Global Corporate Venturing Leadership Society

Leif Capital

CORPORATE VENTURING AND THE FUTURE OF ADVANCED MOBILITY & ENERGY

Q2/2019

Boeing HorizonX

jetBlue technology ventures

Chevron

DENSO

bp

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Introduction

"I can't think of an industry that isn't preoccupied with the shifts to greater autonomy and electrification and that isn't focused on the challenges and benefits of far greater volumes of data, and of ensuring safety and of improving manufacturing processes," says Brian Schettler, Managing Director of Boeing HorizonX Ventures (see full interview from page 5).

The variety of industries participating through corporate venture capital in these shifts are captured in our 'spider diagrams' on pages 10 and 16 below showing some of the co-investors of Boeing and JetBlue Technology Ventures. The breadth of venture themes that a transportation specialist must now focus on is clear on page 18 which shows DENSO's investment areas and portfolio.

DENSO, the world's second largest supplier of automotive components and systems, has invested nearly $100 million over a four-year period in startup companies around the world.

"DENSO has been around for a long time and we want to be here for another 70+ years for our customers and employees," says Tony Cannestra, Director of Corporate Ventures at DENSO. *"To ensure that happens, we need great partners who are focused on developing technologies to radically advance our mode of transportation now and well into the future."*

DENSO now refers to itself as a "mobility supplier". In the future, quite how we get from A to B is very much up for grabs. But that we will still want to get from A to B is not in doubt. The world's largest participants in today's transport systems are using corporate venture capital to maintain their leadership in an unpredictable and unfolding future.

"When we think about our mandate, it is really about travel, transportation and hospitality," says Raj Singh, Managing Director of JetBlue Technology Ventures. *"It does not have to be airline or aviation-specific".* (See full interview from page 14)

I look forward to moderating a discussion on the mobility and energy transition with Brian, Tony, Raj and BP's David Gilmour at the GCV Symposium on May 22nd and 23rd. They'll be introducing companies from their portfolio and expanding on their investment plans.

The energy industry is among the most active investors in advanced mobility. The energy CVC deals done in Q1 2019, (see Kaloyan Andonov's report from page 20), include:

- Chevron Technology Ventures invested an undisclosed amount in sodium-ion battery technology developer Natron Energy. Founded in 2012, Natron is developing long-life low-cost battery technology.
- BP Ventures led a series A round of undisclosed size for Powershare, a China-based developer of electric-vehicle charging software and hardware. This is BP Ventures' first direct investment in China.

Both investments are symptomatic of an industry-wide and global focus on electrification and storage.

"Every industry stands to benefit from safer, cheaper, and more energy and power dense battery technology but each industry has their unique requirements", says Brian Schettler. He says that Boeing's motivation for investing in Cuberg, a US battery chemistry startup, was *"to tailor the designs that will best enable the future of electric flight and other aerospace applications while benefiting from the great successes they have achieved with oil and gas and other industry partners."*

Seeking nominations for the

Global Corporate Venturing 2018 - 2019 Energy Awards

Tom Whitehouse

At the gala dinner on November 20th in Houston, on the eve of GCV's annual conference there on the 21st, we will announce the winners of the following six awards:

1. Low Carbon CVC Investment of the Year
2. Digital Energy CVC Investment of the Year
3. Advanced Mobility CVC Investment of the Year
4. Advanced Materials / Manufacturing CVC Investment of the Year
5. Seed-stage CVC Energy Programme of the Year
6. Lifetime Achievement Award for Contributions to CVC in Energy

These awards all celebrate the role of Corporate Venture Capital in furthering three crucial energy trends:

- Widening the group of industries participating in the transformation of energy
- Extending the geographic reach of new energy-relevant technologies
- Accelerating the uptake of new energy-relevant technology by large corporations

I seek your nominations for investments made between July 1st, 2018 and June 30th, 2019.

Last year, GCV gave its inaugural award for "Energy-tech CVC Investment of the Year" to Maana, a US-based "knowledge platform that accelerates knowledge discovery to increase profitability for industrial and oil & gas companies." Maana had raised over $33.2m of series C funding in a deal which included the corporate venturing divisions of Intel Capital, GE Ventures, Chevron Technology Ventures, Saudi Aramco Energy Ventures, Shell Technology Ventures and Accenture Ventures, as well as China International Capital Corporation.

This year we have more awards to reflect the most important investment themes in the world of energy corporate venturing.

Please contact me with your nominations – tom@leifcapital.com - which could be from your portfolio or from another's. Please state the reasons behind your nominations and explain how they are furthering the three crucical trends mentioned earlier in this article.

I hope to see you at the Houston conference. We'll publish the agenda shortly.

Q&A WITH...

Brian Schettler, MD, Boeing HorizonX Ventures

Leif Capital's Tom Whitehouse interviews the head of Boeing's venture unit.

Brian Schettler, MD
Boeing HorizonX Ventures

Brian, before we talk about HorizonX and Boeing's venturing strategy, could you tell me, on a personal level, your favorite mode of transport? Do you enjoy mobility (advanced or not) as an experience?

Since I can remember I've always been an aviation junkie. My earliest memory is my first flight when I was three years old. And I remember, aged five, telling my parents I wanted to be a pilot. Aviation has been a key part of my life, and love, from early days. I am still excited every time I get on a plane. I just love being in the air.

Did you fulfill your ambition to be a pilot? Do you have a pilot's license?

Not yet, but I'm working on it. But a random hobby of mine is hot air ballooning. It's slow, but it's great fun. I first went ballooning when I was five, much to my mum's disapproval, and I've enjoyed it ever since. My dad was a balloon pilot too.

Is some slow time in the air the antidote to the pace of the job? It's only two years since your venture unit was established. In this time, you've already disclosed 18 investments. You've been busy.

Yes, and when you factor in the non-public deals and many follow-on investments, we've been averaging more than one investment per month. Before we established the venture unit, we were aware of the criticisms that start-ups make of corporate venturing – that it can be too slow. That was a mistake we weren't going to make. We knew we needed to work at start-ups' pace, not a big corporate's. So, we got buy-in from CEO level down on what our process needed to be. We had a lot of pent up demand for Boeing to get into venturing and were inundated from day one with deals. I'm glad to say we've been able to move quickly and grow our portfolio.

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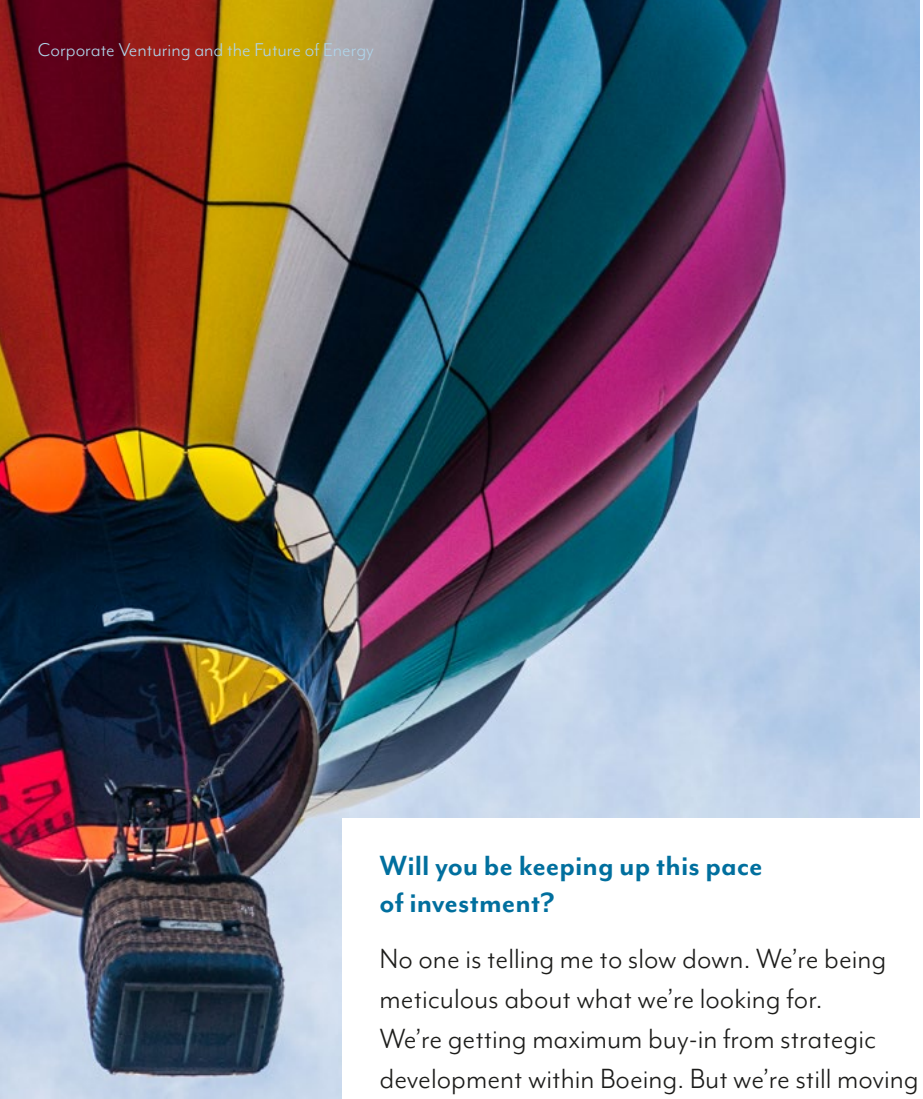

Will you be keeping up this pace of investment?

No one is telling me to slow down. We're being meticulous about what we're looking for. We're getting maximum buy-in from strategic development within Boeing. But we're still moving fast on growing the portfolio. We've not made any pre-determinations as to its optimum size and we will keep on growing as long as we're delivering value to Boeing and to our portfolio. We plan to scale the resources and the team.

What is Boeing looking to achieve through venturing?

