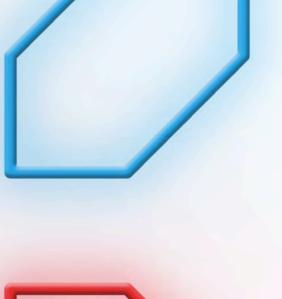


ANNUAL REPORT 2019





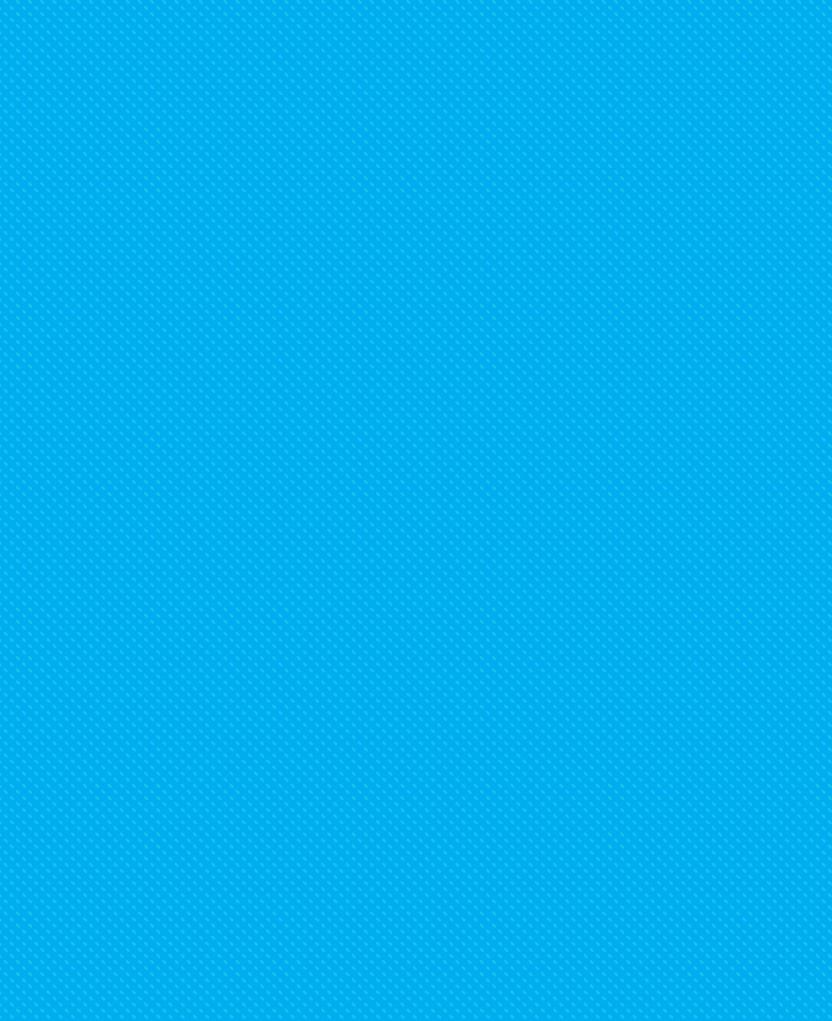


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MANAGEMENT BOARD				

TOWARDS A SUSTAINABLE DATA ECONOMY

The future of Luxembourg's economy is smart, sustainable and based on the use of data. In 2019, the government published two strategies for data-driven innovation and artificial intelligence that point the way forward. Luxinnovation is a key partner for turning these visions into reality.

Already considered as a digital frontrunner, Luxembourg has the ambition to become a leading data economy. The strategy for data-driven innovation outlines the government's vision for digitalising our priority economic sectors. The strategic vision for artificial intelligence highlights our ambition to ensure that this extremely powerful technology will bring advantages to everyone – businesses, research centres and individual citizens alike.

With 35 years experience of supporting Luxembourg companies in their R&D and innovation efforts, Luxinnovation is a trusted partner for businesses. The agency offers various services to help companies succeed with their digital transformation. These range from helping small and medium-sized companies (SMEs) to embark upon digital transformation to supporting major industrial groups in experimenting and developing new products, processes and services.

As the host and manager of the Luxembourg Digital Innovation Hub (L-DIH), Luxinnovation now also facilitates contact between industrial companies that need access to digitalisation skills, technologies, services and support actions, and technology service providers that can meet their needs. In addition, the agency attracts data-driven international investment and companies to Luxembourg that are a perfect fit for our economy and environment.

These new missions are a clear sign of our confidence that Luxinnovation will continue to be a key player in bringing the competitiveness and success of the Luxembourg economy to the next level in a sustainable manner.



Mario Grotz Board Chair

MAKING INNOVATION HAPPEN – 35 YEARS SUPPORTING COMPANIES

In 2019, Luxinnovation celebrated its 35th anniversary. Starting out as a small, enthusiastic group of people, the agency has grown and gained the trust of companies, research organisations and its partners from industry, business and government. Throughout this period, Luxinnovation has anticipated and adapted to change, taken up new challenges and supported the Luxembourg economy in a constructive manner.

What guides us today is the fundamental objective of reaching a sustainable economy in Luxembourg by encouraging and supporting companies to innovate so that they can contribute to and thrive in an economy that is sustainable and data-driven.

We are proud to have been entrusted with the mission to run the Luxembourg Digital Innovation Hub. It also gives us great satisfaction to see a growing number of companies and start-ups coming to us seeking advice, funding opportunities, partners and networks needed to carry out their innovative projects.

The Luxembourg Cluster Initiative was restructured in 2019 in order to better meet the needs of companies and to contribute to the development of Luxembourg's economy by taking on board their ideas and experience. We have set up cluster advisory groups comprised of key individuals from business, research and public administration who are willing to share their knowledge



and vision, and help us develop projects that can contribute to developing Luxembourg's economy and its priority sectors in a sustainable manner. We are grateful for the time and commitment of those engaged in this work.

Luxinnovation has grown considerably over the past 10 years and now counts over 70 staff members. An organisation of this size requires a full-fledged department for administration and finance that can ensure an efficient functioning and planning of operations in line with its strategic objectives. This has been achieved this year.

As an innovation agency, we are there to stimulate positive change by challenging activities that no longer make sense and help bring forth ideas that both create economic value and improve our quality of life. Diversity is key to innovation. Bringing together different opinions, skills, experiences and mind-sets opens the door to new ideas and opportunities. We are fortunate at Luxinnovation to have this diversity within our staff, an essential ingredient for innovation.

