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FOREWORD

TECHNOLOGICAL INNOVATION TAKES GUTS AND CREATIVITY!

If 2020 was characterised, for many companies, by anguish and the disruption of their usual business activities due to a pandemic that hit hard, 2021 can absolutely be characterised by the unprecedented resilience of those same companies.

Important insights

In 2021 some important insights also came to light following these extraordinary events.

First of all, something we have actually known for some time. The **manufacturing industry** in Belgium - and by extension in Europe - is hugely important. In our country alone,

this industry accounts for 320,000 employees and 8.3% of the GNP. It is the engine of renewal, recovery and revival. If we want to maintain and strengthen our social prosperity, we have to continue to invest in these companies.

In addition, we have learned that the **profound transformations** that are swiftly sweeping through our society have not been slowed down by the pandemic - quite the contrary, in fact. **Sustainability** is more than ever a priority on the corporate agenda. Driven by a sense of responsibility and also encouraged by highly conscious and critical consumers, companies are taking the lead in the green transition, both in terms of the circular use of materials,

renewable energy and the reorganisation of the value chain. Companies have also been confronted with the **digital transition** for quite some time now. But a new dimension was reached in 2021. There is a growing understanding that digital technologies will be an essential and crucial lever in bringing the green transition to fruition. For the European Commission, **sustainability and digitisation** are therefore a twin transition, they go hand in hand, reinforcing each other and also providing companies with unprecedented opportunities.

The third point to remember is that technological innovation has become almost imperative today if a company

wants to survive in this turbulent environment. It requires companies to be creative and to have guts. Although the economic conditions are not making things easy. Time pressure, geopolitical tensions, scarcity of raw materials and increasing costs are making it quite hard on innovative companies.

Hand to the plough!

Sirris, for decades the reliable innovation partner for the technology industry, has a crucial role to play for companies in these challenging times. In 2021, Sirris took up its responsibility with verve. The 160 colleagues realised technological innovation projects at more than 1,200 companies in 2021. Good to know:

FOREWORD

75% of these companies are SMEs. In addition, 130 collective R&D projects took place under the wings of Sirris.

There was also an investment of €600,000 in the further expansion of the company's own high-tech infrastructure. All this resulted in an annual financial turnover of €23.7 million.

Eye on the future

But that's not the end of Sirris's ambition for the sector. 2021 was a year of thorough strategic reflection, but our ultimate goal is assuring the technology industry that we will continue to provide our full support for their technological innovations in the years ahead, obviously with our usual clout

This thorough reflection resulted in a concrete action plan with some important objectives.

Sirris is determined to grow in the coming years. Companies definitely need this sizeable critical mass in the various fields of expertise supported by Sirris.

In addition, Sirris and Agoria want to join forces more intensively. By combining our economic, social and technological expertise, we can give Belgian technology companies that unique edge that can make the difference in the long run.

After all, the complexity of the challenges they face requires an industrial community in which they can work confidently towards a sustainable future.

Armed with these insights and an ambitious action plan, Sirris looks to the future with confidence

After all, it is our mission and commitment to be there for our technology companies in these turbulent times.