The strategic dimension is at the forefront of our venturing. We want to identify and partner with a broad set of innovative startups that can contribute to and enable the future of aerospace. We want to identify platforms and capabilities that can make us better. That means improving on manufacturing, costs, safety, and creating an ecosystem with the best minds in the world, connecting them with Boeing and with each other.

What are the particular challenges for startups in the aerospace market?

Aerospace is tough. There are big barriers to entry and it's a risk averse industry. Our role is to help companies get through both to Boeing and to the aerospace industry at large, to get over the barriers and bring their innovation to bear. So, after an investment is made, we have a portfolio development organization in my team with the sole responsibility of helping the portfolio company connect with different parts of Boeing. It's a very important job.

How does your venturing sit within the overall advanced mobility theme? For example, what do you have in common with the automotive industry? To what extent are the aerospace and automotive industries looking for the same advanced mobility solutions?

We have some things in common. But we're not the only industries looking to shape the future of transport. In fact, I can't think of an industry that isn't preoccupied with the shifts to greater autonomy and electrification, and that isn't focused on the challenges and benefits of far greater volumes of data, and of ensuring safety and of improving manufacturing processes. We're all in this together. Sure, it's going to be competitive because there are big markets at stake, but from a venturing perspective, we are co-investing with corporate VCs from other industries in startups for which aerospace is just one potential market. We think this model is great for us and the startups. We can drive an aerospace vertical, someone else can drive automotive, and another partner

Continued ...

"We want to identify and partner with a broad set of innovative startups that can contribute to and enable the future of aerospace."

Brian Schettler,
Boeing HorizonX Ventures

Global Corporate Venturing Leadership Society

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) $13,000 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 15,000+ deals through GCV Analytics for bespoke reports	✓	✓
Access to GCV Connect	✓	✓

* 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.

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Shell Technology Ventures


Marianne Wu
GE Ventures

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can drive energy, etc. And we all benefit from the economies of scale from the mass application potential.

For example?

Our key motivation for investing in Cuberg was to help drive the capabilities they were developing in advanced battery cell chemistry and technology in aerospace applications. Every industry stands to benefit from safer, cheaper, and more energy and power dense battery technology but each industry has their unique requirements. Our investment allows as to tailor the designs that will best enable the future of electric flight and other aerospace applications while benefiting from the great successes they have achieved with oil and gas and other industry partners to greatly boost the performance characteristics of lithium batteries.

I doubt you need reminding of the expectations placed on Boeing of the highest levels of safety. How does this inform your venturing?

It's fundamental. No one will compromise on safety. And it's not just about safety from a hardware perspective. It's about how systems integrate. Airspace integration is the key enabler of a wide range of innovations in advanced mobility on the ground and in the air.

Can you give examples from your portfolio of how you're advancing safety?

We have several. I'll mention just three. Isotropic Systems Ltd. is a British company we invested in recently that we regard as a world leader in space-based connectivity, which will be key to safety. SparkCognition is a Texas-based AI company that is advancing the development of cognitive computing analytics for the safety, security, and reliability of information technology. Near Earth Autonomy is a US company from Pittsburgh that is enabling safe and autonomous flight. It can adapt to unpredictable factors such as obstructed landing zones. Together we've helped Near Earth Autonomy mature their capability and helped them get the certification they need.

"We want to identify platforms and capabilities that can make us better. That means improving on manufacturing, costs, safety, and creating an ecosystem with the best minds in the world, connecting them with Boeing and with each other."

Brian Schettler,
Boeing HorizonX Ventures

Do you think that autonomous flight will be able to compete with autonomous cars? Which do you think will be the first to fundamentally disrupt urban and intra-urban transport?

There's a place for both us. Autonomous vehicles have made great progress. There's more to be done. The same is true for autonomous flight. Our view is that as society continues to grapple

Continued ...

with congestion, the opportunities of opening up the third dimension, opening up new layers in aerospace, will be seized.

Ok. Talking of new layers in aerospace, let's talk about the highest level, space itself. How are you venturing here?

We think space is a frontier ripe for disruption. New space startups are probably the area of technology where we see most activity, from new satellite constellations to propulsion and launch. It's a competitive and quite fragmented area. Boeing has a great legacy here which we want to protect and grow. We have three or four portfolio companies that are space-focused, but I'll draw attention to just one seeing as they will be joining me at the GCV London conference in May. Reaction Engines is a British business that is developing an advanced form of propulsion which will disrupt space travel and intercontinental flight. Our CEO has been very bullish about his desire to see us become a leader in hypersonic flight. Reaction's capabilities will be a key enabler of this future. But we need to also pay attention to the other roadblocks of achieving a reliable hypersonic transportation ecosystem – materials technology, navigation and aeronautical structures. We're looking for other companies in this area.

"We are co-investing with corporate VCs from other industries in startups for which aerospace is just one potential market. We think this model is great for us and the startups. We can drive an aerospace vertical, someone else can drive automotive, and another partner can drive energy, etc. And we all benefit from the economies of scale from the mass application potential."

Brian Schettler,
Boeing HorizonX Ventures

Looking to the future, what do you expect to be investing in? What's top of your list?

We are always looking for technology that will unlock the possibility of mobility. This could be new business models, technologies like autonomy or aerospace-grade AI. It could be sensors and key components. We've already invested in materials and manufacturing businesses that

Continued ...

enhance flight capabilities and increase safety. We take the view that innovation can happen anywhere. We're tacking all of the innovation ecosystems and in the next six months will be establishing accelerators that will further help drive aerospace innovation globally.

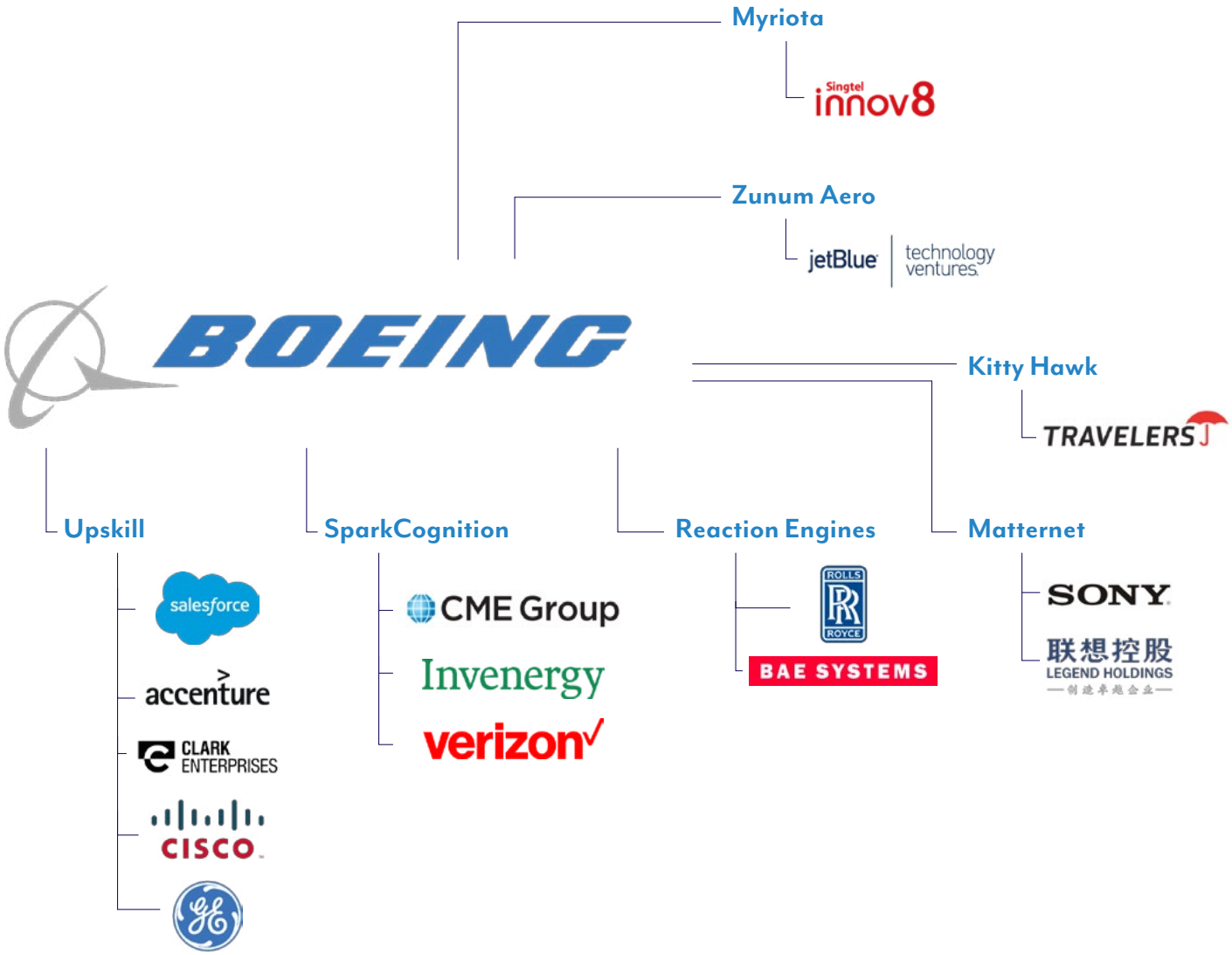
Can you imagine investing in a car?

If it's a platform oriented for ground-based transport, no. But what we're pleasantly surprised by is that what works for us has initially had its validation in other industries. Our job is to ask how technology could be adapted for aerospace. If there's an aerospace angle to what is currently on the ground, we're interested.

What has been the most difficult work you've done?

To me, one of the more difficult pieces is just ensuring that there isn't a confusion internally about why we're doing venture. Very smart people have been solving problems at Boeing for 103 years. We are trying to augment the R&D and not to replace it. Our work was harder in the initial stages when venture was viewed as a threat, but as we've communicated the rationale, we definitely now have a partnership with a great group of internal stakeholders.

