### F TOMORROW -- STREET --



#### **TOMORROW STREET:**

P.23

THE EXCITING JOURNEY SO FAR - P.6

#### **DIGITAL BARRIERS:**

EDGE-INTELLIGENT VIDEO SURVEILLANCE AND SECURITY - P.10

#### **DEEPMIND:**

HOW ARTIFICIAL INTELLIGENCE CAN POSITIVELY IMPACT OUR SOCIETY - P.16

THE AGE OF
THE DIGITAL NOMAD
P.20



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#### Letter to the Readers

We are proud to introduce the first edition of Tomorrow Street Magazine.

Tomorrow Street, Vodafone's innovation centre, has championed positive growth through its game-changing startup portfolio and its dynamic gathering of the tech community at Arch Summit 2018. As Tomorrow Street keeps growing, we bring you stories that redefine the way innovation is understood. It is not merely enough to observe tech and innovation in the work place. To inspire real changes, they belong in every aspect of our day-to-day lives. We hope you will enjoy the first edition of Tomorrow Street Magazine!

The Tomorrow Street Team







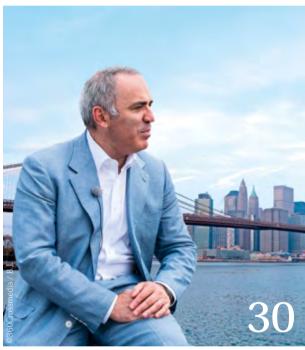


3
LETTER TO THE READERS
6
THE EXCITING JOURNEY
AT TOMORROW STREET
8
TOMORROW STREET'S
PORTFOLIO COMPANIES
10
DIGITAL BARRIERS:
Edge-intelligent video
surveillance and security

13
DISRUPTIVE STARTUPS:
Bring ambitious solutions to the market
14
BUILDING
THE FUTURE
16
DEEPMIND:
How artificial intelligence can positively impact our society

18
THE FUTURE TELCO:
An intelligent
connectivity hub
20
THE AGE OF
THE DIGITAL NOMAD
23
ROLLS-ROYCE:
Generating
innovation
for the future







27
THE STARTUP
MIND-SET
30
AN INTERVIEW WITH
GARRY KASPAROV
32
ARCH SUMMIT:
Connecting startups
to decision makers

38
MENTORING DIGITAL
ENTREPRENEURS:
Bright Sparks
40
VODAFONE PORTUGAL
POWERLAB PLUGS INTO
THE TOMORROW STREET
CULTURE
42
ASTEROID DAY

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#### TOMORROW STREET

### The exciting journey so far...

Tomorrow Street - Vodafone's global innovation centre in joint partnership with the Luxembourg Government focuses on giving innovative companies access to international business. The vision is to create a startup accelerator that connects corporates and startups in a truly meaningful way, generating revenue growth and delivering game-changing innovations.

#### Harnessing the power of startups

Too often corporate-startup initiatives drift off to the side of the mother company, disconnected from the day-to-day business. Tomorrow Street aims to correct that by locking in to the Vodafone Procurement Company (VPC), Vodafone's central procurement function which controls 85% of the company's spending and manages more than 450 categories of products and services through 200+ strategic buyers. Over its 10-year history, VPC has consolidated a unique set of knowledge and capabilities, and Tomorrow Street draws on this power to deliver deals for startups through procurement channels and help entrepreneurs navigate their way

towards the right opportunities. By combining Vodafone's global footprint and strong brand with Luxembourg's digital ambition and position at the heart of Europe, Tomorrow Street has created a unique innovation accelerator unlike no other in the world today.

#### Acceleration and disruption

In the past one year of its launch, the Innovation centre have added five disruptive startups to their portfolio, organized one of the biggest tech event in Europe - Arch Summit 2018 bringing together startups and corporates from across the globe to network, connect and partner together. Currently, Tomorrow Street's diverse team works closely with five late-stage startups on



their expansion plans. In addition, mentors another four earlier-stage Luxembourg based startups helping them with their first step to success. The energy and spark generated by this close cooperation is complemented by the involvement of Vodafone colleagues, who collaborate with the startups to explore ways of disrupting the industries they operate in. With the next wave of innovation likely to come from small and energetic suppliers, this two-way access between startups and Vodafone enables all involved to explore opportunities in a mutually beneficial way. Connecting the right people and accelerating business, Tomorrow Street reflected its concept and launched Arch Summit 2018. Hosted in the heart of Europe -Luxembourg, the event brought startups, corporates and influencers together on one platform to discuss, network and drive innovation together.

#### The next steps: Year two

The focus is on collaboration and to continue to build a stronger community and support the current portfolio startups. The current potential portfolio of new companies is strong, and Tomorrow Street anticipates

announcing new arrivals in early 2019. Planning is already underway for Arch Summit 2019, and with their presence growing globally they look forward to many newer and exciting opportunities. By creating Tomorrow Street has paved the way in establishing a unique platform for collaboration between Vodafone and startups, and also the exchange of ideas and capabilities between private and public, corporate and entrepreneur, and passionate people who want to make a positive impact on the world. The Innovation Centre's journey has just begun, and the road ahead looks exciting.

#### TOMORROW STREET'S PORTFOLIO COMPANIES



#### LB NETWORKS

OcularIP is a SaaS-based Cloud platform for Telecom services providing real-time performance visibility. This easily integrated solution drives customer service improvement, SLA compliance management, and operational savings.

Revolutionising Customer Experience through proactive performance analytics



#### **VIZIBL**

Vizibl gives its users powerful real-time insights into the execution of innovation and returns real value.

The leading SaaS solution enabling Supplier Collaboration & Innovation, helping companies drive 2x more growth.



#### **DIGITAL BARRIERS**

Digital Barriers provides software solutions and cloud services to manage the capture, analysis and streaming of live video, enabling actionable intelligence to be delivered where and when it's needed.

Redefining edge intelligent video surveillance and security through zero latency, low bandwidth video.

#### azoomee

#### **AZOOMEE**

Research has shown a growing concern among parents about their children's digital media usage across smartphones and tablets. Azoomee enables parents to give their kids access to high quality, handpicked and ad-free content.

A safe and secure edutainment platform for kids to play, watch & learn.



#### **EXPETO**

Expeto provides enterprises with secure, scalable, private intranet wherever there is cellular connectivity. The solution enables enterprises to interconnect both public and private IoT deployments through a user view that is easy to configure, and cost effective to deploy.

Manage, Control and Secure Private Data On Any Public Cellular Network



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We take on the world's toughest challenges. So you don't have to.

Where a workload resides or where users login shouldn't matter. Contrail Enterprise Multicloud satisfies IT's requirements to unify control and visibility for networking and security.

Luca Claretti, Global Account Director

juniper.net/cloud

#### DIGITAL BARRIERS

Pioneering edge intelligent solutions that improve people's lives





Digital Barriers CEO Zak
Doffman explains why his
company is teaming up with
Vodafone's Tomorrow Street
facility in Luxembourg and
how its edge intelligent
solutions can bring benefits all
over the world.