Derache

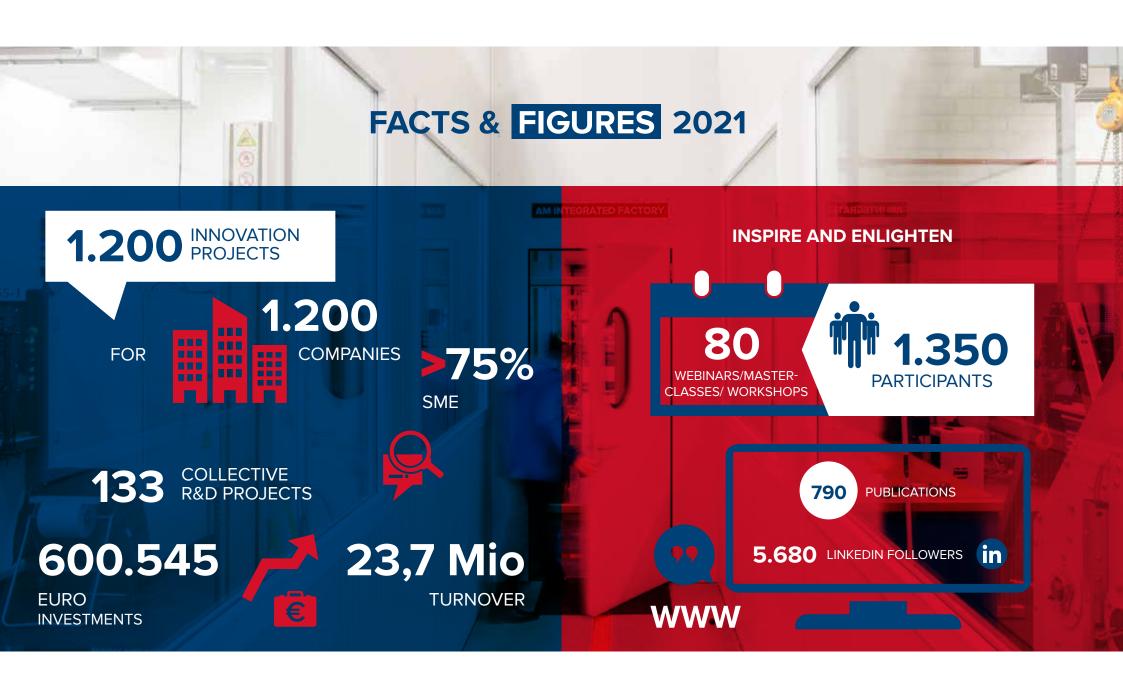
Managing
Director

Herman

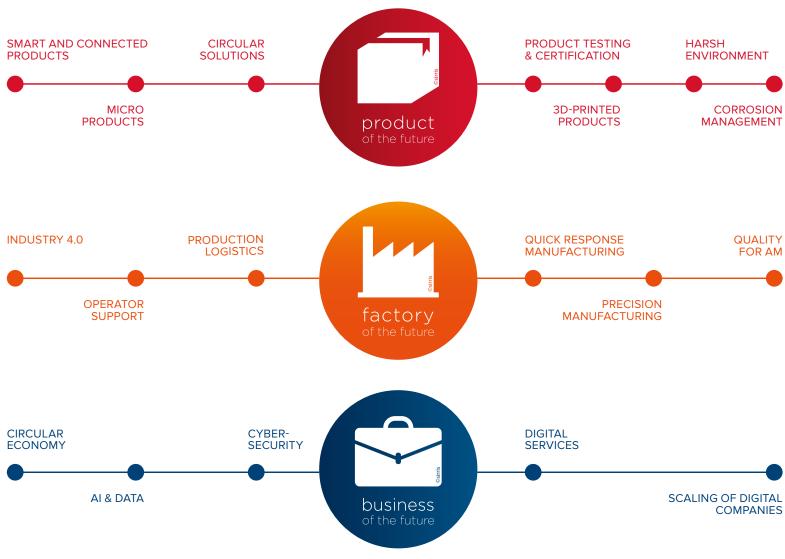


Jeroen
Deleu

Director
Strategy &
Corporate
Development



THEMES 2021









Our expert for this innovation project

JAN KEMPENEERS

MALMAR EXPLORES POSSIBILITIES OF COBOT GRINDING

"Based on these

decided to invest

in cobot grinding

after an initial in-

vestment in cobot

test results,

welding."

Malmar finally

Malmar is a metal processing company with a wide range of products for numerous customers and strives to relieve and unburden its customers. Malmar consequently has a diverse set of processes at its disposal, such as laser cutting, bending, milling, welding, painting and assembly work. The company wanted to improve working conditions and increase the quality of the pieces, and decid-ed to find out whether one of its products could be automatically post-processed.

Malmar visited the Sirris demonstration factory in Diepenbeek and saw the possibilities of cobots for sanding and grinding parts. This prompted them to work with the experts at Sirris to investigate the possibilities of cobot working for one of their products, namely the 'hoods'. After welding with a cobot, these components still require a manual finishing step for the welds. Grinding the weld seams is not only labour intensive, it is also fairly monotonous work, and the quality is somewhat dependent on the operator.

