Global Corporate Venturing

Powerlist 2019

THE CORPORATE VENTURE LEADERS SHAPING

THE FUTURE OF THE INDUSTRY

Global Corporate Venturing Powerlist 2019

Global Corporate Venturing Leadership Society

The benefits of the **Mawsonia** brands under one umbrella

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GCV Leadership Society mission:

The GCV Leadership Society is for corporate venturing leaders and aims to be the pre-eminent provider of data, information, events and other services for the global corporate venturing community. The Society helps develop the corporate venturing leaders of the future.

	Premium* (Company) $12,500 per year	**Luminary** (Company) $50,000 for 2 years
Executive Advisory Role - act as GCV Leadership Society Ambassador for a two-year period	–	✓
Branding on Leadership Society materials as Luminary members	–	✓
Invitations to exclusive leadership society networking events worldwide	✓	✓
Showcase portfolio companies during GCV events	–	✓
Right to join and use the *'GCV Leadership Society'* Name	✓	✓
Get the Weekly Community Newsletter	✓	✓
Entry in the Member App	✓	✓
Pro Bono - Bridging communications to third parties	✓	✓
Enhanced Company Profile in the Directory app	✓	✓
Free Ticket to either the annual Summit or Symposium	TWO	THREE
Assistance in arranging one-to-one meetings and/or private meeting space during GCV events	✓	✓
GCV Subscription** - access the monthly magazine (pdf), news website and special reports	UNLIMITED USERS	UNLIMITED USERS
GCV Analytics for 1 user (add an extra user for $5,000 more) - access 10,000+ deals through GCV Analytics for bespoke reports	✓	✓

* GCV Subscribers can upgrade for a limited time. Subscription fee already paid will be subtracted from the amount due on a pro-rated basis.
** Includes access to Global Government Venturing and Global University Venturing.

Why Join?

- Support your industry
- Help shape thought-leadership and best practice to increase success
- Network with the most influential corporate venturers in the world – these could be your co-investors or partners
- Raise your company's profile to increase co-investment and deal-flow opportunities
- Increase your personal profile for your next career move
- Join sub-committees to move the industry forward in areas such as deal flow, investment models, partnership approaches, innovation excellence and intellectual property

GCV Industry Partner (Firm or other industry professional (e.g. Academic, Government)

$10,000 per year*

* Non-corporate venturers will have more limited access to the GCV Leadership Society unless authorised by its board.

Luminaries include:


Wendell Brooks
Intel Capital


Barbara Burger
Chevron Technology Ventures


David Gilmour
BP Ventures


Jacqueline LeSage Krause
Munich Re / HSB Ventures


Jeffrey Li
Tencent


Michael Redding
Accenture Ventures


Jaidev Shergill
Capital One


Bonny Simi
JetBlue Technology Ventures


Bill Taranto
Merck


Marianne Wu
GE Ventures

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Ilonka Jankovich
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Brad McManus
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Gen Tsuchikawa
Sony Innovation Fund
Jonathan Tudor
Centrica
Erica Whittaker
UCB Ventures
Ben Wright
3M Ventures
Lily Yeung
Molex Ventures
Michael Young
Caterpillar Ventures

Introduction

By James Mawson, editor-in-chief

The big themes:

- Diversity
- Globalisation
- Partnerships and co-investment
- Structures – continuum from strategic to financial and from in-house to independent

"Diversity brings strength to the industry" was an earlier editorial in Global Corporate Venturing, reflecting on some of the highlights from the Global Corporate Venturing & Innovation Summit, including a panel led by Tracy Isacke of Silicon Valley Bank, and including Meghan Sharp of BP Ventures, Karen Kerr of GE Ventures and Kathie Resteiner of Intel Capital.

However, just 5% of the 2,472 corporate venturing leaders are women, according to research for the GCV Powerlist awards to be held at the UK's House of Commons on May 23. Just below the top rank, however, the picture looks better – more than a third of the GCV Rising Stars 2019 are women, so change could be imminent.

Leaders in venture often rise by distinguishing traits beyond the obvious and find the themes that will drive value, ever since 1976 when 29-year-old venture capitalist, Robert Swanson, famously parlayed a 10-minute appointment with biochemist and genetic engineer Herbert Boyer into a three-hour meeting over beers that led to the creation of Genentech.

Even if these observations appear hidden in plain sight – such as women making up about half the population or the internet bringing online billions more people – there are no limitations to the power of innovation capital once it moves beyond a cottage industry.

One signal for the transformation of the venture industry is its globalisation and diversity. From a relatively small coterie of lifestyle business venture capitalists raising limited-sized funds from institutional investors, such as pension funds, there is now a broad sweep from angels and family offices through VCs and corporations, governments and universities which are approaching all stages of investment and even employing different structures, such as initial coin offerings, tokens and quasi-equity, and debt structures, to be rewarded with revenue growth or interest and capital repayment rather than a sale.

The US has a decreasing share of the VC industry and as entrepreneurship, networks and capital globalise the biggest success stories could come from other places.

Last month in Neue Buercher Beitung newspaper, investor Peter Thiel said: "In 2005, I gave a speech at Stanford University, in the middle of Silicon Valley, and the question was: where is the next Google coming from? The answer I gave back then was pretty optimistic. With a 50% probability, the next Google is within eight miles. And in retrospect, I was right. The next Google was called Facebook, and it was just three miles from the room in which I spoke in 2005.

"Today, I would say that the likelihood that the next Google will ever be found anywhere in Silicon Valley is significantly less than 50%."

But where else in the world the next Google will be found remains less certain.

To improve their odds of finding the next ByteDance, corporate venturers are more likely than VCs to invest outside their home region, according to GCV Analytics and PitchBook data. Many countries now are focused on inward investment from CVCs as well as encouraging domestic entrepreneurs and investors to become more international.

Almost all the GCV Powerlist 2019 winners are international in outlook. The organisational and management challenges this can bring can be immense, but the rewards from tapping into innovation hotspots early – witness the growth of Israel, Brazil and Singapore – beyond more established centres, such as the US, the UK and China, can bring both financial and strategic benefits.

But even the largest CVCs struggle to cover all the possible entrepreneurs around the world, let alone across multiple sectors and emerging breakthroughs. Partnerships, therefore, become crucial.

However, whereas the tools for buying, investing and building are increasingly well understood, speeding up the innovation cycle of portfolio companies and business units through partnerships remains more art than science.

Wendell Brooks, president of Intel Capital, and who as chairman of the GCV Leadership Society has a special profile outside the top 100 list to be presented later in the year, made it a clear goal in his first speech at the Global Corporate Venturing & Innovation Summit that his mission was about having the team ask "not what the portfolio companies can do for us, but what we can do for the portfolio companies".

Allied to this was a strategic positioning in trying to collaborate with other CVCs to achieve this and support an entrepreneur in her four primary needs of capital, customers, product development and an exit.

In a world of $100bn venture investment vehicles, such as the SoftBank Vision Fund, or Asian peers, such as Tencent and Alibaba, which can invest in 100-plus deals a year, this also makes sense. Intel Capital's unique position a decade ago, as the largest and best-resourced CVC unit, has passed, but its ability to punch above its weight through soft power measures, such as partnerships and collaboration and identifying power nodes of serial entrepreneurs and smart investors in its network, remains first class.

Some of the most exciting partnerships are being formed between CVCs and their former or existing portfolio companies as they scale up and start investing.

South Africa-based media group Naspers and China-based peer Tencent are placed third and first respectively, while telecoms group SoftBank and China-based e-commerce provider Alibaba are second and 10th.

Cross-shareholdings and co-investing, also notably between CVCs and their executives' family offices, such as phone maker Xiaomi and Lei Jun's

Some of the most exciting partnerships are being formed between CVCs and their former or existing portfolio companies as they scale up and start investing

Shunwei, create scale and opportunities, as the idea of a corporation becomes more porous in how it uses external innovation to bring ideas and units into the business and how it spins off or sells others as they grow. Again, particularly notable in China, Alibaba has separated Ant Financial and brought in Ele.me and Cainiao. Tencent has spun off Tencent Music and bought and syndicated games developer Supercell.

A glance at the GCV Powerlist and in particular the top 25 shows groups that can invest hundreds of millions of dollars or even billions annually – more than almost any independent VC – around the world and in multiple sectors.

But while the outcomes can look similar, the approaches by the CVCs remain relatively idiosyncratic. Tencent, with more than 700 portfolio companies, is becoming more of an investment holding company centred on gaming, similar to Alphabet on search, while Alibaba still seems to be looking more for assets to buy.

The continuum of CVCs from purely financial to purely strategic remains, but increasingly there is openness to the question of in-house ownership or full independence

Still, certain trends remain clear. CVCs are looking for ways to leverage resources from their parent through additional money from outside. This reduces the possibility that an isolated problem in a business unit can affect cash and resources so substantially, as in the case of GE Ventures in the past two years, that the entire CVC unit is disrupted and may be sold.

Formal limited partner (LP) commitments to specific funds managed by a general partnership (GP) that can enable better incentives for staff also helps, with Intel Capital among those paying performance fees from profitable exits and tightening its team to deliver fewer but bigger deals.

The continuum of CVCs from purely financial to purely strategic remains, but increasingly there is openness to the question of in-house ownership or full independence.

Vicente Vento, co-founder and CEO of Deutsche Telekom Capital Partners Management, which manages the Germany-based phone operator's corporate venturing and private equity assets, said: "We are working hard to position ourselves as a non-corporate VC. We operate independently from Deutsche Telekom, now have a multi-LP fund, and invest across venture, growth equity and private equity through distinct funds.

"Fun fact – in our case the majority of the GP is owned by the employees. We are still in transition but moving in the direction of becoming like my former employer and alternative asset manager Blackstone Group."

It is hard to overstate the significance of what is, perhaps, Germany's most establishment corporation effectively taking on an approach and governance set by alternative asset management titans, such as Blackstone, KKR, Carlyle Group and TPG, only a generation before known as the "barbarians at the gates" after the debt-fuelled leveraged buyout raid on RJR Nabisco.

When a group is effectively employer-owned, such as Deutsche Telekom's, or SAP's Sapphire or Wells Fargo's Norwest, even if the money is almost all committed by one or several corporate units, they are excluded from the Powerlist.

Others, such as Alphabet's GV, CapitalG and Gradient, remain in-house CVCs, while other categories, such as Swisscom Ventures have taken on institutional money from pension funds but remain strategic and in-house. New forms of multi-corporate-backed VCs, such as Touchdown and Redstone, have joined traditional players, such as Translink, Emerald, Iris and Pangaea, with specific mandates or funds.

The weight of capital and length of economic cycle mean the golden age of corporate venturing in the first half of the decade might have passed, but the talent, sophistication and diversity of approaches mean the industry finally has the chance to drag the entire private innovation capital ecosystem, as well as the more substantial public markets, into an era of more efficient capital allocation, productivity and economic growth allied to a goal of making the world a better place through the impact of investment.

This will require leadership from this generation of Powerlist winners, but the goal is important.

Methodology

At our May symposium in London, Global Corporate Venturing runs the Powerlist of the top 100 heads of corporate venturing units out of the 2,200 we cover globally.

These are celebrated at an awards dinner at the Shard, Europe's tallest building, sponsored by GE Ventures.

We use a number of metrics for selecting the Powerlist, which draw on our GCV Analytics *(http://gcvanalytics.com)* insights-as-a-service data platform.

In addition, we look for strategic and leadership measures, such as thought-leadership, vision and motivational abilities, including who from the team was part of our Rising Stars awards selected in January at our GCVI Summit *(http://www.gcvisummit.com)* in California.

Strategic and leadership measures:

- Any examples of corporate acquisitions of portfolio or venture-backed companies.
- Business unit partnerships and development with portfolio companies.
- Product or strategy roadmaps and public leadership positions in conferences and associations and societies.
- Team members included in GCV Rising Stars and other awards.
- Team expansion and recent promotions.

My thanks to Liwen-Edison Fu as author of the profiles and Keith Baldock for production of the report.

CEO quotes for the Powerlist nominations

For the GCV Powerlist 2019 awards on May 23 at the House of Commons at the end of the GCV Symposium at County Hall, London, here are some of our favourite nomination quotes.

Mary Barra, chairman and CEO of General Motors: "Under Jon Lauckner's leadership and vision, the GM Ventures team operates with an entrepreneurial spirit and clear direction to focus on technologies that matter most for our customers. The strategic investments GM Ventures is making in breakthrough technologies is helping us build the most valued automotive company."

Thomas Rabe, chairman and chief executive of Bertelsmann: "Investments in young digital companies with innovative business models play an important role in the implementation of our strategy. Through these investments, we ensure the transfer of knowledge both about digital trends that support our transformation and about promising markets. Our investment fund Bertelsmann Asia Investments, in particular, is very successful."

Christian Kullmann, chairman of the executive board of Evonik: "Investments in and partnerships with startup companies generate strategic value and growth opportunities. Our venture capital arm is a vital link to tomorrow's technologies and way of doing business. Venture capital contributes in realising our vision to build the best-in-class specialty chemicals company. The team led by Bernhard Mohr has been instrumental in Evonik leveraging the value of corporate venture capital across the whole company."

Brian Roberts, Comcast's chairman and chief executive: "Under Amy's leadership, Comcast Ventures has invested in some of the most innovative consumer and enterprise technology companies. We have worked together for nearly 30 years and I have always admired her passion and vision for identifying the next big idea. She has carried that through Comcast Ventures and has helped her team develop hundreds of value-creating partnerships."

Bob van Dijk, chief executive of South Africa-based media and internet group Naspers: "Naspers has been investing in innovative businesses around the world for many decades, identifying leading companies addressing big societal needs in high growth markets. Naspers Ventures has taken us into several new sectors including food, education, health and more. Larry and his team are setting Naspers up for our next wave of growth, investing in leading businesses in new sectors that will mould our future."

Mike Roman, CEO of 3M: "3M Ventures is an important tool to gather strategic insights into new adjacencies and accelerate our priority growth platforms. Ben has done an outstanding job leading our Ventures team, which includes implementing a new strategy that has enhanced the way we collaborate and create value with our portfolio companies. He's an outstanding representation of the best of 3M and Corporate Venturing."

Robin Hayes, CEO of JetBlue: "JetBlue has always been a forward-thinking airline and we want to stay ahead of new technologies to continue improving the entire travel experience for our customers. JetBlue Technology Ventures allows us to invest in and shape the future of our industry through the strategic partnerships the team is building with startups innovating in travel and hospitality – from solutions alleviating the pain of flight delays to affordable electric aircraft."

Rose Marcario, CEO and president of Patagonia: "Tin Shed Ventures gives Patagonia an edge in innovation and provides a new source of capital to startups that are in business to save our home planet."

Cher Wang, CEO of HTC: "As a leader in the spatial computing space, HTC/Vive takes its responsibility to build a healthy ecosystem very seriously. We have actively invested in the space to support worthy startups and nurture a wide range of innovation inside and outside the company. Alvin has taken a leadership role in driving our engagement with both the investment and startup communities for the last three years, delivering strong results and deep connections that solidify our position in the market."

Joe Nelligan, CEO of Molex: "Our world is rapidly changing and to meet the needs of our customers and the marketplace we are driving transformative change by investing and partnering with innovative companies that offer new ideas, technologies and talent. Our Venture Program is one of the critical elements we need to support our solutions vision as we work to create the virtuous cycles of mutual benefit that will support our profitable growth in the future."

Jim Loree, CEO of Stanley Black & Decker: "Larry brings a unique blend of independent visionary entrepreneurialism and corporate management experience which enables him to build productive relationships with all parties involved with corporate venturing. He has the ability to envision the art of the possible and marry it with the practical realities of business. His enthusiasm for the application of technology and extreme innovation is infectious and inspirational. Larry is beloved by our business leaders here at Stanley Black & Decker for his extensive contributions to our venturing transactions as well as our innovation ecosystem in general."

Scott Serota, CEO of Blue Cross Blue Shield: "For the last 10 years Blue Cross Blue Shield Venture Partners have advanced healthcare innovation, supporting entrepreneurs and a marketplace of new ideas. Thanks to John's outstanding leadership, we continue to have successful outcomes and have seen a growing level of activity in new strategic investments, as well as increased participation from BCBS companies. As Plans collaborate to drive innovation, we look forward to the next 10 years, with Blue Cross Blue Shield taking on an even greater leadership role, advising on regulatory matters and expanding our involvement with global affiliates."

Frank Stührenberg, CEO of Phoenix Contact Group: "With the Phoenix Contact Innovation Ventures we are much faster and flexible to interact and cooperate with startups and their ideas and technologies then in our core business. The establisehd ecosystem by our Venture Team, headed by Marcus Böker, is one of the key elements of our strategy to the Industry 4.0 and the industrial internet of things."

Lamar McKay, deputy CEO of BP Group: "BP Ventures is playing an increasingly important role in tackling the dual energy challenge – both by identifying technologies that improve the productivity of our current businesses and by helping us transition to new reduced emissions models for heat, light and mobility provision. With a half billion dollar investment, and access to $200m capital every year, we have set up BP Ventures to build the future BP."

Stein Olav Drange, chief technology officer of Equinor: "Equinor Technology Ventures is an important tool to find and accelerate new innovations from startups, helping Equinor in our ambitions to shape the future of energy."

Om Nalamasu, executive vice-president and chief technology officer of Applied Materials and president of Applied Ventures: "For over a decade, Applied Ventures has been investing in and collaborating with startups to transform disruptive possibilities into reality by leveraging the materials engineering expertise of Applied Materials. Rajesh has played a critical role in identifying and accelerating venture investments across many inflections, where our leadership in materials engineering is enabling new growth markets like AI, AR and VR, life sciences, 3D printing, and batteries. With his passion to address a significant pain point for deeptech startups, Rajesh closely worked with executives from Applied Materials and the state of New York to enable the establishment of an $850M state-of-the-art semiconductor fab in upstate New York. I am proud of Rajesh and his Applied Ventures team's progress in enabling successful initiatives and partnerships with startups across the globe, and look forward to many more accomplishments near-term."

David Doft, chief financial officer at MDC: "Jessica has operationalised MDC Ventures to provide real strategic value to our investments, our business and our clients. Her efforts have put MDC Partners on the front lines with the innovations and technologies that can meaningfully improve performance for our client base, and she has served as a catalyst for innovation and experimentation in partnership with our broad network of advertising and marketing agencies."

Jan Kees de Jager, KPN's chief financial officer: "KPN initiated the KPN Ventures investment fund mid-2015 to boost outside-in-innovation, creating more opportunities to closely work together with new, innovative technology companies, while also creating financial return on investments. Herman has been instrumental in executing on this plan. After three years under the leadership of Herman, KPN Ventures has grown its portfolio to 13 relevant direct investments, with one great exit, and five fund-in-fund investments. KPN Ventures is actively supporting the portfolio companies in their growth and in creating cooperations with KPN and its ecosystem partners, as an increasingly important instrument in KPN's transformation, alongside R&D, New Business and M&A."

Thomas Kusterer, chief financial officer at EnBW: "Crispin is building and leading EnBWs Corporate Venturing arm since its inception 2016. EnBW's venturing activities are an open innovation platform, driven by financial return and focusing on scaling smart infrastructure startups, that could make a difference in the future. EnBW New Ventures is the platform that enables EnBW to cooperate fruitfully with entrepreneurial teams, while at the same time all efforts of our New Ventures team are focused to support the entrepreneurs to build sustainable and profitable businesses. EnBW's ability to work closely with the successful entrepreneurs of the future will define EnBW's own success in new sectors, that are not our home turf as of today. Two cooperation examples, where the open innovation is already showing strong growth is the Yello solar decentral rental product for residential photovoltaic and storage with DZ-4 as well as the digitisation of our parking spaces with Cleverciti. Crispin and his team act as translator and moderator between the dynamic startups and EnBW and as flexible tool to enable future growth options for EnBW."

Ashok Belani, executive vice-president of technology and chief technology officer at Schlumberger: "The Schlumberger venture group is an integral part of the technology development ecosystem, which comprises science, engineering, universities, manufacturing, technology lifecycle management and startup companies. It has been a successful business venture, not only having led to commercial products and services, but it has also given Schlumberger a deep insight and network into a broad range of potentially impactful new technology domains outside of our traditional business areas."

Rajan Naik, senior vice-president of strategy and innovation at Motorola Solutions: "Motorola Solutions Venture Capital (MSVC) has been investing in and partnering with startups for 20 years, helping drive technology leadership, innovation and business growth for Motorola Solutions. Brad joined our venture organisation four years ago as the company was beginning to expand its offerings in services, software and video. Leveraging his extensive venture capital experience and network in the VC industry both in the US and Israel, Brad has re-shaped MSVC's portfolio to align with Motorola Solutions' growth platforms and has created unique business models for go-to-market and technology licensing that enable venture stage companies to be successful with enterprises."

Wolfgang Krips, vice-president corporate strategy at Amadeus: "Over the last five years, Amadeus Ventures has interacted with thousands of entrepreneurs in the travel technology space and invested in 10-plus high potential startups highly relevant for our customers. The team constantly shares observations and brings startup collaboration ideas to the rest of the organisation. All our business units now have incorporated startup as part of their activities, as solution partners, and as an emerging customer segment. Amadeus Ventures has become known as one of the top strategic investors in the space of travel and transportation technology. I congratulate Suzanna to be on the GCV Powerlist once again this year and look forward to an exciting 2019."

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Jeffrey Li TENCENT INVESTMENT

For the past eight years, Zhaohui "Jeffrey" Li has been a managing partner at Tencent Investment and a general manager at Tencent M&A, subsidiaries of the largest internet company dominating China's artificial intelligence (AI), enterprise, automotive and security industries.

As Tencent noted last month for its 2018 annual results: "We have invested in more than 700 companies. More than 100 investees were valued at over $1bn each. Among which, over 60 went public."

According to Hurun, China now has 186 tech-focused unicorns, which included the fastest growing startups backed by Tencent, now China's largest listed tech company and its most active corporate venturer. For example, photo and video-sharing platform Kuaishou, a deal sourced and led by an executive director at Tencent, Haiyang "Chris" Yu, who was one of this year's GCV Rising Stars nominated by Li.

Last year, Tencent invested in more than 163 deals according to South China Morning Post, including group buying platform Meituan-Dianping and online entertainment platform Bilibili, both reaching initial public offering (IPO) respectively on the Hong Kong stock exchange and on the Nasdaq Global Select Market.

32 China-headquartered companies listed in the US last year, raising more than $9bn in the process. Tencent Music Entertainment (TME), a subsidiary that manages internet group Tencent's music streaming and karaoke services such as QQ Music, KuWo, Kugou and WeSing, floated on the New York stock exchange in December 2018 with an initial market valuation of $21.3bn. In 2017, TME also swapped equity stakes with Sweden-based music streaming platform Spotify, which had its own well-received listing last year.

China-based, Tencent-backed ride-hailing platform Didi Chuxing, which acquired its rival Uber's China business in 2016 with Uber also acquiring a 20% stake in Didi as part of the deal, is considering an IPO later this year. As Uber prepares to go public, Didi is eyeing an expansion in Latin America, such as Chile, Peru and Colombia, South China Morning Post reported. Didi already had a presence in Brazil and Mexico, having acquired Brazil-based rival 99 last year and offered competitive pay to Mexico-based drivers.

Tencent's intricate tactic to corporate venturing under the leadership of Li, who became a co-managing partner at Tencent Investment with Forest Lin since September 2015, leverages the capital markets as the natural next step in accelerating its ecosystem development for both Chinese and global market success and to compete with its rival Alibaba, a China-focused, US-listed e-commerce company.

Of social media fame, Tencent owns microblogging platform WeChat and messaging platform QQ, Tencent has been China's largest listed company since 2016 with a total market cap of about $420bn. Li said for 2017's Powerlist award nomination that the company was "committed to an open platform strategy, through which they aim to provide users one-stop lifestyle services by working with different partners".

Li added: "As part of the efforts in developing such an open platform, Tencent Investment's team of 40-plus professionals, including a post-investment management team, has built an investment portfolio of hundreds of companies across all stages and in various sectors, including online gaming, social, e-commerce, online-to-offline (O2O) services, content, finance and healthcare, with multiple notable names like Riot Games, Didi, 58.com and JD.com."

Li and Lin run a venturing and M&A team that draw on exceptional dealmaking experience in two former Goldman Sachs alumni, Martin Lau, Tencent's president, and James Mitchell, its senior executive vice-president and chief strategy officer. Both Lin and Li report to Mitchell, who spent more than a decade as Goldman Sachs's head of communications, media and entertainment research.

Analysing the celerity and proactivity of China-based corporate venturing units' activities, Li said for his 2017 Powerlist nomination: "The competitive landscape of China internet space, especially the very high iteration speed of the market, forced all major players to capture future innovation. In that case, there might be relatively more minority deals [in China] compared with the US market. And the giants might leverage their market resource to speed up the growth of the investee company."

At the second GCV Asia Congress last year, Li cited Meituan-Dianping's $4.2bn flotation in Hong Kong as evidence that corporate venture was being used as a coalition-building tool in China. "Our belief in the entrepreneurs actually leads to our supporting position when we make investments. Tencent is keen on making investments in digital content, especially in the gaming sectors. China, with its population of 1.3 billion people, and being a single-currency single-language country, definitely helps startups to thrive in this market."

Li, who was promoted at the end of 2014 from executive director covering earlier-stage deals to managing partner, said helping portfolio companies was one of his main successes and this approach has been fundamental to Tencent's success.

Li joined Tencent in 2011 and launched and led Tencent Investment's efforts to penetrate key O2O sectors, including automotive, education and healthcare. He was responsible for Tencent's investments in Huayi brothers, Zhihu, Netmarble Games, Howbuy and many others around the world.

Before joining Tencent, Li worked as an investment principal at Germany-based publisher Bertelsmann's Asian corporate venturing unit run by Annabelle Long for two years.

He led deals there for Chinese automobile industry content and marketing services firm BitAuto and others, such as Phoenix New Media, in which Bertelsmann invested $2.8m for a 2.9% stake as part of a $25m round. Bertelsmann sold its stake in BitAuto to unidentified buyers for $65m at the start of 2014. Bertelsmann had reportedly invested $12m in BitAuto in 2009 and it floated on the New York Stock Exchange a year later, a year before Phoenix New Media.

Before that, Li worked for Google and Nokia in various product and business roles, where he gained substantial experience in the internet and mobile arenas. He holds a bachelor's degree from Peking University and an MBA from Duke University's Fuqua School of Business.

2

Rajeev Misra and Marcelo Claure

SOFTBANK

SoftBank's Vision Fund, the $98.6bn technology investment fund run by Rajeev Misra has invested about 70% of its capital in less than two years, according to a report by newswire Bloomberg in April that indicated the fund could expand by a further $15bn ahead of a second $100bn fund being started.

The Vision Fund, which was launched in May 2017 with a $93bn first close, increased its capital allocation to $98.6bn on its way to a projected $100bn close.

SoftBank said the Vision Fund was a "new fund created by the Masayoshi Son-led SoftBank Group as a result of its strongly held belief that the next stage of the information revolution is imminent, and unprecedented large scale long-term investment is required".

The fund's broadest strategy involves making long-term investments in the foundational platform businesses that will enable the next age of innovation by being active across a wide range of technology sectors from artificial intelligence to robotics and cloud technologies.

Rajeev Misra

SoftBank could be seen as building a capability to see and understand full public and private dealflow while securing the financial tools to capitalise on insights gathered from trends identified in its operational businesses, such as Sprint, SoftBank's US-based telecoms subsidiary run by its chief executive Marcelo Claure, who is also chief operating officer at telecoms firm SoftBank.

In March this year, SoftBank launched a $5bn Latin America-focused technology fund dubbed SoftBank Innovation Fund. SoftBank's $2bn contribution will function as the fund's anchor investment, and it will act as its general partner while raising additional external capital. It also formed a vehicle called SoftBank Latin America Local Hub to interact with local portfolio companies to help their growth.

The unit will invest in areas across e-commerce, healthcare, mobility, insurance and digital financial services in the Latin America region. Claure heads the SoftBank Innovation Fund as the CEO of the unit and oversees its activities while continuing in his other roles.

SoftBank's portfolio in the region includes ride provider 99 and last-mile delivery platform Loggi, both of which are based in Brazil.

Claure, who was born in Bolivia, said: "Growing up in Latin America I witnessed firsthand the creativity and passion of the people. There is so much innovation and disruption taking place in the region, and I believe the business opportunities have never been stronger.

"The SoftBank Innovation Fund will become a major investor in transformative Latin American companies that are poised to redefine their industries and create new economic opportunities for millions of people."

Claure holds a bachelor of science in economics and finance from Bentley University and honorary doctorates in commercial science from Bentley University and Universidad Tecnológica de Santa Cruz.

Before joining Sprint in 2014, he had been the CEO of SB Product Group, a joint product and procurement platform provider serving SoftBank companies, for seven months. Before that, he had been president, chairman and CEO of wireless company Brightstar for 17 years.

Marcelo Claure

Misra grew up in India before moving to the US to study at University of Pennsylvania where he gained engineering bachelor's and master's degrees, three years later returning to education to gain an MBA from Sloan MIT.

Misra's professional life started in the 1980s designing satellites at the Los Alamos National Laboratory, then a technology startup. But it was upon leaving Sloan MIT when he joined Merrill Lynch that saw the start of a career in the financial sector defined by bold investment decisions and a rapid rise to management roles.

At Merrill Lynch, Misra joined the derivatives trading desk and was promoted to managing director in a record five years, before joining Deutsche Bank in 1996. Misra spent the next decade leading a team that built one of the world's biggest and most powerful investment banks from scratch. Leaving Deutsche Bank in 2008, Misra joined UBS in 2009 and was responsible for rejuvenating the business as head of the fixed-income operation for four years.

Misra, now in his mid-50s, joined SoftBank as head of strategic finance more than three years ago after leaving global investment management firm Fortress Investments Group, where he had worked for less than a year. He now effectively owns his former employer as, in March 2018, SoftBank agreed to buy Fortress for $3.3bn.

Misra has a master's in computer science from the University of Pennsylvania and an MBA from Massachusetts Institute of Technology's Sloan School of Management.

In a career spanning derivatives, global markets and technology investments and dealmaking – as the New York Times noted, Misra has "the rare ability to reinvent himself". As CEO of the SoftBank Vision Fund, the company summed up the expectations now on him: "We eagerly await his next success."

3

Larry Illg NASPERS VENTURES

Bob van Dijk, chief executive of South Africa-based media and internet group Naspers, said: "Naspers has been investing in innovative businesses around the world for many decades, identifying leading companies addressing big societal needs in high growth markets. Naspers Ventures has taken us into several new sectors including food, education, health and more. Larry and his team are setting Naspers up for our next wave of growth, investing in leading businesses in new sectors that will mould our future."

Naspers' approach to investing in developed markets changed in late 2015 from avoidance – after some middling deals in Europe in the 1990s – to active investments in the US.

One of its first deals was a $100m series A round in Letgo, a US-based mobile classified advertising application, in September 2015, following up with a $175m in January 2017 then again with a $500m in August last year.

Naspers CEO Bob van Dijk said at the time: "We will probably have more focus on the San Francisco Bay area than we have had previously. If we see the right opportunities, we could see ourselves put a good amount of capital there."

This led to the opening of Naspers Ventures in San Francisco in May 2016 under Larry Illg, a former eBay online auction company executive. Illg joined Naspers in 2013 from real estate listings platform Trulia, where he was general manager of new ventures. He was chief operating officer of Naspers' e-commerce assets before taking the reins at Naspers Ventures.

Naspers Ventures is where the majority, 36 deals worth an aggregate $2.5bn in round totals, of the investing has happened but not all. Charles Searle, who is responsible for managing Naspers' listed assets, including Tencent and Mail.ru, had an active year, too.

In March last year, Naspers sold HK$76.95bn ($9.8bn) of shares in Tencent, the China-based internet group in which it invested $32m in 2001.

Tencent operates a large-scale online services offering centred on its messaging app, WeChat, which has more than one billion users. At the time of the agreed sale, it was the fifth most valuable company in the world, and it had a market capitalisation of about $505bn.

Naspers acquired a 46.5% share of Tencent through its $32m investment, which took place three years before its initial public offering in Hong Kong, and as of March 2019, Naspers holds 31% of Tencent.

The company sold 190 million shares, equating to a 2% stake in Tencent, at HK$405 each. Naspers pledged in a statement not to sell any more shares for a further three years.

The proceeds from the sale will be used to shore up Naspers' balance sheet and fund an investment drive intended to boost its holdings in other sectors. Naspers Ventures invested in five main sectors last year, food, education, health, mobility, mobile – with Illg focusing on food.

Outside the US, Naspers Ventures expanded by opening offices in Singapore and India. Ashutosh Sharma was recruited in October 2016 from venture capital firm Norwest Venture Partners to head the India office and to lead Naspers' VC and M&A deals in India. Sharma was a vice-president for Norwest in India, having previously been an investment manager at Qualcomm Ventures, the corporate venturing arm of mobile chipmaker Qualcomm, between 2010 and 2012.

Although none of its other investments have garnered the same return as Tencent, in 2007, Naspers invested in Mail.ru, the Russia-based internet company with about $1.85 billion of revenue last year and its earnings before interest, taxes, depreciation and amortisation reached $320 million. Mail.ru exited through a $740m M&A by Russia-based telecoms operator Megafon in early 2017.

Naspers had also been backing since 2012 the India-based e-commerce firm Flipkart and invested about $616m. Its US peer Walmart acquired Flipkart's 77% stake worth 16bn in mid-2018, and Naspers made about $3.3bn in the sale.

Another notable exit was Philippines-based blockchain technology developer Coins.ph, with ride-hailing service provider Go-Jek acquiring a majority stake for an undisclosed amount. Naspers Ventures had initially led a $5m second tranche of the $10m series A round in 2017.

GCV's Rising Star Russell Dreisenstock, who ranked first in 2019, had been instrumental in conducting the $71m investment in Flipkart. For his profile, he cited the low valuation at Naspers first entry and the "exceptional" returns it produced.

And Dreisenstock had had good reason to be pleased with its success. "When looking at technology hotspots outside the US, it is difficult to see past India. Home to 1.3 billion people and the world's seventh largest economy, India is also the birthplace of an outsize influence in Silicon Valley, due to a large diaspora of talent spread across both startups and established technology companies – look no further than the top executives of two of the world's top five most valuable companies, Satya Nadella at Microsoft and Sundar Pichai at Google," wrote Dreisenstock in an article for Entrepreneur.com in September 2017.

In his Entrepreneur article, Dreisenstock cites the characteristics present in Indian culture that have a positive influence on the country's startups. They are bargaining and negotiating, respect for experience, community and jugaad – an Indian concept that he defines as "the most innovative, economical and quality method to accomplish the desired task by unusual or imaginative means and ways".

It is no surprise then that Naspers Ventures has been particularly focused on India. It supplied $250m in 2016 for Ibibo Group, which owns and operates bus ticketing platform redBus.in and hotel booking site Goibibo.com, and participating in five financing rounds for online food ordering platform Swiggy, having provided most recently $80m for its $210m series G round and $660m for a $1bn series H round in June and December 2018, respectively.

However, India is by no means the only part of the world Naspers is interested in. Food delivery platforms around the globe appear to be one of the areas beyond media and e-commerce that firm is keen to move into, having invested about $2bn in such companies in 2018, overseen by Illg.

Germany-based Delivery Hero, in which Naspers invested $423m shortly before the initial public offering in May 2017, received about $775m in March 2018. Later that year in November, Naspers led a $500m round commitment for Brazil-based online food delivery platform iFood.

Alongside food, one of the other verticals targeted by Naspers Ventures is education. The initial deals under Illg and Dreisenstock targeted Codecademy, which is "teaching the world to code", Udemy, a learning and teaching marketplace, and Brainly, the world's largest social learning network with 70 million-plus users.

In 2018, Naspers incorporated a new portfolio company in this field by making a $3m series A round for US-based programming-focused peer-to-peer education platform operator SoloLearn.

According to Dreisenstock, one of the reasons Naspers has been so successful is that the firm's philosophy is to invest for the long term, and this allows him and others to structure deals that are founder-friendly and offer operational support. He said this was what corporate venture capitalists needed to do to be more competitive against traditional VCs.

"They should also continue to nurture the startups and let them act on their vision without immediately imposing a corporate way of doing things or harnessing them to do just what the corporate ambition may be," he said.

4

Young Sohn SAMSUNG ELECTRONICS

Young Sohn is corporate president and chief strategy officer at consumer electronics manufacturer Samsung Electronics and has been leading development and strategy for global innovation and new business creation since he joined mid-2012.

Based at Samsung's Open Innovation Centre in Silicon Valley, Sohn is responsible for a $2bn investment fund funding innovative and emerging businesses and technologies worldwide. Samsung runs three corporate investment teams, Catalyst, Next, led by Brendon Kim, and Samsung Ventures, primarily operating out of South Korea under CEO Yongbae Jeon since the end of 2017, on behalf of its business units. Samsung Electronics alone invests about $200m per year in about 60 startups through these platforms.

Among his most salient achievements, Sohn initiated and led Samsung Electronics' acquisition of audio equipment maker Harman International Industries for $8bn in November 2016.

Sohn, who joined Harman as chairman of the board as part of the deal, said upon completion of its acquisition four months later: "Today is a historic moment for us. The close of this transaction opens

the door to create substantial growth opportunities and deliver greater benefits for customers worldwide.

"We see transformative opportunities in the car – and a future which seamlessly connects lifestyle across automotive, home, mobile and work. Samsung's and Harman's leadership in these spaces perfectly positions Samsung to be the preferred partner to our OEM (original equipment manufacturer) customers.

"In addition, bringing together Harman's iconic audio brands and capabilities paired with Samsung's leading display technologies will deliver enhanced audio and video experiences to consumers and professional end markets. And most importantly, we are enthusiastic about our common vision, the similarities in our culture of innovation, and the added value we can create for customers. We look forward to working with all of Harman's employees to execute on our vision."

Soon after it became Samsung's subsidiary, in December 2016, Harman entered a strategic partnership with US-based visual driving technology developer Navdy, supplying it with $15m.

Navdy created a control-based display for drivers to show information from their smartphone in the line of sight, which shows a new area Harman intends to uncover under Samsung's ownership.

Before Samsung Electronics, Young had been president for two years at scientific diagnostics firm Agilent Technologies' semiconductor group, now spun out as Avago, and chief executive of semiconductors, software and platform provider Oak Technologies for four years.

In addition, as CEO and board member, he led US-based circuits manufacturer PLX Technologies, US-based business process services provider Synnex Technologies and US-based semiconductor company Inphi to initial public offerings. He also held board seats at UK-based microprocessor designer Arm, which was sold to internet and telecoms conglomerate SoftBank, and silicon crystallisation tool supplier Cymer, which was sold to compact silicon microchip maker ASML.

He is also a board member of his alma mater Massachusetts Institute of Technology (MIT)'s Sloan School North America, a senior adviser to the private equity firm Silver Lake Partners, a member of US-based chip design software manufacturer Cadence's board of directors, a member of the Global Semiconductor Alliance board, and he serves as an adviser to University of California Innovation Council.

Young also was a senior adviser for the MIT Media Lab's One Laptop per Child initiative.

He holds a bachelor of science degree in electrical engineering from University of Pennsylvania and a master of science degree from the MIT Sloan School of Management.

5

Nagraj Kashyap MICROSOFT

Microsoft Ventures, the corporate venturing subsidiary of software producer Microsoft, was renamed M12 in April 2018 in a bid to set itself further apart from its parent's accelerator initiative.

The new name – M for Microsoft, and 12 because "entrepreneur" is a 12-letter word – came two years after Microsoft restructured Microsoft Ventures from a global network of accelerators into a full-fledged corporate venture capital unit under Nagraj Kashyap, corporate vice-president of Microsoft and global head of M12.

M12, which has already backed more than 60 startups mostly in North America and Israel over the past two years, has recently expanded its geographic scope to include India, an effort to be led by Rashmi Gopinath, a partner at the unit.

Its first India-based deal was announced in January this year, when the unit led a $35m series B round for healthcare data software producer Innovaccer. The company addresses data interoperability challenges in healthcare and has developed a data platform to improve clinical and financial outcomes.

Kashyap said in a statement at the time: "We are thrilled to broaden M12's reach to include India, India is a market rich with entrepreneurs creating world-class startups that are poised for success on a global scale. In working with these innovative startups, we believe together we will help disrupt enterprises and industries ripe for digital transformation."

After M12 added four companies to its portfolio by investing a total of $3.5m in the winners of Innovate.AI, its startup competition held in May last year, it teamed up with private equity firm EQT Ventures and lender SVB Financial Group to hold another competition in July aimed at female tech founders.

About 40% of M12's investment team members are female, but only 7.5% of founders in its portfolio are women, according to Kashyap. He was quoted by CNet News in November as saying: "If we just play it safe and we just go back to our own networks, we will never solve this problem. There is no shortage of smart female entrepreneurs. We just have to look harder to find them."

The Female Founders Competition awarded in December last year $2m each to two women-led startups – Canada-based manufacturing and automotive-focused machine learning technology developer Acerta Analytics Solutions and US-based 2D and 3D-fusing graphic design software developer Mental Canvas.

Kashyap, who has been involved in venture capital, software engineering, business development and management for more than two decades, is an active mentor and thought-leader in the entrepreneurial ecosystem.

He became a four-year board member of US trade body the National Venture Capital Association in early April, and he was chosen to be a speaker at a technology investor event Engage Invest Exploit (EIE) in Edinburgh later in the month.

He told Scotsman in March: "Speaking at events like EIE helps to show companies how corporate

venture capital can be a source of funding to support them on their journey.

"There will be 50 ambitious companies pitching on the day and the advice I give to founders is to be clear on the business problem you are solving and the team you have put together to achieve it."

Prior to joining M12, Kashyap had been at semiconductor technology producer Qualcomm from 1989 to 2014. He joined Qualcomm's corporate venturing arm Qualcomm Ventures in 2003, where he oversaw the North America ventures team until 2007 when he was appointed head of global venturing. During his tenure, he netted multiple $1bn exits, including Waze, NetQin and InvenSense, and with plenty of others in the portfolio, such as China-based phone maker Xiaomi, that have exited or could do since his departure.

He grew the Qualcomm Ventures portfolio to more than 150 investments in 2015 from 10 in 2003 and established a well-regarded early-stage competition, QPrize, which rewards entrepreneurs around the world with prize money.

Kashyap began his career as a software engineer at Nortel, Motorola and 3Com/US Robotics before moving to management consulting firm PRTM, now part of PricewaterhouseCoopers. Interviewed by GCV in 2016, he said: "I started my career as a software engineer, and I am still a sort of recovering software engineer at this point, but I have moved on to a business role at previous companies."

6

Jacqueline LeSage Krause

MUNICH RE VENTURES

Jacqueline LeSage Krause has since late 2014 been managing director of Munich Re Ventures, the strategic investment arm of Germany-based reinsurance firm Munich Re – the world's largest with over $270bn in investment assets - and its US-based Hartford Steam Boiler (HSB) speciality insurance subsidiary.

She was previously vice-president of innovation and corporate venture capital at US-based insurer Hartford Financial Services Group but left in 2012 after four years as the company embarked on a restructuring plan to sell a number of businesses and focus on the core.

She had been responsible for both internal innovation – incubating new offerings, customer experiences and business models through the Innovation Studio – and external innovation – investing venture capital in startups and forming strategic alliances through Hartford Ventures.

LeSage Krause founded Hartford Ventures after being founder and chief executive of a digital video startup and spending six years as a consultant with AT Kearney.

Now at Munich Re Ventures, based in San Francisco, LeSage Krause has applied her insights to help the firm and industry. At the Global Corporate Venturing and Innovation Summit in January this year, she joined a panel discussion dealing with supporting end-to-end innovation with CVC on the frontlines.

LeSage Krause said, in her case, strategic goals came before fulfilling financial return targets. She mentioned Munich Re's newest fund – the Ergo Fund from its European and Asian primary insurer Ergo – and explained that although it had the same process as other investment units developed by an investment committee, a different theme and type of engagement with startups were in place.

Munich Re invests from the group's three funds – HSB Fund, Munich Re Fund and the Ergo Fund. Leveraging Munich Re's balance sheet and its industry network, the portfolio companies can receive added value from the group's different business units.

Its investment scope covers seed to late-stage startups providing renewable energy technology, insurtech, as well as insurance for autonomous vehicles.

Munich Re Ventures' latest deals include leading a $7m series A round for US-based digital commercial auto insurance provider Inshur in February and participating in a $25m series C round for US-based internet-of-things (IoT) technology developer Augury in January.

Meanwhile, the Ergo fund was involved in mobility-focused deals last year, such as a $385m series B round for US-based automotive leasing service Fair in December and a $60m series B round for US-based mobility software developer Ridecell in November.

LeSage Krause's main focus is internally connecting Munich Re with startups. In 2018, the venture unit, which works across all lines of business in insurance and reinsurance including life, non-life, specialities and health, completed at least seven new investments, including Hippo Insurance, Fraugster, Zeguro, Slice Labs, Next Insurance, Boughtbymany and Relayr.

Munich Re Ventures has more than a dozen portfolio companies to date, mostly in the internet of things and insurtech, with investments ranging from $500,000 to $15m, spanning all stages, and spread across North America and Europe.

This range of activity and experience has helped LeSage Krause attract stars to join her team, including this year's GCV Rising Star Amir Kabir who oversees early and growth-stage investments and gives support to portfolio companies by holding board positions and liaising with Munich Re's internal business heads. He has also been instrumental in the launch of the Ergo Fund and generating its early dealflow.

Before the Ergo launch, LeSage Krause said: "[Munich Re Ventures] exists to help create the future for Munich Re and HSB, while at the same time enabling the future for our portfolio companies and funding R&D for our industry.

"Over the past year [in 2017], we have deepened and expanded our internal business relationships, as well as taken a more active role in leading deals. This combination has amplified the strategic value to both our portfolio companies and Munich Re businesses."

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7

William Taranto

MERCK GLOBAL HEALTH INNOVATION

William Taranto has been one of the champions of ecosystem investing since he moved to US-based pharmaceutical group Merck & Co nine years ago as the group made an effort to venture into non-pharmaceutical healthcare.

The Global Health Innovation Fund (GHI) under his leadership grew quickly to a $500m pool and in 2014 added a $700m private equity fund to help support roll-ups and later-stage deals.

Taranto said the GHI fund had had several key events in 2018: "We had a number of exits. At the end of 2017 and the beginning of 2018, we sold:

- Pharmaceuticals company Cytel to investment management firm New Mountain.
- Healthcare and life sciences-focused data and analytics company Symphony Health to contract research organisation PRA Health Sciences.
- Heart test provider Cleveland HeartLab to medical testing laboratory Quest.