Corporate co-investors of Boeing



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BOEING HORIZONX Ventures

HorizonX Ventures is Boeing's corporate venture capital arm that makes minority equity investments in early-stage companies developing technologies with potential aerospace, services and manufacturing applications. The team is interested in the innovation generated by these startups to help scale ideas for Boeing and the aerospace industry in the following focus areas:

- Advanced Logistics
- A&D Grade Cybersecurity
- Alternative Energy Systems / Propulsion
- Advanced Manufacturing
- Disruptive Mobility
- Industrial IOT
- Autonomy
- Space
- Advanced Materials
- Connectivity
- Disruptive Computing
- Artificial Intelligence / Machine Learning

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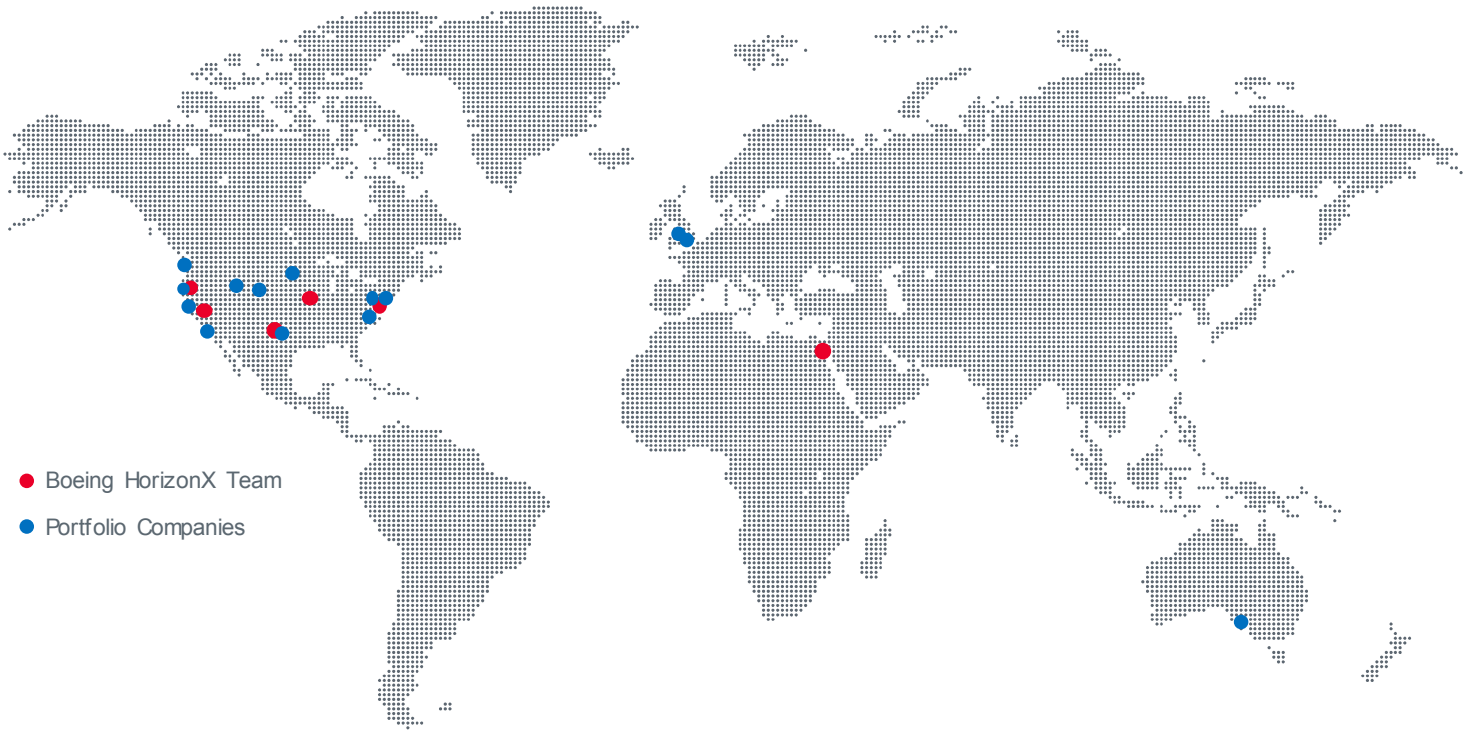

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VENTURES PORTFOLIO

FORTEM TECHNOLOGIES

Salt Lake City, Utah-based startup developing advanced radar systems that help unmanned aerial vehicles detect and avoid other airborne objects beyond visual line of sight.

UPSKILL

Vienna, Virginia-based developer of augmented reality software for smart glasses and wearable devices, focusing on enhanced productivity, quality and safety in manufacturing, field service and logistics.

sparkcognition™

Austin, Texas-based leader in artificial intelligence-powered products to enhance cybersecurity and state-of-the-art machine learning technology for predictive analytics applications.

C360 A VIDEO REVOLUTION™

Wexford, Pennsylvania-based startup specializing in integrated hardware and augmented reality software solutions providing 360-degree video for unlimited users — each with independent viewing control.

NEAR EARTH AUTONOMY

Pittsburgh, Pennsylvania-based autonomous systems technology leader enabling unmanned aircraft to operate at low altitude and in GPS-denied environments.

gamma ALLOYS

Valencia, California-based startup specializing in aluminum alloys reinforced with nanoparticles to improve stiffness, wear resistance and strength across a wide range of temperatures.

CUBERG

Berkeley, California-based startup designing advanced battery technology that could help safely enable the electrification of transportation.

ZUNUM Aero

Kirkland, Washington-based startup developing hybrid- and fully electric propulsion systems for passenger planes for regional travel — bringing simplicity and efficiency to both airlines and passengers.

MYRIOTA

Adelaide, Australia-based developer of Internet of Things technology enabling two-way communications between ground-based micro transmitters and low-Earth-orbit nanosatellites to securely share data.

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VENTURES PORTFOLIO

REACTION ENGINES

Oxfordshire, United Kingdom-based company developing hypersonic propulsion technology to enable high-speed point-to-point transport—shaping the future of air and space travel.

MORF3D AEROSPACE

El Segundo, California-based startup specializing in additive engineering and manufacturing to provide lighter and stronger 3D-printed metal parts for aerospace applications.

Agylstor™

San Jose, California-based startup with ruggedized computational storage systems that are secure, portable and designed for some of the world's harshest environments.

KITTYHAWK

San Francisco, California-based company with enterprise software and mobile-based apps to enable safe operation of commercial unmanned aircraft systems.

MATTERNET

Menlo Park, California-based company pioneering on-demand, end-to-end unmanned aerial delivery that currently operates safely and securely in urban environments.

DigitalAlloys

Burlington, Massachusetts-based company specializing in rapid, multi-metal 3D-printing to enable a higher volume of metal structural aerospace parts faster than ever before.

BRIDGESAT INC.

Denver, Colorado-based company developing optical communications systems solutions for low Earth orbit and geosynchronous satellites.

isotropic

London, United Kingdom-based company has developing a satellite terminal for high-throughput-satellite (HTS) applications at disruptive pricing.

Accion SYSTEMS

Boston, Massachusetts-based company pioneering scalable electric propulsion technology to transform satellite capabilities in and beyond Earth's orbit.

www.boeing.com/horizonx

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INTERVIEW

JetBlue flies high with the help of startup insights

GCV's Robin Brinkworth interviews Raj Singh, MD of JetBlue Technology Ventures

Raj Singh, managing director at JetBlue Technology Ventures, spoke to Robin Brinkworth about JetBlue's strategic model, its partnerships, and how they ensure alignment with JetBlue's business units

Raj Singh has an exquisitely English accent, all Hollywood villain and wood-panelled walls. It is received pronunciation at its finest, now somewhat incongruously settled in San Francisco's innovation ecosystem, surrounded by rhotic American English and California's infamous uptalk. But Singh stands out, not for his accent, but the work he does running the investment team of US airline JetBlue's highly specialised strategic corporate venture capital unit.

Singh is managing director at JetBlue Technology Ventures (JTV), set up in early 2016. The unit is a balance-sheet investor, committing up to $3m for non-control positions in early-stage startups. The unit has made 24 investments so far, seeking to serve an entirely strategic mandate. While JetBlue is an airline, the conception of the venture unit is to provide, in Singh's words, *"strategic value to JetBlue as a travel provider writ broadly"*. He continued: *"When we think about our mandate, it is really about travel, transportation and hospitality. It does not have to be airline or aviation-specific"*.

JTV's team is 12 strong, with six focused on delivering strategic value to the portfolio companies, including integration into JetBlue itself. The other six, which Singh leads, constitute the investment team. JTV does not typically take board seats. It does not take control positions. Neither acquisition nor financial returns are goals – the sole focus is strategic return, although Singh does clarify this.

Continued ...

"Strategic return for us, just to be clear, includes the startup doing well, because there is no strategic return if they are financially unviable and do not exist in a couple of years."

Other CVCs follow other models, and JTV's model is not to everyone's taste. For example, Ulrich Quay of BMW i Ventures makes a powerful case for a more financially-focused model (see interview). Yet it is equally hard to reject Singh's case. JTV's mandate is to help JetBlue prepare for the future, and while he wants each investment to be a financial success, each investment does not exist in a vacuum.

"JetBlue does something in the order of $7bn of revenue a year [2017 figures]. If I can find a startup that eventually becomes a supplier to JetBlue and that allows JetBlue to increase its revenue by 1% or 2%, I am delivering $70m to $140m worth of value."

JTV's early-stage model has been chosen for two reasons. The first is that JetBlue wants to learn, and that learning experience is most intense in the early part of a startup's lifecycle, hence the focus on series A deals. It is in part also down to necessity. JetBlue does not have the cash on hand to invest at the levels of some of the more august VCs.