FEASIBILITY TESTED

Sirris was commissioned by Malmar to investigate whether a robot with power

feedback would be able to finish the welding within the specified time. A fully automated process was not a must, but taking the heavy work out of the operators' hands was, so that they can control the cobot, as well as carry out the final checks and remove small defects. The company

also wanted to know whether the welding spatter could be removed. Finally, Malmar wanted to get an insight into the program-ming effort.

Sirris built a test rig with a UR10 cobot using the parts from Malmar, testing both an eccentric sander and an angle grinder. Both the visual quality of the finish and the

processing time were evaluated.

The tests showed that finishing the welded

hoods is quite feasible. The remains of the spot welds and weld spatter could be neatly removed. The combination of an angle grinder and eccentric sander was, as expected, considerably faster than the full finish with an eccentric sander and made it possible to finish the pieces within the predefined takt time.

PRIORITY TO EASE OF USE

Ease of use is still one of the most important specifications when considering future automation. The feasibility test conducted by Sirris was therefore not only intended to assess the result after cobot working, but also to evaluate the deployability and ease of use. The proposed combination of cobot, cobot software and add-on proved sufficiently user-friendly to generate the paths and set the forces

relatively quickly.

Based on these test results, Malmar finally decided to invest in cobot grinding after an initial in-vestment in cobot welding. This will help the company increase productivity and continue its growth.

7











Our expert for this innovation project **PASCAL POLLET**

GROUP NIVELLES SLASHES ITS OFFICE LEAD TIME FROM 5 WEEKS TO ONE DAY

"The back office is

process the incom-

quotation and can

immediately pro-

vide the customer

with the necessary

information."

now able to fully

ing requests for

Group Nivelles NV, a family business specialising in bathrooms and drain systems, distributes its products both throughout Belgium and internationally, and is continuously growing and improving its processes and products. The company had noticed that its lead time for new customized orders was too long and wanted to reduce it.

The total lead time for a new customized order was typically around 8 weeks, including an office lead time of ca. 4-5 weeks. Manufacturing customized orders is quite complex and requires additional office work, such as making customized drawings and a work preparation for every order. Multiple departments were involved in the office process. The steps and handovers lengthened the lead time. When a change was requested by the customer, the cycle started again which further increased the lead time.

AUTOMATION IN THE OFFICE

The long lead times in the office were caused by the manual processing steps and the handovers.

Group Nivelles tackled this with the support of the Interreg project QRM4.0, in which Sirris too participates.

The manual processing steps were largely automated and the handovers were eliminated. This was possible by

using a product configurator and by connecting the information islands. After connecting these systems, an improved work flow became feasible. The back office is now able to fully process the incoming requests for quotation and can

immediately provide the customer with the necessary information.

FROM 5 WEEKS TO ONE DAY

The new process offers many advantages. The back office has complete control over the whole process and is no longer dependent on the availability of somebody from work preparation. All the know-how is integrated and stored directly in digital systems.

As a result, the office lead time could be reduced

dramatically from 4-5 weeks to just one day. At the same time, this automation has reduced the amount of processing errors and has also freed up capacity in the work preparation department, which can now be used for new projects.







Our expert for this innovation project **THOMAS VANDENHAUTE**

WAAK REALISES ITS AMBITIONS TOWARDS CIRCULAR ECONOMY

WAAK wanted to explore how it can further deploy its customised workers to support the circu-lar economy. The question was therefore: As a customised work company, how to utilise in-house knowledge, expertise and infrastructure and become a circular service accelerator?

As a customised work company, WAAK has a very wide range of activities in industrial assembly, assembly work, packaging work and on-site services. In doing so, it deploys a lot of high-tech tech-nology and up-to-date knowledge of materials and production technologies. The company makes use of an integrated approaches starting with activities in co-engineering and even product devel-opment up to production and packaging for third parties. Finally, the company is also focusing on repair and remanufacturing of devices including for smart road pricing.