Sasha Baillie CEO

ORGANIGRAM



Sasha BAILLIE

CHIEF EXECUTIVE OFFICER



Benjamin QUESTIER

STRATEGIC ADVISOR



Arnaud SERVAIS

ADMINISTRATION & FINANCE



Marco EISCHEN

MARKETING & COMMUNICATION



Jean-Michel LUDWIG

BUSINESS DEVELOPMENT

- International Business Development
- Start-up Acceleration
- Market Intelligence



Johnny BREBELS

COMPANY RELATIONS AND SUPPORT

- Clusters / Sectoral Relationship Management
- Flagship Projects
- SME Performance
- Digital Innovation Hub



Marc FERRING

R&D AND INNOVATION SUPPORT

- Corporate RDI Support
- European RDI Support

OUR STAFF

As of 30 March 2020

CEO

Sasha **BAILLIE**

COMPANY RELATIONS AND SUPPORT

Johnny **BREBELS**

CLUSTERS/SECTORAL RELATIONSHIP MANAGEMENT

Johnny BREBELS

Jean-Philippe **ARIE**Anthony **AUERT**

Charles Albert **FLORENTIN**

Philippe **GENOT**Virginie **GODAR**

Marc LIS

Caroline MULLER

FLAGSHIP PROJECTS

Johnny BREBELS

Jean-Claude BACKENDORF Ania HÖTHKER

SME PERFORMANCE

Arnaud **DUBAN**

Lionel CAMMARATA Rémi GRIZARD Claude HOSTERT Emmanuelle KIPPER

DIGITAL INNOVATION HUB

Marina GUERIN-JABBOUR

Jean-Paul **HENGEN**

R&D AND INNOVATION SUPPORT

Marc **FERRING**

CORPORATE RDI SUPPORT

Pascal FABING

Avit BLANCHY
Barbara GRAU
Isabelle HENNEQUIN
Alexander LINK
Philippe MAYER

EUROPEAN RDI SUPPORT

Benjamin **QUESTIER**

Sanna ALARANTA Charles BETZ Rébecca DAMOTTE Géraud GUILLOUD Stefano POZZI MUCELLI

BUSINESS DEVELOPMENT

Jean-Michel **LUDWIG**

INTERNATIONAL BUSINESS DEVELOPMENT

Jean-Michel **LUDWIG**

Lucie BRIDARD
David FOY
Anne MILLER
Joost ORTJENS
Georges SCHAAF

START-UP ACCELERATION

Stefan **BEREND**

Sven **BALTES**Laurence **HULIN**Valentin **RONGONI**Stéphanie **SILVESTRI**

MARKET INTELLIGENCE

Sara BOUCHON

Maxime **DELAHAUT** Eve **O'CALLAGHAN** Mohamed **TOUMI**

SPACE TEAM

Patricia **CONTI**Frédéric **ROUESNEL**Lynn **ROBBROECKX**

MARKETING & COMMUNICATION

Marco **EISCHEN**

CONTENT & EVENT

Jean-Michel GAUDRON

Lena MÅRTENSSON Nathalie RAHME Kathrin WATTELLIER

DIGITAL

Laurent **FUTIN**

Laura FICHTNER
Sue HEWITT
Romane MARQUET
Jonas MERCIER
Marine MOMBELLI

ADMINISTRATION & FINANCE

Arnaud **SERVAIS**

BUDGET & ACCOUNTING

Marie-Hélène **DOURET**

Astrid **FURGALA** Andreia **PIRES** Christiane **SANDRI** Jérôme **TIBESAR**

HR & TALENT DEVELOPMENT

Brigitte **DE HAECK**

Nadège **HEGUE** Muriel **KONDRATUK**

ADMINISTRATION

Brigitte **DE HAECK**

Cristina EIRES Nadège HEGUE Sarah LAMHENE Mireille PELLIN Andreia PIRES

IT

Arnaud **SERVAIS**

Christophe **RIGOULET**

CORPORATE R&D AND INNOVATION SUPPORT

Luxinnovation contributes to promoting R&D and innovation activities in Luxembourg by facilitating the access to public funding. The agency supports companies with structuring their projects, guides them towards the most suitable funding mechanisms, and helps them prepare applications for subsidies, in particular those provided by the Ministry of the Economy.

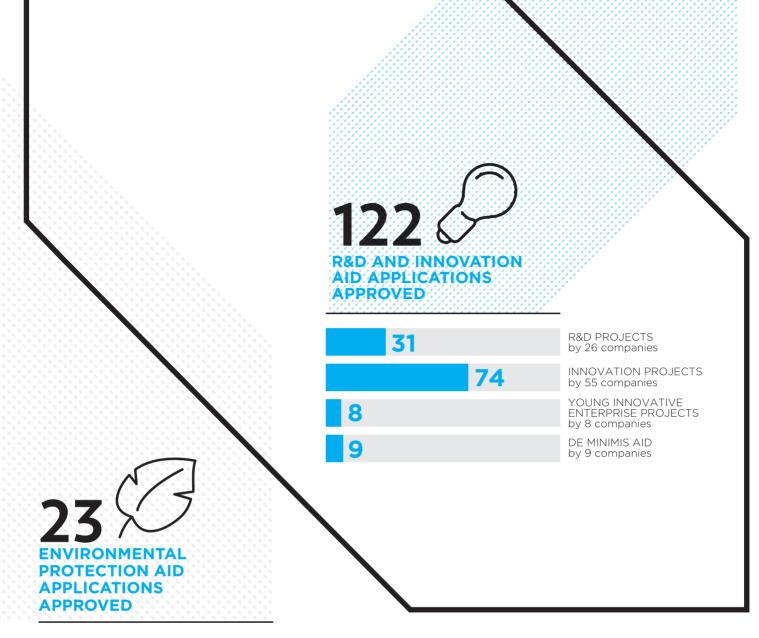
Over 120 successful applications for R&D subsidies were approved by the Ministry of the Economy in 2019. Almost 70% of the companies funded were small and medium-sized enterprises.

In addition to offering support with the preparation of high-quality funding applications, the Luxinnovation team also helps companies structure their R&D and innovation projects and connect with relevant partners when needed. Additional incentives for collaborative research and development projects exist. Companies that want to launch such projects can count on support from Luxinnovation, notably with identifying national research teams with relevant competences, defining the terms of collaboration and verifying whether projects are eligible for the increased funding rates offered by the ministry for collaborative R&D projects.

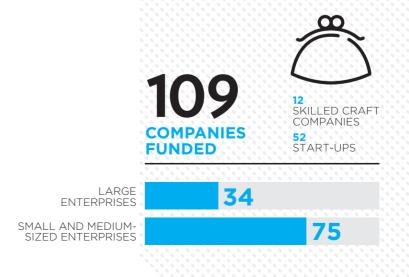
The agency also helps companies get access to international collaboration measures that build on national funding schemes. These include the intergovernmental initiative EUREKA that supports transnational R&D projects carried

out by companies in all technology areas and its flagship programme Eurostars focused on R&D performing SMEs, and IraSME, a small but agile network of funding programmes for R&D projects involving at least two countries. These mechanisms make it possible to co-fund project partners in different countries, which each benefit from national subsidies that are well known by the companies concerned.

