

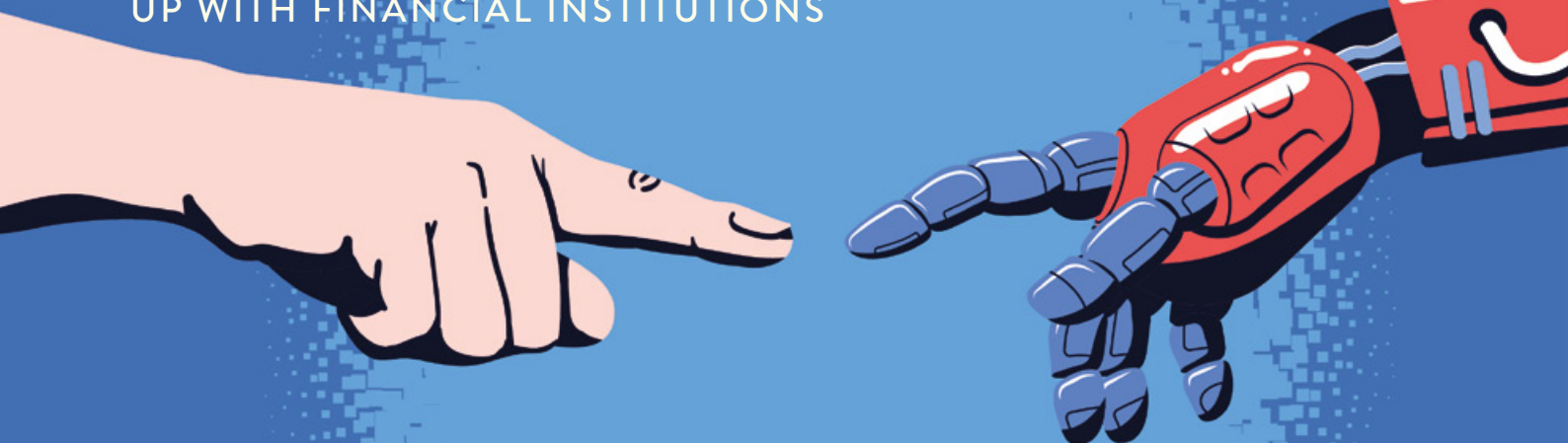
DECEMBER 2018

LEO

THE FINANCIAL CENTRE'S MAG

BEYOND DISRUPTION

WHY FINTECHS ARE PARTNERING
UP WITH FINANCIAL INSTITUTIONS



**UNION INVESTMENT:
WHY WE CHOSE LUXEMBOURG**

**TOKENISATION OF
THE ECONOMY**

**MUDAM:
THE COMING OF AGE**

NICOLAS MACKEL,
CEO, LUXEMBOURG
FOR FINANCE



Dear readers,

Following the elections held in Luxembourg in October and weeks of coalition negotiations between the Liberal, Socialist and Green parties, a new Government was sworn in on December 5th. Many of the familiar leaders are again taking up their key posts for a new term of 5 years. We thus look forward to continuing our excellent cooperation in particular with Prime Minister Xavier Bettel, Deputy Prime Minister Etienne Schneider and above all Minister of Finance Pierre Gramegna, who will also continue to serve as Chairman of the Board of Luxembourg for Finance.

The coalition agreement contains a number of very interesting and promising items around futuring Luxembourg through a variety of initiatives. Examples include the creation of a new Ministry of Digitalisation along with new investments in key areas such as mobility - where international media have picked up the fact that Luxembourg is about to become the first country to make all public transport free to use.

With regards to financial services more specifically, the new government is also committed to continue enhancing Luxembourg's attractiveness both for financial institutions as well as for the talent that helps fuel their growth in Luxembourg. The new government is placing great importance in particular on sustainable finance on the one hand and Fintech on the other.

Our last LEO magazine was dedicated to sustainable finance, and as you will discover in the following pages this edition is focusing on the digitalisation of financial services. I am thus happy to see we are perfectly aligned in our priorities.

As this phenomenon of digitalisation is touching all areas of the financial services industry, we are delighted to have the Chairmen of all three major industry trade bodies give us their take on the future.

Beyond its potential for disruption, we see Fintech above all as a means to innovate financial services, make them faster, more efficient and easier to use, and the creation of the LHoFT (Luxembourg House of Financial Technologies) was an expression of the fact that Fintech is all about cooperation between different players. This is why this edition's dossier features a number of different examples of such Fintech cooperation where start-ups are working with established players as well as the important role that academia plays in driving forward research in partnership with the private sector. Nasir Zubairi from the LHoFT and

Cristina Ferreira from State Street, for instance, explain why Luxembourg is making headway as a centre for RegTech, while the founders of FinTech startups ume and Tetrao provide insight into their solutions for financial institutions to deal with the enormous complexity of regulation and data management.

We are also featuring an interview with Michael Jackson who shares with our readers his deep insights as an established PE/VC veteran of Skype fame who is also becoming an authority on crypto-assets and blockchain.

For our series "Why we chose Luxembourg", we interviewed Maria Löwenbrück from Union Investment, one of the largest German asset managers. She provides an overview of their activities in Luxembourg and how the local financial services ecosystem is supporting their international business.

Last but certainly not least, I encourage you to read the interview of Suzanne Cotter, the newly appointed Director of Luxembourg's fabulous Modern Art Museum MUDAM on her view of art in Luxembourg and her priorities for the MUDAM.

Finally, as the year is drawing to a close, I would like to take this opportunity to wish all of you and your loved ones a fantastic holiday season as well as a happy and successful New Year.

Enjoy the read

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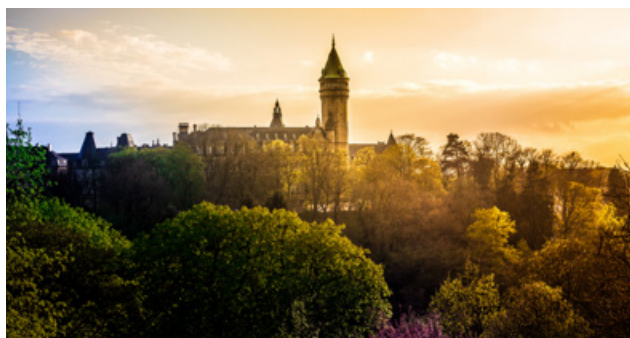
ANY QUESTIONS?

GET IN TOUCH ON TWITTER - @LUXFINANCE

LYXOR MOVES ETF RANGE TO LUXEMBOURG

French asset manager Lyxor, the fully-owned Asset Manager of Société Générale Group, is transferring 19 exchange traded with assets of 4.9bn to Luxembourg.

International asset managers such as MFS, T Rowe Price, Aberdeen Standard, Columbia Threadneedle and M&G and many other asset managers are in the process of consolidating their presence in Luxembourg, which is the largest investment fund centre in Europe and the second largest in the world after the US.



SWISSQUOTE TO MOVE EUROPEAN RETAIL BANKING HUB TO LUXEMBOURG

SWISSQUOTE IS BUYING LUXEMBOURG-BASED INTERNAXX BANK TO SECURE ACCESS TO EUROPEAN UNION MARKETS THAT ITS LONDON HUB FACES LOSING AFTER BREXIT. "WE HAVE ACQUIRED AN ONLINE BANK IN LUXEMBOURG AND OUR RETAIL OPERATIONS IN THE EU MAY BE CARRIED OUT FROM THERE," SAYS CEO MARC BÜRKI.

LUXEMBOURG CONTINUES TO RANK AMONG THE TOP 3 FINANCIAL CENTRES IN THE EU

LUXEMBOURG IS RANKED AS ONE OF THE TOP 3 FINANCIAL CENTRES IN THE EU, ACCORDING TO THREE DIFFERENT RANKINGS THAT WERE RECENTLY PUBLISHED: THE GLOBAL FINANCIAL CENTRES INDEX 24, THE NEW FINANCIAL INTERNATIONAL FINANCIAL CENTRES INDEX, AS WELL AS THE LATEST GLOBAL GREEN FINANCE INDEX (GGFI).

A SUSTAINABLE FINANCE ROADMAP FOR LUXEMBOURG

Luxembourg's Minister of Finance, Pierre Gramegna and Minister of the Environment Carole Dieschbourg, together with Eric Usher, Head of the UN Environment Programme Finance Initiative (UNEP FI), launched the Luxembourg Sustainable Finance Roadmap, with the aim of establishing a comprehensive sustainable finance strategy, leveraging Luxembourg's inherent strengths as a financial centre and contribute to the objectives of the Paris Agreement.

IN THE TOP 10 OF COUNTRIES BEST AT ATTRACTING TALENT

LUXEMBOURG RANKS IN THE TOP 10 OF COUNTRIES THAT ARE BEST AT ATTRACTING, DEVELOPING AND RETAINING TALENT, REPORTS LATEST STUDY "IMD WORLD TALENT RANKING 2018" PUBLISHED BY THE IMD WORLD COMPETITIVENESS CENTRE.



MARIA LÖWENBRÜCK,
MANAGING DIRECTOR,
UNION INVESTMENT

“Today our company manages around 200 investment funds with combined assets of approximately 52 billion EUR.”

MARIA LÖWENBRÜCK

UNION INVESTMENT: WHY WE CHOSE LUXEMBOURG

UNION INVESTMENT, THE LUXEMBOURG-BASED ASSET MANAGER OF UNION INVESTMENT GROUP, IS PART OF DZ BANK, ONE OF THE LARGEST BANKS IN GERMANY. IT EMPLOYS MORE THAN 350 STAFF IN THE GRAND DUCHY. WE SAT DOWN WITH MARIA LÖWENBRÜCK, MANAGING DIRECTOR AND MEMBER OF THE BOARD, TO FIND OUT MORE ABOUT THE COMPANY'S HISTORY, ACTIVITIES AND LONG-TERM STRATEGY.

LFF: HOW LONG HAVE YOU BEEN BASED IN LUXEMBOURG AND WHAT IS THE ROLE OF YOUR BUSINESS IN LUXEMBOURG?

