

Cover photo: Digital Eye Wave Lines

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EDITORIAL



Mario Grotz Board Chair

AN INVALUABLE PARTNER IN 2020

2020 was a year we will all remember for some time to come. The COVID-19 pandemic hit us like a bolt out of the blue, completely transforming our everyday life and bringing huge challenges for our economy. The Luxembourg government and professional chambers reacted quickly with information and measures aimed at supporting companies, protecting employment and combatting the health crisis and its after effects. Luxinnovation was a key partner for us helping us put all this into practice.

Luxinnovation played a pivotal role in supporting companies during the year and cooperating with its stakeholders to put key initiatives in place – the Fit 4 Resilience programme, the EPI-Covid19.lu website and the StartupsVsCovid19 call for projects, to mention but a few examples. Luxinnovation also provided valuable knowledge and analyses of company needs and market trends that is being used to determine where we should focus our efforts in the coming years to help the economy recover and relaunch successfully.

During 2020, Luxinnovation's in-depth knowledge of the economic landscape and of individual businesses and the agility and flexibility shown by the whole organisation, proved to be invaluable. On behalf of the board, I wish to thank the management and staff of Luxinnovation for their commitment and hard work.

However, the most important feedback is that from our client companies. It has been very encouraging to see how many of them have reoriented their production, invested, innovated and reviewed their strategic positioning in order to help fight the crisis and become stronger and more resilient in the future. Four of them share their experience of doing this together with Luxinnovation in the video portraits featured in this annual report. I encourage you to check them out and be inspired about how we can work together to build new foundations for longterm sustainability and competitiveness.

EMBRACING CHANGE

The pandemic that hit us all in 2020 has made us rethink many ways of doing things. As an innovation agency, Luxinnovation has not only sought to provide companies with the right tools to fully embrace the new business opportunities that change brings to them, but also to better identify and highlight the opportunities new global market trends can offer our economy and to help ensure that Luxembourg is a European frontrunner of the digital economy of the future.

The crisis has raised awareness of the vulnerability of our supply chains. Consumers and citizens have also increased their expectations tremendously for more sustainable products and services. This certainly poses a challenge to our companies, who need not only to increase their resilience by diversifying their supply chains but also need to provide their clients with products and services that meet higher social and environmental standards. It is those companies that live up to this challenge and see the opportunities in a change of business model that can be at the forefront of a future data-driven economy.

Throughout this past year, Luxinnovation has sought to draw the lessons from the crisis for our companies and our economy, to identify the opportunities that it provides us with and help our companies on this challenging yet potentially rewarding transformative journey. In this annual report, we shall highlight four key areas of our activity in the past year.

Three factors were paramount in allowing us to carry out our mission successfully: Firstly, working hand in hand with the ministries (economy, research, environment, energy, digitalisation, foreign affairs, finance, state...), with the Chamber of Commerce, the Chamber of Skilled Crafts, FEDIL and the Fédération des artisans, as well as with the University and the research and technology organisations (LIST, LIH, etc). Secondly, the vast range of expertise and the engaging attitude of our teams who are driven by the aspiration to support our companies and our economy by all possible means. Thirdly, the financial means that our government and our stakeholders representing the private sector have put at our disposal to carry out this mission.

As a driver of digitalisation and innovation, Luxinnovation's own internal organisation has had to undergo changes and will continue to do so. Whilst helping companies to function in a more digital and data-driven manner, we ourselves need to carry out our own digital transformation. Luxinnovation seeks to become a fully data-driven organisation by 2025. This requires not only fully accessing our own data on the basis of solid data governance, but also having the right mindset and habits to be able to base our decisions on data. But being a data-driven organisation alone is not sufficient. We shall ensure that we remain a human-centric organisation, that respects and fosters human values, where the creativity of our staff is harnessed and each and every one of us has a real sense of purpose in their job. This is how we make innovation happen.



Sasha Baillie CEO

ORGANISATION CHART



Sasha BAILLIE

EXECUTIVE ASSISTANT Carole Buttignol



Arnaud SERVAIS

Marie-Hélène Douret HR & TALENT DEVELOPMENT Brigitte De Haeck DATA ANALYTICS Philippe Mayer ADMINISTRATION AND IT



MARKETING & COMMUNICATION Marco EISCHEN

CONTENT & EVENT Jean-Michel Gaudron DIGITAL Laurent Futin



STRATEGIC ADVISOR Benjamin QUESTIER



MARKET INTELLIGENCE Sara BOUCHON



BUSINESS DEVELOPMENT Jean-Michel LUDWIG

INTERNATIONAL BUSSINESS DEVELOPMENT Jenny Hällen Hedberg START-UP ACCELERATION Stefan Berend



COMPANY RELATIONS AND SUPPORT Johnny BREBELS

SME PERFORMANCE Arnaud Duban SECTORAL RELATIONSHIP MANAGEMENT CLUSTER & FLAGSHIP Benjamin Questier PROJECT MANAGEMENT