In 2019, Luxinnovation held the chairmanship of TAFTIE, the European Network of Innovation Agencies. The network brings together 30 innovation agencies from all over Europe, with managing R&D and innovation programmes as a main common topic. During the year, Luxinnovation organised five meetings for TAFTIE members in Luxembourg. The events focused on start-up ecosystems, innovation advisory services offered by innovation agencies and the European Investment Bank, mission-driven research and innovation. knowledge and technology transfer, and the Digital Europe programme. The key knowledge of the different agencies was collected in a white paper entitled State aid considerations when developing innovation ecosystems that was published in December.



23 ENVIRONMENTAL PROTECTION PROJECTS by 17 companies







The company's research project "Distributed Collaborative Connected Electromagnetic mm-Wave Sensors" aims at gaining in-depth knowledge about the future possibilities offered by cutting edge radar technology. "This is a very complex matter, and we cannot be sure in advance of the final results," says Mr Schumacher. "However, it is a logic continuation of what we are doing today.

Maintaining a pipeline of new technologies has always been essential for our success."

IEE is implementing this interdisciplinary project together with the University of Luxembourg's Interdisciplinary Centre for Security, Reliability and Trust (SnT), headed by Professor Björn Ottersten who is widely renowned for his expertise in wireless communication and radar technology. The two organisations already have a long history of working together on challenging research projects. The SnT is mainly in charge of theoretical work (e.g. signal processing), while IEE focuses more on technology evaluation and experimental research. The Ministry of the Economy is co-funding the initiative for a period of four years.

CONTRACTUAL AGREEMENTS: A MUST FOR A SUSTAINABLE PARTNERSHIP

The focus of academic and industrial research is not necessarily the same: researchers want to release publications and attend scientific conferences, while companies concentrate on developing intellectual property that they can commercialise. "Both sides need to understand each other's objectives." Mr Schumacher underlines. "The SnT has extensive industry cooperation and the right professionals in place to handle such projects, which is a big asset for us. Beside the contractual regulations, there is a mutual understanding of the individual needs and obligations of each partner. This is necessary for the project to succeed, not only in terms of high-level technology and academic results, but also to enhance the company and its national ecosystem."

IEE has been working with Luxinnovation for years. "The Luxinnovation team supports us to formulate R&D projects that are eligible for state aid and reviews that all documents are complete and correct," says Mr Schumacher. "By asking crucial questions about the projects and how the outcome will be used in practice, they also help us avoid 'inventor blindness' and to keep focused on our business case. Having this support from external experts is very important."

EUROPEAN R&D AND INNOVATION SUPPORT

Luxinnovation informs, trains and supports public and private organisations in Luxembourg with applying for funding from European and international programmes. As the National **Contact Point for Horizon** 2020, the European framework programme for research and innovation, the agency aims at increasing the participation and success rate of Luxembourg players and helps them identify funding opportunities that are aligned with their own strategies and national priorities.

Luxinnovation's EU funding team supported its clients throughout the year with identifying the most suitable calls for proposals, checking their proposals and helping them improve their clarity, relevance and links to EU policies. Eligible clients were also informed about Fit 4 Horizon 2020, a programme from the Ministry of the Economy that supports companies wishing to submit Horizon 2020 proposals.

During the year, the agency was able to identify a number of funding opportunities in line with the government's strategy on data-driven innovation. The team also followed the launch of the Luxembourg Digital Innovation Hub (L-DIH) in close collaboration with the European Commission, and supported companies with getting access to funding for projects related to energy, materials, industry 4.0.5G and personalised medicine.

Several information sessions and workshops were organised on general topics such as proposal writing, as well as on thematic Horizon 2020 programmes. Joint information sessions were also organised with the European Commission representation in Luxembourg, notably on the European Innovation Council and its start-up support programme aimed at providing substantial financial support to innovative researchers and companies.

Written guidelines on how to use specific funding mechanisms, such as cascading grants and the Horizon 2020 lump sum scheme, were compiled and disseminated. Luxinnovation also launched an action aimed at supporting Luxembourg organisations with attracting researchers through the Marie Skłodowska-Curie Individual Fellowships (IF) scheme. The agency helped interested host institutions identify relevant candidates, trained them in proposal writing and reviewed the proposals before submission. The initiative was very positively received by potential host institutions, and numerous applications were received from researchers.

As 2020 will be the last year of Horizon 2020, a priority for Luxinnovation was also to facilitate the transition to the new framework programme, Horizon Europe. The team disseminated information about the structure and forthcoming opportunities of the new programme, and encouraged Luxembourg stakeholders to convey their interests and needs in order to improve current and future research programmes and partnerships.

102
NEW CONTRACTS
SIGNED

or Horizon 2020 projects with Luxembourg participants

IN **2019** €32
MILLIONS
OF HORIZON 2020
FUNDING OBTAINED

2014 > 2019 LUXEMBOURG PARTICIPATION IN HORIZON 2020

Accumulated figures

€136.31

MILLIONS

OF HORIZON 2020

FUNDING

OBTAINED

369
PROJECTS INVOLVING
LUXEMBOURG
PARTICIPANTS

SUCCESS RATE
OF SUBMITTED
HORIZON 2020
PROJECT PROPOSALS

in 2019

17%

EUROPEAN UNION 12%

INTERNATIONAL BUSINESS DEVELOPMENT

Luxinnovation conducts targeted prospection activities aimed at identifying and attracting international companies to Luxembourg whose activities are well aligned with the country's sustainable development and economic diversification. The work is carried out in close collaboration with the Ministry of the Economy, as well as with the Chamber of Commerce, the Luxembourg Trade and Investment Offices (LTIOs) and the embassies.

Luxinnovation's prospection activities focus on three main sectors: the automotive industry and smart mobility, clean technologies and the digital economy. The strategies for the sectors were reviewed following the publication of the government's "Data-driven innovation strategy for the development of a trusted and sustainable economy for Luxembourg" in May.

The strategy for the digital economy now fully integrates the data-driven innovation approach. International prospection missions focus both on attracting relevant companies and on increasing the knowledge about innovation and opportunities in relevant regions. The main focus areas for the automotive sector – autonomous driving, connected mobility, shared mobility and the electrification of mobility – tie in well with the data-driven approach and connect with Luxembourg's strategic projects in the fields of 5G, high performance computing and the cross-border digital testbed for

automated and connected driving. Cleantech prospection is mainly orientated towards data-driven solutions and "product as a service" models. The growing need for cleantech solutions to be used in several eco-districts under construction in Luxembourg is also attracting much interest and traction from foreign companies. The number of foreign companies visiting Luxembourg with a view to settling here, and of those incorporating in Luxembourg, increased by around 60% in 2019 compared to the previous year.

The business development team took part in economic missions organised together with the Chamber of Commerce and the Ministry of the Economy, notably to South Korea in July, and conducted sector-specific prospection missions and road trips. The business developers also participated in selected events and visited leading trade fairs. The regions visited are known for their progress in the specific sectors. The automotive sector focused on Israel, the US West Coast and the Chinese Fast Coast. The cleantech sector visits concentrated on the Nordic countries and Europe, while the digital sector trips were to the US, China, Europe, Russia and Israel.