ML: Union Investment was set up in Luxembourg 30 years ago in response to the first UCITS Directive.

Today our company manages around 200 investment funds with combined assets of approximately 52 billion EUR. We offer a wide range of asset classes and investment styles, including equity funds, money market funds, bond funds, balanced funds, umbrella funds, guaranteed funds and alternative investment products, such as private equity and infrastructure funds.

LFF: WHAT IS THE ROLE OF UNION INVESTMENT WITHIN THE DZ GROUP?

ML: The Union Investment Group is part of DZ Bank, the second largest commercial bank in Germany and the central institution of the Genossenschaftliche FinanzGruppe

Volks- und Raiffeisenbanken cooperative financial network comprising more than 900 banks. Within the DZ group, Union Investment is the competence centre for asset management for institutional and retail clients. As at 31 October 2018, the group managed assets 330 billion EUR on behalf of 4,428 million accounts.

LFF: WHY DID YOU CHOOSE LUXEMBOURG?

ML: There are a number of reasons but I would highlight three in particular. Luxembourg is the largest investment fund centre in Europe from which funds are distributed cross-border worldwide. It is also the “go-to” place in Europe for alternative investment funds, such as Private Equity and real estate funds. Secondly, the fund business is integrated into a highly effective financial hub. Evidence for this is the rapid implementation of EU regulations. Thirdly, Luxembourg can offer the human resource skills to support a first class servicing platform.

LFF: WHAT ARE YOUR PRIMARY ACTIVITIES AND HOW HAVE THEY DEVELOPED?

ML: Besides the core asset management services, we offer portfolio management, investment consulting, sales and brokerage support services, as well as investment custody.

Over time we have been successful at spotting trends in the mindset and behaviour of our clients. For instance, sustainability is a fundamental value of our cooperative structure, and we launched a responsible investment fund as early as 1990. This fund has 20 years of experience in the field of sustainable investing and now manages 40 billion EUR.

The Luxembourg financial centre has been built on an open, liberal and constructive dialogue between all the important actors, including the regulatory authority. This has enabled Luxembourg to cope well with challenges and seize business opportunities at the right moment.

LFF: DOES CHINA REPRESENT A BUSINESS OPPORTUNITY?

ML: Yes, indeed; we recognised the potential early on. In 2007, we formed a joint venture with Bank of East Asia and together we set up a Hong Kong-based asset management company specialising in Asian equities and fixed income. BEA Union Investment Management offers investment solutions to retail, institutional and pension clients in Hong

Kong and continental China. In the opposite direction, in 2014, we set up an investment fund called UniInstitutional Asian Bond and Currency Fund managed by BEA. This fund is distributed in Luxembourg, Germany, Denmark, Austria, Finland and Switzerland.

We welcome the various Chinese investment schemes offered onshore and offshore. In recent years, these schemes have been fully utilised by our Luxembourg investment funds for investment into China (e.g. CIBM, Shanghai Hong-kong Stock Connect). Our German affiliates intend to use the offshore accesses offered by Stock Connect and Bond Connect shortly.

LFF: HOW HAS THE DISTRIBUTION OF UNION INVESTMENT'S RETAIL FUNDS EVOLVED OVER THIRTY YEARS?

ML: Union Investment predominantly distributes its funds for retail clients through the banks belonging to the Genossenschaftliche FinanzGruppe Volks- und Raiffeisenbanken. We neither use brokers nor independent financial advisers.

In 2018, we launched a Robo Advisor for the banks belonging to the Genossenschaftliche FinanzGruppe Volks- und Raiffeisenbanken, called MeinInvest. As of 31 October 2018, 187 banks have implemented the tool, which supports bank staff by offering tailor-made asset management solutions. The client can also directly access the device via the internet.

“Internationally, we started at the beginning of the 90s with the distribution of our products in selected European countries, but also Japan and Hong Kong.”

Internationally, we started at the beginning of the 90s with the distribution of our products in selected European countries, but also Japan and Hong Kong. At the end of the 90s, we set up a structural concept for international fund distribution. Where institutional clients are concerned, we have gradually expanded our service throughout Europe. To sum up our business approach: our service is tailor-made depending on the geographical area and the type of client.

LFF: WHERE DOES THE LUXEMBOURG TEAM FIT INTO THE GROUP?

ML: Our team is responsible for cross-border fund notification, working with over 200 fund distribution partners in more than 20 countries outside Germany. The risk management function for the funds is located in Luxembourg alongside fund administration, transfer agent and reporting. Indeed, Luxembourg is in charge of the transfer agent activities of the entire group. It is the point of contact between the portfolio managers and the custodian bank network: the custody function is supported by around 250 local depositary banks in 80 markets worldwide.

The core idea was always to maximise the use of product and company structures in a chosen location and to avoid the establishment of double structures, as far as legally possible.

LFF: HOW DO YOU SEE ACTIVITIES EVOLVING?

ML: Digitalisation and the current trend in responsible and sustainable investing provide excellent opportunities to develop new products and foster innovation. Customers

are expecting a continuously improving digital experience from the manager of their portfolios and asset managers have become more transparent towards both clients and regulators.

LFF: IS LUXEMBOURG A GREAT PLACE TO FIND TALENT?

ML: Luxembourg has developed fund expertise to a very high level.

“Luxembourg has developed fund expertise to a very high level. This environment offers real career opportunities to qualified staff.”

MARIA LÖWENBRÜCK

This environment offers real career opportunities to qualified staff: it is relatively easy to find a good job and maintain a high quality of life in Luxembourg. Certain tax benefits, such as the impatriate tax regime, make it easier to relocate highly-skilled staff to Luxembourg.

LFF: WHAT DO YOU LOVE BEST ABOUT LIVING AND WORKING IN LUXEMBOURG?

ML: In Luxembourg, you can feel the European spirit on a daily basis. I enjoy being at the heart of the European project, the open borders, the multicultural environment and the willingness of European and domestic actors to work together in pursuit of common goals. A great many of our staff commute to Luxembourg from the Greater Region (Germany, France and Belgium) and this is related to our business approach.

GM

“In 2007, we formed a joint venture with Bank of East Asia and together we set up a Hong Kong-based asset management company specialising in Asian equities and fixed income.”

MARIA LÖWENBRÜCK

BEYOND DISRUPTION

INNOVATION HAS ALWAYS BEEN IN LUXEMBOURG'S DNA AND THE COUNTRY CONTINUES TO EMBRACE DIGITAL TRANSFORMATION ACROSS THE FINANCIAL CENTRE. HOWEVER, CHANGE IS NEVER DONE IN A VACUUM.

IN THIS EDITION WE HEAR FROM LEADING EXPERTS INVOLVED IN THAT CHANGE, WHO SHARE THEIR VIEWS ON HOW TO HARNESS NEW TECHNOLOGY TO DEVELOP NEW PRODUCTS AND SOLUTIONS.



NASIR ZUBAIRI,
CEO
THE LHOFT



RegTech: Making regulation and compliance human again

WITH FINANCIAL REGULATION CONTINUALLY CHANGING, FINANCIAL INSTITUTIONS ARE UNDER CONSTANT PRESSURE TO KEEP UP WITH THE LATEST RULES. HUGE AMOUNTS OF DATA ARE PRODUCED AND REPORTED ON A DAILY BASIS, WHICH IS WHERE REGULATORY TECHNOLOGY (REGTECH) COMES IN. LUXEMBOURG IS MAKING HEADWAY AS A CENTRE FOR REGTECH AND IS DEVELOPING SOLUTIONS TO MANAGE THE COMPLEXITY OF THE RULES AND REGULATIONS.

“Change is inevitable and the agility to adapt to change will become a competitive advantage.”

NASIR ZUBAIRI

Since the financial crisis in 2008, regulation has accelerated rapidly. Globally, the financial industry was taken by surprise and had little time to plan for the wave of regulatory developments that followed. The industry had no choice but to fast-track its technologies in order to cope. Would a crisis have been prevented if the right technology was available a decade ago? What could have been done differently? Financial experts understand that they can't go back to the past. The only thing they can do is look to the future.

Today, RegTech has become a core focus of the Luxembourg House of Financial Technology (LHoFT). Closely linked to FundTech, RegTech accounts for about thirty to forty percent of Fintech companies in Luxembourg.

Nasir Zubairi, CEO at The LHoFT, can't stress enough the critical role that RegTech has come to play in the business operations of financial institutions. “Whether it is operational, compliance or legal, everything is related to administration, reporting and big data consolidation.”

The advantage of Luxembourg is that RegTech companies can easily reach out to counterparts in the financial sector, mak-

ing it easier to scale their company. Nevertheless, in most financial centres, RegTech remains one of the most difficult sectors in which to succeed. From the first meeting with a financial institution, to expressing interest, to getting the contract signed, the process can take up to two years. It can cause cash flow issues and create barriers to scale.

“Everyone will win if processes get refined. There are currently a lot of initiatives going on that will help to speed up and streamline activities,” says Nasir Zubairi.

JUST AS UNIQUE AS EVERYONE ELSE

One possible initiative of The LHoFT is the creation of a certification lab to pre-test solutions.

According to Nasir Zubairi, *“it's usually the procurement cycles which pose the biggest problem for financial institutions. No matter how unique banks think they are, when it comes to procurement, they all check the same things for due diligence and ask similar questions in RFPs.”*

The LHoFT, working with key industry partners, is looking to create a standard

“As soon as the right system is able to intelligently collect, report, and analyse the data, the number of new regulations will no longer be such a cost burden.”

NASIR ZUBAIRI

to pre-test solutions, which will make the procurement process faster, and allow RegTech companies to show a test certificate and report to their clients, bypassing some of the tests of the bank.

In finance, new technologies always have to be thoroughly tested. Once they go live, they have to work flawlessly. However, this often leads to an excessive level of due diligence.