R&D AND INNOVATION SUPPORT VACANT

CORPORATE RDI SUPPORT Pascal Fabing EUROPEAN RDI SUPPORT



DIGITAL INNOVATION HUB Arnaud LAMBERT

ADMINISTRATION & FINANCE

FINANCE

OUR STAFF

<mark>CEO</mark> Sasha BAILLIE

EXECUTIVE ASSISTANT Carole BUTTIGNOL

ADMINISTRATION & FINANCE Arnaud SERVAIS

ADMINISTRATION Sylviane BISQUERT Andreia PIRES

BUDGET & ACCOUNTING Marie-Hélène DOURET Christiane SANDRI Jérôme TIBESAR

DATA ANALYTICS Philippe MAYER

Astrid FURGALA

HR & TALENT DEVELOPMENT

Brigitte DE HAECK Nadège HÉGUÉ Muriel KONDRATUK

IT Christophe RIGOULET

BUSINESS DEVELOPMENT Jean-Michel LUDWIG Lucie BRIDARD

INTERNATIONAL BUSINESS DEVELOPMENT

Jenny HÄLLEN HEDBERG David FOY Joost ORTJENS Georges SCHAAF

START-UP ACCELERATION

Stefan BEREND Sven BALTES Laurence HULIN Stéphanie SILVESTRI COMPANY RELATIONS AND SUPPORT Johnny BREBELS Virginie GODAR

CLUSTERS/SECTORAL RELATIONSHIP MANAGEMENT

Jean-Philippe ARIÉ Anthony AUERT Charles Albert FLORENTIN Philippe GENOT Marc LIS Caroline MULLER

FLAGSHIP PROJECTS

Jean-Claude BACKENDORF Anja HÖTHKER

SME PERFORMANCE Arnaud DUBAN

Lionel CAMMARATA Rémi GRIZARD Claude HOSTERT Emmanuelle KIPPER

DIGITAL INNOVATION HUB Arnaud LAMBERT

Jean-Paul HENGEN

MARKET INTELLIGENCE

Sara BOUCHON Maxime DELAHAUT Eve O'CALLAGHAN Mohamed TOUMI

MARKETING & COMMUNICATION Marco EISCHEN

CONTENT & EVENTS

Jean-Michel GAUDRON René GARCIA Lena MÅRTENSSON Nathalie RAHME

DIGITAL

Laurent FUTIN Laura FICHTNER Sue HEWITT Romane MARQUET Jonas MERCIER Marine MOMBELLI

R&D AND INNOVATION SUPPORT VACANT

CORPORATE RDI SUPPORT

Pascal FABING Avit BLANCHY Barbara GRAU Isabelle HENNEQUIN Eric LAUER Alexander LINK Maximilian PRZYBYL

EUROPEAN RDI SUPPORT

Benjamin QUESTIER Sanna ALARANTA Charles BETZ Ramona CAULEA Rébecca DAMOTTE Géraud GUILLOUD Stefano POZZI MUCELLI

SPACE AGENCY

Patricia CONTI Alessandro GRASSO Juliette PERTUY Frédéric ROUESNEL

SUPPORTING INNOVATION: THE CLIENT AT THE CENTRE

For over 35 years, Luxinnovation has been supporting companies in their R&D and innovation activities. Combining in-depth knowledge of the country's key business sectors with expertise in start-up acceleration, SME performance and funding mechanisms, the agency provides comprehensive, personalised support to its clients and enhances the sustainable development of the Luxembourg economy.

Encouraging and supporting companies to innovate and grow in a smart manner and helping them prepare for the challenges of the future is, quite obviously, at the very heart of Luxinnovation's mission as national innovation agency. By combining the diverse skills and fields of expertise of its teams, the agency is able to provide holistic services that focus on the individual needs of each company.

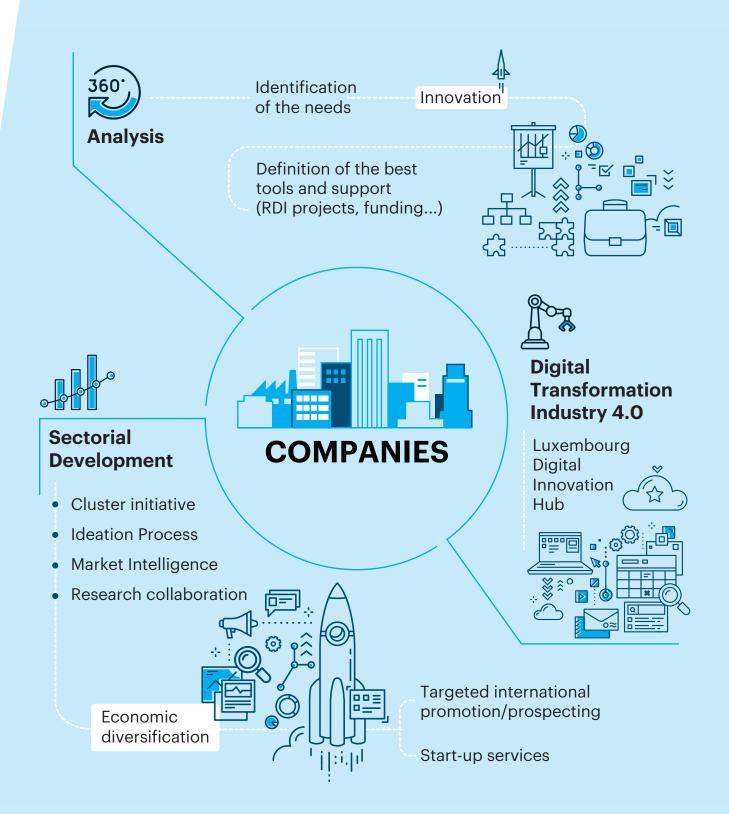
TRUSTED PARTNER FOR INNOVATION

Luxinnovation's mission is thus to be a partner for companies and other organisations in their innovation ventures. The agency currently manages six clusters: the Luxembourg AutoMobility, CleanTech, Creative Industries, Health-Tech, Materials & Manufacturing and Wood Clusters. In many cases, the cluster managers are the entry point for companies interested in working with Luxinnovation.