"We want to make our dollars count. Our sweet spot for that sort of money, to have an impact, means we need to be at the earlier stage."

"When we think about our mandate, it is really about travel, transportation and hospitality. It does not have to be airline or aviation-specific".

Raj Singh, MD,
JetBlue Technology Ventures

The other advantage that investing early has is that it gives JetBlue time to develop the product alongside the startup to get it to a viable stage of integration. This is particularly important in aviation, as Singh pointed out.

"We do not have a minimum-viable-product mindset in aviation. The thing has to work. It is not as big an issue if it is some great new way of accounting, but it is an issue when it comes to active stuff that will be in the air."

For many, JetBlue is an airline, a transportation company. For insiders, JetBlue is a travel operator. That means that to look after JetBlue's strategic imperatives, Singh's brief is surprisingly broad. His team invests around five tentpole themes – seamless customer journeys, customer service and hospitality reimagined, future of maintenance and operations, improving loyalty, distribution and revenue, and evolving regional travel. The result is a relatively technology-agnostic portfolio, with Singh looking for the best fit.

"Throughout the five themes, we do not focus on technologies. There are a lot of interesting technologies underlying things, but we do not chase artificial intelligence or blockchain or whatever it happens to be. We are looking for technologies that solve the issues that interest us."

Continued ...

Singh welcomed the innovation that Uber and AirBNB have brought to the travel sector, glad to see VCs recognising potential in the future of mobility. He is particularly excited by the concept of flying taxis and a busy actively managed airspace, while acknowledging that these are still a few years away. Currently, the innovations Singh can bring to JetBlue are not frontpage deals, but sensible pragmatic solutions to existing business problems. Speaking to that, Singh gave the example of the second theme, customer service.

"You may have had an experience of going up to a gate agent to ask about your flight being delayed, only to have the agent not know about the delay until you show them the notification on your phone's app."

Ensuring that crew members have all the information at their fingertips minimises the disconnect between crew and representatives on the ground, JetBlue's offices and customers. The underlying technology could be anything from wearables to a big data lake, but the key aim is to enable crew members to do the best job they can.

Singh calls the third theme, maintenance and operations, the "iceberg", because it involves things that an ordinary traveller might not see. JTV's work here is about improving the nuts

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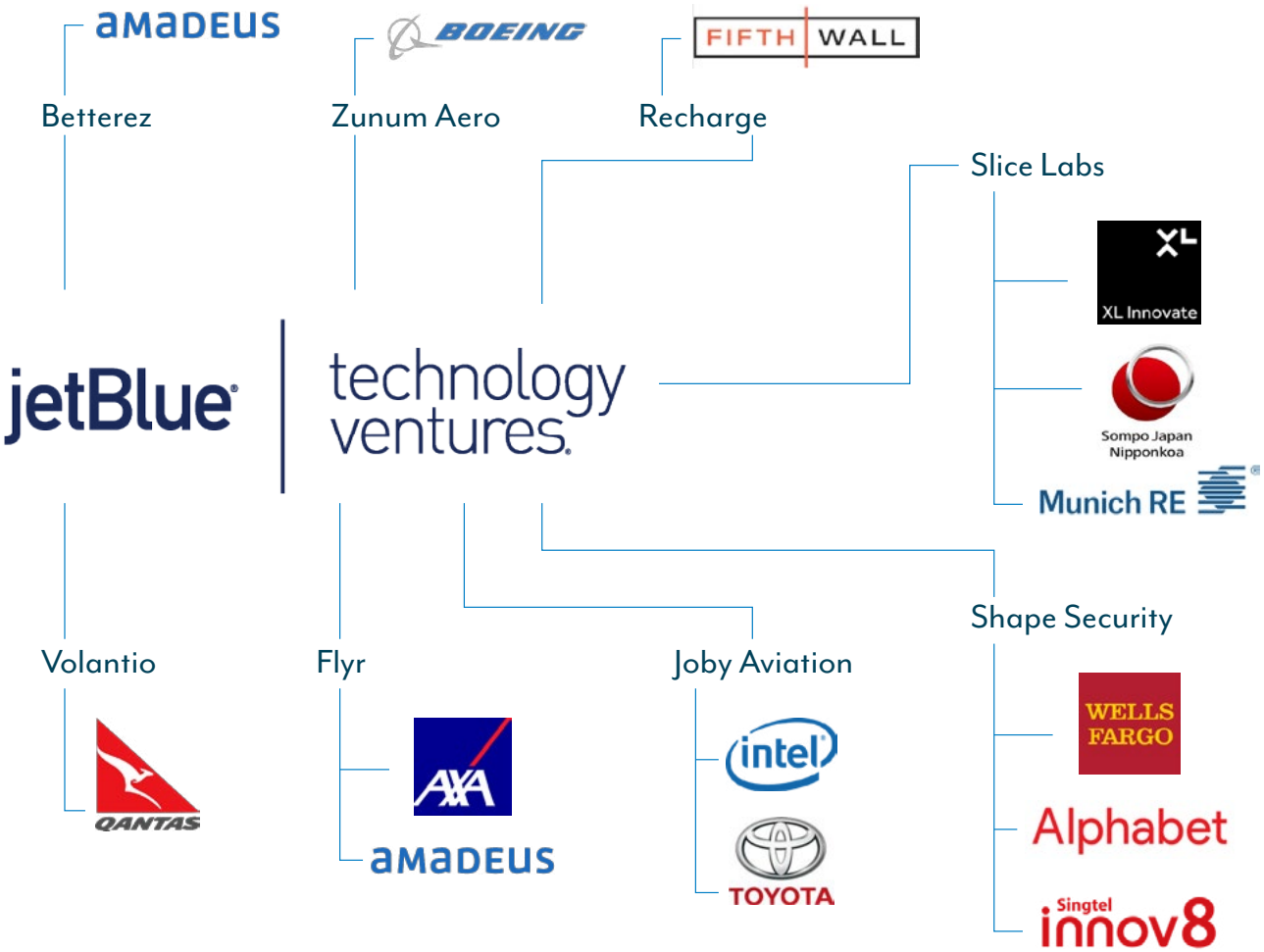
JetBlue Technology Ventures co-investments



and bolts of a travel provider, such as using predictive maintenance to replace a soon-to-fail component, which means better reliability, fewer delays and happier customers.

Whether a startup can identify legal risks or create tailored products for consumers out of existing assets, the aim is for technology to step in and integrate with JetBlue. For that to happen, JTV must bridge the gap between the startup and the business units effectively. JTV's investment team derives its mandate from the investment committee, which is mostly from the C-suite, and then brings prospective investments back to the committee. Meanwhile, the strategic team, in Singh's words, *"walk the halls at HQ"* in New York to ensure alignment with the business units themselves.

"One of the manifestations of that is what we call innovation sprints. In these 12-week engagements, we partner a business unit leader and say: 'We will help you meet your strategic goals.' "

This regular exercise identifies pain points and objectives, looking for startups or technologies that help the business units meet those objectives, and then integrating and implementing the technology or startup into the business unit. Organisational alignment is one thing, but Singh said the team had a *secret weapon* beyond that – Bonny Simi, JTV's president.

"She is a JetBlue officer, and she has been at JetBlue for 16 years. She understands the day-to-day of how JetBlue operates. She is in the loop in the strategy setting, the day-to-day, even sometimes in the board meetings."

All this talk of alignment is not just marketing to Singh. It is why he joined the group, as he feels that it allows the unit to deliver on the promise of being a CVC. Four of the portfolio companies are now suppliers to JetBlue, with three more at proof-of-concept stage. JTV's dealflow is typical for a CVC, and having a strong network is part of that, something that Singh attributes to an underrated quality. "*We are a nice bunch of people. We are easy to work with and friendly – we build good relationships with the startups we are in and that should not be underestimated."*

Singh thinks few other companies in the travel space are doing similar work but believes more will be soon. In order to stimulate that, JTV has started a partnership program for companies within the travel industry that are not direct competitors, such as international airlines, hotels, airport operators and other transportation companies. Air New Zealand was the first partner, and the aim is to bring other partners into the Silicon Valley ecosystem, curated by JetBlue.

"We are seeing a lot of deals, close to 4,500 in the three years I have been here. Let us bring those deals to [prospective partners], not necessarily for investment, although that is possible if they are interested, but for proof of concept and eventual implementation. JetBlue cannot consume all the deals we do because we are going at such a pace, but if we have other partners who are interested, that increases our value proposition to startups."

Looking ahead, Singh said he hoped to expand the partnership program across the travel industry while continuing to deliver value to JetBlue through new investments and potential exits, although Singh admitted that venture capital was a long game and exits would take time.

From spark plugs and air conditioning units to EVs and autonomous driving

DENSO keeps pace via corporate venturing

DENSO, the world's second largest mobility supplier, has invested nearly $100 million over a four-year period in startup companies around the world as part of its long-term vision to provide software-based solutions focused on electrification, automated driving, connectivity and shared economy. From cyber security to semiconductors and sensors, DENSO is investing in startup companies working on key technologies that will play a major role in advancing mobility services that are safe, secure and efficient.

DENSO, the world's second largest mobility supplier, has invested nearly $100 million over a four-year period in startup companies around the world as part of its long-term vision to provide software-based solutions focused on electrification, automated driving, connectivity and shared economy. From cyber security to semiconductors and sensors, DENSO is investing in startup companies working on key technologies that will play a major role in advancing mobility services that are safe, secure and efficient.

"DENSO has traditionally been self-sufficient with its R&D efforts. About five years ago, we realized that to keep pace with the predicted changes in the automotive industry and consumer demand, we needed to embrace an open innovation model that places equal importance on internal and external technology development in all product areas," said Tony Cannestra, Director of Corporate Ventures at DENSO.

"DENSO used to be all about spark plugs and air conditioning units, and while those are still important products for us, we are focused on building a strong ecosystem of software, advanced hardware, and other mobility technologies to quickly and flexibly develop unique solutions that meet the needs of our customers, especially in EVs and autonomous driving."