Strategic events, the locations to visit and the companies with which individual meetings were identified were supported by Luxinnovation's market intelligence unit. The international visits were also carefully planned in close collaboration with local partners such as embassies and LTIOs.



with key conference and fairs

296



NEW COMPANIES WITH A POTENTIAL INTEREST

in establishing activities in Luxembourg identified

68



FOREIGN COMPANIES VISITED LUXEMBOURG

with support from Luxinnovation

19



FOREIGN COMPANIES INCORPORATED IN LUXEMBOURG

with support from Luxinnovation

MARKET INTELLIGENCE

Luxinnovation's market intelligence unit is a key provider of knowledge and economic data. The unit produces sector mappings that provide an in-depth analysis of key national ecosystems, undertakes technology watch activities and analyses relevant markets that are of interest for the further sustainable development of the Luxembourg economy.

The market intelligence team delivered a mapping of the cybersecurity sector, done in collaboration with Securitymadein.lu, and made updates of its wood and health technologies sector mappings. The results of the healthtech sector mapping were published in the 2019 Bilan de Compétitivité by the Observatoire de la Competitivité and STATEC.

In the context of international prospection, the team provided recommendations for the automotive, cleantech and digital sectors and targeted prospection lists to test these recommendations. In order to improve the feedback on potential prospects, which is essential to assess the relevance of the prospection strategies, a new version of the i-Net CRM tool was elaborated together with the Ministry of the Economy.

Luxinnovation tested the use of a new tool for international prospection in 2019, namely the LinkedIn Sales Navigator, which allows the sending of targeted e-mails to selected prospects via LinkedIn. Two main campaigns were implemented to support the economic missions organised to Korea and Morocco. Training material on the tool was developed for the LTIOs, which also received coaching and information on the support available from Luxinnovation via webinars.

A study was carried out on the development of different scenarios for the economic development of an industrial zone located in the south of Luxembourg. An overview of all future construction projects using circular economy principles in Luxembourg, and an accompanying study of the circular construction supply chain, were also produced.



A NEW CENTRE FOR TECHNOLOGY DEVELOPMENT

In 2019, Luxinnovation supported a growing number of international companies opening offices in Luxembourg. One of them, HighSide, has chosen Luxembourg as a centre for developing its highly secure messaging and files platform that protects users against phishing, spoofing, mass data breaches and insider threats.

When IT security expert Aaron Turner decided to uproot his budding company HotShot Technologies and his family and move from his native Idaho to Luxembourg, it was quite a radical step. "I have worked in over 75 countries around the world, but I always had my home in the US," he says. "But Luxembourg attracted me from a business point of view and spurred my sense of adventure."

PROTECTING DIGITAL PRIVACY

Driven by a dual fascination of the endless possibilities offered by the internet and the challenge of limiting its criminal use, Mr Turner has worked as a cybersecurity specialist for Microsoft and the US government. He also created start-ups working on mobile payments and the prevention of ATM skimming. "After selling my second company, I started to think about all the ways that people's privacy is compromised when they communicate digitally. I wanted to create a system that would give them more power over who could access their information," he explains. He developed and patented a technology generating encryption keys based on people's physical location that

are only valid in that specific place and thus very difficult for most hackers to compromise, and launched his third start-up, HotShot Technologies.

HotShot soon partnered with HighSide, and the two companies developed an ultra-secure messaging system incorporating Mr Turner's encryption technology. As a second step, they developed a complete identity management platform using location-based encryption to eliminate the need for passwords. After securing a deal with a very large client, the two partners decided to merge and Mr Turner joined HighSide as president and chief security officer.

TECHNOLOGY, BUSINESS, GROWTH

The link to Luxembourg was formed in 2018, before the merger. "One of our advisors introduced us to Vodafone's procurement centre here in Luxembourg and its start-up accelerator, Tomorrow Street. HotShot was a pre-revenue start-up at the time and not ready to join their programme, but they put us in contact with the Technoport incubator that offered us a place at their premises. When my daughter was accepted at the International School of Luxembourg, we sold our belongings in the US and moved here – and we have never regretted it," Mr Turner points out.

Luxembourg is now becoming HighSide's centre of technology development. The company employs a growing, multinational team of highly qualified specialists and expects to have a staff of 12 here by the end of 2020. It is building good business traction, especially in the US market, and was recently selected to represent Luxembourg in the prestigious Startup World Cup 2020.

"There are a lot of good start-ups here," Mr Turner comments. "Luxinnovation and the Ministry of the Economy have built great programmes such as Fit 4 Start that make it very hard not to come to Luxembourg, especially if you have R&D activities." He appreciates the personalised support offered by Luxinnovation and other players, and the dynamic business environment. "The combination of available private capital and a flexible national business strategy encourages entrepreneurs to take a chance. This is how innovation happens."

"LUXINNOVATION AND THE MINISTRY OF THE ECONOMY HAVE BUILT GREAT PROGRAMMES SUCH AS FIT 4 START THAT MAKE IT VERY HARD NOT TO COME TO LUXEMBOURG."



START-UP ACCELERATION

Supporting the creation of innovative companies is one of Luxinnovation's key missions. Together with its partners, the agency provides support to entrepreneurs on their start-up journey and helps them transform their ideas into sustainable businesses. It also facilitates the contacts with other organisations in Luxembourg's start-up ecosystem that offer additional support.

Fit 4 Start, Luxembourg's leading acceleration programme, aims at helping entrepreneurs take their start-up to the next level. Initiated by the Ministry of the Economy, the programme is managed by Luxinnovation with support from Technoport, the Luxembourg-City Incubator and the Luxembourg Space Agency. Two editions, which both included 10 places for ICT start-ups, were organised in 2019. In addition, the autumn edition offered five places to a second group comprising healthtech companies. For the first time, five places were also available for start-ups active in the field of space technologies. The number of applications increased by 30% compared to 2018. 71% of the applications were submitted by entrepreneurs coming from abroad, which is a clear indicator of the programme's reach and attractiveness on the international level.

Luxinnovation advised over 450 entrepreneurs during the year on a broad range of topics related to the creation, development and growth of their start-ups. In order to help promising start-ups with their internationalisation, the agency facilitated the

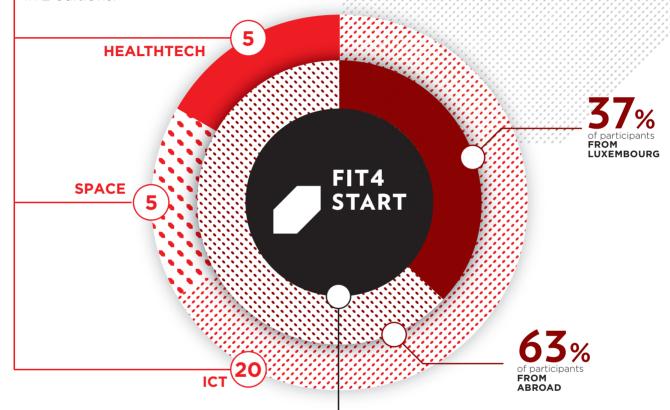
participation of four Luxembourg start-ups in the Startup School organised by investor and accelerator organisation Nex Cubed in San Francisco. Three start-ups also had the opportunity to participate in Benelux Catalyst, a four-week programme based in New York and aimed at helping start-ups from Benelux kick-start their international growth by providing them with tools and resources for being successful on the US market.