INITIAL ENTHUSI-ASM RESULTING IN CIRCULAR ACTIONS

The aim at the start of 2020 was ambitious: to create jobs for 15 full-time employees in 2 to 3 pro-jects by the end of 2021, to increase circular thinking within the organisation and to realise inter-nal projects aimed at saving materials and energy, extending the life of machines and increasing the reuse and recycling of materials

Guidance by Sirris focused on channelling

the energy, interest, ambition and therefore enthusiasm for circular actions into concrete actions and exploration projects.

"From the beginning, we have defined the objectives and rules of the game well with regard to the circular economy. This means: sufficiently clear, but also ambitious and with room for en-trepreneurship, via trial and error." "Kristof Hots. Director Sales & Marketing at WAAK

was to create a framework, to provide stepping stones and tools and to prac-tice with them, in order to gain experience with different, circular thinking.

The initiative started with a

ed in the circular economy.

From this group, four groups

were formed, with whom we

went through an interactive

process. With them, the prac-

tical translation of the circular

principles for their expertise

was explored. They explored

the circular principles for their

expertise, selected a limited

and external stakeholders

were questioned as well.

Various tools, templates and

that this hands-on and expe-

rience-driven approach also

delivered real lessons. The

role of Sirris in this exercise

working methods en-sured

number for further exploration,

the practical translation of

broad call for people interest-

At the end of the short process, the need became apparent to set up a structure and a more formal approach within the organisation as well. No one can continue to carry out such projects on top of their daily work, a minimum in time and sometimes budget too is needed to explore and try ideas to a concrete level.

CIRCULAR REALISATIONS

Meanwhile, WAAK also has a formal CE project team of seven people who discuss the initiatives on a weekly basis and provide monthly feedback to the wider group. The team receives a limited budget per project for exploration and development. Everything is clearly brought together on a central planning board.

After about six months, the new approach has led to more than ten projects. The next steps are of course the further development and communication of the success stories, both to those involved internally as well as external stakeholders.







Our expert for this innovation project

FILIEP VINCENT

CARGILL TAKES AUTOMATED DEPALLETISING FROM DRAWING BOARD TO PRODUCTION FLOOR

Can cobots be used to place different products from a pallet on to a filling line? Cargill, an international food producer, sought and found the answer to this question during an instructive project.

Cargill is an international producer and supplier of food, agricultural products and services. The site in Izegem (Belgium) is one of the most complex food oil refineries in Europe, has one of the largest filling lines in Europe and has a centre of excellence for packaging. The company invests in research, development and innovation, efforts that were rewarded with a Factory of the Euture Award in 2021

STEP BY STEP TOWARDS AUTOMATIC DEPALLETISING

Cargill wanted to investigate whether it could use cobots on the shop floor, specifically for depalletising at the beginning of a filling line for different types of products. It found the inspiration needed with Sirris. In the run-up to the project, a few employees participated in a workshop on safe

human-robot cooperation, to gain knowledge about the use of automation on the production floor.

The aim of the project was to de-stack or de-palletise pallets with 'bottles' that need to be inserted into the filling line, where they are filled with oil, the cap screwed on, and then palletised. De-stacking is done manually and is a repetitive task with no added value for the product.

"A gripper was then custommade, mounted on the cobot and tests were carried out at the Sirris lab in Diepenbeek."

several manual tests were conducted on different products with different grippers, to find out which type of gripper is best

suited for the different types of bottles. A gripper was then custom-made, mounted on the cobot and tests were carried out at the Sirris lab in Diepenbeek.

The next step was to the shop floor. A demo of a commercial product was organised as a first introduction to cobots for several employees at Cargill. A concept for a cobot arrangement on the line was also

drawn. The specifications were drawn up and sent to a shortlist of possible integrators to obtain quotations. A Sirris expert acted as a neutral adviser on the spot. This allowed Cargill to make an informed decision about the use of cobots on the shop floor.

Cargill discussed the project in a stakeholder meeting to decide on the implementation partner and to start the actual implementation. This first automation project with a cobot within the company was followed with great interest from several other branches. Sirris continues to follow the project and further developments.