The first step at the start of each collaboration is to have indepth discussions with the companies in order to understand their current situation and specific needs. Together, the companies and the agency define tailor-made R&D and innovation projects or other relevant actions and set up concrete objectives for what is to be achieved. Often, a "360° inventory" is undertaken, resulting in a roadmap that outlines the company's planned innovation actions and ambitions for the next few years.

Calling on the combined expertise of Luxinnovation's sector experts, SME and start-up advisors and funding specialists, the most suitable tools to help each company move forward are identified. These tools include, for instance, national or European funding for R&D and innovation projects and the "Fit 4" performance programmes managed by Luxinnovation. In 2020, the Ministry of the Economy approved 132 applications for R&D and innovation subsidies and environmental protection aid, which is an increase of 8% compared to the year before. The number of new projects involving Luxembourg participants with funding from Horizon 2020, the EU's research and innovation funding programme, increased from 102 in 2019 to 127 in 2020 (+25%). 310 companies also joined one of the "Fit 4" programmes.

Many companies are looking for cooperation partners for their R&D and innovation endeavours. In addition to supporting organisations looking for international partners for Horizon 2020 projects, Luxinnovation facilitates the establishment of public-private partnerships involving companies and research centres. Benefiting from its close contacts with companies in Luxembourg's key sectors – ranging from start-ups to multinational groups – the agency also regularly introduces companies to contacts that might become innovation or business partners. As an example, the cluster managers made over 500 introductions to potential partners in 2020 and supported the set-up of almost 140 collaborative projects.



SUPPORTING SUSTAINABLE ECONOMIC DEVELOPMENT

One of Luxinnovation's priorities is to support the government with developing the Luxembourg economy in a sustainable manner through research and innovation. The support to individual companies is complemented by larger projects, initiated under the umbrella of the Luxembourg Cluster Initiative, that are aimed at benefiting one or several sectors. At the end of 2020, the agency was evaluating the relevance and feasibility of 9 such flagship projects, in close cooperation with cluster advisory boards. One example is the Timber Trade Platform - e-Holzhaff - a digital market place for wood that will be implemented in 2021. Luxinnovation also launched the Circular by Design Challenge, a coaching programme for creative industry start-ups aimed at enabling the development of new design solutions and innovation business models that are in line with the principles of the circular economy.

The efforts to target initiatives and projects as efficiently as possible is strongly supported by Luxinnovation's market intelligence team, which is a core provider of new, in-depth knowledge of Luxembourg's economic sectors. In 2020, the team worked on sector mappings in the fields of cybersecurity, healthtech, start-ups and the wood sector and developed related dashboards and key insights. These studies are used to better understand the nature and needs of each sector, as well as to identify gaps that could be filled by new companies, either start-ups or international firms. The agency's start-up acceleration team advises entrepreneurs on their business models, growth strategies and funding needs, and facilitated the incorporation of 62 new start-ups in 2020. The team also manages Luxembourg's successful acceleration programme Fit 4 Start, which provided coaching and funding to 20 start-ups during the year.

Luxinnovation's international business development team specialises in targeted prospection activities aimed at attracting international companies looking to expand their business activities in Europe that would be a perfect fit for the national economy. Focusing in particular on strengthening the growth of the sustainable and digital economy, the agency develops contacts with companies with a potential interest in coming to Luxembourg and provides support all the way from the first enquiries for information to incorporation. This work is carried out in close collaboration with the Ministry of the Economy, the Chamber of Commerce, the Luxembourg Trade and Investment Offices (LTIOs) and the country's embassies. Luxinnovation also plays a key role in promoting Luxembourg internationally as an attractive business destination.





DIGITAL TRANSFORMATION: A PREREQUISITE FOR SUCCESS

Helping industry succeed with its digital transformation is increasingly important for economies that want to remain sustainable and competitive. Companies that define this as their main priority can count on the help of the Luxembourg Digital Innovation Hub (L-DIH). Based on a partnership between 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 National Research Fund (FNR), the hub is hosted and managed by Luxinnovation. In addition to helping industrial companies with their digital transformation, the L-DIH connects them with qualified service providers that offer digitalisation skills, technologies and services. Client companies get access to Luxinnovation's full range of services, and can also benefit from the network of European DIHs that is currently being set up. The European Commission will launch a call for applications to acquire the status of "EU-DIHs" in 2021, and the Ministry of the Economy has selected the L-DIH for applying on Luxembourg's behalf.