Recent investment areas for DENSO include:

- Autonomous Drive: DENSO invested additional dollars into Ridecell's Series B funding round for the development of shared mobility.
- Its partnership with ThinCI is enhancing deep

Continued ...

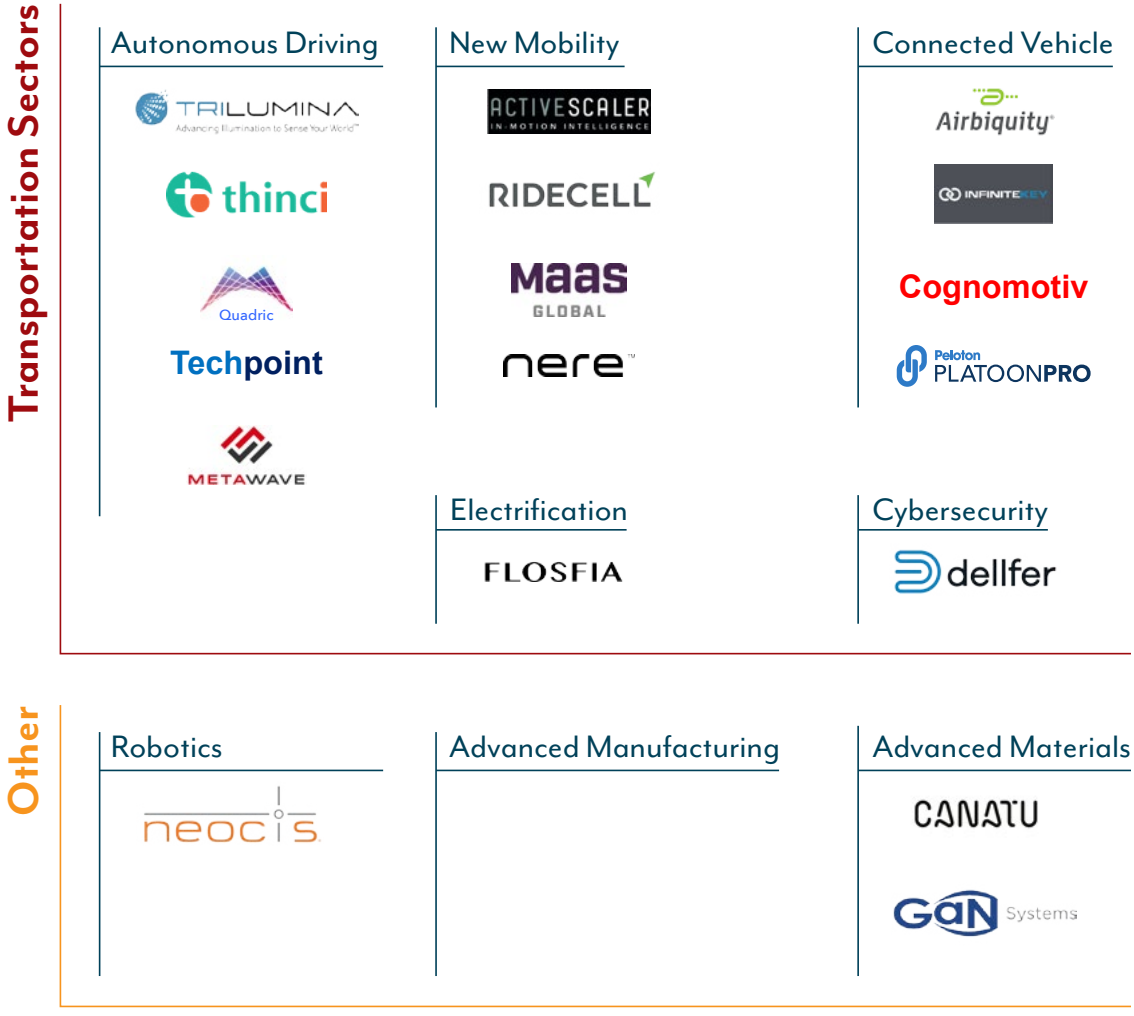
learning capabilities required for autonomous vehicles.

- Cybersecurity: DENSO led Dellfer's initial funding round to help the company develop cybersecurity safeguards for connected and autonomous vehicles.
- Electrification: An investment in FLOSFIA is focused on a semiconductor device expected to reduce the energy loss, cost, size and weight of inverters used in electrified vehicles.
- Sensing: Along with a handful of other strategic investors, DENSO invested in Metawave Corporation to accelerate the development and improve performance of in-vehicle, "smart" radar sensors for autonomous cars.

Looking ahead, DENSO will continue to invest in startups and entrepreneurs who can help accelerate innovation in the automotive industry.

"DENSO has been around for a long time and we want to be here for another 70+ years for our customers and employees," said Cannestra. "To ensure that happens, we need great partners who are focused on developing technologies to radically advance our mode of transportation now and well into the future."

Investment areas and current portfolio



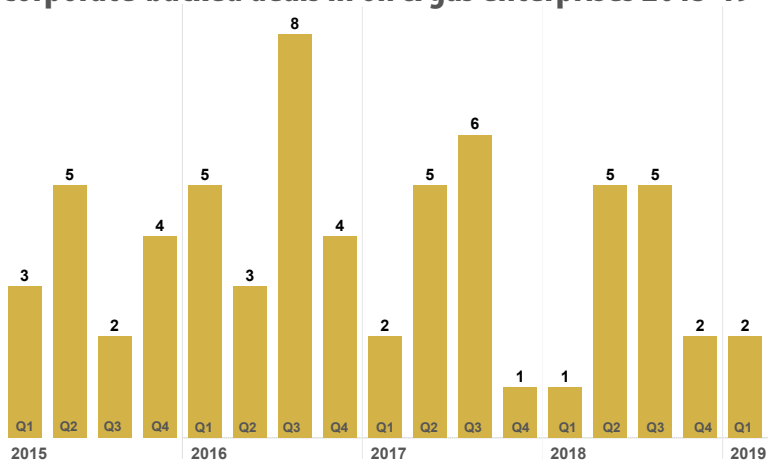
OIL & GAS

Venturing in the first quarter of 2019

Kaloyan Andonov, analyst at GCV Analytics

There has been a general shift in focus of oil and gas corporate venturers since 2014 and GCV Analytics continued to observe this in the first quarter of 2019. The majority of disclosed deals by oil and gas corporate investors went into non-core areas, such as cleantech, IT and, more recently, transport and mobility. On the whole, oil and gas corporate venturers are making more investments in low-carbon energy technologies, mobility and transport as well as in the digitisation of industrial activities, while somewhat ring-fencing bets on traditional upstream innovations.

Corporate-backed deals in oil & gas enterprises 2015-19

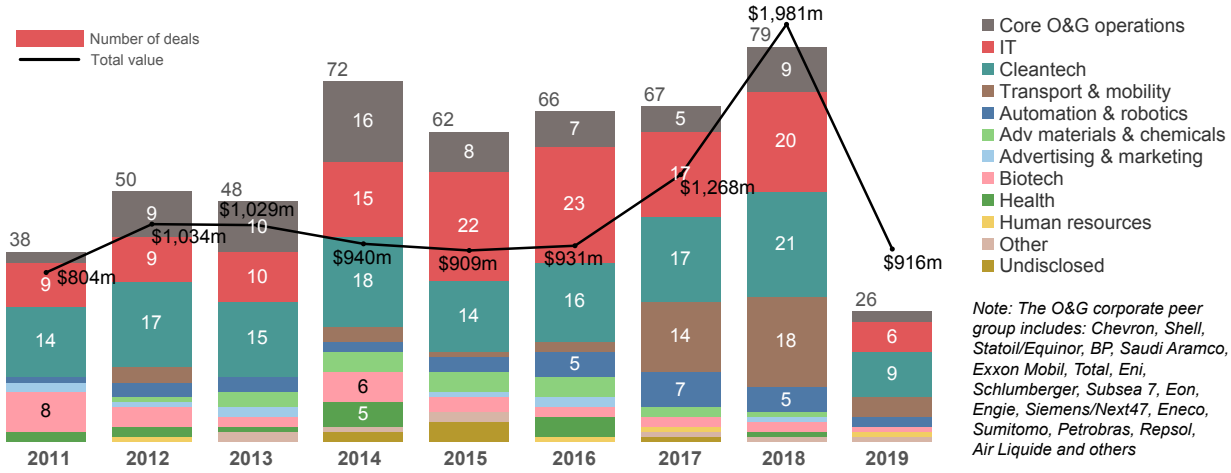


Despite this trend, investments in core oil and gas technologies will continue to be included in portfolios due to the inherently capital-intensive nature of the oil and gas business. The corporate venturing units of oil and gas companies usually aim to bring strategic rather than financial value through their investments. The latter may come in the form of building an ecosystem, finding suppliers or helping business units with specific technical and other challenges.

During the first quarter of 2019, cleantech, IT and transport received more attention from corporate investors than other areas. The number of disclosed deals by oil and gas investors was 26 and their total estimated value was $916m. Disclosed core area commitments have declined over the past three years but were up slighly in 2017. Investments in information and communications technology startups decreased, while those in cleantech and transport rose.

