

2023, the year of the big shift

Increase in innovation projects
for energy transition
and manufacturing



ANNUAL
REPORT
2023

sirris innovation
forward

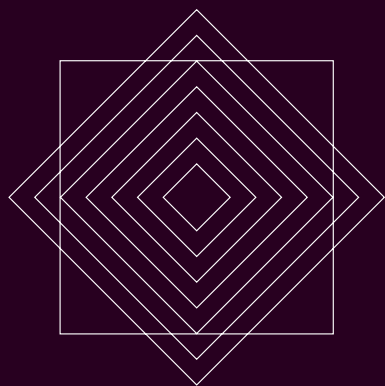


TABLE OF CONTENTS

ANNUAL REPORT 2023

Foreword	03
Facts & figures 2023	06
Industrial cases	08
Innovation forward	16
Finances 2023	22
Representatives	25



Foreword

2023, THE YEAR OF THE BIG SHIFT

The past few years have been tumultuous, marked by a pandemic, a significant energy crisis, and another war in Europe. These events have also impacted us at Sirris. It goes without saying that the climate of substantial uncertainty that came with it was not ideal for companies to invest in innovation. Fortunately, 2023 was the year of the big shift.

Moreover, in 2023, we witnessed a 6% increase in the volume of innovation services provided to companies and a 5% growth in the number of research projects. Particularly noteworthy is the enhanced emphasis on innovation projects related to energy transition (**+10%**) and projects aimed at boosting competitiveness (**+5%**). It is not a coincidence that Sirris has focused on those two themes in recent years. Furthermore, our individual services are experiencing continued growth in green transition and manufacturing, as will be illustrated by some inspiring cases in this annual report.

More than ever, Sirris has effectively fulfilled its role as the 'architect of innovation'. This progress was made possible by several significant, structural measures we implemented in 2023. Significantly, we relaunched the Strategic Committee, an advisory body with several industrialists from the sector.

... In 2023, we witnessed a 6% increase in the volume of innovation services provided to companies and a 5% growth in the number of research projects ...

... Our individual services are experiencing continued growth in green transition and manufacturing ...

This development keeps Sirris at the forefront as the collective innovation centre for the technology sector in our country, staying closely connected with the trends and challenges companies face in terms of innovation across Flanders, Brussels, and Wallonia.

CLOSER TO THE ECOSYSTEM

Besides the growth in innovation projects, 2023 was also the year in which we strengthened collaborations in various ecosystems and deployed new and more modern infrastructure serving the manufacturing industry.

At the end of 2023, we moved our Diepenbeek industrial lab to the state-of-the-art FacThory in Genk, located in Thor Park. This not only gave us the space to expand further and to invest in new infrastructure, it was also the perfect opportunity to be closer to the organisations and companies in our ecosystem. In time, approximately 50 manufacturing companies will be located on the campus itself, creating an ideal hub for knowledge exchange and collaborative ventures within the manufacturing ecosystem.

Earlier, in the spring, together with Agoria and POM West-Vlaanderen, we laid the cornerstone for the House of Manufacturing in Kortrijk, located at the heart of a crucial ecosystem for Sirris. Through virtual reality, we were able to showcase the entire building: a cutting-edge construction project that will serve as the primary gathering spot for the manufacturing industry in West Flanders. Indeed, House of Manufacturing will combine training and research infrastructure with networking and meeting facilities for companies and knowledge institutions. This is where the whole sector meets.

Ultimately, we progressed with constructing our 4.0 demonstrator in Charleroi to assist companies in enhancing the flexibility of their production lines. Where previously a machine was dedicated to producing a single product, it must now be capable of manufacturing multiple products from the same production floor without additional costs. In essence, technology is being leveraged to maximise machine agility and minimise the time required to switch from one product to another.

GENERATIVE AI

Finally, a major investment plan for generative artificial intelligence (GenAI) was launched at the end of 2023. AI - and especially generative AI - is evolving at an unseen speed. That is why we are accelerating our efforts at Sirris to support tech companies in strengthening their market leadership - and even expanding it where possible.

Indeed, across all sectors, there is a growing recognition of the vast potential of GenAI. Whether in manufacturing, services or even agriculture, the smart implementation of AI will be an essential catalyst of productivity and thus growth everywhere in the coming years.

FOREWORD

The advantage gained by companies and organisations that are first to embrace new technologies can be incredibly valuable. It is Sirris's role to support them in this endeavour and help them benefit from these new innovations. By doing so, Sirris will increase the number of companies that employ the latest technologies on a daily basis within our sector. And all of that with one aim: to keep companies competitive.

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HOW DID WE EMBRACE 2023 AS THE YEAR OF THE BIG SHIFT IN MORE DETAIL?

YOU CAN READ ALL ABOUT IT IN THIS ANNUAL REPORT.