In close collaboration with all the key players of Luxembourg's start-up ecosystem, Luxinnovation developed "Startup Luxembourg", a national brand for the ecosystem. This common brand is used to make Luxembourg renowned at the international level as an attractive location for start-ups. It was notably featured at the national pavilion organised in collaboration with the Chamber of Commerce at the internationally renowned technology conference VivaTech in Paris and at Web Summit in Lisbon, considered the largest tech event in the world. Luxinnovation organised a side event at Web Summit in partnership with Vodafone Power Lab, the Luxembourg Open Innovation Club (LOIC) and the Chamber of Commerce which connected start-ups with corporate innovation leaders and investors.

The Luxinnovation team also provided support to a number of national events and initiatives, such as ICT Spring, Arch Summit, Mind & Market, Pitch Your Start-Up, Start-Up World Cup, Paperjam Start-Up Stories and the European Start-up Night.



in 2 editions:



CONTACTS INITIATED WITH

463



000 ENTREPRENEURS REQUESTING SUPPORT

75



APPLICATIONS SUBMITTED by entrepreneurs

from

DIFFERENT COUNTRIES



CLUSTERS/COMPANY RELATIONSHIP MANAGEMENT

One of Luxinnovation's key objectives is to support the competitiveness, diversification and sustainable development of the Luxembourg economy. Through the Luxembourg Cluster Initiative, the agency offers holistic, customer-centric support to companies and helps them address the global evolution of their sectors that might, at the same time, represent challenges and opportunities. Luxinnovation also hosts Luxembourg's newly created Digital Innovation Hub.

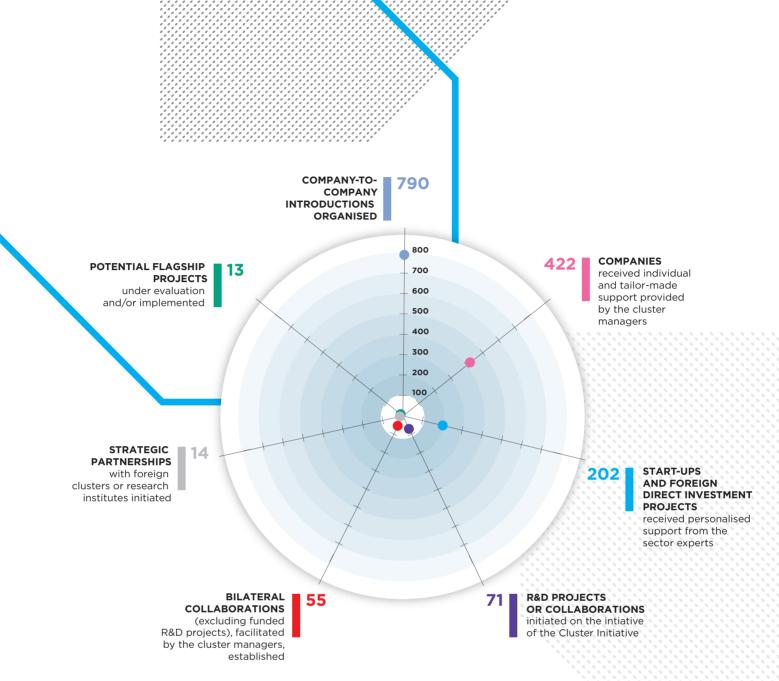
Ever since its launch by the Ministry of the Economy, the Luxembourg Cluster Initiative has been an essential tool for accelerating the transfer of knowledge and best practice, generating technological cooperation and developing advanced technologies. The initiatives bring together companies, research centres and support organisations in the AutoMobility, CleanTech, Creative Industries, ICT, Materials & Manufacturing and Wood Clusters. In 2019, the management of the Cluster Initiative was thoroughly reviewed in order to better respond to industry needs and be more customer-centric.

During the year, the agency has brought forward various flagship projects aimed at stimulating and facilitating innovation. In order to better address transversal topics and technologies such as digitalisation, a growing number of cross-sector activities were implemented. 35% of the cluster events were co-organised by two or more clusters, which is a

considerable increase compared to previous years.

The clusters are also increasingly involved in international initiatives. The Creative Industries Cluster joined the German PCI Kreativnetzwerk, which brings together around 40 creative industries clusters. The AutoMobility Cluster joined the Greater Region automotive network Pôle Automobile Européen and ZIM UmSenAuto, which focuses on commercial solutions for environmental sensors, as representative of Luxembourg industry. The Materials & Manufacturing Cluster is a strategic partner in five Interreg projects, where it creates links between project participants and local industry. The CleanTech Cluster continued to contribute to the metacluster Greater Green, an Interreg-funded project that brings together environmental technology players in the Greater Region.

The Luxembourg Digital Innovation Hub (L-DIH) was officially inaugurated on 30 September 2019. The hub is a collaboration between the Ministry of the Economy, FEDIL - The Voice of Luxembourg's Industry, Luxinnovation, the University of Luxembourg, the Chamber of Commerce, the Luxembourg Institute of Science and Technology (LIST) and the Luxembourg National Research Fund. It is hosted and managed by Luxinnovation. This key element of the national strategy for data-driven innovation is aimed at facilitating the digital transformation of industry, with a particular focus on SMEs. An experienced manager was recruited to define the L-DIH strategy and its operational implementation for the years 2020-2021. Meetings with 20 industrial companies were organised to identify their needs and around 10 service providers were identified who are able to support companies in their digital transformation and move towards Industry 4.0. The hub also prepared to become acknowledged by the European Commission as the unique Digital Innovation Hub of the Grand Duchy of Luxembourg.





PILOT PROJECTS WITH CROSS-SECTOR PROJECT MANAGEMENT IN PLACE (EXAMPLES)

- CIRCULAR BUILDING:
 LEVELING OFFER AND DEMAND
- TIMBER TRADE PLATFORM

- CIRCULAR DESIGN CHALLENGE
- PLASTICS LOOP
 CIRCULAR ECONOMY

CLUSTERS: A REFORM FOR GREATER EFFICIENCY

The clusters managed by Luxinnovation took an important step forward in 2019 by reforming their governance and refocusing their missions in order to further improve the way they function.

At the beginning of the 2000s, the Luxembourg Cluster Initiative was launched by the government as a "key element of the R&D and innovation policy". The management and organisation was entrusted to Luxinnovation.