INTERVIEW

Paul Wurth "UNDERSTANDING, PROFESSIONALISM, SUPPORT"



Watch the video

Catherine Remillet, Corporate Innovation & Technology & IPP

OVERCOMING COVID-19: OUR RESPONSE

The outbreak of the COVID-19 pandemic had a huge impact on Luxinnovation's activity. One of the key tasks of the agency became helping Luxembourg companies, and the economy in general, face the crisis, overcome its challenges and initiate a successful relaunch process.

During a few dramatic weeks in March 2020, Luxembourg went from having its first few coronavirus cases to entering a full lockdown. The impact on many parts of the economy was radical, and the skills of the entire Luxinnovation team were mobilised to provide adequate support.

EMERGENCY INFORMATION AND SUPPORT

In order to protect the health of its employees, Luxinnovation closed its offices at the very start of the pandemic and introduced working from home. However, remaining open to clients was an absolute priority. Listening to, supporting and advising companies facing the immediate consequences of the lockdown became a key task of the agency's cluster managers and funding, start-up and SME advisors. The European funding team also provided support to Horizon 2020 projects that needed to adjust or modify their projects due to the health crisis.

Together with the Ministry of the Economy, Luxinnovation organised a series of webinars for start-ups to inform them about new support measures and answer their questions. In addition, the agency provided editorial support to the Ministry's crisis communication unit in order to facilitate the timely dissemination of information on government actions and available financial support.

MANAGING CRISIS

Luxinnovation also joined forces with other national players mobilised to fight the pandemic. As a member of the COVID-19 Research Task Force set up by Research Luxembourg, the agency facilitated the exchange between public research organisations and companies in order to develop innovative solutions to address the health crisis. This was done in close collaboration with the National Research Fund and the Ministry of the Economy. Luxinnovation also acted as a bridge between the Ministry and public researchers modelling the epidemiology of COVID-19 and its economic impact.

The Market Intelligence team put in place a one-off watch system to identify COVID-19 initiatives implemented elsewhere that could be a source of inspiration for Luxembourg. Together with two other national innovation agencies, FFG in Austria and ANI in Portugal, Luxinnovation organised a webinar for the European TAFTIE network on support measures put in place by innovation agencies in the context of COVID-19.

INCREASING THE SUPPLY OF PERSONAL PROTECTIVE EQUIPMENT

The confinement measures implemented across the world put a severe strain on global supply chains. At the same time, the demand for personal protective equipment rose sharply. Finding ways to obtain locally produced equipment became necessary.

Using its extensive networks and in-depth knowledge of Luxembourg industry, Luxinnovation contacted over 200 companies in order to identify those that could reorient their production or cooperate with others in "mini manufacturing cells" to produce such equipment. The agency was also in contact with various control organisations and administrations regarding the certification and authorisation of the items produced.

In order to help connect the supply of and the demand for personal protective equipment produced and offered by Luxembourg companies, Luxinnovation and the wedo.lu team of the Fédération des Artisans set up the web platform EPI-Covid19.lu. Launched on 18 April 2020, the platform collected information on the production and supply of facemasks, face shields, aprons and disinfectants, as well as on available raw materials, semi-finished products, skills and services. Between April and June, the platform had over 21,000 visitors, 1,800 user accounts were set up and almost 140 offers were posted.

Post-COVID Ideation Process IDENTIFYING POST COVID-19 INNOVATION CHALLENGES AND OPPORTUNITIES

The pandemic has had a dramatic impact on consumer behaviour and highlighted vulnerabilities in our current economic system. According to a market trend study conducted by Luxinnovation in summer 2020, consumers have become much more used to digital solutions, and their demand for more sustainable products and services has increased considerably. At the same time, there is a clear need for developing more regional supply chains and value chains to reduce vulnerability and increase resilience. Based on these conclusions, and on interviews with over 50 company executives, the agency set up interdisciplinary working groups that identified three priority fields for action:

- **Regional value chains** with a focus on materials required for construction (wood, steel, glass and concrete)
- Sustainable food production based on local foodstuffs based on more organic farming and improved biodiversity
- Business model innovation as a way for companies to respond to new gaps and opportunities on the market

The first concrete actions to be defined are expected to be implemented in 2021.



StartupsVsCovid19 INNOVATIVE START-UP SOLUTIONS COMBATTING COVID-19

In a combined effort to benefit from the innovative ideas of Luxembourg's start-up community and help young companies survive the crisis, the Ministry of the Economy launched the "StartupsVsCovid19" call for projects in April 2020. The call focused on the development of technology-based, innovative products and services intended to limit, or even overcome, the economic, health and societal effects of COVID-19. Luxinnovation played a key role in setting up, organising and implementing the call. The agency notably contributed to preparing the call texts and developed a web platform for handling the application process. It disseminated the call widely and was part of the jury that selected 15 applicants that each received financial support of up to \leq 150,000 granted by the Ministry of the Economy.



NEW FUNDING INITIATIVES

The Luxembourg government launched a range of financial support measures at the very beginning of the coronavirus crisis to help companies face financial difficulties. Luxinnovation team members temporarily joined the COVID Direct Aid Unit at the Ministry of the Economy in order to help process aid requests in a timely manner.