"At the end of 2018, we did an initial public offering of medical device developer Electrocore and sold application and data management software developer Liaison Technologies to enterprise software provider OpenText."

Taranto added that, from a strategy perspective, the GHI fund narrowed its focus to two key areas: oncology and real-world evidence and data (RWE/D). "GHI created an enterprise-wide effort to lead Merck into the digital future in those spaces.

"The goal is to enhance Merck's oncology data, network and access, and help us solve our use cases across our business," Taranto said. He mentioned some of the new investments in those spaces including precision cancer care technology developer Strata Oncology, natural language processing technology developer Clinithink, clinical trial design and recruitment optimisation services provider TriNetX, clinical testing access developer Antidote Technologies and precision medicine technology developer Syapse.

He elaborated the plan for this year: "Our business units from Merck Research Labs and Global Human Health have partnered all of our new oncology and RWE/D companies from a commercial perspective. We look to do multiple new investments in those spaces in 2019."

Merck GHI completed 11 follow-on investments:
- GenomeDx Biosciences, a genomic information company.
- Livongo, a healthcare assistance platform developer.
- Caresync, a patient management software developer.
- Electrocore, a medical device developer.
- Arcadia Data, a visual analytics software developer.
- eHealth Technologies, an electronic clinical records and images provider.
- ClearData, a healthcare management software producer.
- Ayogo, a patient behaviour change company.
- Preventice, a medical device company.
- WellDoc, a digital diabetes treatment developer.
- Navigating Cancer, a medical software company.

"We reviewed over 350 companies in the oncology and RWE/D space in 2018," Taranto said. The fund's investments covered diverse geographical areas including the US, Canada and Europe, financing series A, B and C rounds and had multiple co-investors.

In an interview last year, Taranto told GCV regarding GHI's evolution over the years: "Not a lot has changed with the fund since we started in 2010. The subtle change to the fund is around our strategy.

"When we first launched, the goal was to provide Merck optionality around M&A as they looked to enter new businesses. Though this remit is still there, we have begun to focus the portfolio and investing in companies that have a more direct and immediate impact on our core business.

"If they can be standalone and provide optionality or revenue, then that is an added bonus. One of the rewards of this change, as Merck has focused on oncology, is that we have done a number of investments in this space which have a real impact on patient's lives and the health ecosystem."

8

David Gilmour BP

David Gilmour took responsibility for petroleum company BP's venturing activities at the end of 2016 after running Air BP, BP's aviation fuel supply business. He now leads the BP Ventures' team as vice-president and has developed what he called in 2017 "a new strategy highlighting the importance of technology and venturing in enabling the transition to a lower-carbon economy".

The total BP Ventures fund now stands at over $500m, invested in more than 50 companies and 12 funds, the majority of which are actively managed by the team.

2018 was year two of BP's group strategy where venturing was elevated to one of four strategic priorities. As in 2017, the team increased in size, new offices were opened and annual capital invested grew, this time to over $100m.

During 2018, the unit invested more than $100m, of which, six were new portfolio companies – Israel-based ultra-fast charging battery technology developer StoreDot, UK-based digital energy monitoring company Voltaware, US-based workplace car maintenance services provider Zippity, US-based geoscience AI technology developer Belmont Technologies, US-based autoparts commerce software provider PartsTech and novel carbon dioxide capture process developer C-Capture. Sixteen follow-on investments in existing portfolio companies were also made.

The unit had successful exits in 2018, for example, US-based biolubricant base oil manufacturer Biosynthetic Technologies was acquired by US-based speciality hydrocarbon and fuel products supplier Calumet Specialty Products in April.

In July 2018, BP Ventures invested $10m in the Nio Capital US Dollar Fund to support the fund's work exploring opportunities in China's new energy vehicle ecosystem.

Deployment of portfolio companies' technologies is a key metric for BP Ventures. The unit tracks the number of companies whose technology was deployed as well as the value, as a component of a strategic value target against which the unit is measured.

In 2018, 16 of BP Ventures' portfolio companies had technology deployed into a BP business unit; deployments were made in BP's upstream, refining, retail and alternative energy businesses. 46 individual technology deployments took place.

Of particular note from an integration perspective are the following:
- BP and Johnson Matthey license their Fischer Tropp technology to Fulcrum BioEnergy.
- Field trial of Freewire technologies mobile charger in BP's flagship retail forecourt in Hammersmith.
- More than five projects under way with Beyond Limits across BP's upstream and downstream.
- Continuous BP Chemicals and Tricoya partnership to build integrated wood elements acetylation value chain in Hull.
- Proof of concept of Voltaware energy efficiency monitor with BP Retail to understand how power consumption in a retail environment and identify opportunities to reduce cost and overall consumption – now being deployed in the UK and the rest of Europe.

Of additional note is BP Ventures' new strategic technology venture alliance with AkerBP, creating opportunities for its portfolio companies to source new investment.

BP has just launched its first advertising campaign in many years – "Possibilities everywhere". Two of its portfolio companies, US-based advanced materials company Solidia and US-based biofuels developer Fulcrum Bioenergy, were featured in the campaign creating opportunities to showcase their offers to wide, international audiences.

The team under Gilmour's leadership is made up of experienced investment professionals. Meghan Sharp, managing director of the Americas, is this year's number two GCV Rising Star, recognising not only her deal quality but also her personal commitment to the diversity agenda within venture capital.

Akira Kirton, former managing director of Europe, the Middle East, Africa and Asia of the unit, was number four GCV Rising Star last year before moving internally to run chemicals and with Ignacio Gimenez stepping up to cover the region. Gilmour, who co-chairs GCV's London Symposium this year, was number 21 on GCV's Powerlist last year.

The BP Ventures team continues to grow in line with the fund and the strategic importance placed on venturing by the company.

Two experienced female appointments were made. Daniela Proske, a senior principal based in San Francisco, who joined with a CVC background from BASF Venture Capital, the corporate venturing unit of chemicals company BASF, and co-founded a life sciences company as head of finance which went public. Erin Hallock, who has a private equity background, joined from Business Growth Fund (BGF), the corporate venturing fund backed by Barclays, HSBC, Standard Chartered, Lloyds and RBS, as a UK-based principal.

Graham Howes was appointed managing director for BP Ventures Asia-Pacific investments.

Finally, as a mark of the fast-track development opportunities for talented commercial talent, one of the unit's younger principals, Shaun Healey, led half of its new deals in 2018.

In addition to venturing, Gilmour's responsibilities include technology commercialisation, as well as strategy and planning activities for group technology. His emphasis is on venturing as a means of business development. "Venturing is now front and centre from a business perspective," he explained. "My intention is that BP Ventures can lead to the development and growth of long-term businesses within the group."

It has certainly caught senior managers' attention, with business unit leaders, such as Bernard Looney, chief executive of BP's powerful upstream division, exploring US-based venture companies managed by Meghan Sharp.

Furthermore, Lamar McKay, deputy CEO of BP, said: "BP Ventures is playing an increasingly important role in tackling the dual energy challenge – both by identifying technologies that improve the productivity of our current businesses and by helping us transition to new reduced emissions models for heat, light and mobility provision. With a half-billion-dollar investment, and access to $200m capital every year, we have set up BP Ventures to build the future BP."

For Gilmour, who has a doctorate in inorganic chemistry from Oxford University and has responsibility for technology commercialisation and venturing activities at BP, as well as strategy and planning activities for group technology, these sorts of close connections being formed are helpful.

Before joining group technology in October 2016, Gilmour himself held roles as CEO and chief operating officer of Air BP and a number of different roles as marketing and technology director, strategy director, performance unit leader and global sales director for Castrol Marine.

9

Michael Redding ACCENTURE VENTURES

Michael Redding has spent nearly three decades at professional services firm Accenture's US-based office in California. In early 2015, he was appointed managing director of Accenture Ventures, firm Accenture's corporate venturing vehicle, to oversee strategic investments for the consulting firm.

When Redding and his Accenture Ventures team bring clients and startups together, reimagining and innovation are key drivers for transformation. This past year, Accenture Ventures went through one of its own transformations designed to make it even more impactful in the market and for its clients.

"It was a significant year of reinvention and elevation for us," Redding said. An expanded team with additional capabilities reaching across the globe and a new digital platform that supercharges users are the pillars of the new Accenture Ventures.

Redding added: "Accenture Ventures teams with and invests in companies that create or apply innovative enterprise technologies. These type of investments and partnerships enable us to co-innovate with our clients by matching their business opportunities with emerging technology startups to unlock their transformation potential and catalyse their growth."

When launched in 2015, Accenture Ventures focused on establishing a strategic minority investment program that makes targeted equity investments in technology startups providing products and platforms to Accenture's G2000 enterprise clients.

The goal of the investments was to catalyse organic services revenue growth for Accenture through the creation of innovative solutions from the cross-pollination of ideas from disruptive startups and clients. Critical to Redding's success was finding those startups that unlocked business transformation in such domains as applied intelligence, security, blockchain, extended reality and cloud – SaaS (software as a service), PaaS (platform as a service), IaaS (infrastructure as a service).

Redding and his team at Accenture Ventures developed a strong, repeatable process with robust governance to initiate and execute the investment transactions. Earlier investments aligned to Accenture's business included Vlocity with Salesforce Ventures, Apigee, which was later acquired by Google, and Docker.

Over time, it became clear, that a small core team, while efficient and effective, was not sufficient to meet the opportunity presented by the expansive Accenture global client base and the emergence of startup ecosystems around the world, not just in traditional "hot spots" like Silicon Valley and Tel Aviv. Paul Daugherty, Accenture's chief technology and innovation officer said, "I challenged Mike to define 'Accenture Ventures 2.0' in order to elevate the materiality of the impact Accenture Ventures was having on Accenture's client success and culture of innovation at scale."

To reinvent, reimagine, and elevate Accenture Ventures, Redding combined the existing investment team, which includes GCV 2019 Rising Star Pramila Mullan, with a larger "open innovation" program. The open innovation program had been previously established to act as a "bridge-maker" between startups, accelerators, and VCs with innovation programs at Accenture's enterprise clients. By combining the two, he established an unparalleled corporate strategic capability that he likes to describe as a systematic program of "local heroes, global champions".

As Redding describes it: "Innovation is risky. When an Accenture client is prepared to 'go out on a limb' to try a disruptive new idea in order to unlock new potential via a transformation, they want to find ways to mitigate some of the risk associated with using early-stage technologies and implementing the related organisational change needed. There is a greater comfort level when people can build trust in one another and collaborate to get it done."

On top of that, added Redding, these executives are stewards of the communities in which they work and live and want to both contribute to a thriving local economy while also building internal and external talent pools to support their future staffing needs. By having a local, in-market, Accenture Ventures team, Accenture can facilitate this virtuous local loop while still being able to draw from the best in the world from the global Accenture Ventures' network. So, Accenture Ventures facilitates its clients' digital transformations with the best "local heroes" while having full access to "global champions.

To achieve this, Redding rapidly expanded this framework of local Accenture Ventures teams so that there is now an Accenture Ventures team or representative in over 40 countries including multiple cities in major geographies such as the US, India, and China. This gives Accenture unprecedented "street level" visibility to the emerging startup scenes ranging from Sao Paulo to Dublin, to Bangalore and even Latvia. He also added the first permanent Accenture Ventures team in China and made Accenture's first investment in China, Malong – an artificial intelligence (AI) startup in Shenzhen.

One way they leverage this street-level view to help clients is by hosting innovation competitions. For example, more than 1,000 startups from around the world participated in the third annual Accenture Healthtech Innovation Challenge. Accenture brought together promising digital health startups with life science companies and healthcare organisations to demonstrate their innovative technology solutions designed to improve the way people access and manage healthcare. Ayasdi was named the 2019 challenge champion for their clinical variation management application which uses machine intelligence to identify the optimal way to conduct surgical and nonsurgical procedures.

To facilitate a truly effective global network, Redding also oversaw the launch of a new digital platform, the Accenture Partner Innovation eXchange (APIX). All 469,000-plus Accenture employees have full access to APIX to enable them to search, discover, review, and promote startups relevant to Accenture and their clients. Loaded with 385,000-plus external records, over 6,900 have been updated with insights from Accenture employees around the world leading to 1,000-plus meaningful interactions between Accenture, our clients, and startups.

While the new Accenture Ventures brings expanded capability, it continues to make strategic investments. Some recent notable examples include Upskill, enterprise software for augmented reality devices in industrial settings; Ripjar, AI for national and cybersecurity; Akumina, modern employee portals, with Avanade; and Quantexa, AI for financial crimes.

Accenture Ventures also invested in and formed an alliance with P97 Networks, a provider of secure cloud-based mobile commerce and digital marketing solutions for the convenience retail, fuel and vehicle-manufacturing industries.

Redding said: "We were introduced to this opportunity at a past GCVI Summit event in Monterey and have been collaborating on several initiatives including consumer experience, in-vehicle payments and other digital marketing solutions."

Underlying much of Accenture Ventures' focus is a commitment to innovation. In fact, Accenture Ventures operates under a framework called the Accenture Innovation Architecture, which uses an innovation-led approach to help clients develop and deliver disruptive innovations, and to scale them faster. From research, ventures and labs to studios, innovation centres and delivery centres, Accenture helps companies imagine the future and bring it to life.

According to Paul Daugherty: "Mike's integration of Accenture Ventures into a global network with a digital platform has acted as a force multiplier and underpinned Accenture Ventures strategic importance as a pillar of Accenture's Innovation Architecture."

10

Anna Patterson GRADIENT VENTURES

Since Anna Patterson founded Gradient Ventures (GV), the artificial intelligence (AI)-focused fund owned by internet and technology conglomerate Alphabet, in 2017, she has served as a managing partner for the unit.

Alphabet was formed in 2015 to act as an umbrella company for its alpha – internet technology provider Google – and its bets – diversified business interests.

The 2015 realignment involved the firm's early-stage investment arm, Google Ventures, and its growth-stage unit, Google Capital, being rebranded as GV and CapitalG, respectively.

Google Assistant Investments was also launched in March 2018 with the founder Ilya Gelfenbeyn as its head. The fund, as its name suggests, focuses on digital voice assistance ecosystem.

By early 2019, Gradient had already invested in 20 companies, and all been in relatively early-stage rounds. The latest of which include:

- Leading a $4m seed round for human resources platform software developer Sapling in February 2019.
- Leading a $7m series A round for English pronunciation training app developer Elsa in February 2019.
- Contributing to a $10.5m series A round for business messaging service NumberAI in January 2019.
- Leading a $7m series A round for autonomous dispatch and routing software developer Wise Systems in December 2018.

- Co-leading a series A 18m round for AI-empowered automated bookkeeping app developer Botkeeper in November 2018.
- Leading a seed $5m round for AI-empowered predictive analytics platform developer Canvass Analytics in August 2018.
- An $11m series A round for US-based testing system developer Test.ai in July 2018.

GV is investing directly from Google's balance sheet and can commit up to $8m a time, and it has the flexibility to pursue follow-on investments. The fund also has an engineering rotational program in place with Google, pairing its top talent with Gradient's portfolio companies.

The largest cumulative investment by GV, which now has $2.4bn under management, over the course of 2017 was likely in 3D printing technology provider Desktop Metal. GV led the company's $45m series C round in February before returning for its $115m series D in July.

The unit's exits included upscale coffee chain Blue Bottle, for which Nestlé paid $700m for a majority stake, and dark data platform Lattice, which was bought by Apple for $200m. Big data software provider Cloudera, Gram-negative infection therapy developer Spero Therapeutics and monoclonal antibody developer Arsanis respectively raised $225m, $194m and $136m from their initial public offerings.

Speaking to the New York Times in October last year, Patterson said she considered the AI hype to be "synonymous with the '90s" which she had experienced before, for example, "high-tech company" or "dot-com company". Startups back then claimed to be high-tech companies in order to attract VCs' attention. "Sometimes I am seeing companies that say they are AI companies, but one of the lines that I draw is if the maths can be done in Excel, it is not an AI company," she determined.

Patterson sits on the board of several companies – Square, Algorithmia, PullRequest and Test.ai. Before founding GV, Patterson had been a vice-president of engineering in AI at its parent since 2010, having joined Google in 2004 as a director of engineering where she helped build and grow Android and was involved in Google Play's launch.

Furthermore, she was Google's search index system TeraGoogle's architect and inventor. This project increased search results' index size to more than 10 times.

As an entrepreneur, Patterson co-founded Cuil, a search engine that categorised web pages by content, in 2005. After writing Recall.archive.org, a search engine of internet archive, she authored a piece titled Why writing your own search engine is hard in the computer magazine ACM Queue. She was also the co-creator of a search engine dubbed Xift.

Patterson received the Technical Leadership ABIE Award in 2016 for her outstanding work in AI and promoting diversity in the tech industry, and she made GCV's Powerlist last year.

She holds a bachelor's in electrical engineering and computer science at Washington University in St Louis and a PhD in computer science from University of Illinois Champaign-Urbana. After completing her PhD, she took up a research scientist role at Stanford University in AI, where she collaborated with Carolyn Talcott, a renowned computer scientist, and John McCarthy, one of the founders of AI.

11

Ethan Xie ALIBABA INNOVATION VENTURES

China-based e-commerce firm Alibaba was co-founded by Jack Ma, executive chairman, and Joseph Tsai, executive vice-chairman, in 1999, but it is Tsai who controls its investments and corporate venturing strategy along with his direct report, Ethan Ying Xie, managing partner of Alibaba Innovation Ventures, that have built up its market dominance.

Alibaba aims to be a company that lasts at least 102 years, so that it will have operated across three centuries, and many of the company's current plans hinge on the abilities of Xie, who joined Alibaba in January 2013.

With growth at payment platform Alipay, which is owned mainly by Alibaba's founders, Jack Ma and Simon Xie, rather than Alibaba, and financial unit Ant Financial, which Alibaba spun off ahead of listing expected sometime this year on the new Shanghai technology board, according to an unnamed delegate from the Chinese People's Political Consultative Conference, the group has strong potential inside and outside China.

Alibaba has complemented venture deals with significant outright purchases of companies, including Asian e-commerce platform Lazada, logistics platform Cainiao Network and Chinese on-demand services company Ele.me, according to one of Alibaba's portfolio companies, South China Morning Post in an article.

Alibaba also pointed in its results to "cash outflow of RMB22,888m ($3,329m) for investment and acquisition activities, including investments in Focus Media and Tokopedia" in its fourth quarter.

Apart from Ant Financial, Alibaba backed 11 unicorns in 2018, including China-based mobile news platform Toutiao.

In China, every 3.8 days a unicorn company was born in 2018, according to a report published in January this year by Hurun Research Institute. Chinese unicorns, which are worth an aggregated $700bn, grew from 2017's 120 to 186 by the end of 2018 – a 55% increase. Ant Financial and Toutiao dominate one-third of the Chinese unicorn market which is an indicator of how important Alibaba is, even excluding their track records outside of the country.

Alibaba first began investing heavily in 2013 when Xie joined. Tsai summed up the vision when he said in 2013: "Alibaba is run by entrepreneurs, and we believe in supporting entrepreneurs with great vision and a strong sense of mission for their companies."

At that time, Alibaba was launching an investment arm in the US to seek startups working in the e-commerce and emerging technologies spaces. It has since scaled up in the US, including leading the $793.5m series C round for augmented reality company Magic Leap in February 2016 and joining October 2017's $502m D round – a second tranche was executed in March 2018 by Saudi Arabia's Public Investment Fund and other new investors including Axel Springer Digital Ventures, the media group's CVC unit, thereby making it a $963m D round.

Leading such a high-profile round affirms Alibaba's status as one of China's, and the world's, corporate titans. Rony Abovitz, founder, president and CEO of Magic Leap, said: "We are excited to welcome Alibaba as a strategic partner to help introduce Magic Leap's breakthrough products to the over 400 million people on Alibaba's platforms."

As part of the round, Tsai joined Magic Leap's board. Tsai was part of Alibaba's founding team in 1999, along with Simon Xie and Ma, having previously been a private equity investor at Sweden-listed Investor AB. Alibaba's senior team is experienced in venture investing, with CEO Daniel Zhang leading its strategic investments in Haier, Intime Retail, which he chairs, and Singapore Post. Ma also sits on the board of SoftBank, a major shareholder after its earlier corporate venturing deal to back Alibaba's growth. US-listed Yahoo also owns a substantial corporate venturing stake in Alibaba.

They are, therefore, well-qualified to judge a good investor and rate Ethan Xie highly, as do his peers. When Xie ran a workshop at the GCV Academy in Shanghai, he scored 4.5 out of 5 for the program presentation and was described as having "very good local knowledge and a well-respected brand in CVC", according to Andrew Gaule, who headed the academy at the time.

In an interview held in July last year with 36kr, Xie said: "Alibaba is essentially a commerce company. The success of an investment is not based on financial returns, but rather on the strategic synergy with our main business units and see if there is a chemical reaction of 1+1>2 between Alibaba and the invested company."

Adding that in 2018, Alibaba had focused on AI, chips, semiconductors and storage, Xie said: "The ability to generate business value is the only criterion for Alibaba to evaluate the success of its strategic investment."

Alibaba also makes forward-looking investments unrelated to its core business, such as smart travel, focusing on the company's technological innovation and business model innovation.

Alibaba's strategic investment department has three teams – one being the TMT (technology, media and telecom) Xie is responsible for, and the other two being entertainment and retail. The three teams also work with different business units.

For example, Xie said: "I cover Alibaba Cloud, enterprise services, enterprise app Ding Ding (also known as DingTalk), Alibaba's technical support department AIS, and so on. The investment team will go to the weekly, fortnightly or monthly meetings with business units to find out what they are going to do.

"When we invest in any project, we have to deal with the business units. Whether a company is discovered by the investment team or by the business units, there is a lot of communication going on in the early stages."

Albeit the differences between departments, their ultimate goal is the same, "that is, invest in this company if it can have long-term value for the Alibaba Group as a whole".

In mergers and acquisitions, Alibaba's attitude toward entrepreneurs is for them to stay together. For example, Alibaba acquired UCWeb in 2014 for $4.7bn – the largest Chinese internet M&A deal – and its CEO Yongfu Yu became president of Alibaba UC's mobile business group.

Xie said: "The most important thing is the entrepreneur's own ability. If they can reach the M&A step, it shows that they have the ability to do so. In the end, whether or not you can integrate into Alibaba's team will ultimately be reflected in your ability.

"In fact, you should treat the founding team of the acquired company as a normal talent flow. I do not want to distinguish whether someone came in through M&A or if we recruited them. There is no essential difference. The core is that after you integrate – are you in a better state to do better things? That is the most important question."

Based on its activity in the past 12 months, Alibaba seems to have no plans to reduce its corporate venturing efforts. If such dealmaking continues, Xie, with a science degree from Tongji University and a post-grad from University of Sydney, could feel he has already packed a 100-year history into his short time at Alibaba.

12

Annabelle Long

BERTELSMANN ASIA INVESTMENTS

Forbes China publishes at the beginning of every year a ranking of China's top venture capitalists. Annabelle Yu Long, managing partner at Bertelsmann Asia Investments (BAI), the China-based corporate venturing arm for Germany-headquartered media group Bertelsmann, was named the sixth most successful investor this year.

Chairman and chief executive of Bertelsmann Thomas Rabe said: "Investments in young digital companies with innovative business models play an important role in the implementation of our strategy. Through these investments, we ensure the transfer of knowledge both about digital trends that support our transformation and about promising markets. Our investment fund Bertelsmann Asia Investments, in particular, is very successful."

That this was Bertelsmann's most active region for corporate venturing and highlighted in its full results speaks eloquently to Long's performance and skills, who has also been supportive of those eventual role models for youth.

As this year's GCV Rising Star Iris Cong, a senior investment manager, aptly said: "We want to become the best unicorn hunter in Asia." BAI is an expert at catching unicorns at an early stage, according to a ranking by professional services firm Deloitte and investment advisory services firm China Venture in 2017. Ever since BAI was launched in 2008 by Long, it has had 10 initial public offerings (IPOs) in 10 years, having contributed to more than 10% to the group's profit in 2017.

Bertelsmann said: "Since its establishment, Bertelsmann's Chinese fund has supported multiple startups in successfully going public – four of them in 2017 alone. In more than 10 other cases, BAI holdings were sold directly to other companies, again generating significant profits for BAI. The Bertelsmann Investments division, of which BAI is a part, generated total EBIT of €141m in 2017, after €35m in 2016, and thus made a significant contribution to Bertelsmann's Group net income."

Germany-based Bertelsmann is one of the world's oldest and largest media, services and education groups with more than 119,000 employees and €17.2bn ($19.1bn) in revenue in the 2017 financial year. Since 2017, Bertelsmann, which traces its book publishing back more than 180 years, has bedded down its focus on education as its third main business line alongside media and services.

For example, China-based English language learning platform Jiliguala, which secured an undisclosed amount of funding from BAI in November 2018, whose intellectual property was acquired by Canada-based book publisher Penguin Random House, helped sell more than 10,000 children's books in three months.

In addition, China-based parenting and pre-school education advice provider Xiaobu, which received a pre-series A funding of undisclosed amount from BAI in March 2018, helped sell 15,000 Penguin Random books in nearly four months.

Cong explained this collaboration in detail for her Rising Stars profile earlier this year: "Bertelsmann was significantly expanding its stake in Penguin Random House, the world's leading trade publishing group in 2017. Moreover, Penguin Random House is one of the biggest children's book publishers in the world.

"When BAI explores opportunities in the education sector, I find a lot of synergies between Bertelsmann business and startups. These top-tier online players could be perfect distribution channels for Penguin Random House children's books in China."

Bertelsmann Investments has four funds – Bertelsmann Asia Investments (BAI), Bertelsmann Brazil Investments (BBI), Bertelsmann India Investments (BII) and Bertelsmann Digital Media Investments (BDMI), Bertelsmann Investments – through which Bertelsmann has more than 160 shareholdings around the world.

And while there might be four growth regions, there is clearly one that is dominant – China. With more than 130 investments over the past decade since Long founded BAI in 2008, the group now manages more than $3bn

Long, who also sits on the board of listed companies Tapestry, BitAuto, CDEL and iClick, as well as private companies Meili, Bigo Live, 352air and Jike, has built the team from the ground up.

She is also CEO of the Bertelsmann China corporate centre and on the company's group management committee (GMC), which advises the executive board on corporate strategy and development.

Long reports directly to Rabe who effectively runs the company through the GMC. She said last year: "Bertelsmann Asia Investments is one of the best-known and most successful funds in the Chinese investment scene at this point. We continue to put into practice what we set out to do 10 years ago. And we are pleased that, with such a small team, we are able to make a sizeable contribution to a global media corporation like Bertelsmann.

"There is probably no other company at Bertelsmann that generates such a high profit per capita as the six-member BAI team – and we're proud of that, of course. Every year we have the same expectation and aspiration: to be better than the year before. So far, we have always managed that – and I'm very confident that this will continue to be the case since we invest in growth regions and growth sectors. We are surfing a very positive, sustained trend, so it's not an unrealistic expectation."

BAI's success did not happen overnight but with time and perseverance. BAI made its first investment in China-based online education platform operator China Distance Education Holdings (CDEL) in April 2008. Today, BAI has more than 85 portfolio companies, and its most recent investments included leading financing rounds for Sufficient Goods in March, 91duobaoyu in February and Tapai in January.

But while Long has made a success of BAI, the groundwork for Long's success was laid beforehand. After her MBA from the Stanford Graduate School of Business and a BSEE from the University of Electronic Science and Technology in China, Long joined Bertelsmann in New York in 2005 and worked as a principal at Bertelsmann Digital Media Investments before founding BAI.

Before joining Bertelsmann, Long started her career as a TV anchor and became a producer with a variety of highly rated, award-winning television and radio programs in China, the company said.

And her results have been recognised outside of the company. Long was named a Young Global Leader (YGL) by World Economic Forum. She is the first person to join YGL's Advisory Council from China and also serves as a member of its Global Agenda Council on the Future of Media, Entertainment and Information. Long was named Fortune China's 25 Most Powerful Women in Business of 2017 and 2016 ChinaVenture – Financial Times China Top Investor.

13

Rob Salvagno CISCO INVESTMENTS

Rob Salvagno is head of corporate development at US-based networking equipment provider Cisco and its corporate venturing capital vehicle Cisco Investments.

Cisco has so far acquired around 200 companies, while Cisco Investments invests an estimated $200m to $300m a year, from early to late stages. It has more than $2bn of investments in more than 120 companies and 45 venture funds.

In December last year, Cisco acquired two companies – US-based fabless semiconductor technology producer Luxtera for $660m as reported by Bloomberg, and US-based network analytics platform provider Singularity Networks for an undisclosed amount.

Regarding the former acquisition, Salvagno said at the time: "As system port capacity increases from 100GbE to 400GbE and beyond, optics plays an increasingly important role in addressing network infrastructure constraints, particularly density and power requirements."

And about the latter, he wrote on Cisco's blog: "Service providers today are challenged to meet intense demands for always-on connectivity powered by reliable, high-speed bandwidth. They need a holistic view of network performance to anticipate and proactively manage their traffic patterns. With network automation software and innovative data collection techniques, we are helping our service provider customers transform how they operate their infrastructure."

This echoes Salvagno's discussion in January last year at the Global Corporate Venturing and Innovation Summit the unit's investment strategy and its progress since he stepped into his leadership role four years ago.

Salvagno, who runs a team of more than 40 and reports to Cisco's chief financial officer Kelly Kramer, said having the same team working on both investments and acquisitions had been key in driving the unit's success. He added: "Although there is still a long way to go, we have the opportunity to be a top investor. We do a great job at tracking innovation, so what we really need to do now is build our core value proposition."

This, Salvagno said, was crucial for a unit's success. When setting up a unit, CVCs should first determine their investment approach. Was the goal to strengthen existing businesses, or to track innovation outside that? "These are two different philosophies, and you need to be clear about them both internally and externally," he said. "There is a lot of money out there, so you really have to look at what makes you unique. It is about believing in your core value proposition, and how it may benefit your portfolio companies."

The company in October 2015 promoted Salvagno after Hilton Romanski, previously senior vice-president of corporate development, became chief strategy officer. Romanski, however, left Cisco in

September last year to join private equity firm Siris Capital and was replaced by Anuj Kapur, formerly senior vice-president of networking and security.

Salvagno had joined Cisco at the end of the 1990s dot.com boom, having been a tech investment banker at storied firms Donaldson, Lufkin & Jenrette and PaineWebber after graduating in economics at Stanford University in 1997.

Together, corporate development and Cisco Investments have a worldwide presence with teams covering the US, Israel, China, Asia-Pacific, Japan and Europe.

Founded in 1993, Cisco has committed to multiple VC funds, notably SoftBank's China fund, which invested in online retailer Alibaba. Last year, Cisco said it was committing to a new fund called Catalyst Labs Fund I, a $500m venture capital fund according to a regulatory filing, being set up in October by Jon Sakoda, a 12-year veteran at VC firm New Enterprise Associates. Cisco's strategic priorities are in the areas of data centres, cloud, security, big data, internet of things and core network equipment.

Recent commitments in India have shown the country's importance to Cisco. Cisco has long been active in India, having pledged in 2010 to invest $200m in the country over a three-to-five period. It allocated $40m to early-stage startups in the country in 2014 before expanding the initiative to $100m in 2016, where about 50 projects have been completed, such as 10 innovation labs, three smart city showcases and a cyber-range.

Cisco Investments has funded 20 India-based startups and in March last year, it committed an undisclosed amount to venture capital firm IDG Ventures India's third fund, the Economic Times reported.

In February 2018, Cisco became a limited partner in VC firm Stellaris Venture Partners' first fund, which has a $100m target. The fund has already secured capital from enterprise software producer SAP and IT services firm Infosys.

At the time, Salvagno said: "Cisco has a rich history of participating in India's technology ecosystem and investing directly in local innovation over the past decade."

And he added in June 2018 in a statement: "I am very bullish on India. I see our participation, going forward, only increasing. I think that is reflective of where the market is going, and that is also reflective of how Cisco is in a position to leverage that. We think that there is more opportunity for enterprise and B2B (business-to-business) plays in India."

Its history is equally rich around the rest of the world under Salvagno.

14

Wei Liu BAIDU VENTURES

China-based internet group Baidu hired Wei Liu in February 2017 as chief executive to run its then nascent $3bn corporate venturing unit, Baidu Ventures, formed a few months earlier in October 2016.

Baidu Ventures is an early-stage independent investment fund focused on deep technologies empowered by artificial intelligence (AI), for example, chips, sensors, cameras, communications and algorithmic innovations.

At its sister unit Baidu Capital, Wenjie "Jenny" Wu was hired from online travel agency Ctrip in November 2016 as a managing partner but left in November 2018 to join agribusiness conglomerate New Hope Group as a chief investment officer. Jinling Zhang, a former vice-president at smartphone producer Xiaomi, came on board in January 2017 as chief financial officer.

and 2019 Saman Farid joined Baidu Ventures in 2018 as a partner and head of the US

who founded the company in 2000 and also acts as chairman of the fund, wrote a letter his employees, saying: "Winter is coming," signalling that an economic restructuring is nter to every company" but affirmed this would be an opportunity for Baidu.

nen the year grows cold, do we see the qualities of the pine and the cypress," citing a vergreen plants. "It is high time that Baidu stepped forward as a platform company."

AI would be the most significant aspect to emphasise this year as it could help Baidu's costs and that "historical transformation of AI is penetrating various industries, unleashing enormous growth potential and room for upgrade".

Li added that Baidu had a 27% growth in its Q3 revenue in October to RMB28.2bn ($4.11bn) while its 2018 revenue had been more than RMB100bn ($14.6bn). Baidu in its annual results for last year said its "total other income was RMB11.8bn ($1.72bn), increasing 111% from 2017, mainly due to gains from the disposal of Du Xiaoman, (financial services), and fair value gains on private company investments".

Under Liu's leadership, Baidu Ventures made numerous investments in the AI, virtual reality and augmented reality technologies.

In March this year, it participated in a $14.5m series A round for US-based AI-equipped business automation technology developer Automation Hero and a seed round of undisclosed amount for China-based children's education platform operator Proud Kids.

In February, Baidu Ventures partook in a series A round of eight-digit dollar sum for China-based computer vision technology developer Aqrose Technology and a $15m series A round for US-based robotics systems developer Veo Robotics.

In January, moreover, it was involved in a $10m series A round for China-based digital information encryption and decryption chip manufacturer Serica Integrated Circuits Technologies, a RMB100m series B round for China-based 3D optical technology developer Light Theto and led a $3m angel round for China-based AI-empowered unsupervised learning, interpretability, decision-making and anti-fraud technologies developer RealAI.

Before joining Baidu Ventures, Liu had been a partner for six years at Legend Star, a venture capital subsidiary of conglomerate Legend Holdings. He joined Legend Star in 2011 and in his time at the unit its investments included speech recognition technology developer AI Speech and educational app developer Knowbox.

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Bill (Zhaoyu) Qian JD DIGITS

Bill Qian, formerly head of cross-border M&A at China-based e-commerce firm JD.com's financial technology spinoff, JD Digits – formerly known as JD Finance – was promoted to general manager of corporate ventures in July last year.

Qian oversees investments in enterprise services, industrial internet-of-things and consumer internet technologies.

Last year, he oversaw an RMB168m ($26.2m) series A round for digital contact platform Jiatui Technology which JD.com and JD Digits invested in May, and a $15.3m series B round for cloud services provider operator BoCloud which JD.com invested through JD Digits and its cloud services arm JCloud, in July.

When news aggregation platform Qutoutiao, which was backed by China-based internet company Tencent and China-based online brokerage backed by consumer electronics company Xiaomi, went public in an $84m initial public offering on the Nasdaq Global Market in September last year, JD.com invested about $14m.

Other deals JD Digits co-led include a $10m series B round for file management and collaboration software developer FangCloud Technology in October 2018 and a $3m seed round for children's sports and entertainment equipment developer 700Kids in January this year. It also participated in a $210m series B round for online car trading platform Huashenghaoche in October 2018.

Earlier deals Qian was involved in included a series A round of undisclosed amount for Meiguanjia, an internet operating system provider for the beauty industry, in May.

Having joined JD in July 2015 as head of crowdfunding business strategy, Qian initially concentrated his efforts on equity crowdfunding as part of a year-long stint in which it raised more than RMB1.1bn ($162m) for 89 startups.

Concurrently, Qian helped JD Finance launch JD Innovation Ventures, the early-stage fund now renamed Qianshu Capital. Qianshu typically pursues series A deals and earlier for consumer-focused startups, in areas such as lifestyle, fashion, cosmetics, health and entertainment.

Some of Qian's portfolio companies from this time included retro radio manufacturer Mao King, honey and bee product supplier Dengfenglai and suitcase producer 90Fun, all of which have online stores on the JD platform.

JD.com for its annual results for last year noted an "increase in investment in equity investees and investment securities of RMB22bn [$3.3bn]".

A senior director at one of the large China-based corporate venturers said: "The markets were choppy in Q4 [fourth quarter] 2018 but private markets have remained fairly stable and companies are increasingly relying on private capital even well beyond the $1bn valuation benchmark.

"The density of unicorns within a given segment or vertical, and the sheer growth in the number of private unicorns in China (and globally) is also staggering, which begs the question whether the $1bn unicorn threshold is that meaningful of a benchmark in differentiating companies in the current environment."

Qian moved across to head JD Finance's cross-border M&A in February 2017, helping form joint ventures in Thailand with retail conglomerate Central Group and Singapore-based principal investment firm Provident Capital in September the same year.

Before joining JD, Qian had been a vice-president of corporate development at US-based internet-of-things acoustic processing technology developer One Llama Labs from 2014 to 2015, having joined from investment firm Trustbridge Partners in Hong Kong and Shanghai where he led eight deals and invested more than $100m where he had spent four years. Qian started his career in 2007 at Air China as an operation manager before switching to China Development Bank as an investment analyst, for a year each.

He holds a bachelor's degree in chemical engineering from Shanghai Jiao Tong University – where he had been vice-president of student union of a 40,000 student body – a master's degree in finance from Nanyang Technological University – where he ranked first in class achieved dean's honour list – and an MBA from University of Toronto – where he came in first place in a venture capital and investment competition and second place in a private debt case analysis competition.

16

Sue Siegel GE VENTURES

Sue Siegel is chief innovation officer (CIO) at industrial conglomerate General Electric (GE) and chief executive of its corporate venturing unit, GE Ventures, with long-term colleague Marianne Wu as president of GE Ventures.

Siegel joined the company's healthtech scheme Healthymagination initially in 2012, ascending to CEO of GE Ventures in 2013 to help the unit evolve from predecessor GE Capital, before eventually being promoted to CIO at its parent in 2017.

Ahead of her expected retirement from GE this summer for a portfolio career, Siegel reports directly to Larry Culp, GE's chairman and CEO since October, and her role as CIO includes being a member of the company's capital allocation and portfolio management governance and helping it grow, incubate and accelerate horizontal, adjacent and transformational businesses.

However, financial challenges at GE, including an $11bn charge, had seen liquidity concerns and shares down by 65% in the past two years amid a break-up of the company and reports indicate it could spin out GE Ventures into a separate entity, according to a report in MedCity News. Details are still being worked out, but one possibility is that Mohr Davidow Ventures would take over the unit.

Siegel herself joined GE from venture capital firm Mohr Davidow Ventures along with partners Marianne Wu and Alex De Winter, selected respectively as GCV's Rising Stars in 2017 and 2019.

Siegel's background was in healthcare investing for Mohr Davidow from 2007 and a career in the industry stretching back 30 years to 1985 at chemicals company DuPont and Bio-Rad Laboratories, then later as president of both Affymetrix and Amersham – acquired by GE – and before that as a

student in Boston and Puerto Rico.

"The pace of change will never be as slow as it is today," she said when she co-chaired the third annual Global Corporate Venturing and Innovation (GCVI) Summit in 2018.

"Change is going so fast," she added. "If you think of it, today is as slow as it is going to get; in the future, you will see the current time as slow, which means things are only going to accelerate – which is a scary perspective. We already feel how tumultuous everything is, and how we struggle to keep up with all the technologies. And yet things are only going to get faster.

"What this means from a CVC point of view, is that we cannot get complacent. We need to continue challenging ourselves."

At this year's event, where Siegel became chairwoman emeritus, she said that corporate venturers "are ambassadors that serve as the bridge between the entrepreneurial ecosystem – entrepreneurs and venture capitalists – and our corporate entities, which sometimes view them as a threat" and while challenges may lie ahead, she declared that "corporate venturing is a discipline that is here to stay".

Siegel also took the opportunity to implore the audience – particularly men – to support diversity and ask themselves what they had done to increase it, noting that "our strength lies in our diversity".

GE Ventures' five main units have been equity investing, which invests in and partners startups, GE Licensing, New Business Creation, Healthymagination and Catalyst. Under Siegel, GE Ventures has become the primary unit backing earlier-stage entrepreneurs.

Siegel also emphasised the importance of collaboration among players in the field. "Corporates understand that innovation is broad and diverse and that we cannot do it alone. Partnerships are key and GE welcomes partners in the growth journey."

Siegel was recognised in Fortune's list of 34 Leaders Who Are Changing Healthcare and was named one of the Top 50 Most Powerful Women by the California Diversity Council. In January this year, she joined genetic technology provider Illumina's board of directors.

Outside of co-chairing the GCVI Summit 2018, her leadership positions at conferences have been focused on healthcare, including Harvard Partners' Healthcare Innovation Advisory Board, the Scientific Advisory Board of Brigham and Women's Hospital, Stanford Medicine Board of Fellows, University of California's Innovation Council and USC's Schaeffer Centre for Health Policy and Marshall School of Business Board of Leaders.

17

Wen Jiang XIAOMI

In November 2017, Lei Jun, co-founder and billionaire CEO of China-based phone maker Xiaomi, said: "In China, in the past four years we have invested $4bn in over 300 companies. In the next five years, we will invest [$1bn] in 100 companies in India. We will basically replicate the most successful ecosystem business model of China in India.

"We will have all types of services and products and integrate them. That is the Xiaomi business model. We focus on a few key things and everything else, we let our partners provide. We have reached just a huge scale in seven years because of this partnership and affiliation model.

"Any apps that increase the frequency of usage of smartphones – we are interested in this. As long as it is related to acceleration of mobile internet. We only pick minority stakes. The purpose is to work closely on the business side with these companies."

According to the Economic Times, earlier this year, Xiaomi outdid its South Korea-based peer Samsung to lead the smartphone market in India and invested Rs35bn ($510m) in its India-based subsidiary Xiaomi Technology India in two tranches in January and March. It was the highest amount since it entered the country over four years ago.

While only a fraction of these 300 investments have been made public, Xiaomi's focus on apps to boost usage often leads to Wen Jiang, its entertainment and content lead investment manager, and, before 2014, an investment manager at personal computer maker Lenovo Group's corporate venturing unit, Legend.

In November 2017, Xiaomi co-led a series B round for China-based review and self-publishing platform operator Jinying and India-based news aggregator mobile app RozBuzz's A round alongside Shunwei Capital.

Shunwei Capital is the venture capital firm co-founded and chaired by Lei for early to series B rounds of up to $10m and which would be a co-investor alongside Xiaomi for the Indian deals.

Tuck Lye Koh, chief executive and founding partner of Shunwei, said the top 10 to 20 most-downloaded mobile apps in China should serve as references to startups looking to succeed in India.

In China, the most popular apps include mobile-payment apps, navigation apps, search engines, news readers, and music streaming services.

Over the past two years, Shunwei or Xiaomi or both have invested in India-based ShareChat, video app Clip, mobile gaming Mech Mocha's $5m round, $3m in second-hand car market Truebil, e-books and self-publishing platform Pratilipi and microlending platform KrazyBee's $8m A round.

Xiaomi made its first publicly-disclosed investment in India in April 2016, a $25m round in online entertainment company Hungama Digital Media Entertainment, less than a year after a scion of Indian industry, Ratan Tata, invested in the Xiaomi's own last equity round.

Xiaomi had led the Hungama round as part of Wen Jiang's strategy to introduce local content on Xiaomi's Mi smartphones.

Last summer, Xiaomi made at least three investments in India. In September, it participated in a $99.2m series C round for social networking app developer ShareChat. Shunwei Capital led the round, while Morningside Ventures, Lightspeed Venture Partners, SAIF Partners, Venture Highway and an unnamed Cayman Islands-based fund also contributed to the round. The round reportedly valued ShareChat at about $458m.

In August, Xiaomi co-led two series A rounds of $13.4m and $7m respectively for e-commerce consumer finance provider ZestMoney and chat-based entertainment platform developer Samosa.

In a Wired article last year, Xiaomi had initially relied on a dual business model of selling hardware products and online services. Most revenues came from the sale of affordable phones and smart TVs, which serve as platforms for Xiaomi's online services that provided the most profit. Xiaomi offers small loans to Xiaomi phone users. However, the company saw a fall in the sale of its Mi phones in 2016 to a reported 41 million units from a reported 70 million the year before, which lead to the development of its open ecosystem corporate venturing model and the company borrowing $1bn in debt In July to fuel its development.

Xiaomi set up offline retail stores but created an ecosystem of about 100 startups as partners to provide Xiaomi with other Internet-connected home and tech products that would draw customers to its stores, Wired reported.

Wang Xiang, Xiaomi senior vice-president and who used to run one of its earliest corporate venturing investors, Qualcomm's, China business, said to Wired: "Buying a phone or TV is a low-frequency event. How many times do you need to go back to the store?

"But what if you also need a Bluetooth speaker, an internet-enabled rice cooker, or the first affordable air purifier in China – and each one of those products is not only best-in-class but costs less than the existing products in that category? Our ecosystem even gives customers unusual new products that they never knew existed. So, they keep coming back to Xiaomi's Mi Home Store to see what we have got."

The combination of entertainment, content and affordable hardware is a powerful platform and Xiaomi went public on the Hong Kong stock exchange last summer which valued the firm at $100bn.

18

Vanessa Colella CITI

After overseeing Citi Ventures' global investment strategy, accelerator program and internal strategic growth initiatives as a managing director for three years, Vanessa Colella was named head of at US-listed bank Citi's corporate venturing unit in 2017 as chief innovation officer.

Citi Ventures prides itself for adding value to partners by co-investing in startups with other venture capital firms. It said in a statement: "We make a point to not require exclusivity. Startups are not just looking for an investment, they are looking for a partner.

"We believe that partnerships can be made with innovative companies, not with the intention to take over, but to mutually help each other and scale great ideas. Our goal is to be the bridge that connects our portfolio companies to the best partners in the banking world, helping them land a commercial deal or launch a product in partnership with Citi. Their success is how we measure our success."

The number of investments participated in:

To date, Citi Ventures has made 68 investments, 20 of which including follow-on investments, were made in 2018, having co-invested with more than 40 VCs and CVCs in five different countries – Israel, US, UK, Singapore and Canada.