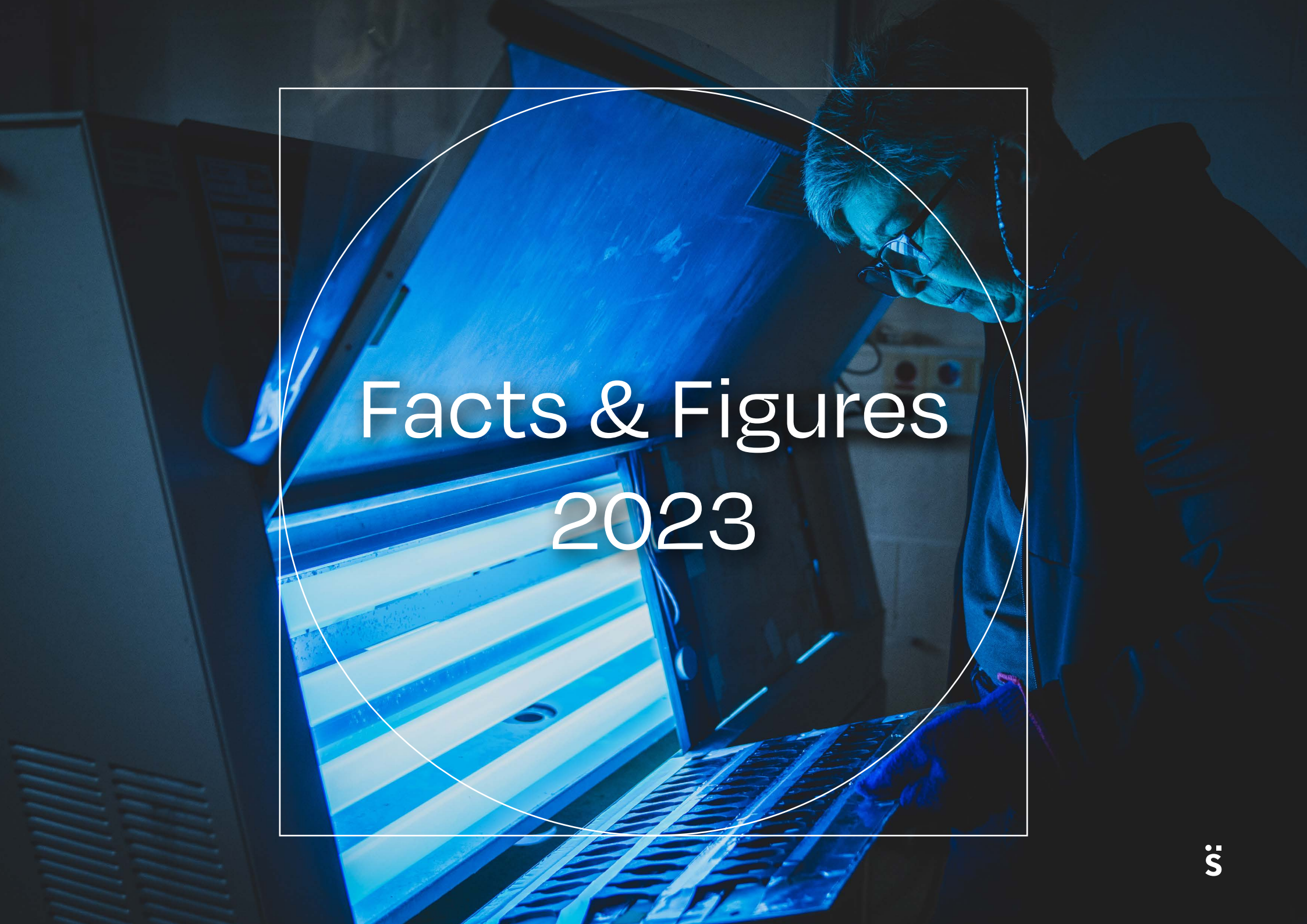
Herman
Derache

Managing
Director



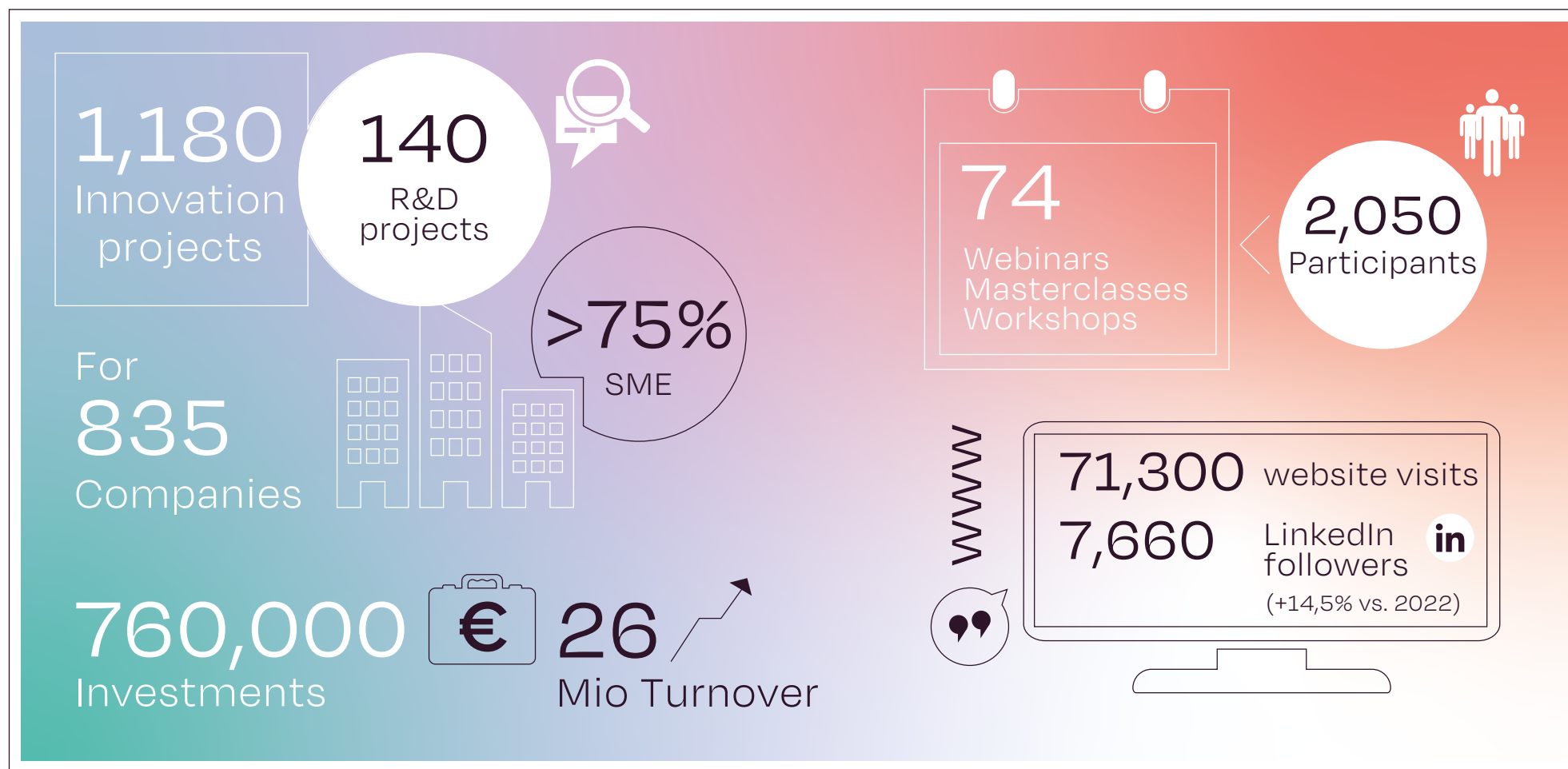
Jeroen
Deleu

Director Strategy
& Corporate
Development

A person with glasses is working on a laptop in a server room. The room is dimly lit with a strong blue light emanating from the laptop screen and the server racks in the background. The person is wearing a dark jacket and is looking down at the laptop keyboard. The overall atmosphere is technical and focused.

Facts & Figures 2023

FACTS & FIGURES 2023





Industrial cases

Industrial cases

This annual report contains a small selection of inspiring examples of technological innovation in the industry.

As an innovation centre, we want to embody the adage “the proof of the pudding is in the eating”. It is not enough to talk about innovation. It is also necessary to show how technological innovation is put into practice.

We help companies introduce and apply new technologies and manage the associated risks.

Be inspired and discover what technological innovation can mean for you!



The sustainable, modular bathrooms of **Bao Living**

Green transition

Together with Sirris, Bao Living made its modular bathrooms even more sustainable thanks to the Ecocost method, thereby halving the life cycle impact.

read more



Our expert
for this innovation project

STEFAN MILIS



Ampacimon: sensors on high-voltage lines

Product solutions

Energy transition