The very first cluster, SurfMat, dedicated to "New Materials - Surface Treatments and Coatings" (since then renamed Materials & Manufacturing), was created in 2001. It was followed by InfoComm (2002, then renamed ICT), BioHealth (2008, now HealthTech), EcoInnovation (2009, now CleanTech), Automotive Components (2013, now AutoMobility), Wood (2016) and Creative Industries (2017). More than 1,450 companies and institutions are currently involved in the Cluster Initiative. The number increased by more than 20% in 2019

EVOLVING MISSIONS

"Originally, the cluster activity was based on five pillars: business development; product and service innovation; branding; internationalisation; prospection and promotion. All this was supported by a strong brand that differentiated the cluster services from the other support offered by Luxinnovation," explains Johnny Brebels, Director Company Relations and Support at Luxinnovation.



Over time, the context has changed, especially in 2016 when the promotion agency Luxembourg for Business was integrated into Luxinnovation and the new international business development department took over the responsibility for prospection and promotion.

This in no way diminished the activity of the clusters, which now concentrate on identifying companies' needs, networking and creating so-called flagship projects. The flagships involve at least two companies or organisations, favour public-private partnerships and make a positive contribution to the ecosystem or the economy, in a sustainable and intelligent way.

NEW GOVERNANCE STRUCTURE

Initially, the clusters were coordinated by Luxinnovation's cluster managers, who followed the overall guidelines of the agency's management board, and steering committees chaired by representatives of the private sector. However, this dual governance gradually proved to be out of step with changing needs, the emergence of cross-sectoral projects and the development of a more customer-oriented approach.



SME PERFORMANCE

Luxinnovation contributes to enhancing the competitiveness of Luxembourg companies, in particular small and mediumsized enterprises (SMEs), by helping them prepare for and launch innovation activities. The participation in the agency's range of performance programmes more than doubled in 2019. Luxinnovation also helped SMEs take advantage of European partnership opportunities through the Enterprise Europe Network (EEN).

The growing family of "Fit 4" performance programmes for SMEs now includes six different components. Fit 4 Digital remains the largest programmes in terms of participation, with no less than 110 new companies joining in 2019. A complement to the programme targeting small enterprises, the Fit 4 Digital Packages, were launched on 23 October by the Ministry of the Economy, the House of Entrepreneurship (HoE) of the Chamber of Commerce and Luxinnovation. They offer companies the opportunity to make a preanalysis with the support of the Go Digital team of the HoE, choose a package such as digital marketing, client management or organisational management, and implement a digital tool with the help of an experienced service provider. The initiative directly proved to be a success with 135 "Digital Quick Checks" performed and over 30 companies participating before the end of the year.

Fit 4 Innovation is the second biggest programme with a total of 11 new participations in 2019. One of its objectives is to help companies get ready for launching new innovation activities, and three companies submitted aid applications for process and organisational innovation projects to the Ministry of the Economy as a direct result of their participation.

Together with the Chamber of Commerce and the Chamber of Skilled Crafts, Luxinnovation is also the Luxembourg node of the Enterprise Europe Network (EEN) and helps Luxembourg players establish partnerships with international organisations. Five such partnerships, three focusing on advisory services and two on formal partnership agreements, were established in 2019. Luxinnovation also assessed the innovation capacity of six SMEs and held a business innovation workshop with one company. The team supported three beneficiaries of the highly competitive SME Instrument funding provided by the European Commission with advice and coaching.

Three "Club Inno" events were organised together with the Chamber of Skilled Crafts on the topics of change management, service design with LEGO® Serious Play®, and business model innovation for SMEs.

Finally, Luxinnovation is part of a consortium that submitted a successful project proposal to the European Commission's INNOSUP programme. Named "DigiJourney", the project is aimed at improving digitalisation support services provided to SMEs through the exchange of good practices. It is carried out together with partners from Spain and Romania.

156

PARTICIPATIONS IN 2019

FIT 4 DIGITAL 110

FIT 4 GROWTH

FIT 4 SERVICE

FIT 4 DIGITAL PACKAGES

FIT 4 INNOVATION DIAGNOSTICS

FIT 4 INNOVATION PROJECTS

26



COMPANIES
PARTICIPATING
in international
matchmaking events
organised by the Enterprise
Europe Network (EEN)

5



EEN PARTNERSHIPS INITIATED, each including one Luxembourg and one foreign organisation

MARKETING AND COMMUNICATION

The aim of Luxinnovation's marketing and communication effort is three-fold: firstly, the agency informs companies about how they can benefit from R&D, innovation and digital transformation. Secondly, in the context of Luxembourg Trade & Invest, it promotes Luxembourg as an attractive business destination for international companies with high added value. Thirdly, Luxinnovation also promotes Luxembourg's dynamic start-up ecosystem at the national and international level in collaboration with its partners. Increasingly sophisticated digital tools offer new ways of reaching target groups with relevant, specialised information. Luxinnovation's marketing and communication team focused its efforts in 2019 on the identification and implementation of powerful digital tools, and the production of high-quality, attractive content. Original articles drafted by the editorial team as well as videos were continuously published on the different websites managed by the agency, as well as in relevant external publications. The team disseminated various newsletters. notably the monthly Luxinnovation news bulletin *Insights* and the international newsletter Crossroads.

The work with social media was further developed during the year. Several new accounts were created to better target specific groups and enhance the return on investment. The team implemented targeted communication and sponsored ads campaigns using well-defined hashtags and coherent visual approaches. Campaigns focused in particular on economic missions and the Luxembourg pavilions at major international fairs, and on Fit 4 Start.

Luxinnovation played a key role in creating a common brand for Luxembourg's start-up ecosystem, Startup Luxembourg. A new website for the start-up acceleration programme Fit 4 Start was launched at the end of the year, which will be followed by a completely new Startup Luxembourg website in early 2020.

Printed publications published during the year included, for example, the third edition of the international *Happen* magazine and sector mappings highlighting the wood, health technologies and cybersecurity sectors.

10



NEW BROCHURES AND MAGAZINES PUBLISHED

30



NEWSLETTERS PUBLISHED

46



VIDEOS PRODUCED Major events organised included, among others, two Fit 4 Start Pitching and Graduation Days, the inauguration of the cross-border digital testbed for autonomous and connected driving, the Wood Cluster Forum, the launch of the Luxembourg Digital Innovation Hub, the Smart Manufacturing Conference and several events organised in the context of Luxinnovation's presidency of TAFTIE. Luxinnovation celebrated its 35th anniversary in November in the presence of His Royal Highness the Grand Duke.

Luxinnovation continued to work closely with the Chamber of Commerce, the Ministry of the Economy, the national branding committee and other stakeholders involved in promoting Luxembourg abroad. The agency also supported the Luxembourg Trade and Investment Offices (LTIOs) in their promotional activities and provided relevant training sessions.