Luxinnovation worked closely with the Ministry of the Economy on the implementation and promotion of several new funding initiatives: the COVID R&D and COVID INVEST aid schemes and the investment aid measures for development projects, process or organisational innovation projects, and energy efficiency and exceeding standards projects, forming part of the "Neistart Lëtzebuerg" programme. The agency's funding advisors and sector experts guided companies to the most appropriate funding schemes and supported them in the preparation of high-quality aid applications. Luxinnovation also cooperated with the Ministry on the organisation of the StartupsVsCovid19 call for projects.

The European Commission launched two emergency calls for projects aimed at advancing research on the coronavirus. Luxinnovation informed relevant stakeholders in Luxembourg about the calls and supported them with finding international partners. This resulted in 8 funded projects with Luxembourg participants receiving a total EU contribution of &2.5 million.

While helping companies face the most immediate effects of the crisis, Luxinnovation also started at an early stage to prepare for the recovery and relaunch of the economy. In May 2020, the agency launched the Fit 4 Resilience programme with the objective of helping companies reposition themselves after the COVID-19 crisis. Luxinnovation also released a study entitled "Post COVID-19 Market Trends" that identified four megatrends likely to shape the post

COVID-19 economy: digitalisation, sustainability, resilience

and new business strategies.

In order to assess the impact of the crisis on businesses and develop an action plan for overcoming negative impact and increasing companies' future resilience, Luxinnovation launched a "post-COVID ideation process". Its objective was to identify the most promising avenues for strengthening companies and the Luxembourg economy in the economic context of the future.







Fit 4 Resilience PREPARING THE WAY FROM CRISIS TO SUCCESS

On 28 May 2020, Luxinnovation, supported by the Ministry of the Economy, launched Fit 4 Resilience, a programme aimed at helping companies manage their way out of the coronavirus crisis and develop long-term strategies.

The agency developed the initiative based on the successful approach used in its "Fit 4" performance programmes. Fit 4 Resilience supports companies with analysing the impact of the pandemic and identifying how they could best reposition themselves and relaunch their activity in a more resilient manner. Luxinnovation managed the selection of consultants assisting the participants in their analyses and launched a wide promotion campaign to build awareness of the programme. At the end of 2020, the 10 first companies had finalised their Fit 4 Resilience participation.

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INTERVIEW

Molecular Plasma Group PLASMA TECHNOLOGY FOR VIRUCIDAL FACE MASKS



Watch the video



STIMULATING DIGITALISATION

Digitalisation has been a hot topic for years, but it became more important than ever in 2020 when much of business and working life suddenly had to rely almost exclusively on digital solutions. Luxinnovation worked diligently to support its clients in their digitalisation processes.

Some experts claim that during the first months of the coronavirus pandemic, advancements in digitalisation were accomplished that would otherwise have taken 3-4 years. Ranging from awareness raising to hands-on programmes and project support, Luxinnovation's services stimulated the uptake and implementation of digital technologies.

DIGITALISATION FOR SMEs

Fit 4 Digital is one of Luxinovation's flagship performance programmes, which it manages with the support of the Ministry of the Economy. 107 SMEs joined the programme, which helps them take advantage of information and communication technologies (ICT) in order to improve competitiveness, in 2020.

Fit 4 Digital Packages, the programme adapted for companies with less than 50 employees, attracted 183 participants – more than 6 times as many as the year before. The initiative, which is implemented in close collaboration with the House of Entrepreneurship, was also extended with organisational management packages adapted to three specific sectors: retail, hotels and restaurants; architecture and engineering; and skilled crafts.

In addition, digitalisation was high on the agenda of "Club Innovation", the recurring event series organised in close collaboration with the Chamber of Skilled Crafts. Three events on the topics of 3D printing, traceability and blockchain attracted a high number of participants.

L-DIH Talks KNOWLEDGE EXCHANGE FOR A SUCCESSFUL DIGITAL TRANSFORMATION

During spring 2020, the Luxembourg Digital Innovation Hub (L-DIH) organised a series of talks on different aspects of digitalisation and industry 4.0. The objective was to introduce industrial companies to various methodologies and technologies and help them familiarise themselves with the public and private players that can support them by providing advice, technologies and training. The nine L-DIH Talks focused on topics such as agile organisations, new business models, digital skills and digital factories. And the talks themselves experienced the benefits of digitalisation: when the outbreak of CO-VID-19 made it necessary to replace physical meetings with webinars, the number of participants increased from an average of 35-40 participants to 50-70 per session



Post COVID-19 market trends HOW DIGITALISATION WILL DRIVE GROWTH AND TRANSFORM SOCIETY

Online meetings, online shopping, online restaurant orders, online working – the world became considerably more digital in 2020, and consumers became much more familiar and comfortable with using digital solutions. Changes in habits and consumer patterns became drivers for growth for companies able to capture new, digital opportunities.

These conclusions can be derived from Luxinnovation's market intelligence report identifying the major market trends and innovations that will drive the post COVID-19 economy. Digitalisation was one of the four megatrends identified – the other ones being sustainability, resilience and new business strategies. To successfully ride on the wave, the study highlights the importance of investments and new business models as well as adapted legal frameworks and privacy and security tracking. It also emphasises the need for industry to embrace the principles of Industry 4.0 to remain competitive and become more resilient in the face of future crises.

