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SINGAPORE AND THE NETHERLANDS HUBS FOR INNOVATION

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The Netherlands places strong emphasis on cyber security, led by Prime Minister Mark Rutte, who recently received a special report with recommendations on safeguarding digital platforms. PHOTO: ANP BART MAAT

Safe and sound

A robust fintech and cyber security ecosystem keeps the Netherlands' and Singapore's financial systems in good hands

KATRIJN DE RONDE
SPH Content Lab

THE Netherlands and Singapore, both tech-savvy financial hubs, are shaping up to be the home of fintech wizards and cyber security

warriors who keep our banking systems safe.

In 2008, the global financial crisis laid bare how fragile the system really was. On the surface and in the media, there was much talk about credit default swaps and bad mortgages. Behind the

scenes, the financial industry was scrambling for survival.

"Some household names among financial institutions basically still had their clients' data in paper files on a shelf," says Mr Gerben Visser, co-founder of the Singapore FinTech Consortium; the annual fintech conferences InsurTech and BlockCon; and strategic partner of Lattice80, the world's largest fintech hub.

Since then, there has been a wave of transformation and re-

organisation among traditional financial institutions. But the behemoths are fighting an uphill battle. While they have been moving their business into the digital realm, the tech start-up sector discovered the potential of digital financial services, and introduced the likes of mobile banking, peer-to-peer payments and bitcoin.

Working together

"The rapid pace of fintech innovation brings challenges to bank-

ing regulation and cyber security," says Mr Visser. "On the other hand, it provides opportunities to financial systems."

Hackers, phishers, fraudsters and financiers of crime and terrorism were quick to discover the opportunities financial technology offered. Fortunately, cyber crime fighters were not far behind.

Dutch knowledge institution TNO and Interpol in Singapore collaborated on specialised training to fight cyber crime, especially on the invis-

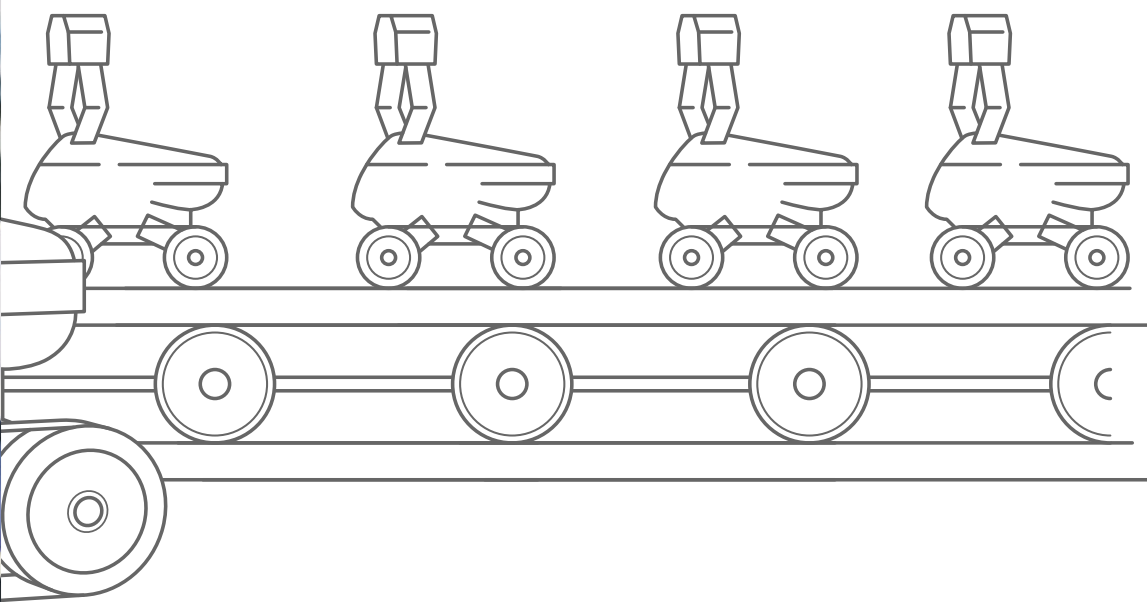
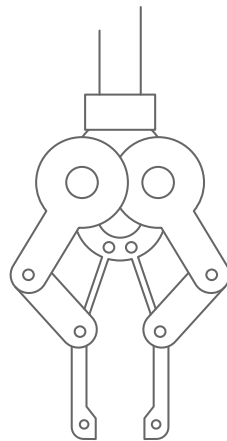
ible or Dark Web. The organisations recently signed an agreement to continue this collaboration and to share experience and expertise.

TNO and Interpol will join hands to develop educational material for regulators in order to weed out criminal activities such as ransomware (viruses that hold someone's computer hostage until payment is received) and the financing of terrorism.