It has had 17 exits, four of which took place in 2018:
- US-based personal finance management app developer Clarity Money was acquired by Goldman Sachs Bank USA, a subsidiary of investment banking group Goldman Sachs for $100m in April.
- US-based blockchain technology-focused fintech provider Chain merged with fintech producer Lightyear in September.
- Canada-based invoicing tool provider Joist.
- US-based cybersecurity software producer Cylance.

Citi Ventures invests in five key areas that are important to the financial services ecosystem:
Financial services and technology: Identifying emerging trends and new models in banking and financial services.
Data analytics and machine learning: Using data in new ways to drive value and efficiencies.
Commerce and payments: Uncovering ways to better engage consumers by providing innovative offers and leveraging new payments rails and infrastructures.
Security and enterprise information technology: Proactively solving for next-gen security threats and fraud mitigation and enabling flexible infrastructure.
Customer experience and marketing: More effectively acquiring, retaining, engaging, and serving customers, while enabling remarkable client experiences across all channels.

Citi funded and partnered US-based business financial management software provider HighRadius to use automation and artificial intelligence (AI) to bridge the gap between accounts payable and accounts receivable in business-to-business payments.

Traditionally, accounts payable and accounts receivable have been separated, but by using technology to move toward automation, banks can unite them into a more streamlined, unified way.

In July 2018, the unit also announced a strategic partnership with HighRadius to launch Citi Smart Match, which leverages HighRadius's proprietary AI and machine learning (ML) technology along with Citi's own proprietary assets. The partnership is designed to automate manually intensive processes, reduce costs, decrease DSO (days sales outstanding) and optimise working capital.

Citi operates in 90 countries and has the largest receivables business in global banking, so its partnership with HighRadius helps address a major client pain point.

Citi Ventures also financed and partnered US-based risk management software developer Feedzai to integrate Feedzai's transaction monitoring platform, powered by advanced ML technology, into its own proprietary services and platforms to provide Citi clients with enhanced control and risk management for payments transactions.

The strategic partnership with Feedzai demonstrates Citi's deep commitment to using technology to drive innovation. With the help of Feedzai's solution, Citi can scale rapidly in an effort to deliver value to clients, allowing them to make payments securely, efficiently and without friction, across the globe.

Feedzai's ML technology will automatically adjust controls to monitor discrepancies and changes in client payment behaviour, allowing for the analysis and identification of potential anomalies in affected payments before they are sent for clearing. It will do this while ensuring that payments are processed quickly and efficiently.

Citi Ventures added: "Citi expects to be live with a new solution leveraging Feedzai's technology in 2019."

Citi Ventures originally invested in US-based customer engagement technology developer Braze, formerly Appboy, during its $50m series D funding round in August 2017 and made a follow-on investment in October 2018.

Citi Ventures said: "Braze is a customer engagement platform that automates sending intelligent, relevant, timely and personalised messages to customers across all channels, including mobile, web, email, and other connected devices. Citi invested in and partnered Braze to drive customer loyalty with Citi customers through its artificial intelligence-driven lifecycle engagement platform. Through Citi Cards and Citi FinTech teams, Braze's technology powers Citi's mobile messaging capability, providing its customers with intelligent, authentic and relevant contextual messaging."

After Colella having ranked third as a GCV Rising Star 2016, she ascended to the Powerlist from 2017 for three years consecutively. Its stellar team members Victoria Cheng and Travis Skelly, both senior vice-presidents, were also featured as Rising Stars in 2018 and 2019, respectively.

Under Colella's leadership, the unit has also added more people to its team to cope with its growing portfolio in Israel.

A Massachusetts Institute of Technology and Columbia University graduate, Colella wore a number of hats before coming to Citi. She had been a partner at McKinsey, entrepreneur-in-residence at US Venture Partners, senior vice-president of insights at Yahoo, a seventh and eighth-grade science teacher and author of a book on agent-based modelling.

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Bonny Simi JETBLUE TECHNOLOGY VENTURES

Bonny Simi is president of JetBlue Technology Ventures (JTV), the wholly-owned venture subsidiary of US-based JetBlue Airways.

JetBlue Technology Ventures (JTV) not only invests in startups, but also introduces them to JetBlue as a potential customer. JTV is looking for a wide range of innovations to enhance all aspects of JetBlue's business.

It is a first in a long tradition for the company. Robin Hayes, CEO of JetBlue Airways said: "JetBlue has always been a forward-thinking airline and we want to stay ahead of new technologies to continue improving the entire travel experience for our customers. JetBlue Technology Ventures allows us to invest in and shape the future of our industry through the strategic partnerships the team is building with startups innovating in travel and hospitality – from solutions alleviating the pain of flight delays to affordable electric aircraft."

Since its inception, JTV has identified and reviewed more than 2,500 startups and participated in 23 deals. JTV introduced 14 startups, half of which are JTV's portfolio companies, to its parent as suppliers or partners in some capacity. Its portfolio includes startups that will reduce cost, increase revenue, improve customer service and optimise operations.

JTV seeks to demonstrate significant strategic impact within two years and modest financial returns within seven. With respect to the strategic impact, several proof of concepts and portfolio company integrations have already demonstrated results for JetBlue and were featured during JetBlue's 2018 Investor Day presentation. For example:

- Gladly is a startup introduced to JetBlue via JetBlue Technology Ventures, and is an omni-channel customer service tool that treats customers not as individual passenger name records or reservation numbers but as a holistic person, aggregating all the contacts that the airline has had with a customer in one view. JetBlue has implemented Gladly across three communication channels and it is being used by all our 2,000 customer support crewmembers. 10 months since its launch, JetBlue is seeing reduced costs in the contact centre and increased customer service.
- ClimaCell is another example of a startup found by JTV that is having a positive impact at JetBlue. It was founded by a group of entrepreneurs from Massachusetts Institute of Technology and Harvard and discovered that cell signals attenuate differently depending on the type and intensity of precipitation. This allows them to sense weather in a much more precisely than traditional weather radar. JetBlue trialled the aviation solution for six months at Boston's Logan Airport, to assist the ramp operations team with predicting lightening, fog and snow – all which impact ramp operations. Eventually, the data from ClimaCell could help reduce costs associated with unnecessary cancellations and delays, and increase safety on the ramp.

In addition to bringing JetBlue startup, JTV also designed and runs a signature collaborative innovation sprint program with different JetBlue business units to help them maintain a fresh outlook on the future. These programs are 12-week JTV-driven engagements where JTV helps the business unit understand what the future of their sector looks like. JTV casts a wide net to find a large group of startups that fit within the engagement's theme and then thoughtfully reviews and whittles down the list to a handful of startups that pitch to JetBlue leaders for potential partnerships and pilots. JTV has conducted eight innovation sprints so far with various business units, including customer support, benefits, and technical operations, that have led to several successful startup proofs of concepts and pilot programs.

JTV is also a strategic adviser and partner to JetBlue's new subsidiary, JetBlue Travel Products (JTP), which consists of the JetBlue Vacations brand and other non-air travel products including travel insurance, cruises and car rentals. The objective is to provide travel services to customers in a fully integrated and seamless way that hasn't been done before. JTV introduces startups to JTP as potential suppliers and advises JTP on its strategic product roadmap based on our unique technology-based travel insights and awareness.

The JTV team spends a considerable amount of time speaking at events to share its travel vision and insights, contributing to the broader innovation ecosystem and furthering the innovative external brand of JetBlue. In 2018, the team spoke at 67 events in total – Bonny spoke at 19.

JTV has had three investment principals featured as GCV Rising Stars in the past three years – Christina Heggie this year, Ajay Sharma last year and Anna Schiller in 2017.

In the past year, JTV has had five new members join the team – Amy Burr named managing director in May, Gidi Fisher appointed operating principal in August, Ashley Lowes hired as communications manager in July, Matt Miller as investment analyst in July and Zach Winn investment analyst in early 2019. Alex Kaufman was also promoted from investment associate to investment principal.

JetBlue plans to expand beyond the US and into other brand extensions beyond air travel. The funding comes off the JetBlue balance sheet and the team is based in San Carlos, California, appropriately at an airport.

Simi has been with JetBlue for 15 years in a variety of leadership and operational positions, and is still an active captain at the airline. She is a graduate of Stanford Business School and Stanford Engineering School, and is a three-time Olympic athlete in the sport of luge, a form of sled racing.

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Jaidev Shergill

CAPITAL ONE GROWTH VENTURES

In 2014, US-based financial services firm Capital One set up a corporate venturing subsidiary to make early-stage investments in financial technology companies. Jaidev Shergill, then Capital One's head of digital products, was chosen to lead the unit as a managing partner.

In a speech at the Global Corporate Venturing & Innovation Summit last year, he took an in-depth look at investment strategy and his unit's evolution. Capital One now has 12 team members, including nine investments professionals.

"We started in a very scrappy manner," said Shergill. "At the two-year mark, we had a good investment process, and so we started looking at the strategic traction our investments could bring."

Capital One currently evaluates companies with three metrics – 40% is based on investor relationship value, 40% on vendor relationship impact; and 20% on learning and culture impact. These evaluations are repeated throughout the investment period, according to Shergill.

He added: "Using these metrics enables us to put the lens of strategic impact pre-investment and opens up the possibilities of seeing how portfolio companies evolve over time. It enables us to figure out the direction we want to go into from an investment perspective. It also helps us in our reporting to the investment committee, which in turn is more involved and able to see where we are in our journey, and can provide a more targeted help on specific issues."

By the end of last year, the unit had made nearly 20 investments in total across multiple stages in a variety of sectors, including data, security, blockchain, and enterprise technology.

Capital One Growth Ventures provided a $6m extension to a $31m series C round for US-based marketing technology developer PebblePost in November, made a follow-on $450m series F investment in US-based data warehousing technology provider Snowflake Computing in October, and participated in a $95m series C investment in US-based data-as-a-service provider Enigma in September.

Other earlier deals Capital One Growth Ventures conducted in 2018 included a $21m series B round for US-based cybersecurity validation software developer Verodin and a $12m series A round for US-based data management software developer Okera.

Capital One previously invested in startups through North Hill Ventures, the venture capital firm with which it was affiliated until North Hill was spun off in 2012. It also operated Capital One Labs, a San Francisco-based research subsidiary operating as a startup laboratory.

Shergill also oversaw digital venture investing and startup business development for Capital One from 2012, and was previously president of Citi Ventures, the corporate venturing arm of financial services firm Citigroup, from 2007 to 2009, when he left to found and run Bundle, a big data consumer-facing digital startup.

Similar to his Capital One experience, Shergill worked at Citi for a number of years – from 2004 in this case – before creating its venture unit.

Previously, he worked in the US and UK across a swathe of top-tier financial services firms, including Credit Suisse, Lansdowne Capital and Deloitte, after gaining an MBA at Insead and an engineering degree at Northwestern University.

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Geert van de Wouw SHELL VENTURES

Geert van de Wouw has been vice-president of Shell Ventures, the corporate venturing unit of the Anglo-Dutch oil major, since April 2012.

While Shell Technology Ventures (STV) had existed in one form or another since 1996, making it the longest-running energy industry corporate venture organisation in existence, the "Technology" part of the name was dropped in 2017 to leave Shell Ventures.

Mark Gainsborough, executive vice-president at Shell New Energies since its launch in mid-2016, said last year: "Through Shell Ventures, our New Energies business obtains early insights into disruptive trends in our industry and creates options for future business growth. This allows Shell to anticipate the change that is happening as a result of the energy transition.

"Furthermore, to signify its expanded scope, we have changed the name from Shell Technology Ventures to Shell Ventures. Technology will continue to remain one of our focus areas, but the new name reflects an evolving reality in the energy industry, where – besides technologies – innovative and potentially disruptive business models are being introduced by startups that have highly disruptive qualities and are therefore of interest to Shell. Often underpinned by a unique digital capability, these business model innovators are making us rethink the way we, for example, interact with our motorist customers in retail or develop new solar projects, conduct maintenance at our petrochemical sites or offer more 'connected' energy offerings to our commercial, industrial and residential customers."

Van de Wouw told GCV last year: "The rebranding is quite easy to explain. We have been doing investing in business model innovation rather than strictly technologies, as the old name implied. People would just get very confused as our mandate expanded, and the name implied a focus on technology only."

Besides technology, Shell Ventures has invested in various business model innovators over the past few years, including Sunseap, a clean energy solutions provider from Singapore, Innowatts, an integrated retail energy platform that uses smart meter data and weather data for retail energy providers, and Tiramizoo, a Germany-based startup for same-day, last-mile delivery optimisation.

Beyond the name change, Shell Ventures had an active year. As van de Wouw put it: "We relaunched Shell Ventures back in 2012 as concentrated primarily on core oil and gas technologies. Two years later we began looking at renewable energy technologies and in 2016 we started to include novel business models in the renewable power domain. In 2017, we further expanded our scope to include business models and technologies in the Future of Mobility space. A good example of that is our recent investment in Ample, a rapidly deployable EV battery charging solution proposition from California for operators of electric fleets, allowing slow charging and 24/7 availability of battery-powered vehicles. To achieve this, Ample uses autonomous robotics and smart-battery technology."

The size of his team has also increased. "In terms of finding talent for our venturing unit, we doubled the size of the team since the beginning of 2017 and there has been no shortage of excellent professionals applying to work at Shell Ventures. Many of them come from outside the company [Shell], from corporate venturing units, financial VC's or private equity firms, bringing their unique external perspectives to Shell Ventures.

"I believe this is thanks to our reputation as a professional and faithful co-investor, which we have been building over the years. The combination between these seasoned VC professionals and the people in my team that know Shell from the inside has proven to be very effective."

One of his hires was Steve McGrath, now head of Shell Ventures – Silicon Valley & China since February 2017, having previously been the CEO of emerging technologies group of Spencer Trask, the legacy of the eponymous financier who backed Thomas Edison and invested in the light bulb, the first electric grid, and the phonograph. He oversaw the Ample deal and took a board seat in July 2018.

However, building a diversified team has been a challenge and so Van de Wouw has "herewith wholeheartedly and passionately support Intel Capital's Wendell Brooks call out for more diversity in our corporate venture capital industry".

He added: "Diversity of thought is very important to any professional venture capital unit. Through challenging each other's deals, we avoid deal-bias and sharpen our decision making. While at Shell Ventures we already have diversity in terms of geographic and cultural backgrounds, we would like to do better in terms of gender diversity.

"However, what we found quite difficult in the recruitment process was finding experienced female talent in the venture capital ecosystem, which is – unfortunately – still very male-dominated. So, I would like to use your magazine as a platform and say that if there are women working in venture capital interested in working for Shell, they should contact me. With closing 22 deals last year, we are one of the most active and diversified corporate investors in the Energy industry and otherwise a very diverse and fun team to work in."

Most of the top 50 corporate venture units have women in their senior ranks, but there is still much to be done to boost diversity in the community. Van de Wouw recognised it and added: "I therefore fully embraced and supported the initiative taken by Wendell Brooks, President of Intel Capital during the 2018 GCVI Summit when he called us out to hire and mentor the best and the brightest women and underrepresented minorities as part of our growth plans."

Van der Wouw also said for his profile last year: "I am a firm believer of diversity in teams, as this drives diversity of views and perspectives in our teams, which is key to the decision-making quality of any venture firm. It is for this reason that Shell Ventures have embarked on a conscious initiative – as part of our Shell Ventures 2.0 Improvement Plan – to hire more female and underrepresented minorities in our team. I am leading this effort together with Ashley Smith on my team, who is equally passionate about this initiative.

"We have come to the realisation that, besides our continued efforts to hire external female and minority talent into Shell Ventures, for example for our growth plans in China, we also have to be very deliberate in growing our own talent through hiring female and minority talent into more junior positions at Shell Ventures. These roles can be investment associates or interns."

But the search for the right people has yet to prevent its continuous work of increased relevance to Shell.

Shell led the acquisition of venture-backed startup The New Motion, one of the leading charge-point providers for electric mobility in Europe. But Van de Wouw, who is on the board of Airborne Oil and Gas, pointed to Shell Ventures' "ability to forge strategic partnerships between our portfolio companies and our [Shell] businesses".

More than 90% of its investments are being deployed within Shell, including data analytics platform Maana, which is being deployed at 12 different occasions in Shell, and concentrated solar for industrial heat and enhanced oil recovery Glasspoint.

He said: "Glasspoint is a perfect example of a very successful startup that wouldn't be around today without STV's and Shell help. In parallel with our minority investment in 2012, Shell funded the construction of a 50 tonnes-per-day steam pilot at Jamal in Oman. We subsequently led the next round, $50m, with SGRF (the sovereign wealth fund of Oman), who we got interested to co-invest with us. Glasspoint is now busy completing the largest solar steam project in the world in Oman with through our JV [joint venture] partner PDO: a 1 GigaWatt and 6000 tonnes-per-day steam plant at our heavy oil fields in Miraah (Oman). More recently, Glasspoint was awarded a similar steam delivery contract by the Shell-Exxon joint venture ERA in California!"

This year, Shell acquired its portfolio company Germany-based energy storage technology provider Sonnen in February for an undisclosed amount. The company had received about $168m in funding, including $70m in a May 2018 round led by Shell's corporate venturing unit, Shell Ventures, that included all its existing investors.

More broadly, Shell Ventures has expanded its focus from oil and gas technologies only to renewable energy – power value chain –, connected energy – smart homes and smart businesses –, digital – data analytics – to smart or connected mobility and freight.

He said: "Besides our traditional focus to support our upstream and integrated gas businesses, we now cover all Shell businesses, including new energies, retail, global commercial – lubes – and trading."

Shell Ventures also supports and funds several incubator programs like Greentown Labs in Boston.

And so while chemicals company DuPont was the largest corporate venturing group of the 1960s and before, oil major Exxon was probably the largest CVC in the 1970s, having been founded the decade before. Exxon Enterprises' subsequent fall and sale for $1m in the 1980s has proved an academic case study of CVC management techniques but its closure has also allowed peer Shell to claim the mantle of the long-running corporate venturing unit. It is a title Van de Wouw, who after nine years at Fluor joined Shell in 2004 and held a number of senior roles before taking on Ventures in 2012, is proud of and it made all efforts to build an even longer-term, more sustainable one in more ways than one.

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Amy Banse COMCAST VENTURES

Amy Banse has been leading Comcast Ventures, where she is a managing director and head of funds, since mid-2011. This dates to Comcast's corporate venturing unit merger with NBC's Peacock Fund, creating a $750m vehicle, but subsequently expanded after its purchase of UK-based pay-TV operator Sky and its venture unit.

It has been an active fund, with mass media company Comcast backing more than 180 portfolio companies since 2009, split between advertising, consumer, enterprise and infrastructure sectors. During 2018, Comcast Ventures has been as active as ever, having participated in 14 investments.

Brian Roberts, Comcast's chairman and chief executive, said: "Under Amy's leadership, Comcast Ventures has invested in some of the most innovative consumer and enterprise technology companies. We have worked together for nearly 30 years and I have always admired her passion and vision for identifying the next big idea. She has carried that through Comcast Ventures and has helped her team develop hundreds of value-creating partnerships."

The fund has certainly delivered on returns, exiting six portfolio companies. Last year, US-based blockchain technology developer Chain merged with fintech producer Lightyear in September to form a new company called Interstellar, integrating their respective blockchain technologies, and US-based cybersecurity software producer Cylance was acquired in November by mobility technology provider Blackberry for up to $1.5bn according to Business Insider.

Other corporate acquisitions of Comcast Ventures' portfolio companies in 2018 included US-based vehicle connectivity platform developer Autonomic by carmaker Ford and US-based marketing platform WhoSay by media group Viacom in January, US-based retention software company Windsor Circle was acquired by electronic billing and invoice services provider OSG Billing Services in February and US-based data technology provider Kensho by financial data and analysis provider S&P Global in March.

As for 2019, in February alone, the unit closed four investments – a $35m series C round for US-based

digital marketing technology developer Lytics, a $20m debt financing round for US-based student loan marketplace College Ave Student Loans, a $2.3m seed round for US-based workplace communication skill coaching tool creator Orai and a $16m series A round for US-based geothermal technology developer Dandelion Energy.

In January, Comcast Ventures was also involved in three deals – it co-led a $20m series B round for US-based network security technology developer Aporeto, a $105m series E round for US-based financial savings app developer Acorns and contributed to a $51m series D round for US-based hair colouring product supplier Madison Reed.

Comcast under Banse has been one of the most thoughtful about its diversification strategy. She said last year that 45% of the portfolio companies had had diverse founders and co-founders and 20% companies with women founders and co-founders.

Comcast has the $20m Catalyst fund, a dedicated fund focused on supporting underrepresented founders led by Kai Bond, who joined from Samsung Accelerator. Catalyst has, since 2011, made investments in more than 80 startups. Last year, it invested in five diverse startups.

Comcast's other fund called Genacast invests up to $1m in seed-stage, business-to-business technology startups based in the northeastern US and in 2018, it partook in two new investments.

Her team of 22 people includes 11 managing directors and five principals, of which five are female. At the team level, Comcast also witnessed several moves. In January this year, Michael Yang, who had been at Comcast Ventures for nine years and led investments in healthcare, internet-of-things and virtual reality technology, left to join Omers Ventures, the venture capital arm of Canada-based pension fund Ontario Municipal Employees Retirement System (Omers).

Last year, Banse nominated Comcast Ventures' partner Daniel Gulati to receive GCV's Rising Stars award and after receiving it in January this year, he was promoted to managing director in March. The unit also opened a new office in Los Angeles in the same month. The team expanded by hiring a new head of marketing and communications, Sue Kwon, in October 2018 and a new head of business development, Madura Wijewardena, in January 2019.

Banse previously founded Comcast Interactive Media in 2005 and led the company's online strategy over the next six years, overseeing various acquisitions and in-house projects, including Comcast.net, Xfinity.com, Fancast and Swirl. She joined Comcast in 1991 as an in-house attorney for programming acquisition. She worked on the development of Comcast's cable network portfolio, including the company's investments in E! Entertainment Television and the Golf Channel. She has a degree from Harvard University and studied at Temple University's James E Beasley School of Law after following in her father's footsteps – he was general counsel for Merck.

Banse is on the board of directors for consumer and professional products manufacturer Clorox and diversified software producer Adobe. She is also on the board of directors for Tipping Point Community, a nonprofit which addresses education and homeless issues in Northern California.

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Tom Heyman

JOHNSON & JOHNSON INNOVATION–JJDC

US-based healthcare company Johnson & Johnson (J&J) had been making venture investments since the 1960s, Johnson & Johnson Innovation–JJDC was created only in 1973 and it has been taking minority equity stakes in third-party entrepreneurs since, making it one of the oldest and most consistent investors.

Tom Heyman, leader of Johnson & Johnson Innovation–JJDC (JJDC) when he replaced Brad Vale in 2015, has pledged to continue the group's legacy. Having celebrated its 45th anniversary last year, it has continued to be one of the largest and most dynamic groups, investing more than $400m in more than 40 investments last year.

Heyman was quoted as saying in JJDC's newsletter in December last year: "This year marks an important milestone for JJDC as we celebrate our 45th anniversary as strategic investors for the Johnson & Johnson Family of Companies. Today, most major companies embrace corporate venture investment as a means to fuel innovation. However, 45 years ago, this was not the case. When Johnson & Johnson launched JJDC in 1973, we became the first dedicated corporate venture arm in healthcare — and among the first of any industry. JJDC set the stage for this increasingly vital source of funding to help advance innovation.

"It has been a humbling journey to say the least and an incredibly uplifting experience to be able to support and nurture potentially transformative companies and products that may go on to make important differences in the lives of patients and consumers. I encourage us all to take a step back to remember why we are here and why it matters. Amidst even our busiest days, we must never lose sight of the contributions by the global entrepreneurial community which is bolstered by venture investing.

"In fact, this year brought its share of record setting in venture capital healthcare investing, with unprecedented investment in biotech companies and the most funding ever for digital health startups. I am personally excited to share with you in this newsletter a snapshot of just some of the strategic investments JJDC made this year across pharmaceutical, medical device and consumer health sectors. Our investments represent a flexibility and openness to new ideas and business models and, through our resulting portfolio, we gain visibility to some of the most innovative solutions poised to positively impact a diverse healthcare ecosystem.

"As we close 2018, I applaud the entire JJDC team and our growing family of portfolio companies as they produce truly transformative solutions. Let us keep making history together in the year ahead. Patients are counting on us. And I have no question we will deliver."

JJDC's newest area of investment is in consumer, such as its Memebox deal. Originally founded in South Korea in 2012, Memebox is a US-based beauty and cosmetics retailer which operates an online platform that sells cosmetics products from Korea – such as lip gloss and balm, make-up and facemasks – to customers in the west, China and Taiwan. JJDC led a $35m series D round for the company in January this year.

Marian Nakada, vice-president of venture investments at Johnson & Johnson Innovation–JJDC and GCV Rising Star 2019, for her profile this year said: "JJDC makes lasting commitments to its portfolio companies, ensuring stability, determination and ample support to help entrepreneurs and their companies achieve their greatest potential."

JJDC launched its consumer investment practice six years ago but keeps the majority of its consumer portfolio confidential. Vice-president of consumer venture investments and external innovation Stacy Feld, GCV Rising Star in 2018, did disclose at the time in her profile that the organisation had eight companies in the portfolio, including two successful exits, across a range of segments.

JJDC is one of the first corporate investors in the consumer market and one of the challenges it has faced is ensuring there is a clear firewall in place to prevent spillover of sensitive information from companies it is investing in to J&J and its consumer products divisions.

"As consumer investing expands, it will be important for newcomers to similarly demonstrate to entrepreneurs their process for managing confidential information – it is critical in gaining trust. Trust is essential to an effective board, building a strong management team and growing the company to reach its full potential," Feld said.

In October last year, the unit led a $25m funding round for US-based digital health technology developer Carrot and a representative from JJDC was said to have joined the company's board of directors as part of the deal. This round followed $5.8m of funding in August 2017 according to a securities filing. JJDC's investment was carried out subsequent to years of communication from Carrot's developmental phases. Feld was quoted as saying in JJDC's newsletter in December 2018: "Deals like this do not just happen overnight. Persistence and relationship-building are so critically important."

Heyman has done much to encourage the ethic Feld mentioned. Heyman has kept his ties with Belgium as since April 2012 he has been a member of the board of directors and the general assembly of innovation and research hub IMEC.

From 2008 until November 2016, Heyman was chief executive of Belgium-based J&J pharmaceutical research subsidiary Janssen Pharmaceutical, responsible for its Beerse campus, which is one of eight research centres in Europe spending an aggregate €1.5bn-plus ($1.7bn) in research and development each year.

Beerse is also the site of J&J's only incubator – called JLabs – in Europe after the company decided not to set one up in the UK as planned. Called JLABS @ BE, Belgium, therefore, was the location of its 10th JLabs, which can house up to 30 life sciences startups focused on innovations across the entire healthcare spectrum, including biotech, pharmaceuticals, medical devices, consumer and healthtech sectors.

From 2017 to February 2019, JLABS @ BE received €2.1m ($2.5m) of financial support bestowed by the European Regional Development Fund and the government agency Flanders Innovation & Entrepreneurship (VLAIO –Hermesfonds).

At its longest-established JLabs, on the west coast of the US, it has 51 companies and 36 alumni.

Further down the coast, and J&J has 42 companies in JLabs San Diego – of which 11% are consumer. However, one of the interesting outcomes from its facility has been the number of partnerships between portfolio companies, not just to J&J itself. For example, Abilta Bio and Primordial Genetics, Amplyx and Linnaeus, and Xycrobe Therapeutics and Kode Biotech have all partnered each other.

In Europe and more broadly, J&J has had an excellent record of co-investing and working with partners, its leading syndicate corporate venturing peer is Switzerland-based Novartis, according to GCV Analytics, which reflects back to the experience and trust its approach has generated under Heyman and his predecessors.

Heyman was also responsible for acquiring companies for J&J, including Tibotec, Centocor, Cougar Pharmaceuticals, Aragon Pharmaceuticals, Covagen and Alios Biopharma, and "hundreds of transactions for both early and late-stage pharmaceutical products and technologies", according to his J&J profile. So after 25 years in business development, adding corporate venturing leadership might seem almost straightforward, even in what was a record four years since he took over.

Heyman started at Johnson & Johnson in 1982 in its law department of the Janssen affiliate back in Belgium. Then in 1990, he was asked to come to the US as vice-president of corporate development for Ortho, which was one of the other pharmaceutical companies within the Johnson & Johnson family of companies. Then in 1992, he was then asked to lead the business development group of the pharmaceutical group of Johnson & Johnson.

Born in the Congo and graduating with a master of law from the KU Leuven in Belgium, Heyman started out hoping to have a "real impact" on his country through foreign policy.

In a 2013 interview with PharmaBoardroom, Heyman said: "I am a lawyer by training. My dream was to enter the diplomatic service of Belgium, but I quickly came to the conclusion that Belgium is too small a country to have a real impact on foreign policy. I, therefore, started to get more and more interested in international law and economics."

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Jon Lauckner GENERAL MOTORS

As chief technology officer, vice-president of research and development of carmaker General Motors (GM) and president of its corporate venturing arm GM Ventures, Jon Lauckner has pledged to drive innovative autotech development for the entire company.

GM chairman and chief executive Mary Barra attested to Lauckner's capability to bring innovation forward through GM Ventures: "Under Jon Lauckner's leadership and vision, the GM Ventures team operates with an entrepreneurial spirit and clear direction to focus on technologies that matter most for our customers. The strategic investments GM Ventures is making in breakthrough technologies are helping us build the most valued automotive company."

Since its launch in mid-2010, GM Ventures has invested in 116 deals with 219 co-investors in series A to F rounds across different geographic areas – the US, Canada, Europe, Israel and China – and in six sectors – advanced propulsion; connected vehicle; advanced materials; sensors, processors and memory; manufacturing technology; and value chain and business model.

It has had 13 exits, the latest of which was an M&A deal conducted by digital mapping developer Dynamic Map Platform which acquired mapping technology startup Ushr for an undisclosed amount in February this year.

Other acquired portfolio companies include:
- US-based secure digital identity management platform provider KeyFactor by VC firm Infinity Venture Partners
- US-based web-based touch-centric applications software and cloud services provider Strobe by GM.
- Germany-based ridesharing platform Flinc by automotive manufacturer Daimler.
- US-based chemical producer Sirrus by chemical supplier Nippon Shokubai.
- US-based iris recognition technology producer Delta ID by identity verification technology provider Fingerprint Cards.
- Canada-based deep learning technology developer Maluuba by software provider Microsoft.
- Germany-based automotive software producer OpenSynergy by consumer electronics manufacturer Panasonic.
- US-based location intelligence platform Telogis by telecoms company Verizon.
- US-based solid-state battery technology developer Sakti3 by UK-based cleaning and climate management equipment manufacturer Dyson.
- US-based developer of lithium-ion batteries Envia Systems by an undisclosed investor.
- US-based biofuel producer Mascoma by cellulosic ethanol developer Enchi.

For the portfolio companies, GM also acts as a customer that offers technology support with the company's resources. Lauckner said: "If we decide to invest in a startup, it is an indication there is a significant probability that we will use the company's technology."

For example, Tula Technology provides a variable cylinder deactivation software to select GM vehicles to improve fuel efficiency by as much as 15% without degrading power capability, combining Tula's software expertise with GM's propulsion system expertise.

Other portfolio companies that have partnerships with different GM business units include:
- Canada-based autonomous vision technology developer Algolux.
- US-based solar energy systems provider Empower Energies.
- US-based geospatial information management platform provider GeoDigital.
- US-based location services provider MapAnything.
- US-based high-strength steel maker NanoSteel.
- US-based autonomous driving technology developer Nauto.
- Israel-based wireless charging pad maker Powermat.

- US-based battery-powered electric buses maker Proterra.
- US-based wireless sensors developer Savari.
- US-based metal printer developer Seurat Technologies.
- US-based lithium-metal battery technology developer SolidEnergy Systems.
- China-based car sharing platform operator Feezu (Weizuche).
- US-based on-demand car servicing provider Yoshi.
- Tula, Ushr and 11 other undisclosed portfolio companies.

Lauckner began his career with GM in 1979, working in several assignments in powertrain and vehicle engineering. Later, he worked in the marketing and product planning staff. From 1992 to 2005, he pursued various product development assignments in South America and Europe, and he returned to the US in mid-2005 to a new position as vice-president of global program management.

In 2009, he was named vice-president of global product planning, before finally forming GM's CVC subsidiary in the following year and was appointed to president of GM Ventures.

As an active participant in the global VC and CVC communities, Lauckner has taken part in the Michigan Venture Capital Association, the National Venture Capital Association's Corporate Venture Advisory Group, GCV Leadership Society and various conferences including Intel Capital's Global Summit in 2018 and GCVI Summit in 2019.

Lauckner holds a BSc in mechanical engineering from University of Michigan. He earned a master's in management from Stanford Business School in 1990 through the Sloan fellowship program and attended the GM-Harvard senior executive program in 2001.

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Dominique Mégret SWISSCOM VENTURES

In 2005, Dominique Mégret started Swisscom Ventures, the corporate venturing subsidiary of telecoms firm Swisscom, an early-stage fund that runs on an evergreen model where returns are reinvested in new portfolio companies.

Mégret has been instrumental in the creation of a global network of information and communication technology corporate venturers and, in July last year, a SFr200m ($199m) external fund called the Digital Transformation Fund was raised.

The new fund, to which Swisscom committed about $50m and included an oversubscribed offering to third-party investors, will co-invest alongside Swisscom Ventures III fund. It will target early to later-stage companies mainly from on Switzerland, but also eyeing the US, Europe and Israel.

Swisscom Ventures has already invested in about 60 startups resulting in 25 exits, including the sale of Switzerland-based business software provider Bexio for a reported $110m in July last year.

Other Swisscom deals which resulted in exits include:

- US-based tradeshow promotional material generator Poken which was acquired by show services provider GES in March 2017.
- US-based high-speed wifi chip maker Quantenna which went public in October 2016.
- France-based fixed and mobile semiconductors provider Sequans which went public in April 2011.

Most recent investments by the unit include:

- leading a series A round for Sweden-based automated troubleshooting software developer Netrounds in January 2019.
- co-leading a Sfr2.75m ($2.74m) seed round for Switzerland-based artificial intelligence-empowered clinical diagnostics technology developer Scailyte in December 2018.
- co-leading a $11m series B round for autonomous inspection drone producer Flyability in November 2018.
- co-leading a $6m series A round for US-based cloud-based networking infrastructure developer Rtbrick in October 2018.

Regarding Swisscom Ventures' investment thesis, Mégret told Global Corporate Venturing in an interview held in September 2016: "We invest in core telecoms and IT services, in technology that will emerge in that space and transform our business within the next three years.

"We also invest in technologies that manage customers and improve customer experience. Then we try to discover new areas of growth which will emerge within the next three to five years for Swisscom.

"That is why we have been taking some bets in areas which seem, at this point, remote but are getting closer to the core business of Swisscom, such as e-health, the internet of things, artificial intelligence, wearables and even fintech.

"So, overall about half our investments are important new technologies bringing efficiencies to our industry, while the other half consists of technologies that will or may become important to us, thus giving us differentiation in the broad customer management and experience field."

Initially, Mégret joined Swisscom in 2002 as head of the group strategy department, a role he held for two years before he went on to create of the corporate venturing unit.

Before that, Mégret was an entrepreneur in the UK, strategy consultant in the European telecoms industry and country manager for an IT company in Germany. He co-founded venture firm Kick-Start Ventures.

He holds a bachelor's degree from the European Association for Professions in Biomedical Science and an MBA from Insead.

The Rest in alphabetical order

Kristin Aamodt EQUINOR TECHNOLOGY VENTURES

Kristin Aamodt has been a managing director at Equinor Technology Ventures (ETV), a corporate venture capital subsidiary of Norway-headquartered energy company Equinor formerly known as Statoil Technology Invest, since February 2017.

Stein Olav Drange, Equinor's chief technology officer, said in his nomination of Aamodt: "Equinor Technology Ventures is an important tool to find and accelerate new innovations from startups, helping Equinor in our ambitions to shape the future of energy."

ETV has an active portfolio of 24 companies, where Equinor owns a minority share and aims to add material value as active corporate investors. Every year, the unit handpicks investees from around 300 to 400 candidates, and Equinor eventually acquires a 10% to 40% stake in the few companies that make the cut and acts as an agent in their product development.

"Through over 25 years of experience with this model we have proven that we can achieve an attractive internal rate of return on capital invested while contributing considerable business value to Equinor," Aamodt told Petroleum Review in February. "Our role as an external technology radar to the startup communities will become increasingly relevant in the future, to stay at the forefront of technology in a rapidly developing landscape."

Aamodt was especially proud of last year's breakthrough for lowering carbon dioxide emissions in Equinor's contracted marine fleet and setting a new standard for the world's marine sector through ETV's investment in Canada-based energy storage technology provider Corvus Energy, which has developed a lithium-ion battery for electric propulsion systems in marine vessels, echoing Equinor's push for marine electrification.

Another outstanding portfolio company is Eelume, a Norway-based autonomous underwater vehicle developer, which has developed a snake-shaped robot called Eelume that could remain undersea to inspect and repair subsea offshore drilling infrastructure.

ETV's portfolio companies Intelligent Mud Solutions and Sekal, both of which are Norway-based oil and gas drilling software and services company, have also contributed to driving automation within the drilling industry. Aamodt said: "ETV's active investment in Sekal is making a material impact in our industry and contributing to cutting costs – part of the ambition to reduce drilling costs by 15% – and increasing health, safety and environment performance."

In addition, ETV has driven digitisation in US shale onshore in a record pace – less than two years from problem identification in Equinor to broad scale implementation of a solution – from its portfolio company Ambyint, a Canada-based developer of internet-of-things and artificial intelligence technology for the oil and gas industry.

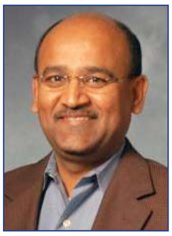
Aamodt added: "While our focus is within the energy sector, we have examples where our activity can impact beyond this sector, for example, our recent investment in Sweden-based healthtech company Medfield Diagnostics that addresses a huge problem related to stroke treatment."

Together with Equinor Energy Ventures, its sister unit at Equinor set up two years ago and that is focused on renewable energy companies, ETV's strategy is to continue to strengthen its contribution to Equinor's ambition of shaping the future of energy.

Before joining the CVC unit, Aamodt had been with Equinor's predecessor Statoil for a decade. She first joined as in investment manager in 2008 overseeing asset management in the corporate's portfolio companies, then she was promoted to project manager of the $120m 12MW floating wind turbine project called Hywind Maine, for which she was responsible from 2010 to 2013.

In 2013, Aamodt took on another initiative called Statoil Technical Efficiency Program which analysed potential efficiency gains to respond to industry challenges and this scheme was ultimately approved and implemented by the corporate executive committee in 2014. After that, Aamodt held offshore operations and maintenance manager roles for three years, before being appointed to her current role in early 2017.

Aamodt holds a master of science degree in chemistry from Norwegian University of Science and Technology.



Biplab Adhya and **Venu Pemmaraju** WIPRO VENTURES

Wipro Ventures, the $100m strategic investment unit of India-based, New York-listed technology firm Wipro focuses on investing in early to mid-stage startups.

Under chief strategy officer Rishad Premji, Wipro Ventures' co-heads Biplab Adhya and Venu Pemmaraju leverage the parent company's "global reach and market knowledge to accelerate the growth of our portfolio companies".

Since its launch in 2015, Wipro Ventures has invested more than $65m in about 20 startups globally, of which 15 are US-based and the rest in India and Israel.

The recent deals Wipro Ventures participated in included follow-ons:
- The unit invested for the second time in India-based internet-of-things products platform developer Altizon Systems in July 2018, in a $1m funding round in July 2018, after having injected $4m in early 2016.
- A $17m series C round for Israel-based cybersecurity technology provider Intsights, which had previously received funds from the unit in a $15m series B round in February 2017 and a $7.5 series A round in September 2016.
- A $10m round for US-based identity verification software provider Emailage in August 2018, with the unit supplying an undisclosed amount in April 2016.
- A $14.2m round for US-based conversational interface technology developer Avaamo in May 2018, with the unit supplying $2m in March and $1m at an undisclosed time.
- A $13.5m series B round for US-based data management software developer Imanis Data in March 2018, which had received $2.1m in December 2017 and $12m series A in 2015.
- A $36m series D round for US-based cybersecurity technology developer Vectra in February 2018, which had received an undisclosed amount from the unit in 2016.

Wipro Ventures' portfolio companies cover the upcoming industry 4.0 – automation and data exchange in manufacturing technologies – areas Wipro is especially keen on, including internet of things, chatbots, cybersecurity, big data, cloud computing and artificial intelligence.

For example, Altizon is located in Pune, India and was launched in 2013 to provide internet-of-things, cloud, big data and machine learning technologies. India's entrepreneurial ecosystem has grown considerably, combining its growth in the economic and digital spheres with the help of government initiatives.

In recent years, Wipro has been gradually altering its previous emphasis on information technology architecture and maintenance to end-to-end support in digital applications. The firm also said in a statement that it would hire more from campuses in order to boost its digital proficiency.

Pemmaraju told Consultancy India in February: "As of date, we have committed more than $65m in capital," while Adhya added: "Since 2015, we have had more than 100 wins in conjunction with the startups we have invested in."

Pemmaraju continued: "We measure both the financial health of the companies and the strategic value to Wipro and the startups. Our baseline investment strategy is still the same – invest into early to mid-stage enterprise software companies that have exhibited initial product-market fit, deployed their solution at a handful of enterprise customers and put mechanisms in place to engage with a global technology services provider."

Pemmaraju previously spent nearly 15 years as an investment director at Intel Capital, where nearly half of his 18 public deals have successfully exited, including CloudMade, a US-based platform for location-enabled apps and services, which was 50% acquired by France-based car parts maker Valeo, and CrowdStar, a social and mobile gaming company acquired by Glu Mobile.

Adhya was previously the global head of the Oracle practice at Wipro, where he was the responsible for strategy, sales and operations for the IT Services offerings around Oracle applications from early 2012.

Grant Allen ABB TECHNOLOGY VENTURES

Grant Allen became head of ventures at Switzerland-based industrial giant ABB at the beginning of 2017 upon ABB Technology Ventures (ATV)'s former president Girish Nadkarni's departure – who is on the Powerlist for his new unit at France-based oil major Total.

Before his promotion, Allen had been with ABB for more than seven years, and over a decade as a venture investor. At ABB, he has led more than a dozen investments, including the exits of Netherlands-based electric vehicles power supplies provider Epyon in 2011, US-based cybersecurity provider Industrial Defender in March 2014, US-based vacuum robotics technology provider Persimmon Technologies in May 2017 and US-based machine learning technology developer Bonsai in June 2018, all positive returns for ATV.

About four startups were acquired by ABB's robotics business unit in the past two years, he added, including US-based direct current-powered datacentres and telecoms facilities infrastructure provider Validus DC in 2011.

He added: "76% of our 21 active portfolio companies have strategic engagements with their sponsoring business units – if not more broadly across ABB. Three companies are [in March 2019] working on deep product integration."

In 2018, the unit participated in five new deals and six follow-on investments, including Sweden-based materials technology producer Graphmatech, Canada-based mining data platform creator MineSense, India-based end-to-end dairy technology developer Stellapps and US-based industrial analytics software developer Element Analytics.

ATV has produced many stellar members featured on GCV's Rising Stars roster and the Powerlist. Allen himself has been on the latter three times since 2017 after being chosen as a Rising Star in 2016. He nominated Kurt Kaltenegger in 2017 and Malin Carlstrom in 2019 for the Rising Stars awards and both were selected. He said: "We are expanding our team this year with three new hires – a senior investor in Israel, one new head in India and one in Zurich or Bay Area."

Before ABB, Allen was a vice-president with Core Capital Partners, a $400m enterprise software-focused venture firm in Washington DC, capital of the US. Among other roles, he had stints at Microsoft in its mobile and embedded devices division, working for the chief executive of Jingle Networks – later sold for $63m – and at several startups, including a web services company focused on the mortgage industry he founded when was 19 years old.

Allen has an MBA from Wharton School at University of Pennsylvania and a BSE from Pratt School of Engineering at Duke University. He was appointed to US trade body the National Venture Capital Association's corporate venturing advisory group. Outside ABB, he is an angel investor, with positions in more than two dozen companies, including Uber, Avizia, Catawiki, EquityZen, Munchery, AltspaceVR, Earnest and Kanler. Previous investments include LivingSocial, Alibaba and Visually. Allen is on the boards of Soft Robotics, which this month closed a $20m round, Trilliant, Grabit and Atom Power.

Being a thought-leader in the CVC industry, he is a member of GCV's Leadership Society and a strategic adviser to three VC funds including Forte Ventures, and a speaker at about 10 to 15 conferences per year.

Lak Ananth NEXT47

Lak Ananth, who was vice-president of strategy and corporate development and managing director at US-based enterprise IT company Hewlett Packard Enterprise until October 2016, joined Germany-based conglomerate Siemens as managing partner of its €1bn ($1.2bn) Next47 corporate venturing unit launched in the same month.

Since then, he has thoroughly reorganised the unit. Among recent changes were Ralf Schnell, former head of Siemens Venture Capital before its effective incorporation into Next47 at its launch under Ananth, becoming head of private equity at Siemens Financial Services in April last year, as well as the departures of Susana Quintana-Plaza, a partner who ran Next47's London office, and Swati Dasgupta, a director of external innovation, both in August last year.

New recruits included Chris Barchak, a UK-based venture partner who joined from VC firm Conor Venture Partners in July 2018; Eddie Kang, a US-based principal who joined from active growth equity firm Telescope Partners in October 2018; and Moshe Zilberstein, an Israel-based investor who joined from venture and growth equity investment firm Norwest Venture Partners in January this year.

The changing of the guard at Next47 as it positions itself as more independent of Siemens' business units and an evergreen fund able to reinvest profits from its €1bn ($1.2bn) fund. The fund has a three C's model – providing capital, creating intrapreneurs through a partnership with accelerator Techstars and being a catalyst to business units to open markets for startup portfolio companies.

Its most recent investments included a $20m series C round for Germany-based electric vehicle charging technology developer Ubitricity in March, after having previously provided an undisclosed amount in November 2017, and a $25m series C round for Israel-based supply chain software provider Bringg in January, having co-invested with enterprise software provider Salesforce, beverage producer Coca-Cola and mobility technology producer Ituran.

Ananth reports to Joe Kaeser, Siemens' CEO. For his Powerlist profile in 2017, Ananth said: "Collaborating with Techstars is an important and exciting step for Next47 and Siemens. We are excited to provide Siemens employees access to the proven Techstars platform globally.

"As a Siemens subsidiary, we have both an external and an internal vision. The external vision is to be the world's premium address for ventures between corporates and startups, as well as a role model for open innovation. The internal vision is to shape Siemens' core businesses of tomorrow.