FROM OBSERVATION TO IMPLEMENTATION

Sirris experts came to map out the process environment and current way of working at Cargill, list the specifications and important preconditions that had to be met, in consultation with the team involved. Afterwards,



⇒ Fairwind



CASES

Our expert for this innovation project
PIETER-JAN JORDAENS

FAIRWIND VALIDATES COLD-START TEST OF FULL-SCALE ARCTIC WIND TURBINE PROTOTYPE

"During the tests

Fairwind, a Belgian company that designs and manufactures vertical axis wind turbines, has in its offering the 50 kW-Polar-Version-Wind Turbine, which is entirely in line with the Paris Agreement objective to reduce the consumption of fossil fuels taking place in Antarctica. To verify the proper behaviour of its central shaft, the company performed climatic tests on a full-scale prototype under real-live Arctic conditions.

Developing equipment for extreme environments such as Antarctica, bump into different obstacles: low temperatures and Antarctica's harsh conditions, such as severe icing and very high windspeed, bring additional challenges to the wind turbine design and manufacturing process. For example, the developers needed to consider additional environmental loads, such as ice accretion on rotor blades or thermal expansion and contraction with such temperature gradients. Different materials, coatings and lubricants

needed to be used, and cold start-up procedures had to be adapted as well. Moreover, the emergency braking

into the blades
needed to be verified
and its operation
validated for such
extreme events in
cold climate sites.
Finally, maintenance
actions were
foreseen according
to Antarctica access
restriction and
remote location.

system integrated

REALISTIC SIMULATION OF POLAR CONDITIONS

Fairwind wanted to verify as precisely as possible the proper

behaviour of its full-scale Polar-Version central shaft under realistic conditions

as they occur in Antarctica. For the necessary climatic tests on the full-scale wind turbine prototype the company

turned to Sirris with its Large Climatic Test Chamber at the Antwerp Sirris site. Next to the cold-start tests of the wind turbine prototype itself, different anti-icing blade coatings were tested and compared as well.

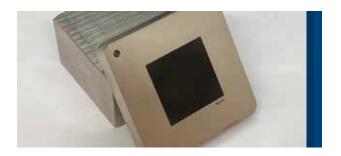
During the tests campaign, the chamber reached a minimum temperature of -40 °C, which aimed to verify the machine's safe and reliable operations in temperature conditions similar to the ones in Antarctica, where the central shaft will be installed on an actual wind turbine at the German meteorological Neumayer-Station III.

to test different anti-icing coatings on rotor blade samples using a new icing array, developed by Sirris. Different types of ice were tested with this new icing array.

Thanks to the large size of the climate chamber and the icing set-up, the full-scale 50 kW-Polar-Version wind turbine central shaft could be installed and operated in extremely low temperatures, down to -40 °C, bringing its realistic testing campaign to a successful ending.

campaign, the chamber reached a minimum temperature of -40 °C, which aimed to verify the machine's safe and reliable operations in temperature conditions similar to the ones in Antarctica."

Part of the tests campaign, next to the functional tests on the prototype, aimed









Our expert for this innovation project

OLIVIER MALEK

ESA ACHIEVES THE DEEPEST BLACK THANKS TO LASER TEXTURING

Ultra-black surfaces are for many reasons essential to space industry. Black coatings that are used at present work well, but they have their limitations. In search for a better alternative ESA, together with Sirris, started exploring the possibilities of laser texturing.

Making black surfaces is very important for space travel: a black surface reflects little or no light and is therefore often used on instruments for accuracy and to reduce errors. Stray light can complicate scientific experiments such as observations of the earth's surface and/or stars. Furthermore, black surfaces radiate much more heat, and this is just about the only way an instrument or satellite can get rid of the heat generated by electronics and/or solar radiation is through radiators, which radiate it back into space. The blacker the surface, the better it is suited for this purpose, and also the lighter, more compact, more accurate and more

stable the instrument becomes.

At present, many black coatings are used,

"The

measurements

high absorption

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and emissivity

any damage or

the surface."

confirm that

textures do

achieve the

but they have some limitations.

For example, they are very fragile and require a number of complex steps to be applied on a surface.

They are also not as good as they should be in terms of performance, especially emissivity (radiating heat). This is why the European Space Agency ESA, together with

Sirris, started their search for a better alternative, with the support of the Federal Science Policy (BELSPO).