Sirris helped Ampacimon, a specialist in network monitoring, develop a drone and specialised tools for placing sensors on high-voltage lines. An impressive case about the creation of a first functional prototype.

read more



Our expert
for this innovation project

FRANCOIS ROSOUX



Solhyd: hydrogen panels for all

Advanced manufacturing

Energy transition

Solhyd, a KU Leuven spin-off, makes green hydrogen accessible to everyone through solar panels. Learn how Sirris helps scale production.

read more



Our expert
for this innovation project

BART VERLINDEN



How **3ST** set the stage for greener offshore wind technology

Energy transition
Innovation management

*3ST partnered with Sirris to finalise
its strategy, proving business
viability and readiness for large-
scale deployment.*



Our expert
for this innovation project
PIETER JAN JORDAENS



Improving real-time **HVAC** efficiency

Artificial intelligence
Energy transition

*Denergy is revolutionising building
climate control systems with
cutting-edge, data-driven
approaches.*



Our expert
for this innovation project
FLORENCE GUILLAUME



Macq and Sirris improve road safety with AI-enabled cameras

Artificial intelligence
Sustainability

*The AI-enabled camera makes
it possible to identify vehicles
between multiple traffic cameras,
without depending on license
plates.*



Our expert
for this innovation project
SREERAJ RAJENDRAN



Enhanced prosumer's production and Consumption forecasts at the edge

Artificial intelligence

Energy transition

3E aim to improve forecast accuracy and frequency in electricity consumption using near real-time data at the edge.