"A decisive factor will be the team's ability to find opportunities and engage with the Siemens ecosystem. We have the ability to form a great business from just an idea in a short time. For instance, we have enabled a robotics business to develop eight generations of hardware within less than a year. We can offer access to some of the world's most sought-after clients, including Siemens."

Before heading Next47, Ananth developed and built the Hewlett Packard Pathfinder organisation, bringing together innovation strategy, venture investments, acquisitions and partnerships.

Earlier, Ananth worked in strategy and corporate development at Cisco Systems and was instrumental in the $2.9bn acquisition of Starent Networks, the $1.2bn acquisition of Meraki, and an investment in Control4.

Next47 – a reference to 1847, the year Siemens was founded – has remade itself now for the parent company.

Miguel Arias TELEFÓNICA

Miguel Arias joined Spain-based telecoms group Telefónica as its global entrepreneurship director in early 2018 from Spain-based technology company Carto, one of Telefónica's portfolio companies, where he was chief operations officer.

In this role, Arias manages all aspects of the operator's entrepreneurship spaces, including 11 Spain and Latin America-focused accelerator network Wayra's open innovation hubs and 50 Open Future corporate venturing initiative spaces around the world.

Gonzalo Martín-Villa, Telefónica's chief innovation officer, said in his nomination of Arias: "As a leader in the telecoms industry, Telefonica has a commitment to its customer to meet its needs and adapt to new technologies in a fast-changing world.

We are fully convinced that Telefónica cannot do this on its own, and we have been leading open innovation in our industry since long time ago.

"Under Miguel Arias's management Telefónica has stepped up its game. We have built simpler interfaces and become more flexible and agile when working with startups and external talent. Miguel has brought an innovative and entrepreneurial vision to our activity, being able to take innovation into our core business and make startups and Telefónica talk the same language."

Arias is crafting a new chapter in Telefónica's open innovation strategy by identifying and instigating technologies that complement internal research and development (R&D) while devising an enhanced network within the global entrepreneurial ecosystems.

Arias told Mobile Insights that the telco had learnt that startups "are key partners to accelerate our business" in strategic areas of interest.

He added: "In a digital world evolving at breakneck speed, clients now expect innovation and customer service. That is why we are enabling a smooth interface between startups and a big telco like Telefónica."

Arias leads the new stage in Telefónica's open innovation strategy through Wayra Open Innovation Hubs in 10 countries and 50 Open Future partnerships around the world. Wayra is a business acceleration platform that facilitates entrepreneurs, startups, investors and public and private partners to connect across the globe to seize innovation and business opportunities and to complement internal R&D.

Telefónica has been dedicated to an open innovation scheme over the past seven years, and Arias acknowledged that it was not always smooth sailing for the operator. "We are proud to admit that, like any good entrepreneur, we have made some mistakes."

That said, Arias ensured he and his team learn from trials and errors and Telefónica has modified its strategy over the course of time to concentrate its efforts on later-stage startups to bring in deals that "bring innovation to Telefónica but also expose our technology to the wider ecosystem".

Telefónica's approach integrates the group's open innovation, entrepreneurship and investment programs through an international platform. In doing so, it welcomes and fosters external involvement from those who want to devise their own investment and entrepreneurial plans and are introduced to corporates in the process.

More than 750 startups have benefited from Telefónica's investment and about 1,700 have been accelerated and 100 companies have entered partnerships or do joint business with the telco. The Telefónica Open Innovation scheme covers 16 countries so far and more than €160m ($180m) have been committed.

Telefónica seeks to team up with innovative startups in areas including cybersecurity, video, virtual reality and augmented reality, artificial intelligence, cloud and big data. Arias explained that Telefónica had also been inspired to implement a tactic similar to that of a startup for its own business.

Arias said: "I feel organisations can learn to unlearn, which is something startups do all the time. The more we listen to customers and test our assumptions and ideas as quickly as possible with reality, we will become learning machines and we will be able to find new systems and products to solve our customers' needs."

Arias holds a master of science degree in civil engineering from Universidad Politécnica de Madrid and an MBA from IE Business School. In his pursuit to enhance the Spanish entrepreneurial ecosystem, he co-founded Chamberi Valley, a networking initiative for scaleups based in Madrid. He shares his experiences as an entrepreneurship professor at the IE Business School and ISDI.

Tony Askew and **Kevin Brown** REV VENTURE PARTNERS

REV Venture Partners, formerly known as Reed Elsevier Ventures, is a subsidiary of information and analytics services provider Relx. The fund is managed by REV founder partners Tony Askew and Kevin Brown, who together are one of the corporate venture industry's longest-serving partner groups, having both moved to REV at the end of 2000.

Since then, REV has invested hundreds of millions of dollars in big data, digital health, internet and enterprise technology companies. It was an early investor in big data processor Palantir, health information and technology provider Healthline, language learning app developer Babbel and internet and network services provider Netli.

A recent deal was the $23m series C round for US-based analytics software producer Mode in February this year.

Askew said for 2016's Powerlist: "Our focus on data and analytics is much the same, as is our broad geographic waterfront – the US, Europe and Israel. We believe data and analytics are transforming every industry and we will continue to back exceptional, ambitious entrepreneurs that have the drive to disrupt and build new category leaders."

However, Askew has his concerns. At the start of last year he said: "The single biggest factor propelling the investment landscape is the volume of capital now being deployed – $240bn in the past three years, of which more than a third came from non-traditional VC sources – sovereign wealth, mutual and pension funds and an expansion of corporate investment activity. This has led to expanded valuation expectations, particularly at early rounds from more intensive competition for deals."

For his 2014 Powerlist profile, Askew said: "We found a welcoming home here, as Relx Group, formerly Reed Elsevier Group, wanted us to create a successful, long-term corporate venturing capability. We designed the fund as a financial VC but with a meaningful strategic angle. The financial focus means we take board seats and our compensation includes carried interest [a share of investment profit] like traditional VCs, which aligns us well with entrepreneurs and other investors. Our strategic angle comes from bringing to bear Relx Group's superior access to domain knowledge and a highly relevant referral network."

Askew first became a venture capitalist at SoftBank, a Japan-based internet and telecoms conglomerate, after working as an entrepreneur. He said: "Back in the early days of the cauldron of the internet bubble, I was persuaded it would be far more interesting to apply what I had learnt in building digital businesses by becoming a VC and so I joined SoftBank. I graduated as a physicist, so I did what all physicists do in the UK and joined a management consultancy."

Other past activities included running electronic publishing for Random House, which included co-investing in a Los Angeles-based new media company alongside filmmaker Stephen Spielberg. Later, at mobile operator Cellnet, now O2, he co-developed and launched the world's first wireless internet service provider, Genie, which grew quickly to 4 million users across Europe. He was the first chairman of the corporate venturing group of UK trade body the British Private Equity and Venture Capital Association and now heads its VC committee.

John Banta BLUE CROSS BLUE SHIELD VENTURE PARTNERS

Since June 2014, John Banta has been executive director of BlueCross BlueShield Venture Partners (BCBSVP), a $550m corporate venture fund sponsored by the Blue Cross Blue Shield Association (BCBSA), a federation of 36 US health insurance organisations. Since then, he has been on "the continued quest for value-based – or at least more effective and efficient – clinical approaches" in a world of "US federal health policy instability", as he said in GCV's year-end survey last year.

Banta said: "2018 was a prolific year for us – our most productive yet by several measures, including projects sourced and assessed, levels of new and follow-on investment, exits and value creation. New investment areas included:

- Speciality pharmacy – SonarMD, a US-based developer of technology that helps care providers manage patients with chronic health conditions, and Octave Bioscience, a US-based care management service for patients with neurodegenerative diseases.
- Addiction management – Workit, a US-based addiction treatment provider, and Ideal Option, a US-based medication-assisted treatment and behavioural counselling services provider.
- Social isolation and gaps in care – Wider Circle, a US-based senior mobilisation and socialisation program developer.
- Musculoskeletal – Physera, a US-based musculoskeletal care treatment access provider.
- Medical transport – Alacura, a US-based clinical patient transportation manager.

"We developed and launched a unique program to accelerate the national deployment of innovation across our system and have also been afforded a more prominent role in offering advice and advocacy to regulatory entities to drive better health outcomes through innovation. To that end, we have participated by invitation in HHS Patient-centred health forum and the HHS Deputy Secretary's Investment and Innovation Summit and are co-hosting an Innovation and Policy Forum in collaboration with the BlueCross and BlueShield Association and the Congressional Innovation Caucus on Capitol Hill in the Spring of 2019."

To date, the unit has had nine successful exits, including one complete and one partial – recap – exit during 2018. Specifically, US-based palliative care provider Aspire Health was sold to health benefits provider Anthem in May last year.

BCBSVP also engages actively with its portfolio companies, Banta said: "We have now created in excess of 140 commercial relationships between our portfolio companies and BlueCross Plans." The unit has made 43 investments to date, including seven new investments in 2018 and 2019.

Furthermore, Banta added: "We have formed our PhaseOne innovation deployment program, as well as Clinical and Technical Strategy Advisory Groups involving participation from numerous BCS Plans."

It is not the first time a BCBSA-affiliated person has been selected to receive a GCV award. Banta himself has been featured on the Powerlist for three consecutive years since 2017. Binoy Bhansali, a vice-president at Sandbox Industries, a US-based venture firm that manages BCBSVP, was recognised as a Rising Star this year. Eric Steager, director of corporate development and innovation and managing director of strategic innovation portfolio at Independence Blue Cross (IBC), a healthcare licensee of the BCBSA, was also selected a Rising Star in 2017.

Banta is responsible for maintaining relationships with all stakeholders to ensure the operational success of the fund, and for the generation of an appropriate rate of strategic and financial return.

BCBSVP was launched in 2008 and is currently managing its third fund with $575m in assets under management, including participation of the overwhelming majority of the 36 Blue Cross and Blue Shield health insurance plans, and nearly doubling the size of the program. Banta explained: "We have invested in a stage-agnostic manner, ranging from de novo startups to minority participation in control investments."

For his 2017 Powerlist profile, Banta said: "With the healthcare industry continuing to experience unprecedented change, we will continue to focus on supporting leading entrepreneurs driving innovation within a dynamic marketplace."

It is success supported from the very top. Scott Serota, president and chief executive of the Blue Cross Blue Shield Association, said: "For the past 10 years Blue Cross Blue Shield Venture Partners has advanced healthcare innovation, supporting entrepreneurs and a marketplace of new ideas. Thanks to John's outstanding leadership, we continue to have successful outcomes and have seen a growing level of activity in new strategic investments, as well as increased participation from BCBS companies. As Plans collaborate to drive innovation, we look forward to the next 10 years, with Blue Cross Blue Shield taking on an even greater leadership role, advising on regulatory matters and expanding our involvement with global affiliates."

From 2002 to 2014, Banta was CEO and managing director of IllinoisVentures, an early-stage technology investment firm launched by University of Illinois and focused on companies deriving from Midwest universities and labs. Banta built and led the founding team and continues to serve as the managing principal of the Illinois Emerging Technologies Fund managed by the firm, and of IllinoisVentures Capital Holdings.

Before joining IllinoisVentures, he was the president and chief operating officer of DigitalWork, a Draper Fisher Jurvetson and Dell Ventures portfolio company, having served as head of corporate and business development.

Previously, Banta was a vice-president of corporate services at investment banks UBS and Bear Stearns, and a director of the Investment Management Consultants Association. He earned an MBA in finance and statistics with high honours from University of Chicago Graduate School of Business where he has guest lectured, and a bachelor's degree in finance from University of Illinois.

Christopher Bartlett VERIZON

Christopher Bartlett joined US-based telecoms firm Verizon's corporate venturing arm, Verizon Ventures, as senior vice-president for corporate development and head of ventures in October last year.

Bartlett took over responsibilities for John Doherty, former senior vice-president of corporate development at Verizon and former president and chief investment officer at Verizon Ventures featured on Global Corporate Venturing's Powerlist from 2016 to 2018, who left Verizon at the end of June last year and joined Netherlands-based data centre company Interxion as chief financial officer in November.

Verizon, which generated $126bn in 2017 revenues, hired Bartlett from investment banking firm Morgan Stanley, where he had been a managing director leading North American media and communications mergers and acquisitions for the firm since 2004. Bartlett had been based in New York but relocated to Basking Ridge, New Jersey.

Matt Ellis, chief financial officer of Verizon, said at the time: "Chris brings a wealth of experience to Verizon. We are pleased to have him join our team as we position the business for future growth."

At Verizon Ventures, Bartlett oversees joint ventures, strategic investment activity, acquisitions and divestitures with his colleague Michelle McCarthy, GCV's Rising Star in 2016 and a 20-year veteran and director at Verizon Ventures who invests in startups focusing on advertising technology, internet of things and telematics technologies.

McCarthy is currently on the boards of Verizon portfolio companies digital advertising data provider AdTheorent, digital devices-focused hardware platform operator Bug Labs, emerging market-focused internet service provider Jana and machine learning-empowered mobile safety technology developer Sfara.

Another team member is Jeffrey Black, GCV's Rising Star this year and a director of corporate development, who joined Verizon in 2009 as a member of the M&A group, where he oversaw numerous transactions and strategic investments before being appointed to his current role in 2012. He is responsible for handling 12 portfolio companies with a valuation in excess of $100m.

To date, Verizon Ventures has invested in more than 50 companies across industries and technologies since its launch in 2000.

After Bartlett came on board, the unit participated in follow-on investments – a $40m series B round for Israel-based public transport optimiser Optibus in December, a $10m series D round for US-based, Latino-focused digital media platform Mitú in November, a $10.2m series B round for US-based on-demand car maintenance platform YourMechanic and a $55m series C round for US-based data analytics software producer OmniSci, formerly known as MapD, both in October.

Before his 14-year stint at Morgan Stanley, Bartlett was an associate at Bear Stearns, an investment banking firm which was acquired by its peer JPMorgan Chase in 2008, in media and communications M&A for two years. He started his career in 1996 as an analyst at Arthur Andersen.

He holds a bachelor's degree in finance from University of Texas at Austin and an MBA from Columbia Business School.

Paolo Bavaj HENKEL VENTURES

Paolo Bavaj, a GCV Rising Stars and Powerlist awards recipient last year, heads Henkel Ventures, the corporate venturing unit of Henkel Adhesive Technologies.

Bavaj initially joined Henkel Adhesive Technologies, a business unit of Germany-based industrial and consumer product manufacturer Henkel, in December 2010 as a corporate director of strategy and business development, before he was promoted in April 2013 to head of new business development to identify and evaluate innovation opportunities through strategic foresight management, scouting, startup screening, venturing and incubation.

Eventually, Bavaj took up his current post slightly ahead of the unit's official launch in early 2017. Although Henkel made its first startup investment in March 2014, it only publicly communicated in November 2016 that it was committed to investing €150m ($170m) until the end of 2020 into startups and VC funds.

Michael Todd, corporate vice-president and global head of innovation at Henkel Adhesive Technologies, said: "Corporate venture capital is a very important tool for Henkel Adhesive Technologies to access new markets and onboard new technologies. Paolo combines operational excellence with an entrepreneurial mindset to identify and unlock new business opportunities for Henkel.

"His ability to find new market opportunities, develop new business models, partner with the entrepreneurial ecosystem has made Henkel stronger. Under his leadership Henkel Adhesive Technologies is developing a balanced portfolio of fund investments, direct startup investments and strategic partnerships that are opening up significant new growth opportunities for Henkel."

The unit's stellar team has produced another GCV Rising Star this year – Robert Günther, who heads the corporate venturing activities from the finance side. Bavaj said: "We are constantly expanding the team – now being eight members – taking in outside perspectives in other to continuously improving the quality of my team. We also had one promotion recently in the team.

"Maybe a worthwhile aspect to note is also that we are consciously moving people from my team to our operating business in order to emphasise and develop an entrepreneurial mindset throughout the organisation."

The unit actively partners portfolio companies. "Our aim is to create and develop a Henkel business based on a technology from a startup. We are running currently over 50 startup collaborations in order to make this happen. Very recently, we agreed with a startup in Boston to sell their anti-fingerprint coatings leveraging our market penetration, our developed customer base, our technical service capabilities and our global footprint. With another startup, we are working on the same model for interior trim coatings for the automotive industry."

Bavaj also engages with the VC community by participating in conferences and associations. "We developed together with a financial VC a very high-sophisticated tool for actively managing our startup portfolio and deriving generic strategies and roadmaps for each of our portfolio companies. I talk very often publicly at conferences and associations about thought leader topics. I also organise external public events, like the European Chemistry Partnering Summer Summit at Henkel, the Pitch Party at Henkel as well as the Innovation Roundtable at Henkel. I am also contributing through

PhD interview to further research about interesting VC topics.

Henkel Ventures participated in nine direct investments in five startups and four investments in four VC funds last year, totalling €80m ($91m) of investment on behalf of Henkel Adhesive Technologies. To date, Henkel has invested in nine VC funds and eight startups.

Its portfolio companies include Israel-based conductive copper inks producer Copprint and US-based advanced materials startup NBD Nanotechnologies, regarding which Bavaj said the unit "could link the investment strongly with the operating business".

After his PhD in chemical engineering at RWTH Aachen, Germany, Bavaj joined Celanese Chemicals in 1996, where he worked in operations, new business development and led then a global research and development (R&D) and new business development team, gained experience as area sales manager in the US, and ran the Celanese emulsions textile and engineered fabrics business in Europe as well as its global glass fibre business.

Thomas Birr INNOGY

Thomas Birr, chief executive of Innogy Innovation Hub, Germany-headquartered energy utility Innogy's accelerator and corporate venture capital arm, and chief futurist and senior vice-president of innovation and business transformation at Innogy.

Birr said: "At the Innogy Innovation Hub, we invest in the technologies and business models that have the potential to transform the future of energy. It is a bold vision and we take a bold approach, combining traditional corporate VC with accelerator and angel investing.

"This gives us unparalleled access to the most promising startups and presents unique opportunities to create value and innovate. In a short space of time, we have built a world-class team of investment experts, sector specialists and founders and entrepreneurs that has set us on a course to drive exponential growth in our portfolio."

Innogy Innovation Hub was set up in 2014 to identify globally the technologies, ideas, individuals and businesses that will help build the future of energy, providing funding, mentoring and a platform for co-creation, collaboration and convergence.

Central to the Innovation Hub's vision is that new technologies, business models and consumption patterns will redefine the energy market of the future. As new technologies emerge, traditional sector boundaries are blurring, while new business models are creating new value chains. Energy is foundational to disruption in adjacent sectors including mobility, telecoms and proptech.

Therefore the hub invests in four focus areas as the basis for its portfolio approach:
- Smart and connected: Future internet of things and mobility business models that make each customer both a consumer and a prosumer.
- Disruptive digital: Future data-driven business models that deliver an enhanced energy system experience for customers.
- Cyber-ventures: Breakthrough methods to protect the bigger threat surface created by increased digital connectivity of business and society.
- Machine economy: Future technologies that enable and define emerging

interactions with and among machines.

Since it started making investments in late 2015, it has invested in nearly 90 companies and built a portfolio of €162m ($182m), as of December 2018. Last year was an active year for the hub, having invested in 61 companies growing the value of its portfolio by over 50%.

The hub is headquartered in Berlin, with teams across Europe, including in London in the UK, Warsaw in Poland and Essen in Germany, as well as offices in Palo Alto in the US state of California

Innogy provides opportunities for its portfolio companies to thrive independently to transform the energy sector. A number of its portfolio companies have Innogy as a customer or are running proof of concepts within Innogy, but a greater validation of its strategy is that seven of the companies it has founded or provided pre-seed capital have received further rounds of funding from other external parties.

Innogy Innovation Hub said: "We have continued to play an active role in forging partnerships and take an ecosystem approach to support our portfolio companies and maximise their potential. In 2018, we were involved in 10 accelerator programs globally, providing opportunities for more than one-third of our portfolio companies to participate. This included Free Electrons, the world's first global energy accelerator, which we founded and now includes the participation of 10 international utilities with a total customer base of 80 million.

"It also includes ScaleUp Hub UK that we launched in 2018 with Wayra UK, part of Telefonica, and the Catapult Network. The first cohort resulted in 18 trials."

Innogy Innovation Hub said its networking activities in 2018 largely followed its strategy to focus on "fringe" events as well as hosting and co-hosting private invitation-only events in order to get in close contact with relevant stakeholders.

In addition, the hub arranged and participated in other smaller meetups and private dinners in Palo Alto, Tel Aviv, London, Essen and Berlin throughout the year to engage with the local innovation, entrepreneurial and investor ecosystems.

"Most importantly," the hub added, "our vision and activities deserve their own stage." Thus, it hosted its own "conference in a day" – the UnConference – in Berlin where around 400 guests from its global innovation network joined to hear and share thought-provoking insights on unlocking innovation from top industry business leaders and experts.

Taking place at Café Moskau, its network of business leaders, entrepreneurs, investors and startups from various industries had the opportunity to engage with its investment portfolio of more than 80 global startups and explore how their innovative solutions could grow and transform their own businesses.

Innogy Innovation Hub has 45 employees in six locations globally and recently added operations in Central and Eastern Europe.

Regarding exits, the hub said: "As we only started to build our portfolio in mid-2016, we have not exited many of our portfolio companies to date. We have had one small exit – Sweden-based heat exchanger technology producer Airec – and in the first quarter of 2019, we have already received offers for three exits but in each case have decided to remain a shareholder."

He holds a degree in mechanical engineering from Hamburg Polytechnic.

Marcus Böker PHOENIX CONTACT INNOVATION VENTURES

Marcus Böker has been a managing director at Phoenix Contact Innovation Ventures, the corporate venturing unit of industrial equipment maker Phoenix Contact, from January 2015. He first joined the corporate in 2010 as a project manager of acquisitions before being promoted to head of acquisitions in 2013, a role he held for five years, overlapping partially with the corporate venturing duties.

Since January 2018, Böker also holds a senior director of M&A role simultaneously for the whole group, where he prepares the concept and financing structure of the new entity.

Böker explained: "Phoenix Contact Innovation Ventures acts as a strategic minority investor with similar financial conditions and expectations of a pure venture capital fund.

"With its approach to bring smart money with additional value to startups, for example, via joint exhibitions and opening the company sales channel, both companies can grow independently from each other."

Frank Stührenberg, chief executive of Phoenix Contact said in his nomination of Böker: "With the Phoenix Contact Innovation Ventures we are much faster and flexible to interact and cooperate with startups and their ideas and technologies then in our core business. The established ecosystem by our venture team, headed by Marcus Böker, is one of the key elements of our strategy to the Industry 4.0 and industrial internet of things."

Since 2015, Böker and his team have conducted six deals in five countries, in sectors as diverse as energy, wind, cybersecurity, network technology and inductive charging, totalling at $12m worth of seed to series A investments:

- Germany-based electric vehicle wireless supercharger developer Blue Inductive Blue Inductive.
- Austria-based renewables, robotics and sports-focused smart sensor producer Eologix.
- Germany-based commercial building energy management system provider SmartB.
- Netherlands-based network security software developer SecurityMatters.
- US-based wind farm optimisation solution provider WindESCo.
- Canada-based industrial cybersecurity technology producer iS5 Communications.

Böker said: "The 2-million-digit fund is structured as an evergreen fund to recycle the gained profits.

"With this structure, Phoenix Contact Innovation Ventures addresses the particularities of the industrial hardware and software business-to-business market which needs longer validation cycles.

"With the exit of SecurityMatters in 2018, it could be shown that Phoenix Contact Innovation Ventures acts as a serial investor including the validation of the self-financing investment approach." The exit was valued at about $113m.

"Furthermore, in spring 2018, Phoenix Contact Innovation Ventures acted as a lead investor in the investment round with more than C$22m in the Canadian critical infrastructure company iS5 based in Toronto."

The corporate has developed a complete original equipment manufacturer system for the wind industry based on the Phoenix Contact system together with its portfolio company Eologix.

Böker built the M&A department of Phoenix Contact in 2010 from scratch. Before joining Phoenix, he had worked for Germany-based energy supplier E.on in the M&A and corporate development department for two years from 2005, before becoming a project manager for two years from 2008 at Germany-based filling and packaging systems supplier KHS.

Böker holds a master of laws degree in mergers and acquisitions from the University of Münster.

Jasper Bos M VENTURES

Jasper Bos, formerly vice-president at M Ventures, the corporate venturing unit of Germany-based drugs group Merck, ascended to senior vice-president and managing director of the unit earlier this year.

The promotion came in the wake of the departure of the unit's former head Roel Bulthuis who left in late 2018 to join Netherlands-based venture capital fund Inkef Capital as head of healthcare.

Bos said at the time: "What excites me most about my work for M Ventures is the active role we play in our portfolio companies, which is all about supporting our entrepreneurs in realising their ambitions and dreams."

A month after Bos assumed the post, the unit has participated in a €20m ($22.6m) series A round for Netherlands-based autoimmune disease therapy developer Calypso Biotech. Inkef Capital, where Bulthuis is managing director, co-led the round.

Calypso is developing therapeutic monoclonal antibodies to treat diseases or conditions caused when the immune system attacks the body. It was spun off from Merck subsidiary Merck Serono in 2013 with $3.2m in seed funding.

Bos joined Merck's previous biopharmaceutical fund of M Ventures in 2009 and transitioned to vice-president leading the healthcare team for the current fund in 2016.

At M Ventures, Bos supported, among others, the early successful investments and exits in Switzerland-based reproductive health company ObsEva, which listed on Nasdaq and Denmark-based cancer treatment developer EpiTherapeutics, which was acquired by biopharmaceutical company Gilead.

Bos was also an initiator of Netherlands-based central nervous system disorder therapy developer Prexton Therapeutics, which was acquired early 2018 by pharmaceutical firm Lundbeck for close to $1.1bn and which won the GCV M&A Exit of the Year award in January.

Bulthuis, a serial winner of the GCV Powerlist 100 awards, had originally set up what was then called MS Ventures in 2009 and in 2016 saw the evergreen strategic venture fund double to €300m ($337m) and broaden from a focus as one of the leading early-stage investors in the healthcare field to all areas of interest for the parent company.

When Bulthuis departed the unit, he had celebrated more than a decade at Merck, as before establishing its venture fund he was responsible for negotiating a range of licensing deals for subsidiary Merck Serono. Previously, he was director in the biotech investment banking team at Fortis Bank.

Each of the business sectors in Merck have dedicated funds. These funds have a starting capital of €50m ($56m) and a target size of €100m ($112m) evergreen, which, along with an existing fund, would take the total under management to €450m ($505m).

M Ventures also includes the Bioaccelerator Fund in Israel and the €30m Entrepreneur Partnership Program to fund spinouts from the parent company.

Before joining Merck Serono in 2009, he had worked in the Investment Fund for Health in Africa, PharmAccess Foundation, the Netherlands Vaccine Institute and National Institute for Public Health and the Environment.

Bos holds a degree in corporate finance from Amsterdam Institute of Finance, a master of science in pharmacy and a PhD in pharmacy and pharmaco-economics from University of Groningen.

Axel Bouchon LEAPS BY BAYER

Axel Bouchon is head of Leaps by Bayer, formerly known as Bayer Lifescience Center, Germany-based pharmaceutical and chemical producer Bayer's investment vehicle which seeks innovative pharmaceutical technologies strategically pertinent to the parent organisation's business. He is also a member of the Bayer research and development executive committee.

In recent years, healthcare and life sciences have become increasingly tech-focused. In an interview held with Business Insider in January last year, Bouchon was quoted as saying: "The true disruption of the next five to 10 years will come at the interface of tech and biotech."

He added that he hoped this intersection of tech and biotech would help patients, even though he admitted that "both sides miss fundamental expertise" and needed individuals who could think differently.

"The potential of how biophysical data could be combined with data management will revolutionise the pharmaceutical industry and all of life sciences. And interestingly, nobody on the tech side nor on our side has the solution."

Bayer acquired US-based agrochemical producer Monsanto for a total consideration of $62.5bn in June 2018 and the latter's corporate venture capital unit Monsanto Growth Ventures (MGV) was renamed three months later to Bayer Growth Ventures (BGV) and would carry on its operations.

John Hamer and Kiersten Stead, former directors of MGV, left the new organisation in April to join venture capital firm Data Collective in San Francisco to set up a new $250m life sciences-focused fund.

Initially, Bayer crop science division president Liam Condon said the company was keen on MGV's past activities but were unsure of how to integrate it.

Condon noted at the time: "We are hotly debating it. We cannot conclude anything yet because Monsanto is still a standalone company, but we are very excited about what we see and know of MGV. We think it is a great model."

Eventually, Leaps by Bayer's team has taken over the management of the unit and Jürgen Eckhardt, head of Bayer venture investments, was named interim head of Bayer Growth Ventures before March's appointment of Derek Norman, former head of

Syngenta's corporate venturing unit, to vice-president.

Bouchon told St Louis Business Journal in September 2018: "The Bayer Growth Venture concept is perfectly complementary to the portfolio of Leaps by Bayer. By bringing both approaches together under the roof of one organisational unit, we do now avail of all tools in equity management that are necessary to foster disruptive innovation, capture trends and tap into external innovation potential."

Bayer said Leaps by Bayer would give emphasis to health and agriculture opportunities, while BGV would expand Bayer's reach to health, nutrition, life sciences technologies and agritech and would concentrate on early rounds as MGV did. BGV conducts its deals from offices in Berlin, Germany as well as Boston, St Louis and San Francisco in the US.

Eckhardt told AgFunder in October 2018: "BGV spans across the innovation of agriculture and life sciences, 'cross-pollinating' the two disciplines where those opportunities exist. This is one of the reasons we're particularly excited to not only keep the former MGV's innovation engine running, but to take it to the next level and solve some of our world's greatest challenges."

Bouchon previously served as senior vice-president of new business and product concepts at US-based vaccine developer Moderna Therapeutics. In that role, he formed, funded and ran startups that investigated human, animal and plant diseases.

Before Moderna, Bouchon held different roles at Bayer, for example, he headed its pharmaceutical arm Bayer HealthCare overseeing pharmaceuticals, consumer and animal health products and medical devices.

Bouchon holds a bachelor's degree in biochemistry, organic chemistry and immunology from Eberhard Karls University and a doctorate from University of Tübingen.

Scott Brown UPRAMP, CABLELABS

Scott Brown is executive director at cable entrepreneurship accelerator UpRamp backed by research and development initiative CableLabs, where he holds a concurrent role of vice-president of ventures and outreach for the global cable and broadband industry.

Brown joined UpRamp upon its launch in February 2016. He said at the time: "For decades, CableLabs and our member cable operators have been at the forefront of the broadband revolution – connecting hundreds of millions of businesses and households to the internet, connecting the many internet devices in the home, connecting families and the world to each other.

"CableLabs has taken the next step to connect two of the most powerful networks in the world – the exciting and growing network of startup companies, and the largest, most powerful broadband network in the world, run by our 55 global cable operator members."

UpRamp was devised to be a novel accelerator to connect startups and later-stage technology developers with cable operators to help foster the cable innovation ecosystem. Brown added: "Unlike traditional accelerators, UpRamp is closer to an executive MBA for startups; something we like to call a Fiterator."

UpRamp told Multichannel News in August 2016 that its Fiterator program "guarantees actual commercial deals", and a group of chief executives and chief technical officers from the industry would help select the four finalists.

Brown added: "In addition to our focus on deals, not demo days, every company that enters the Fiterator program is granted a non-exclusive and royalty-free license to every patent in our parent company CableLabs' portfolio."

In August 2016, UpRamp revealed the first cohort of companies – multichannel single radio wireless equipment developer Edgewater Wireless, video services personalisation platform operator MediaHound, big data and analytics processor developer VelociData and wireless mesh networking technologies developer Trinity Mobile Networks. UpRamp said applicants were quite varied – some had received seed rounds, while some were public companies that had raised $157m in total.

In August 2017, four more companies were added – peer-to-peer technology-driven video delivery services provider Teltoo, artificial intelligence-empowered troubleshooting technology provider DeviceBits, devices connection platform provider Bansen Labs and cybersecurity analysis collaboration platform operator King & Union.

In August last year, the most recent cohort was chosen – cybersecurity and identity protection software provider Averon, customer-focused mobile video and chat platform Blitzz and edge cloud computing platform operator Mutable.

Brown added: "The UpRamp Fiterator is a three-month, non-resident program for companies that already have a product in the market, have either raised capital or built a sustaining revenue stream, and are looking to engage real customers in this large and growing market. While most accelerators close their program with a 'demo day', the outcomes of a Fiterator accelerator are real deals and reference customers. This highly selective program is limited to four startups per cohort, with each startup gaining access to our network of over 250 senior level mentors from CableLabs and our member operators."

Brown was hired by CableLabs in 2015 from Bounce.io, the provider of an online platform on email bounces that he founded in 2013.

Tony Cannestra DENSO INTERNATIONAL AMERICA

Tony Cannestra has been a director of corporate ventures at car parts maker Denso International America since April 2014, where he leads its corporate venture efforts.

He set up a venture investing strategy for Denso by establishing an extensive network of universities, entrepreneurs, incubators, accelerators, angel investor groups and venture capital funds.

The unit invests in early-stage startups that are compatible with Denso's strategic growth plan through equity investments and non-equity funding, as well as mergers and acquisitions. The investees typically develop advanced robotics, mobility, manufacturing and internet-of-things technologies.

After having touched on the autonomous vehicle topic at last year's Global Corporate Venturing and Innovation Summit where Cannestra said most of the technology would likely be developed in the next few years, at this year's Summit, he talked about the hype surrounding this space. "It is good to have a hype, but the performance of our investments is important."

As an evidence of this trend, last year, the unit partook in a $60m series B round for US-based mobility software developer Ridecell, a $65m series C round for US-based artificial intelligence processors developer ThinCI, a $10m financing round for US-based wireless technology developer Metawave and a $2m seed round for US-based IoT and automotive cybersecurity technology developer Dellfer – all but Ridecell were co-led by Denso.

Under Cannestra's leadership, the unit has acquired two companies – US-based Bluetooth low energy micro-location and passive phone-as-a-key technologies developer InfiniteKey in 2017 and US-based automotive diagnostic software supplier Ease Simulation in 2014.

In an interview for GCV's mobility sector report published in 2016, Cannestra said: "The startups are typically of strategic interest to Denso in three areas – connectivity, autonomous vehicles and cybersecurity. We invest in the stages from seed to series B. Most of the opportunities we look at are mission-critical to the automobile. Because of the importance of those systems, we tend to take a longer-term perspective on when those technologies can be implemented in an automobile. You cannot do what we do in a one or two-year window. And we are investing for strategic rather than financial returns.

"We invest off the balance sheet. This means that we are not limited by the number of investments we can make annually, and it keeps everyone engaged at the R&D level and at the upper management level since they have to be informed and sign off on every investment.

"In my previous work in venturing, I observed that corporate venturing is not successful unless you really add value to the whole ecosystem. So when I helped create the Denso CVC group in Silicon Valley several years ago, we made a conscious decision to support entrepreneurs at the earliest stages, to work with other venture funds as a limited partner and as a co-investor, as well as leading direct investments.

"So as part of that investment strategy, we sponsor the incubators Prospect Silicon Valley in San Jose, Lemnos Labs in San Francisco and NextEnergy in Detroit. We were the anchor investor in Autotech Ventures, and we have made five direct investments in startup companies."

Before taking the role at Denso, Cannestra spent five years as managing partner of venture capital firm Strategic Venture Partners, where he focused on corporate investors as limited partners. Before that, he was a principal and later an executive vice-president of fund manager Ignite and a board member of energy storage company Cymbet Corporation.

Nazim Cetin ALLIANZ X

Nazim Cetin is chief executive at Allianz X, an investment vehicle formed in 2013 by Germany-based insurance and asset management group Allianz. Cetin, who has experience as a corporate intrapreneur and as an entrepreneur, joined Allianz X in August 2017 and initiated the company's strategy shift from being a company builder to becoming a digital investment unit of Allianz.

Having deployed more than €200m ($236m), Cetin led the unit to make investments in digital growth companies around the world, hired a growing team of investment professionals and repositioned Allianz X as a competitive investor in the venture capital space.

Allianz X invests in growth-stage companies that develop digital technologies pertinent to its parent's business, covering areas including mobility, wealth management, cybersecurity, data analytics, connected property and health products.

In addition, Allianz increased the capital reserves of Allianz X from €430m ($483m) to €1bn ($1.13bn) in February this year. The firm said in a statement that it had allocated more capital to Allianz X because of the unit's success in its investments and partnerships and the important role it had played in Allianz's digital transformation plan.

Iván de la Sota, Allianz's chief business transformation officer, said at the time: "We are very pleased with the progress Allianz X has made thus far and are committed to further invest and develop the next generation of digital growth companies related to Allianz's core business.

"Our digitisation approach is multifaceted. Allianz X is a valuable addition – not only in meeting the changing expectations of our customers."

Allianz X's more than 15 portfolio companies include on-demand ride provider Go-Jek, currently valued at $10bn, and it co-led a $160m round for N26, a mobile banking platform most recently valued at $2.7bn, in March last year. It also invested $96.6m in digital insurance platform Bima in late 2017.

Apart from its direct investments, Allianz X looks to connect portfolio companies with parts of the larger Allianz group to assist growth. It offers Go-Jek drivers insurance and underwrites Bima's policies, while its Euler Hermes subsidiary launched a credit insurance product with business finance marketplace C2FO.

Allianz's previous venture unit, led by Jörg Richtsfeld, invested in companies such as DRL, Simplesurance and MoneyFarm, and Allianz X is also working with them to unlock strategic value alongside Allianz's operating entities.

Cetin added in February: "Since shifting our strategy, we have built a great portfolio in which many companies have already developed successful partnerships with Allianz's business units.

"We are very excited about raising our investment budget to €1bn and will use the funds entrusted to us to both strengthen our portfolio and build strong, global platforms that create new businesses for Allianz."

Nazim joined Allianz X from media conglomerate Bertelsmann, where he was a vice-president of corporate development and new businesses, as well as head of business development. Previously, he founded the first German magazine focusing on philosophy and economics, internationalised the commercial finance division of Maple Bank, served as a venture partner for Target Global, and advised many international VC funds and startups.

Nazim currently sits on the boards of American Well, BIMA, C2FO and N26.

Shaohui Chen MEITUAN-DIANPING

Shaohui Chen joined Meituan-Dianping, a China-based e-commerce platform that raised $4bn in October 2017's series C round from a consortium led by Tencent, as vice-president of corporate development earlier in 2014 before his promotion to senior vice-president.

Previously, he had worked in corporate venturing and mergers and acquisitions at China-based media group Tencent for nearly four years after a three-year stint at two venture capital firms and then completing his MBA at Harvard.

With the $4bn raised from a syndicate led by China-based media group Tencent and US peer Priceline Group, as well as financial and government investors, Meituan-Dianping had plenty of funding to expand.

Effectively, Meituan-Dianping filed for an initial public offering in Hong Kong in August 2018 and it raised $4.2bn at a $48bn.

And to help its expansion, Meituan-Dianping launched an RMB3bn ($435m) corporate venturing fund in February 2017 with Chen as the fund's CEO and Tencent and New Hope Group as limited partners.

The first phase of the fund aimed to raise RMB1.5bn from a consortium including Meituan-Dianping, Tencent and China-based food company New Hope Group to back companies operating in the food and beverage, retail, hotel, tourism, and entertainment sectors.

Other corporate venturing deals by Meituan-Dianping last year included a $1bn series H round for India-based online food delivery platform Swiggy in December, a $2.9m series B round for China-based cloud-based healthcare platform provider LinkedCare Information Technology in September, a $200m series D round for China-based online wholesale alcohol retailer Yijiupi also in September.

Chen's colleague Wenqian Zhu had originally taken a 20% stake in Dianping in February 2014 while at Tencent. He then helped the restaurant-review and group-buying services provider Dianping's $850m round in March 2015 at a $4.05bn valuation from a consortium including Tencent.

In October 2015, Dianping then merged with peer Meituan, which in January that year had raised $700m at a $7bn valuation from a syndicate led by Alibaba. With Tencent leading the post-merger C round, Alibaba has seemingly turned its attention elsewhere and invested in a separate group of on-demand service providers, including food delivery platforms Ele.me and Koubei and ticketing service Tao Piao.

Martin Lau, president of Tencent, at the time of its C round, said: "We are glad to continue providing Meituan-Dianping with both strategic and financial support as it fulfils its vision of transforming China's food and lifestyle services industry. The company is executing smoothly and at scale across multiple categories, is providing convenience and value to consumers, and is contributing to a healthy and diversified China internet ecosystem."

Meituan-Dianping's market share is impressive. With 86% market share for in-store dining and 61% market share for on-demand delivery in 2017, it launched Meituan Travel that took more than a third of the hotel reservation market in its first year and launched Co-Line Marketing, an integrated online and offline programmatic marketing platform with geo-localised consumer profiles to help merchants reach their target customer and entered new verticals, including new retail and bed and breakfast (B&B) accommodation. In 2018, during its IPO process, Meituan said it was slightly ahead of online travel agency Ctrip in domestic room nights booked – with 33.6% market share for the former and 33% for the latter.

Meituan-Dianping now has 380 million users and serves as a platform for about 5.5 million active businesses, according to the firm's latest earnings report in September, adding it had moved to compete with Alibaba and Tencent-backed peer JD.com in offline and artificial intelligence, as well as ride-hailing services such as Didi Chuxing.

Suzanna Chiu AMADEUS VENTURES

After shining as a GCV Rising Star for three consecutive years from 2016 to 2018, Suzanna Chiu, head of ventures at Amadeus Ventures, corporate venture capital unit of Spain-based travel software and technology services provider Amadeus IT Group, was included in last year's Powerlist for her leadership and this year is no different.

Wolfgang Krips, senior vice-president of corporate strategy, said: "Over the last five years, Amadeus Ventures has interacted with thousands of entrepreneurs in the travel technology space and invested in more than 10 high-potential startups highly relevant for our customers. The team constantly shares observations and brings startup collaboration ideas to the rest of the organisation.

"All our business units now have incorporated startup as part of their activities, as solution partners, and as an emerging customer segment. Amadeus Ventures has become known as one of the top strategic investors in the space of travel and transportation technology. I congratulate Suzanna to be on the GCV Powerlist once again this year and look forward to an exciting 2019."

Based in Madrid, where the firm is headquartered, Chiu started off as senior manager of strategic planning in 2012, until she was appointed to head of ventures in 2014.

In 2018, Chiu brought new investment dimension into the program. She explained: "Rather than investing in subjects that complement the offers of our business units, we invested in Dawex – a data exchange platform based in France. The idea is to work together with Dawex to experiment data collaboration and monetisation with our industry and non-industry partners."

Chiu also sought strong alignment between ventures and other startup programs within Amadeus in terms of communication and lead management. "Combining resources from both corporate and business across regions to bring full range value proposition from expertise, reach, technology to funding to startups working on travel technology."

Strong support from business units on co-marketing and solution collaboration activities has also been vital. "Our portfolio startups presented in close to 10 customers events around the world last year, offering them access to high-quality customer leads and solid revenue opportunities. On solution collaboration, two startups' solutions are integrated into Amadeus and are currently being piloted by our customers. We also have referral relations with three portfolio companies where we recommend their solutions directly to our customers."

Chiu leads a team of talented investment professionals who continue to drive the ecosystem. Chiu nominated Covadonga Baselga, an investment manager from her team, to be GCV's Rising Star this year. Amadeus Ventures also hired two new members – Marta Pinho and Cristina Moyano – both of whom have experience working with startups and increased the unit's dealmaking capabilities.

Being a prolific thought-leader, Chiu participated as a speaker and jury member at various conferences including the Skift Forum Europe 2018, Phocuswright Europe 2018, South Summit 2018, among others.

Concerning plans for this year, Chiu said: "2019 is going to be an important year. After five years of operations, we are reviewing our objectives and approach based on feedback and learnings. We have proven ourselves to be successful in finding and identifying startups that can potentially disrupt the travel industry.

"The next step would be to amplify our impact to the organisation – on innovation and future growth. Our goal would be to evolve the program into a profit generator which identifies a portfolio of business opportunities that will fuel the future growth of the organisation. This would include broadening the objectives of investments and also the criteria of investments.

"We will dedicate 2019 in getting our internal stakeholders on board and at the same time, doing more transforming deals."

Before joining Amadeus, she was a senior manager at Macquarie Capital Advisers, where she led several mergers and acquisitions transactions in the telecoms and media sectors, based between London and Hong Kong. In Hong Kong, she also served as lead consultant for business-to-business e-commerce services provider Sesami, and as a consultant for Accenture.

Chiu graduated from the Chinese University of Hong Kong, where she obtained a statistics-focused bachelor of science, and she completed a finance concentration MBA at the London Business School.

Henry Chung and **Dong-Su Kim** LG

Henry Chung joined South Korea-headquartered electronics, chemical and telecoms conglomerate LG's electronics manufacturing arm LG Electronics in 2010 and is a vice-president of corporate venture capital.

Chung has been joined by Dong-Su Kim, one of South Korea-headquartered electronics conglomerate Samsung's most seasoned corporate venturers in the US, who LG in May 2018 to set up a new venture fund called LG Technology Ventures.

The new venture capital unit oversees investments from LG Group affiliates – LG Electronics, LG Chem, LG Display and LG Uplus – which raised investment funds totalling ₩430bn ($400m) in March last year. These LG firms will help make investment decisions when LG Technology Ventures identifies strategically relevant startups, especially those with technologies in artificial intelligence (AI), robotics and auto components.

Furthermore, LG will acquire startups, make equity investments and hire or collaborate with external industry experts. Under an open innovation strategy, the group has invested in South Korea-based AI-empowered strategic consulting platform developer Acryl and Japan-based communication and industrial robot developer Robostar.

As general manager of Samsung Ventures America, Kim had led deals for Samsung in more than 20 companies, including data storage technology developer Pure Storage and memory-based IT infrastructure equipment manufacturer Netlist, which were floated on the New York in October 2015 and Nasdaq stock exchanges respectively in November 2006

Previously, Chung had been a director of LG Innovation Ventures from 2010 to 2012 before ascending to senior director and managing director of the unit, a role he held until the promotion to his current role in 2016.

Chung scouts and conducts venture deals, engages in open innovation and corporate development activities in North America and reports to I. P. Park, chief technology officer of LG Electronics based in the South Korea headquarters.

During his time at LG Innovation Ventures, the unit participated in a $15m series E round for US-based cloud computing technology provider Joyent in October 2014. Joyent was acquired by electronics producer Samsung in June 2016.

Russia-based facial and 3D gesture recognition technology developer 3DiVi announced in March last year that it was expecting to close a $2m venture funding in June 2018 from LG Innovation Ventures and from other undisclosed investors.