UTRABLACK THROUGH MULTI-SCALE TEXTURING

To Sirris it was clear that here was an opportunity to push the state of the art by deploying its ultra-short pulsed laser technology.

By applying multi-scale textures (microstructures with nanostructures on top), incident light can be captured very efficiently, making the surface very black, without the disadvantages of a coating. Such a structured surface also increases the emissivity far beyond what is possible with coatings, even to 0.99 (coatings 0.92-0.95).

This allows for solid mass and volume gains, which is particularly important for Belgian aerospace companies competing for international tenders.

The first part of the research has been concluded, in which the technology was proven on flat test pieces. The measurements confirm that textures do achieve the high absorption and emissivity specified, without any damage or contamination to the surface.

This opens the door to a whole range of new applications, which we will investigate further in a follow-up project together with some Belgian space companies and the Centre Spatial Liege (CSL).





Labrints[®] oerolot

"To ensure the

success of its in-

telligent steamer,

technological, bu-

lopment choices."

siness and deve-

Labrints had to

make the right



Our expert for this innovation project **STIJN GIELIS**

PERFECT HOT DRINKS WITH LABRINTS AND ITS SMART AUTOMATIC STEAMER

Peter Hernou, barista, World Latte
Art Champion and CEO of start-up
Labrints, has taken up the challenge of
bringing perfect drinks to the hospitality sector and thus to the consumer.
Peter knows how to prepare a quality
drink, but how to get the perfect product into the consumer's cup without the
physical presence of the barista? To do
so, the company has developed a smart
steamer: 'aēralab' stands out from
other devices by bringing the skills of
the barista to the consumer through
technology.

Aēralab looks like a professional coffee machine, but it is not. The device allows heating and/or frothing of milk, both animal and plant-based, juices and other liquids in a stable, hygienic and high-quality way. It also allows for greater flexibility in handling other recipes and for precise control of critical quantities, such as the process temperature and foam volume. Finally, the device is at the heart of a broader concept to also offer digital

services to the various players in the value chain. In a next stage, these digital services will be linked to the device.

To ensure the success of its intelligent steamer, Labrints had to make the right technological, business and development choices. Indeed, developing such a device comes with some challenges: smart features such as automatic identification of the

proposed liquid, improved detection through machine learning (AI) and data exchange through connectivity, as well as the business aspects of setting up and rolling out digital services.

To meet these challenges, Labrints turned to Sirris for advice. Thanks to the support of Sirris and the use of low-threshold subsidy tools, including the Digihub of the Flemish business network VOKA, Labrints was able to take concrete steps in its growth story.

crete steps in its growth story.

FROM PROOF OF CONCEPT TO DEMONSTRATOR

In order to demonstrate the reliable operation of the smart features, Sirris designed and built a proof of concept. Spectral sensor technology and machine learning algorithms are used to distinguish between different types of beverages, such as dairy products, plant-based milk

drinks or juices. As this concept has been seamlessly integrated into the existing machine as a kit, Labrints is able to show customers how this unique concept works by means of a tangible demonstrator.

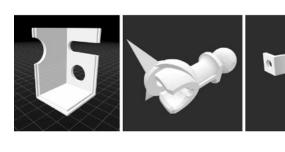
SUPPORT ALONG THE DEVELOPMENT PATH

Labrints had experienced that the search for support, insight, knowledge and contacts is not always easy and that the multitude of possibilities does not always make it easy for a company to make the right choices. Therefore, Sirris also supported the start-up in the approach, planning, financing of developments and cooperation with industrialisation partners.

Meanwhile, Sirris is also helping Labrints to successfully launch the digital services that will be linked to the device.

Thanks to this cooperation, aēralab, the world's first smart automatic steamer for perfect temperature and quality foam with microbubbles, is now a fact. The device has been awarded the Host 2021 Smart Label Innovation Award.









" This project

combining an

AM engineer's

data-driven

experience with

machine-learning

methods in order

to create an AM

knowledge base

that can assist

in all major AM

steps."

aiming at



Our expert for this innovation project

MAHDI TABASSIAN

MATERIALISE AND CR3DO ACCURATELY ESTIMATE BUILD TIMES OF 3D OBJECTS

Although the additive manufacturing (AM) technology has evolved substantially over the last decades, the overall end-to-end process involves many complex steps and still today requires manual input from an engineer at crucial points. Sirris has been collaborating with Materialise and Cr3do to create an AM knowledge base that can assist in all major AM steps.