read more



Our expert
for this innovation project

FLORENCE GUILLAUME



ESA explores space-proof additive manufacturing

Additive manufacturing

By harnessing additive manufacturing and innovative welding, new possibilities for spacecraft component design and production have been unlocked.

read more



Our expert
for this innovation project

FRANCOIS ROSOUX



Refurbishing at Modular Lighting Instruments

Circular economy

Thanks to the guidance and expertise of Sirris, Modular Lighting Instruments was able to embark on refurbishing modular architectural lighting, enabling an internal team to work on circularity in a structured way.

read more



Our expert
for this innovation project

THOMAS VANDENHAUTE

BergHOFF®

BergHOFF's recipe for success: putting ceramic coatings to the test

Quality control

BergHOFF selected 10 cooking pans with different ceramic coatings for testing. Together with Sirris it has evaluated these sustainable, PFAS-free alternatives to PTFE, and compared their quality and performance with competing products.

read more



Our expert for this innovation project

ARANTXA PENNINGER



Footprint inc.: evaluating the recyclability of 3D prints by pellet extrusion

Circular economy

Product innovation

Recycling bio-fiber polymers is complex due to high-temperature degradation. Sirris helped Footprint Inc. create a pellet-extrusion test to evaluate recyclability.

read more



Our expert for this innovation project

HENRI APPELDOORN

sirris

The sky is the limit for aluminum alloy 7075

Product innovation + Materials engineering

The modification of the aluminum alloy 7075 through an in-situ microalloying has significantly improved its mechanical properties.

read more



Our expert
for this innovation project

KAIRET THOMAS

Sirris: the ideal partner for the **IT architecture** of manufacturing SMEs

Digitising manufacturing

A streamlined IT infrastructure is essential for SMEs to integrate processes, reduce costs and quickly respond to market changes, with Sirris helping them find the best solution and achieve ongoing innovation.

read more



Our expert
for this innovation project

MARK VAN PEE

Some R&D projects in the picture



RECYCLABILITY TESTING OF COATED PAPERS

In the transition to a circular economy, coated paper-based packaging plays a crucial role. Maximising the recyclability of these materials is essential for enhancing their sustainability and meeting European targets. Through the **RePac2 project**, Sirris has been actively exploring the recycling potential of coated paper packaging. We have established a pilot line to evaluate recyclability at the lab scale and published a whitepaper on using recyclable coated paper for food packaging.

CIRCULAR ECONOMY CONNECT

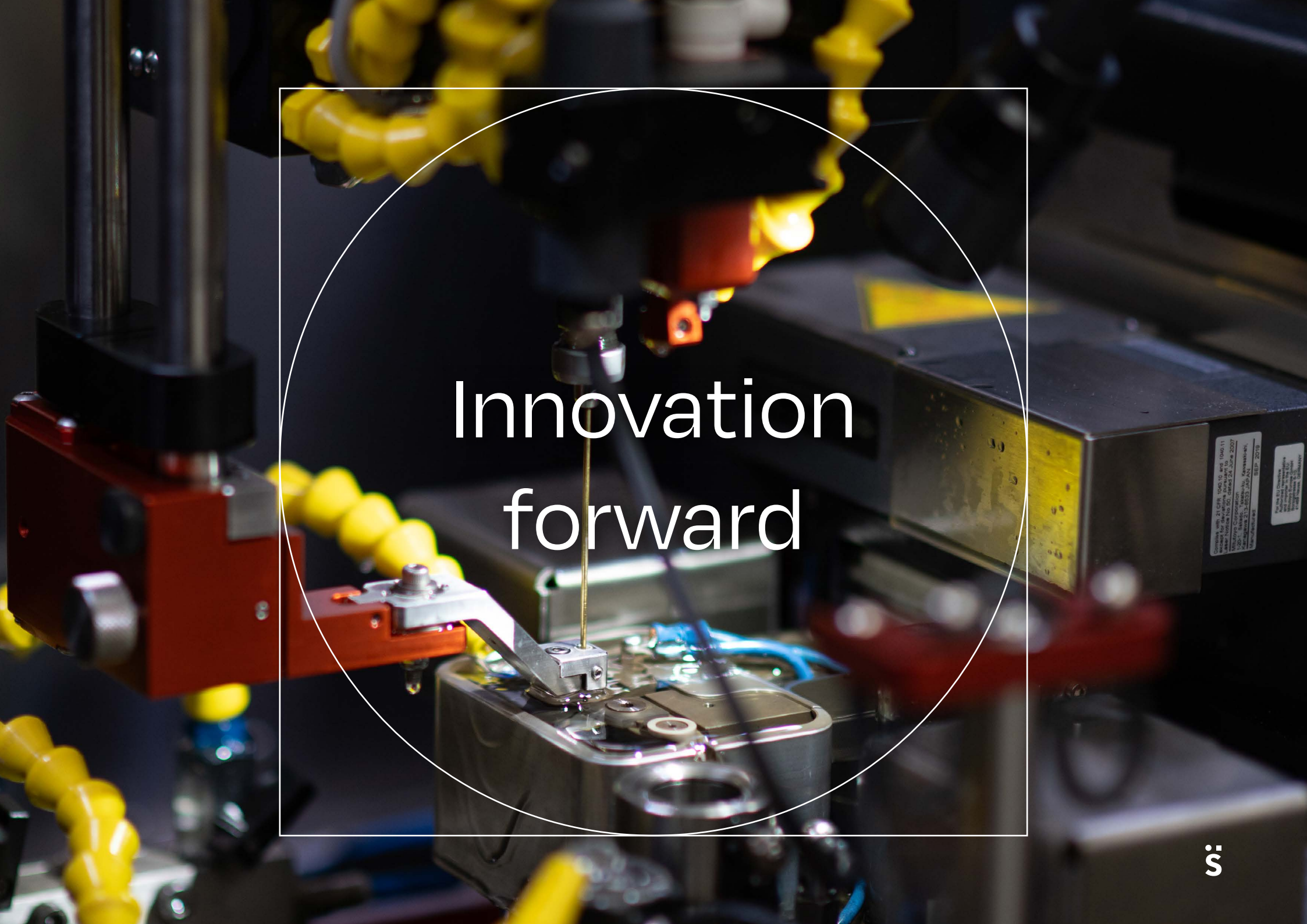
Since 2016 Sirris en Agoria have organised the “Lerend netwerk CE Connect”, bringing like-minded companies from the technological and manufacturing industry together to discuss and learn about the circular economy. During the Executive Exchange session in April 2023, the C-level management from the network shared its insights and lessons learned in a panel discussion with Atlas Copco, Signify, BSH, conTeyor and Barco. The panel's insights were compiled into four articles under the title “**Removing Circular Economy hurdles**”. Each article began with a provocative statement addressed in the session: “Clients are not willing to take the risk to have a long-term commitment to a supplier”, “The ROI is the most important KPI, so an additional cost to use recycled material or prolong the lifespan is not acceptable”, “A circular product is just a product that is leased” and “Top management will never be convinced to move to a circular product or business model!”