DIGITALISING ECONOMIC SECTORS

Several other programmes managed by Luxinnovation also have positive effects on the digitalisation of economic sectors. Fit 4 Start, Luxembourg's leading acceleration programme that was initiated by the Ministry of the Economy and is managed by Luxinnovation with the support from Technoport, the Luxembourg City Incubator and the Luxembourg Space Agency, provided coaching and funding to 10 ICT, 5 space and 5 healthtech start-ups in 2020. As ICT is an important component of the activity of all participants, their development supports the digitalisation of their respective economic sectors.

StartupsVsCovid19, which provided funding to 15 start-ups whose technology-based, innovative products and services combat the effects of COVID-19, also helped prepare the uptake of new, advanced digital technologies.

ICT firms is the biggest target group for Luxinnovation's international prospection activities aimed at attracting companies from all over the world that are a perfect fit to Luxembourg's economy. The agency's efforts to bring in companies with new technologies in the fields of cyberse-curity, edutech, artificial intelligence, telecommunications, smart mobility and the internet of things further boosts Luxembourg's digital economy.



FOSTERING INDUSTRY 4.0 AND THE DATA ECONOMY

The Luxembourg Digital Innovation Hub (L-DIH) is Luxinnovation's key tool for promoting Industry 4.0. The hub helps industrial companies, in particular SMEs, digitalise their production and benefit from high performance computing and artificial intelligence. One of its main activities in 2020 was the organisation of the L-DIH Talks series that focused on the implementation of Industry 4.0. It also identified over 50 qualified service providers able to support companies in their digitalisation process.

Luxinnovation organised a five-day digital Smart Manufacturing Week targeting all manufacturing sectors. Over 350 participants attended webinars offering opportunities to share digital transformation experience and sustainability strategies in order to meet the challenges of tomorrow.

In collaboration with the University of Luxembourg and Lux-Provide, the agency also coordinates Luxembourg's participation in EuroCC, a project supporting European countries in establishing single national competence centres for high performance computing (HPC). The objective is to elevate all participating countries to a common high level in the fields of HPC, high performance data analytics and artificial intelligence, and to make HPC capacities available to different users from science, industry, public administration and society.

DIGITAL EVENT SOLUTIONS

Organising events is one of Luxinnovation's main channels of providing information and facilitating the exchange of experience among Luxembourg companies and research organisations – a task that perhaps became even more crucial when the pandemic put an end to standard face-to-face meetings. In order to be able to continue this activity, the agency invested in web-based platforms suitable for the organisation of webinars and of major digital events and developed the skills necessary to run online workshops and conferences.

Major events in 2020 included the L-DIH Talks, the Smart Manufacturing Week and the 8-day Fit 4 Start Online Pitching Sessions where 85 start-ups competed for a place on the programme. Luxinnovation also worked extensively to prepare the 2020 Cleantech Forum Europe, which took place on 12-14 January 2021, and the "phygital" launch conference of the European network of Digital Innovation Hubs, which gathered over 2,500 participants from 40 countries on 26-27 January 2021.

TOWARDS A DIGITAL FUTURE

Luxinnovation also invests efforts into helping the Luxembourg economy capture the opportunities that a digital future will bring, not least on the international level. In its role as knowledge provider for strategic decisions, the agency identified digitalisation as one of four major trends that will structure the post COVID-19 markets. In order to help companies find new, international market opportunities, Luxinnovation also developed a web-based digital marketing guide together with the Ministry of the Economy and the Chamber of Commerce.

Horizon 2020, the European framework programme for research and innovation, offers interesting opportunities to prepare for the digital future. Luxinnovation supported 27 Luxembourg participations in projects funded under the ICT-Leadership in Enabling and Industrial Technologies (LEIT) work programme, which together received €12.9 million of EU funding.

Luxinnovation also promoted Luxembourg's digital plans and capacities at international events. The agency's CEO presented the country's exploratory work for establishing a national data exchange and interoperability platform at the final of the EU Datathon competition, and highlighted the advantages of Luxembourg as a testbed for an integrated, data-driven events solution at the 59th ICCA (International Congress and Convention Association) Congress.



Digital Marketing Guide ALL-IN-ONE DIGITAL GUIDE FOR GOING INTERNATIONAL

In October 2020, the Ministry of the Economy, the Chamber of Commerce and Luxinnovation published an online digital marketing guide. Aimed at Luxembourg companies of all sizes that wish to take advantage of digital opportunities and benefit from the tools, training and financial assistance available, the guide highlights the latest trends in digital marketing to help companies strengthen their online presence and adjust their international strategy, particularly in this critical period of COVID-19, but also beyond.

Ranging from the creation of a website, through online advertising, online marketplaces, video conferencing, mar-

keting automation and social networks, the guide explains how to implement these practices within any company, while ensuring a sufficient level of cybersecurity. It is available in French and English.