“The perfect product does not exist. When it goes live, there will always be a problem. You need to analyse the processes you have in place. What is the marginal benefit of doing 100 steps instead of 50 or 60? Yes, it’s absolutely true that you need to mitigate core risks and that you can’t have massive failures or security loopholes, but beyond that, how much is really necessary? You have to make sure you move forward,” explains Zubairi.

Future competitiveness in finance will largely depend on agility. *“PSD2, MIFID 2... regulation always iterates as financial services and technologies evolve. Change is inevitable and the ability to adapt to change will become a competitive advantage,”* he adds.

Nasir’s advice is rather pragmatic: Learn enough and keep up with the industry developments, then do something in a lean and agile way, analyse the impact, understand the core risk, learn from mistakes... and then repeat.

“Be it regulation, technologies or processes, we are not building something that will last and

stand the test of time forever. The leaner the processes, the fitter you will be to embrace and keep up with change.”

How about the systemic risks related to FinTech? *“There is a lot of talk about systemic risk in the crypto world, artificial intelligence, big data, etc. My argument is that there may be certain dangers in the long-term, but right now why not park it for the time being and focus on the fact that a lack of digitalisation in institutions poses a serious systemic risk? If banks collapse in the next years, it may well be caused by inefficiency in an environment of increasing margin compression,”* he continues.

Nasir Zubairi also states that Luxembourg, or other financial centres, may consider creating a regulatory reporting hub.

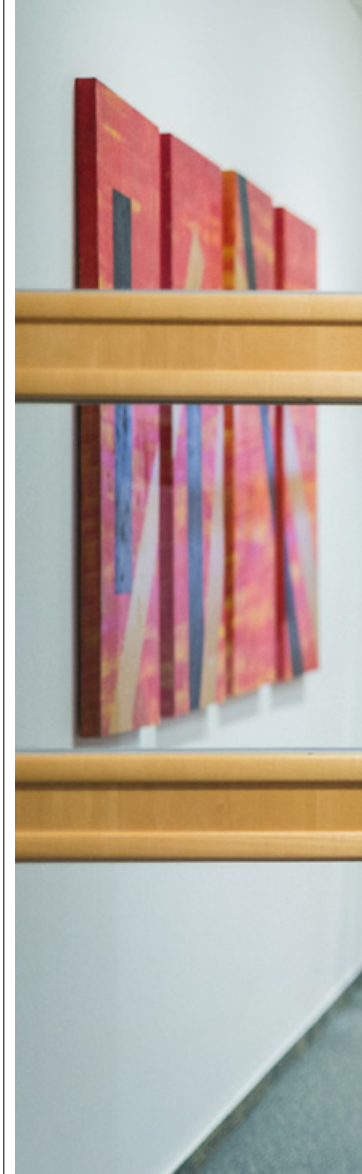
“With PRIIPS, for example, the volume of documentation that needs to be produced and checked is tremendous. We can save time and money for the financial institutions as well as the regulator if we manage to automate some of the rules. As soon as the right system is able to intelligently collect, report, and analyse the data, the number of new regulations will no longer be such a cost burden.”

ZILLIONS OF DATA POINTS

State Street, one of the partners of The LHoFT, began working with several RegTech companies over the last couple of years.

There are various reasons why financial institutions want to make use of RegTech. Cristina Ferreira, Head of Regulatory Solutions and Innovation at State Street, highlights three of them: making operational processes more efficient, enhancing client experience relating to compliance and regulation, as well as staying ahead of the competition.

State Street is servicing over 33.99 trillion USD in assets under custody and administration, and 2.81 trillion USD in assets under management.





CRISTINA FERREIRA,
HEAD OF REGULATORY
SOLUTIONS AND INNOVATION,
STATE STREET

“RegTech solutions are an enabler for us to manage large quantities of data efficiently. Managing all that data without new technology has become humanly impossible, especially in terms of accuracy and timeliness. There are a lot of transactions that need to be controlled and executed on a daily basis at the frequency of the net asset value (NAV) calculation. Without the right technology, humans can’t handle the zillions of data points that are created every day,” explains Cristina Ferreira.

Whenever new regulations come into place, State Street also strives to enhance their client services.

“For example, to calculate the PRIIPS and MiFID costs and charges, our clients require a lot of data from us in order to comply with the regulation. They need up to three years

of historical transaction data. The scale and amount of information could not be managed effectively without involving a RegTech,” she adds.

There are currently many ‘unknowns’ for banks and asset management companies. To stay ahead of the competition, they tap into the technological knowhow and the innovative mind-set of the RegTechs.

“Nowadays the fund industry faces heavy fee pressures. You even have zero-fee funds. So you can imagine how this cascades down to other service providers. We therefore need a successful digital strategy to lead the next generation of investment fund servicing. We must understand the social and economic trends that are shaping the financial industry and ask the important questions. How will investors invest in the future, what tech-

“Without the right technology, humans can’t handle the zillions of data points that are created every day.”

CRISTINA FERREIRA

“The LHoFT has the know-how, the infrastructure, and the framework to select the best breed of FinTech and RegTech companies.”

CRISTINA FERREIRA

nologies will they be using, what will be the financial products of the future, what infrastructure will be used?”

REGULATED MEETS UNREGULATED

Unlike banks or asset management companies, RegTech companies are not regulated, which makes the cooperation occasionally more difficult.

The challenge is that banks and asset management companies put certain protective clauses (security, compliance with outsourcing, etc) in their contracts that need to be explained to the RegTech firms. A 10-page contract takes time to negotiate and the provisions aren't always understood.

“RegTech companies have tech people but no legal expert. Lawyers are costly. There are times they could really benefit from legal support,” underlines Ferreira.

THE FINEST SELECTION

Partnering with a RegTech firm is an investment decision which must not be taken lightly.

State Street has access to a large internal network which compares RegTech solutions from various countries. It is also one of the members of the LHoFT, which consequently eases the selection process in Luxembourg.

“The LHoFT has the know-how, the infrastructure, and the framework to select the best breed of FinTech and RegTech companies. The LHoFT is a real success story. The advantage is that you can find all the companies in one location, making it easy to meet them all. In addition to sourcing RegTechs, the LHoFT also helps you to develop ideas and solutions. It's an environment where you can really think out of the box,” explains Cristina Ferreira.


FROM BOOKS TO FUNDS

One of the RegTech companies in the LHoFT that is currently driving innovation is Tetrao. Every day, millions of people in finance manually process the same kind of documentation produced by thousands of different actors. It is slow, expensive and unscalable. Tetrao has developed a unique artificial intelligence machine which is capable of automating those processes.

The founder, Christian Gillot, born in France's neighbouring Lorraine region said, it was a 'no-brainer' for him to set up his company in Luxembourg. *“I wanted to grow my company out of Luxembourg because I needed to have an international environment for my business,”* he explains.

After obtaining his PhD, Mr Gillot worked in a start-up where he encountered technical problems relating to the automation of websites that sell books.

“Websites continuously change their lay-out and branding. I had to look after 150 websites and manage the data logistics. The real challenge was integrating the data. Out of the 150 websites, I had to redo ten of them on a daily basis due to integration errors,” he explains.



CHRISTIAN GILLOT,
FOUNDER,
TETRAO

“RegTech is one of the toughest areas because it’s very technical and there’s a lot of complexity to solve before being operational. It’s not like in B2C where you can develop a new fancy app to call a taxi and quickly be on the market.”

CHRISTIAN GILLOT

Publishers consider their bestseller the most important book in the world. The process of the launch and sales need to be managed flawlessly.

“One of our publishers won the Femina literature prize in France. At some point, Amazon was checking the book prices and found out that a small bookstore in the countryside was selling the book ten euro cheaper by error. Shortly after, the second biggest bookseller in France, Fnac, reacted and said that it would change its price as well if Amazon would not correct the mistake. It shows the importance of data integrity.”

Investment funds face exactly the same issues. “The data integration can be messy,” continues Christian Gillot. All the fund documents are different, and they all present the data in their own way.

“Some asset managers already faced multi-million dollar penalties because their KID said that the product was less risky than the prospectus. These kinds of data logistics errors can have serious consequences.”

Christian’s solution was to emulate human brainpower. “A human being can read and understand the variety of documentation templates. Humans will always be able to adapt to a new layout or colour. It won’t affect their understanding of the information.”

NOT A FANCY APP TO CALL A TAXI

It took Tetrao two years of R&D to have a working prototype. Christian Gillot works with dedicated teams in Luxembourg, France and Spain. The Luxembourg team is focused on Artificial Intelligence. “We managed to attract top experts to Luxembourg who are focused on making sure that the AI is working.”

“RegTech is one of the toughest areas because it’s very technical and there’s a lot of complexity to solve before being operational. It’s not like in B2C where you can develop a new fancy app to call a taxi and quickly be on the market,” stresses Gillot.

“If you try to fool people, then you better do it out of a big city. Here in Luxembourg, everyone will know it whether you do a good or bad job.”

CHRISTIAN GILLOT

Moreover, for some of the forms that insurance companies need to process, the data is always presented in the same way. For example, the bulk of health claim documents look similar and apply the same layout.

“It’s very simple to create AI for such insurance documents. Companies don’t even need a RegTech partner to do it and can build it in-house. The kind of documents that we address are always different. What we do is to understand all the visual elements, whether it is a document with 1- 2 or 3 columns, whether it includes a table or uses different colours.”

Gillot explains that AI is like a kid in school. It needs to be shown a lot of examples in order to learn.

First, the annotators look at a variety of asset manager’s documents. What is the umbrella company? What is the depositary bank? What is the entry charge? What is the name of the share? The currency? There are many questions that will need answering again and again, depending on how complex they are.

“Some people say data is the new oil. Well, these annotations are the refinery. You have to process the data. Only afterwards, the AI experts can start to build the statistical machine.”



LAURENT DENAYER,
CEO,
UME

“You could say that if you finish the due diligence ten or eleven months after you started, something is seriously wrong in that industry.”

LAURENT DENAYER

Luxembourg is Europe's leading centre for investment funds. The big advantage for Tetrao is that the local ecosystem is only one phone call away from headquarters.