#### What is Digital Barriers' business and background?

We deliver edge intelligent solutions to the global security, defence and law enforcement sectors through a combination of ultra-low bandwidth streaming and artificial intelligence on edge devices. We are headquartered in London with customers in up to 50 countries across Europe, North America and Asia. Luxembourg will be our primary EU location. We have 120 employees and are on track to reach £30 million in revenue this year. Formerly part of a company established in 2010, Digital Barriers was spun out last year with backing from an investor, Volpi Capital. We are already profitable, which funds our ongoing growth, and we are looking into further areas of investment to accelerate this process.

#### What opportunities and challenges do IoT devices present today for your clients?

People use our technology for two reasons, the first being that they are unable to obtain live intelligent video from the edge. Intelligent solutions enable video to be triggered according to a particular configuration – for example instead of police officers having to wait for a car or at a border, a camera can notify them when someone is coming. We can also immediately identify the car's number plate and if necessary, trigger an alarm depending on the result. The second reason is cost savings - even where the bandwidth exists, it is too expensive to stream HD video on a continuous basis. Our technology enables a reduction in the required bandwidth of up to 75%, saving time, money and energy. We get the video to where it is needed, when it is needed.

#### Is this technology of benefit to ordinary people?

It is, in several ways. Video as a security service is improving our lives: you can see it in action in autonomous vehicles, while police officers wear cameras that make them accountable

for their actions. Soon people will be able to travel seamlessly through airports thanks to biometric authentication, or use an ATM without entering a password. Another important aspect is wider social benefits. Across the globe hundreds of millions of people lack access to services, but new technology will enable them to connect to the world. Of course, as with any new technology, people should remain alert to any possible issues. Together we must check if it is implemented appropriately. And if you equip your house with a video surveillance device, for example, it is important to choose the right equipment and ensure it is encrypted from end to end, since it will know your password and sit inside your firewall.

#### Why did you choose to join Tomorrow Street?

There is incredible demand right now for the kind of IoT capability we have developed. We believe this is the perfect time to join Tomorrow Street and Vodafone, bringing our unique technology together with their global reach right around the world. We really look forward to working with them and accelerating our international growth.

#### DISRUPTIVE STARTUPS

## Successful founders using ground-breaking ideas and ambitious plans to bring solutions to market.

At school, someone who was a «disruptive influence» was often the class clown or bully whose behaviour could end up with their being expelled. Today being labelled a «disruptive technology business» is the highest form of praise and likely to lead to an equally high share valuation.

#### Airbnb: Sleepless nights for hoteliers

One can't help wondering whether the founders of disruptive businesses like Airbnb, Skype and Spotify actually set out to be deliberately disruptive; did they embark with business models that would intentionally shake traditional businesses to the core? After all, Airbnb started by providing airbeds - hence the name - in private homes to people travelling on the cheap. That was hardly a "Masterplan" that would have established hotel chains like Hilton, Marriott and Holiday Inn, quaking in their - rather complacent - boots. The incumbents could rely on their perennially predictable expense-account funded clientele – or so they thought. But even without a grand strategy, Airbnb proved nimble and flexible, adapting their offer to the trends, opportunities and circumstances that those who had been in the hotel business forever had failed to spot.

**Skype: Long established model** You don't ask, "Shall we have a free,

internet, video conversation?" any more than you say you are "going to vacuum clean the house". You say, "I'll Skype you," "I'm going to Hoover" or "A Coke please." Despite being a major disrupter "Skype" is now so established it is a verb listed in the Oxford English Dictionary. But it was not always the case. Its founders struggled to find the startup money despite realising that phone users were being ripped off: while technology had driven down telephone costs to almost zero, established telephone companies were banking stellar profits. Skype threw a disruptive spanner in the works for traditional telephone providers when people worldwide flocked to its free video service.

#### Spotify: all the way to the bank

Disruption is one thing, making money is another. While Skype makes very modest revenues from its paid telephony services, another disrupter, the internet-based music streaming service Spotify, has succeeded in converting about 46% of its users to paying subscribers.

They want music advertisement-free and a few swipes away. That level of success has led to Spotify being listed on the New York Stock Exchange. And if that accolade is not enough, the Wall Street commentator, Jim Cramer, claims, «What Netflix is to video, Spotify is to audio and Spotify believes that the streaming market is still in its infancy.» But disruption can be hard work: many of Spotify's predecessors offered free music but illegally. Spotify's secret was to put in the graft negotiating the rights to music in a thoroughly undisruptive slog. ■

66

Today being labelled a «disruptive technology business» is the highest form of praise"

> The Leader of Tomorrow: Warrick Cramer's Story

#### BUILDING THE FUTURE

Warrick Cramer, the CEO of Tomorrow Street is always looking for ways to keep moving forward.

When asked how he became an entrepreneur, the answer is simple. "It's in my genes" said Cramer. During his childhood, his father worked in a chocolate factory. Young Cramer began obtaining chocolate at a discount to then resell it to his friends. The entrepreneur spirit continued in his college years when he launched his first business in what was becoming the fast-growing world of mobile phones. He bought a toolkit and installed hands-free systems in car and trucks. He became an innovator in mobile payment technology by being one of the first to send a PIN code in the form of a text message. Among all his WORK INNOVATION PASSION for technology, his great passion is his photography business.

Having grown up in Melbourne, Australia and starting up his businesses there, it was a family choice to explore a move to Europe. His experience and passion for innovation and business development ultimately brought him to Vodafone, where he devotes his talent and entrepreneurial mind-set to revamping innovation at the heart of Vodafone's Supply Chain.

As an entrepreneur, he faced many hurdles before finding success. He went through the journey of expanding his business in other markets all on his own. Inspired by his personal experience of lack of support and guidance as an entrepreneur, led him to form Tomorrow Street Innovation Centre.

Switching to a corporate environment proved to be completely different than what Cramer was used to, "I was shocked, I confess." Processes were much more bureaucratic, but at the same time they were more holistic by covering all aspects of leadership. The entrepreneurial world is similar to the startup one where things happen overnight for survival's sake. Once starting at Tomorrow Street, Cramer thought about the basics of entrepreneurship. "It's all about looking for opportunities, especially

outside the box." That inspired him to begin reaching out to influencers in the Luxembourg startup scene and exploring a partnership with the public-sector partner, Technoport Incubator.

Luxembourg was the perfect location for Tomorrow Street through its visionary ideas and digital ambitions. Even as a small country, it has an impressive level of impact and influence throughout Europe.

Cramer paved the way for Tomorrow Street by securing 1,500 square meters of office space and recruiting a diverse mix of skills in finance, procurement, marketing and communications. He brought in more entrepreneurs, knowing that they would be able to understand the startup experience.





Tomorrow Street's main focus was to adapt the corporate work process to the entrepreneurial mindset, and not the other way around.

So far, Tomorrow Street continues to grow. It has built a unique operating model with partnerships with a wide range of venture capitalists and influencers in more than 20 countries. Five exciting startups have signed on to the Tomorrow Street programme, and they are already making deals with Vodafone operating companies and partners.

In January 2018, the Tomorrow Street team spotted the opportunity to create and launch a new startup event for a global audience. In the space of four months, Arch Summit was born. While it was created quickly, the event was a huge success because of Tomorrow Street's partnerships. Arch Summit, which took place on May 3rd and 4th of 2018, generated so much interest internally that the Tomorrow Street team expanded by including Vodafone employees.