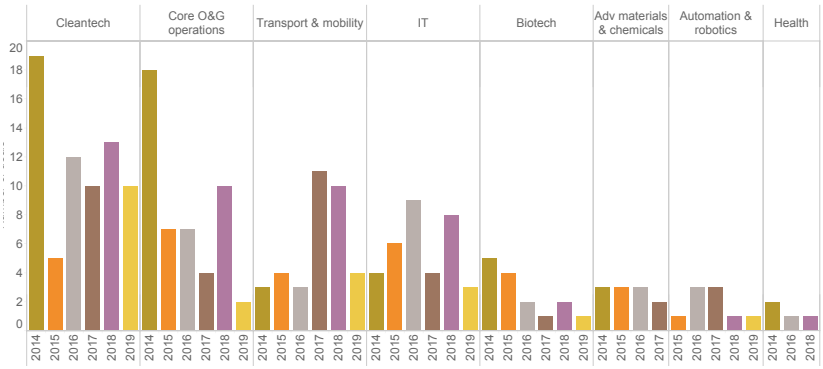
The average size of deals in which oil and gas corporate venturing peers participated in the first quarter was $54.44m, considerably higher than the levels in 2017 and 2018, due to the outlier effect of one particularly large deal. Many oil and gas corporate venturers are focused on investing in a digitised future of disrupted mobility and transport, with emerging opportunities in renewable and sustainable sources. As valuations in these areas of innovation have been growing, it is no surprise that the average deal size among oil and gas corporates has increased over the past few years. UK-based BP has disclosed a significant number of rounds in biotechnology and cleantech

Investments by O&G corporate peer group 2011 - Q1 2019

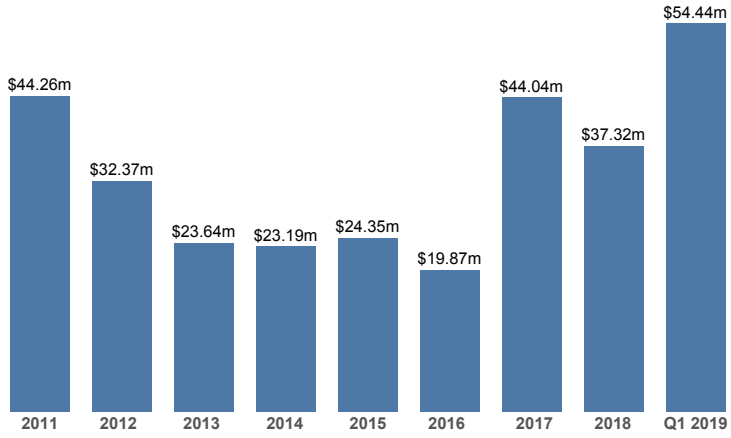


Note: The O&G corporate peer group includes: Chevron, Shell, Statoil/Equinor, BP, Saudi Aramco, Exxon Mobil, Total, Eni, Schlumberger, Subsea 7, Eon, Engie, Siemens/Next47, Eneco, Sumitomo, Petrobras, Repsol, Air Liquide and others

Type of oil & gas venturing investments by year



Average size of deals backed by oil & gas CVCs 2011- 19



businesses since 2014, along with investments in core operation technologies and, more recently, mobility and transport. The mobility space is also of interest to Spain-based Repsol.

Norway-based Statoil, recently rebranded as Equinor, has been active in cleantech, but more so in gas core operation technologies. France-based Total has placed heavy bets on cleantech, while Anglo-Dutch company Shell has been focused on both cleantech and core oil and gas technologies. US-based Chevron's publicly disclosed commitments revolve around core energy operations and the digital dimension of its operation, as do the investments of Saudi Arabia-based Saudi Aramco. However, nearly all oil and gas majors are involved in some way in low-carbon and advanced mobility opportunities.

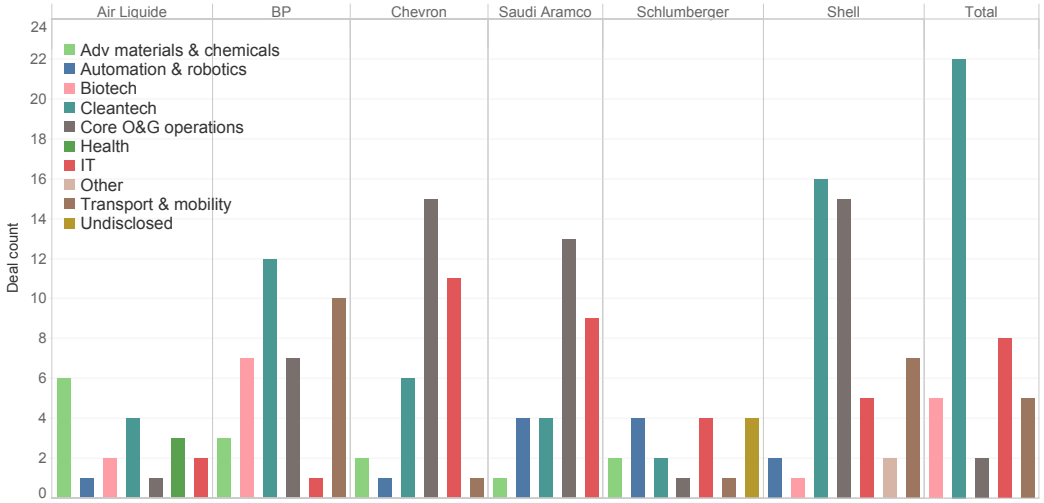
DEALS

Oil and gas companies among the most active corporate venture investors from the industrial and energy sectors were BP, Chevron and Shell. In the first quarter of 2019, there were a number of notable deals.

US-based autonomous driving technology developer Aurora Innovation secured $530m from investors including Shell and e-commerce platform and cloud services provider Amazon. The round was led by venture capital firm Sequoia Capital and also featured Lightspeed Venture Partners, Geodesic, Reinvent Capital, Greylock, T Rowe Price and Index Ventures. The round reportedly valued the company at more than $2.5bn. Aurora is working on software, hardware and data technology for driverless vehicles. It has a team of 250 and has struck partnerships with automotive manufacturers including Hyundai, Volkswagen and Byton.

Canada-based carbon capture technology developer Carbon Engineering closed a $68m funding round featuring petroleum suppliers Occidental Petroleum Corporation

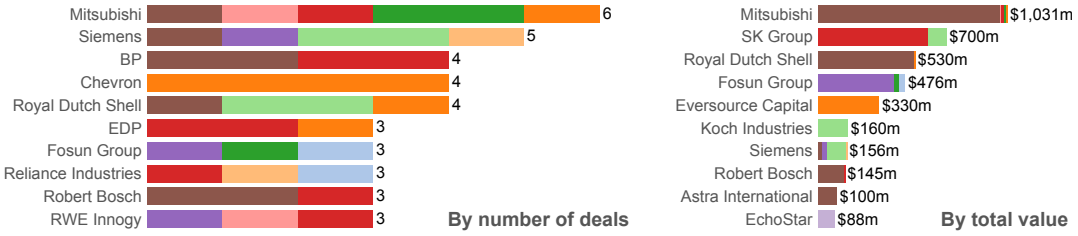
Type of investment by company 2014-Q1 2019



and Chevron, along with mining group BHP and property developer Bethel Lands Corporation. The round also included First Round, Lowercase Capital, Rusheen Capital Management, Starlight Ventures, Thomvest Asset Management, Carbon Order, private investors Bill Gates and Murray Edwards as well as the Benjamin, Hodgkinson and Hutchison families. Occidental and Chevron participated through their respective subsidiaries Oxy Low Carbon Ventures and Chevron Technology Ventures. BHP reportedly contributed $6m. Founded in 2009, Carbon Engineering is developing technology intended to capture carbon dioxide directly from the atmosphere and convert it into ultra-low carbon fuels to power cars, trucks and airplanes. The company claims its direct-air-capture technology can capture and purify atmospheric carbon dioxide for less than $100 per tonne. The funding will support the expansion of its pilot plant and the engineering of its first commercial facilities.

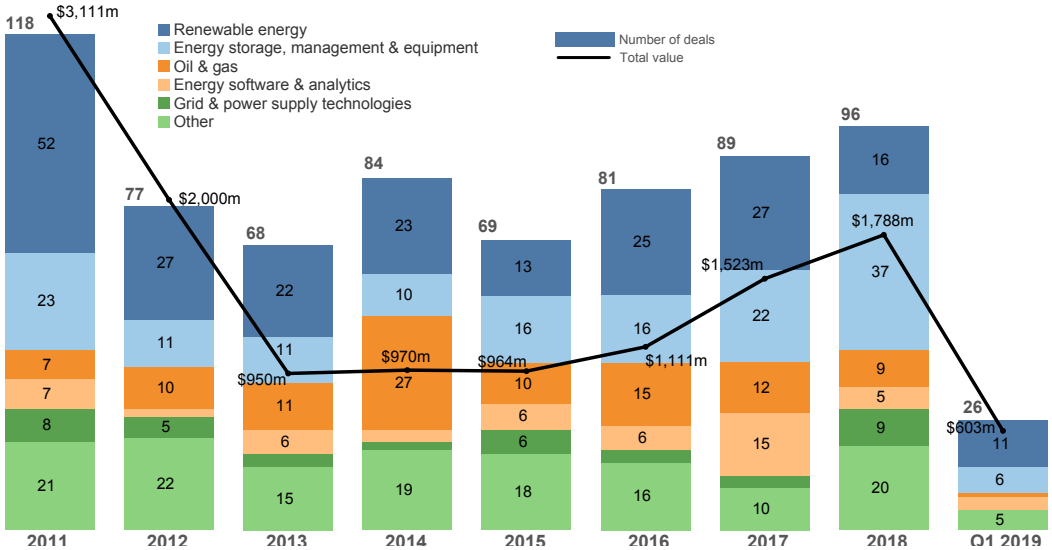
United Arab Emirates-based solar power provider Yellow Door Energy secured $65m in a series A round that included Equinor and diversified conglomerate Mitsui. The round also featured the International Finance Corporation, the private investment arm of the World Bank, as well as development bank Arab Petroleum Investments Corporation and private equity firm Adenium Energy Capital, while Equinor invested through its Equinor Energy Ventures unit. Founded in 2015 as a spinoff from founding investor Adenium, Yellow Door designs, builds and maintains solar energy plants for corporate customers in the Middle East and Africa who pay for power on a monthly basis. The company also installs energy-efficiency equipment for businesses, taking a proportion of cost savings. The series A funding will support construction of 300MW of solar capacity.