REVOLUTIONISING THE PROTECTION OF CRITICAL INFRASTRUCTURE

Stakeholders of critical industrial and civil infrastructure frequently suffer from disruptions caused by a wide diversity of safety and security threats. While various security monitoring and protection systems are offered on the market their capabilities are insufficient to ensure resilience and protection of critical infrastructure. The **SINTRA project**, with no less than 35 European partners, aims to overcome these limitations by delivering an open data-streaming AI platform that enables cross-organisational interoperability and ensures trustworthiness in the safety and security monitoring.

ACTIVE/PASSIVE COATING STACK FOR SURFACE ICING MITIGATION TESTED UNDER VARIOUS CLIMATIC CONDITIONS

Within the **NewSkin project** Sirris has enhanced its ability to test products and prototypes in cold and icy environments with an icing array, which allows large-scale testing of the anti-icing behaviour of different coating solutions. This facility allows for rapid assessment of different anti-ice coatings and testing of heatable coatings. At WinterWind 2023, Sirris won the Winterwind Innovation Award for experiments using a heatable coating. This innovation could find applications on wind turbine blades to fight icing conditions or for offshore foundations to counter splash icing. These experiments were done in the context of the COOCK Fighting Icing project and made use of the NewSkin ice spray test infrastructure.

A close-up photograph of an industrial robotic arm with yellow joints and a red body. The arm is positioned over a metallic component, possibly a battery or electronic module, which is being worked on. A thin, vertical tool or probe is in contact with the component. The background is dark and out of focus, showing other parts of the machinery. A white circular frame is superimposed over the center of the image, containing the text "Innovation forward".

Innovation
forward



Innovation forward

As the innovation centre for and by the technological industry, Sirris is the reference for technology adoption and innovation. For all companies who are looking for practical and pragmatic support, to shape their business – now and in the near future.

To turn technological innovation projects into a success stories, companies need to master a growing number of disciplines. A daunting challenge for many companies, which is why Sirris is here to help. Together we reduce the risk and successfully enable innovation challenges.

FOR AND BY THE TECHNOLOGICAL INDUSTRY

This approach results in more than **1,300** innovation projects a year, working for and with **1,500** companies – the majority SMEs. From technological advice to custom innovation projects, from a wide range of publications, training courses and masterclasses to tailored innovation management.



SATISFIED
CUSTOMERS

Our key advantages:

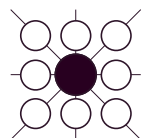
150 experts, industrial labs
with high-tech infrastructure and
an extensive network

Sirris has **150 experts** working in multidisciplinary teams, on a wide range of innovation projects for companies, large and small alike. We help companies introduce and adopt technological innovations – in a concrete and practical way.