"We have more success developing our solution in France by being based in Luxembourg, than by being based in Paris. In Paris, we have to go through multiple layers whereas in Luxembourg, you have the strength of the community. This also means that if you try to fool people, then you better do it out of a big city. Here in Luxembourg, everyone will know if whether you do a good or bad job."

Christian Gillot also reminds us of the positive impact that people in Fintech can bring. As a child, he learned programming with his father. *"The great thing is that the vast majority of IT people are very good and open-hearted people. They want to build something for the community. My advice to young people would be: It's okay to be crazy. To be successful in today's world, you need to be extremely weird. Know what you are good at and do what you can do to have a positive impact on society."*

DE-RISKING FINANCE

RegTech solutions will allow fund industry jobs to become more interesting for financial professionals. Right now, some of them might be overworked, taking unnecessary risks. There are currently roles focused on manually checking thousands of KIDs. It's almost an impossible task, with a lot of personal responsibility attached. RegTech can go along to help de-risk finance.

Another example of a RegTech company that is bringing transparency and quality to the work of those working in the fund industry is 'ume'. 'ume' is a platform that is standardising and mutualising the information for due diligence of fund distributors.

Laurent Denayer, CEO of ume, says: *"It's a very important market to cover. If a distributor sells a fund to the wrong investor then the entire reputation of the asset manager is on the line."*

In terms of due diligence questionnaires (DDQs), there is currently no standard, or rather multiple standards in the market. Each management company sends its own questionnaire to all its distributors.

"As a distributor, it's not fun to fill out all these questionnaires, especially when management companies try to capture the same information, over and over again, yet in different ways," explains Denayer.

On average, it takes distributors three to nine months to answer. Laurent Denayer explains why. *"An average bank in Europe deals with 50 to 200 management companies that have their own questionnaires. The person in charge of answering all these questionnaires has to do many other things as well. You could say that if you finish the due diligence ten or eleven months after you started, something is seriously wrong in that industry."*

For management companies, it also takes time, at least 10-15 hours per questionnaire. They need to draft the questions, while constantly taking into account new regulations. Then the management company will sometimes need to call the distributor several times to get an answer. Then if they realise the answer isn't complete, they have to call again. After this back and forth they then need to summarise the information, discuss the results with the legal as well as compliance teams, and finally prepare a report for the board.

"All these steps make this process very time consuming for highly-qualified people and, at the end of the day, it brings hardly any added value," adds Denayer.

In order to address this, ume developed one standard questionnaire. The distributors only need to fill it out once every year and the management companies are given immediate access. At the end, it makes life easier for both the distributors and management companies and saves a lot of compliance costs.

A TRIP ADVISOR 'MADE IN LUXEMBOURG'

ume also functions as a platform to find distributors, a kind of TripAdvisor for fund distributions. *"If you want to sell your funds in Portugal or South Africa, and you don't know anyone there, it can take a lot of time to find the right contact person and compile the information. You will need to hire a consultant and you might need to fly there 4-5 times."* Denayer points out that fund managers can't always justify such costs.

Via the ume-platform asset managers can now connect and find distributors all over the world, and compare their risk profiles.

The advantage is that Luxembourg is part of the solution by being home to the world's top 100 asset management firms. *"By working with 20% of the ManCo's in Luxembourg, we can cover 80% of the world on the distribution side. Out of Luxembourg, we have been able to embark on our journey, reach a global directory of distributors and make life much more efficient for many in the future."*

LR

"By working with 20% of the ManCo's in Luxembourg, we can cover 80% of the world on the distribution side."

LAURENT DENAYER

CHOOSING THE RIGHT PARTNERS TO FOSTER INNOVATION

DEVELOPING A SUCCESSFUL INNOVATION STRATEGY MEANS CHOOSING THE RIGHT PARTNERS. COLLABORATION BETWEEN BOLD START-UPS AND ESTABLISHED PLAYERS ENCOURAGES RAPID INNOVATIONS BY COMBINING DIFFERENT STRENGTHS. WE MET WITH THOSE INVOLVED IN PARTNERSHIPS IN THE FINTECH SPACE TO FIND OUT MORE.

Clearstream, one of the world's largest settlement and custody firms for international securities, always have engaged in partnerships with dynamic, innovative FinTechs and other third parties like the Luxembourg House of Financial Technology (LHoFT) or the University of Luxembourg.

"We constantly need to identify ways of improving our performance to continue making progress. In this context, Luxembourg is fantastic: there are many initiatives, at a public and private level, to support innovative spirit. For us, it has always been important not only to benefit from this innovative ecosystem but also to contribute to it," says Francois Piret, Vice-President at Clearstream, headquartered in Luxembourg.

LEVERAGING A PARTNERSHIP


Less than two years ago, RegTech company Finologie, a small player on the market with a track record in leveraging partnerships with mobile operators and retail banks, began looking for a reliable IT infrastructure partner with a strategic position in the financial sector. They came to Clearstream to present their portfolio.

"One of the requirements was a real appetite for innovation, which we found at Clearstream. Other elements we were looking for was the ability to go beyond just a statement of interest – to make sure the partner would be able to speed up things and of course a capacity to deliver," says Raoul Mulheims, Finologie Co-Founder and CEO.

Besides being impressed by the quality of their solutions, Piret identified many possible synergies between their activities. Finologie's extensive RegTech knowledge and Clearstream's expertise in high-performance IT infrastructure design and regulatory compliant operations complemented each other perfectly.

"The joint work is very efficient and enriching. It is great to see how both partners tackle temporary technical constraints during the development process together despite the different company profiles. It is more a question of symbiosis, strong human connection and shared vision towards the future. As long as you are aligned, there are no challenges, just opportunities. Luxembourg's financial centre is the perfect place to foster such opportunities," adds Piret.



A portrait of Francois Piret, Vice-President of Clearstream, standing in front of a glass wall. He is wearing a grey blazer over a light blue shirt and has a colorful pocket square in his jacket.

FRANCOIS PIRET,
VICE-PRESIDENT,
CLEARSTREAM

“As long as you are aligned, there are no challenges, just opportunities. Luxembourg’s financial centre is the perfect place to foster such opportunities.”

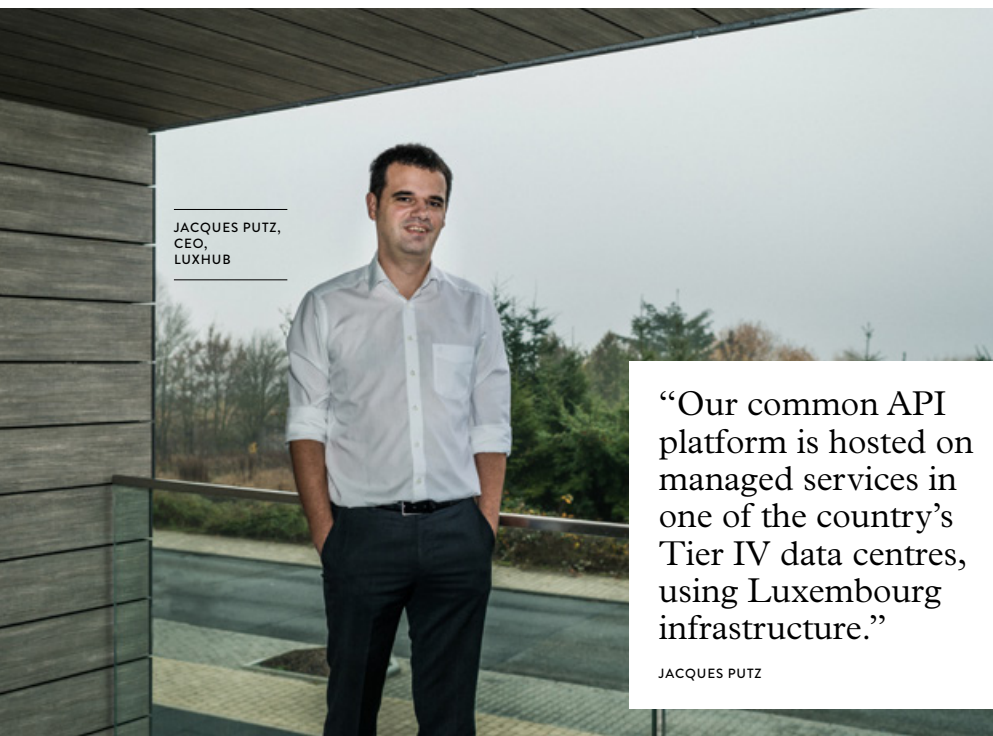
FRANCOIS PIRET



RAOUL MULHEIMS,
CO-FOUNDER AND CEO,
FINOLOGEE

“One of the requirements was a real appetite for innovation, which we found at Clearstream.”

RAOUL MULHEIMS



JACQUES PUTZ,
CEO,
LUXHUB

“Our common API platform is hosted on managed services in one of the country’s Tier IV data centres, using Luxembourg infrastructure.”

JACQUES PUTZ

CREATING NEW REVENUE OPPORTUNITIES

The launch of the FinTech Acceleration Platform together with Germany-based FinTech figo in May marked the first milestone within this partnership.

“The platform enables established financial industry players and new generation digital companies to distribute and leverage each other’s services resulting in new revenue opportunities,” Piret adds.

The first version of the platform is live and the first connections and use cases for financial industry professionals will be deployed over the next weeks, starting with KYC (Know Your Customer) and PSD2 products.

“There is a gradual roll-out plan for financial services building blocks over the next months, with a variety of international FinTech specialists, making their products and services compliant with Luxembourg regulation and thus enabling CSSF-supervised entities to source these components easily,” adds Mulheims.

CAPITALISING ON THE POTENTIAL BENEFITS OF OPEN BANKING

While compliance is a significant driver of adopting RegTech tools, European competition rules are another. Earlier this year, PSD2 became law across Europe, opening the doors to “open banking”. Under the directive, banks will need to make customer data available in a secure manner and give third parties access to their customers’ accounts. For TPPs such as FinTech startups and alternative banking and payments platforms, open APIs are considered the best-practice approach for technology integration.