Materialise is the largest company active in 3D-printing world-wide. Founded in 1990 in Leuven, Belgium, the company has now more than 2.100 employees world-wide, with strong interna-tional presence in software, industrial and medical applications with AM. Materialise has the largest group of software developers for AM and with more than 250 high-end industrial print-ers, is the largest service provider of AM parts in Europe.

Cr3do is an SME specializing in generating personalized solutions for customers by using mod-ern, smart manufacturing techniques such as AM and laser cutting,

to lower the threshold for other SMEs to get started with these technologies. The

company provides expertise, 3D modeling services and production of their solutions. Most customers are active in the architectural and residential development sector, for which Cr3do creates high-end 3D models and 3D visu-als.

Sirris has been collaborating with Materialise and Cr3do in the context of the ITEA3-SAMUEL project

aiming at combining an AM engineer's experience with data-driven machine-learning methods in order to create an AM knowledge base that can assist in all major AM steps. The focus of the Belgian partners is on use cases related

to build-time estimation (BTE) and build preparation (e.g. part orientation and

nesting).

DATA-DRIVEN BUILD-TIME ESTIMATION

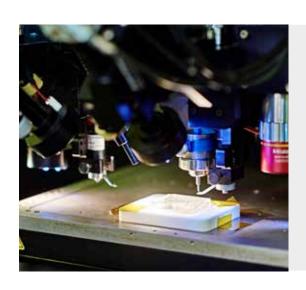
Accurate estimation of build times of 3D objects is of great importance in the different phases of an AM process, such as during quotation, build preparation or at planning level. The existing physics-based models can very precisely tackle this task, but at the cost of taking a considerable amount of computational time. An alternative solution is to use a data-driven machine learning method for BTE. However, estimating

build times of a dataset of objects with diverse and het-erogeneous characteristics is a challenging task for a single learning algorithm.

Sirris therefore investigated the value of the so-called 'divide-and-conquer' strategy in parti-tioning the dataset into subsets of homogeneous objects to facilitate the BTE task for the ex-amined learning models. The usefulness of this strategy has been demonstrated via the execu-tion of comprehensive experiments. Two different divide-and-conquer methodologies have been proposed by Sirris and the experimental results showed that both methods are indeed capable of providing accurate BTEs and can outperform the performance of a single learning method trained with all objects in the dataset. More specifically, the proposed algorithms yielded a mean relative estimation error below 10% for all objects and below 5% for around 40% of the objects in the dataset.

The proposed data-driven divide-and-conquer strategies and the obtained results were published in 2021 International Conference on Data Mining Workshops (ICDMW).

TOGETHER WE INNOVATE



70
YEARS OF HANDS
ON EXPERIENCE

1300

SATISFIED CUSTOMERS EACH YEAR

INNOVATE TOGETHER

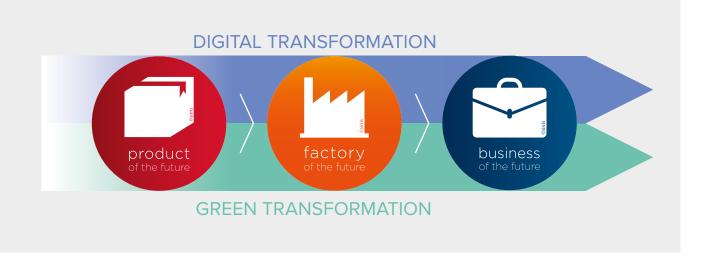
Although many companies are aware of the need to renew to secure sustainable growth, the implementation of technological innovation is an obstacle point because of the corresponding risks and investments in terms of time, money, effort and knowledge acquisition. As an innovation companion for the Belgian technology industry, we come these companies to their aid.

How do we do so? By familiarising them with the necessary technological options and by supporting them to successfully adopt technological innovations in their products and processes.

We have been making this happen for over **70 years**: Sirris works with around **1,500 companies** per year, SMEs in particular.