INTERVIEW



Guala Closures Group "THE FIRST PATHWAY FOR OUR R&D CENTRE"



Watch the video

INTERNATIONAL ACTIVITIES: PARTNERSHIPS, PROSPECTION, PROMOTION

Looking beyond Luxembourg's borders to help companies and research centres find project partners and innovation opportunities is a central part of Luxinnovation's activity. The agency is also charged with the international promotion of Luxembourg's economy and start-up ecosystem and with attracting international companies that are the perfect fit for the country.

Building strong networks as a resource for supporting R&D and innovation activities in Luxembourg has always been central to Luxinnovation's activity. In addition to its extensive contacts across local business sectors, the agency also has far-reaching international networks that benefit the national economy.

BOOSTING THE START-UP ECOSYSTEM

With a long track record in supporting start-ups throughout their journey, Luxinnovation also contributes to the development of the national start-up community as a whole and the efforts to promote the start-up ecosystem abroad. In 2020, the agency organised a number of webinars entitled "Inside Startup Luxembourg", which offer international entrepreneurs an opportunity to discover what Luxembourg has to offer start-ups and to meet the players of the ecosystem. Such webinars were organised, for example, as side events at ICT Spring Luxembourg 2020 and Web Summit 2020, as a softlanding event for companies pitching for a place in Fit 4 Start and as targeted events for Brazilian and Chilean start-ups organised in collaboration with the Luxembourg embassy. Together with the Luxembourg Trade & Investment Offices (LTIOs) in New York and San Francisco, Luxinnovation also contributed to recruiting Luxembourg start-ups to two US-oriented acceleration programmes, Benelux Catalyst New York and NexCubed San Francisco. The programmes - which in 2020 were run digitally - offered seven Luxembourg start-ups the opportunity to build contacts and prepare their scale-up on the US market.

INTERNATIONAL R&D AND INNOVATION PARTNERSHIPS

Supporting the successful participation of Luxembourg players in European R&D and innovation projects is a key task for Luxinnovation. In its role as National Contact Point for Horizon 2020, the EU's framework programme for innovation and research, the agency promoted relevant project opportunities and helped candidates find international partners and optimise their proposals.

The results were positive: the number of Luxembourg participations in Horizon 2020 projects (127) increased by 25% compared to the year before, and the success rate of Luxembourg applicants (19.57%) was the third best in the EU. Private companies participating in Horizon 2020 projects primarily cooperated with partners from Germany, Spain, Italy, France, Greece, the UK and Belgium. Luxinnovation also helped 30 companies find postdoctoral experts from all over the world for collaboration in the context of the Marie Skłodowska-Curie Actions Postdoctoral Fellowships programme. National R&D subsidies can also be used to support international collaborative projects. Luxinnovation is the Luxembourg contact point for IraSME, a network of funding programmes from different countries and regions that aim to support small businesses in their innovation efforts. Luxinnovation actively promoted the programme in 2020 and helped Luxembourg companies find relevant project partners.

Together with the Chamber of Commerce and the Chamber of Skilled Crafts, Luxinnovation represents Luxembourg in the Europe Enterprise Network (EEN) with the objective of helping SMEs take advantage of European partnership opportunities. 23 expressions of interest were received in 2020 from foreign companies responding to technology profiles disseminated to the network with support from Luxinnovation.

Marie Skłodowska-Curie Actions FACILITATING COOPERATION WITH EXCELLENT RESEARCHERS

The European Commission funds excellent postdoctoral scientists conducting 2-year research projects at companies, research centres, NGOs and public administrations through the prestigious Marie Skłodowska-Curie Actions Postdoctoral Fellowships. In its role as national contact for European funding, Luxinnovation helps interested Luxembourg organisations find the best applicants from around the world and supports them in preparing high-quality research proposals to apply for funding.

Luxembourg organisations showed great interest in this initiative in 2020, and a high number of applications were received from researchers. A total of 88 proposals were submitted. Those submitted during the first half of the year had a success rate of 28%, which was the highest in the EU (the average was 15%). The ones that had been prepared with coaching from Luxinnovation had an even higher success rate: 42%.

Partnership with Invest India JOINING FORCES TO STIMULATE INBOUND FOREIGN DIRECT INVESTMENT

Luxinnovation signed a Memorandum of Understanding on 18 November with Invest India, India's national investment promotion and facilitation agency. This partnership, which was signed in the context of the virtual bilateral summit between the Prime Minister of Luxembourg, H.E. Xavier Bettel and the Prime Minister of India, H.E. Narendra Modi, aims to increase inbound investment in India and Luxembourg.

The objective of the collaboration is to strengthen and assist bilateral efforts to increase inbound investment activities in both countries, as well as to support and develop cooperation between Indian and Luxembourg companies.

LUXEMBOURG: ATTRACTIVE EUROPEAN LOCATION FOR BUSINESS

For several years now, Luxinnovation has been conducting prospection activities in order to attract international companies to Luxembourg and promoting the country's business advantages and opportunities on the international level. These tasks are carried out in close collaboration with the Ministry of the Economy, the Chamber of Commerce and the Luxembourg Trade and Investment Offices (LTIOs) located around the world.