Before joining LG, Chung had spent four years as a director of the direct investment team at US-based debt and equity provider Silicon Valley Bank (SVB)'s venture capital investment arm SVB Capital, where he invested from two funds in different technology realms ranging from information technology hardware, internet, cleantech and life sciences.

Before that, Chung was a vice-president from 2003 to 2005 at a mergers and acquisitions strategic consulting firm Newforth Partners, which is now part of boutique investment banking firm Woodside Capital Partners.

In addition, Chung was a founding partner of Imagicians Interactive, an internet strategy and consulting services provider based in Boston, in the US state of Massachusetts, that was sold to a traditional advertising agency Lapham-Miller in 2002. He was also a management consultant at boutique strategic consulting firm Fletcher Spaght.

Chung began his professional career as a computer programmer developing system dynamics models at Mitre, a nonprofit organisation that manages federally funded research and development centres, and as a DNA researcher at the National Institutes of Health, an agency of the US Department of Health and Human Services.

Eilat Cohen Basat KIMBERLY-CLARK CORPORATION

After many years in the technology sector, Eilat Cohen Basat joined US-based consumer packaged goods (CPG) company Kimberly-Clark Corporation (KCC) in May 2014 to establish and lead its Global Digital Innovation Lab, an open innovation platform similar in concept to the ones she established, launched and led before.

Cohen Basat said for her Rising Stars award last year: "I focus on deals and projects in advanced technologies such as internet of things, artificial intelligence, sensors, nanotech, deep learning, predictive analytics and blockchain.

"As the CPG world is undergoing major disruptions, any new investments, acquisitions and collaborations that will help the CPGs face the growing uncertainties are highly valuable."

Cohen Basat is also keen on mentoring and guiding startups in their initiatives in the business-to-consumer and business-to-business world, not only from the funding aspect but through building a viable value proposition and a strategic growth path into the market.

She added: "I can say that in multiple markets we have launched products and services that will not be directly associated with a CPG-like company and that we have evaluated some interesting capabilities for M&A in non-traditional spaces. More and more parts of the organisation are taking part in these activities."

Before KCC, she had established and led a full-scale startup collaboration program for Amdocs, a tier one supplier in the telecoms sector, covering mergers and acquisitions, investments and collaborations.

"In this tenure [to September 2012], I have worked with C-level leaders from many service providers, for example, AT&T, Sprint, SingTel Group, Vodafone, NTT Docomo and others, to structure their open innovation strategies and frameworks.

"I was honoured to be part of AT&T's Rethink Possible and SingTel Group's Digital Life strategic initiatives and set for each an innovation centre in Israel covering all engagement types– collaborations, investments and acquisitions."

Cohen Basat also has ample experience establishing new lines of business for large enterprises as well as starting new startup ventures.

She noted: "I truly believe large corporates can only benefit from relationships with young companies that bring in unique expertise, new and agile ways to crack challenges, and fearless attitude towards trial and error.

"In a CVC or alternate forms of collaboration, a startup can get more than pure financial backing but also industry knowledge, an understanding how to build a sustainable business and a valuable partnership when entering new markets. Through this collaboration of two different entities, great things can happen to both sides."

However, said there were challenges. "In a big corporate, every day is a challenge when you are bringing in a future agenda. Corporates tend to heavily question any not-invented-here capabilities and ways of thinking. Finding a common language between the entrepreneurial world and the corporate world – as far as jargon, processes and time to execute is also a big challenge."

Fortunately, as a keen explorer, uncovering and understanding people's motivations, habits and cultures has been part of Cohen Basat's interests and skills.

And Cohen Basat is keen to do more, saying: "I would be happy to set a CVC for a corporate that sees the opportunity in it and help it grow into viable strategic directions.

"CVCs have an inherent dilemma – between being a financial investor and a strategic arm for the corporate. Sometimes these do not go hand in hand. If a CVC could actually be fulfilling to the promise of being smart money for the entrepreneurs, without binding them and allowing them to grow then all parties will gain and CVC will be a better fundraising partner and it will grow the CVC industry."

Iain Cooper SCHLUMBERGER

Iain Cooper has been managing technology investments for oil services company Schlumberger's corporate venturing deals since 2007, after having served 15 years at the company. For more than a decade, he has overseen early-stage technology scouting and corporate venturing for Schlumberger and is regarded as an ideal boss to Andrea Course – this year's Rising Star – and Tyler Durham as venture principals for his levels of support to colleagues, insights and freedom for them to achieve their goals. His persistence and ability in venturing has also paid off with the company committing to a larger initiative.

Ashok Belani, executive vice-president of technology and chief technology officer at Schlumberger, said: "The Schlumberger venture group is an integral part of the technology development ecosystem, which comprises science, engineering, universities, manufacturing, technology lifecycle management and startup companies. It has been a successful business venture, not only having led to commercial products and services, but it has also given Schlumberger a deep insight and network into a broad range of potentially impactful new technology domains outside of our traditional business areas."

Cooper added that Paal Kibsgaard-Petersen, Schlumberger's chairman and chief executive, has been "very supportive of our group during the downturn". He added: "We maintained a team of three during a downturn. No mean feat when you look at what happened to many of the other oil company VC groups."

Cooper said for 2017's profile: "In terms of achievements we had a nice exit with Liquid Robotics – with a pretty good multiple [in the sale to Boeing] – and with an eye to the future, we undertook the first investments for Schlumberger in the renewable energy and oil and gas decarbonisation spaces with Kite Power Solutions [raising £5m ($6.5m)], Alphabet Energy [raising $23.5m] and GHGSat [for its satellite-aircraft hybrid detection of methane emissions]."

Cooper reviewed the company's corporate venturing activities in 2018, saying: "This year has primarily been the year of follow-ons." He said Schlumberger was involved in nine follow-on deals, including:

- A $10m series A round for Canada-based greenhouse gas emissions monitor GHGSat.
- A $30m series B round for US-based workplace robotics technology provider Sarcos Robotics.
- A $20m series B round for US-based intelligent systems and robotics technology developer Houston Mechatronics.
- A $29.7m series G round for US-based memory storage developer Nantero.
- A $31m series C round for US-based enterprise cybersecurity technology producer Onapsis.

He said there was only one new investment last year, which was undisclosed. In total, the 10 deals from 2018 totalled $97m in investment in three countries – the US, Canada and Norway. Along with 34 different co-investors, Schlumberger invested in seven industries – oil and gas, robotics, additive manufacturing, electric vehicles, clean energy, materials and cybersecurity.

Cooper said he was also "pulled into both M&A transactions and some side projects", for example, "I have been working with a well-known space launch company on their plans for Mars colonisation and their drilling and sub-surface imaging needs."

An unnamed portfolio company is under acquisition investigation: "We are in deep negotiations on it, as we have been through most of last year," Cooper said. He is hopeful that it will go through this year.

Other portfolio companies – US-based shippable metallurgical system developer Molyworks, Canada-based nanocrystalline cellulose producer CelluForce, as well as Sarcos, Onapsis and Houston Mechatronics – have either development or commercial contracts with Schlumberger.

Cooper sits on the selection committee for the Propel Energy Conference and the Banff Venture Forum, where "we look at many deals in Canada", he said. "I also developed our strategy for Schlumberger's participation in the energy transition and how we participate in this space."

Cooper himself gained a PhD in meteorology from Reading University in 1992, before which he studied mathematics and physics at Bristol University. He joined Schlumberger as a research scientist in 1992 before working his way up to product development manager by 2007, when he founded the corporate venturing group. He keeps active on the creative side, with at least 26 granted US patents and a few more pending.

Barbara Dalton PFIZER VENTURES

Barbara Dalton has run US-listed drugs company Pfizer's corporate venturing unit since she joined in 2007 as vice-president. But her knowledge of the industry stretches back a quarter of a century to when she started out as president of UK-based pharmaceutical company GlaxoSmithKline (GSK)'s corporate venturing unit, SR One, in 1993.

Founded by Peter Sears in 1985, SR One first invested on behalf of SmithKline Beckman before a series of mergers resulted in GSK. Dalton became president in 2001 when Brenda Gavin, who took over from Sears in 1999, moved on to co-found Quaker BioVentures.

After formally leaving SR One in 2003, Dalton joined EuclidSR Partners, a $260m venture firm set up in 2000 and backed by GSK. EuclidSR grew out of a partnership between Euclid Partners, a venture capital firm, and SR One, and Dalton and other SR One principals invested on behalf of both GSK and EuclidSR until their departure in 2003.

She worked at EuclidSR until the start of 2007 – an era typified by the difficulty of floating or selling portfolio companies following the dot.com bubble – and has now spent a dozen years at Pfizer.

But for corporate venturers, financial returns are usually only table stakes to align with VCs and avoid being a cost centre to the parent. The potential for greater support to portfolio companies by connecting them to the corporation and, vice versa, providing strategic insights and options to the parent offer a dimension of added-value investing.

GSK had relationships with about 50% of portfolio companies at the time of her departure from SR One, while Dalton said Pfizer was "probably about 25% and there are always discussions ongoing with portfolio companies".

At EuclidSR she worked with Elaine Jones, who also joined her at Pfizer Venture Investments and retired last month, while the third member of the team is Bill Burkoth.

Her small team at Pfizer puts out about $50m a year in cheque sizes of up to $10m a round and is both active and successful. Her Pfizer profile says she has managed more than 30 fund investments and 80 diverse company investments in the US and Europe and has had direct investing responsibility for biotechnology therapeutic and platform companies, as well as some healthcare IT and service businesses, including Accelerator NYC, Complexa, Cydan, Ixchelsis, Lodo, Magnolia, Morphic Therapeutic and Petra Pharma.

Among her latest deals were a $63m series B round for US-based blood disease drug developer Imara in March this year and a £65m ($83m) series B round for UK-based cancer-focused biotechnology developer Artios Pharma in August last year.

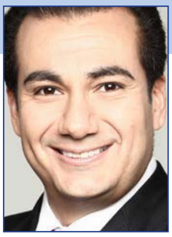
US-based peptide therapeutics developer Rhythm Pharmaceuticals, which raised $41m in a February 2017 round and $33m in a 2012 series B round from Pfizer Venture Investments and others, filed for a $115m initial public offering on Nasdaq in September 2017.

While Pfizer's venture returns are undisclosed, Dalton said: "it is significant and would put us in the top quartile for most biotech VC funds".

She added: "Right now about 15 portfolio companies are talking to someone in the organisation. We have been as high as 45% with relationships, but the more new companies you add, that number drops because it takes time to generate those connections."

Options for the parent in the longer term are also important. While strategic shifts and breakthroughs in science and business models may make a portfolio company redundant, they can also result in some becoming important partners from adjacent or non-core peripherals.

Dalton, who has a PhD in microbiology and immunology from Medical College of Pennsylvania, shows no signs of changing even after winning the GCV Lifetime Achievement award in January.



Heriberto Diarte SCHNEIDER ELECTRIC

Heriberto Diarte has been heading corporate ventures and external innovation at France-based energy management and automation technology producer Schneider Electric since November 2017. He oversees open innovation for the company, including its incubation programs to launch new companies, and investing in startups and later-stage growth companies.

Schneider Electric launched a dedicated corporate venturing unit called Schneider Electric Ventures in November 2018 that invests between €300m and €500m ($340m to $565m) in startups.

Ahead of its launch, Jean-Pascal Tricoire, chairman and chief executive, said at the

Innovation Summit North America: "Schneider Electric Ventures is our way of helping innovators turn their vision into reality and make a real difference to the way we live and work.

"Schneider Electric Ventures demonstrates our commitment to innovation, helping innovators and entrepreneurs who share our values develop their ideas and gain access to global markets."

Tricoire emphasised in a keynote address that the fund, together with the annual €1bn research and development spending, would allow the firm to be involved in the shift from fossil fuel-based energy consumption to a cleaner electrified paradigm. Schneider Electric has pledged to have a net zero carbon footprint by 2030.

Diarte added at the time: "The investments we have made and the companies we have incubated so far are central to Schneider Electric's vision for the future. These innovative technologies and services we are investing in will make a huge contribution to creating a world that is more connected, greener, efficient and sustainable."

The unit focuses on energy efficiency and sustainability, in areas such as energy use and industrial management, and will deploy the capital for direct investments in startups, dedicated strategic funds, incubation initiatives and partnerships with entrepreneurs.

Upon its launch, the unit invested in real estate modelling technology developer Habiteo, building management platform KGS Buildings, energy management device producer Sense, industrial data system developer Element Analytics, industrial security software provider Claroty and electric vehicle charger installer Qmerit.

In addition to its external deals, Schneider Electric Ventures has incubated solar technology installer Clipsal Solar and electric vehicle fleet services provider EIQ Mobility. Regarding the latter, Diarte said: "EIQ Mobility is an exciting investment. We deeply support their data analytics approach and infrastructure-as-a-service strategy.

"In the US alone, fleet vehicles drive 296 billion miles (476 billion km) a year, and their annual cost is more than $200bn. With more than 50,000 fleets in the US, we see a huge growth opportunity for EIQ Mobility, and significant cost reduction and sustainability opportunities for their corporate clients. We have committed to leveraging EIQ products with our more than 4,500 service technician and sales vehicles in the US to introduce more EVs into our US fleet."

Schneider Electric also partnered hardware incubator Greentown Labs to establish the Greentown Labs Bold Ideas Challenge program which acts as a liaison between entrepreneurs and mentors as well as business and technical resources.

The unit's namesake is its predecessor which was set up in 2000 with a €50m corpus and also conducted venture capital deals, until Schneider Electric formed Aster, a venture partnership with power and automation group Alstom, in 2010 and the former unit was absorbed.

Diarte holds a bachelor of science in economics from Instituto Tecnológico Autónomo de México, a master of public administration in business and government partnerships from Harvard University and an MBA from Stanford University's Graduate School of Business.

Jens Eckstein SR ONE

Few corporate venture capital groups cross the threshold of investing more than $1bn, but UK-based pharmaceutical company GlaxoSmithKline's independent corporate venturing unit, SR One, is one of them.

Jens Eckstein took over as president of SR One in 2011. Celebrating its 30th year of existence in 2015, SR One had invested $1bn in more than 170 companies as of then and had a portfolio of 40 private and public companies.

Last year, the firm's investment pace did not seem to slow down either, with at least eight new investments. Those included a $80m series D round for US-based precision oncology drug developer TP Therapeutics and a $54m series A round for US-based biotechnology startup Gotham Therapeutics in October, as well as a $55m series C round for US-based hearing loss prevention therapies developer Decibel Therapeutics and a $65m series C round for US-based biotechnology company Nimbus Therapeutics in June.

Earlier deals included a $20m series D for US-based digital therapeutics company Propeller Health, a $100m series F round for US-based biopharmaceutical company Constellation Pharmaceuticals and a $20m series B round for US-based antibiotics developer Macrolide Pharmaceuticals in April, as well as a $58m series A round for US-based biotechnology company Pandion Therapeutics in January.

Many of its portfolio companies resulted in exits – US-based biopharmaceutical company Translate Bio, Constellation Pharmaceuticals and US-based cancer and autoimmune treatment developer Principia Biopharma, all of which floated on the Nasdaq Global Select Market respectively in June, July and September.

Meanwhile, Belgium-based biopharmaceutical company Ablynx was acquired by pharmaceutical firm Sanofi for €3.9bn ($4.4bn) in January, Propeller Health was acquired by connected medical devices provider ResMed in December for $225m.

Jill Carroll at SR One and GCV Rising Stars 2018 winner said: "A lot of the deals we have been doing lately have been in a company-building format, which means that we invest a lot of time, effort and money in developing the group.

"We screen around 500 new deals a year that we constantly monitor, so one of the most difficult steps for us is to decide where to place our bets. The fact that we are an early-stage investor adds a layer of difficulty, as there's always a tremendous amount of technical risk to manage around early-stage companies."

SR One operates independently of GlaxoSmithKline and is not a strategic investor, with the pharma group doing some strategic venture investing on its own, as both fund commitments and direct equity investments.

Eckstein joined SR One after working at venture firm TVM Capital as a general partner since 2007. He joined TVM as a principal in 2004. At TVM he became chief executive of SelectX Pharmaceuticals and was also an entrepreneur-in-residence at the company.

Eckstein, a Kauffman Fellow, earned a PhD in biological chemistry from University of Konstanz and Harvard University and became a post-doctoral fellow at University of California San Francisco. Between 1993 and 1999 he worked at healthcare startup Mitotix, which was acquired in 2000 by German biotech company GPC. He was then at Enanta Pharmaceuticals as director of lead discovery and research from 1999 to 2003, before founding Akikoa Pharmaceuticals, where he worked from 2003 to 2005.

Keiichi “Kay” Enjoji TEL VENTURE CAPITAL

Japan-based semiconductor and display equipment maker Tokyo Electron (TEL) named Keiichi ”Kay” Enjoji president of its corporate venturing unit, TEL Venture Capital (TVC), in July 2011 and promoted him to vice-president of corporate technology strategy at TEL in January 2017.

TVC’s investment scope includes innovative technologies impacting TEL’s core semiconductor and advanced display, to photonics and optics, sensors, life sciences, healthcare, medical electronics and other areas.

The unit is not only keen on backing startups for financial returns but also product and business development perspective. Enjoji’s dual role as president of TVC and vice-president of TEL allows him to identify new business strategies for the corporation and implement them through venture investments and mergers and acquisitions (M&A).

Enjoji, with more than three decades of semiconductor industry experience under his belt, runs partnership programs and conducts M&A deals with portfolio companies after investments.

With strong demand for chips, TEL has been seeing record results while TVC made many investments including US-based crystal materials producer Light Polymers in 2017.

In addition, TVC has had many successful exits out of the deals done. In December last year, Bloomberg reported that networking equipment provider Cisco had entered discussions to acquire US-based fabless semiconductor technology producer Luxtera. The acquisition was completed two months later, with Cisco paying $660m in cash and assuming Luxtera’s outstanding equity awards.

Another notable exit for the unit was US-based on-demand disinfection chemistry system manufacturer Miox which was acquired by electrochemical technologies provider De Nora and took place also in February this year.

Enjoji, who sits on the boards of Floadia, Light Polymers, Tsukuba-Seiko, Alberta Nano-Monitoring Systems, Innovative Particle-Monitoring Technologies, Opt Creation, Liola, Genalyte, EnerVault, Crystal Solar, Tau-Metrix and Quantum 14, said last year that more deals would be coming: “Recently we raised our funds to be double, to expand strategic investments.”

Enjoji manages a team of more than 10 people in Japan, the US, France and Israel making strategic investments for TEL to impact its core semiconductor and advanced display, to photonics and optics, sensors, and life sciences, healthcare and medical electronics.

Enjoji has a wider remit as a head of the innovative technology planning group to manage collaborations with startups. All its investments are expected to lead to joint business development projects.

Enjoji was previously a director of TEL’s microelectromechanical systems (MEMS) division for more than seven years since 2003, having instigated new businesses such as through-silicon via (TSV) process equipment, advanced probe card and MEMS tester.

Before that, he had held a senior manager of corporate marketing role for three and a half years since 2000, where he developed new business strategies for TEL, selected

MEMS and TSV technology and acquired diversified conglomerate Sumitomo's steel manufacturing division Sumitomo Metal's MEMS department.

Enjoji also oversaw earlier as a senior manager from 1994 product marketing and oversea sales for chemical vapour deposition and physical vapour deposition systems, as well as sales and marketing for US-based cancer treatment technology provider Varian's products in Japan. In total, he has worked within the Japanese corporation for more than 25 years.

Enjoji holds a master's degree in economics from Keio University.

Amy Francetic ENERGIZE VENTURES

Since January last year, Amy Francetic had been managing director of the Invenergy Future Fund, which evolved into Energize Ventures in September.

It is sponsored by Invenergy, the world's largest independent renewable power developer, and with third-party corporate limited partners (LPs) that include power and industrial equipment producer General Electric (GE), France-based energy management and automation technology producer Schneider Electric, electricity and natural gas provider WEC Energy and a number of family offices, foundations and endowments.

Invenergy Future Fund, a $150m fund, had invested about $30m in five data-focused companies which allowed energy and industrial operations to be more accessible, dependable and safe. They were industrial cybersecurity software provider Nozomi Networks, artificial intelligence technology developer SparkCognition, data platform operator DroneDeploy, electric vehicle charging infrastructure provider Volta Charging and cloud-based platform for energy settlements developer Aquilon Energy.

Francetic told Greentech Media that LPs including GE and Schneider "have a number of partnerships with our portfolio companies" and that she believed that "these companies have to have a partner to gain commercial traction and scale up their businesses".

Energize Ventures, equipped with $120m, has invested in startups developing energy storage and distributed energy resources. It led a $23m series B round for US-based weather analytics software provider Jupiter Intelligence in March this year, and a month earlier, a $15.9m series A round for edge virtualisation software developer Zededa and a $20m series A round for cloud-based solar photovoltaic engineering software developer Aurora Solar.

Francetic, senior vice-president for new ventures and corporate affairs at Invenergy, was hired in February 2016 to create the first fund.

Francetic said: "In the energy industry, startup companies need to deploy their solutions most often through intermediaries like utilities, manufacturers and system integrators. That means that large players control the destiny of startups, so entrepreneurs must engage with these stakeholders early and carefully.

"Additionally, traditional sources of venture capital fled the energy industry following the losses of cleantech 1.0. I wanted to work with investors who could be important customers for startups and who could help the energy industry transition to a cleaner future."

And while she was "proud of how much we have accomplished in our first year of operations", she said the challenges were in "flying the aeroplane while building – doing investments while fundraising", and "trying to stay focused on our vision of a clean energy future while our federal leadership tries to resurrect the past".

Fortunately, her experience has helped. After two years as a principal at MVC Capital, Francetic was chief executive and co-founder of a technology accelerator, Clean Energy Trust, in Chicago. She said: "We made over 30 early-stage seed investments in clean energy companies across the Midwest, including some really difficult to fund companies that were doing hard technology science innovation.

"Earlier in my career, I co-founded and then ran a consumer electronics company, Zowie, that spun out of a lab that connected toys to the computer. We sold that company to Lego in 2000."

And, having been a photographer right after she graduated from Stanford University and travelled through West Africa documenting the role of women entrepreneurs in rural villages, Francetic has a clear way for the corporate venturing industry to do better: "Bring more women executives in the fund, into the board room, into the portfolio."

Tarik Galijasevic ALLSTATE STRATEGIC VENTURES

Tarik Galijasevic is head of Allstate Strategic Ventures, the corporate venturing arm of US-based insurance provider Allstate, which invests directly in startups that are strategically relevant for the parent organisation.

The unit looks to deliver both strategic and financial returns through minority investments, business partnerships and other strategic relationships. By accessing emerging markets, products, services and talent, it accelerates Allstate's business strategies to create new business opportunities.

As managing director of Allstate Strategic Ventures after the retirement of senior vice-president Jeff McRae at the end of February, Galijasevic oversees all aspects of the venture investment process, identifying, closing and monitoring deals.

He and his team work internally with leaders of Allstate's different business units to determine key focus areas and priorities for investments and business development and to liaise between Allstate and its portfolio companies.

The unit also collaborates externally with institutional venture capital firms, incubators, accelerators, academia, entrepreneurs and others to seek technologies and startups that can help Allstate grow and transform its business.

His prior responsibilities at Allstate included helping develop corporate strategy, leading M&A buy-side and sell-side processes, including a $1.4bn acquisition in 2016 of SquareTrade, a US-based extended warranty provider for the consumer electronics industry, structuring and negotiating partnerships and joint ventures.

In addition, Allstate acquired US-based employee identity protection service provider InfoAmor for $525m last year.

Galijasevic has 15 years of experience across business development, venture capital, private equity, mergers and acquisitions, leveraged buyouts, investment banking, private placements, initial public offerings and secondary offerings, dividend recaps, asset-backed securities, high grade and high yield debt and portfolio management.

Having closed more than 40 deals in his career with a total transaction value of more than $27bn in Europe, North America, Africa and Asia, Galijasevic has advised multinationals and small and medium-sized companies in different industries including automotive, shipping, aerospace and defence, industrial, consumer and healthcare, pharmaceutical and information technology.

Before joining Allstate, Galijasevic had been an investment banking and business development consultant for five years at private equity startup TG-F, where he helped build the company from scratch, executing deals for small and medium-sized companies in Europe and North America.

Galijasevic started his career at financial services firm JPMorgan Chase where he spent almost five years, holding different roles. He led and executed M&A deals, public and private equity and debt transactions and strategic advisory assignments.

Some of his notable deals included:

- Lead-left bookrunner on debt financing for private equity firm Carlyle and advised its purchase of US-based aircraft maintenance services provider Standard Aero for $1.45bn.
- Exclusive financial adviser to hospitality and travel services provider Carlson on the acquisition of a 25% stake in Sweden-based hotel network operator Rezidor for about $200m.
- Exclusive financial adviser and provider of a fairness opinion to building systems supplier Johnson Controls on its $3.2bn acquisition of refrigeration and heating, ventilation and air conditioning equipment maker York International;
- Lead-left bookrunner on $2.2bn debt financing for Johnson Controls on its acquisition of York International.
- Lead-left financial adviser to private equity investment firm Clayton, Dubilier & Rice on its $5.5bn acquisition of residential services provider ServiceMaster.

He holds a bachelor of science degree with a magna cum laude in civil engineering from Illinois Institute of Technology (IIT) and an MBA in finance, international business and entrepreneurship from IIT's Stuart Graduate School of Business.

Phil Graves TIN SHED VENTURES

After launching originally as US-based clothing company Patagonia's corporate impact venturing fund $20m and Change in 2013, Phil Graves, was promoted to senior director of corporate development in 2016 and changed the fund's name to Tin Shed Ventures.

Regarding the name change, Graves explained in 2017: "We have far surpassed the original $20m Patagonia committed to spending on investments in outside businesses and so we changed the name to reflect Patagonia's roots and founder Yvon Chouinard's early days working out of a tin shed, which he still works out of from time to time today."

Graves said Tin Shed Ventures' team had grown last year with the addition of this year's GCV Rising Star winner Liliana Bettolo: "Liliana has a background in chemical engineering and helps integrate our portfolio companies' innovations into Patagonia products." In addition, Alex Kremer, last year's GCV Rising Star, was promoted to investment principal.

The fund was GCV's Launch of the Year when it started, and it continues to enjoy success. Graves said: "Two of our portfolio companies received a third-party-led new round of financing at valuations several multiples above our carrying value." Furthermore, he added that the unit had closed a new investment in a company based in New Zealand.

Patagonia was ranked the sixth most innovative company in the world by Fast Company in February last year, and Tin Shed Ventures was listed as a reason why: "Through Patagonia's VC arm, Tin Shed Ventures, the company acquired a stake in a startup called Yerdle. Cofounded by Adam Werbach, the onetime head of the Sierra Club who had pushed Walmart toward more sustainable practices, Yerdle helped take Worn Wear online. Last April, Patagonia added Worn Wear to its own website, offering customers gift certificates for future purchases if they sent in used clothing."

Concerning Yerdle, Graves told GCV in 2017: "Our portfolio company, Yerdle, teamed up with Patagonia's Worn Wear initiative to help launch a 'recommerce' platform, through which Patagonia will buy back used Patagonia garments and sell them on a new web platform.

"The garments that customers trade in will also be cleaned using another technology in which Tin Shed Ventures has invested. Tersus Solutions is a waterless textile processing company that cleans garments using liquid CO2 rather than water. The closed-loop nature of Tersus's technology also allows microfibres to be captured within the system rather than flushing them into our waterways."

Graves told Women's Wear Daily in an interview in June last year: "Now that we are seeing the growth and the demand for Worn Wear, we are actually crafting a new business unit. Internally, we are very bullish on growing the program. We do not have to wrestle with the question of growth like we do with some new items."

Rose Marcario, Patagonia's chief executive and president, said: "Tin Shed Ventures gives Patagonia an edge in innovation and provides a new source of capital to startups that are in business to save our home planet."

For 2017's Powerlist award nomination, Marcario praised Graves saying: "He is an astute judge of responsible entrepreneurs with talent and experience who have a good shot at success. So far, all the fledgling businesses we have invested in are healthy and on their way to flying solo. As for Patagonia, we are making a decent return in all ways. We are a more patient capitalist. New ideas take time to germinate. We do not go in with an exit strategy or insist beforehand on what the investment business calls – you have to love the term – a 'liquidity event'. We do not micromanage, nor do we seek a seat on the board of the businesses we invest in. We want these like-minded businesses to have the time and the freedom, as well as the wherewithal, to build in a healthy way – environmentally and socially as well as financially."

By having an evergreen fund structure, Patagonia has no set hold period for portfolio companies, and, as a B Corp – a company certified to be pursuing a mission involving standards of social and environmental performance, accountability and transparency – it encourages entrepreneurs to use the corporate structure as a way of combining financial and environmental goals in their mandate.

Graves concluded that Tin Shed Ventures would continue to explore avenues to employ Patagonia's tax equity dollars to fund renewable energy projects, such as wind and solar power.

Alvin Wang-Graylin HTC

At the GCV Asia Congress in Hong Kong last September, Alvin Wang Graylin, China regional president of HTC Vive, the virtual reality (VR) arm of Taiwan-based smartphone producer HTC, gave a talk on augmented reality and virtual reality (AR/VR).

"HTC is right now the global leader based on investments – we are the most active AR/VR investor in the world," said Graylin, who is also vice-chairman of the $10bn Industry of Virtual Reality Alliance (Ivra) fund and president of the $18bn investor membership society Virtual Reality Venture Capital Alliance (VRVCA) with more than 50 active VC members.

Cher Wang, HTC's CEO, said: "As a leader in the spatial computing space, HTC Vive takes its responsibility to build a healthy ecosystem very seriously. We have actively invested in the space to support worthy startups and nurture a wide range of innovation inside and outside the company.

"Alvin has taken a leadership role in driving our engagement with both the investment and startup communities for the last three years," she lauded Graylin, "delivering strong results and deep connections that solidify our position in the market."

Describing the current AR/VR scene, Graylin gave an analogy of the global personal computer industry, where the focus shifted gradually to content as the technology, hardware and platform matured.

"What we are seeing in the emerging markets, emerging technology like AR/VR is still more about the platform. That is where the money goes.

"Content is still a smaller part of the investments, but if you look at the hardware devices, the technologies and the platform, that is where the dollars are being put in." As the hardware and platform developed, the applications and content would naturally emerge to sustain new technology, he affirmed.

Even though VR-focused startups reduced the range of their products and services, especially in China, Graylin is confident that AR/VR is alive and well, if not kicking as strongly as it was a few years ago. He told the Hong Kong Economic Journal in an interview: "VR projects have risen very quickly in mainland China in the past two years. To some, VR in the mainland has become stagnant, but I don't think so.

"We know that as simply a hardware manufacturer, it is difficult for HTC to maintain its leading position in this new sector. Therefore, we now focus on creating the entire chain and ecosystem around VR."

For example, HTC partnered the Shenzhen municipal government in late 2016 to create the Shenzhen VR industry investment fund with an RMB10bn ($1.4bn) corpus, setting up research and development centre in the city in the process.

Graylin told GCV: "The HTC-Shenzhen government fund has reached an initial close with RMB1bn ($147m) and has already made its initial investments in 2018."

Furthermore, ViveX, HTC's VR startup accelerator whose objective is to help foster a global VR ecosystem, closed its fourth batch of investments last year. The program has 18 new deals, adding to the existing repertoire of 100 deals over the past two years.

Of these startups participating across ViveX's six global offices in San Francisco, London, Taipei, Shenzhen, Beijing and Tel Aviv, six are US-based (360 Stories, Liv, Modal, MyndVR, Primitive, Visby), five are China-based (Ifgames, Inload, Shiny VR, YaoAn, YuanJi), while three hail from Europe (France-based Immersive Factory, UK-based Kagenova, Spain-based YbVR), two are from Israel (Ayayu Games, Sixdof.space) and one is based in South Korea (Z-Emotion).

Graylin said: "There are about 20 to 30 VR companies that survived the market downturn and many of them are cooperating with us."

Regarding HTC Vive's outlook in China, the country he oversees, Graylin remarked proudly to GCV: "Vive continues to dominate the China market with over 50% revenue share for the entire market and the most preferred brand by consumers and businesses alike. Vive China is also the most profitable region for Vive globally."

In fact, China had already put forth the first self-developed group standard for the VR industry as early as 2017. Graylin said, as quoted by Vertical News: "China is the first country to implement an official VR industry standard, showing how important the development of VR is to the Chinese government.

"This standard will raise the quality bar for VR device vendors, provide more standardised specifications for content developers and ensure that end users will have a more consistently positive experience across VR devices."

To combat the status quo, Graylin advises VR-focused startups to work actively with enterprise bodies, such as academia and healthcare. Most recently, HTC teamed up with Taiwan-based Taipei Medical University, establishing in late 2018 the world's first VR anatomy course for the latter's biology students. In the course, students were able to observe the human body from different angles and appreciate intricate corporal functions such as heart valve movement.

After being chosen for GCV's Rising Stars award in 2017, Graylin has been featured on Powerlist for three consecutive years from 2017 on. In 2018, he was awarded to top honour of most influential person in VR in China by the GoldenV awards, "the VR Oscars voted by top industry representatives".

Larry Harper STANLEY VENTURES

Larry Harper has been a vice-president at Stanley Ventures, the corporate venture capital unit of US-based hardware product maker Stanley Black & Decker, for the past three years. He and his team invest in early-stage companies from seed, series A and series C rounds with innovative technologies are strategically relevant to its parent's business units.

Stanley Ventures fosters and mentors startups to help accelerate their growth and develop innovative products. Its areas of focus span a variety of 15 unique sectors, among them are additive manufacturing, wireless charging, batteries and materials, with companies hailing from the US, Canada, Italy, Switzerland, Ireland and Israel.

Stanley Ventures has already had two of its members chosen as Rising Stars by GCV – in 2018, Michael Mahan, who was an investment manager at the time of selection and was promoted to managing director earlier this year, and Dina Routhier, an investment manager, in 2019. Sean Wright has also recently joined in Frankfurt, Germany to pursue the unit's mandates in Europe.

As Stanley Ventures' leader, Harper is no exception to these accolades. Jim Loree, Stanley Black & Decker's CEO, said: "Larry brings a unique blend of independent visionary entrepreneurialism and corporate management experience which enables him to build productive relationships with all parties involved with corporate venturing.

"He has the ability to envision the art of the possible and marry it with the practical realities of business. His enthusiasm for the application of technology and extreme innovation is infectious and inspirational.

"Larry is beloved by our business leaders here at Stanley Black & Decker for his extensive contributions to our venturing transactions as well as our innovation ecosystem in general."

Harper said Stanley Ventures had so far invested a total of $45m and resulted in two exits worth $14m. Veloxint, a Massachusetts Institute of Technology (MIT) spinout developing novel metal alloys, was acquired by ecological aluminium alloy producer Braidy Industries. 3xLogic, a cloud-based video analytics service provider, on the other hand, was purchased by Stanley Security, an Stanley Black & Decker division that provides security systems, which "is key to our strategy in our enterprise security space", he said.

Harper said: "The venture team is very active – closing 12 investment in 2018 with a portfolio of 20 in the portfolio [since the unit was launched three years ago]." Stanley Ventures has commercial agreements with 16 out of the 20 portfolio companies.

Many of the portfolio companies have partnered Stanley Ventures to develop further, apart from 3xLogic, operational intelligence security services provider Viakoo, robotic companion developer Pillo Health and electric vehicle charging technology developer Freewire "are all in revenue with us at this time", added Harper.

Before becoming the unit head, Harper had held several roles at Stanley Black & Decker. He initially founded inventory and material management software supplier CribMaster in 1992 and remained its president even after it was acquired by Stanley Black & Decker in 2011 with $66m in sales and an $11.7 offering memorandum.

In 2014, Harper became chief executive of inventory management software provider View Technologies, a joint venture between Stanley Black & Decker and smart antenna hardware and software developer RF Controls. Simultaneously, he took on vice-president of technology business development to bring in innovation into the organisation before he was finally promoted to his current post in late 2015.

George Hoyem IN-Q-TEL

George Hoyem, managing partner at In-Q-Tel (IQT), the venture investment unit of the US intelligence community, is one of the largest strategic dealmakers in the US with more than 50 primarily early-stage deals each year.

The Central Intelligence Agency (CIA) being one of IQT's clients as a nonprofit strategic investment unit means many of these deals are kept private.

In 2018, IQT made about 55 new investments in support of eight intelligence directorates. Some deals include:

- A partnership with augmented reality firm Immersive Wisdom in December 2018.
- A $40m series B follow-on round for machine learning system developer Primer in November 2018.

- A $92m series C round for data analytics software producer OmniSci in October 2018.

IQT also opened its first international offices in London, UK and Sydney, Australia in November last year. IQT said in a statement: "Our core strength is our ability to identify and deliver insights and access to new commercial technologies on behalf of our government partners in the intelligence and national security communities. Innovation knows no boundaries, and a physical presence is a continuation of our efforts to obtain a better understanding of technology and market developments outside the US.

"These offices will take advantage of the world-class science and technology, and venture capital ecosystems available within each region to continue IQT's national security mission for the US and its allies. These offices will support a partnership between the US, UK and Australian intelligence and national security communities."

In its annual tax filings, IQT said it was founded in 1999 as a "private, not-for-profit company to help the CIA and broader US intelligence community identify, adapt and deliver cutting-edge technologies that address national security needs. IQT's strategic investment model means, on average, for every dollar that IQT invests in a company the venture capital community has invested over $10, helping to deliver crucial new capabilities at a lower cost to the government."

As one of the executives behind IQT's formation and who remains closely involved put it: "IQT was originally modelled as a technology VC because technology and entrepreneurship was the area of interest for us."

Hoyem, who has more than 25 years of entrepreneurial, operations and venture capital investing experience in high-technology companies, remains active himself and has led close to 20 investments at IQT since he joined in 2010.

Hoyem manages the West Coast Investment team and heads the enterprise IT investment practice area. This investment area includes companies targeting solutions in advanced analytics, cybersecurity, datacentre infrastructure, cloud and mobile-focused technologies.

Earlier in his career, Hoyem also backed, supported and served on the boards of several dozen emerging technology companies as managing partner at Blueprint Ventures and at Redleaf Group and El Dorado Ventures before and after the millennium, including Good Technology, which was acquired by Blackberry in November 2015, Solera Networks, which was acquired by Blue Coat in May 2013 and SpectraSensors, which was acquired by Endress & Hauser in 2012.

Hoyem holds a bachelor of arts degree in business and computer science from Western Michigan University.

Natalie Hwang SIMON VENTURES

Natalie Hwang is the managing director of Simon Ventures, a multi-stage corporate venturing unit oriented towards innovation for "the future of retail and commerce" on behalf of parent corporation Simon, a Standard & Poor's 100 company and one of the largest real estate enterprises in the world.

Currently a one-person investment team following the departure of founder Skyler

Fernandez in early 2017, Hwang is admired by her peers for running the corporate venturing unit of a Fortune 500 company while in her 30s.

In a keynote debate at the GCV Synergize conference in New York City in November 2017, Nicole Quinn, a partner at VC firm Lightspeed Ventures, said: "I totally respect Natalie's vision when we have been looking at opportunities. She really understands the increasing speed of retail, such as the use of SMS to order products."

David Simon, chairman and chief executive of Simon Property Group, also attested to the unit's accomplishments. "We are committed to supporting the health of the broader retail ecosystem through Simon Ventures. The initiative is proving itself to be an impactful and leading platform in driving new sources of value for its range of stakeholders."

Reviewing last year's achievements, Hwang affirmed: "2018 marked a particularly active year for Simon Ventures as we scaled our portfolio by an additional five new investments and supported follow-on rounds in existing companies that continue to demonstrate best-in-class traction for their categories."

New investments in 2018 included the following:
- Simon Ventures co-led the last round of financing with VC firm Union Square Ventures in US-based consumer app Foursquare that has since evolved to become a fast-growing location intelligence platform.
- Participated in an early round of financing in US-based e-scooter rental service Bird that has scaled to more than 120 cities and five countries in the past year and a half.
- Supported the last financing of US-based women-focused publisher Bustle Digital Group, having scaled its monthly readership to more than 80 million women.
- Supported the first round of financing in Verishop, an e-commerce platform being launched by Imran Khan after his departure from Snapchat as chief strategy officer in November 2018.
- Supported the first round of financing in US-based online community platform provider 9 Count, the latest venture from Alex Hofmann – former president and founding team member of China-based social video app developer Musical.ly that was sold to China-based digital media company ByteDance in 2017.

Follow-on for existing portfolio companies included:
- US-based lifestyle membership company FabFitFun raised a significant growth round from VC firm Kleiner Perkins in January 2019. Simon Ventures had taken a lead role in the company's first two rounds of financing before this recent capitalisation.
- US-based men's fashion e-commerce platform operator Grailed led a growth round sponsored by VC firm Index Ventures with Simon Ventures and fellow VC firm Thrive Capital supporting the round.
- US-based organic lemon juice brand Dirty Lemon raised a round of financing by beverage producer Coca-Cola's Venturing & Emerging Brands unit to support further business expansion.

Hwang said: "We continue to leverage our operational platform of assets, resources and connections to support tailored operational initiatives and help fuel accelerated growth."

Hwang graduated with honours from Duke University – awarded Best Honours Thesis in her class for public policy studies. She went on to study at University of Virginia Law.

She started her professional career at law firm Simpson Thacher & Bartlett, which later helped her dive into the world of venture investing. At the time she was involved in "a lot of deals, including private equity and hedge funds investments as well as M&A side work, many of which were highly-publicised transactions".

Subsequently, she joined alternative investments manager Blackstone Group. She also ran, "on her own time", a personal early-stage fund focused on retail and commerce, "leveraging a lot of the insights from my experience there to making early-stage investments in the next-generation commerce and retail tech space and participating alongside top-tier VCs like Thrive Capital."

Today, she directs a corporate venturing unit with a clear preference for enterprises from those fields, albeit at a later stage of development. Simon Ventures' investment philosophy places a substantial weight on the financial side.

Looking ahead in 2019, Hwang said: "Simon Ventures will continue to partner actively dynamic founders who are at the forefront of leading consumer innovation and to leverage Simon's leadership in retail distribution to collectively define the future landscape of commerce.

"Three years in, we are proud to have backed companies that are exerting real impact as they scale and offer Simon a pipeline of significant opportunities for financial return as well as new sources of value creation.

"The response from the venture and tech community to our involvement has been enthusiastic. We are seeing tremendous opportunities to access dynamic growth and I am excited about building upon our momentum at Simon Ventures and to continue to position Simon as a thought leader in the world of innovation."

Ilonka Jankovich and **Paul Jacquin**

RANDSTAD INNOVATION FUND

Ilonka Jankovich and Paul Jacquin have been co-managing the Randstad Innovation Fund, the corporate venturing arm of the eponymous staffing firm, since its inception in 2014.

With a background in corporate law, Ilonka Jankovich founded two recruitment firms that she subsequently sold to Monster in 2001, and to Randstad in 2012. Following the acquisition by Randstad, discussions led a to partnership that would see Jankovich found and manage a corporate venture arm funded by Randstad.

Paul Jacquin, who was head of business corporate development for Randstad at the time, had several years of experience in technology mergers and acquisitions and venture capital. He had closed many deals across several continents and was tightly involved in Randstad corporate development. He was chosen as partner to co-fund and co-manage the Randstad Innovation Fund.

Since its launch and with €50m in earmarked capital, the Randstad Innovation Fund has made 17 investments across six countries in the US and Europe, primarily in talent acquisition and workforce management startups. As the investments are early-stage, the strategic value to the startups comes from a deep understanding of the market and the ability to test large-scale deployments in a global staffing firm, they said.

The fund has also been paramount in conducting research focusing on trends in HR technology and in helping Randstad realign its digital strategy to be considered more innovative than competition, they added. The early-stage nature of the investments implies a longer investment horizon, yet some early success includes a global partnership with Checkster to supply reference checks for Randstad as well as the acquisition and integration of Twago by the Randstad Group. Global partnerships were also put in place for Montage and Shiftboard.

Earlier this year, the unit participated in a $7.6m series A round led by VC firm Jazz Venture Partners for US-based recruitment technology provider Wade & Wendy in March.

Last year, it co-led a $10.8m series A round for US-based youth-focused professional development network Goodwall in July, contributed in February to a $30m series C round for US-based skills assessment technology provider HackerRank and to a $8m series B round for US-based recruitment software developer Gr8 People.

When Jacquin nominated Jankovich in for GCV's Rising Stars award in 2018, he said: "I think Ilonka's role as partner and board member in several companies has only increased and built on past experience; she has done incredibly well in terms of her learning path and her mastering of the investment dynamics.

"Being a strategic investor is very different from being an entrepreneur, and while I have a long tenure and experience on the investment side, Ilonka is also bringing perspective from the other side."

Aside from her activity at Randstad, Jankovich also has a hand in private equity through her non-executive board member role at Delft-based cloud software business Exact, acquired by Apax Partners in 2015. "Switching from one world to the other is fantastic," she said. "It is a very different level, but with very similar topics, which makes it very instructive; I can bring a lot, and learn a lot too."

Ankur Kamalia DB1 VENTURES
Christoph Hansmeyer DEUTSCHE BÖRSE

Ankur Kamalia joined and set up DB1 Ventures, Germany-based stock exchange Deutsche Börse's corporate venturing unit, as managing director and head of group venture portfolio management. However, he is about to leave to join University of North Carolina at Chapel Hill's Global Leadership Council.

During his time at the unit, he put together the team responsible for managing all of the minority strategic investments.

Kamalia is succeeded by Christoph Hansmeyer who joined Deutsche Börse Group in April last year and reports directly to the new chief executive Theodor Weimer who joined the group in early 2018.

Hansmeyer oversees group strategy and mergers and acquisitions and acts as chief of staff to the CEO and is responsible for the corporate and chairman's office. Since November 2018, he additionally leads the group venture portfolio management team.

Kamalia said: "The single biggest risk to young CVC units tends to be a meaningful shift in parent management or strategic priorities. It is also critical to continue to deliver both strategic and financial value to the firm. DBG went through a meaningful transition in management from 2017 through to the end of 2018."

"Obtaining not only the support of the new group CEO but also his further validation, where we increased our balance sheet commitment by an additional €100m was a highlight.

"We continued to deploy capital in 2018, including in HQLAx, a blockchain-based collateral platform, and LMRKTS, a compression technology firm and continued to increase our investment in existing portfolio companies such as Trifacta, Figo and Illuminate.

"We continue to positively discuss with the DBG management the forward pathway for DB1 Ventures to help scale it further. Our investments which typically have centred in the early and growth stage – more towards growth and expansion recently – and focused on enterprise financial technology and the underlying technology rails supporting financial markets, are geographically diverse with investments in the US, the UK, Germany, Luxembourg, India and Taiwan.

"We have co-invested with a diverse and large group of both financial VCs and CVCs."