In the long term, Tomorrow Street aims to find and develop Vodafone's next generation of strategic suppliers. To achieve this, Tomorrow Street shares an ambition with their startups to deliver grown and bring value to Vodafone's customers as well as positive change to the world. In addition to the five portfolio companies, Tomorrow Street also has a community program working along with five Luxembourg-based startups to provide mentoring and

guidance to help them develop on the road to success.

With Warrick Cramer in the lead, Tomorrow Street is on the path to success. "We are building a highway to the future, helping both startups and established businesses exploit today's digital revolution and booming global market to the full."

#### **DEEPMIND**



The former child prodigy of chess, Demis Hassabis, is now focused on a different kind of victory. Hassabis is the co-founder of DeepMind, the world leader in artificial intelligence research. As DeepMind continues to investigate how artificial intelligence can positively impact our society, Hassabis keeps exploring its potential for tackling issues.

#### A young champion becomes a true expert

Demis Hassabis, 41, owes his appetite for challenge and success to his early career as a brilliant chess player. He started playing at the age of 4 and quickly became a champion. At the age of 8, he acquired his first computer with his own prize money. The young Londoner then designed a program which was "already sufficiently sophisticated to beat my little brother," he mentioned with a smile. His interest in gaming and programming led him to design video games. The most famous of which was Theme Park, a game Hassabis invented when he was 17. It became the first best seller within games that used artificial intelligence. "The player

creates a world, and the game adapts to his or her style of play," Hassabis explained. While this was already a huge feat for someone at any age, Hassabis still wanted to contribute more to the world of tech. "A piece of the puzzle was still missing," he added. After completing his doctorate degree in neurosciences, he founded DeepMind in 2010.

#### Increasingly intelligent artificial intelligence

DeepMind aims to explore the world of artificial intelligence and find new methods for its use. Working with a hundred researchers, Demis Hassabis is directly inspired by how the human brain works. However, developing algorithms isn't



enough. Observing the American Nobel Prize-winning physicist Richard Feynman's principle of "what I cannot create, I do not understand," DeepMind's scientific experts focus on the concept of "reinforcement learning." This means that the machine observes, acts and then takes the changes of inputs into account. This works similarly to how the brain might react to the effect of different hormone levels. A new step is taken when machines and programs integrate "their own creations" in their system. However, this artificial intelligence that had been focused on strategy games now needs to begin to understand abstract concepts and to have a long-term memory, according to Demis Hassabis. Since it was acquired by

Google in 2014, DeepMind has been opening new doors in the tech world.

#### Plans for the future

Moving forward, the company is interested in delving more into 3D technology, simulating and creating real robots. As for what's next for Hassabis, the former champion turned innovator is focusing on how artificial intelligence can master information databases. This is a task which currently can even be too dense and complex for the human brain. In Demis Hassabis's view, the challenges of the modern world climate, health, energy, etc. - are increasingly becoming subjects that artificial intelligence can no longer ignore. These topics can lead to ethical dilemmas; therefore these

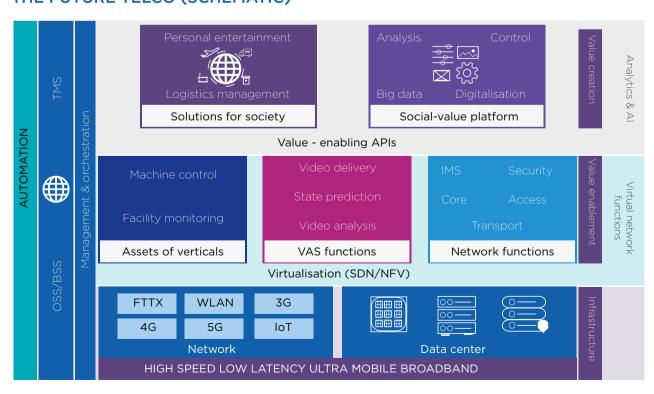
innovations call for responsibility. And while he's looking to the future, Demis Hassabis wants to focus on the progress of machines being able to convert unstructured information into ordered knowledge. This adventure is only just beginning.

## THE FUTURE TELCO:

## An intelligent connectivity hub simplify | automate | innovate

THE FUTURE TELCO will be a pervasive and AN INTELLIGENT CONNECTIVITY HUB rendering smarter, faster, efficient digital services on demand, to improve human interactions with the world around us. For most Communication Service Providers (CSPs) this journey will be a non-linear, complex and an iterative process, spanning across technology nuances, varied business ecosystems and breaking down their own cultural barriers.

#### THE FUTURE TELCO (SCHEMATIC)



#### TRUSTED PARTNER FOR TELECOM OPERATIONS AND TRANSFORMATION SERVICES



Transformation Advantage; Not just Arbitrage

#### Digital Transformation an overwhelming concern for CSPs?

With the current state of complexity in Telco networks plagued with legacy B/OSS systems, the transformation to future Telco is daunting. Digital transformation, it appears, has become an overwhelming concern for communications service providers (CSPs). The reason? The existing Telco infrastructure is hard-wired and requires extensive multi-domain integration to meet the demands of intelligent and smart operations.

So to get there, the infrastructure will have to be transformed to ensure connectivity to billions of devices (Internet of Things), become virtualised & be self-driven thereby simplifying operations through hyper-automation, orchestration of services, and platforms and devices.

This transformation will enhance massive analytical capabilities to understand patterns, time sequencing of events, market trends and customer behaviour by embracing Artificial Intelligence (AI) with deep neural techniques for Machine Learning (ML) and Self-Healing capabilities.

#### Tata Communications Transformation Services (TCTS) – Transformation services partner of choice for Vodafone

Tata Communications
Transformation Services (TCTS) is a
unique and trusted
TRANSFORMATION SERVICES
PARTNER OF CHOICE for Vodafone.

As part of the transformation journey for Vodafone, we have engaged and delivered on key digital transformation imperatives of Automation and Analytics to deliver Lean Opex and Smart Capex solutions as below to Simplify, Automate and Innovate.

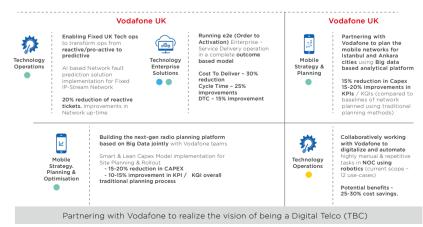
TCTS with focus on customer centricity has built an industry-leading Telco transformation framework which is a culmination of TCTS' decade-long transformation experience and industry research across leading Telcos globally. The framework identifies various transformation priorities of Telcos across six market segments and six domains to illustrate the various roadmaps in this journey and with a focus on building the future Telco which is hyper-connected, pervasive, intelligent and customer-centric.

#### About Tata Communications Transformation Services (TCTS)

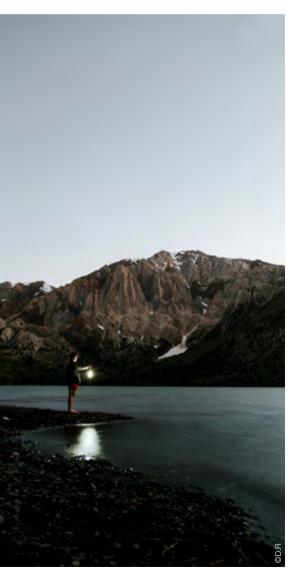
Tata Communications Transformation Services (TCTS), a 100% subsidiary of Tata Communications Ltd, provides leading business transformation, managed network operations, network outsourcing and consultancy services to telecommunication companies around the world. TCTS delivers operational efficiency, cost transformation and revenue acceleration solutions for all the stages of the carrier process lifecycle including but not limited to network engineering and design, implementation and operations functions.