Top energy and industrial investors Q1 2019



Energy company Exelon and communications, media and automotive conglomerate Cox Enterprises took part in $60m round for US-based sensor technology developer Ouster. Investment firm Runway Growth Capital led the round, which also included Silicon Valley Bank among others. Exelon took part through its Constellation Technology Ventures unit. Founded in 2016, Ouster is developing light detection and ranging (lidar) technology for automotive vehicles, industrial robots and unmanned aerial vehicles. The sensors, which use lasers to calculate distances to objects, are

Energy sector deals by subsector 2011- Q1 2019



also used in mapping, defence, mining and agriculture. Ouster will use the proceeds to expand production facilities, including a new quality assurance testing and sensor calibration centre in California.

Industrial product manufacturer Paul Wurth led a €25m ($28.8m) series C round for Germany-based electrolyser and fuel cell developer Sunfire. Inven Capital, the corporate venturing arm of energy utility CEZ, and Total Energy Ventures also provided capital, as did investment firm Idinvest Partners and angel investment group Sunfire Entrepreneurs Club. Founded in 2010, Sunfire produces high-temperature electrolysers and fuel cells that produce clean energy, hydrogen and synthesised gas for customers in industries that currently rely on fossil oils and natural gases, such as transport, aviation and chemical production. The series C proceeds will be used to implement commercial projects that apply high-temperature electrolysis and power-to-liquid technology.

Ghana-based solar energy provider PEG Africa secured $5m from Total Energy Ventures, which joined Energy Access Ventures, Blue Haven Initiative and Renewable Energy Performance Platform, alongside $20m in debt financing from investors including CDC Group, according to Disrupt Africa. It had initially raised $7.5m across two rounds from backers including energy utility Engie's Rassembleurs d'Energies initiative, the corporate returning to help provide $13.5m in series B equity and debt financing in late 2017. Founded in 2013, PEG Africa offers solar energy

Top deals backed by oil & gas corporate venturers Q1 2019

	Round	Sector	Size	Venture investors
Aurora Innovation	–	Transport	$530m	Amazon | Geodesic Capital | Greylock Partners | Index Ventures | Lightspeed Venture Partners | ReInvent VC | Royal Dutch Shell | Sequoia Capital | T Rowe Price
Carbon Engineering	–	Energy	$68m	Benjamin family office | Bethel Lands Corporation | BHP Billiton | Carbon Order | Chevron | First Round Capital | Hodgkinson family office | Hutchison family office | Lowercase Capital | Occidental Petroleum | Rusheen Capital Management | Starlight Ventures | Thomvest Ventures | private investor
Yellow Door Energy	A	Energy	$65m	Mitsui | Equinor | International Finance Corporation | Arab Petroleum Investments Corporation | Adenium
Ouster	–	Transport	$60m	Carthona Capital | Cox Enterprises | Exelon | Fontinalis Partners | Runway Growth Capital | Silicon Valley Bank | undisclosed investors
Sunfire	C	Energy	$28.8m	Paul Wurth | Čez | Total | Idinvest Partners | Sunfire Entrepreneurs Club
PEG Africa	–	Energy	$25m	Blue Haven Initiative | Energy Access Ventures | Renewable Energy Performance Platform | Total
Xage Security	B	IT	$16.5m	Saudi Aramco | General Electric | March Capital Partners | City Light Capital | NexStar Partners
Xpansiv	A	IT	$10m	S&P Global | Reflective Ventures | Energy Innovation Capital | Avista | BP
Daphne Technology	–	Industrial	$5m	Global Innovation Fund | Saudi Aramco | angel investors
Belmont Technology	A	IT	$5m	BP

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Understand what drives smart decision-making in successful Corporate Venturers

The newly structured 2-Day 'Intelligent Corporate Venturing' courses embrace *The 8 Arms of Intelligent Corporate Venturing*, delivered alongside case-studies and high level expertise from experienced professionals in the corporate venturing ecosystem.

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Who should come?

Corporations planning to start venturing:
Companies have told us that they wished they had come on the Academy earlier in their thinking process because they hadn't set up their operations in the optimum way. Validate your reasons for venturing, understand the different models, learn from experienced venturers and brainstorm what could work best for your organisation.

People new to venturing or senior executives overseeing the venture group:

- Be more effective from the get-go
- Learn from hearing about the mistakes of others, not by making so many of your own
- Be a more effective investor, understand how to add value to your portfolio companies and increase your chances of success

Experienced CVCs:

- Fill in any gaps in your knowledge and get up-to-date on current best practices
- Give back to newer members of the community
- Network with other experienced CVCs on the faculty

People that have relationships with CVCs:

- Those who are not working directly in CVC but interact with corporate venturing colleagues

The 8 Arms of Intelligent Corporate Venturing

- Structuring a CVC Unit
- Capital Sourcing
- Staffing – Internal vs External Hires
- Independent VC Fund Strategy
- Deal Flow, Due Diligence, Valuations, Term Sheets
- Portfolio Management and Value Creation
- Performance Measurement: Strategic vs Financial, Internal vs External
- Exits and Survival Strategies

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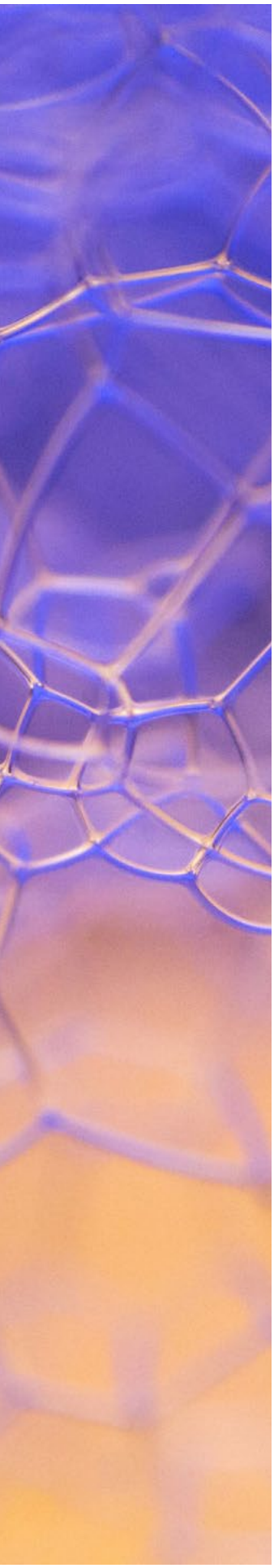
TBC, 2019

Sao Paulo
TBC, 2019

Tokyo
TBC, 2019

Silicon Valley
27-28 January 2020

For more information contact
Paul Morris | pmorris@globalcorporateventuring.com



products to off-grid customers in Ghana, Cote d'Ivoire and Senegal on a pay-as-you-go basis.

Xage Security, a US-based developer of blockchain-protected security technology for industrial internet-of-things systems, raised about $4.5m from investors including Saudi Aramco Energy Ventures for its series B round, which now totals $16.5m. It had raised the first $12m from GE Ventures, a subsidiary of power and automation technology producer General Electric, as well as March Capital Partners, City Light Capital and NexStar Partners in July 2018. Xage has created a platform that secures internet-of-things systems by spreading authentication and private data across a network of devices.

Xpansiv, a US-based creator of a software platform that manages commodities production, closed a $10m series A round featuring ratings agency S&P Global, blockchain investment fund Reflective Ventures and investment firm Energy Innovation Capital as well as Avista Development and BP Ventures, respective subsidiaries of energy utility Avista and BP. It is also working with BP to convert some of the corporate's gas production data into its Digital Feedstock format.

Saudi Aramco Energy Ventures joined investment vehicle Innovation Fund and an undisclosed angel investor in a Sfr4.9m ($5m) round for Daphne Technology, a Switzerland-based provider of filtration technology for shipping emissions. Founded in 2017, Daphne Technology develops a catalyst-free nano-technology helping the petrochemical, power and transportation industries lower air emissions to regulation levels.

BP Ventures also provided $5m of series A funding for Belmont Technology, a US-based developer of artificial intelligence technology for oil and gas exploration. The company, which revealed through a regulatory filing that it had raised almost $3.3m for the round from four investors, will use the capital to enhance its core product, Sandy, as well as to commercialise the platform and increase the size of the workforce. Founded in 2017, Belmont Technology has built a cognitive system to augment human intelligence for oil and gas exploration as well as production activities. Its technology is using artificial Intelligence to reveal patterns and relationships within heterogeneous geoscience data sets.

Canada-based carbon technology company Inventys raised about C$6.6m ($5m) from Business Development Bank of Canada's cleantech practice as well as a follow-on investment from Chevron Technology Ventures. The investment reportedly added to the series C financing raised by Inventys in 2018, bringing the total to about C$21m. The round's first tranche was led by OGCI Climate Investments. Founded in 2007, Inventys is developing an energy and capital-efficient technology for capturing carbon dioxide from industrial flue gas streams in addition to building a CO_2 marketplace by matching CO_2 emitters with CO_2 users. It claims its VeloxoTherm process reduces the cost of existing post-combustion CO_2 capture technologies. The funds raised will help Inventys complete and commercialise a CO_2 capture demonstration plant project with Husky Energy.

US-based connected car and telematics technology developer Zubie received an undisclosed level of funding from BP Ventures, the corporate venturing arm of oil and gas supplier BP, and investment firm Melody Capital. The company had previously raised $32m from NGP Capital, the VC firm since spun out of communications technology producer Nokia, as well as communications equipment maker Comporium, automotive components manufacturer Magna International, lubricants provider Castrol, Melody Capital and OpenAir Equity Partners. Zubie is the creator of the Zubie Key, a hardware dongle that plugs into a diagnostic port under a car's dashboard and analyses system functions to provide suggestions on car maintenance, driving habits and methods of lowering driving costs.