“I’m not a fan of the term “open banking”, as it reduces the current wave of financial services digitisation to the way established players currently handle business and functions,” adds Mulheims.

“Digitisation has the power to fundamentally redesign many segments of financial services as we know them today, also redefining the positions in the value chain. It is a good thing that traditional players embrace this opportunity and start their thinking process, but depending on the segment they are focusing on, keeping up with the increasing pace of change might be a huge challenge for many of them. Some will do great, others are going to disappear, a lot will make less money than before, and many new players will enter the market. However, it is not just a ‘substitution of the old by the new’ phenomenon we will be observing: the roles are changing, and so are entire business models. And we provide the building blocks to both old and new players in this future landscape of a fully digitised financial services distribution,” concludes Mulheims.

CREATING AN OPEN BANKING SERVICE

All of this has opened the door for another Luxembourg player LUXHUB, a European open banking platform, and the joint initiative of four major Luxembourg retail banks.

“LUXHUB aims to create a platform for European banks to maximise the opportunities of the new API economy and mutualise costs for regulatory issues,” explains Jacques Putz, CEO LUXHUB.

“We strive to support the entire digital ecosystem to take advantage of the opportunities generated by regulations. Banks now must redefine their approaches and strategies as we can provide them with expert technical solutions. All the banks are benefiting from these new mutualised services and it can be seen as an accelerator: it increases the speed of innovation. Our uniqueness is that we focus on the complexity of the new open banking era and act like a service company and an accelerator. The marketplace designed by LUXHUB advocates innovation and collaboration between traditional banking players and FinTech startups, all participating together in the new API economy.”

As an enabler, LUXHUB facilitates activity in the first instance in PSD2 compliance. In the second step towards open banking, the platform is developing a range of solutions to help its partners’ customers to be among the first to comply. Nineteen financial institutions have already signed up to the initiative, with others due to sign up in the coming weeks.

COLLABORATION: THE KEY TO SUCCESS

“Our common API platform is hosted on managed services in one of the country’s Tier IV data centres, using Luxembourg infrastructure for our services. The financial regulator, the CSSF supervises EBRC (European Business & Reliance Centre), and this gives banks much trust in this platform,” concludes Putz.

CREATING EFFICIENT METHODS OF CUSTOMER IDENTIFICATION

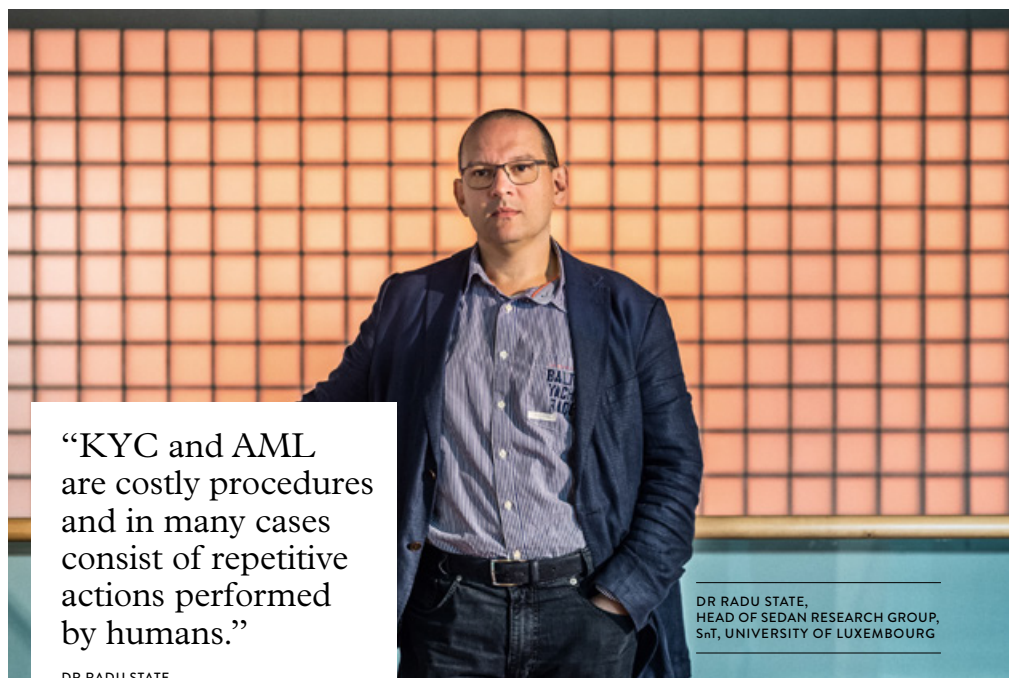
Last year, the Luxembourg Bankers’ Association (ABB) with the University

of Luxembourg and its Interdisciplinary Centre for Security, Reliability and Trust (SnT) launched a joint four-year research project on the distributed ledger prototype and data analytics for KYC (Know Your Customer).

“KYC and AML are costly procedures and in many cases consist of repetitive actions performed by humans. Automating these procedures and shifting the human work towards more creative and higher qualitative added-value tasks, will decrease costs and provide a better experience for the people involved in the process,” explains project lead Dr Radu State, Head of SEDAN Research Group, SnT.

The project utilises smart contracts to help provide a KYC system shared amongst financial services firms.

“The big advantage of our project is provided to the end user – the client. Smart contracts allow end users to take control of their data. The user can decide how his/her data will be shared (and if it will be shared). Explicit authorisations are given/withdrawn by the



“KYC and AML are costly procedures and in many cases consist of repetitive actions performed by humans.”

DR RADU STATE

DR RADU STATE,
HEAD OF SEDAN RESEARCH GROUP,
SnT, UNIVERSITY OF LUXEMBOURG



“We have to keep investing in our infrastructure and in the latest technologies. This is why we have a 5G strategy and why we invest in blockchain competence.”

ANNE-CATHERINE RIES

ANNE-CATHERINE RIES,
SENIOR POLICY ADVISOR,
DIGITAL LUXEMBOURG

end user, using smart contracts. This is a step forward towards a user-centric approach. From a technical perspective, this also eases the audit on how user-related data is processed. Building a shared permissioned blockchain with several banks is also dependent on the underlying technology.”

BLOCKCHAIN WILL TRANSFORM ARTIFICIAL INTELLIGENCE

Choosing one technology out of the three major ones, which is accepted by the several stakeholders, was essential to develop the partnership. In the not too distant future Dr State expects KYC/AML/CFT to be mostly automatised.

“Blockchain technology is one enabler, but AI (Artificial Intelligence) will also play a major role. We need to advance step by step. Once we can enable a secure and efficient distributed KYC infrastructure, we can tackle the next steps.”

PIONEERING PROJECTS NEED A FUTURISTIC FOUNDATION

The Luxembourg government believes that collaboration is key to success in the digital era. Digital Luxembourg, a multidisciplinary government initiative aims to strengthen the country’s digital efforts and collaborates closely with the private sector, i.a. on infrastructure investment and in digital skills and talents development.

“We have to keep on investing in our infrastructure and in the latest technologies. This is why we have a 5G strategy and why we invest in blockchain competence and projects like Infrachain, a collaboration between the government and a mix of private actors,” says Anne-Catherine Ries, Senior Policy Advisor, Digital Luxembourg. “This initiative not only strives to address business needs but also positions Luxembourg as a blockchain competence centre that can attract rare blockchain developers. Then you have the cyber security which is also a strong focal point.”

CREATING A TECH-SAVVY WORKFORCE

Ries and her team at Digital Luxembourg stay in close contact with companies to strategise how to keep the ecosystem attractive and to further digital development. *“I think that our strength has been that we stay in close dialogue with these innovative companies and we ask them what support and environment they need to thrive. The same is true in terms of talents and skills needs: we learn from the private sector by staying in touch all the time. Together we develop projects or find innovative solutions. For instance, the question of access to talents is a significant topic for many companies, i.a. for PayPal which has its EU headquarters in Luxembourg. We entered into a discussion with them, and we convinced them to invest in our university.”*

PayPal employs around one hundred people from more than twenty countries in its hub in Luxembourg. Since it became an independent company again three years ago, partnerships have played a vital role in their development. *“At PayPal, we are always looking for global thinkers to invent new ways to make money safe and accessible for all. There is a great talent pool in Luxembourg, thanks to the dynamism of the market. We’ve partnered with financial networks, issuers and acquirers; with major retailers, marketplaces*



CLAIRE ALEXANDRE,
HEAD OF GOVERNMENT RELATIONS, EMEA,
PAYPAL

and technology companies. When the opportunity arose to join forces with the University of Luxembourg, it felt like a natural extension of our existing partnership strategy,” says Claire Alexandre, Head of Government Relations, EMEA, PayPal.

DIGITAL REGULATION REQUIRES FRESH THINKING

The payments company is partnering with the Luxembourg National Research Fund’s (FNR) PEARL programme, to es-

“At PayPal, we are always looking for global thinkers to invent new ways to make money safe and accessible for all.”

CLAIRE ALEXANDRE

establish a FinTech Chair, and recruit internationally recognised scientists to develop and strengthen thinking on financial services regulation.

“This FinTech Chair aims at sparking important conversations about the intersection between technology, market developments and regulation. In doing so, it should help demystify technology for stakeholders like regulators and supervisors. Some of the academic work will be on RegTech, which is the use of technology for regulators. Data is greatly transforming our economies and our lives; there is no reason why regulators should not be able to leverage technology and data as well to achieve their objectives.”

The academic and research staff will be able to test hypotheses, as well as solutions and tools aimed at understanding technology, facilitating efficient regulation of the market and assessing its impact.

“Our partnership can play three roles: contribute to expand further the global brand of Luxembourg as an innovative and dynamic market; attract world-class researchers from around the world, who may then decide to stay in Luxembourg; and interest other innovative firms to bring their projects to Luxembourg to be tested under the umbrella of this new research facility,” concludes Alexandre.