For more details on TCTS and how we can help your company build, operate and transform, please contact us at tcts.marketing@ tatacommunications.com or visit www.tatacommunications-ts.com. To hear more from TCTS experts, join us on LinkedIn https://www.linkedin.com/company/tata-communications-transformation-services and follow us on Twitter https://twitter.com/Tata\_TCTSL.

#### THE FUTURE TELCO AN INTELLIGENT CONNECTIVITY HUB SIMPLIFY | AUTOMATE | INNOVATE



## THE AGE OF THE DIGITAL NOMAD



Digital nomad is a term that you're likely becoming familiar with. You've surely seen them around. Hoards of latte-sipping millennials tapping away at laptop keyboards in your favourite local cafés. But what are these technological travellers really up to? How is it they make a living, and what are the major drawcards of this itinerant lifestyle?

Written by Maggie Harris

#### What exactly is a digital nomad?

You can thank the technological age for giving rise to this new wave of the working class. Gone are the days when a desk job was a life sentence of drudgery. With just a laptop, a backpack and a plane ticket in hand, droves of digital nomads are taking to the skies in search of greener grasses and cheaper living costs. Digital nomads earn a living by taking advantage of our increasingly internet-driven world, using telecommunications technology to deliver online what would once have been produced from the comfort of an office. Copywriters, virtual assistants, bookkeepers, graphic designers and e-commerce specialists are just some of the roles which lends themselves to the location independent life of a digital

nomad. While some of these folks are working for progressive firms who value work-life balance over showing face at the office water cooler, rising numbers of digital nomads are starting businesses of their own.

In 2013, British copywriter Helen Peatfield took the plunge. Having worked in advertising for over a decade, she decided that there must be more to life than sitting a desk for 50 weeks of the year in dreary London. She packed up her life in search of sunnier shores to pursue a career in scuba diving. "I'd never lived outside my home country (the United Kingdom) or done any real travelling before I left. My travel experience was limited to work trips in the USA and Europe, and the typical twoweek holiday in the sun," Helen explains.



Despite her lack of travel experience, Helen enjoyed the laid-back lifestyle in South East Asia immensely and loved her job. Before long, however, it was clear to her that scuba diving wasn't going to provide a long-term living wage, no matter how affordable the location.

"I had saved up some emergency cash before I left. Had I not, I would have had to go back within the first year. Scuba diving was exciting and made me look like I was living the dream, but it doesn't pay well. I started freelancing on sites like Upwork, churning out bad copy for bad pay, before realising that I was actually becoming pretty good at this writing malarkey. Now, I run my own business, I make much better money, and I get to work from some of the most beautiful places in the world."

#### Top DN destinations

There are a few key criteria for a worthy digital nomad hotspot. Access to high-speed internet, affordable living costs and warmer temperatures seem to be top of the list. With these few conditions in mind, the options are seemingly endless.

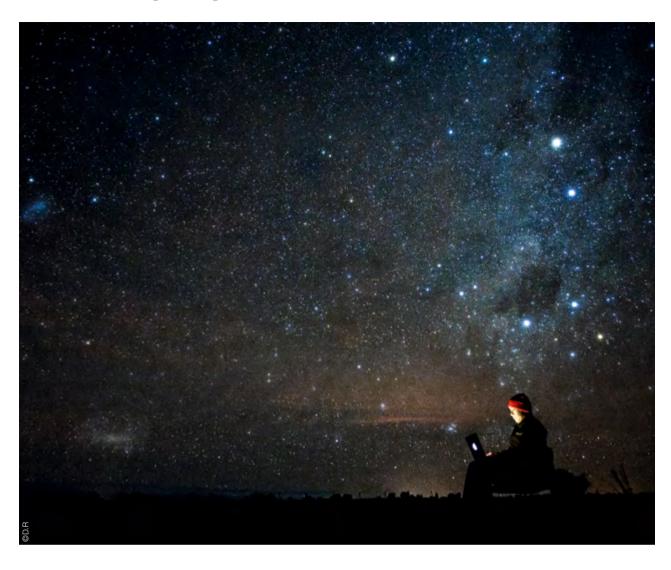
Websites like NomadList collaborate with digital nomads from around the world to list and rank hotspots for living and working remotely.

Considering factors such as living costs, climate, access to internet and safety, the List helps aspiring and seasoned digital nomads decide their next destination.

At the time of publishing highest

At the time of publishing, highest ranked cities include Canggu, Bali at number one, with top marks in affordability, climate and safety; followed by Chiang Mai, Bangkok, Prague, Buenos Aires and Mexico City. Average living costs for the topbilled cities range from USD \$1,200 to \$1,500 per month; a fraction of London's \$3,854 or Los Angeles' \$4,376.

As for visa regulations, spots throughout South East Asia and Eastern Europe tend to be more flexible, allowing many nomads to live indefinitely, or require a simple hop over the border into a neighbouring country for a few days before visas can be renewed. For example, Thailand currently allows fly-in tourists to stay for up to 30 days before having to do a 'visa run' into neighbouring Cambodia, Laos or Vietnam, after which, a new visa is issued. Longer 90-day business visas can also be acquired, for digital nomads planning on making Thailand home for a few months or more.



#### The benefits of employing digital nomads

The location independent lifestyle of a digital nomad isn't just attractive to nomads themselves, but to the corporations that employ them. As our job market continues to be affected by automation and the digital age, companies are having to adapt quickly and turn traditional workplace arrangements on their heads.

"Working with decentralised freelancers and contributors means that I have access to a huge global talent pool. I can focus solely on ensuring I have the most exceptional talent possible working on my projects, without the nitty gritty of day-to-day staff management and expensive overheads like running an office. It works for me, and brings a

truly global perspective to our work," says Alice Armitage, a marketing and communications specialist and digital nomad from Melbourne, Australia. It isn't all sunshine and beachside cocktails, however. The life of a digital nomad, particularly for those who freelance, does come with its share of drawbacks, not least of which includes the 'feast or famine' cycles of work and the lack of routine.

"Working online has its ups and downs. It took a long time to build up to a regular and liveable income. And day-to-day motivation can sometimes be a struggle without the regular routine of a 9-to-5 office job. But I can work wherever I want... with whoever I choose," says Peatfield. "I'm in Thailand right now.

I can see the ocean from my bed, and I wake up to chattering monkeys instead of London's sirens. Any drawbacks are vastly outweighed by the bonuses."

# THE HOUSE OF ROLLS-ROYCE CELEBRATES MOST SUCCESSFUL YEAR EVER FOR BESPOKE





Following the House of Rolls-Royce's recent announcement of the highest annual results in its 115-year history, the marque reflects on some of 2018's finest examples of Bespoke engineering, design and craftsmanship. Rolls-Royce shuns mass-luxury 'tick-box' options in favour of Bespoke creations that no other manufacturer can achieve.