150

MULTIDISCIPLINARY
EXPERTS



8

STATE-OF-THE-ART
INDUSTRIAL LABS



5

DOMAINS OF
EXPERTISE

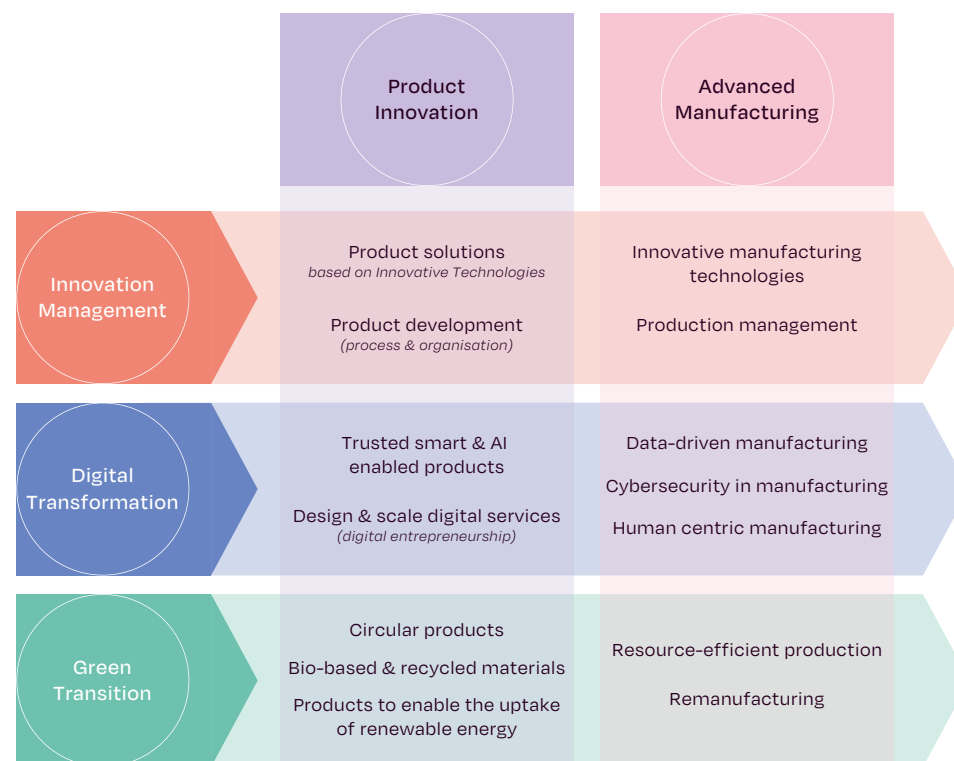


BIGGEST
PARTNERNETWORK
IN BELGIUM



Our expertise

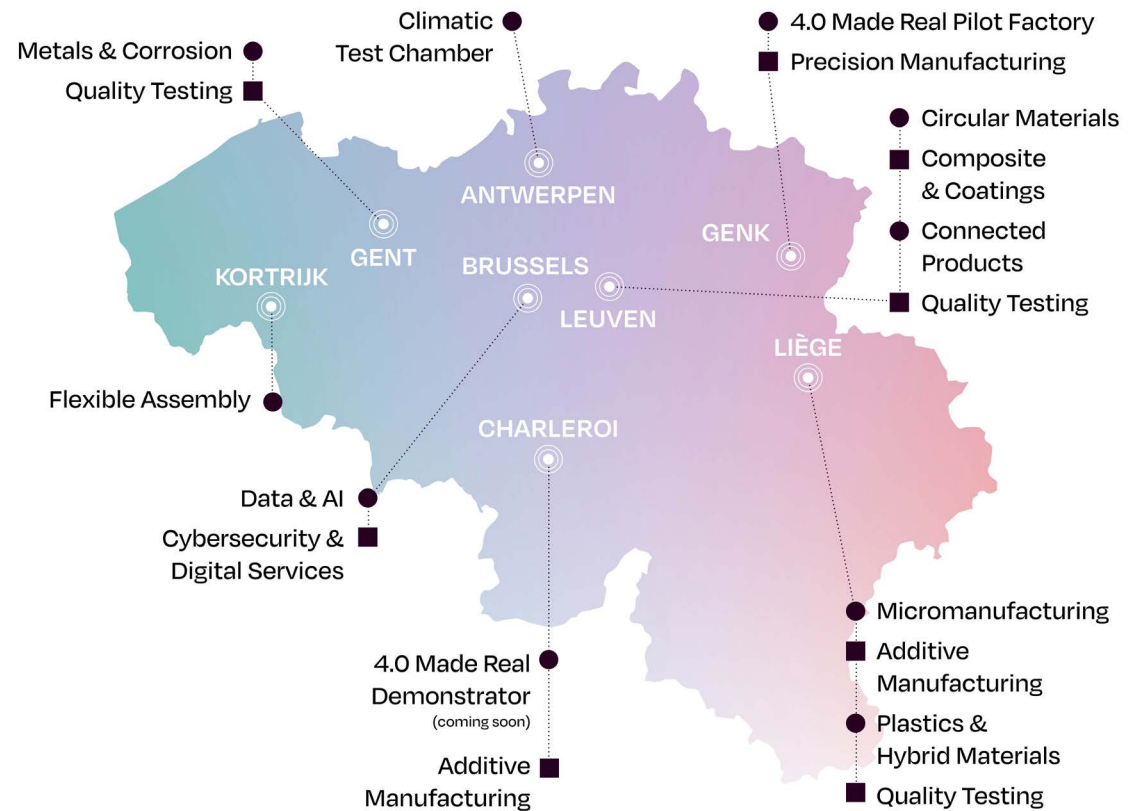
Our expertise spans both product innovation and advanced manufacturing. We approach the challenges twofold: from the point of view of innovation management and from the point of view of the dominant transformations of the moment, the digital and green transitions. This results in state-of-the-art capabilities in in about twenty domains, addressing the collective challenges of the companies in the sector.