FOLLOWERS ON SOCIAL MEDIA IN 2019:

Luxembourg Trade & Invest accounts (\triangle compared to 2018)

f 3

3,035 **+3%**

in

.160 **New**



3.993 **+9%**

Startup Luxembourg accounts

f

New

New

831 **New**

Luxinnovation accounts

f

3.904 **+32%**

in

7.926 **+67**%

y

6.697 +14%

3



NEW WEBSITES LAUNCHED

43



EVENTS ORGANISED

+200



MENTIONS OF LUXINNOVATION in national and international newspapers and magazines

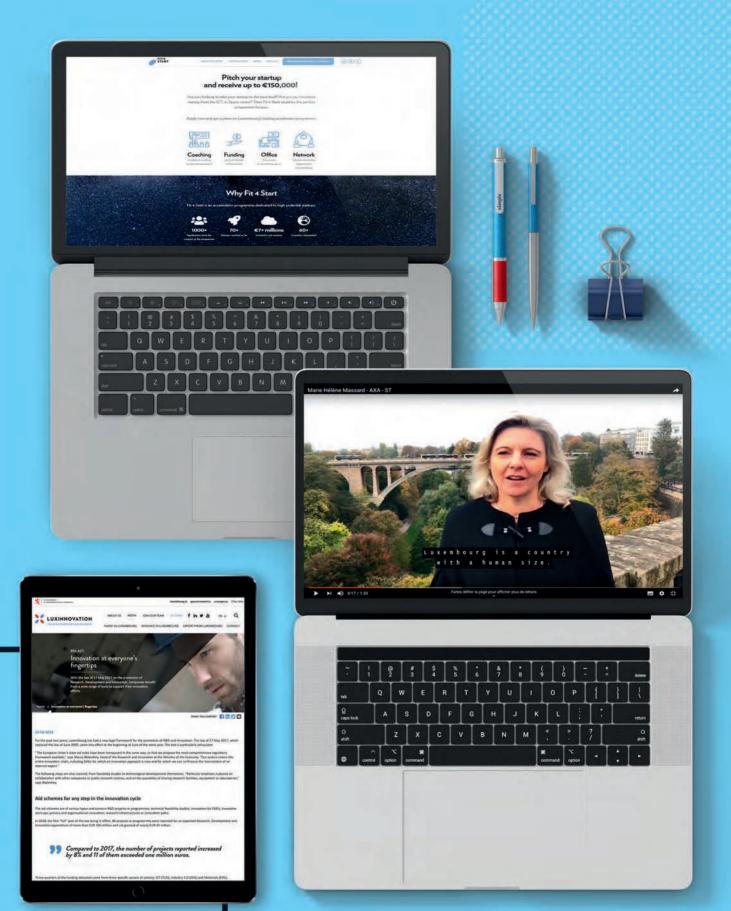
8



SOCIAL MEDIA SPONSORED ADS CAMPAIGNS IMPLEMENTED







ADMINISTRATION & FINANCE

Over the past few years,
Luxinnovation has expanded
rapidly in terms of size as well as
the extent of its mission. In order
to efficiently support its growing,
client-centred teams, a new
department for administration and
finance was created in 2019 and a
dedicated director was appointed.
The department brings together
all internal services: administration,
human resources, information
technology, finance, legal, quality
management and the general
secretariat.

One of the department's main priorities in 2019 was to empower its accounting team to integrate and formalise all aspects related to financing. The team is now managing accounting, the budget process and follow-up, procurement, and funding of the agency.

Luxinnovation advertised 19 open positions in 2019 and received almost 950 applications. In addition, over 230 people submitted spontaneous applications. In order to be able to fulfil its mission, the agency mainly recruits highly skilled and experienced personnel. The gender balance of the current staff members is exemplary – 49% women and 51% men – and the employees represent 13 different nationalities.

A key focus of Luxinnovation is to support the implementation of the government's strategy for data-driven innovation. This is not only reflected in the agency's service offering, but also in its internal functioning. An initiative

was launched to develop a comprehensive digitalisation strategy for Luxinnovation in line with the government's vision. To pursue this task, the team will be reinforced and new investments are planned in 2020 and 2021.

Being a central player in the field of innovation also means assuming social responsibilities. In order to lay the foundations of a global corporate social responsibility (CSR) strategy, Luxinnovation worked on topics such as reducing CO_2 emissions and office waste, improving the wellbeing of the staff, developing a responsible purchasing policy and focusing on the agency's social impact. 16 concrete actions were implemented. Luxinnovation's objective is to be CSR certified in 2021.

ANNUAL ACCOUNTS

BALANCE SHEET 31 DECEMBER 2019 (EUR)

ASSETS	2019	2018
FIXED ASSETS	553,337.72	640,407.76
Intangible assets	194,749.66	237,864.87
Tangible assets	358,588.06	402,542.89
CURRENT ASSETS	3,813,203.37	3,188,706.61
Debtors	551,771.96	729,577.96
Cash at bank and in hand	3,261,431.41	2,459,128.65
PREPAYMENTS	119,708.52	75,976.09
TOTAL	4,486,249.61	3,905,090.46

CAPITAL, RESERVES AND LIABILITIES	2019	2018
CAPITAL AND RESERVES	3,411,396.90	2,630,059.58
Subscribed capital	541,739.24	541,739.24
Reserves	2,827,619.96	2,030,389.59
Profit or loss for the financial year	0.00	0.00
Capital investment subsidies	42,037.70	57,930.75
PROVISIONS	231,198.18	249,370.18
CREDITORS	803,947.06	591,105.13
Amounts owed to credit institutions	4,320.52	2,588.97
Trade creditors	529,091.48	288,343.44
Other creditors	270,535.06	300,172.72
DEFERRED INCOME	39,707.47	434,555.57
TOTAL	4,486,249.61	3,905,090.46

PROFIT AND LOSS ACCOUNT 31 DECEMBER 2019 (EUR)

	2019	2018
Other operating income	10.419.711,25	9.924.342,11
Raw materials and consumables and other external expenses	-3.065.338,22	-2.382.220,16
Staff costs	-7.041.057,16	-6.986.789,66
Value adjustments	-256.023,51	-238.920,54
Other operating expenses	-58.504,72	-316.424,14
Other interest receivable and similar income	1.300,22	12,39
Interest payable and similar expenses	-87,86	0,00
Profit or loss after taxation	0,00	0,00
PROFIT OR LOSS FOR THE FINANCIAL YEAR	0,00	0,00



Isabelle Schlesser

GENERAL SECRETARY OF LUXINNOVATION BETWEEN 2005 AND 2012

"When I arrived in 1999, I was the 5th employee of Luxinnovation and one of the first to be recruited by the GIE. I started by managing European projects in the field of innovation management techniques, as well as the business plan competition 1,2,3, Go, created in 2000. I also enjoyed working on the creation of the innovation web portal, which was one of the first state portals.

At that time, we were working in a real start-up atmosphere and I always enjoyed being able to work with researchers and entrepreneurs at the same time: people who have ideas and want to develop things. Being able to help and support them is very rewarding.