2018 will be remembered as one of the most ambitious years for the marque's Bespoke Collective. Enjoying unprecedented demand for its Bespoke creations, customers are offered near-limitless opportunities to bring their own personal vision to their Rolls-Royce. The marque has an expertly honed understanding of the super-luxury market's requirement for personally tailored and finely crafted items that are more frequently found in the world of horology, super-yachts, architecture and private aviation.

Each motor car is crafted by hand at the Home of Rolls-Royce, in Goodwood, West Sussex, which is acknowledged and celebrated as a Global Centre of Luxury Manufacturing Excellence.

#### Phantom 'Whispered Muse'

Rolls-Royce Phantom 'Whispered Muse' is a contemporary masterpiece that reinterprets Charles Sykes' original drawings of the Spirit of Ecstasy. This remarkable Phantom demonstrates Rolls-Royce's unrivalled leadership in the art of luxury. Whispered Muse's design embraces Phantom's unique glass 'Gallery', an area in which to exhibit unique works of art and design, by incorporating a sculpted silk adaptation of the Spirit of Ecstasy, created by British artist Helen Amy Murray. The feminine form of the 'Graceful Little Goddess' is echoed throughout the Bespoke treatment of the motor car. As a finishing touch, the Spirit of Ecstasy is crafted from Rose Gold – a first for Rolls-Royce Motor Cars' Bespoke division.

#### Commemorating the Czechoslovak Squadrons of the Royal Air Force

An impressively creative twist on Dawn delivers an important narrative that pays homage to Czech and Slovak airmen who served in RAF squadrons No. 312 and No. 313 during the Battle of Britain. The livery of Spitfires used by these Czechoslovak Squadrons inspired the Dawn's solid Grey exterior and Black coachline. Inside, the door flight on the driver side carries the motto of the 313th Squadron: "Jeden Jestráb Mnoho Vran Rozhání" ("One hawk chases away many crows"), while the passenger side commemorates the guiding principle of the



312th Squadron: "Non Multi Sed Multa" («Not many, but much»). Intricate embroidery on the headrests depict the badges of the two squadrons and between the rear seats is an interpretation of the Rolls-Royce Merlin engine that powered these famous fighter planes. Inspired by original blueprints and engineering drawings, the detailed needlework enhances the technical and high-precision character of this significant motor car.

#### Scarcer than Gold – the Ruthenium Phantom Gallery

Another outstanding example of Rolls-Royce's pinnacle motor car is a highly Bespoke Phantom known as the 'Gentleman's Tourer', which presents an aesthetic carefully tailored for trans-continental Grand Touring. The interior is a masculine, operational space, created for long, ultra-luxurious journeys. One feature in particular highlights the technical modernity of this motor car – the Gallery is fashioned from ruthenium, a precious metal from the platinum group. With only 20 tonnes mined annually – compared

with 2,500 tonnes of gold – this is an especially precious addition to a contemporary Phantom.

#### Silicon Valley meets Black Badge

Google's Vice President of Engineering and a well-known car enthusiast, Benjamin Treynor Sloss, took delivery of a very personal Rolls-Royce Dawn Black Badge at 2018's Pebble Beach Concours d'Élégance. The Bespoke Collective at Rolls-Royce reinterpreted the vellow-and-blue colour scheme favoured across the rest of his collection, inspired by the colours of the Modenese flag. A new, intense deep yellow named 'Superflare' is paired with the darkest of navy blues named 'Pikes Peak Blue' - due to Mr. Sloss's interest in the king of timed hill climbs. The vivid colour scheme is continued throughout the interior, with the seats, dashboard, tonneau cover and rear seat 'waterfall' clad in Navy Blue leathers, highlighted with Bright Yellow seat piping and stitched Double-R headrest logos.

#### Phantom in Fuxia

A Bespoke Phantom was delivered in

2018 to renowned collector, Michael Fux, during Monterey Car Week. The Phantom was his eleventh Bespoke model from Rolls-Royce Motor Cars, following the 'Dawn in Fuxia' that was handed over during Pebble Beach 2017. As with a number of his other cars, the Phantom is finished in a truly unique paint colour, which is his alone to use - 'Fux Intense Fuxia Pearl'. Carrying over some of his favourite hues from earlier cars, the interior is trimmed in a combination of vibrant purple 'Fuxia' and 'Arctic White' leather. This striking Phantom joins Mr Fux's collection of more than 140 unique motor cars, which he uses to help raise funds for his charity - the Michael Fux Foundation - providing support to children and their families at the Miami Children's Hospital.

#### The Silver Ghost Collection

In 2018 Rolls-Royce paid homage to the original Silver Ghost with the creation of 35 Bespoke examples – the 'Silver Ghost Collection'. These motor cars boast carefullyconsidered references to the past: a solid sterling-silver Spirit of Ecstasy,



a hammered-copper insert that pays tribute to the material in the original's engine bay, and the newly created hallmark 'AX201', a tribute to the famous registration plate. Further references to the model's heritage include open-pore Tudor Oak veneer with silver inlays throughout the cabin and a Bespoke coachline that incorporates 100% pure silver particles.

#### Adamas – the darker side of contemporary craftsmanship

Rolls-Royce unveiled Adamas in 2018, its first ever Black Badge Collection, comprising 40 Wraiths and 30 Dawns. The character of these motor cars is reflected by the Adamas name, meaning 'untameable' or 'invincible', with the resilience of a diamond. These Wraiths and Dawns showcase a darker side of contemporary craftsmanship, with unbreakable carbon structures woven into the motor cars to create a beguiling beauty that captures the rebellious spirit of Black Badge. For the first time, the Spirit of Ecstasy is formed from machined aerospacegrade carbon fibre, while the

dashboard clock is encrusted with laboratory-grown black diamonds.

Wraith Luminary Collection
This 'highly charged' series of just
55 Wraiths presented a world first
for Bespoke craftsmanship. On
opening the coach doors, the owner
is met by a truly innovative
statement of modern luxury, with
intricately perforated Tudor Oak
wood veneers admitting light from
an array of 176 LEDs. The wood is
sourced from the forests of the
Czech Republic, selected for its
depth of colour and the density of
the grain structure.

Rolls-Royce's Bespoke engineers developed a unique shooting star headliner, adding a playful aspect to the configuration of the 1,340 fibre optic lights. Further technical mastery is showcased through a unique stainless steel hand-woven fabric used to highlight sections throughout the cabin.

#### **Dawn Aero Cowling**

2018 saw the transformation of Dawn. A Bespoke, lightweight 'Aero

Cowling' tonneau cover is fixed in position over the rear seat area, creating a roadster-style motor car that can still be converted to a full four-seater when desired. Crafted from ultra-lightweight carbon fibre and aluminium, the Aero Cowling is sculpted to funnel airflow for enhanced comfort, and can be matched to your personal specification of Dawn.

#### **Cullinan Viewing Suite**

The Rolls-Royce Viewing Suite is automatically deployed at the touch of a button. Two rear-facing, beautifully contemporary, fine leather chairs and a cocktail table gracefully emerge from within the rear compartment - creating a luxurious viewing platform from which to take in the surroundings; whether that be a sporting engagement or some of the world's most breath-taking vistas. The launch of this feature previewed the near-limitless opportunities for enhancing Cullinan with highly Bespoke modules to suit all manner of lifestyle requirements.