BP Ventures also led a series A round of undisclosed size for Powershare, a China-based developer of electric-vehicle charging software and hardware. Private equity firm Detong Capital Partners also participated in the round, which represented BP Ventures' first direct investment in China.

Shell Ventures, petroleum supplier Shell's strategic investment arm, added an undisclosed amount to a series D round being raised by US-based energy management software provider Autogrid that stood at $32m by September 2018. Oil and gas provider Total's corporate venturing arm, Total Energy Ventures, had also joined the round, along with renewable power producer Orsted and energy utilities CLP, Innogy, Tenaska and Eon, among other investors, in 2018. Founded in 2011, Autogrid has developed a software platform that helps utilities, electricity retailers, renewable energy power providers and energy service providers manage their resources. The company's Energy Data Platform uses artificial intelligence, machine learning, big data and internet-of-things technology to help users supply cleaner and more cost-effective energy.

Saudi Aramco Energy Ventures, the venturing unit of Saudi Aramco, supplied an undisclosed amount of series A funding for Earth Science Analytics, a Norway-based provider of artificial intelligence technology for the petroleum geoscience sector. The company did not disclose details of its earlier funding but said it had received funding and support from oil and gas suppliers ConocoPhillips, DEA, Lundin Petroleum and Spirit Energy. Founded in 2016, Earth Science Analytics develops geoscience-driven machine learning workflows and software, aiming to provide data-driven forecasts to clients with greater precision and at lower cost.

Chevron Technology Ventures invested an undisclosed amount in sodium-ion battery technology developer Natron Energy. Formerly known as Alveo Energy, Natron received $15.1m in funding across three rounds between 2013 and late 2017, according to securities filings, from investors including Fluxus Ventures, Prelude Ventures, NanoDimension and Khosla Ventures. Founded in 2012, Natron is developing long-life low-cost battery technology.

Shell provided an undisclosed level of funding for Nordsol, a Netherlands-based producer of liquified biomethane, investing through Shell Ventures. The capital will help Nordsol expand from technology provider to full-fledged producer building and operating its own biogas plants with strategic partners. Founded in 2009, Nordsol produces liquified biomethane.

Salesforce Ventures invested an undisclosed amount in Kespry, a US-based provider of aerial information secured through drones. Kespry had previously raised $61.3m as of December 2017, from investors including networking technology provider Cisco, Shell, power and automation technology producer ABB, law firm Wilson Sonsini Goodrich & Rosati across three rounds. Founded in 2013, Kespry allows organisations to source specialised aerial data through its unmanned aerial vehicles. Clients can program a mission using a tablet provided by the company, and a Kespry drone plots a flight path, using lidar technology, before the data it films is transferred to the Kespry app for processing.

Shell agreed to acquire one of its portfolio companies, Germany-based energy storage technology provider Sonnen, for an undisclosed amount. Founded in 2010 as Sonnenbatterie, Sonnen produces smart energy storage systems for customers in Europe, the US and Australia, allowing them to store surplus energy from home solar systems. Users in some European markets can also form a local community to pool energy through what the company refers to as a virtual battery. Sonnen will operate as a subsidiary of Shell, working with its new energies division, and expand its virtual battery system into grid services.

RigUp, a US-based oilfield services marketplace operator backed by General Electric (GE), collected $60m in a series C round led by venture capital firm Founders Fund. The round also featured private equity firm Quantum Energy Partners, VC firm Bedrock Capital and advisory and investment firm Global Reserve Group, reportedly valuing RigUp at $300m. Founded in 2014, RigUp has created a mobile app that enables oilfield operators and service providers to find and connect with independent contractors who have to pass background checks before they can join the company's network. The platform can also be used to handle invoicing and accounting tasks related to worker payment.

FUNDS

US government-owned research laboratory Argonne National Laboratory formed a research agreement with a $180m US-based battery technology fund backed by speciality chemicals supplier Albemarle and energy companies Equinor and Exelon. Hanon Systems, a distributor of energy management technologies for automotive vehicles, has also committed to the fund, which was founded in 2017 under the name Volta Energy Technologies. Volta was launched to uncover promising battery-related technologies which could be of use to its limited partners, which hope to complement their in-house research and development. Argonne's role includes providing resources to help Volta's portfolio companies develop their applications. Volta also claims to have access to research from prominent US national laboratories and universities, in addition to institutions in the UK, Germany, Japan and China.

China-based appliance manufacturing group Midea raised $104m for an investment fund with a targeted close of RMB1bn ($147m) to RMB2bn. The Guangdong Midea Smart Technology Industrial Investment Fund's initial commtments included $44m from an unnamed wholly-owned investment arm of Midea. Other limited partners were not disclosed. The fund will focus on areas such as intelligent manufacturing, smart home, retail and new energy. It will be managed by an asset management vehicle formed in 2018. Founded in 1968, Midea has grown into a conglomerate with more than 200 subsidiaries covering consumer appliances, heating, ventilation and air-conditioning systems, supply chain logistics, robotics and industrial automation.

Japan-based electronics manufacturer Toshiba has set up a ¥10bn ($89m) corporate venturing fund. The vehicle is part of a plan by Toshiba that will involve it investing up to $8.3bn over the next five years, focusing on areas such as renewable energy technologies, power electronics, robotics and medical technologies covering treatment, screening and diagnostic testing. Part of the investment mandate will also go towards bolstering the company's rechargeable battery technology, which has been used for vehicle, industrial and infrastructure applications such as buses, trains, elevators and power plants.

Netherlands-based venture capital firm Set Ventures secured commitments from Shell, energy utility PTT Group and banking group BNP Paribas for a fund targeting €75m. Set Fund III is also backed by Energiiq and BOM Brabant Ventures, funds managed by Dutch development agencies InnovationQuarter and De Brabant Development Agency, along with family office Korys, Finnish-state backed fund Sitra and the European Investment Fund. Shell invested through Shell Ventures. Founded in 2007, Set Ventures is an energy technology-focused vehicle that invests up to €6m in European businesses focused on energy generation, distribution, storage and efficiency. Set Fund III will make early growth-stage investments in startups using smart software and service-based business models.

Great Plains Energy, a US-based energy utility that now operates under umbrella company Evergy, rebranded its investment affiliate, GXP Investments (GXPI), as Evergy Ventures. Founded in 2015, GXPI provides funding for North America-based developers of emerging technologies with the potential to transform the electricity sector. The unit's core focus has been on digital utility technology such as smart sensors and analytics platforms, connected mobility services, smart cities technology, distributed energy resources and intelligent connected buildings. Over the past three years, GXPI has invested more than $50m in a total of 13 companies including smart thermostat maker Ecobee, cybersecurity software developer Claroty, energy storage operator Axiom Energy and safety communications technology provider LiveSafe. Great Plains Energy merged with electric utility company Westar Energy in May 2018 to form umbrella company Evergy.

PEOPLE

Engie Electro Power Systems (EPS), the energy storage subsidiary of France-headquartered energy group Engie, promoted its Italy-based chief of staff and head of new business, Giovanni Ravina, to chief innovation officer. Before joining Engie EPS in March 2018, Ravina spent four years as part of the founding team of Engie's corporate venturing initiative, Engie New Ventures. During his time there, he led financing efforts for smart grid technology developer Opus One, geospatial data technology developer StreetLight Data, nanosilicon-based multigas analysis system provider Apix Analytics and electric scooter provider Gogoro.

Eneco Innovation & Ventures, Netherlands-based energy utility Eneco's corporate venturing arm, promoted investment director Leonie Baneke to head of the unit. Baneke joined Eneco as an M&A adviser in 2014 before becoming an investment director at Eneco Innovation & Ventures in 2016 six months after its launch. The vehicle focuses on investments in smart home, intelligent building and domestic renewable energy technology developers. During her time at the unit, she has helped it invest in digital heating installation service provider Thermondo, electric mobility management platform GreenFlux and virtual power plant operator Next Kraftwerke.

Michael Mahan
Stanley Black & Decker

US-based hardware product maker Stanley Black & Decker promoted investment manager Michael Mahan to managing director of its corporate venturing unit, Stanley Ventures. Selected as a GCV Rising Star 2018, Mahan was the first member to join the unit on its launch in 2016. In his role as investment manager, he was involved in deals for robotic companion developer Pillo Health and oil and gas refinery system provider Arix Technologies. Stanley Ventures typically invests from seed to series B stage in startups with a focus that is compatible with Stanley Black & Decker in areas such as oil and gas and hydraulics technology.

Eli Groner
Koch Disruptive Technologies

Eli Groner, previously director-general of the Israeli prime minister's office, joined Koch Disruptive Technologies (KDT), an investment subsidiary of US-based chemicals and energy conglomerate Koch Industries. KDT hired Groner as an Israel-based managing director. The first deal it KDT led was a $150m series E round for Israel-based ultrasound surgery technology developer InSightec in 2017, a month after the unit was launched. Groner assumed his previous position in 2015 after confirmation from the Israeli cabinet, and liaised between the Israeli prime minister and various government departments. In this capacity, Groner advised on national budget negotiations and economic policies. He also co-chaired the China-Israel joint economic taskforce and oversaw the National Cyber Bureau and the National Program for Smart Mobility launched by Israel in January 2017.

Tyler Williams left Shell Ventures to become an executive committee member of Canada-based investment partnership Natural Gas Innovation Fund (NGIF). Williams had been an investment principal at Shell Ventures since 2017, having joined the corporate in 2013 before taking a Canada-based global technology leader position in the development of its industrial internet-of-things strategy. Deals in which Williams was involved include a $2.8m round for Canada-based oil and gas infrastructure platform developer Osprey Informatics. Shell Canada joined six other Canada-based gas producers to pledge C$3m to support NGIF's initiative to back companies developing cleaner methods of power generation using gas.

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