Over the past three years, DB1 Ventures has established the group globally as a well-respected and known strategic investor in the fintech area thanks to its investment activities – thus far nine direct investments and three indirect fund investments.

Kamalia said the team played a key role in forming partnerships with portfolio companies. "The team has continued to deliver value-add in strategic and financial terms. From a strategic perspective, we have entered into multiple partnerships with our portfolio companies – for example, onboarding Trifacta as a core solution for data management in our data lab, and acting as a core client advocate; jointly evaluating opportunities in Europe with Trumid, a US-based new electronic corporate bond trading platform; or indeed our latest investment in a platform called HQLAx, where we are helping them build, in partnership with R3 and multiple banks, a new digital platform to facilitate the transfer of HQLAs on a DLT based platform."

Furthermore, the unit generated financial returns, too. "From a financial perspective, since we were established, we have returned back €350m of capital through monetisation events on assets with minority holdings which were entrusted to the team in late 2015; this is relative to the approximate €280m in assets and cash paid in to our activities for a total of 19 portfolio companies the team has managed over the past three years. We continue to manage a portfolio of 14 assets, all minority holdings, in areas which are strategically core or adjacent to DBG's business for a realised and unrealised internal rate of return of 57% – including the exited assets – over the last three years."

Before joining Deutsche Börse Group, Hansmeyer spent five years at Germany-based insurance and asset management group Allianz, most recently acting as head of group strategy. Before that, he had worked for 12 years in the financial institutions group at investment banking firm Goldman Sachs, with postings to Frankfurt, New York and London.

Kamalia, on the other hand, came to Deutsche Börse from family office WWA in Singapore where he spent nearly two years after completing a three-year stint at investment banking firm UBS in Singapore and London.

George Kellerman

YAMAHA MOTOR VENTURES & LABORATORY SILICON VALLEY

In January this year, Hiroshi Saijou, CEO and managing director of Japan-based small-vehicle producer Yamaha Motor's corporate venturing arm, Yamaha Motor Ventures & Lab in Silicon Valley (YMVSV), moved positions to chairman.

Saijou, a founder of YMVSV who featured on Global Corporate Venturing's 2016 and 2018 Powerlists, also became general manager of new business development at Yamaha Motor. George Kellerman, formerly chief operating officer and general partner at YMVSV, took on Saijou's previous roles.

Kellerman told GCV at the time: "We launched a new $100m fund – the Yamaha Motor Exploratory Fund – and moved to a larger office with a garage and workshop space two months [earlier], so we are definitely growing and expanding our influence within Yamaha Motor. We are putting an increased emphasis on investing and we are going to be opening two to four international branch offices over the next year or two."

The company said the fund would "further strengthen its global corporate venturing activities".

Regarding Saijou's new position, Kellerman added: "Hiro is actually moving to Yamaha Motor USA to become general manager of new business development, which will become the internal organisation to which YMVSV can hand off startups and projects. Without someone to receive those startups or projects, they will just die on the vine, so Hiro is building phase two of our global corporate venturing activities."

The unit expanded beyond Silicon Valley last summer. Craig Boshier joined YMVSV in July 2018 as an Australia-based general manager with a focus on medtech. Boshier told GCV at the time that his priority was to cover the country as well as nearby markets such as New Zealand and Southeast Asia.

The Australia-based unit would target investments in agritech, and Boshier cited the sector's importance for Australia's economy as a key factor. It also intended to explore investments in medical, transport and construction technology.

The Silicon Valley-based core unit of YMVSV has a portfolio that includes agricultural robotics developer Abundant Robotics, drone technology provider PrecisionHawk and vehicle-focused wifi internet system developer Veniam.

YMVSV has two internal projects – Motobot, a humanoid robot that can ride an unmodified motorcycle autonomously, and VasP (vehicle as probe), an internet-of-things visualisation of microenvironmental information. While such projects are focused on vehicles, Yamaha Motor's background of disruptive shifts – it started out as a musical instruments maker of keyboards – means its tagline is "exploring new Yamaha as value creator for the world", according to Saijou.

Saijou said for his profile in 2016 its other achievement and highlights were establishing YMVSV in California, with a "great team" and direct reporting to Yamaha Motor's top management. This team includes George Kellerman and Amish Parashar, and Saijou is expecting to increase its size after the departure of Jay Onda to Orange.

YMVSV's investments last year included a $12m series A round for US-based robotics maker Roam. Founded in 2013, Roam Robotics is building a robotic external skeleton called Elevate, which would help people ski, walk and run by strengthening the leg muscles, improving stability and reducing muscle fatigue and joint pressure.

Quoting Yamaha Motor's founder, Saijou said: "Action is the best way to learn, so let us explore rather than research. In the business world today, so many people are obsessed with figures. They become fixated on the numbers of the minute and without them are too afraid to do any real work. But in fact, every situation is in flux from moment to moment, developing with a natural flow. Unless one reads that flow, it is impossible to start out in a new field of business."

Nadeem Khan AFLAC CORPORATE VENTURES

Nadeem Khan, who has been working at US-based insurance provider Aflac for 15 years and was senior vice-president of corporate development until January 2017, was made president of Aflac Corporate Ventures, the insurer's nascent corporate venturing subsidiary.

Paul Amos, Aflac's president of global operations, said at the time of the unit's launch: "With a greater focus on the customer experience, we feel that it is vital that Aflac prioritises potential partners that will help us enhance services and shareholder value while building our future growth engine.

"By investing in companies that we see as vital to our core business, we will be positioned to innovate as these early-stage companies continue to mature."

Aflac Corporate Ventures targets investments in startups that develop software strategically significant to its core business to improve the insurance value chain.

Aflac set the investment timeframe at three years at the time of the launch, but it was extended to three to four years when the fund size was increased from $100m to $250m in September 2018.

Khan said at the time of fund increase: "Our focus continues to be on growth-stage, innovative and scalable companies. As we increase the fund size, we are diversifying into later-stage deals and fund-of-fund opportunities.

"This supports our overall strategy to invest in companies with missions relevant to Aflac's core business and restates our commitment in this space. This also provides greater market reach and drives dealflow by building partnerships with the startup ecosystem and other corporate and strategic investment groups."

Bharat Rajaram, who has been at Aflac for almost a decade and featured on GCV's Rising Stars rosters in 2018 and 2019, was promoted from director of mergers and acquisitions at Aflac to managing director at the unit in March 2017.

For this year's award, Khan said in his nomination of Rajaram: "Bharat continues to do an outstanding job leading the ventures team at Aflac. He has partnered accelerators and strategic investors in building a platform that makes Aflac Ventures highly visible and accessible to startups around the world. His vast knowledge and understanding of insurance allow him to serve as a valuable mentor and adviser to our portfolio companies."

Only a handful of investments have been made public to date. In September 2018, the unit said it had supplied funds between $1m and $6m for equity stakes of between 3%

and 14% for eight companies in the US and Japan.

In January this year, Aflac Corporate Ventures took part in a $58m series D round for US-based insurance price comparison service CoverHound, a $33.5m series C round for US-based employee benefits software provider Limelight Health and a $20m round for Singapore-based digital life insurance startup Singapore Life.

Last year, the unit participated in a $2.3m seed round for US-based process automation software developer Reply.ai in September, and seven months earlier, a $4m series B round for US-based consumer assistance program application developer Picwell and a $4.2m seed round for US-based legal will, trust and life insurance-focused mobile app developer Tomorrow Ideas.

Herman Kienhuis KPN VENTURES

Since 2016, Herman Kienhuis has been an executive vice-president and managing director at KPN Ventures, the corporate venturing arm of Netherlands-based telecoms company KPN.

Jan Kees de Jager, KPN's chief financial officer, said in his nomination of Kienhuis and praised KPN Ventures' role in the organisation's broader innovation strategy: "KPN initiated the KPN Ventures investment fund mid-2015 to boost outside-in-innovation, creating more opportunities to work closely together with new, innovative technology companies, while also creating financial return on investments.

"Herman has been instrumental in executing on this plan. After three years under the leadership of Herman, KPN Ventures has grown its portfolio to 13 relevant direct investments, with one great exit and five fund-of-funds investments."

In total, KPN Ventures has had two successful exits worth $1.4bn.

The most recent of which took place in November last year, where Netherlands-based network security software developer SecurityMatters was acquired by US-based internet-of-things (IoT) security technology provider ForeScout Technologies for $113m.

Furthermore, US-based networking equipment provider Cisco purchased cloud-based IoT platform developer Jasper Technologies – an investment by KPN before KPN Ventures' launch later incorporated into the fund in 2015 – for $1.3bn in March 2016.

De Jager added: "KPN Ventures is actively supporting the portfolio companies in their growth and in creating cooperation with KPN and its ecosystem partners, as an increasingly important instrument in KPN's transformation, alongside R&D, new business and M&A."

Thanks to Kienhuis's expertise and experience in strategy and finance acquired at management consultancy McKinsey, digital media product and business development from Finland-based digital services provider SanomaDigital which belongs to media and learning company Sanoma, and corporate venture capital from SanomaVentures, Sanoma's corporate venturing arm, he was hired by KPN in January 2016 to start and run the newly created €70m investment fund KPN Ventures.

In late 2015, Kienhuis founded angel syndicate River Venture Partners and has been an angel investor in several seed-stage startups. He is also an adviser at Founders-plus, a Netherlands-based nonprofit initiative organising networking events to connect tech founders to exchange experiences, and an adviser at Singapore-based startup generator and early-stage VC firm Antler, a board member at Netherlands-based social enterprise Questionmark Foundation.

In addition, Kienhuis gives guest lectures on corporate venture capital and entrepreneurial finance at University of Amsterdam's Amsterdam Business School and the Jheronimus Academy of Data Science. He has been a mentor at StartupBootcamp Accelerator, an adviser to the Innovation Fund of the Dutch Railways and an adviser to the Dutch Journalism Innovation Fund.

Last year, KPN came in second place in the Corporate Startup Star Award by the European Commission's Startup Europe Partnership, for its active startup engagement and investments, which Kienhuis received jointly with his colleagues at KPN's New Business startup liaison office. In 2017, KPN was awarded top 12 Corporate Startup Star Award and top three Corporate Startup Investment Award by the European Commission's Startup Europe Partnership, for its startup investment activity at KPN Ventures.

KPN Ventures hired Sarah Schleeper in January 2018 as an investment associate, expanding the KPN Ventures team to five members. Internship positions were also offered to three master's students.

KPN engages actively with KPN Ventures' portfolio companies:
- KPN IoT launched the world's first nationwide LPWAN (LORA) IoT network based on the technology of France-based IoT company Actility.
- KPN launched sensor and alert system KPN Vitaal for elderly care based on the technology of Netherlands-based monitoring technology creator Sensara.
- KPN Security Services is a commercial distribution partner of SecurityMatters, bringing its industrial cybersecurity solution to Dutch industrial clients, and they also have worked together in developing a smart building security solution, with a subsidy from the EU.
- KPN IoT is a commercial distribution partner of Belgium-based automated tool management services provider Viloc, bringing its asset tracking device to its business clients in the construction industry under the product name Bouwtag.
- KPN's security team is a strategic customer of Netherlands-based cybersecurity intelligence platform EclecticIQ, purchasing and using its threat intelligence platform to support the work of KPN's security analysts, who are also providing feedback on functionality and development roadmap.
- KPN is a pilot customer of Netherlands-based cybersecurity intelligence platform Cloudify, integrating its cloud orchestration platform to support its cloud services offering to Dutch business customers.
- KPN Health developed a new remote heart monitoring service, integrating the technology of Germany-based cardiac health technology developer Personal MedSystems to build a smartphone-based, personal electrocardiogram device called CardioSecur.

Frank Klemens DUPONT

Frank Klemens is a managing director at DuPont Ventures, chemicals producer DuPont's strategic investment arm, who identifies, evaluates and conducts strategic equity deals for DuPont's businesses.

Klemens joined DuPont at the end of 1991 as a regulatory analytical scientist in crop protection for nearly six years, before being promoted to budget and project manager, a role he held for almost nine years.

In August 2006, he became director of licensing, a position he holds concurrently alongside his duties at DuPont Ventures which he assumed in 2016.

As a licensing director at DuPont, Klemens works with different DuPont business units to in-license and out-license technology and seeks technology investment opportunities. He oversees investment and licensing in areas including biotech, food ingredients, food safety, nutrition and health, electronics and imaging, internet of things, safety and construction, machine learning and advanced materials.

He concentrates his efforts on speciality chemicals, which address digestive, metabolic and cardiovascular health, and speciality food protection.

DuPont Ventures was launched in 2003, and since 2016, Klemens has been involved in all phases of corporate venturing activities ranging from deal sourcing to execution as well as post-investment management. In this capacity, Klemens acts as a liaison between business development and innovation units through venture investments to enhance the company's growth.

Having come from a chemistry background, Klemens uses his knowledge in the industry to pursue technologies that can bridge the gaps in projects in progress as well as the new ones. He actively seeks strategic alliances with and invests in venture-backed startups.

DuPont Ventures' most recent deal took place in January last year when it co-invested in a $75m funding round for US-based drone technology producer PrecisionHawk with corporate venturing peers Comcast Ventures, Constellation Technology Ventures, Intel Capital, Verizon Ventures, NTT Docomo Ventures and Syngenta Ventures, as well as automotive equipment maker Yamaha Motor and a subsidiary of financial services provider USAA.

PrecisionHawk's chief executive Michael Chasen told Triangle Business Journal at the time of fundraising: "We have the opportunity to grow a multibillion-dollar, maybe even public, company right here in Raleigh, North Carolina. I would love PrecisionHawk to be that company."

Eight months later, PrecisionHawk acquired two energy industry-focused drone services providers Hazon and InspecTools for undisclosed amounts in September.

Other notable activities of DuPont include its acquisition of US-based microbiome technology developer Taxon Biosciences for an undisclosed amount in July 2016, as well as the launch of an agtech-focused accelerator fund called Radicle between its plant genetics subsidiary DuPont Pioneer and Germany-based pharmaceutical and chemicals firm Bayer in June 2016.

Among earlier known deals of DuPont Ventures was a $22m series C round for US-based biofuels product maker NexSteppe in 2014.

In February last year, Klemens became a board member of nonprofit Philadelphia-Israel Chamber of Commerce which aims to connect the entrepreneurial ecosystems of Israel and the US state of Philadelphia.

Klemens holds a bachelor of science in chemistry from John Carroll University, a master of science in chemistry and a PhD in inorganic chemistry from Purdue University.

Anja König NOVARTIS VENTURE FUND

In June 2017, Anja König was promoted to global head of Novartis Venture Fund (NVF), the corporate venturing unit of Switzerland-based pharmaceutical company Novartis, following the retirement of Reinhard Ambros.

Ambros had spent the 12 years as global head of NVF and was part of 2017's GCV Powerlist. König had, as managing director of NVF, been named as part of Global Corporate Venturing's Rising Stars list for 2017 before stepping into the top role.

This year, the unit has participated in a SFr35m ($35.1m) series A round for Anaveon, a Switzerland-based immunooncology spinout of University of Zurich, in February.

König, who is a board member at the UZH Life Science Fund, said at the time: "Such a strong series A financing, by an international syndicate, of a company spun out of University of Zurich was for me personally a great validation of the principles behind the UZH spinout fund to support Swiss innovation."

A month earlier, the unit also supplied funds in a $65m series B round for Ribon Therapeutics, a US-based biotechnology company developing enzyme families activated under cellular stress conditions.

König commented: "Ribon has developed a novel platform with the flexibility and rigour to investigate and exploit new targets providing the opportunity to build a diverse and attractive pipeline of first-in-class therapeutics."

Last year, the unit took part in a $70m series C round for US-based biotechnology company focused on cancer therapies Galera Therapeutics, a £65m ($83m) series B round for UK-based cancer-focused biotechnology developer Artios Pharma, a $25.1m series A round for US-based genetic medicine developer Akouos, a $20m series B round for US-based antibiotics developer and Harvard University spinout Macrolide Pharmaceuticals, among others.

König's earlier investments included biotech Bicycle Therapeutics, which raised $32m in a 2014 round that included corporate venturing peer SR One; UK-based anti-fungal drug developer F2G, which received $60m in June 2016; and Forendo Pharma, which secured $12.8m in 2014.

König has also overseen several successful exits for Novartis, including Switzerland-based biopharmaceutical company Covagen and UK-based Alzheimer's disease drug developer Heptares via mergers and acquisitions, while Austria-based biopharmaceutical company Nabriva and South Korea-based biotech company Qurient were via initial public offerings.

But outside of maintaining its strong investments and exit pipeline, König's focus has been on the team and hired Michal Silverberg in November 2017, who has been featured on GCV's Rising Stars roster from 2018 to 2019.

König has studied physics throughout her academic career – she holds a bachelor's degree from University of Oxford, a master's degree from Ludwig Maximilian University of Munich and a PhD from Cornell University.

Before joining NVF in 2006, König was a US-based associate partner at management consultancy firm McKinsey for six years from 2000, where she worked with healthcare, pharmaceutical and biotech firms on both sides of the Atlantic.

Lisa Lambert NATIONAL GRID PARTNERS

Lisa Lambert, who spent a year and a half as managing partner at venture capital firm Westly Group, rejoined the corporate venturing community in January last year as senior vice-president and chief technology and innovation officer at UK and US-listed energy utility National Grid.

Before joining Westly in 2016, Lambert had worked at Intel Corporation for 19 years as vice-president and managing director of corporate venturing unit Intel Capital's software and services group.

Lambert was also founder and managing director of Intel Capital's Diversity Fund, and she led global investments in more than 100 companies and produced top decile returns, including seven flotations and over 30 trade sales.

In November, Lambert founded National Grid Partners (NGP), which aims to invest up to $30m per deal and is expected to exceed its initial allocation of $250m, and assumed the role of president to oversee venture and growth capital investing, internal and external innovation projects such as technology scouting, incubations and accelerations, and technology commercialisation.

NGP's focus is on three areas: new energy technology, large-scale transmission projects across North America and the UK, and commercial projects outside of traditional regulated utility frameworks, such as utility-scale renewables – solar and wind – and liquefied natural gas.

National Grid had previously explored venture investing under Daniel Hullah, who subsequently joined GE Ventures in 2016.

This year, NGP participated in a $20m series B round co-led by Comcast Ventures, the corporate venturing unit for mass media group Comcast, for US-based network security technology developer Aporeto in February.

Upon NGP's launch in November 2018, NGP took part in the following investments:
- A $32m series D round for US-based energy management technology developer Autogrid.
- A $24m series B round for US-based infrastructure asset management platform Sitetracker.
- A seed round of undisclosed amount for US-based energy resources marketplace operator Leap.
- A venture round of undisclosed amount for US-based solar energy asset servicing company Omnidian.
- A $37m series B round for US-based cybersecurity technology developer Dragos.
- A $45m series B round for US-based weather forecasting technology developer ClimaCell.

National Grid was also a founding member of Energy Impact Partners, a venture capital firm launched in 2015 to fund companies developing emerging energy technologies competing for large-scale transmission projects across North America and the UK.

For its transmission and commercial projects, National Grid has backed Viking Link, a 700 kilometre subsea cable that will enable the trade of renewable energy between Denmark and the UK and expected to be operational by 2023; Granite State and Northeast Renewable Link, transmission projects that will deliver almost nine terawatt hours of energy for customers across New England; and Vermont Greenline, a proposed 400 megawatt transmission cable that will run from northern New York, under Lake Champlain, to Vermont and will deliver renewable energy to New England to help meet regional clean energy goals.

Lambert told GCV in an interview held in January this year that NGP would focus on sectors such as power generation and transmission, cybersecurity, smart vehicles, blockchain, edge computing and space technology.

Lambert has sat on the board of directors of several portfolio companies, including Silkroad Technology, Brit & Co, and X Plus 1, acquired by Rocket Fuel. She is also on the board of directors for the National Venture Capital Association, co-chairwoman of the Venture Forward initiative and the founder, CEO and chairwoman of Upward, a global network of executive women designed to accelerate career advancement.

Jonathan Larsen GLOBAL VOYAGER FUND, PING AN

Jonathan Larsen is chief innovation officer of China-based insurer Ping An Group and chairman and chief executive of its corporate venturing Ping An Global Voyager Fund.

Larsen joined the Voyager Fund upon its launch in May 2017 from financial services firm Citigroup where he had held several Singapore and Hong Kong-based roles for nearly two decades. The fund pledged a $1bn commitment to invest in healthcare and financial technology developers mainly based outside of China.

A senior executive at Ping An Insurance Group told CNBC in October last year that the fund was had the international focus because it wanted to compete with China-based tech majors that have invested abroad – e-commerce group Alibaba and internet group Tencent.

Larson told CNBC that the fund had targeted areas that were relevant to the health sector, such as digital imaging, brain scans and X-rays. He said: "We are working with a company right now that can identify 30 diseases with an AI (artificial intelligence) algorithm by scanning the back of your eye. These technologies have transformative power, not just in emerging markets but actually all over the world."

Echoing what he had said at the WSJ D.Live Asia 2017 conference in Hong Kong that the unit would seek companies its parent company could learn from, he told CNBC that it was not really about "putting lots and lots of capital to build up a user base", but rather an "asset-light model where Ping An can be a technology enabler".

Amid the delicate relationship between the US and China lately, Larsen told CNBC that the unit would invest in the US but "relatively small in scale". He added: "Our typical ticket size is going to be in the $10m to $30m range on average. Our largest deal size might be $100m. Typically, we are looking at 10% to 20% of a company and some kind of ongoing partnership or option in the longer term for such a partnership."

Ping An has 180 million customers, 1.4 million insurance agents, 6,000 branches and extensive digital distribution assets in mainland China. Donald Lacey, managing director and chief operating officer of the Voyager Fund, said at last year's GCV Asia

Congress in Hong Kong that Ping An was the largest insurance company in the world. One in every 1,000 people in China was a direct or indirect agent, and one in 10 was insured by the company.

Lacey added that the Voyager Fund had a history of building fintech and healthtech businesses at scale, such as Ping An Good Doctor, a telemedicine platform listed on Hong Kong Stock Exchange, on which some 200 million digital users could consult doctors. "That gives us an interesting scale and access to introduce new technologies, new capabilities that we find in different parts of the world," he said.

Ping An said it had already built digital service ecosystems in four areas – financial service, real estate finance, healthcare and automobile sales and servicing. Internet finance platform Lufax is an example of fintech innovator.

Ping An is providing all of its capital, and Larsen said the firm's eventual aim was to become a "data business", with Voyager Fund part of several open innovation ventures.

The ventures in question include an established CVC fund called Ping An Ventures and high-profile investments in domestic companies such as Didi Chuxing, the ride-hailing service then known as Didi Kuaidi, e-commerce platform Mogujie and live streaming platform Huya.

The Voyager Fund's latest deals include a $9m series C round for US-based remote medical examination technology developer TytoCare and a series B round of undisclosed amount for China-based smart healthcare technology provider Airdoc both in January this year, a €41.5m ($47.3m) venture round for Germany-based fintech company builder Finleap in November 2018 and a $70m series C round for Israel-based medical diagnostics technology developer MeMed in September 2018.

In September 2017, the Voyager had made its first deal when UK-based financial services portal developer 10x Future Technologies, also known as 10xbanking, raised £34m ($46m) and said it might partner Ping An to enter the Asian market.

To help its transformation of financial services, Larsen in October 2017 hired his former Citigroup's Asia head of insurance investment banking Donald Lacey.

Before joining Ping An, Larsen spent 18 years at Citigroup where he was most recently the Hong Kong-based, global head of the firm's retail banking and mortgages businesses, that had about $12bn in revenues and spanning 19 countries.

He has been at the leading edge of the financial services industry for the last 29 years across the Asia Pacific region and globally.

Before Citi, Larsen was a principal in the financial services practice of global management consulting firm Booz Allen & Hamilton where he spent eight years advising large banks and other financial institutions across Asia, Australia and New Zealand and in the US and Europe.

He is a Distinguished Fellow of the Institute of Banking and Finance, Singapore, and was named Retail Banker of the Year in 2011 by Asian Banker magazine, after gaining a bachelor honours degree from University of Melbourne.

Crispin Leick ENBW NEW VENTURES

Crispin Leick is a 10-year veteran that has held the managing director position at three corporate venture capital funds he helped launch.

He first raised €90m ($100m) in RWE Innogy Venture Capital in early 2008 for Germany-based energy utility RWE's renewable energy subsidiary RWE Innogy, then he devised a spinoff fund of €25m ($28m) in Innogy Venture Capital in the middle of the cleantech meltdown in 2011, before eventually setting up EnBW New Ventures with a and €100m ($110m) corpus in late 2015 for Germany-based energy utility EnBW Energie Baden-Württemberg. The funds raised totalled at more than €200m ($230m).

While Leick was at Innogy Venture Capital, he made Global Corporate Venturing's Powerlist in three consecutive years from 2012 to 2014. Under his guidance, two junior members at Innogy Venture Capital team have grown into senior investment professionals.

EnBW's chief financial officer Thomas Kusterer said in his nomination of Leick: "Crispin is building and leading EnBW's Corporate Venturing arm since its inception 2016. EnBW's venturing activities are an open innovation platform, driven by financial return and focusing on scaling smart infrastructure startups, that could make a difference in the future.

"EnBW New Ventures is the platform that enables EnBW to cooperate fruitfully with entrepreneurial teams, while at the same time all efforts of our New Ventures team are focused to support the entrepreneurs to build sustainable and profitable businesses.

"EnBW's ability to work closely with the successful entrepreneurs of the future will define EnBW's own success in new sectors that are not our home turf as of today.

"Two cooperation examples, where the open innovation is already showing strong growth is EnBW's electricity and gas subsidiary Yello's solar decentral rental product for residential PV [photovoltaic system] and storage with Germany's first decentralised electricity supplier DZ-4 as well as the digitisation of our parking spaces with Germany-based car parking technology developer Cleverciti.

"Crispin and his team act as translator and moderator between the dynamic startups and EnBW and as flexible tool to enable future growth options for EnBW."

Leick's central philosophy as a corporate venturer is to give entrepreneurs the freedom to drive their business while having a strong financial return-driven focus, enabling but not forcing open cooperation with the corporate investor. To measure a startup's success, however, he looks at not only the money raised but also sustainable business built and future job creation in the long term.

As Leick strongly embraces open innovation, he built CVC schemes twice with independent decision bodies and VC incentive structures, to counter the belief still held by many CVCs in internal strategic investment groups that often have conflicts of interests.

In total, Leick has been involved in more than 50 VC transactions in the past 10 years, leading and co-leading investments in more than 20 startups. Of these, he said his best exit delivered close to 10-times return.

Being a forerunner in driving the innovation theses of the utility sector, Leick made bold moves before they became mainstream. For example, he invested in decentralised renewables in 2008, small scale batteries in 2009, decentralised energy management in 2010, rooftop solar system in 2015, peer-to-peer software in 2016, smart parking in 2017 and smart datacentres in 2018.

From 2008 to 2015, he led Innogy Venture Capital's efforts in cleantech and enabling technology, financing 12 startups, of which four of them were successful, creating more than 200 jobs:

- Germany-based energy market internet-of-things platform developer Kiwigrid, owned partly by corporations.
- Germany-based solar film developer Heliatek, majority owned by multiple corporations.
- Germany-based energy forecaster Enercast.
- Sweden-based gas-liquid heat exchangers maker Airec, acquired by Sweden-based industrial product maker Alfa Laval.

From 2016, Leick has been running EnBW New Ventures, identifying smart infrastructure in energy, mobility and cities, and two new deals are expected to close in the first quarter of 2019. His current focus is on smart critical infrastructures.

During this time, he has made investments in six startups, two of which have become successful and have created nearly 200 jobs:

- Germany-based rooftop solar and battery rental model supplier DZ-4.
- Germany-based smart parking technology developer Cleverciti.

Three of EnBW New Ventures' current portfolio companies have entered a commercial relationship with EnBW:

- DZ-4 provides a white label product for Yello Solar, an EnBW brand.
- Germany-based energy and utilities control technology developer Lumenaza has multiple contracts with EnBW subsidiaries providing a white-label platform for regional power products.
- Cleverciti is currently installing its smart parking solution at EnBW for its employee and guest carparks.

Leick added that EnBW New Ventures also takes diversity seriously, with half of its current team being female. Currently, the unit has four investment professionals – one senior and three juniors – hired upon their university graduation and promoted from analyst to associate in January this year, while two further hires are also expected this year.

Leick holds a master's degree in chemical engineering from Karlsruhe Institute of Technology and an MBA from the University of Chicago's Booth School of Business.

Quinn Li QUALCOMM VENTURES

After former Qualcomm Ventures' head, Nagraj Kashyap left in January 2016 to join software provider Microsoft's corporate venturing vehicle M12, swiftly followed by Israel-based star investor Mony Hassid six months later, it should have been a challenging time for US-listed chip maker Qualcomm.

But, while Quinn Li's promotion to the top corporate venturing role in 2016 came at an interesting time for the company, he has cemented his reputation as a leader in the venture community with a string of deals and initiatives and stepped up to co-chairman of the Global Corporate Venturing and Innovation Summit in Monterey in

January in both 2018 and 2019.

One exit that happened two months after his promotion was an early $2m investment made by Qualcomm in December 2015 in US-based driverless vehicle technology developer Cruise, which was a high-profile win when General Motors bought it for $1bn. Another two portfolio companies, Brazil-based ride-hailing service 99 and Brazil-based agricultural technology developer Strider were acquired from Qualcomm Ventures' Latin America portfolio headed by Carlos Kokron in January and March last year, respectively.

Other exits included US-based default gateways security software developer Genband which merged with cloud-based communications provider Sonus Networks in May 2017 and open source security provider BlackDuck which was acquired by US-based electronic design automation solutions provider Synopsys in November 2017 for $565m.

Exits in 2018 included US-based security provider LogRhythm being acquired by private equity firm Thoma Bravo in May, US-based enterprise wifi technology provider Mojo Networks by computer networking company Arista Networks in August, US-based topology optimisation software provider Frustum was acquired by US-based product lifecycle management software supplier Parametric Technology in November and US-based software-based content security system creator Verimatrix was acquired by France-based near-field communication chips provider Inside Secure in December for $150m. US-based biopharmaceutical company Liquidia Technologies raised $50m when it floated on the Nasdaq Capital Market in July 2018.

This year, Germany-based electric vehicle (EV) charging technology developer Ubitricity received €20m ($22.7m) in a series C round from Next47, along with energy utility EDF and carmaker Honda in February.

Early last year, Qualcomm Ventures transferred Kokron from head of Latin America to head of North America following these sales.

In an in-house interview last year, Kokron (known as CK) said: "Savvy entrepreneurs in both the US and LatAm are striving to build big businesses which would translate to significant value creation, and with a lot of sweat and some luck this yields to great exits for all involved. If you look at the Qualcomm Ventures experience, we have a strong track record of seven $1bn-plus exits in the last eight years."

99's sale to China-based Didi Chuxing was Brazil's largest for a VC-backed company, and Qualcomm also had another big exit in May last year with the flotation of China-based smartphone maker Xiaomi at a valuation of $100bn – it was the largest venture-backed initial public offering since 2014.

Li said in 2017 for his GCV Powerlist profile regarding Qualcomm Ventures' overall strategy: "We invest in companies that are building highly disruptive technologies."

At 2016's Global Corporate Venturing & Innovation Summit in California, Li told interviewer Jordan Herman, partner at law firm Baker Botts, these disruptive technologies were often in the internet of things (IoT) and automotive, as well as virtual reality, but not in startups that compete with the parent's business of computing chips.

In this year's summit, Li, who was promoted to senior vice-president last reiterated that Qualcomm Ventures had invested in the parent company's broader ecosystem, citing mobility, automotive and the internet of things as particular areas of interest. He also declared that in Qualcomm's view, "mobile is going to be the most pervasive artificial intelligence platform" and that he was "very excited about this trend".

Qualcomm Ventures was primarily interested in identifying future technology trends for its parent, investing in potential and current customers as well as in business partners with a view to driving the ecosystem forward. Li conceded that quantitative measuring was hard because it was almost impossible to figure out whether a portfolio company became a client of the parent corporation because an investment was made or whether they would have become a customer anyway.

It was important, therefore, that a corporate venture capital unit followed three rules – senior management had to be on board, there had to be a very clear plan and the team had to be disciplined about it, and there had to be a long horizon because returns would not be generated for five to six years.

Selected as a GCV Rising Star in January 2016, when he was head of North America, before his promotion to overall head of Qualcomm Ventures was announced, Li said the ability to make investments with a strong financial return while helping drive forward Qualcomm's strategic objectives was one of the reasons he was drawn to corporate venturing. He also takes pleasure in helping portfolio firms grow through leveraging Qualcomm's resources.

Li, who joined Qualcomm Ventures in 2005 after roles at IBM, Broadcom and Lucent following completion of his electrical engineering PhD at Washington University in St. Louis, said some of the biggest challenges he has had to overcome along the way have involved finding the balance between strategic and financial objectives, while building the right team with sufficiently diverse experience to expand investments into new areas.

Jean (Qing) Liu DIDI CHUXING

Didi Chuxing, a China-based ride-hailing application provider, raised an aggregate of more than $20bn as of July 2018 before receiving an additional $500m investment from Nasdaq-listed travel service firm Booking Holdings in the same month.

In 2017, Didi had raised more than $9bn from a consortium including Japan-headquartered telecoms and internet group SoftBank, China-based internet group Tencent, China-based e-commerce group Alibaba and US-headquartered consumer electronics provider Apple.

Earlier this year, in March, SoftBank funded Didi $1.6bn, its third investment after having supplied funds in earlier rounds – $4.5bn in mid-2016 and $4bn in December 2017. They were the largest rounds of funding yet for a technology company, and Didi is reportedly valued at $56bn.

Qing (Jean) Liu, president of Didi Chuxing, has been behind much of Didi's rise and was reportedly behind US-listed technology firm Apple's decision to invest $1bn in Uber. She joined Didi in July 2014 as chief operating officer when the company was two years old and was instrumental in last year's $7bn takeover of Uber's Chinese operation in return for the US company taking a 20% stake in the merged business. Didi also invested $1bn in Uber.

Earlier, in 2015, she led the strategic merger of Didi Dache and its main competitor

Kuaidi Dache to form Didi Chuxing. Now, she has been preparing its shift towards autonomous driving and artificial intelligence and machine learning, plus international expansion with corporate venturing an important tool.

With Stephen Zhu, vice-president of strategy at Didi Chuxing who ranked first for the GCV Rising Stars 2018 awards and was chosen again in 2019, they have had an impressive few years.

Didi Chuxing was formed out of the merger in 2015 of two Chinese ride-hailing platforms – Tencent-backed Didi Dache, and Kuadi Dache, which had received early-stage funding from Alibaba. Didi is now the world's largest online transportation platform with more than 450 million users and 21 million drivers and has a traffic management system to reduce congestion through machine learning.

Didi's meteoric rise has been fuelled by Japan's SoftBank, Chinese tech giants Alibaba, Baidu and Tencent, as well as corporations Apple and Foxconn and state investor Mubadala.

To develop its international strategy, Zhu used corporate venturing. In his Tech in Asia interview in November 2015 he said: "In each region, you have different users, different drivers, a different regulatory regime. So, we go with a local champion that knows the market much better."

Didi had invested in Uber's main US peer, Lyft, through a series of corporate venturing rounds from 2015, and also, often alongside Tencent or SoftBank or both, has investments in Taxify which operates in Europe and Africa, Careem in the Middle East, Ola in India, Grab in southeast Asia and Brazil's 99 before turning it into a majority stake at an about $1bn valuation.

Didi's investments in these companies involve sharing technological and logistical data between the companies rather than private user data.

Zhu told Tech In Asia: "We work together, and we can share experiences in terms of technology, deep learning, product innovation, and operations. We can speed each other up.

"We are thinking about sharing a lot of the learnings we have in China to other markets like Southeast Asia and India.

"When you think of the dynamics of the cities, it is quite similar – you have high population density, and you have various price points.

"The bus service we have could potentially work out in southeast Asia or India as well. We think collaboration works perfectly."

The crossholdings between Didi and Uber could prove influential if it leads to consolidation as the two also share external shareholders. In December 2017, SoftBank completed its acquisition of up to 20% of Uber at about $48bn in value, down from $68bn in its previous round and less than Didi in its latest round, which could encourage consolidation around one global champion.

This is a far cry from when, in May 2013, Tencent invested $15m for a 20% stake in Beijing-based Didi Taxi's series B round, at an estimated $60m valuation. Back then, the Didi Taxi mobile phone app had just entered the Shanghai market with 5,000 new orders from the city every day.

Liu's Beijing office is in Zhongguancun, China's answer to California's Silicon Valley. In a profile for news provider Financial Times, Liu said she had "spent her life bouncing from elite institution to elite institution in a dizzying spiral of success".

Liu was born in 1978 into what the Financial Times referred to as "Chinese tech royalty", as the daughter of Chuanzhi Liu, who founded Lenovo, the computer maker that bought IBM's personal computer (PC) business in 2005 and subsequently became the largest PC maker in the world. She told Financial Times: "My father said one thing that has stayed with me: 'It is supposed to be hard.' When you have that mentality, you find nothing is so difficult. Then you actually start to enjoy it and have fun."

Graduating from Peking University with a degree in computer science, she went on to do a master's at Harvard, followed by 12 years at Goldman Sachs, mostly in Hong Kong, where she worked with Martin Lau and James Mitchell, senior executives at another of Didi's investors, Tencent.

But while gender discrimination remains generally common in China, Liu told Financial Times she had never experienced discrimination while at Goldman Sachs nor at Didi and "my feeling is that there are more women in China in tech than in other industries".

A study by the Cyberspace Administration of China quoted by Financial Times estimated women started 55% of internet companies in the country, compared with 22% of startups in the US, according to research by Vivek Wadhwa and Farai Chideya, authors of Innovating Women.

In an interview held in February 2018 with QuartzAtWork, Liu said: "A female colleague once said to me that her male peers plan careers in terms of decades, but she was not able to do so because she has to factor in family, children, and the sacrifices women are expected to make along the same timeline. Hearing that made my heart ache.

"Cheng Wei – our founder – and I started the Didi Women's Network to help women break exactly that kind of mid-career bottleneck. I want to help create an environment where young woman can afford to view a family and a career as mutually reinforcing blessings, not some kind of 'handicap' or 'challenge'. To me, personally, motherhood actually opens up a new phase of enhanced motivation and broadened thinking, and develops one's emotional intelligence, which I believe is critical in modern business."

She added: "I am lucky that at a very early stage of my life, I came to realise that you do not need to set any limits for yourself just because you are a woman, or a computer scientist, or a banker. Stay curious, stay open and never stop growing – that way we are always ready when new opportunities arise. We live in a multi-disciplinary world, and our different skills and passions make us richer humans and more effective leaders and employees."

Wendy Lung IBM VENTURES

Wendy Lung, director of corporate strategy at IBM Ventures for more than a decade, enjoys "trailblazing into unknown territories, so it was a perfect fit for me to join the ventures team and be headlights for our business".

In an interview held in March this year, Lung told KoreaTechDesk that IBM Ventures' model was "unique" compared with other corporate venture capital units because "we focus on working closely with the venture and startup community to drive strategic growth for IBM". She added, "IBM will make select direct investments, but we prefer to focus on providing value to startups in the areas they need the most", including "mentoring, market visibility and access to customers and experts".

In addition, she said IBM Ventures' mission was to deliver "headlights" for IBM's business units by tapping into the innovations and disruptions "to engage with the best startups to help solve the business problems of our customers and to support our customers in their innovation initiatives".

IBM Ventures not only supplies capital but also other resources such as time, existing technologies and customer base to create synergy and to help the portfolio companies to develop further.

As IBM is present in many markets around the world, it can identify startups in different countries through its global network of investors and partners.

IBM Ventures is stage-agnostic and invests in all stages with its Startup and IBM scheme, which provides free technology and resources to emerging companies that are strategically pertinent to IBM but do not have revenue as yet. "We generally help enterprise startups engage our global business units and customers when startups have product and traction in the market," Lung added.

As an IBM-lifer, having joined the US-listed technology company as a sales representative in 1989, Lung has been a partner in IBM Ventures since 2008 and one of her earlier successes had been the creation of IBM's first global program for startups in 2010.

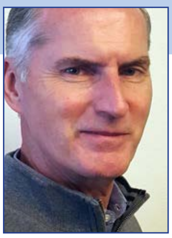
She said for 2016's awards: "It was exciting to rally resources from across the company to engage and provide value to early-stage startups."

For example, last year, IBM Ventures participated in a $24m series C for US-based internet-of-things integration technology provider IFTTT in April, led by Salesforce Ventures, the corporate venturing arm of customer relationship management software producer Salesforce. She has also been leading IBM's exploration of an impact investment fund potentially similar to Salesforce Ventures' impact fund.

Lung added for last year's profile: "I have been publicly working with dozens of IBMs clients to match them up with promising startups for years. For example, I support IBM's innovation partnership with Deutsche Bank. The new program is just an extension of that, called Innovation Hub."

And while she has countered the Silicon Valley trend of company-hopping to build a career, she remains aware of the challenges faced by others. "For the past five years, I have been part of a volunteer organisation that assists people who have come across life challenges to re-enter the workforce."

By giving to others, however, she has typified another Valley mantra of trying to help the world become a better place.



Brad McManus MOTOROLA SOLUTIONS VENTURE CAPITAL

Rajan Naik, senior vice-president of strategy and innovation at Motorola Solutions, said: "Motorola Solutions Venture Capital (MSVC) has been investing in and partnering with startups for 20 years, helping drive technology leadership, innovation and business growth for Motorola Solutions. Brad joined our venture organisation four years ago as the company was beginning to expand its offerings in services, software and video."

"Leveraging his extensive venture capital experience and network in the VC industry both in the US and Israel, Brad has reshaped MSVC's portfolio to align with Motorola Solutions' growth platforms and has created unique business models for go-to-market and technology licensing that enable venture stage companies to be successful with enterprises."

When chosen as GCV's Rising Star in 2017, Brad McManus was an investment director at MSVC, the corporate venturing unit of the eponymous public safety and commercial communications and intelligence service provider, a post he held from May 2015 until mid-2017, when he was promoted to managing director.

McManus said: "MSVC is responsible for accelerating sustainable bottom-line growth for Motorola Solutions through investments in new technologies, new businesses and new talent.

"MSVC is a small, high-impact team with offices located in Chicago, Illinois; Silicon Valley, California and Tel Aviv, Israel. The team is responsible for making investments in high-tech startups that are relevant to our businesses.

"The unit currently manages a portfolio of about 20 companies with new companies added to the portfolio periodically. The department is also responsible for monetising these investments and meeting annual strategic and financial goals set by the corporation.

"MSVC also manages Motorola Solutions' partnership in the Labs/02 incubator based in Jerusalem, which sources and incubates seed-stage startups based in Israel."

In 2018, McManus achieved several milestones for MSVC. For example, he helped redefine the unit's strategic rationale for investments, which includes six categories for both business and visionary and technology-based objectives.

In addition, he enhanced MSVC's investment proposal and review process which now focuses on "strategic thesis analysis and pitch-based on six objectives". He was also involved in streamlining the investment committee, from six members down to three – chief technology officer, chief technology officer and chief financial officer's delegate.

Under his leadership, the unit's executive sponsor and business unit champion framework was also refined to align with key business units and chief technology officer sponsors. The organisation moved under chief technology officer from chief technology officer to align resources and value of ventures more closely to strategic imperatives, he added.

There are also challenges associated with being a CVC unit leader, however. For example, McManus mentioned "driving forward-thinking innovation while simultaneously impacting the bottom line through strategic alliances with portfolio companies" as one. "Short-term business growth objectives are important, but ventures must also drive thought-leadership and advance internal innovation through strategic investments."

Moreover, he said: "Incubator strategic outcomes are challenging when structure also must incorporate objectives of external partners. MSI joined a financial VC, a foreign corporation and the local government in an incubator program, which has made strategically relevant outcomes more challenging. MSVC is working on resolving this issue currently."

Last year, MSVC participated in three new direct investments, such as a $25m series

B round for US-based advanced computer processor developer Syntiant and a $5.5m seed round for US-based augmented reality technology developer Edgybees, as well as four incubator investments. In February 2019, MSVC partook in $6.5m series A round in C2A Security, Israel-based in-vehicle chip-level security platform provider, through Lab/02.

Most recently, three of the unit's portfolio companies had successful exits:

- Israel-based video analytics technology provider BriefCam was acquired by Japan-based imaging technology producer Canon in May 2018.
- US-based geospatial software developer Boundless Spatial is to be acquired by US-based space and analytics company Planet, announced in December 2018.
- US-based app development platform GoCanvas received $150m in funding from US-based investment firm K1 Investment Management in February 2019, making the latter the former's majority stakeholder.

Before joining MSVC, McManus co-founded venture capital firm Capbridge Ventures in 2013 and had been a managing partner until 2015. During that time, he managed strategic venture funds for corporations in targeted adjacent verticals.

Before that, McManus was a managing director at Panasonic Venture Group, the corporate venturing unit of the eponymous Japan-based consumer electronics company, from 2002 to 2013.

Lisa Miao BYTEDANCE

Lisa Miao has been an investment director at China-headquartered digital media company ByteDance since November 2017.

The digital media company – which is known for its news aggregation app Toutiao with 120 million daily active users and its video-sharing app TikTok, also known as Douyin, with 500 million monthly active users – counts telecoms group SoftBank as one of its backers.

SoftBank, along with growth equity firm General Atlantic and investment firms KKR and Primavera Capital Group, invested $3bn in ByteDance in October last year and the company was subsequently valued at $75bn.

After that, it was speculated that ByteDance might launch an initial public offering; however, in December 2018, it set up an RMB10bn ($1.44bn) corporate venture capital fund instead. The company provided RMB2bn – 20% of the capital – while the rest would come from external investors, such as government-owned investment banks and funds, and the unit would target artificial intelligence and media content.

Although the company has not invested as frequently as other large China-based tech corporates, its in-house investment team has backed a few portfolio companies previously, mainly in the digital media space both within China and abroad.

In China, ByteDance has invested in media app developers with a focus on animation, automobiles and finance as well as advertising agencies.

In late 2016, ByteDance led a $25m round for India-based media aggregation app developer Dailyhunt and supplied $50m of series B round for video streaming service Live.me in November 2017, before leading a $200m round for China-based online education provider 17zuoye in March 2018.

ByteDance is also an active buyer of startups. In February 2017, it acquired US-based short-form video app Flipagram for an undisclosed amount. In November the same year, it acquired US-based social video app developer Musical.ly, which was merged with TikTok, for about $1bn and France-based news app provider News Republic for $86.6m.