## THE STARTUP MIND-SET

### Why corporations need a startup mind-set



Director and Senior Partner of Tomorrow Street, Neil Cocker discusses how Tomorrow Street can help bridge the gap by linking together the mind-sets and strengths of established corporations and innovative startups.

There is so much hype about digital, but away from all the noise the simple fact remains that we are living through an industrial revolution. Tech companies have created a new dynamic for everyone, and the traditional boxes and silos used to characterise businesses and the people within them are losing relevance. Now it is the ability to be flexible and adapt to change rapidly that gives a company a real edge. For corporates, collaborating with startups to implement new products is a powerful way of learning how to think differently and transform business functions.



According to Neil Cocker, Director and Senior Partner, "Organisations that don't move fast to adapt to this new world won't survive" which has always been the case in any industrial revolution.

Speed is at the heart of digital transformation, but traditional companies have much longer cycles of change. Major change involves navigating through multiple layers of complexity - through quarterly and annual business cycles, linked to strategies with a three to five-year lifespan, while synchronising multiple business units and thousands of employees – a sort of 3-D chess game with the pieces changing all the time. In addition, ingrained habits, risk aversion and fear of change slow down or often kill off positive initiatives. Tomorrow Street is at a crossroads where the entrepreneur culture meets the corporate world. "We are in an ideal position to help both sides empower each other by doing what they do best." Established corporations are strong in aspects such as global scale, risk management, strategic planning, drawing on extensive networks of experts or training. Meanwhile, startups excel at getting things done overnight, changing direction almost in real time, being fearless, learning from mistakes and being creative. "Our mission is to

connect the two in order to share best practice from both worlds, and ultimately deliver new products to the corporate customers and in turn generate revenue for the startup. In the end, success relies on a very simple dynamic – having very honest conversations about how you can help each other, and staying true to your word", adds Cocker "organisations that don't move fast to adapt to this new world won't survive."



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## AN INTERVIEW WITH GARRY KASPAROV

During my trip to New York to cover the world championship, I found myself in the press room between the New York Times and the Washington Post. When I deplored the absence of Garry Kasparov, they could not help laughing. I knew that Garry had created a competing federation of FIDE in the 90s and campaigned - unsuccessfully - for being referred to the federation in 2014, but I found it unfortunate for chess that such an iconic figure was missing in the city where he resides. When I said that I would like to interview him, that triggered a second volley of laughter. Stung, I sent an email a few minutes later. And the interview was planned.

Written by Jérôme Bloch

#### You run several foundations promoting chess around the world. Why should people play chess?

The best thing about chess is that everyone gets something different from it. First off, it's fun. Chess has survived and thrived for centuries because it is very enjoyable for people of any demographic, age, gender, rich or poor and at any skill level. You can enjoy it as a casual hobby or enjoy the rich artistry and literature of immersing yourself and raising your level. For kids, it builds concentration and mental discipline. For everyone, it develops creative problem solving. And studies show that cognitively demanding activities

like chess can delay and combat dementia. My Kasparov Chess Foundations around the world are dedicated to bringing chess into the classroom curriculum because of all the proven benefits for kids, and we've had great success.

#### Players like Carlsen & Karjakin use computers a lot. Do you think that this has made the game more predictable and less attractive?

The use of computers is like the use of books, only accelerated: it still depends on what the human does with all of this knowledge. If the professional game is more predictable today, it's not because of computers, but because the players

themselves aren't working enough to innovate. In fact, the use of strong computer programs and databases and encourage players to try out wild and entertaining variations they would otherwise be afraid to try. But few do.

#### How are machines impacting our economies today?

The same way they always have, by taking over tasks from humans at a faster and faster pace. This makes us more productive, and potentially more creative as machines take over mundane and laborious work. This has been true since the first machines were invented, and the

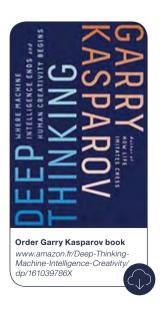


worries today are similar, about job losses. It's different now because instead of agriculture and manufacturing, the machines are coming after the work of people with college degrees! But I am an optimist in this regard. If we humans continue to dream big, explore, and create new industries, there will always be jobs, even if we cannot imagine what they are today.

Do you think that the World Championship should adapt its format in order to make the sport more attractive for mass-media and the public? (For example with a blitz game after each draw, or by

#### forcing players to use a larger repertoire of openings)

Chess should be willing to experiment, and I'm in favor of a wide range of events, including rapid, blitz, and trying out balloted openings, where the openings are selected at random in advance. But we shouldn't forget that classical chess has had tremendous successes, and should still be our centrepiece. Compare it to classical music. Justin Bieber is more popular at the moment, but people will always listen to Bach, Mozart, and Laurent Menager!



#### ARCH SUMMIT

### Bridging the gap between corporates and startups

## LET'S ARCH 2019





#### Just in time for tomorrow

In May 2018, the inaugural Arch Summit brought 200 startups and scaleups together with hundreds of tech companies and multinationals for a dynamic two-day programme of innovation showcases, startup pitch competitions, keynote speeches, and tech roundtables. The vision was to connect startups with decision-makers from the world's leading companies to accelerate innovation in corporations and drive growth for startups.

Arch Summit was conceptualized by Tomorrow Street CEO, Warrick Cramer to give startups a platform to interact with decision makers that can help accelerate their business. "It's normally very difficult for startups to meet corporate CEOs directly. They have to work their way up the chain, and many CEOs are blind to the startups that are out there," said Warrick Cramer, CEO, Tomorrow Street. "Tomorrow Street

is part of Vodafone as well as Technoport, so we can connect to a network of global suppliers, investors and startups."

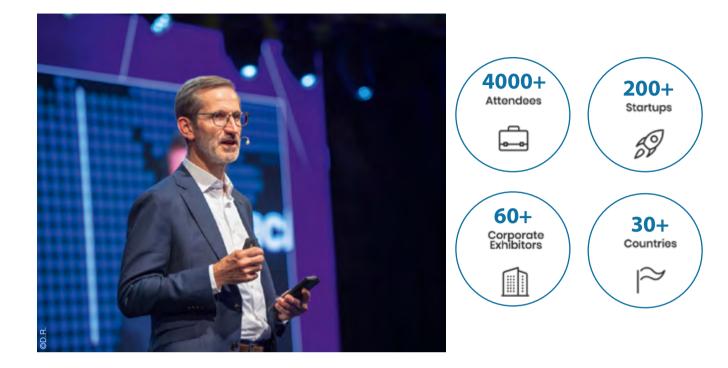
Four months passed between the event's concept to its completion. Even in this short span of time, Arch Summit was successful thanks to the Tomorrow Street's team dedication and motivation, its partners and resources. It was an idea that everyone supported and worked hard to make happen for the benefit of innovation. Warrick Cramer, CEO of Tomorrow Street commented, "Innovation is a field in which it's easy to get lost. In business, remaining focused is

essential to ensure success. So, the focus of Arch Summit was particularly on areas of business like the internet of things, artificial intelligence and cyber security that fit with large corporations' need to pull innovation into the procurement business."