With the selection process now underway, the new FinTech Chair and research team is expected to be in place for the start of the next academic year.

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MICHAEL JACKSON,
PARTNER,
MANGROVE CAPITAL PARTNERS

PHOTO TAKEN AT CREUTZ & PARTNERS «AU PALAIS».



“People are now moving hundreds of millions of dollars’ worth of Bitcoin around on a 30 cents transaction cost.”

MICHAEL JACKSON

The future of blockchain, virtual currencies and tokenisation of the economy

MICHAEL JACKSON, A PARTNER AT LUXEMBOURG-BASED VENTURE CAPITAL INVESTMENT FIRM MANGROVE CAPITAL PARTNERS AND FORMER COO OF SKYPE, SHARES HIS VISION ABOUT ICOS, CRYPTOCURRENCIES AND BLOCKCHAIN.

LFF: YOU ARE A NON-EXECUTIVE DIRECTOR OF BLOCKCHAIN.COM, A POPULAR CRYPTOCURRENCY WALLET PROVIDER. WHAT UNIQUE INSIGHT HAS THIS GIVEN YOU INTO THE NEW CRYPTO WORLD?

MJ: We believed there was only going to be one Bitcoin. Now there are thousands. We thought that there was just going to be one wallet provider. Now there are many. And we believed that it would take a very long time for cryptocurrency to be adopted by the institutions. That’s happening much faster than we imagined in fact. Although Bitcoin is now ten years old, in the last year we’ve seen tremendous interest from institutional investors private holders, family offices and custodians looking for professional services for managing and investing in cryptocurrencies of many sorts.

LFF: IS BITCOIN HERE TO STAY?

MJ: Recently the prices of all crypto currencies has taken a real hit. Some say it is the end, yet in some periods bitcoins have been more stable than the global stock markets or some currencies. I’m a big believer in Bitcoin. It’s been around longest and tested most. It is the most popular. It’s still small regarding global asset value, but it does have governance around it. It does have an adoption around it, and it does have a brand around it, and often this is what drives something forward. So it has a place in an emerging crypto-based economy.

LFF: WHAT EFFORTS ARE GOING ALONG BEHIND THE SCENES TO POWER FASTER TRANSACTIONS?

MJ: One of the criticisms of the Bitcoin network has been that it’s slow. When you can only do seven transactions a second, the costs of running it are huge. You inherently have a considerable transaction cost, so clearly everybody knew that new technology would be needed to add on to Bitcoin to make that work. That’s changing now with the *Lightning Network*, a decentralised network using smart contract a functionality in the blockchain to enable instant payments across a network of participants. It is built around much faster transaction times, and cheaper transaction costs. People are now moving hundreds of millions of dollars’ worth of Bitcoin around on a 30 cents transaction cost which is much lower than anything else and more stable than anything else. This instant transfer of money is something which will in time transform the financial markets again because it’s a parallel system rather than a serial system. So correspondence banking, for example, disappears and becomes unnecessary in a Bitcoin world.

LFF: HOW DO YOU SEE BOTH LEGISLATION AND PRODUCT DEVELOPMENT FITTING INTO THE NEW WORLD?

MJ: There are a lot of things that virtual currencies are very good for. There is a lot of stuff that virtual currencies are very

“Crypto asset markets are new markets. It’s a very volatile environment now, and you certainly need to understand and appreciate it.”

MICHAEL JACKSON

bad for and we talk about traceability and we talk about money laundering and all of these things because bitcoins and virtual currencies can very quickly be like cash. The industry itself has matured as well to recognise that free transfer of money in an anonymous way is not compatible with the society that we all want to live in and the financing of terrorism and all of these things. It’s an irrepressible wave of regulation that you can’t fight. We are working with KYC wallets for example. There’s a Luxembourg based project today which is analysing the whole history of the virtual currency world to detect anomalies and money flows and things like that, and they’re finding them. Regulators can use these to intercept transactions and to trace them.

LFF: HOW WELL EQUIPPED IS LUXEMBOURG IN THE FIELD OF BLOCKCHAIN?

MJ: Blockchain technology is computer technology. It’s been around for actually rather a long time. Other systems have been built on similar distributed technologies over time. Blockchain is an extremely efficient way of turning a serial process into a parallel process, as well as having the power to disintermediate. Luxembourg’s

very strong in being able to gather the different sectors of the community: the government, the financial providers, the regulators and put them all together in one room. As an example, the government’s support of Infrachain is positioning Luxembourg as a blockchain competence hub.

The financial centre is solid today in managing asset portfolios, and these asset portfolios are going to be tokenised at some point. The efforts that Infrachain and the government are making together with the regulator can spearhead these developments.

LFF: SOME LIKEN CRYPTO MARKETS TO THE BEGINNING OF THE CAPITAL MARKETS? HOW DO YOU SEE THAT?

MJ: Crypto asset markets are new markets. It’s a very volatile environment now, and you certainly need to understand and appreciate it. In some countries gains on crypto have been taxed as gambling gains and it’s probably not far from the truth. We’re in a gambling market, and that’s when the capital markets were or where the derivatives markets were twenty years ago when these products began to come along.

We’re seeing the large financial services providers getting more and more interested in this. Where we’re seeing activity now at blockchain.com, is demand from family offices who want a professionalised mechanism for playing in this area. They’re fully aware that their money could be lost, just as you do with options trading and so many other things.

As this market becomes more institutionalised as products, predictions and methodology becomes more advanced, we’re beginning to see that mature and this is happening now where Goldman, CME and people like that are developing products and selling product to their more avant-garde, more advanced institutional clients. I think it will take a long time before the more stable and mature financial industry moves into this area. I think we

overestimate how quick it’s going to go but I think we underestimate how deep it’s going to go.

LFF: WHAT DO YOU EXPECT WE WILL SEE OVER THE NEXT 12 MONTHS?

MJ: I think what we will see over the next year or so is real product come to market that allows people who don’t understand to access products managed by people who do understand. The way we’ve always done it in the financial services markets and to give a channel for people to be exposed to this new cryptocurrency asset class. I’m also seeing the hedge fund managers from the late nineties who built up funds and financial portfolio management companies back then moving into this area and providing expertise because they’ve been working in it for twenty years. Also providing drive because they know what they’re doing and but also providing a product that people want to buy, because they understand it. Much of the industry so far has been driven by youngsters with no experience of the financial markets at all who invented these things.

LFF: WHAT SHOULD INVESTORS LOOK FOR IN AN ICO AND HOW CAN THEY NAVIGATE THIS SPACE?

MJ: ICOs are a new form of fundraising, allowing companies to issue coins or tokens or an instrument representing some value in the company. An ICO is in some ways similar to an initial public offering.

Traditionally, we’ve done that only with equity, but now we can do it on other projects or components of the ecosystem within the company itself. It does make it a bit more complicated as an investor because you don’t quite know what you’re investing in.

There was tremendous enthusiasm for ICOS at the back end of last year. Since then it has fallen off a bit, as many people were raising capital based on hot air, but the underlying trend is there. But while

the amount of ICOs has fallen over the last quarter, the quality has increased, and I think that's a good sign for the future for people who want to drive their business in that way and funds are beginning to understand that as well.

LFF: CAN ICOS BECOME EFFICIENT FOR START-UPS?

MJ: One of the great benefits of an ICO is, it allows a start-up to create a product, create an ICO around the product and sell that participation in that product to their users and people who believe in it. They no longer need to go to financial institutions and can go directly to their user base in many environments that's very useful, particularly in new technology and advanced thinking where the industrial side of financing hasn't caught up.

LFF: HOW DO ICOS CHANGE THE VENTURE CAPITAL INDUSTRIES OPERATING MODEL?

MJ: ICOs significantly changes the way Venture Capital (VC) operates because traditionally VC capital provides early-stage funding. In the past, VC has been able to take the pick of the pie and dictate the terms of the deal. If the popular companies can now raise capital from their user base, the VCs are now competing with the users, and the users probably value the company more than the VCs do in fact. I think for the more established projects, where more analysis is needed, ICOs have no place. Nevertheless just last week Monzo, a challenger bank from the UK raised 20 million pounds from its users, outside the traditional VC route. Concerning Private Equity (PE), it depends on the sector. If you've got industrial projects, where you're looking to build management, then PE has a powerful place. But once again if it's a mass market product, then PE has a less stable place in financing the business. So it changes. It doesn't take anybody out, but I think early-stage venture is the first place which is touched.

“If the popular companies can now raise capital from their user base, the VCs are competing with the users.”

MICHAEL JACKSON

LFF: HOW WILL THE TOKENISATION OF THE ECONOMY SUPPORT SMALL BUSINESS?

MJ: Despite the divide in wealth, there is a lot of money tied up with small savers. One of the things we get with a cryptocurrency is what we call “programmable money” where you can issue currency that represents something and the performance of the underlying asset gives benefit directly. It makes microtransactions suddenly become viable for the financial community. Tokenisation of assets means that you can split any asset and seller participation to basically anybody. It allows you to tie the returns much more directly into the performance of the company. One of the dreams I have is how we can satisfy small business funding and enable them to raise capital from customers. So for example, if I invest in a coffee machine in my local café, then every time a cappuccino is sold, ten cents goes to me. If I get tired of that investment, I need a marketplace to sell my tokens. Nobody's got that right yet, but it's going to come and when it happens it could unlock tremendous value.

LFF: A LOT OF PEOPLE IN THE CRYPTO COMMUNITY ARE TALKING ABOUT THIS BEING THE DEATH OF THE FINANCIAL SERVICES INDUSTRY?

MJ: We hear this in a lot of places, and one has to be somewhat optimistic about it. It will change the financial services industry as new products come along, as costs get taken out of the system, as things become more efficient. But the fundamentals of

the financial services industry are acquiring trust, requiring distribution, and confidence in the system. They need to be part of the cryptocurrency, the ICO, the tokenised economy going forward and they are assets that we've built up over the last thirty years within the Luxembourg financial system and the financial system of Europe and beyond. Those skills and assets need to come into this community, and there's plenty of opportunities for people to participate in this new economy.