CONTINUED ON C6



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Safe and sound

CONTINUED FROM C5

Blockchain technology, which enables monetary or data transactions without having to go through a third-party organisation such as a bank, is currently viewed as the next big disruptive technology. “It can create a new set of currently unforeseen societal and technological consequences, with regulatory, business and social impacts”, says Mr Mark van Staalduijn, financial technology expert at TNO. Together with Delft University of Technology (TU Delft) in the Netherlands and the Singapore University of Technology and Design (SUTD), TNO will set up the Blockchain Security Laboratory. By attacking blockchain technology in a test-bed setting, TNO, TU Delft and SUTD hope to regulate, design, deploy and certify cyber secure blockchain applications. Bitcoin, the most famous blockchain application, is known to have been used for nefarious activities. But the technology itself can be a much stronger force for good, according to Mr van Staalduijn. Its incorruptibility is exactly why data and financial transactions can be done without a middle man. “Blockchain technology is currently the driving force behind thousands of start-ups,” he says.



The Netherlands is home to four technological universities, which work closely together with the industry in research and development. This is part of the “triple helix” to foster innovation – collaboration between government, knowledge institutions and businesses. PHOTO: NADIAFOTOGRAFEERT

Open digital societies

Many start-ups are concentrated around financial hubs with fast Internet connections and excellent research institutions, including Singapore and the Netherlands. The Netherlands has one of the most open digital societies in the world, with a whopping 93.7 per cent of the population actively using the Internet, combined with an average Internet speed of 17Mbps. It is home to global financial players such as ING, ABN AMRO and Rabobank. Not surprisingly, the country is also a global leader when it comes to keeping its digital community safe. Singapore, already one of the world’s leading financial centres, is adding fintech to its vast portfolio. The scene is being set, with commitment from the Government and a push from traditional banks such as OCBC and DBS. Singapore and the Netherlands are kindred spirits when it comes to a love of innovation and strong support for companies. The Netherlands was named “world’s high-tech start-up capital” by the respected tech magazine TechCrunch. Booking.com began as a Dutch start-up, just like the large file sharing service WeTransfer. Article sharing service Blendle has gained the interest (and investment capi-



The Netherlands has developed into a leading centre for knowledge on cyber security. PHOTO: HAGUE SECURITY DELTA

tal) of the New York Times. Dutch fintech start-up Adyen is quietly developing into an important global player. The platform offers a single payment solution to businesses everywhere in the world, connecting the customer directly to over 250 payment methods such as Visa, Mastercard, PayPal, Tenpay, Apple and Android Pay. By outsourcing the back office and payment infrastructure, businesses can concentrate on their core products and services. Retailers such as Mango, Superdry and Crocs and airline company KLM are increasingly looking to Adyen for financial services, joining the likes of digital companies such as Uber, Airbnb, Netflix, Spotify and Groupon. **Building an ecosystem** The Singapore FinTech Consortium plays a key part in building a robust financial ecosystem. It sees

its role as the builder of a platform where financial professionals, tech specialists and regulators meet and collaborate on the next generation of financial services. In today’s global financial world, it is not all about the banks — related institutions will also need to rapidly catch up. The lessons the banking industry learnt in 2008 on the importance of digitalisation, for instance, passed the insurance industry by. “The insurance business is still deeply rooted in the past,” says Mr Visser. “Even during the worst of the financial crisis, most people kept paying their premiums, so the money kept coming in.” This is why Mr Visser and his company set up the InsurTech platform, and why he moved into the fintech co-working space Lattice80, located in Singapore’s Central Business District.

“Lattice80 is the world’s largest co-working space for fintech professionals”, he says. “It’s a neutral platform, a so-called ‘demilitarised zone’. This

is where the parties with vested interests, market participants and the regulator can work together on future-proofing our financial system.”

Strong ties

The Dutch Chamber of Commerce (DutchCham) brings together Dutch corporates in Singapore, provides them easy access to business opportunities, knowledge and expertise, and represents and promotes their interests in Singapore. President Ynse de Boer says: “Our vision is a DutchCham that harnesses the professionalism and strength of our large orange and corporate members, as much as the entrepreneurship and dynamics of our smaller and start-up members. At the intersection of small and

large, fruitful business connections and opportunities will emerge. “Singapore and the Netherlands enjoy a close and healthy bilateral economic relationship, with the Netherlands being the second-largest investor in Singapore. DutchCham mirrors this relationship with strong partnerships and cooperation with Singaporean counterparts. Our activities aim to amplify the brand of Dutch business overseas, particularly with regard to water and maritime, sustainable business and collaborative innovation.”



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SINGAPORE AND THE NETHERLANDS HUBS FOR INNOVATION

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Future forward

The Netherlands and Singapore are pushing the envelope in robotics technology

KATRIJN DE RONDE
SPH Content Lab

“WE SHALL have to earn our own living with our hands and our brains,” Dr Albert Winsemius, long-time economic policy adviser and friend of the late Minister Mentor Lee Kuan Yew, famously said on the topic of the Singapore economy.