Our infrastructure

Our industrial labs with high-tech infrastructure, located all over Belgium, offer the option of carrying out proofs of concept, feasibility studies, experiments with prototypes and pilot lines and running comprehensive sets of technical tests. This “test before invest” approach significantly increases the chances of successfully implementating new technologies.

Innovation is co-creative. Sirris collaborates with an extensive network of university labs, research centres, government agencies, clusters and other partners. These collaborations yearly result in 130 national and international joint R&D projects, across the various fields of expertise – allowing us to accelerate building knowledge across the themes that are relevant to industry in our sector.



Trusted & neutral companion

As the collective centre of the Belgian technological industry, founded by Agoria in 1949, we operate as a non-profit organisation. Our objective is to support achieving sustainable economic growth in Belgium, by helping companies to reap the benefits of technological innovation.

The intellectual property of the innovative application or solutions we work on always stays within the companies we work with and for.

Sirris currently counts 2,500 member companies with 95% satisfied customers each year. The drive towards the continuous improvement of our operations is emphasised by our ISO 9001-2015 quality management certification.



NON-PROFIT
ORGANISATION



ISO CERTIFIED



IP STAYS
IN COMPANY



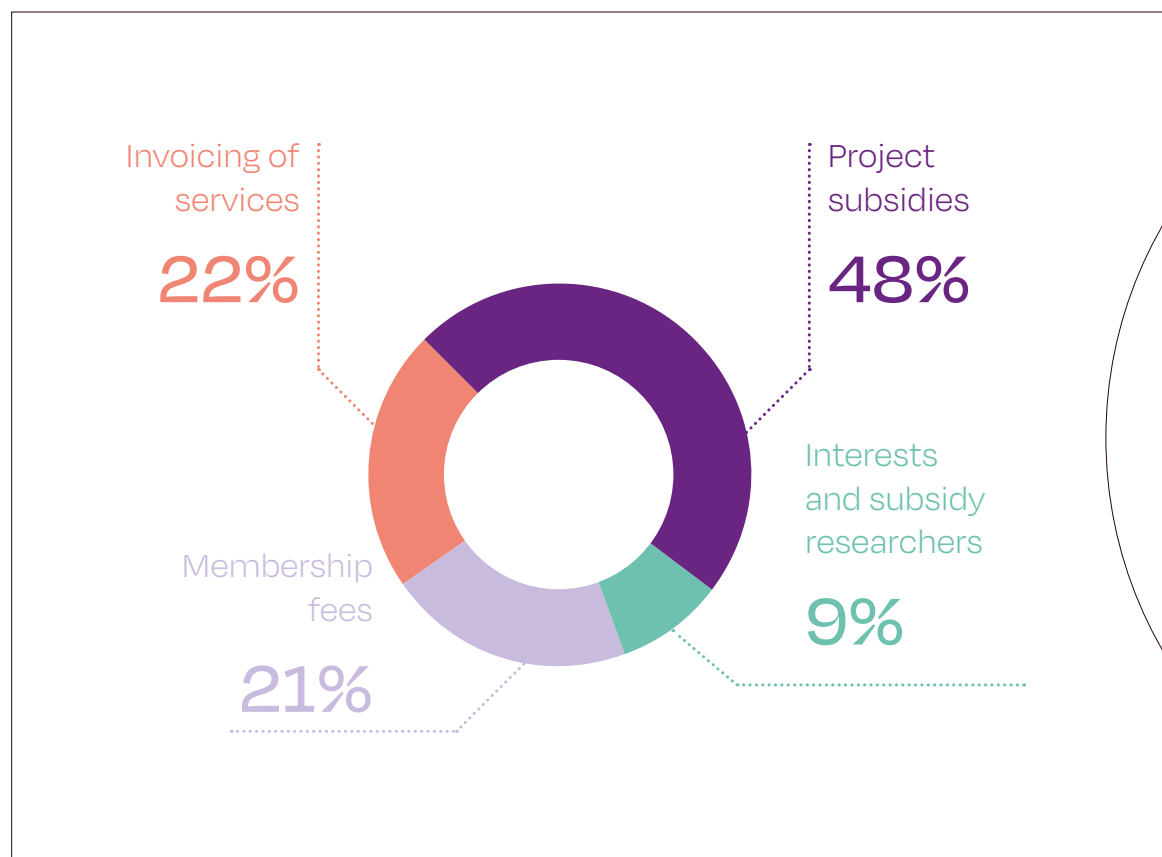
70 YEARS
OF HANDS-ON
EXPERIENCE



The image shows a hand holding a probe connected to a roughness tester in an open case. The device's screen displays '14/20', 'Ra 1.670µm', and 'ROUGHNESS TESTER PCS-RT 2000'. A red cap is on the table, and another device is visible in the foreground. A white circle highlights the central area.