#### An arch over the gap

The corporate and startup worlds often appear very far apart. Startups struggle to navigate their way through the complex structures of global companies to find the key corporate decision-makers.

Meanwhile, the same decision-makers are often actively seeking startup solutions, yet they cannot



find them because of the loss of visibility within layers of the company. Arch Summit aspires to bridge this gap by creating a networking opportunity for entrepreneurs with disruptive ideas to engage with executives seeking new products to deliver value to their companies. As the digital age accelerates, the need to find and deliver the right solutions to improve customer experience is crucial to the strategies of all multinational firms. Arch Summit provides the perfect platform to find these latest solutions.

#### Award-winning innovation

Highlighting the disruptive impact of tech innovation, Arch Summit gave out the Disruptive Startup Award. The €150,000 award was won by London-based Verv, a mature-stage startup that seeks to improve the idea of the domestic smart meter by creating a home energy assistant. It measures the efficiency of each electrical appliance in the home while predicting expected electricity consumption up to 24 hours ahead to use artificial intelligence to

manage electrical power. It improves efficiency, cost and minimizes the home's carbon footprint.

Arch Summit also granted the Whoopi Goldberg Female Empowerment Award of €50,000 to StarTalers. This Luxembourgish startup aims to combat gender inequality through sustainable financial investments. The StarTalers program consists of a virtual coach and roboadvisor program that provides financial education, portfolio development tools and a network of women professionals to increase opportunities for women while empowering them to confidently invest!

The third prize, Dell Technologies Social Impact Award, celebrated how technology is able to tackle social issues of today's world. The Belgian startup Qompium won the €50,000 award by presenting their low-cost, scalable and user-friendly health phone applications. Their main app, FibriCheck, uses a smartphone camera to detect the warning signs of dangerous medical conditions such as strokes.

#### Arch 2019

Startups and corporations alike could feel the power and impact that came from their first reunion in 2018. Arch Summit returns on 3-4 April 2019 to continue shaping the tech industry. In 2019, prepare to be amazed. Featuring exhibitions in areas of internet of things, artificial intelligence, cybersecurity, 5G, robots, mobility, blockchain, virtual reality and augmented reality; Arch Summit will connect its attendees with unique opportunities to witness the latest tech solutions. Network with business leaders from IBM. Google, Nokia, Dell and many more. Startups will have the chance to compete again to win 100K€ in revenue with a global company.

(The Arch Summit was held on May 3rd and 4th in Luxembourg. The event was organised by Tomorrow Street and brought together tech leaders, high-level speakers and decision makers from around the world.) ■

## HEAR IT FROM THEM:



66

When you see the power, the passion and potential of the people – from startups and also from big corporations, Arch Summit is just amazing, really getting these people together."

Sonia Hernandez, CEO of Vodafone Malta



D.R.

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World Wide Technology were proud to be a key sponsor for the Vodafone Arch Summit 2018. The event aligns with our culture and core values; celebrating collaboration, technology and innovation. We look forward to being a part of the event next year."

Daniel Valle, Chief Technologist Service Providers World Wide Technology



66

IVt has been very interesting in the aspect of seeing how startups interact with the more established companies. Arch summit has been a great opportunity for networking and on an innovation perspective."

Jonathan Donaldson Technical Director of Google Cloud





Arch Summit is providing so many different perspectives, so many different interesting companies that have great opportunities and great potential in a market."

Anton Kathrein, CEO Kathrein



#### 66

Arch Summit was a great success this year, and I'm really looking forward to 2019. I hope you're coming too."

Johan Wibergh, CTO



#### 66

Tomorrow Street and what they are doing with Arch Summit is the best corporate innovation programme for startups in the world today."

Jonathan Nelson CEO & Founder - Hackers / Founders



#### 66

I am here today at the Arch Summit, an event that bring together startups and female talents. I am here today to talk about female empowerment and on how to get women to the next level and on how to get the courage to get the job that you deserve."

Georgia Paphiti CFO at UBS



#### 66

I am blown away by the way that Arch Summit has been assembled. It's been a top-notch gathering."

Yao Huang CEO & Founder of The Hatchery





Thrilled about the quality and the diversity of the startup community I discovered at Arch Summit."

Xavier Bettel Prime Minister of Luxembourg

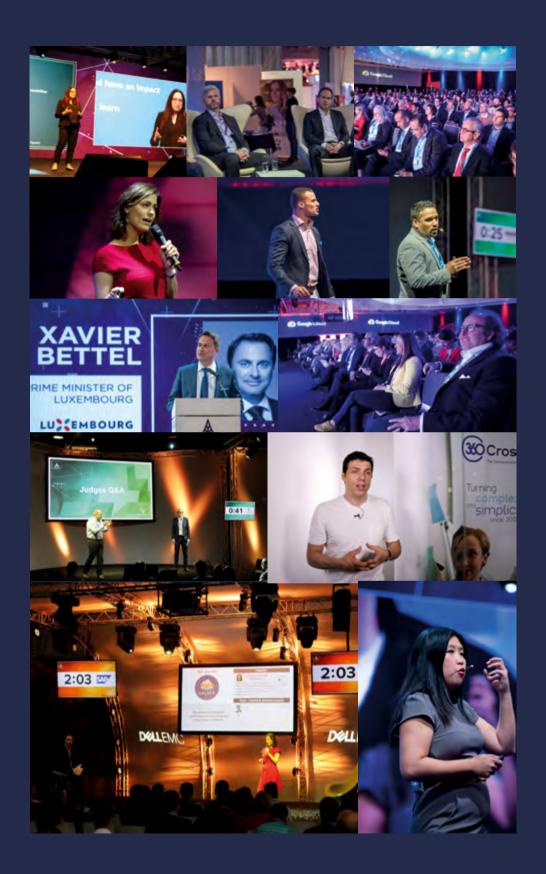
## ARCH SUMMIT 2018

Arch Summit was held on May 3rd and 4th in Luxembourg. The event was organised by Tomorrow Street and brought together tech leaders, high-level speakers and decision makers from around the world. This event provided a great occasion to take stock of trends in the innovation sector via three startup pitch with \$250 000 prize in total.

MORE INFORMATION www.archsummit.lu



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## MENTORING DIGITAL ENTREPRENEURS:

#### Bright Sparks





To support digital entrepreneurs and foster a culture of innovation, Vodafone recently launched Bright Sparks last September. A mentoring programme for digital start-ups, Bright Sparks was developed in collaboration with Oxford University Innovation, an organisation set up to help University staff and students apply their expertise and research for wider social and economic benefit.

Oxford University Innovation selected 10 digital start-ups[i] to participate in Bright Sparks based on their areas of expertise, stage of development and enthusiasm for the project. The 10 start-ups will each have a Vodafone mentor who will work with them to support early stage digital innovations, providing specialist skills and commercial guidance.

Brendan Ludden, Head of Licensing and Ventures, Physical Sciences at Oxford University Innovation, said: "Our 10 digital start-ups who are taking part in the Bright Sparks mentorship programme are developing some of the most innovative solutions to societal issues from transport to healthcare. We chose to partner with Vodafone because of their world-leading position in mobile technology and markets. With Vodafone mentors providing guidance in areas like digital, strategy and marketing, our 10 start-ups will have access to vital skills they need to thrive."