At that time, the economic and human context was obviously different and sometimes you had to dare to make things happen."

The genes of Luxinnovation can be traced back to Pierre Werner's government programme following the legislative elections of June 1979. The government clearly expressed its will to contribute "to the innovation effort of companies, in particular by implementing appropriate instruments to encourage research, the use of new technologies and the adoption of innovation in the production and service sectors".

In particular, the desire for information, awareness raising and assistance for R&D and innovation was emphasised: companies and research organisations expressed the need for a privileged point of contact who could provide them with information on existing aid and services in the field of innovation, and assist them in drawing up their national and European projects.

As a result, on 1 June 1984, an "Agency for the Promotion of Innovation" was set up within the Ministry of the Economy and Small and Medium-Sized Enterprises, with a budget of 2,468 million Luxembourg francs (just over €60,000) for its first (half) year of operation.

















Serge Pommerell

MANAGER OF LUXINNOVATION BETWEEN JULY 1991 AND MAY 1997

"I was recruited after answering an ad. I had just graduated from university: this was my first real job. A few days after starting, I was sent to Lisbon to attend a very high-level conference on technology transfer. I was immediately thrown in at the deep end!

At that time, many people were still wondering what innovation really was. So we advocated information and awareness: we went into companies and identified their R&D needs. The challenge was to understand the engineers and turn their idea into a quantifiable research project.

We never counted our hours, nor the long journeys. I have very good memories of this period and of the very strong motivation of all the people we worked with."

INNOVATION AND RESEARCH ENTRY POINT

The first management committee met on 4 October 1984, with Georges Schmit and Patrick Nickels (representing the Ministry of the Economy), Romain Beffort and Nicolas Soisson (for the Federation of Industrialists) and Jean-Paul Schmit and Étienne Reuter (for the Chamber of Commerce).

The very first companies receiving support were Solucom (transport of thermal energy), Ets R. Stoll (integrated computer management) and Jean Dechmann (installations for recovering unused concrete raw materials and for the manufacture of reinforced concrete).

Since its creation, Luxinnovation's mission has been to be the first "innovation and research entry point" in Luxembourg. Its vocation was to encourage the participation of entrepreneurs and researchers in national and transnational R&D programmes.

Over the years, the demand for Luxinnovation's services has grown strongly and two other organisations joined the agency's partnership: the Ministry of National Education and Vocational Training (then responsible for research policy in the public sector, meanwhile taken over by the Ministry of Higher Education and Research) in 1992, then the Chamber of Skilled Crafts in 1998.

In 1998, in order to give Luxinnovation its own legal form and consolidate its activities, its founding members granted it the status of Economic Interest Group (GIE) on 1 November.

RAISING AWARENESS AND SUPPORT

In 2001, Luxinnovation was entrusted with the implementation of several large-scale national programmes and projects: the creation of the Luxembourg Portal for Innovation and Research, the launch of the Cluster programme and the creation of an innovation observatory.

These programmes enabled it to develop

its internal skills and create a greater force for action. Between 2001 and 2008, Luxinnovation's workforce grew from 8 to 28 people.

The year 2009 marked an important milestone in the economic landscape, with the adoption of the law of 5 June relating to the promotion of research, development and innovation, introducing nine new public aid schemes. Luxinnovation was entrusted with awareness raising and the promotion of this law. The agency continued to grow and saw its staff increase from 28 to 40 people between 2008 and 2013.

At the beginning of 2015, there was the big move: Luxinnovation left the Chamber of Commerce building in Luxembourg-Kirchberg and relocated to the brand new House of Innovation at the heart of the City of Sciences, Research and Innovation in Esch-Belval.

INTERNATIONAL SCOPE

In 2016, Luxinnovation grew further as it was assigned the international economic promotion activities related to the "Luxembourg Trade & Invest" brand that had previously been carried out by the promotion agency Luxembourg for Business.

One year later, the law of 17 May 2017 renewing the aid schemes for research, development and innovation completed and enriched the system dating from 2009. The new law further strengthened Luxinnovation's mission to support companies in identifying the most suitable mechanisms for implementing and co-financing their innovation initiatives. The growth continued and the agency's staff now exceeds 70 people.

Very present on the national level, Luxinnovation has also played a role since its creation in providing access to different European funding programmes. The agency is the national contact point for the different multi-annual framework programmes of the European Commission. A role in which it is very active. As proof: in 2018, Luxembourg was the country with the highest success rate in the EU



LUXINNOVATION EMPLOYEE BETWEEN 2002 AND 2020

"My association with Luxinnovation began in 2002, when the organisation was still very small. I started working in support of the Luxembourg Cluster Initiative in close collaboration with the Ministry of the Economy. This work was always very rewarding and I am very pleased that the clusters continue to make a valuable contribution to the development of the economy.

More recently, I have been involved in supporting the international development activities of the agency, requiring completely different skill sets. This has brought many new challenges, but the results of all this hard work are fast becoming evident.

Now recently retired, I am very excited to see that the agency is remaining as relevant today as it has always been. It was a privilege to work with such talented colleagues and I am sure that the agency will continue to grow and take on new responsibilities in the years to come."

for project proposals under the Horizon 2020 framework programme.

The creation of the Luxembourg Digital Innovation Hub in September 2019 is the latest major milestone for the national agency, whose history over the past 35 years illustrates the innovation dynamics of an economy that in 2018 was ranked among the European innovation champions.

MANAGEMENT BOARD

As of 30 March 2020

BOARD MEMBERS

Mario Grotz

Board Chair

1^{er} conseiller de gouvernement Ministry of the Economy

Sasha BAILLIE

CEO

1^{er} conseiller de gouvernement Ministry of the Economy

Tom BAUMERT

Member of the Board of Directors Luxembourg Chamber of Commerce

Romain MARTIN

1^{er} conseiller de gouvernement Ministry for Higher Education and Research

Philippe OSCH

CTO

Hitec Luxembourg

Gilles REDING

Directeur Affaires environnementales, techniques et innovation Luxembourg Chamber of Skilled Crafts

Georges SANTER

Head of Digital and Innovation
FEDIL - The Voice of Luxembourg's industry

Gilles SCHOLTUS

Conseiller de gouvernement 1ère classe Ministry of the Economy

SUBSTITUTE BOARD MEMBERS

Daniel DA CRUZ

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Robert KERGER

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Ministry for Higher Education and Research

Philippe LINSTER

CEO House of Startups

Luxembourg Chamber of Commerce

Anne MAJERUS

Conseillère Technique et Économique Luxembourg Chamber of Skilled Crafts

Marco WALENTINY

Conseiller de direction 1ère classe Ministry of the Economy

Carole WAMMER

Rédacteur

Ministry of the Economy

Jean-Marc ZAHLEN

Chargé de Projets

FEDIL - The Voice of Luxembourg's Industry

Lynn ZOENEN

Global Affairs Manager Ispace