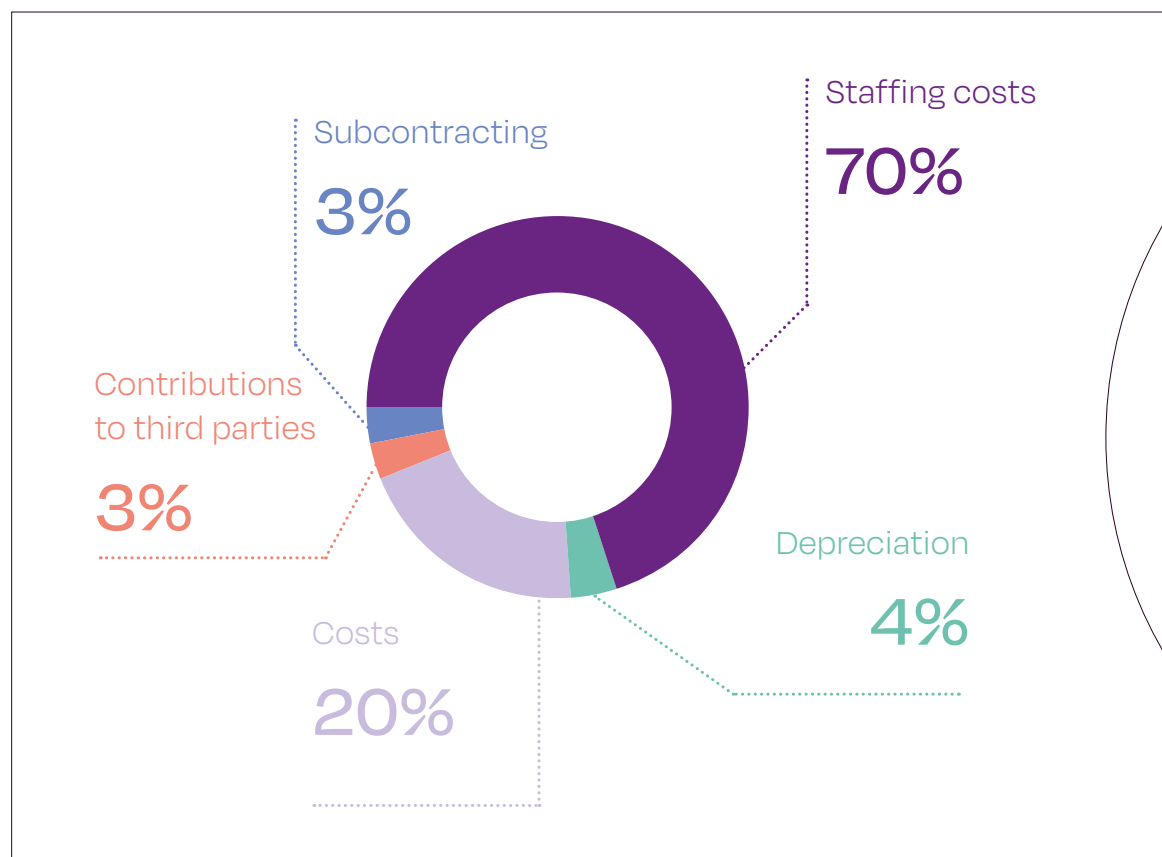
Finances 2023

#Breakdown of income



	% 2023	euro 2023
Membership fees	21%	€ 5 365 143,46
Invoicing of services	22%	€ 5 687 491,43
Project subsidies	48%	€ 12 475 988,63
Interests and subsidy researchers	9%	€ 2 477 696,60
Total INCOME	100%	€ 26 006 320,12

#Cost breakdown



	% 2023	euro 2023
Staffing costs	70%	€ 17 211 523,49
Costs	20%	€ 4 819 537,29
Subcontracting	3%	€ 634 049,25
Contributions to third parties	3%	€ 789 056,69
Depreciation	4%	€ 1 217 244,14
Total COST	100%	€ 24 671 410,86

A photograph of an office environment. In the foreground, a woman with blonde hair and glasses, wearing a light blue shirt, is seated at a desk and looking at a computer monitor. To her left, a man in a pink shirt is seen from the back, also working at a computer. To her right, another woman with long blonde hair, wearing a teal sweater, is seated and looking at a monitor. The background features a wall with several square acoustic panels. On the wall, there is a poster with the word 'KAST' and a logo, and a collage of several small photographs of groups of people. A large, thin white circle is superimposed over the center of the image, framing the woman in the blue shirt. The word 'Representatives' is written in white, sans-serif font across the middle of the circle.

Representatives

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Jean-François Delaigle

Head of Business Development & Innovation

Contact

BluePoint - Boulevard A. Reyers, 80 • B-1030 Brussels • +32 2 706 79 44
www.sirris.be • info@sirris.be

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forward