When the coronavirus pandemic made international travel and face-to-face meetings with prospects impossible, the agency switched from physical to digital prospection. It presented Luxembourg at around 50 webinars held all over the world, including Luxembourg's first "e-mission" to China in November 2020, and added new sections on investing in Luxembourg and the support provided to prospective investors to the Luxembourg Trade & Invest website. Softlanding visits for companies interested in receiving indepth information and meeting key people in Luxembourg were organised in digital format together with the House of Entrepreneurship. Although inward investment declined considerably across the world in 2020, 10 international companies incorporated in Luxembourg with support from Luxinnovation.

The agency continuously supported the LTIOs with their prospection and promotion activities. As a pilot initiative, the Market Intelligence unit developed tailor-made country reports and related prospection lists for LTIO Abu Dhabi, and the Marketing & Communication team assisted LTIOs and embassies with the development of relevant content and digital marketing strategies as well as with online prospection tools. Luxinnovation also supported the launch of the new LTIO in Casablanca, in particular with promotion activities and the development of a dedicated website.

In order to further enlarge Luxembourg's international reach, Luxinnovation signed a Memorandum of Understanding with Invest India. The agency also provided support to the collaboration set up between the South Korean and Luxembourg governments to establish a Smart Green Business Centre in Luxembourg.

Luxinnovation published the first edition of its new international publication, *Crossroads Magazine*, and prepared the organisation of Cleantech Forum Europe. The original plan was to host this major international event in Luxembourg during 2020, but due to the pandemic, it had to be postponed to January 2021 and held in digital format. Nevertheless, the country was featured at several online events set up by the forum organiser during the year, and benefited from this activity to implement a range of promotion initiatives profiling clean technologies in Luxembourg.



Crossroads Magazine A NEW TOOL FOR PROMOTING LUXEMBOURG BUSINESS OPPORTUNITIES

Luxinnovation launched a new Luxembourg Trade & Invest publication in 2020, *Crossroads Magazine*. Edited by the agency and based on an original concept developed in-house, the magazine highlights the technological excellence and innovation potential of the Luxembourg economy. The first issue focused on clean technologies and market trends and new opportunities in the post COVID-19 economy.

Crossroads Magazine is a central platform from which to promote Luxembourg as an attractive business destination for international investors. The printed version of the magazine, which includes augmented reality features to make it more interactive, is primarily distributed by the Luxembourg Trade and Investment Offices (LTIOs) and embassies across the world. An animated, digital version of the magazine is also available.

INTERVIEW

DataThings

IRASME: COOPERATION WITH AN INTERNATIONAL INNOVATION PARTNER



Watch the video

Grégory Nain, Co-Founder & Head of Operatior

ANNUAL ACCOUNTS

BALANCE SHEET 31 DECEMBER 2020 (EUR)

ASSETS	2020	2019
FIXED ASSETS	427,306.94	553,337.72
Intangible assets	135,287.88	194,749.66
Tangible assets	292,019.06	358,588.06
CURRENT ASSETS	6,187,276.70	3,813,203.37
Debtors	589,671.23	551,771.96
Cash at bank and in hand	5,597,605.47	3,261,431.41
PREPAYMENTS	223,892.38	119,708.52
TOTAL	6,838,476.02	4,486,249.61

CAPITAL, RESERVES AND LIABILITIES	2020	2019
CAPITAL AND RESERVES	5,143,233.82	3,411,396.90
Subscribed capital	541,739.24	541,739.24
Reserves	4,575,349.93	2,827,619.96
Profit or loss for the financial year	0.00	0.00
Capital investment subsidies	26,144.65	42,037.70
PROVISIONS	273,880.85	231,198.18
CREDITORS	1,291,804.12	803,947.06
Amounts owed to credit institutions	3,383.91	4,320.52
Trade creditors	470,051.16	529,091.48
Tax and social security debts		
Other creditors	818,369.05	270,535.06
DEFERRED INCOME	129,557.23	39,707.47
TOTAL	6,838,476.02	4,486,249.61

PROFIT AND LOSS ACCOUNT 31 DECEMBER 2020 (EUR)

2019
10,419,711.25
-2,964,992.06
-7,041,057.16
-256,023.51
-158,850.88
1,300.22
-87.86
0.00
-0.00

EXPENSE CATEGORIES 2020

Chaff an aba	/00 דד
Staff costs	77.8%
Other external expenses	17.0%
Value adjustments	2.6%
Other operating ex- penses	2.6%
Total expenses	100.0%



Total	100.0%
European programmes Other	3.5% 0.7%
Private stakeholders	4.8%
Ministry for Higher Education and Research	5.9%
Ministry of the Economy	85.1%
Ministry of the Economy	85.1%



Annual accounts

MANAGEMENT BOARD

AS OF 31 MARCH 2021

BOARD MEMBERS

Mario GROTZ Board Chair 1^{er} conseiller de gouvernement Ministry of the Economy

Sasha BAILLIE CEO 1er 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 1^{ère} classe Ministry of the Economy

SUBSTITUTE BOARD MEMBERS

Daniel DA CRUZ Conseiller de légation Ministry of the Economy

Robert KERGER Conseiller Ministry for Higher Education and Research

Philippe LINSTER CEO House of Startups (Chamber of Commerce)

Anne MAJERUS Conseillère Technique et Économique Luxembourg Chamber of Skilled Crafts

Marco WALENTINY Conseiller de direction 1^{ère} 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 Investment Manager Alpine Space Ventures





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