The Dutchman could just as well have been talking of his home country. Like the Netherlands, Singapore is looking to future-proof its strong manufacturing industry. Robotics, with its vast untapped potential, could be the answer.

Dutch global surveying company Fugro searched for the missing Malaysia Airline flight MH370 with autonomous underwater vehicles to provide detailed scans of the deep ocean floor. And this year, six convoys of self-driving trucks drove from all over Europe to the port of Rotterdam.

In addition, the Rotterdam port authority, like the Port of Singapore, is running pilots with driverless vehicles inside its industrial zone.

Industrial change

The change that robotics bring to our world is not confined to hard grunt work on the frontiers of surveyance, logistics or the manufacturing floor. It is more than a way to enhance productivity or solve issues of ageing and labour shortage. It may even disrupt the entire industrial process, from the labour population to the regulation.

“We offer an integrated solution,” says Mr Paul van IJsselstein, chief executive officer of Stratagem and president of the Dutch consortium ICRIT.

The consortium specialises in the maintenance, repair and over-

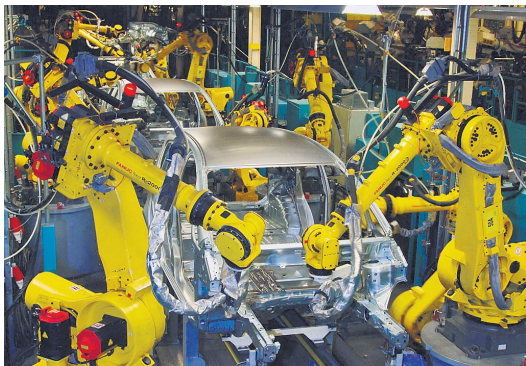
haul of airplanes. Stratagem specialises in developing products and services based on innovation.

One such product, the Laser Coating Removal Robot and the Automated Painting Robot, a fully autonomous robot platform that can strip and paint aircraft in a much more sustainable way, is currently in development by new Dutch start-up LR Systems.

Mr van IJsselstein says: “We can’t just sell the robotics and any other new products. We need to offer a complete solution, which includes new training methods, the way these products are used in a hangar or in a workshop, as well as new costs and business models.”

A Memorandum of Understanding has been signed with the Singapore Airlines Engineering Company to test and certify the laser coating removal robot.

“Stripping paint off aircraft is normally time consuming and dirty,” says Mr van IJsselstein. The use of robotics would mean a healthier work environment and a more efficient process. This could help to solve the labour crunch, if combined with innovative training methods.



Stratagem and the consortium work not only with their respective clients and knowledge partners, but also with original equipment manufacturers and regulators, who need to approve the processes from an airworthiness point of view.

Stratagem’s working method means a new way of developing business for Mr van IJsselstein, who has worked for large com-

panies such as Dutch aviation specialist Fokker, air plane manufacturers Airbus and Boeing after a career in the Dutch Royal Navy. But it is one that inspires him.

“We specialise in finding new markets for innovative technology,” he says.

Much in common

The Netherlands and Singapore share many characteristics, such as a thirst for innovation and a love of technology.

Both have a knowledge economy and are gateways to their respective hinterland — mainland Europe for the Netherlands, South-east Asia for Singapore. Both are global powerhouses when it comes to logistics, and both have strong presence in the global aviation business. Both countries also have a relatively small home market, relying on the regional — increasingly global — market to drive the economy.

For small- and medium-sized enterprises (SMEs), it can be hard to get access to the global players, says Mr van IJsselstein. This is where a consortium of SMEs, such as ICRIT, can make a difference.

“The companies complement each other. We are able to offer a wide array of services and products because we work together.”

The cooperation with partners such as HOPE Technik and the Singapore Institute of Manufacturing Technology (SIMTech), is aimed at widening the complementarity of technology and product development, and creating global solutions, rather than focusing on regional aspects alone.

Education and training

Stratagem is not the only company to recognise the importance of training and education in an industrial setting. Safety is paramount in many sectors, such as the maritime, chemical and oil and gas



industries, and the importance of training cannot be overstated.

Dutch company XVR Simulation, which offers virtual reality training platforms for professionals called on in emergency situations, is working with Singapore’s Civil Defence Academy to develop local scenarios for the Republic’s emergency response teams.

Dr Winsemius would have applauded the move of these organisations.

There is a second part to his comment on the importance of Singapore’s hands and brains for economic growth: “Keep in mind, that as a rule — brains pay better.”

Above: Laser arm of Stratagem’s laser coating removal robot, which is able to strip and paint airplanes. Left: A car robot in action.

PHOTOS: LR SYSTEMS, HOLST CENTRE



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