In March this year, ByteDance Ventures acquired China-based online game developer Mokun Technology, after its app TikTok launched its first in-app game called Music Jumping Ball. Later in the same month, it showed further interest in the gaming industry by acquiring a 45.19% stake in another China-based game studio Shanghe Internet Technology, which had created numerous mobile games.

In the same month, its app TikTok also acquired US-based location-driven animation app developer GeoGif's assets, whose location-based technologies would soon be implemented in the former.

Before joining ByteDance, Miao had spent two years as an investor at Tencent Investment, China-headquartered internet group Tencent's corporate venturing department. Before that, she spent the summers of 2013 and 2014 as an associate at venture capital firms Kleiner Perkins Caufield &Byers and Sequoia Capital and at financial services firm Morgan Stanley while completing her MBA at University of Pennsylvania's Wharton School between 2013 and 2015.

She started her career as an analyst at management consultant McKinsey from 2009 to 2011 before joining pharmaceutical firm Novartis as a manager of strategy and business development between 2012 and 2013.

Miao holds a bachelor's degree in microelectronics from Fudan University.

Jack Miner CLEVELAND CLINIC VENTURES

Jack Miner leads Cleveland Clinic Ventures (CCV), a team of venture experts charged with funding the full lifecycle – from product-development company to exit – at the US-based healthcare services provider.

The unit works closely with Cleveland Clinic Innovations, the clinic's innovation arm which has been crafting companies and products from innovative medical solutions and intellectual property (IP), while the former focuses on spinoffs and fundraising to advance IP commercialisation.

CCV has access to Cleveland Clinic's resources and full-time directors, executives-in-residence, operations and associate CCV team members. Cleveland Clinic has spun off more than 80 startups since 2000, including heart test provider Cleveland HeartLab which was acquired by medical testing laboratory Quest Diagnostics in October 2017 for an undisclosed amount.

As managing director, Miner reports to the chief investment officer. He said for his Rising Stars award this year: "Not only do we have access to the world's thought leaders in healthcare through our own health system, but we also gain insights from our world-class portfolio of venture and private equity fund managers.

"The team was conceptualised in 2016 by our chief investment officer and launched in 2018 when hiring the team of venture partners was completed. We have a multifaceted approach to corporate venture capital, investing in each of three sectors – medical devices, therapeutics and diagnostics, and health information technology. Along with the three sectors, we also invest along the full continuum of growth stage, from product development to company sale."

Miner brings plenty of experience to the role, having been part of seven venture-funded software companies. Since joining Cleveland Clinic, he said the biggest success had been recruiting such a talented and experienced team of healthcare investors, cumulatively representing more than 35 years of investment and M&A success.

"The biggest challenge remains defining how a healthcare system can invest in not only their own technology but also other companies that are strategic to the health system. The numerous competing interests require creating processes that provide transparency and predictability."

Miner told Modern Healthcare in April last year that some of his portfolio companies were incorporated into the healthcare system, such as a device which helps improve stroke victims' motor control. He said: "The return does not trump certain aspects of what we do, that we really have to get those technologies from bench to bedside."

CCV's portfolio companies include orthopaedic surgeries' medical devices developer Custom Orthopaedic Solutions, acquired by Arthrex last year; imaging contract research organisation ImageIQ, acquired by clinical data and therapeutic technology provider ERT in 2017; and neuromodulation device developer Cardionomic.

Before joining CCV in September 2016, Miner oversaw the ventures team at his alma mater University of Michigan's Office of Technology Transfer. University of Michigan hired him in 2011 where he helped establish more than 50 startups and ran a portfolio of 300 companies.

There, Miner also managed the Venture Accelerator – a lab and office space located near the university's research discoveries commercialisation unit Tech Transfer – and mentors-in-residence program, as well as the business formation team.

Miner holds a bachelor's degree in economics from University of Michigan and a master's in management from Northwestern University's Kellogg Graduate School of Management.

Bernhard Mohr EVONIK VENTURE CAPITAL

Christian Kullmann, chairman of the executive board at Germany-based chemicals company Evonik Industries, in nominating Bernhard Mohr for the GCV Powerlist said: "Investments in and partnerships with startup companies generate strategic value and growth opportunities.

"Our venture capital arm is a vital link to tomorrow's technologies and way of doing business."

Kullmann added: "Venture capital contributes in realising our vision to build the best-in-class speciality chemicals company. The team led by Bernhard Mohr has been instrumental in Evonik leveraging the value of corporate venture capital across the whole company."

Mohr joined Evonik in 2012 to set up the corporate venturing activities of Evonik and became managing director of Evonik Venture Capital in 2013.

He has more than 20 years of professional experience in the chemicals and venture capital industry, having joined Evonik Industries after five and a half years working at Germany-based chemicals company peer BASF's corporate venturing unit.

Before moving to BASF Venture Capital, Mohr held multiple roles at BASF. Between 1985 and 1996 he studied chemistry in Germany and the US and had postgraduate assignments in Japan, the US and France, working with Nobel laureates Robert Grubbs and Jean-Pierre Sauvage, including Airborne Oil & Gas, Algal Scientific, Biosynthetic Technologies, FRX Polymers, JeNaCell, Nanocomp, Synoste, Vivasure and Wiivv.

Since its inception in 2012 Evonik Venture Capital has built a portfolio of about 25 investments, direct and indirect. In early 2019, Evonik launched its second venture capital fund with a volume of €150m ($170m), more than doubling the amount under management to €250m.

The new fund will help secure access to disruptive technologies and innovative business models as well as supporting Evonik's digital transformation and enabling early identification of potential technology acquisition targets. The fund has a global reach with investments in Europe, North America, Asia and Israel.

Mohr said: "The extension of the fund volume to €250m manifests our ambition to establish Evonik Venture Capital as one of the global leading investors in the speciality chemicals space."

The investment focus is on business and innovation fields such as healthcare, animal nutrition, smart materials and speciality additives, which Evonik has already identified as growth drivers. The investment scope ranges from early to growth-stage to follow-on financing with investment volume per portfolio company of up to €15m. As well as providing capital, Evonik offers startups access to the resources of one of the world's leading speciality chemicals companies.

EVC has four offices – in Hanau and Essen, Germany, in Parsippany, the US and in Shanghai, China. Evonik Venture Capital's team is made up of experienced investment managers that provide portfolio companies comprehensive support. The team consists of 10 seasoned investment professionals with a long-standing track record in the venture capital and chemical industry. Lutz Stoeber, a GCV Rising Star from 2017 to 2019 is responsible for Evonik Venture Capital's operations in North America, while recent promotions included Erning Cao, named investment director in the Shanghai office, and Ilja Vladimirov, promoted in January 2019 to investment manager of digital topics in the Hanau office.

In 2017, Evonik Venture Capital started to expand its activities into the digital space with the investment in Digital-plus Partners, a growth equity investor with a fund size of €350m. They focus on B2B technology companies offering digital solutions and business models. In 2018, Evonik Venture Capital invested in US-based startup MySkin, which has developed mobile devices that measure properties of the skin for cosmetic applications and OptiFarm, a UK-based firm active in Precision Livestock Farming.

The portfolio, which is made up of both direct and fund investments, includes companies such as Israel-based digital-printing specialist Velox and Germany-based biotechnology startup Numaferm. The portfolio company Structured Polymers, a US-based business active in 3D-printing technology, was acquired by Evonik in early 2019.

Other examples of venture-backed companies acquired by Evonik in the biotech space include France-based cancer therapies-focused biotech company Alkion Biopharma, Canada-based lipid nanoparticle chemistry manufacturing services provider Transferra Nanosciences and Belgium-based big data software provider Porphyrio. In January this year, Structured Polymers, a US-based business active in 3D-printing technology which was a portfolio company of Evonik Venture Capital, was also acquired by Evonik.

Syndication with other well-known and successful investors is paramount for Evonik Venture Capital whose current co-investors range from reputable corporate investors – BP, Shell, Monsanto, BASF, Sime Darby, Sumitomo, Chevron, Saudi Aramco and Subsea7 – to financial investors – Life Science Partners, Panakes, New Protein Capital, Capricorn, Israel Cleantech, Citic, PMV, Robecco Formation 8, Eclipse and Finnvera.

Most recently, Evonik Venture Capital co-led a series A round of several million dollars for Netherlands-based poultry industry-focused animal welfare biotechnological startup In Ovo, in October last year. Mohr said at the time: "In Ovo has taken on one of the biggest ethical problems in modern poultry farming. This investment strengthens Evonik's position as a partner of choice for the farming industry as we can provide support for ethical food production."

As an active member of the CVC community, Mohr chairs the International Venture Club and is part of the CVC Counsel Invest Europe and GCV's Leadership Society.

Din Mustaffa FNZ GROUP

Din Mustaffa was recently promoted to head of strategic ventures at UK-based financial technology provider FNZ Group and helps develop a more structured approach towards making strategic venture investments.

FNZ is backed by General Atlantic, a US-based private equity firm, and focuses on fintech within the wealth and asset management sector with approximately $450bn assets under administration and around 1,500 employees. "FNZ is mainly interested in opportunities across verticals within the wealth management sector," said Mustaffa.

FNZ's chief executive Adrian Durham added: "As a global fintech business with over 1,500 employees and £350bn ($450bn) in assets managed for over seven million retail investors, maintaining the same pace of innovation across our whole platform, becomes increasingly challenging.

"To address this challenge, and ensure innovation remains a strong driver of growth, FNZ created a strategic ventures division in early 2018, and hired Din Mustaffa to head it. Since joining, Din has overseen a wide range of strategic investments on behalf of the company, ranging from startups to established businesses, that either add product and service capability or geographic expansion to FNZ's business. Din has been able to rapidly identify the right opportunities, build strong relationships with entrepreneurs, and structure deals that meet the interests of all parties. He has also ensured for the less mature companies, that they receive the support that helps them to aggressively grow, leveraging FNZ's wider platform as required."

Founded as a startup in New Zealand in 2004, FNZ moved its headquarters to Edinburgh, Scotland in 2012. Its customers include Aegon, Aviva, Barclays, BNP Paribas, HSBC, Lloyds, M&G, Quilter, RBC, Santander, Standard Life Aberdeen, UBS, Vanguard and Zurich.

Mustaffa is responsible for planning and executing worldwide mergers and acquisitions (M&A), corporate development, investments and other strategic ventures for the group. He also leads and manages end-to-end deal process including coordination between various parties and advisory teams.

He said: "FNZ is round and maturity-agnostic, we are able to invest and acquire any business that meets our strategic priorities."

Among the feats realised in 2018, Mustaffa is especially proud of FNZ's acquisition of Germany-based financial institution Ebase – European Bank for Financial Services – from Germany-based online bank Comdirect for €151m ($168m) in July. He also oversaw the sale of FNZ to Canada-based institutional investor Caisse de dépôt et placement du Québec and UK-based financial services consultancy Generation at an enterprise value of $2.2bn. Several M&A and venture deals are currently under way.

Mustaffa helped create more structure around venture portfolio investment management as well as synergies by permitting portfolio companies to work with each other.

Regarding the relationship with the portfolio companies, Mustaffa said: "We have the preferred right to acquire most of our portfolio companies and may be in the process [in February 2019] of acquiring one of our portfolio companies. Most of our portfolio companies' services are marketed together with FNZ's core offerings as one package, and in certain regions, these services play an important role in attracting new clients to use the FNZ platform. Staff at FNZ and our portfolio companies tend to work together closely across the entire organisation to deliver our combined technology and asset servicing proposition."

Concerning the investment strategy, Mustaffa said: "FNZ continues to review opportunities to make investments consistent with its strategic objectives, including to enter new regional markets and distribution channels."

Before joining FNZ Group in 2018, Mustaffa had been at UK-based accountancy firm Grant Thornton's M&A corporate finance department for a year, having joined from UK-based accountancy firm Jeffreys Henry's audit and equity capital market corporate finance division where he spent a year and a half. Before that, Mustaffa had worked for UK-based financial services company Flemmings for four years.

Mustaffa holds a bachelor's degree in accounting and finance with first-class honours from University of Exeter. He also has a certificate in investment, risk and taxation awarded by Chartered Institute for Securities and Investment and is a chartered accountant.

Girish Nadkarni TOTAL ENERGY VENTURES

As Patrick Pouyanne, chairman & CEO at France-based oil major Total, aptly said: "Our capital venture fund is a way to identify innovations which could make sense for Total to keep our eyes open to what is happening around us," the constantly evolving energy and mobility ecosystems are seeing many changes lately.

Girish Nadkarni had been president of ABB Technology Ventures from 2009 until October 2016, before taking the president position at Total Energy Ventures (TEV) in 2017, relocating to Paris, France.

TEV has made more than 40 investments to date, including six new investments, three new funds and seven reinvestments in 2018. Nadkarni was quoted by Petroleum Review in February this year as saying: "As a corporate venture group, we have a dual mandate. We not only have to make sure there is a decent rate of return, but the investment must also have strategic relevance to Total. The technology may be potentially disruptive or signal emergent opportunities or help solve certain problems.

"Foremost, our interest is to probe technologies that address the entire energy value chain," referring to the $32m series D round in September 2018 for US-based energy management technology developer Autogrid, which has developed a software that helps utilities, electricity retailers, renewable energy power providers and energy service providers manage their resources.

As for the fund's approach, he told GCV: "Although we have invested across the various stages, as of 2018 we embarked on a 'barbell' strategy wherein the majority of our investments will be in growth-stage companies which have revenues of at least $5m and a proven product-market fit. At the other end of the barbell, we will invest in seed-stage companies which have highly disruptive technologies or business models."

TEV has invested in France, Germany, Spain, the US, China, Kenya, Nigeria and Ghana, in sectors including distributed energy management, mobility, electric aviation, solid-state batteries, energy access home automation and internet of things (IoT).

Nadkarni said, like other CVC funds, one metric used to measure TEV's success was the financial return. However, he also valued the lessons learnt to avoid future pitfalls.

He added that TEV would also commit to $10,000 to $500,000 in the next five years to fund more than two dozen seed-stage startups with "high-disruptive potential" to gain innovative technologies.

TEV also invests in VC funds, for example, Cathay China Smart Energy Fund and Energy Access Fund, for new tech and markets and if it can have active engagement among other factors.

Nadkarni said while TEV had not acquired any portfolio companies, Total had acquired many venture-backed companies, especially companies identified by TEV as potential investment targets. An example is G2Mobility, a France-based developer of a smart charging system for electric vehicles (EV).

TEV works closely with portfolio companies in different fields, such as:
- France-based business decision making software developer Cosmotech for augmented intelligence.
- US-based seismic data recording system supplier Wireless Seismic for oil exploration.
- France-based sensing technology developer Avenisense for sensors.
- Spain-based freight shipping services marketplace owner OnTruck – dubbed "truck-based Uber" – for logistics.
- Tanzania-based renewable energy technology developer Zola Electric for energy access in Africa.
- US-based energy management technology developer AutoGrid Systems for distributed energy management.
- US-based rotor-empowered vertical take-off and landing air cargo logistics system developer Elroy Air for logistics drones.
- US-based battery technology developer Ionic Materials for solid-state batteries.

Nadkarni said TEV had formed region-specific teams: "In addition to our traditional investment areas, we created two new teams, both headed by very impressive women. The first is to invest in Asia, with the primary focus being on China. In 2018, we invested in two funds – one of which we anchored – and invested in two companies."

For instance, the Asia-focused team at TEV financed US-based and China-focused EV lithium-ion battery provider Octillion and China-based AI-empowered IoT fleet management service provider G7.

"The other team invests in the emerging markets, with emphasis on Africa. This team focuses on energy access for people living off-grid and low carbon technologies. They made three investments last year in Nigeria, Kenya and Ghana."

With its endeavours in Africa, Total hopes to provide wider energy access to emerging markets. The Africa-focused team funded Nigeria-based shared energy IoT software supplier Solstice Energy Solutions and Ghana-based smartphone-empowered pay-as-you-go solar energy system provider PEG, for instance.

TEV also has had activities in its home ground Europe, apart from the aforementioned France-based Cosmotech and Avenisense as well as Spain-based OnTruck, the unit also counts Germany-based electrolyser and fuel cell developer Sunfire in its portfolio.

Before setting up ABB Technology Ventures, Nadkarni was senior vice-president of ABB's robotics division. He also worked as an entrepreneur-in-residence at venture capital firm View Group and was the founder and CEO of the startup VSimplify.

Nadkarni's past roles included work at industrial conglomerate GE, financial group Prudential and law firm Shearman & Sterling. He has an MBA from Harvard Business School and studied law, economics and statistics at University of Mumbai.

Nadkarni is deeply involved in the corporate venturing world: "I have been quite active speaking at various conferences such as EcoSummit, Innovation Roundtable, Sino French Forum on AI, and the GCV Summit in London. I have also judged the INSEAD Venture Capital Competition and mentored companies at Techstars Paris."

Janis Naeve AMGEN VENTURES

Janis Naeve, managing director of Amgen Ventures, biopharmaceutical company Amgen's corporate venturing arm, has headed the unit since 2005, a year after it was formed under the leadership of Jay Hagan, former managing director of the unit until 2008, with $100m.

The unit's parent company Amgen said it had always appreciated the importance of funding early-stage innovation as it was founded in 1980 by venture capitalists and scientists.

Naeve stated on the website: "At Amgen Ventures, we unlock value by making investments that match promising early innovations with more than 30 years of biotechnology experience."

Her own experience does not reach back quite so far, however. Following her PhD and postdoctoral fellowship in neurobiology in California, she worked on business development at biotech company Aurora Biosciences and small molecule therapeutics developer X-Ceptor Therapeutics from 1997 to 2004 before joining Amgen in March 2005.

For more than a decade, Amgen Ventures has invested in more than 30 emerging biotechnology companies to advance promising medicines and technologies.

For the Global Corporate Venturing annual review last year, Naeve said its focus was on next-generation technologies to improve immuno-oncology and cell-based therapies. Its deals so far this year have included a $40m series B round for biotechnology company Imago BioSciences in March and a $27m series B round for medical analytics technology developer Aetion in February.

Last year, it was especially active in November, having participated in a $23m series A round for biotech company Rheostat Therapeutics, a $6.6m seed round for amyotrophic lateral sclerosis treatment developer QurAlis, a $65m series B round for immunotherapy developer Kymera Therapeutics and a $30m series A round for RNA (ribonucleic acid) drug developer Ribometrix.

In the summer, it had taken part in a $85.4m series E round for cancer drug developer Sutro Biopharma, a $133m series E round for neurodegenerative diseases-focused biotechnology developer Alector, a $110m series B round for gene editing technology developer Precision BioSciences and a $55m series C round for digital medication developer Akili Interactive Labs.

This continued the activity levels of 2017 when Amgen backed Obsidian Therapeutics, which raised $49.5m with Nunez joining the board as an observer, Syapse's $30m D round, Fortuna Fix's $25m B round, Immatics' $58m E round and Kymera's $30m A round.

Probably its biggest deal was Wuxi NextCode, which achieved a final close of its Amgen Ventures-backed series B round at $240m with additional commitments from investors including Temasek.

In February this year, its portfolio company Alector, an immuno-neurology therapy developer, raised $176m and floated on the Nasdaq Global Select Market in February. Other exits last year were Israel-based cellular medicine developer Gamida Cell which raised $69m in an initial public offering (IPO) in October and Sutro Biopharma which raised $85m in its IPO in September – both were listed on Nasdaq.

Naeve holds a bachelor of science degree in microbiology from California Polytechnic State University Pomona and a PhD in pathology from University of Southern California. She completed a postdoctoral fellowship in neurobiology at the California Institute of Technology.

Faran Nouri LAM RESEARCH CAPITAL

Faran Nouri is a founding member of Lam Research Capital, the corporate venturing arm of US-based wafer fabrication equipment and services provider Lam Research. She joined Lam Research in 2014 when the firm was looking to set up a corporate venturing unit.

Coming from an engineering background with a bachelor's and a master's degrees in electrical and electronics engineering from University of Colorado Boulder, Nouri had begun her career as an engineer, first at Hewlett-Packard and TMA, before being appointed as a technology developer at NXP Semiconductors, then known as VLSI Technology and later as Philips Semiconductors.

She explained: "I was a long-time semiconductor industry technologist when I dropped out of the industry to attend Stanford's graduate school of business." She was a director at industrial manufacturing equipment provider Applied Materials for 11 years before returning to university to earn her second master's degree, this time in management.

"Following graduation, I tried my hand at a startup, learned a lot about the startup world and its challenges," she said, having been a co-founder and adviser at crowdfunded solar energy startup 98lumens. She said she "ultimately decided that I would make a better investor than a startup founder".

On why she decided to join a corporate venture capital unit, she said: "There is never a boring day, I find the job extremely stimulating and interesting. I love meeting creative thinkers to learn about new technologies. As a CVC, I get to leverage my technical skills in an industry I know."

Nouri's initial responsibilities included drawing up Lam Research Capital's vision and mission and specifying the areas of investment of strategic relevance to the parent company. She set up an evergreen fund with a run rate of $50m a year and hired investors with domain expertise.

Today, the unit invests in early-stage companies developing technologies in four areas – life sciences, industrial automation, semiconductor and technology extensions – focusing on series A and B investments of $1m to $3m per round.

Being a relatively young fund, Nouri said the unit had yet to establish a strong track record, but it had "several exciting companies in its portfolio". It participated in a $30m series B round for Mission Bio, a US-based DNA analysis spinout of University of California, San Francisco in December 2018.

Other portfolio companies include US-based plant-based medicines provider Antheia, US-based 3D medical visualisation software developer Echopixel, US-based nanoglass coating supplier KaiaTech, proprietary DNA sequencing platform developer Omniome, Canada-based semiconductor wafer processing applications' peak process control technology developer Reno Subsystems and US-based 3D and optics solutions provider TetraVue.

Nouri's ambition is to invest in still more "companies that make a difference". Her greatest accomplishment to date in the unit, she added, was "establishing the group, developing best practices and forming a network of partners to build a healthy pipeline".

Seeing corporate venturing as a long-term commitment, she said: "It requires faith on the part of the company in the early years until we demonstrate our strategic value to Lam Research." Thanks to her team's perseverance and dedication, she said, she was now able to pinpoint the value Lam Research Capital delivers to its parent.

Carole Nuechterlein ROCHE VENTURE FUND

Carole Nuechterlein has headed the Roche Venture Fund, the corporate venturing unit of Switzerland-based pharmaceutical company Roche, since 2001, but even after a significant time at the top of the unit, she has said her challenges remain "exits and finding the diamonds in the rough".

That challenge became a little easier last year after its portfolio company Allakos, a US-based antibody developer, raised about $128m in its initial public offering (IPO) in July. Founded in 2012, Allakos is working on a treatment called AK002 that will address eosinophil and mast cell-related diseases. Eosinophil disorder causes cells that are responsible for releasing toxins to be overproduced, leading to an inflammation of tissue.

In February last year, Roche also agreed to acquire cancer research technology provider and portfolio company, cancer research technology provider Flatiron Health, paying $1.9bn for the remainder of the company's shares. Roche already owned a 12.6% stake in Flatiron, meaning the acquisition valued the company at about $2.15bn.

Founded in 2012, Flatiron has developed electronic health record software configured for oncology research, as well as technology that can manage and develop cancer research data. It works with over 265 community cancer clinics and it offers access to more than two million active patient records to its users.

Nuechterlein manages Roche's Sfr500m ($530m) evergreen venture fund, which means it can reinvest in new deals the proceeds from exited portfolio companies, and so the sale of Flatiron could potentially boost its investment activity.

In 2017, Roche agreed to acquire US-based healthcare analytics provider Viewics for an undisclosed amount in November and Austria-based diabetes management technology developer MySugr for about €74m ($84m) in June. Aileron Therapeutics, a US-based cancer treatment developer, filed to raise up to $69m in its IPO in June.

AveXis, a US-based gene therapy technology developer, raised $95m for its initial public offering (IPO) on Nasdaq in February 2016. AveXis is working on gene therapy treatments for rare and life-threatening neurological genetic diseases. Its lead product candidate, AVXS-101, is in phase 1 clinical trials for spinal muscular atrophy, the leading genetic cause of infant death.

Roche's recent deals have included a $38.7m series D round for US-based medical device company MacuLogix in March this year. Last year, it was involved in a $59m series A round for US-based drug delivery platform developer Entrada Therapeutics, a €21.3m series B round for Spain-based orphan disease drug developer Minoryx Therapeutics, a $20m series C round for US-based biomolecular technology developer Biodesy, a $30m venture round for US-based endocrine disease drug developer Millendo Therapeutics and a $85m series C round for US-based vaccine developer SutroVax.

Before venturing at Roche, Nuechterlein worked in the company as an attorney for 10 years. She joined Roche from SangStat in Fremont, California, where she was general counsel. She began her career working at law firm Skadden Arps Slate Meagher & Flom in its mergers and acquisitions group. From there, she worked at Syntex/Roche in Palo Alto, California, focusing on mergers and acquisitions, research collaborations and licensing deals.

Richard Osborn TELUS VENTURES

In February 2016, Richard Osborn left health and wellness-focused investment fund RecapHealth Ventures for a managing partner role at Telus Ventures, the venturing unit of Canada-based telecoms firm Telus, replacing the unit's founder Mathew George.

Osborn had been managing director of RecapHealth Ventures since it was founded in 2010, before which he was a partner at private equity firm Second City Capital Partners.

And this has been an area he has helped Telus Ventures push into. Telus Ventures invests in six primary areas – healthcare IT, internet of things, big data, fintech, digital security and identity.

Osborn, who believes in social impact investing, told YouAreUNLTD in February this year: "Our thesis is that all good healthcare, now and in the future, is going to be a mix of in-person and technology-supported care. In-person care might occur in a hospital or a doctor's office, or increasingly it might be delivered at home. All of those groups are going to use technology to improve the diagnoses, the treatment, the follow-up, the care coordination and more."

For 2017's GCV Powerlist nomination, Darren Entwistle, president and CEO at Telus, said: "Telus Ventures has played a critical role in ensuring we embrace innovation opportunities that advance our country's digital economy and Telus's leading performance."

As an experienced venture investor, he has two of the most powerful attributes required – experience in deal-making across a wide sweep of disruptive technologies and a strong network. This has helped deliver exits, such as last year's sale of US-based cybersecurity technology provider Zenedge to Oracle for an undisclosed size.

Another portfolio company, data preparation and analytics provider Lavastorm, was acquired by US-based software company Infogix in March last year.

In 2018, Telus Ventures participated in 13 investments, with nine being new and four being follow-on investments. Since the unit's inception, it has been involved in 119 total investments – 69 new and 50 follow-on deals. The total amount of investments participated in has been C$41.5m ($31.6m) per financial year.

Under Osborn's leadership, Telus Ventures seeks partnerships actively with portfolio companies:

- Alithya – partner to assist in the IT development within Telus Health and the acquisition of non-core businesses from Telus.
- Get Real Health – partnership towards significant contract deals in Canadian provinces of Alberta, British Columbia, Saskatchewan and potentially other provinces for their province-wide PHR solutions, or condition-specific PHR.
- iStore – consultant to the Telus retail stores for Telus Retail 3.0 which drove a four-time increase in accessory sales in same-store sales.
- Moj.io – solution provider for in-car connectivity across Telus's more than 1,000 nation-wide retail stores.
- Skyroam – Telus was the sole provider of connectivity services for Skyroam through global carrier partnership across a network of more than 90 partners around the globe.
- Taulia – the company was the provider of dynamic discounting services which have generated over $8m in benefits to Telus and Taulia also recently won a competitive RFP for additional financial management services.
- Vigilent – the company's solution is deployed across 11 locations (Central Offices and International Data Centres) which has reduced cooling and electricity demand.
- Vox Mobile – provides mobile device management services, which are resold by Telus to its customers – medium-sized to large enterprise and Telus represents over 20% of the Vox's total revenue.
- Zenedge – a scenario in which Zenedge's solution was used internally by Telus to protect its tier-one sites, then Telus resold to it to customers and then invested in it.

Furthermore, Osborn sought to expand the venturing unit's connections inside and outside Telus through participating in venture capital-focused conferences and associations:

- BCtech Summit – speaking position.
- Canadian Financing Forum – speaking and host positions.
- Creative Destruction Labs – board position.
- Board member of Canadian Venture Capital Association (CVCA) and chairman of the Annual Conference in June 2019 in Vancouver.
- CVCA - Invest Canada – panel member.
- Canadian Innovation Exchange CVC – panel member and speaking engagement.
- Mars Resi – panel member.
- New Ventures BC – award presentation.
- Sinet Canada – panel member.
- Social Impact Documentary – panel member.
- Startup Week – panel member.
- Telus Ventures Summit – host, with CVC panels and speaking engagement.

In November last year, Telus Ventures also invested in Canada-based venture capital firm Panache Ventures' first fund with a C$50m ($37.8m) corpus.

Telus appears ubiquitous as a phone operator, alongside peers Bell Canada and Rogers, which has refocused its ventures activity back into Canada and effectively shuttered its Silicon Valley team under Paul Sestili, but, under Paul Lepage, former chairman of Telus Ventures who hired Osborn, Telus Health is a powerful provider of healthcare technology connecting doctors and healthcare practitioners to one another and to their patients.

From an impressive base, therefore, Osborn has quickly made his mark in a company that, almost uniquely among Canadian corporations, has taken venturing seriously.

Tony Palcheck ZEBRA VENTURES

Tony Palcheck, a managing director at Zebra Ventures, US-based data tracking technology producer Zebra Technologies' corporate venture capital vehicle, said he had been on this post for the past four years.

Being the only person on the Zebra Ventures team, Palcheck considered himself very much a leader: "I manage 11 portfolio companies. In 2018, I had three exits – two good ones – invested in two new companies, did two follow-on investments and returned five times more money to the company in 2018 than I invested. I would say it was a good year."

For example, US-based software video analytics technology provider Intellivision was acquired by smart connected security devices provider Nortek Security & Control in May 2018. In addition, GoCanvas, a US-based app development platform, obtained $150m in funding from investment firm K1 Investment Management in February this year, making K1 a majority stakeholder.

The new investments made last year were Tagnos, a US-based developer of automation technology for clinical healthcare logistics processes which raised $5m in March, and Plus One Robotics, a US-based developer of computer vision software for the robotics industry which closed an $8.3m series A round in November.

Anders Gustafsson, chief executive of Zebra Technologies, commended Palcheck's efforts and the corporate venturing unit: "I do not know anyone as passionate about corporate venture capital as Tony. He is a tremendous advocate for the industry and the function, as evidenced by his contributions inside Zebra, as well as his role as the chairman of the Illinois Venture Capital Association.

"In 2018, Tony did an outstanding job of managing our existing venture portfolio, as it relates to driving both strategic returns and financials returns for Zebra. He serves as a catalyst for innovation in our company, and his efforts and insights support our strategy and corporate development teams, as well as our sales personnel and ultimately our customers.

"Tony has developed and maintained a strong network among startups, co-investors and others in the industry, and enables Zebra to leverage their insights as we consider how Zebra can best serve our customers and deliver value in the future."

In 2018, Palcheck became the chairman of the Illinois Venture Capital Association, which represents the venture capital (VC) and private equity (PE) industries in the US state of Illinois. He explained: "In that role, I worked with our association partners to lobby our legislators to vote against a 'privilege tax' on VCs and PE employees, which would have done serious damage to the VC and PE industries in our state.

"We also convinced the state to allocate a certain portion of the state pension fund towards the VC and PE asset classes. This was a major win for the PE and VC community in our state, as well as for all tech entrepreneurs in our state. I also am attempting to pull together an Illinois Corporate Venture Capital group that includes Mondelēz Ventures, Allstate Venture, Tyson Ventures, ADM Ventures, US Cellular Ventures and Evolv Ventures – Kraft-Heinz Food's venture group –, so that we collectively have a greater voice in the association."

Palcheck is also an active mentor who provides industry insights to around 10 students per year from Kellogg School of Management's MBA program. "This is to introduce some very qualified students to the world of corporate venture capital. A few of these students have gone on to be part of the venture capital world, including Elana Lian at Intel Capital."

Focusing on the synergy between the parent company and the portfolio companies, Palcheck said: "Zebra was a major customer of one of my portfolio companies that was acquired, and Zebra is a major partner to one of my new investments. We have commercial agreements with three of the other companies in my portfolio.

"I regularly present to Zebra's largest customers and collaborate with them to identify great startups that will impact them, and us."

Palcheck concluded proudly: "We are a small fund, but I think we punch above our weight."

Jessica Peltz-Zatulove MDC VENTURES

Jessica Peltz-Zatulove has been a partner at MDC Ventures, marketing firm MDC Partners' corporate venture capital unit formerly known as KBS Ventures, since 2014.

Peltz-Zatulove considers MDC Ventures' numerous exits and commercial agreements have demonstrated the power of the unit which has successfully scaled ventures, as the value it provides to the parent organisation is immense.

MDC's chief financial officer, David Doft, praised both MDC Ventures and Peltz-Zatulove, saying: "Jessica has operationalised MDC Ventures to provide real strategic value to our investments, our business and our clients.

"Her efforts have put MDC Partners on the front lines with the innovations and technologies that can meaningfully improve performance for our client base, and she has served as a catalyst for innovation and experimentation in partnership with our broad network of advertising and marketing agencies."

In 2018, Peltz-Zatulove sourced three US-based investments:
- Seed round for Veritonic, a creator of an analytics platform that assesses the quality of audio input.
- Seed round for Gradient.io, a machine-learning platform that enhances brands' presence on e-commerce group Amazon's website.
- Post-seed for Perksy, a developer of an app-based market research service.

The unit co-invested last year with venture capital funds including Bain Capital, Founders Collective, Torch Capital, Flying Fish, Pioneer Square Labs, Newark Venture Partners, Kiwi Ventures and others.

Peltz-Zatulove helped facilitate and close the acquisition of portfolio company Roost, a smart home device producer, to Bounce Exchange, an advertising technology company backed by digital media holding company Trigger Media, and a community merger for RLY, a provider of video and photo looping social networking app, to Trash, a self-editing video app provider. Meanwhile, portfolio company Adaptly, a social media ad-buying company, was acquired by Ireland-headquartered professional services company Accenture.

MDC Ventures actively invests in data and analytics, machine learning and artificial intelligence, commerce, audio, voice, content and martech sectors. Peltz-Zatulove scaled the corporate advisory board to 18 agencies within its holding company, with more than 100 employees participating in ventures initiatives, helping with due diligence, pilot tests and other duties.

She also brokered commercial arrangements for portfolio companies, for example:
- Gradient and MDC's digital media marketing agency Unique Influence for skin health products supplier Proactiv.
- Perksy and MDC's digital media agency Assembly for Nickelodeon, a children's TV entertainment branch of media group Viacom.
- Online content licensing platform provider Catch & Release and MDC's marketing and advertising agency Doner.
- Audio input quality assessment analytics platform creator Veritonic and MDC's marketing and advertising agency Forsman & Bodenfors for meats, cheeses and condiments supplier Boar's Head.

Furthermore, Peltz-Zatulove expanded proprietary educational initiatives for the advertising industry:
- Collision Conversation dinner series.
- Immerse event series.
- Educational webinars on emerging trends in martech, highlighting portfolio companies.

Recognised by Forbes as one of the seven women leaders in CVC, Peltz-Zatulove contributed an opinion editorial piece on smart speaker market on Adweek, comparing and contrasting Google and Amazon's respective smart devices. She was interviewed by Velocitize on martech and she moderated a MediaPost discussion on

D2C (direct-to-consumer) disrupting consumer packaged goods.

Peltz-Zatulove has also been involved actively in promoting gender diversity in the venture capital community:

- Running the Women in VC group in New York City – with 300 women.
- Creating and managing the Global Women in VC directory, which now includes more than 800 women across 500 funds in a score of countries.
- Mentoring at Built by Girls, guiding promising young women with interest in tech-related fields.

Ulrich Quay BMW I VENTURES

Ulrich Quay, managing partner of Germany-based car maker BMW's newly-independent BMW i Ventures corporate venturing unit, has had a busy few years.

Before setting up BMW i Ventures in 2011, Quay was senior legal counsel for mergers, acquisitions and joint ventures at BMW, having joined its law department in 2000 after being a top-decile student at University of Freiburg.

BMW i Ventures, which added Marcus Behrendt as CEO in August last year after an internal move from vice-president at the car maker, has invested in 39 companies since inception, investing a total of $178.6m in sectors across artificial intelligence (AI), mobility, e-mobility infrastructure, connected car, e-commerce platforms, autonomous vehicles, car technology, transportation, cybersecurity and industry 4.0.

In 2016, it raised a €500m ($550m) fund from BMW as a sole limited partner on the understanding BMW i Ventures had full autonomy over investment decisions, according to Quay.

In an interview with GCV held in February this year, Quay said BMW was the sole backer, but the fund was a distinct unit, not working off the balance sheet. This meant Quay could pursue purely financial deals, but not solely strategic deals. He said the fund's financial goals were "on par with the top VCs in the valley" with the fund acting like a nimble investor.

Its deals so far this year have included BMW i Ventures leading a $40m series C round for US-based child transportation service provider Zūm, participating in a $22m series A round for US-based autonomous shuttle transport provider May Mobility, both in February, and a $21m series B round for US-based roadside assistance provider Urgent.ly in January.

In autumn and winter of 2018, the unit partook in a $200m series D round for UK-based AI chip producer Graphcore in December, a $240m series H round for US-based electric vehicle charging network operator ChargePoint in November and a $140m series D round for US-based online vehicle sales service provider Shift Technologies in September.

The fund has also seen money flow back in with exits totalling $4.5m, including Embark acquired by Apple in 2013, Humin acquired by Tinder in 2016, and, both from last year, Stratim (formerly known as Zirx) acquired by KAR Auction Services and Skurt acquired by Fair.

The latest exit was carried out last summer, with UK-based electric vehicle charging points network operator Chargemaster being acquired by petroleum supplier BP for an undisclosed amount.

In addition, in January last year, BMW acquired US-based parking space booking service and portfolio company Parkmobile for an undisclosed amount after I Ventures invested an undisclosed amount in 2014, the year after the company raised $6.3m from BCD Holdings, Bluefield Investments and Fontinalis Partners, the venture capital firm co-founded by motoring corporate Ford's executive chairman, Bill Ford.

Parkmobile's platform enables motorists to hire car parking bays through a mobile app which has more than 8 million registered users. It connects with a number displayed near the space and can collect payment using online mechanisms such as Visa Checkout or PayPal.

Quan affirmed that "probably one-third of the portfolio has very close relationships with BMW; one recently received an $80m order".

Like independent VC funds, this one, based in Luxembourg, has a performance pay scheme – called carried interest – for principals and partners. The team has grown from three in 2015 to 12 at the beginning of 2019. The unit promoted Kasper Sage to partner in the wake of his Rising Star recognition by GCV in January, Baris Guzel was also promoted to principal in the same month. Quay said two additional vacancies for principal and analyst were being filled as of March.

Tom Rodgers MCKESSON VENTURES

Tom Rodgers has been a senior vice-president and managing director at McKesson Ventures, the corporate venturing unit of US-based healthcare provider McKesson, since its launch in 2014.

John Hammergren, McKesson's chairman and CEO, said in 2014: "McKesson Ventures will help us support the development and commercialisation of innovations taking place across healthcare. By investing and partnering entrepreneurs and other investors that can bring new approaches to the challenges our customers are facing, we will accelerate the innovation cycle and further strengthen the value we provide to industry stakeholders across all segments."

And the unit under Rodgers's leadership has certainly met the expectations.

The biggest investment in which McKesson Ventures was involved was a $1.21bn series B round for US-based cancer test developer Grail in November 2017, with the oncology testing technology developer spun off from genomics technology producer Illumina, which raised $300m in May 2018, bringing its total funding to about $1.65bn.

However, McKesson Ventures has usually focused on smaller rounds. This year, it participated in a $63.4m series B round for US-based medical analytics technology developer Aetion, taking its total funding to $77m.

In 2018, McKesson Ventures contributed to a $32.5m round for US-based e-commerce company Pharmapacks in June and a $21m series B round for US-based cancer care software provider Oncology Analytics in November. The unit also co-led a $50m funding round in US-based healthcare concierge platform Accolade in March.

While in 2017, it led US-based prescription auditing service provider Truveris's $25m series D round in September.

In 2018, McKesson Ventures participated in six new investments, resulting in 13 investment rounds of $40m in total.

Exits have also emerged, with $36m of realised returns:

- US-based digital respiratory therapeutics developer Propeller Health was acquired in January this year by connected medical devices provider ResMed for $225m.
- US-based life sciences analytics software developer Shyft, which counts the unit as an investor in its $20m series B round, was acquired by medical research technology provider Medidata for $195m in July 2018.
- US-based virtual clinic developer Carena was acquired by telehealth services provider Avizia for an undisclosed sum in October 2017.

Given such activity it has been little surprise Rodgers has added to his team with McKesson Ventures, hiring in 2017 Carrie Hurwitz Williams as principal – who was named GCV Rising Star in 2018 – and Irem Mertol in 2017 as a director. Anahita Nakhjiri joined in February 2018 as a senior associate and Mark Padilla was appointed chief counsel for the unit in March 2018.

More than a decade ago, Rodgers himself was vice-president of corporate strategy and business development for McKesson before joining venture capital firm Advanced Technology Ventures in 2004 where he was a partner for nearly eight years. He then had a two-and-a-half-year stint as director of strategic investments at healthcare technology provider Cambia Health Solutions before rejoining McKesson.

Rodgers holds a bachelor's degree in history and sociology of science as well as chemistry from University of Pennsylvania and an MBA from the same university's Wharton School.

Erik Ross NATIONWIDE INSURANCE

Erik Ross has been head of Nationwide Ventures, the corporate venturing subsidiary of insurance firm Nationwide, since he founded the unit in early 2016.

In August 2017, Nationwide pledged to invest more than $100m in startups through Nationwide Ventures.

Terrance Williams, chief marketing officer of Nationwide, was appointed president of emerging businesses and oversees Nationwide's efforts in funding companies developing technology or services that cover insurance and financial transactions, as well as data protection, retirement-age living and protection for customers in the mobility space.

J. Scott Sanchez, president of innovation at payment technology provider First Data, joined Nationwide in September 2017 as chief innovation officer and reports to Williams.

At that time, Nationwide Ventures had backed six companies mostly through investments, which included online investment platform Blooom and online or mobile insurance providers Next, Insurify and Sure.

Nationwide also launched a business incubator dubbed Refinery 191 that partners startups, universities and other corporates to develop new technology. In addition, the company is among the limited partners for insurance-focused venture capital firm Rev1 Ventures' first fund.

Steve Rasmussen, Nationwide's chief executive, said at the time of the fund increase:

"Nationwide's core mission is to deliver value for our members by protecting what's important to them.

"This organisational change allows us to focus on emerging businesses and invest in startups that align to that mission. At the same time, we want to anticipate the future needs of our members and improve current processes and offerings to remain best in class."

For last year's annual survey, Ross said cybersecurity, autonomous tech, machine learning and artificial intelligence were of particular importance.

Evidencing this, the unit participated in 2018 in a $12m series E round for US-based business finance provider BlueVine in August, a $83m series B round for US-based online insurance portal Next Insurance in July and a venture round of undisclosed sum for US-based machine learning software developer Betterview in May. Nationwide first contributed to a $29m series A round for Next Insurance in May 2017.

This year, the unit took part in a $5.2m series A round for US-based core insurance functions software platform creator Socotra.

Nationwide has also been involved in corporate acquisitions, for example, in January this year, it acquired underwriting services provider E-Risk Services for an undisclosed amount to improve its wholesale distribution.

Before joining Nationwide in 2014 as an associate vice-president of innovation, Ross had been chief digital officer at the US state of North Carolina for nearly two years, after a one-year stint as chief strategy officer at iCache in 2012.

Before that, Ross had spent five years at Bank of America, holding different senior vice-president roles in areas including innovation and research and development.

Ross holds a bachelor's degree in business administration from Bloomsburg University of Pennsylvania and an MBA with strategy and business-to-business marketing concentrations from Penn State University.

Harshul Sanghi AMERICAN EXPRESS VENTURES

Harshul Sanghi, formerly head of mobile device maker Motorola Mobility's corporate venturing unit Motorola Mobility Ventures, joined US-based credit card company American Express (Amex)'s corporate venturing arm Amex Ventures as head nearly eight years ago.

Sanghi, managing partner of the unit since August 2011, said: "Amex Ventures was started with one mission – to drive innovation within American Express by investing and partnering startups around the world. It is all about creating an ecosystem. You need entrepreneurs who believe they can change the world with their ideas. You need venture capitalists and advisers who can help fund the idea, and you need customers to validate the idea."

Steve Squeri, chairman and chief executive of Amex, added: "You cannot win without an external perspective. You need to understand what is going on in the marketplace. Amex Ventures gives us an opportunity to learn and get that external perspective."

Amex Ventures plays a central role in driving innovation for American Express. In 2018, the unit grew its relationships with portfolio companies which are helping Amex become more essential in customers' digital lives, build on its leadership position in commercial payments and support other key strategic initiatives.

Amex Ventures has invested in over 50 startups since its formation in 2011. Its portfolio, which continued to expand in 2018, today includes more than 40 active investments. Since the start of 2018, the unit announced 10 new additions to its portfolio:

- US-based financial service platform operator Albert.
- Israel-based behavioural biometrics technology developer BioCatch.
- US-based online mortgage platform operator Better Mortgage.
- US-based application programming interface integration platform Cloud Elements.
- US-based consumer finance platform developer Divido.
- US-based consumer recommendation platform developer Even Financial.
- Israel-based fraud detection services provider EverCompliant.
- US-based ticket rebooking application provider Freebird.
- US-based vehicle-sharing platform Turo.
- Mexico-based small and medium-sized enterprises-oriented financing platform operator Visor.

Amex made its second acquisition of an Amex Ventures portfolio company in 2018, buying Mezi, a personal travel assistant using artificial intelligence and human expertise to help consumers plan and book trips. The first acquisition of a portfolio company occurred in 2016 with American Express' purchase of InAuth, a mobile device authentication company.

Amex Ventures invests in startups that can foster and enhance innovation across its parent organisation. The unit helps build partnerships between these startups and Amex. Two-thirds of its portfolio companies today have commercial partnerships with Amex's business units.

Collaboration with portfolio companies include:

- In the US, Amex is applying BioCatch's technology to help detect fraud in its online application process for consumers.
- Last year, Amex rolled out one of the first applications of a blockchain technology for a US-based financial services loyalty program called Flexible Rewards. Amex first piloted this capability with its portfolio company, US-based mobile commerce platform Boxed.com.
- Amex and US-based business payments software provider Bill.com announced a new offering, American Express Vendor Pay by Bill.com, which couples automating accounts payable process with the ability for businesses to pay vendors with their American Express Business or Corporate Card.