Certain parts of the Luxembourg ecosystem are going to be challenged because inherently some of the products aren't needed any more. The transfer agent function disappears. Correspondence banking disappears. But it doesn't mean those people who are doing that go — the skills that they use in correspondence banking are just as relevant everywhere else. It's the natural cycle of the industry.

GM

“I think we overestimate how quick it's going to go but I think we underestimate how deep it's going to go.”

MICHAEL JACKSON





READY FOR THE FUTURE OF FINANCE

FUTURING IS ABOUT BUILDING ON EXPERIENCE AND ANTICIPATING FUTURE NEEDS. WE TALKED TO THE CHAIRMEN OF LUXEMBOURG'S INDUSTRY ASSOCIATIONS, DENISE VOSS (THE LUXEMBOURG FUNDS ASSOCIATION - ALFI), GUY HOFFMANN (THE LUXEMBOURG BANKERS' ASSOCIATION - ABBL) AND CHRISTIAN STRASSER (LUXEMBOURG'S INSURANCE AND REINSURANCE ASSOCIATION - ACA) TO DISCUSS LATEST TRENDS AND EXPLAIN WHAT MAKES LUXEMBOURG READY FOR THE FUTURE OF FINANCE.

“Types of risks to be covered are evolving with technology: some are shifting, like those related to driving with driverless cars, some are emerging, like cyber-risks.”

CHRISTIAN STRASSER

LFF: IN A FAST-CHANGING WORLD, INSURERS MUST CONTINUOUSLY ADAPT TO NEW RISKS. HOW WILL DRIVERLESS CARS, SMART HOMES AND OTHER NEW TECHNOLOGY AFFECT INSURERS?

CHRISTIAN STRASSER: Innovation will definitely shape the future of our industry. To which extent and at what speed, it is not clear yet.

As insurers, we cannot have an impact on the speed of innovation or on which technology will be the next big thing, but we will have to take into consideration that our clients use these technologies on a daily basis. Types of risks to be covered are evolving with technology: some are shifting, like those related to driving with driverless cars, some are emerging, like cyber-risks.

The key will be to accompany our clients in this process. To do so, we need to remain close to the market, follow its evolutions and keep an open eye for new solutions that meet our clients' demands.

LFF: BLOCKCHAIN, ARTIFICIAL INTELLIGENCE...HOW IS FINTECH SHAPING THE ASSET MANAGEMENT INDUSTRY AND ADDING VALUE FOR THE INVESTOR?

DENISE VOSS: New technologies will improve fund distribution, increase efficiency and reduce costs not only for companies but also to the ultimate benefit of investors.

For the asset management industry, digitalisation will tremendously improve the efficiency of the KYC process. Blockchain will allow back and middle-offices to facilitate transaction flows and report-



CHRISTIAN STRASSER,
CHAIRMAN
LUXEMBOURG'S INSURANCE AND
REINSURANCE ASSOCIATION (ACA)

“Our strength will
continue to rely on our
capacity to reinvent
ourselves.”

CHRISTIAN STRASSER

“Banks need to have a closer look at the new services which are data-driven and create added-value for customers.”

GUY HOFFMANN

ing. It is an added value for record keeping and settlement of fund subscriptions and redemptions. Luxembourg is starting to be recognised as a RegTech hub. It is something that management companies in Luxembourg are involved in and starting to use, including for example some of the many distribution oversight platforms that have been developed in the country.

Finally, dealing with the transformation of our business as a result of technology from a human resources perspective is also of radical importance. How will technology affect jobs in the asset management industry? Clearly, we need to plan this in a thoughtful way, using change management tools allowing us to prepare this transition.

LFF: WHAT ARE THE OPPORTUNITIES ARISING FROM DIGITAL TRANSFORMATION FOR THE BANKING INDUSTRY?

GUY HOFFMANN: Digital transformation will have a major impact on the banking industry. It is important that banks make use of this opportunity to satisfy the shifting demand and expectations of our customers and offer them a range of new innovative services and products designed at enhancing their customer experience such as instant payment, QR Code payment, online billing...

Solutions such as KYC, digital onboarding of customers, blockchain, artificial intelligence or crypto currency are key assets in terms of cost-efficiency and can be used to develop solutions that assist our transition towards a more sustainable economy.

In particular, banks need to have a closer look at the new services which are data-driven and create added-value for customers and risk management functions by using data analytics. We must not forget that banks have a unique opportunity to capitalise on the data they hold on their customers and on the way they use financial products.

LFF: WILL INSURTECH REVOLUTIONISE INSURANCE?

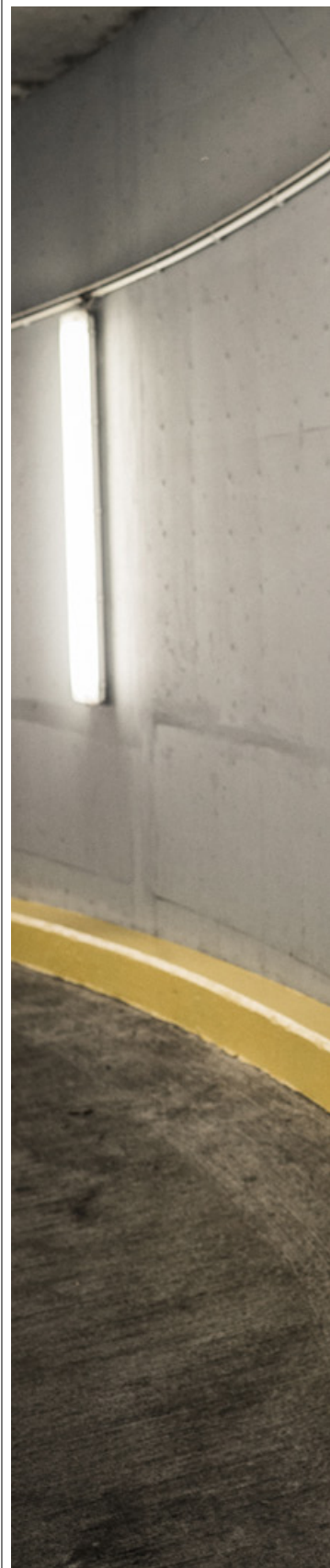
CHRISTIAN STRASSER: Which InsurTech solutions will revolutionise the insurance industry is still unpredictable but believe me, I am more than happy to be able to collaborate with them. Insurers and InsurTechs should work together to enhance the industry as a whole. InsurTechs help us to reinvent our products and services, taking us out of our comfort zone.

Personal device connectivity, AI, blockchain, cloud technologies and other new technologies are all getting plugged into the game of insurance. The outcome will be cost savings, increased agility, automation, personalisation, and a better experience for the insured. New technologies will have an impact on the whole value chain.

LFF: HOW WILL CLIENT RELATIONS EVOLVE IN THE FUTURE?

GUY HOFFMANN: Customer loyalty towards banks is decreasing and will decrease more in the future. Banks have to counter this with good services, trust and innovative solutions.

Customers are redefining their expectations. They want convenience, personali-





DENISE VOSS,
CHAIRMAN
THE ASSOCIATION OF THE LUXEMBOURG FUND
INDUSTRY (ALFI)

sation, accessibility and ease of use. This needs to be on the radar of banks in the future if we want to retain the relationship.

A large number of the players active today in FinTech are not regulated, making them very agile. By contrast, banks face a number of regulatory requirements designed to ensure a trustworthy, high quality service. This will be a key differential going forward.

LFF: HOW IS CLIMATE CHANGE IMPACTING YOUR RESPECTIVE INDUSTRY?

DENISE VOSS: Sustainability has become a key consideration for investors. ALFI identified many years ago the opportunities offered to asset managers by responsible investing. In fact, we now consider sustainable finance to be one of the 3 pillars of the industry, alongside UCITS and alternative investment funds.

We firmly believe that what is considered “sustainable finance” today will be mainstream finance tomorrow.

One of our priorities is helping socially responsible investors to have confidence in their investment. Luxembourg plays a key role in this process with the help of LuxFLAG, the Luxembourg labelling agency, of which ALFI was a founding member.

“New technologies will improve fund distribution, increase efficiency and reduce costs not only for companies but also to the ultimate benefit of investors.”

DENISE VOSS

We are committed to supporting the objectives of the EU Commission Action Plan on Sustainable Finance, that is developing a taxonomy, carbon benchmarking and disclosure. In the future, we will need to strike the right balance between clarifying what sustainable investment is and landing up with an overly prescriptive approach that leaves no scope for flexibility and innovation.

CHRISTIAN STRASSER: The increased frequency of extreme weather is a source of stress, fear and doubts for our clients. The insurance industry has to put new solutions in place and develop a new generation of risk assessment tools designed to understand the impact of climate change on our business. This is vital for an industry whose core business is to manage risk.

The better insurers understand climate risks facing the economy, the more they can make prudent decisions and the more efficient and stable our markets will become.

LFF: WHAT ARE THE CURRENT CHALLENGES FACING THE ASSET MANAGEMENT INDUSTRY?

DENISE VOSS: One of the priorities will be to make sure that the industry remains fit for purpose to ensure that we can still meet, in a cost-efficient way, the current and future needs of investors who are going to be more and more responsible for their own financial well-being and retirement.

We need to make sure that we become relevant to younger investors, and I don't think it is a given. We shouldn't assume automatically that they will embrace investment funds, nor that they will only be accessed by mobile. We need to keep an open-mind and question all our assumptions.

As increasing regulation puts pressure on margins, the industry will have to rely even more on technology to reduce costs.

Luxembourg has been traditionally known



GUY HOFFMANN,
THE LUXEMBOURG BANKERS' ASSOCIATION - ABBL

“Customer loyalty towards banks is decreasing and will decrease more in the future.”

GUY HOFFMANN

as a fund domicile but, more and more, it is developing into a risk management hub for investment funds and a centre for front-office activities including portfolio management - alternative investment management in particular. We must continue developing the whole value-chain.