#### [i] The 10 start-ups are:

- 1. Care Compare for care and physiotherapy services
- 2. Land making bicycles easily affordable and available to everyone, everywhere

- 3. Global Jet Watch helping children everywhere reach for the stars
- 4. Greater Change helping the homeless with cashless giving
- 5. Oxtractor delivering actionable insights from social data
- 6. Pidge the ecosystem platform for amateur sports teams
- 7. Pinboard one-to-one student skill sharing
- 8. SwitchThat simple, unified automation for smart properties
- Total Mama revolutionising pregnancy by empowering women with information and insight
- 10. Ufonia your talking AI doctor■

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INNOVATE - Launch new products and digital services - monetise IoT opportunities, enterprise services such as SD-WAN, Cloud and Virtualisation.



# VODAFONE PORTUGAL POWER LAB PLUGS INTO THE TOMORROW STREET CULTURE

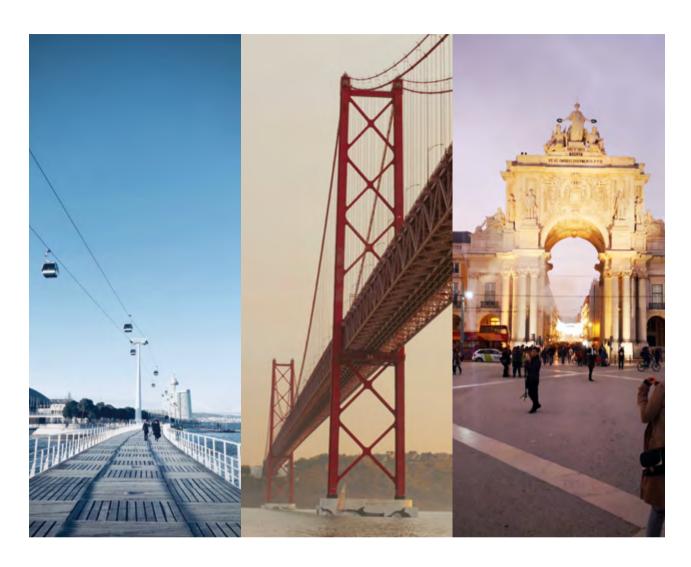


Fátima Cardoso and Ioão da Silva Guerreiro from Vodafone Portugal management team leading the Vodafone Power Lab Innovation Centre in Lisbon. Cardoso and Silva Guerreiro see that the country's startup scene is brimming with innovation. The country's potential is on its way to being realised thanks to co-operation between the group's Power Lab team and Tomorrow Street in Luxembourg.

The Power Lab programme was established by Vodafone Portugal in 2009 in conjunction with Audax-ISCTE to foster innovation and entrepreneurship in Portugal by backing projects initiated by informal groups of people or startups of which the goals are in line with Vodafone's business strategy and activities. Fatima Cardoso joined the Power Lab team in June 2017, and is currently heading the innovation centre.

Joao da Silva Guerreiro is the head of supply chain management for Vodafone Portugal. Two years ago, after meeting Warrick Cramer – now CEO of Tomorrow Street – they had an interesting discussion about entrepreneurship and the importance of being persistent and pursuing one's ideas as an entrepreneur. From there, they saw the opportunity to connect Power Lab with Tomorrow Street to

involve Portuguese startups in the scouting process. While this wasn't the main focus for the supply chain management in Portugal, it proved very moticating for the team to work with potential new suppliers. The Power Lab team learned a lot about working with startups, and it became part of what the team does in Portugal. The main technological focus areas of the Lisbon startup environment are broad. They tend to be the communications networks, but there is an interest in the internet of things and smart city solutions. The projects and ideas between rival startups have resulted in a growing portfolio of smart city solutions. Artificial intelligence, virtual reality and augmented reality projects are also gaining traction. The development of 5G is opening up many new opportunities. While Power Lab is one of many



incubators in Portugal, they don't see the others as competition. "To be successful everyone needs to be open and startups need to exchange knowledge and experience" said Cardoso. She states that having an inclusive environment is a big strength because it allows people to share ideas. Power Lab is also active in Porto and Coimbra in an office environment with other incubators, and the community helps drive collaboration.

When a new startup joins the Power Lab team, they start with a kick-off meeting with another team member. For example, a firm developing a credit management platform will meet with the related team at Vodafone Portugal. They begin to define a project to launch with Vodafone, whether a pilot scheme or the development of a service, and

hold monthly meetings to follow up until the end of the programme. Today, startups tend to have good skills in how to build and develop their own projects. That is why Power Labs switched their focus on the teaching component to focusing on creating a network of contacts, ramping up sales to a bigger client base and communicating their ideas and services. This is all to help them gain a larger share of the market. The connection with Tomorrow Street continues to be a significant one by enabling innovative Portuguese firms to plug into activities and participants in the broader Vodafone model, offering them the opportunity to scale up if their idea is a good one. Vodafone Portugal's startups also participate in Tomorrow Street events such as the Arch Summit. Six

startups had the opportunity to get in contact with some of the leading tech startups at Arch Summit. They connected with high-level competitors and gained useful knowledge and learned about their gaps and promising development areas. By having the competition juries as significant venture capitalists, startups were able to better understand the sector's key needs. They are excited to be a part of Arch Summit 2019. "I was delighted that all our startups performed well and did the country proud, as well as holding useful discussions with corporates. We see a lot of potential for their products to be used within Vodafone," said Silva Guerreiro.

#### ASTEROID DAY



Asteroid Day, an official United Nations event, raises global awareness about the hazards asteroid impacts can cause to Earth. It promotes knowledge on asteroids, the damage they can cause, as well as what can be done to protect the Earth, our communities and the future. The day is celebrated through educational programmes and diverse events spanning from lectures to live concerts - all show the significance and need for increasing detection and tracking of asteroids. Every year, Asteroid Day is held on June 30th to memorialize the anniversary of Siberia's Tunguska Asteroid Impact in 1908 - the largest and most damaging asteroid impact documented in international history.

#### The creation

Asteroid Day was originally founded by astrophysicist (and celebrated guitarist for Queen) Brian May, filmmaker Grigorij Richters, Apollo 9 astronaut Rusty Schweickart, Chief Operation Officer for B612 Danica Remy and the late world-renowned scientist Stephen Hawking. They partnered with B612, an American non-profit organization focused on Earth's protection through the early detection of damaging asteroids, as well as the Association of Space Explorers. In 2016, the United Nations declared Asteroid Day as an international event.

#### Fast forwarding the past to the future

The Luxembourgish government worked alongside

Asteroid Day in 2017 to broadcast educational programs throughout the world in 2017. The production starred global leaders and top experts in both planetary science and defence.

**30JUNE** 

In 2018, the Tomorrow Street team joined the movement by supporting the organisation and running of Asteroid Day. This time, educational STEM activities were taught throughout Luxembourgish schools and the live broadcast attracted 17 million viewers worldwide. One of the impactful speeches by NASA Astronaut Ed Lu also took place in the Tomorrow Street office.

Asteroid Day keeps growing, keep an eye out for June 30th, 2019! ■



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