The Amex Ventures team also partnered American Express' Global Commercial Services business unit to create Business Essentials, a unique limited-time program from Amex that was made available in January 2019. Through Business Essentials, a small number of American Express Business and Corporate customers have been invited to receive access to a curated group of cloud-based solutions, including its portfolio company US-based e-commerce software provider BigCommerce, to help run their businesses.

With the growth of Amex Ventures' portfolio, it has added six new members to its team since the start of 2018.

Sanghi is a veteran venture capitalist with more than 25 years of operating experience and a track record in delivering financial returns and strategic value. For his 2014

Powerlist award, Sanghi said he helped establish Motorola Ventures, after the phone equipment provider's purchase of his previous employer, Ucentric Systems, as the "go-to standard for corporate venturing".

Motorola Ventures was subsequently divided into Motorola Mobility Ventures and Motorola Solutions Ventures, mirroring the parent company's split, with Sanghi becoming head of Motorola Mobility Ventures but leaving before search engine Google's purchase of the parent business in 2014.

Brian Schettler BOEING HORIZONX VENTURES

Brian Schettler is managing director of Boeing HorizonX Ventures, US-based aerospace firm Boeing's corporate venture capital unit launched in April 2017 which invests in innovative aerospace technologies, business models and manufacturing processes.

Schettler reports to HorizonX vice-president Steve Nordlund, formerly vice-president of corporate strategy for Boeing Defense, Space and Security, the unit has screened more than 2,000 companies to date, and closed about 20 investments by the end of 2018.

The unit's first two investments in hybrid electric aircraft producer Zunum Aero and augmented reality technology developer Upskill were announced simultaneously with the fund's launch and were quickly followed by cognitive security analytics specialist group SparkCognition and C360 Technology, which manufactures 360-degree video camera systems.

In late 2017, HorizonX was also the lead investor in the first funding round of US-based startup Near Earth Autonomy, which develops autonomous flight technology, and in the seed round of aluminium alloys maker Gamma Alloys.

Last year's deals included Australia-based nanosatellite technology developer Myriota which closed a $15m series A round in March and UK-based propulsion system developer Reaction Engines which raised $37.3m in April.

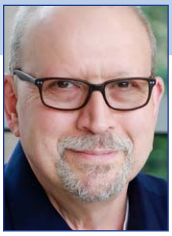
The unit also led a $16m series A round for US-based unmanned aerial vehicles-powered delivery service provider Matternet in June, a $10m series B round for US-based optical data transmission technology developer BridgeSat in September and a $3m funding round for US-based spacecraft propulsion technology developer Accion Systems in October.

The most recent deal HorizonX led was a $14m series A round in January for UK-based satellite antenna technology developer Isotropic Systems which agreed to collaborate with HorizonX's other portfolio companies Myriota, BridgeSat and Accion Systems, all of which focus on space and satellite technologies, to develop its technology post-investment.

Schettler has more than 17 years of experience in aerospace, technology, and defence companies in areas of corporate and business strategy, mergers and acquisitions, business development, and product portfolio management. Most recently at Boeing, he was senior strategist for Boeing Military Aircraft, where he led mergers and acquisitions, business strategy, and partnership development in Silicon Valley and beyond. He also served as a strategist for Phantom Works, where he partnered with Boeing Research & Technology to build development strategies for new technologies and products while also building product and market strategies for new platforms and concepts.

Outside Boeing, Schettler has experience leading global companies in strategy and development. He spent three years as vice-president of corporate strategy at Cobham, a UK-based technology company, where he led corporate and business strategy development, including the evaluation and prioritisation of private venture investment across its diversified product lines. He spent another two years at ATK and was responsible for corporate strategy and portfolio development. Finally, Schettler led strategy and program operations for the Space Systems Division of Northrop Grumman, managing their technology portfolio and investments.

Schettler holds a Bachelor of Science in electrical engineering from Northwestern University and a Master of Business Administration from the University of Maryland. He has completed executive education courses at Northwestern's Kellogg School of Management and has certifications from the Swiss Federal Institute of Technology.



Reese Schroeder TYSON VENTURES

Reese Schroeder has been a managing director at Tyson Ventures, food producer Tyson Foods' corporate venture capital unit, since June 2017. A year later, he was put forward by his peers and included in GCV's Rising Stars roster and the Powerlist. He is a 16-year industry veteran in the corporate venturing realm.

Schroeder had been a managing director at Motorola Solutions Venture Capital, the corporate venturing arm of US-based communications equipment maker Motorola Solutions, for 13 years from 2004, and he was nominated to GCV's Powerlist from 2012 to 2014 then again from 2016 to 2017.

In 2016, he was bestowed the Lifetime Achievement Award by GCV because of "his outstanding, enduring success at the helm of Motorola Solutions Venture Capital, but also in recognition of his invaluable support of the wider venturing ecosystem".

After more than two decades with the Motorola corporation, Schroeder embarked on a new career path within the CVC industry, joining Tyson Ventures as a managing director, where he oversaw the unit's inception.

He said for the Rising Stars profile in 2018: "I was very happy in my role at Motorola, and I think they were still very happy with me. But the Tyson opportunity came along, and it was an honour for me to be part of the founding team of a corporate venture group. It was also an occasion to enter a totally different world, moving on from 20 years in the communications industry to foodtech, which I found very intriguing."

Tyson Ventures was set up by Tyson Foods in 2016 with an initial corpus of $150m to finance "companies developing breakthrough technologies, business models and products to sustainably feed a growing world population," the corporation pledged at the time.

Schroeder told GCV for his Powerlist nomination this year: "We have made seven investments since our charter was approved on October 9, 2017. Five of these investments are public and two are not yet."

Tyson Foods, in turn, seeks to implement solid strategic collaboration with Tyson Ventures' portfolio companies. For example, in August last year, Tyson implemented

Connect, a platform developed by food safety software developer FoodLogiQ. Tyson employs its manage and monitor features to enhance its supply chain and supplier management, as well as issue tracking and reporting.

FoodLogiQ was a deal led by this year's Rising Star Tom Mastrobuoni, chief financial officer at the unit, who was nominated by Schroeder last year.

Schroeder added that apart from the partnership with FoodLogiQ, others are under way.

Other portfolio companies of Tyson Ventures likewise have innovative food-related technologies, such as:
- Future Meat Technologies, Israel-based cell-based meat production system developer;
- Tovala, US-based smart oven producer;
- Beyond Meat, US-based vegetarian meat developer which filed late last year to go public on the Nasdaq and whose 6.6% stake is owned by Tyson Ventures;
- Memphis Meats, US-based animal cell-based cultured meat producer

Tyson Ventures is active in the foodtech conference scene, too. Schroeder explained: "We participated in a number of conferences last year. This year, we will be sponsoring Future FoodTech in San Francisco and Seedcon at University of Chicago. I will also be speaking at The Hatchery in March, the new food accelerator and meeting place in Chicago."

Mihir Shah and **Yishai Lerner** JLL SPARK

Mihir Shah and Yishai Lerner, co-chief executives, are on a mission to transform the real estate industry through technology-based innovation. They lead the $100m JLL Spark Global Venture Fund, the corporate venturing representative of real estate developer and property manager JLL. It has made early-stage property technology investments since its launch in June 2018, evidenced by its first two investments made in real estate technology-focused accelerator program Metaprop and real estate technology-focused late-stage investor Navitas Capital.

Shah said: "2018 was a landmark year for JLL Spark. We launched the $100m global venture fund and invested in 10 proptech startups serving all facets of the commercial real estate lifecycle. We are looking forward to seeing what the coming year has in store as we continue to open doors with JLL businesses and clients for our existing portfolio, while making new investments in promising technology startups in America, Europe, the Middle East and Africa (Emea), and beyond."

JLL Spark said in a statement: "While technology has transformed many traditional industries across the business world, the real estate industry has not been as quick to evolve. However, that is changing. Investments in real estate technology companies grew 25% in 2017 to $3.4bn [according to CB Insights], and while many entrepreneurs are trying to build proptech companies, distribution remains a challenge along with long sales and deployment cycles.

"Enter JLL Spark, a division of JLL. Most corporate 'innovation' or venture arms lack the ability to achieve results at speed due to required adherence to standard corporate process. However, JLL has structured JLL Spark to operate independently and without typical constraints, providing the nimbleness of a startup backed by JLL's expertise and resources.

"The JLL Spark entity complements JLL, allowing JLL's core business to be more productive and drive competitive advantage. Led by Mihir and Yishai, who have successful track records building and investing in tech companies, JLL Spark's strategic proptech investments offer JLL the ability to provide innovative products to real estate owners and operators."

After Shah and Lerner launched JLL Spark's Global Venture Fund, which plans to finance companies focused on technologies from real estate development and management to leasing and investing while enhancing the experience of those who occupy it. The fund has also pledged to help entrepreneurs and their companies by connecting them with JLL's business lines and clients for insightful feedback and distribution of their products. The new fund focuses on seed and series A investments, as well as select later-stage rounds.

Having been entrepreneurs themselves, Mihir and Yishai know firsthand how difficult it can be to bring a new product to market, especially in an industry that has been slow to adopt new technology. Therefore, their goal is to partner entrepreneurs and help them tap into the resources of JLL's business units so they can succeed in rapidly growing their companies.

JLL Spark recently announced that it has selected UK-based proptech-focused platform Concrete VC Proptech as its investment adviser in Emea to help expand its reach and make strategic proptech investments in Europe especially. While the bulk of investments to date have been in the US, one is based in the UK and another in Israel, and it plans to make more investments in Emea and Asia-Pacific over the next year.

Under Mihir's and Yishai's leadership, JLL Spark has made 10 strategic investments since the launch of their Global Venture Fund. Public deals in which JLL Spark was involved last year, with cheque sizes from $300,000 to several million dollars, included a $18m series A round for Israel-based real estate investment technology developer Skyline.ai in August and a $1.5m series A round for US-based real estate-focused sensor-as-a-service platform provider VergeSense in October.

Its activities were particularly busy in September, having invested in a $6.6m seed round for tenant experience platform provider HqO, an $8m series A round for property investment management platform creator Dealpath, an extension for a $30m series B round for real estate-focused project management platform Honest Buildings – making its total funding $50m – and a $2.8m seed and series A stages for trade contractor-focused insurance service provider Jones, all of which are based in the US. In January this year, JLL Spark also funded UK-based flexible office space platform operator Hubble in a £4m ($5.3m) series A round.

As heads of the fund, Shah and Lerner bring complementary strengths. Shah was co-founder and CEO of mobile and online recommendation service provider Mob.ly (formerly Goodrec) and knew David Gerster, now a vice-president at JLL Spark, as a product leader at internet company Yahoo and as a senior executive at daily deals platform Groupon. Lerner was also behind the sale of Mob.ly to Groupon after an early career building artificial intelligence for video games at Activision Studios. Both are also angel investors and have advised many startups, including Uber and Boom Supersonic.

They said for their Rising Stars profile this year: "We arrived at JLL about a year before launching the fund, with a broad mandate from CEO Christian Ulbrich to help the company benefit from new and potentially disruptive advances in proptech. This led to us acquiring a small startup, Stessa, which helps residential landlords organise all the data necessary to track the performance of their properties. As we learned more about the proptech landscape, we started to realise just how massive the opportunity is, and that led to our current model of investing in proptech startups."

Shah and Lerner had a successful 2018, said JLL Spark, having grown JLL Spark and led the company through several strategic investment rounds. In January this year, Eric Wittman was hired as chief growth officer leading the growth team dedicated to portfolio company success with hands-on leadership, advice and direct business connections. JLL Spark hopes to see the continuing evolution of the space and continuing to invest in innovative real estate startups.

Ian Simmons MAGNA INTERNATIONAL

With C$54bn ($40bn) in revenues last year, Magna International, Canada-based automotive systems producer, is probably the largest company you are unfamiliar with – unless you are in the automotive industry. Its clients range from Aston Martin to Ford and just about everyone in between. Its product range is equally diverse, from electronics to chassis, drive trains and seating. The chances are that many – if not most – of the parts of the car you drive were made by Magna.

It manufactures at more than 348 manufacturing sites globally, employing 173,000 people. Ian Simmons, who began his automotive career as a mechanical engineer with Ford in the UK nearly 40 years ago, is charged with running Magna's "all-tech" venturing strategy, which is designed to keep it in the vanguard of automotive design and manufacturing. And his deals are starting to attract the right sort of attention to Magna.

In March 2018, Magna invested $200m in US-based ride-hailing service Lyft as part of a multi-year strategic collaboration deal.

Founded in 2012, Lyft established itself as the second largest on-demand ride platform in the US, behind Uber, and entered its first international market in Toronto, Canada. The Magna funding valued the company at $11.7bn, according to the Financial Times, and has been a successful financial return following Lyft's flotation at the end of March.

The partnership would involve the companies making joint investments in the development and manufacturing of autonomous driving systems. Lyft at the time was already working on and testing driverless car technology and has established a dedicated research centre in Silicon Valley.

Magna would bring its expertise on in-car systems, vehicular safety, driver assistance technology and manufacturing to the partnership while Lyft will contribute its existing technology and driver data. They also agreed to share intellectual property.

The investment brought Lyft's total funding to about $3.8bn, with other shareholders including carmakers General Motors and Jaguar Land Rover, which invested $500m and $25m respectively, and ride-hailing service Didi Chuxing.

Swamy Kotagiri, chief technology officer of Magna, of the deal said at the time: "There is a new mobility landscape emerging and partnerships like this put us at the forefront of this change.

"Lyft's leadership in ridesharing and Magna's automotive expertise makes this strategic partnership ideal to effect a positive change as a new transportation ecosystem unfolds."

A year after the investment, Lyft set the terms for an IPO that would allow Magna, along with co-investors Alphabet, Rakuten, GM, Jaguar Land Rover, Alibaba, Didi Chuxing and Icahn Enterprises to exit, valuing it at up to $22.9bn. The IPO was understood to involve almost 30.8 million shares issued on the Nasdaq Global Select Market priced at $62 to $68 each – the company would raise slightly over $1.9bn in funding if it floated at the foot of its range.

While not a financial-only investor, Magna has already had a positive exit. Israel-based connected automotive security software developer Argus Cyber Security, in November 2017 agreed to an acquisition by automotive components producer Continental.

Financial terms were not disclosed but local media reports last month suggested the deal would value Argus at about $400m having raised about $30m.

In April 2017, US-based automated car technology developer Peloton Technology raised $60m in its series B round including Magna and a host of other strategic and financial investors showing that while the portfolio company connects trucks, Magna led by Simmons in ventures for the past seven years is often the connective tissue between investors.

Simmons had previously been at various roles at Magna Steyr North America in Troy, Michigan since 2003 having joined the company after four years at Porsche.

Ruchita Sinha SANOFI VENTURES

Ruchita Sinha has been senior director of investments at France-based drugs maker Sanofi's corporate venturing unit located in Cambridge, in the US state of Massachusetts, since joining in November 2016. In this capacity, she heads the digital health investments for the unit.

Under her leadership, the unit participated last year in US-based ventures – a $65m series B round for immunotherapy developer Kymera Therapeutics in November, a $19m venture round for digital medicine developer Click Therapeutics in October, a $30m series C round for health behaviour tracking platform Evidation Health in August and a $55.3m series A round for precision medicine developer Expansion Therapeutics in January.

Sinha is currently on the boards of portfolio companies including blockchain-equipped healthcare management platform developer Curisium, rare infant diseases' medicines developer Inozyme Pharma and digital behavioural medicine service Omada Health, for which the unit provided funding in 2017 in $3.5m seed, $14m series A and $50m series C rounds, respectively.

The unit has had numerous successful exits to date, for example, cancer-focused, immune-based therapies developer Immune Design was acquired by pharmaceutical firm Merck & Co in February 2019 for $300m and neurodegenerative diseases-focused pharmaceutical company Lysosomal Therapeutics was acquired by pharmaceutical company Allergan in January 2017.

Meanwhile, some portfolio companies exited through an initial public offering (IPO), such as neurological disease treatment developer Ovid Therapeutics in May 2017 and immunotherapy developer Unum Therapeutics in March 2018, both having raised about $86m each for the corresponding IPO.

Sinha's best exit so far has seen Sanofi exit cancer treatment developer Impact Biomedicines, which was acquired by fellow pharmaceutical firm Celgene for $1.1bn up front but with $6bn more dependent on milestones.

Founded in 2016, Impact had acquired the development and commercialisation rights from Sanofi for Fedratinib, an oral small-molecule inhibitor of the JAK2 kinase enzyme, which addresses bone marrow disorders polycythemia vera and myelofibrosis, which in turn took an equity stake of undisclosed size in the company.

Sanofi had originally developed Fedratinib but its roll-out came to a halt in 2013 when the US Food and Drug Administration issued a clinical hold order. After acquiring the rights, Impact managed, however, to convince the regulator that the issues were solvable, and the hold was rescinded.

Before Sanofi Ventures, she had been a director from 2013 for almost four years at GE Ventures, industrial product and appliance manufacturer General Electric's corporate venturing unit, where her deals included board observer roles at non-invasive intracranial pressure monitoring devices developer HeadSense and senior care industry-focused communication platform developer CareMerge.

Previously she had been director for strategy, portfolio management and commercial operations at drugs peer Pfizer from 2010 for nearly three years, where she oversaw business development, strategic planning and portfolio management for therapeutic areas such as cardiovascular, diabetes and oncology.

Sinha holds a bachelor of science degree in biochemistry from Mount Holyoke College, a master of science in cellular and molecular biology and an MBA with a finance and entrepreneurship concentration from the University of Chicago Booth School of Business.

Anne Sissel BAXTER VENTURES

Anne Sissel, vice-president and head of Baxter Ventures, the corporate venturing unit of US-based healthcare company Baxter, saw two exits last summer for the unit. Neurological disorder therapy developer Aptinyx filed for a $102m initial public offering in May, while medical device maker TVA Medical, for which the unit led a $15m series C round in 2015, was sold to medical technology producer Becton Dickinson in July.

Set up in 2011 by healthcare group Baxter International with $200m, Baxter Ventures focuses on patient care companies with innovative technologies. Two of its most recent investments were a $132m series D round for medical device producer Outset Medical Outset Medical and a $10m series C round for medical device developer Prescient Surgical, both conducted last year.

Baxter Ventures' earlier investments include a $38m C round co-led with MVM Life Science for biosensor system developer VitalConnect in November 2017 and a $15m series C round for medication tracking platform developer Kit Check in June 2016, with technologies and therapies to improve patient care globally and with a focus on therapeutic areas complementary to those of Baxter's hospital products and renal businesses.

Baxter has active engagement and partnerships with portfolio companies, although Sissel could not disclose them yet.

Sissel said: "At Baxter, we embrace innovation at every stage of development and recognise corporate venture serves a unique role in the process. Corporate venture investing allows us to partner with early-stage companies to share our knowledge and experience while learning from their novel technologies and approaches. We believe a strong corporate venture initiative leads to a more robust innovation strategy, as we aim to build market-leading technologies to better serve our patients."

Sissel was selected to publisher Crain's Top 40 Under 40 list in 2016. Other Baxter team member on the list was Tom Polen in 2008, now Becton Dickinson's president and chief operating officer. Before that, it was Rob Davis, now chief financial officer at US-based pharmaceutical company Merck & Co, and Harry Kraemer, former chief executive of Baxter and now a professor at Kellogg School of Management.

Baxter Ventures' members are no strangers to awards, however. Blake Arnold, then an associate director at the unit and now a director of corporate strategy at gene therapy technology developer AveXis, and Amy Kobe, a director at the unit and now also a vice-president at venture capital firm Baird Capital, were previous Rising Stars award winners in 2018 and 2017, respectively.

Sissel was previously on the founding and executive team as head of finance and business development for Veracyte, a life sciences company backed by Domain Associates, Kleiner Perkins Caufield & Byers, TPG and Versant Ventures and eventually listed on the Nasdaq stock exchange.

Before Veracyte, she worked in the investment banking division of Goldman Sachs and completed more than $200bn in transactions for clients in the healthcare industry, including Johnson & Johnson, Genentech and Qiagen.

Sissel holds an MBA from University of Pennsylvania's Wharton School and a bachelor of science degree in finance from Indiana University. She is also a chartered financial analyst.

Dave Smith CORNING

Dave Smith has been head of corporate venture capital and director of mergers and acquisitions at ceramics and glass product maker Corning since he joined in April 2017.

One of the most prominent deals Corning has done to date is for US-based smart glass producer View, known as Soladigm when founded in 2007, for which it has supplied funds on several occasions.

As early as 2013, Corning participated in a $60m series E round in June for View and the two entered a strategic development agreement to advance View's Dynamic Glass. The series E funding was used to support the development of dynamic glass technologies for exterior architectural applications.

Dynamic Glass, which at the time had been installed in more than 100 buildings across the US, automatically transitions between clear and variable tint in response to environmental conditions and user preferences.

In August 2015, Corning invested an additional $150m in View after the company had reportedly raised $100m from unnamed investors five months earlier. The capital helped expand View's manufacturing capabilities and general company growth.

View subsequently raised more funding in 2017 and 2018 backed by TIAA Investments, an affiliate of asset manager Nuveen, investment manager BlackRock and telecoms and internet group SoftBank's Vision Fund, increasing its overall debt and equity financing to more than $1.8bn in November 2018, and the company said its Dynamic Glass had been installed in 35 million square feet of buildings.

Other past deals included a $34m series B round In March 2014 led by Corning for US-based medical device maker NinePoint Medical, which develops medical devices that enable high-resolution in-vivo imaging to improve patient care. Proceeds from the financing was used to support the continuous commercial launch of the NvisionVLE Imaging System in the US, as well as development of the company's product offering.

When US-based electronic switch developer Menlo Micro was spun out of conglomerate General Electric (GE) in December 2016, Corning took part in an $18.7m in a funding round which featured other investors including GE's corporate venturing arm GE Ventures.

Apart from investing in companies, Corning also supplied cash for US-based venture capital firm Phoenix Venture Partners in March 2017. Its second fund's limited partners included Corning, pharmaceutical firm Pfizer and manufacturing conglomerate 3M. Chemical producers Eastman Chemical, Solvay and Showa Denko, and manufacturing company WL Gore & Associates also contributed to PVP II fund, the size of which has not been disclosed. Its other LPs include undisclosed family offices and financial institutions.

After Smith came on board, Corning acquired small cell multi-access systems developer SpiderCloud Wireless for an undisclosed amount in July 2017 and of US-headquartered technology platforms developer 3M's communication markets division for $990m in December 2017.

Since May 2017, Smith has been a member of US-based lighting solutions provider Versalume's board of directors. The company holds the exclusive right to distribute Corning's light-diffusing fibre technology called Fibrance.

Before joining Corning, Smith had been a senior director of mergers and acquisitions at e-commerce company eBay's global corporate development group for a year.

Smith holds a bachelor's degree in economics from University of North Carolina at Chapel Hill and an MBA from University's Pennsylvania's Wharton School.

Rajesh Swaminathan APPLIED VENTURES

Rajesh Swaminathan was made head of chip and display designer Applied Materials' Applied Ventures unit in June last year upon former head Tony Chao's departure. Since that time, he and his team have doubled the pace of the unit's investments. In addition, the unit led or co-led five out of the 11 deals approved in 2018.

Applied Ventures counts more than 80 deeptech companies in its portfolio and has deployed approximately $300m in capital so far. The unit invests $50m per year in different stages.

Observing the "valley of death" for deeptech startups due to lack of semiconductor fab access in the US and limited access in Asia, Swaminathan closely worked Applied leadership team and the state of New York in the establishment of an $850m Materials Engineering Technology Accelerator (Meta centre) in State University of New York at Albany.

Omkaram "Om" Nalamasu, senior vice-president and chief technical officer of Applied Materials and president of Applied Ventures said: "For over a decade, Applied Ventures has been investing in and collaborating with startups to transform disruptive possibilities into reality by leveraging the materials engineering expertise of Applied Materials.

"Rajesh has played a critical role in identifying and accelerating venture investments across many inflexions, where our leadership in materials engineering is enabling new growth markets like AI (artificial intelligence), AR/VR (augmented and virtual reality), life sciences, 3D printing and batteries.

"With his passion to address a significant pain point for deeptech startups, Rajesh closely worked with executives from Applied Materials and the state of New York to enable the establishment of an $850m state-of-the-art semiconductor fab in upstate New York.

"I am proud of Rajesh and his Applied Ventures team's progress in enabling successful initiatives and partnerships with startups across the globe and look forward to many more accomplishments near-term."

Swaminathan added: "What attracted me to Applied Ventures is the incredible talent pool of Applied Materials that startups and our ventures team can tap into.

"Applied Materials enables scalable, high-performance devices for our partners by sharing our expertise across equipment, processes and new materials. This allows us to add significant value to companies without creating technology or business model or channel conflicts.

"We sincerely think of a win-win strategy in our strategic investments. We have co-invested with many top-tier deeptech CVCs and VCs and look forward to building a strong ecosystem of partners for our deeptech portfolio.

"Over the past many years, I have had the opportunity to identify and invest in over 16 companies, while also managing eight additional companies from or with other partners in the fund. In my current role, I look forward to supporting the success of our team across multiple inflexions and plan for the next growth phase of Applied Ventures."

Applied Ventures, whose assets under management (AUM) nears $300m, has conducted 80 deals to date. Swaminathan's personal AUM is $73m, which includes $56m directly invested by him and $17m inherited from other partners and currently managing – with that, he has invested in 17 companies and manages seven companies from the previous team, overseeing a total of 24 investments.

Applied Ventures has invested in 13 countries and in seven sectors – semiconductor technology, display, AR/VR, autonomous vehicles, 3D printing, medical device and life sciences. The unit is stage-agnostic and invests from seed to series G in around 35 unique rounds.

In the last quarter of 2018, it co-led a $52m series B round for US-based magnetoresistive random access memory technology developer Spin Memory in November and participated in a $25m series B round for US-based advanced computer processor developer Syntiant in October.

The unit has had 35 successful exits so far, of which five were overseen by Swaminathan. He said: "The companies that I invested in and supported were acquired [or filed initial public offering] for a total transaction value and a market cap of around $433m – this is not just Applied's return, it is the overall market cap and acquisition value of the companies I was involved in."

The unit acquired two portfolio companies in recent years and has "strong engagement and operating rhythm between our business units (BUs), Applied Ventures and our portfolio companies. Applied is a strategic investor and therefore about 70% of our recent investments have joint development area and collaborations with our BUs, enabling strong technical and product development support for startups from Applied Materials", Swaminathan said.

Swaminathan developed Applied's roadmaps in new inflexions, driving venture investments in companies in complementary metal-oxide-semiconductor image sensors, AR/VR, additive manufacturing, medical devices, life sciences and autonomous vehicles.

The unit, which has expanded by 25% within the past year, has hired new team members including investment director Frank Lee in October and investment manager Rajesh Ramanujam in January. Michael Stewart, former investment principal, was promoted to investment director upon receiving his GCV Rising Stars award in January.

Swaminathan said he was proud of the diverse and highly talented team he worked with. "Frank Lee joined us after 20 years of venture capital experience from UMC Capital, where he led the venture arm's US operations, and Vertex Ventures in Singapore. Frank is driving our display-related investments and is also driving some major initiatives – soon to be announced – in Asia.

"Michael Stewart, an entrepreneur in the past, brings tremendous experience from Intel, Applied Materials' semi and solar groups, and is now driving our AI investment strategy.

"Rajesh Ramanujam was an Applied veteran before he left for a two-year stint at investment banks and another couple of years at Lam Capital. He is driving our investments across semiconductors, additive manufacturing and other inflexions.

"Jackie Kossmann brings a lot of experience from her entrepreneurship and generalist VC experience, and currently driving our AR/VR and other semiconductor investments. Juan Cueva brings tremendous entrepreneurship experience and is driving our life sciences investment strategy. Most recently, Saewook Lee joined us from 3M Ventures, and will be driving new market inflexions with our roll-to-roll team among others, and also managing our Korea Innovation fund."

Regarding this year's outlook, Swaminathan added: "2019 is going to be a year of execution across many areas. We plan to offer key infrastructure and expertise to new and existing portfolio companies through our new Meta centre in New York. We also plan to pursue key investment opportunities in Asia, Europe and Israel. We plan to engage with a diverse set of partners – VCs, incubators, law firms – to build a robust ecosystem and infrastructure for financing and supporting deeptech startups."

Prior to joining Applied Materials in 2009, Swaminathan had spent two decades assisting and investing in disruptive startups. Over the past decade, he led Applied Ventures' investment thesis and investments across many deeptech inflexions including advanced displays, batteries, AR/VR, Lidar image sensing, 3D printing, medical devices and life sciences.

Before that, Swaminathan worked at hedge fund Third Point developing the firm's venture and public investment strategy in cleantech and semiconductors. The role had followed a brief stint at Deutsche Bank's investment banking group in the renewable energy team, during which time he pursued his MBA at Harvard Business School as part of a shift into finance after five years leading Lucent Technologies' engagement with startups across optics and radio frequency devices.

He started his career at Nokia Bell Labs, where he held business development positions, driving the due diligence process and successful partnerships in several nanotechnologies, optical and III-V semiconductors startups.

Gen Tsuchikawa SONY INNOVATION FUND

Gen Tsuchikawa has been vice-president of corporate development at Japan-headquartered electronics producer Sony and chief investment manager at its corporate venturing unit Sony Innovation Fund (SIF) since August 2016.

Hiroki Totoki, representative corporate executive officer, senior executive vice-president and chief financial officer of Sony, said in his nomination of Tsuchikawa: "For the past 14 years, Gen has been relentlessly driving a wide range of strategic initiatives, spanning the whole spectrum of Sony's diverse business domains and across Sony's global worldwide footprint.

"As the head of Sony's corporate development, he led a large number of complex buy-side and sell-side transactions. Since establishing Sony Innovation Fund from the ground up in 2016, Gen's leadership has resulted in SIF investing in over 40 breakthrough startups. He and his global team continue to provide tremendous support to portfolio companies and instil a genuine open innovation momentum throughout the Sony group."

Tsuchikawa initially joined in 2004 as senior vice-president of corporate development and treasury for the US electronics operations.

Since July 2016, Austin Noronha has been the fund's US-based managing director. Noronha initially joined Sony at the end of 2001 as a managing director of its growth ventures and innovation group in San José, in the US state of California. In 2016, he helped restructure the CVC unit and relocated to the Silicon Valley.

SIF's team sources and invests in startups developing disruptive technologies and pursue strategic partnerships with them. Both strategic and financial returns are priorities of the fund. It focuses on investments in the US, the EU, Israel and Japan.

One of the unit's team members is this year's GCV Rising Star Ludovic Copéré, a managing director of the fund, who came from Sony's international offices spanning three continents in France, the UK, the US and Japan. Another managing director Joseph Tou also hailed from Sony's corporate development unit.

SIF focuses on seed, early and middle-stage companies. The unit's mission is to drive business creation, create a talented team, develop innovative and scalable technology and explore novel ecosystems on behalf of the broader Sony corporation.

The most recent deals include an $11m series A round for US-based vision technology developer Brodmann17 in March, a ¥140m ($1.3m) series A round for Japan-based insurance sales software developer Hokan in January and a $60m series B round for US-based mobility software developer RideCell in November.

In June last year, the fund participated in a series A round for US-based drone delivery service provider Matternet and a $18m series A round for Switzerland-based indoor drone technology developer Verity Studios.

Three months earlier, the fund funded US-based robotic locomotion technology developer Agility Robotics in an $8m series A round, and a month before that, it took part in the equity portion of the $41m equity and debt financing round for Japan-based digital asset management platform developer WealthNavi.

In the midst of its reorganisation in mid-2017, the fund invested an undisclosed amount in Japan-based cybersecurity startup Caulis and Japan-based electrostimulation device maker Happy Hacking Life.

Tsuchikawa has more than 30 years of investment and mergers and acquisitions (M&A) experience across industries including banking, wealth management and enterprise.

Before joining Sony, Tsuchikawa had been a director of investment banking at wealth management firm Merrill Lynch for five years covering M&A and technology media and telecoms.

Before that, he had served as a senior manager of the president's office at Industrial Bank of Japan for more than 15 years where he managed tier-one financing, set up joint ventures with financial services firm Nomura and started a loan syndication business.

Tsuchikawa holds a bachelor of law degree from Hitotsubashi University and an MBA at Stanford University's Graduate School of Business.

Jonathan Tudor CENTRICA

In September 2017, Jonathan Tudor left petroleum producer BP, where he was managing director of its BP Ventures unit, and accepted "an offer I could not refuse" to head a corporate venturing subsidiary of UK-listed energy utility Centrica.

Tudor, the winner of a Global Corporate Venturing Rising Stars award in 2016 and Powerlist 2018, had been venture director at lubricants provider and a division of BP Castrol's corporate venturing arm Castrol InnoVentures, before its reorganisation into BP Ventures in 2017.

Tudor had worked at Castrol and BP, where he had found ample support as a "self-confessed geek, who likes technology with the allure of making money in addition to shifting the corporate dial," since 2012.

Following three years at glass manufacturer Schott, Tudor's initial move into investing was as an investment director at government technology contractor Qinetiq's venture capital arm, Qinetiq Ventures, from 2002 to 2007, before its secondary buyout backed by Coller Capital led to the formation of CG Innovation Partners.

In addition to his core activities, Tudor is head of British Private Equity and Venture Capital Association's CVC committee, and wants to "share best practice on how to manage strategic measures, as well as work on training and the professionalisation" of the work done by corporate venturers.

Tudor brings a decade of venture experience to Centrica, where Sam Salisbury, GCV's Rising Star awardee in 2017, and Christophe Defert, awardee from 2017 to 2019, directors and co-heads of Centrica Innovations (CI), had scaled up a unique blend of corporate and impact venturing for the utility.

Centrica launched CI in January 2017 to invest £100m ($125m) in startups over the course of five years. The unit incorporated the £10m Ignite social impact fund it formed in 2014, and which won GCV's corporate impact venturing award in 2016.

Defert has spent seven years at Anglo-American energy utility Centrica after completing his MBA from Wharton business school in 2010. His move into ventures in February 2017 from being chief of staff to the CEO of Centrica's US-based business, Direct Energy, came with a renewed push into corporate venture capital.

Salisbury and Defert were then joined by Jonathan Tudor from BP Ventures in October 2017.

As Iain Conn, Centrica's group chief executive, said for the Powerlist 2017 awards: "The launch of Centrica Innovations is an important step in identifying and responding to the changing needs of our customers. The new venture will ensure innovation is embedded across our business and will allow us to invest in the technologies that can support our customers into the future. We are already investing £1.2bn to 2020 in our connected home and distributed energy and power businesses, helping residential and business customers take control of their energy and save money."

In August last year, CI participated in a $18m series B round led by Liberty Technology Venture Capital, a corporate venturing arm of mass media company Liberty Media, for US-based industrial cybersecurity technology developer Indegy.

Other deals CI was involved in include an $83m series C round for US-based electrical generator producer EtaGen in January 2018 and a round of undisclosed amount for US-based energy-focused blockchain service LO3 Energy.

In January this year, CI co-led a $12m funding round for Driivz, an Israel-based provider of electric vehicle (EV) charging technology. This deal was followed by a post on The Times of Israel by Tudor in March, where he said CI was looking to target the Israeli entrepreneurial ecosystem, covering energy, electrification of transport, data, blockchain and the internet of things.

Erica Whittaker UCB VENTURES

Erica Whittaker is head of Belgium-based biopharmaceutical company UCB's corporate venture capital subsidiary. UCB Ventures is a €150m ($168m) fund launched in 2017 that invests in early-stage startups developing therapeutics focused on immunological aspects of neurodegenerative and musculoskeletal disorders.

Jean-Christophe Tellier, UCB's chief executive, said: "At UCB, we connect science and patients to create innovative solutions addressing severe diseases in neurology, immuno-inflammation and bone. We established UCB Ventures to help us to learn about and from the most innovative science that has the potential to shape the future of medicine.

"Erica has been instrumental for establishing us in the world of CVC fast and effectively, as well as for nurturing our reputation as a strategic investor rooted in a deep scientific understanding and with a passion to maximise value for patients around the world."

Among the highlights from the past year Whittaker is most proud of is having built the strategic unit from scratch, "where none had existed previously within UCB, with two direct investments – series A in gene therapy (StrideBio), seed in cell therapy (Aetion) – and a well-regarded international team based in London, Brussels and Boston," she said.

Whittaker said the unit was an agile investor. "Our speed and decisiveness earned us a place in the series A investment syndicate for StrideBio, a next-generation gene therapy company based in Durham, North Carolina, for which I am a board director."

In 2019, the unit will invest in and contribute to more biotech startups developing technology that can have a significant impact on UCB's patients in the future. UCB Ventures' investment activities will be expanded in the process to include disruptive digital health technology developers.

The unit hired Alicia Irurzun-Lafitte in March this year as a partner based in Boston who will scout and conduct US-based deals in collaboration with UCB Ventures teams in Belgium and the UK. She had spent nearly three years at M Ventures, the corporate venture capital unit for Germany-based drugs producer Merck Group, helping to grow its healthcare-focused portfolio and in forming spinoff companies.

Other venture partners are Fiona de Hemptinne, former head of EU at UCB who joined the unit in March 2018, and Emmanuel Lacroix, former senior director of global business development of UCB who took up the unit's offer a year earlier.

Before joining UCB Ventures, Whittaker had spent seven years at UCB, having held three different roles. She was hired in 2010 as vice-president of strategy and partnering of NewMedicines, a drug discovery program through clinical proof of concept, where she instigated and ran the UCB-Harvard Research Alliance. In 2012, she ascended to member of NJB corporate strategy team which was vital in forming UCB's patient value strategy. She became head of market access and pricing in Europe, Middle East and Africa in 2013 and set up regional patient access and pricing strategies.

Concurrently, Whittaker has also chaired the European Federation of Pharmaceutical Industries Association's Healthcare Systems Working Group.

Before UCB, Erica had spent a decade as an equity analyst at financial services firm Merrill Lynch, where she led financial, valuation and commercial analyses for publicly listed biotech and pharmaceutical companies based in Europe.

Whittaker, who was selected to participate in the Women in Bio Boardroom Ready Program in 2018, holds a bachelor's degree in biology and comparative literature from Brown University, a PhD in molecular biochemistry from University of Edinburgh and an MBA from Heriot-Watt University Business School.

Ben Wright 3M VENTURES

Ben Wright has been director at 3M Ventures, the corporate venturing unit of US-headquartered technology platforms developer 3M, since April 2017.

Regarding 3M Ventures' performance this past year, Wright said: "I am proud of the 3M Ventures team accomplishments this year. We enacted a new investment strategy two years ago, which has led to significant results in the last year.

"In the past year, we have made nine investments in companies strategically aligned with 3M. These investments will not only help us learn about attractive adjacencies, but they also enable partnerships to accelerate 3M growth.

"Partnerships with our portfolio companies led to over $6m in 3M sales in the last year, which was a first for 3M Ventures. We are also pleased that we significantly improved financial performance over the past two years and now contribute material operating income to the corporation. We look forward to continuing the momentum in 2019."

3M's chief executive Mike Roman said: "3M Ventures is an important tool to gather strategic insights into new adjacencies and accelerate our priority growth platforms. Ben has done an outstanding job leading our ventures team, which includes implementing a new strategy that has enhanced the way we collaborate and create value with our portfolio companies. He is an outstanding representation of the best of 3M and corporate venturing."

From 3M Ventures' portfolio, US-based digital respiratory therapeutics developer Propeller Health was acquired in January this year by connected medical devices provider ResMed for $225m. Wright added that several portfolio companies under the unit's new investment strategy are potential acquisition candidates.

3M Ventures' current portfolio, which consists of investments across 3M's five business groups and 24 divisions, counts 35 deals totalling $100m of investments from series A to E. The unit has produced five exits during the past two years.

3M Ventures seeks collaboration with all portfolio companies to generate mutual value for the startups and 3M. Some notable examples of 2018 collaboration include:

- Partnership with US-based air quality sensor technology developer Airviz helped 3M launch the first Bluetooth connected Filtrete Air filter. The partnership helped 3M take the product from idea to launch in less than 18 months and added significant sales in 2019.
- Partnership with US-based digital dental treatment planning technology developer ULab Systems helped 3M's Oral Care division enhance its digital capabilities in custom orthodontics. This significantly accelerated 3M's commercialisation efforts.
- Partnership with US-based healthcare coordination platform developer Collective Medical and US-based comprehensive health-related data platform developer Health Catalyst to accelerate each companies' healthcare software sales growth. This resulted in significant program wins for both companies and 3M.

Being an active corporate venturer, Wright is a member of Intellectual Capital Exchange's corporate venturing group. He also leads the Men as Advocates group within 3M's Women's Leadership Forum. The latter, which is a diversity promotion platform at 3M Ventures, seeks to have men engaged in helping advance women within 3M.

Wright said: "I have used the forum to help accelerate our investments in the women and minority-owned businesses. As a result, we closed our first 'women-founded and led' tech investment this year. I am hoping this is the first of many, and proud that 3M is helping promote diversity in tech."

3M Ventures' team member Dan Ateya was named one of GCV's Rising Stars for this year, whom Wright nominated. 3M Ventures has expanded by 30% within the past year, growing from five to eight on the team, and had three promotions last year.

Wright initially joined 3M in 2010 and held several roles overseeing mergers and acquisitions and was involved in strategic planning, before he was promoted to director of the corporate venturing unit in 2017.

He holds a bachelor's in systems engineering from United States Military Academy and an MBA in finance and marketing from University of Minnesota's Carlson School of Management.

Lily Yeung MOLEX VENTURES

Lily Yeung has been vice-president at Molex Ventures, a subsidiary of manufacturing, chemicals and energy conglomerate Koch Industries, since December 2017. In this role, she sources and funds startups developing pharmatech, healthtech and medtech to bring forth innovative approaches to the healthcare industry by combining engineering, manufacturing, intellectual property and licensing strategies.

Molex Ventures invests on behalf of Molex, Koch's medical device subsidiary. Its incumbent chief executive, Joe Nelligan, defined Molex Ventures managed by Yeung by saying: "Our world is rapidly changing and to meet the needs of our customers and the marketplace we are driving transformative change by investing and partnering with innovative companies that offer new ideas, technologies and talent.

"Our venture program is one of the critical elements we need to support our solutions vision as we work to create the virtuous cycles of mutual benefit that will support our profitable growth in the future."

Before joining the corporate venturing unit which she helped build, Yeung had held several roles at its parent Molex. She first took a senior financial analyst role in 2007 before ascending to finance manager in 2009 and strategic business development manager in 2012. Eventually, she was promoted to corporate development director in 2014, a position she still holds concurrently with her corporate venturing duties.

When Yeung was appointed to her current role as vice-president at Molex Ventures in December 2017, she said: "Fostering the cross-pollination of ideas and capabilities can serve as a catalyst for transformational innovation.

"As a technology leader, Molex welcomes opportunities to forge strategic relationships with startups at key stages in their development.

"We are proactively seeking collaborations with startups that have developed a successful solution or concept and are ready to take their innovation and commercial growth to the next level."

Her pledge remains intact almost a year and a half later. Under Yeung's leadership, Molex Ventures currently has eight active portfolio companies with which the unit has strategic engagement:
- Pharmaceutical device developer Windgap Medical.
- Transportation software provider Excelfore.
- Datacentre connectivity infrastructure developer MultiPhy.
- Inhaled insulin products developer Dance Biopharm.
- Remote and wireless charging technology developer Ossia.
- Silicon photonics technology developer Elenion Technologies.
- Wireless power applications developer NuCurrent, which is exploring additional synergy.
- Fluid flow rates measurement technology developer Vasa Applied Technologies, which has been acquired by Molex but pending sales process to appropriate original equipment manufacturer.

Four exits:
- LED lighting developer Bridgelux.
- Telecoms, lifestyle, computing and automotive maker Hi-P.
- Autonomous vehicle technology developer Strobe, Molex Ventures retained its strategic engagement with acquired owner.
- Retail insights and engagement platform provider Xenio Systems.

Yeung said that Molex Ventures' total lifetime investment was under $50m, and "on average, we do between four and six transactions a year, including new ones and follow-on".

Yeung started her career as a senior accountant at accounting and business advisory firm Maner, Costerisan & Ellis in 2001 after she graduated from Michigan State University with a degree in accounting. She then enrolled in University of Phoenix in 2005 for her MBA studies, while she was a financial analyst at Sanford North America.

Michael Young CATERPILLAR VENTURES

Michael Young has been director of Caterpillar Ventures, corporate venturing subsidiary of construction equipment maker Caterpillar, since the unit's launch in June 2015.

Caterpillar Venture Capital helps entrepreneurs from across the globe to foster and grow their businesses with Caterpillar's industry knowledge, resources and dealer network. Caterpillar Ventures focuses on distributed power, analytics, robotics, additive manufacturing and business models.

Most recently, Caterpillar Venture Capital provided an undisclosed amount of funding for US-based electric vehicle and battery technology provider Fisker and a $20m series A round for US-based smart hardhat manufacturer Guardhat in October.

A month earlier, US-based workplace robotics technology provider Sarcos Robotics received $30m in a series B round from the unit, alongside other corporates power and industrial manufacturer General Electric, software provider Microsoft and oilfield services supplier Schlumberger.

In 2017, the unit supplied funds in an $18m round for Canada-based mining data platform creator MineSense Technologies in August, a $2m post-initial public offering equity for Australia-based robotic technology developer Fastbrick Robotics in July and an $11m series A round for US-based business planning software developer Riivos, at that time still known as Alight.

Apart from funding companies, Young has also overseen a mergers and acquisitions deal in May 2017 when Caterpillar acquired its portfolio company Yard Club, a US-based construction equipment management platform, for an undisclosed sum. Yard Club had previously received an undisclosed amount from Caterpillar in mid-2015 at which time it started collaborating with members in Caterpillar's dealer network.

Before joining the unit, Young had been a director of corporate strategy at the parent Caterpillar for three years where he was involved in the company's five-year strategic plan called 2020 Vision, which has included initiatives such as the seed-grow-harvest business model.

During that time, Young was also in charge of M&A where he carried out 12 transactions in both the US and Asia-Pacific.

He also served seven years as Caterpillar's China-based director of business development of Asia-Pacific, including joint venture and M&A, in Beijing.

Before that, he had been at computing technology manufacturer Dell from 1995 to 2001 holding multiple roles in the US, Singapore, Hong Kong and mainland China. In Singapore, he served as a transaction associate at its corporate venturing unit Dell Ventures, where he led investments in four enterprises in Asia-Pacific – three of which went public.

While in China and Hong Kong, Young was chief financial officer where he devised China sales and operations and handled Dell's investments, operations, employee benefits, banking and taxing with government authorities.

He started his career at chemicals manufacturer Ethyl's petroleum additive facility in the laboratory while he was completing his bachelor of science degree in accounting and finance at Southern Illinois University in Edwardsville. Then he held a number of accounting roles. He spent almost a decade in total at Ethyl.

Young also holds an MBA from St Louis University.