LFF: WHAT ARE THE MOST TRANSFORMATIONAL CHALLENGES FOR THE FUTURE OF BANKING?

GUY HOFFMANN: There is an increased competition spurred by FinTechs but also between banks themselves, as everyone is trying to get to a certain level of revenues and income. Banks may begin to provide third party services to their clients, acting as a distributor, or else provide services directly to the client – or a combination of the two. Most probably some older business models will disappear and so will part of the revenues. In the long-term, the banking industry might be partly reshaped, and external suppliers will play a substantial part, as happened to the car industry.

Maintaining employability and retaining talent will be key. 50,000 people work in this environment. The challenge must be to keep as many people as possible in the long run.

LFF: WHERE WILL LUXEMBOURG'S STRENGTHS LIE IN THE FUTURE?

CHRISTIAN STRASSER: Our strength will continue to rely on our capacity to reinvent ourselves. The more international we become, the more we must challenge ourselves. Luxembourg's capacity to embrace digitalisation will be a major advantage. We need to have players who demonstrate what is possible on the digital level and what solutions are available.

For the insurance sector, it is important to combine our long-standing experience and know-how with new trends and new technologies. If we do not challenge ourselves, someone else will. This does not mean that we should follow every trend, but we need

to move fast where innovation could be meaningful to our clients.

LFF: IN WHAT AREAS OF BANKING DO YOU SEE THE MOST POTENTIAL?

GUY HOFFMANN: Sustainable finance is the future and represents a key business opportunity given the interest among millennials. Banks have a major role to play in financing the transition to a sustainable economy. The challenge will be to move away from a niche sector and make it more mainstream. Luxembourg banks have to find new tools to offer their clients so that we become one of the well-known hubs for green and sustainable finance.

More generally, we need to educate people about the role played by banks in the financing of the economy. We must expect the emergence of new and innovative products for retail, private and corporate customers. New technologies push us out of our comfort zone and force us to think differently, but Luxembourg is firmly on the map where financial evolution is concerned. It is our intention to stay there.

OB

“We firmly believe that what is considered “sustainable finance” today will be mainstream finance tomorrow.”

DENISE VOSS

SUZANNE COTTER,
MANAGING DIRECTOR,
MUDAM

Mudam: the coming of age

IN JANUARY 2018, SUZANNE COTTER BECAME THE NEW DIRECTOR OF MUDAM, LUXEMBOURG'S CONTEMPORARY ART MUSEUM. WE SAT DOWN TO DISCUSS HER VISION TO POSITION THE INSTITUTION AS ONE OF THE LEADING CONTEMPORARY ART INSTITUTIONS IN EUROPE.

FROM MELBOURNE TO LUXEMBOURG

Mudam's new Director, Suzanne Cotter, epitomises Luxembourg's cosmopolitan identity.

Australian-born, her passion for art has led her to leading positions in many prestigious museums around the world. She is the former Director of the Museum of Contemporary Art of the Serralves Foundation in Porto, a position that she occupied for five years, and a former Curator of the Solomon R. Guggenheim Foundation, where she led the team of curators of the Abu Dhabi Project and also contributed to the development of the Guggenheim New York Art Program and affiliated Guggenheim Museums worldwide.

The globe-trotter explains her enthusiasm for Luxembourg, since her arrival a year ago.

"I am amazed by Luxembourg's dynamism. The city is in constant transformation and it is a very easy place to live. I am lucky enough to live in the city allowing me to be well connected. I can walk and take the tram which I love," she explains enthusiastically.

For Cotter, art has been a vocation since her youngest age. *"Working in a museum is the chance to create something that did not exist before."*

BEYOND THE INFANCY STAGE

Creating something new will be Cotter's mantra during her five-year mandate at Mudam where she has embarked on a mission to lead the museum in its adulthood.

"It is a young museum that we want to insert more strongly into the cultural landscape, here in Luxembourg but also in Europe. My desire is to contribute to the history of this museum so in the future it goes from strength to strength. It's part of my responsibility. We have to go ahead with humility but with a bit of boldness as well," she adds.

The museum which celebrates its 12th anniversary this year, was designed by the renowned Sino-American architect Ieoh Ming Pei and is perched on the cutting edge of Luxembourg's European district, offering magnificent views onto the historic part of town.

"I am full of energy and excitement for this new project. The possibilities at Mudam are impor-

tant: we have a fantastic building located in the heart of Europe in a cosmopolitan city with a solid history. It has assets, for sure, and potential to develop," she adds.

The future is promising.

When asked about the growing interest from the public, Cotter explains that she feels a vibrant energy, demonstrating the efforts already put in place by the team.

2018 has seen the number of visitors exceed 125,000, a 25% increase on 2017, and after 12 years of existence, the museum has just reached 1,000,000 visitors.

PUTTING THE LIMELIGHT ON MUDAM'S OWN COLLECTION

Entering adulthood will begin with a high-quality artistic programme reflecting Mudam's ambition to be among the most dynamic museums for contemporary art in Europe and accessible to the broadest possible public.

Driven by Mudam's own collection, exhibitions will focus on 700 pieces of artwork it has collected over the past few years, mostly dating back to the 1990s.

"We want people to be able to look at the work of artists that we now consider as the masters of contemporary art," explains Cotter.

Until 7 April 2019, Mudam is dedicating more than 400 square metres of space to paintings by major artists from this specific period, such as Michel Majerus, Albert Oehlen, Helmut Federle and Tina Gillen.

The artistic programme also gives room to various art disciplines such as painting, sculpture, photography, film, dance and literature.

One of the most iconic of the museum's latest projects is the first exhibition in Luxembourg dedicated to Canadian artist Jeff Wall, featuring his most emblematic works, such as *Picture for Women* (1979), the *Storyteller* (1986), and his more recent pieces.

Considered as one of the most influential contemporary artists of his time, Wall has revolutionised his audience's perception of photography by aligning it with a broader pictorial tradition and appraising it in its relations to other arts such as painting, cinema and literature, *"We want to go deep with exhibitions that are scholarly, well researched and more responsive. We're really looking at new practices, new bodies of work and artists,"* adds the new Director.

MAKE IT A LIVING PLACE

Museums are a lot more than collections of artifacts; they allow visitors to make connections, discuss thoughts and opinions, and become an active part of the community.

"Our artistic programme must make the museum alive, dynamic, and attract different types of audiences. I want the museum to become a place that is part of the daily life of residents, cross-border workers and tourists. It's a matter of visibility and presence," she says.

The artistic programme will move beyond the architectural confines of Mudam with



SUSUMU SHINGU . SPACESHIP, MUDAM LUXEMBOURG, 2018-2019

a series of presentations and artistic interventions in the surrounding site of the museum.

"We are ideally located in a beautiful green park and surrounded by the remnants of a fortress. You can stroll through the area before visiting the museum and vice-versa. It is a unique experience. It is important for visitors to be in a familiar environment that inspires and transcends them as soon as they step into the museum."

As part of its long-term vision for deeper public engagement, Mudam will also collaborate throughout the year with artists, writers and cultural producers on a rich offer of talks, round tables, public events and screenings.

Enhancing the visitor's experience will also involve entering the digital age. The collection will be central to Mudam's digital strategy, which will be unrolled in 2019, with the aim of offering, both on-line and in the museum, a richer experience of the art on display and one that is attuned to the changing modes of viewing in our current and rapidly changing technical age.

INTERNATIONAL CONNECTIONS

Collaboration is a touchstone.

In the coming year, the artistic programme will spring from numerous national and international partnerships with prestigious institutions, including the Brandhost Museum, Munich, the Paul Klee Foundation, Bern and the Whitney Museum of American Art in New York.

"I also use my experience and network acquired through the years. The museum must find institutions that could play the role of sister institutions," she explains.

Cotter explains that Luxembourg's geographical position is a clear added-value, leaving room for cooperation with major institutions in neighboring countries.

"Luxembourg's location in the heart of Europe gives us the advantage of being very close to a lot of major institutions in the heart of Europe. This is a major added-value," she concludes.

No doubt, the future of Luxembourg's art scene is in safe hands.

OB

TONY CRAGG, *FORMINIFERA*, 1994, COLLECTION MUDAM LUXEMBOURG, APPORT FOCUNA, ACQUISITION 1996



JEFF WALL, *APPEARANCE*, MUDAM LUXEMBOURG, 2018-2019



UPCOMING EVENTS

2019
14-15.01

LUXEMBOURG FOR FINANCE WILL BE AT THE ASIAN FINANCIAL FORUM 2019

The Asian Financial Forum will take place in Hong Kong on 14 and 15 January 2019 bringing together some of the most influential members of the global financial and business community to discuss developments and trends in the dynamic markets of Asia. Come and visit the Luxembourg for Finance booth.

Under the theme **Creating a sustainable and inclusive future** the two-day forum features in-depth discussions and exchanges on topical issues.



COMING UP

Luxembourg for Finance has just released its 2019 event and mission programme. Please visit our website (PDF Agenda online) and contact our events team for more information and sponsorship opportunities at events@lff.lu.

BY SCANNING THE
QR CODE BELOW,
VIEW THE FULL
EVENTS PROGRAMME.



IMPRESSUM

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**THE NEXT EDITION OF LEO, THE FINANCIAL CENTRE'S MAG WILL BE PUBLISHED
IN MARCH 2019.**

FUTURING FINTECH

LUXEMBOURG IS READY FOR THE FUTURE OF FINANCIAL TECHNOLOGY

Futuring is about building on experience and anticipating future needs. To flourish, innovation needs an environment that's 'just right'. A place where fresh ideas are valued, new approaches are developed and the tools are available to turn ideas into reality. Luxembourg has proven itself to be such a place in the past, and it's doing so again now. Here, finance and technology are evolving together, fast.

It's no coincidence that many FinTech pioneers have chosen to offer their financial products and services across the EU from Luxembourg. They belong to a growing community of FinTech entrepreneurs working together with banks, insurers and asset managers to turbo-boost a whole new digital ecosystem for finance.

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