OUR EXPERTISE

As innovation is often defined as an umbrella term, we focus on several clearly delineated technological themes. For example, we offer expertise to strengthen your company, your product and your production system, by implementing technological innovations, and to engage in the digital and green transitions. Our great expertise within these fields is at your service to help you get started.



OUR KEY ADVANTAGES: 160 EXPERTS, HIGH-TECH INDUSTRIAL LABS AND AN EXTENSIVE NETWORK

Sirris has **160 motivated experts** who work in multidisciplinary teams, on a wide range of innovation projects for Belgian companies, large and small alike. These projects range from selecting the right technological innovation to their actual implementation. Our high-tech industrial labs offer the option of carrying out feasibility studies, producing prototypes and running a battery of concrete tests, thereby significantly increasing the chances of successful implementation. An extensive network of research centres, government bodies, knowledge institutions, clusters and other partners also increases your chances of success. For example, Sirris is involved in around **200 national and international joint R&D projects**, across our various fields of expertise.







LOCAL EMBEDDING

Our network reaches out to many countries, mainly by working on European projects, but the domestic industry is our absolute priority. How do we focus on proximity in practice? We provide companies with access to our multidisciplinary teams and high-tech laboratories at the **eight Sirris sites** spread across the country.



SUSTAINABLE ECONOMIC GROWTH

We are here to help you future-proof your business, product or factory. We operate as a nonprofit organisation. The intellectual property rights to the innovative application or solutions we work on together belong to you. We use the generic knowledge we acquire to assist and support other companies, constituting one of our tasks as a collaborative centre for the technological industry. Sirris currently has 2,500 member companies. The drive towards the continual improvement of our operations is also emphasised by our ISO 9001-2015 quality management certification. Our objective is to support in achieving sustainable economic growth in Belgium.

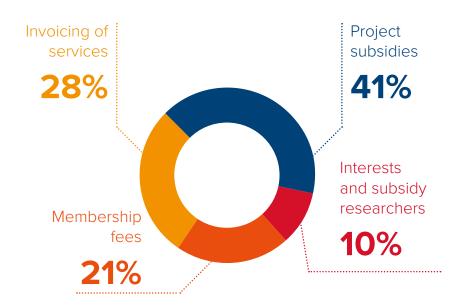






FINANCES

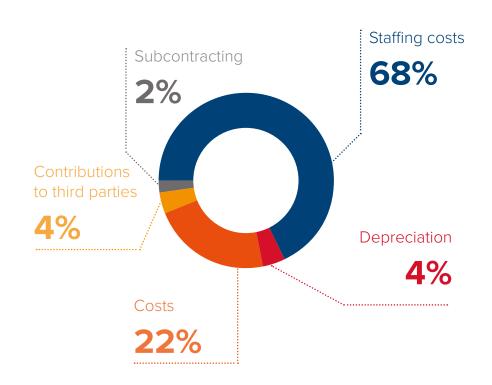
#BREAKDOWN OF INCOME (OPERATING PROFIT)



	% 2021	euro 2021
Membership fees	21%	4 996 582,44
Invoicing of services	28%	6 573 665,16
Project subsidies	41%	9 816 018,62
Interests and subsidy researchers	10%	2 325 918,94
Total INCOME	100%	€ 23 712 185,16

FINANCES

#COST BREAKDOWN (OPERATING PROFIT)



	% 2021	euro 2021
Staffing costs	68%	€ 15 931 852,39
Subcontracting	2%	€ 589 513,70
Contributions to third parties	4%	€ 835 567,32
Costs	22%	€ 5 146 358,75
Depreciation	4%	€ 1 090 041,38
TOTAL COST	100%	€ 23 593 333,54

REPRESENTATIVES

#MEMBERS OF THE GENERAL COUNCIL

MEMBERS APPOINTED BY AGORIA

CHAIRMAN

René Branders

CEO, FIB Belgium SA, Tubize

MEMBERS

Marnix Botte

Senior Director Transformation Programs, Nokia, Antwerpen

Patrick Candry (mandate until 22/06/2021) Director Technology and Innovation, Barco NV, Courtrai

Arnout Vetsuypens (mandate from 22/06/2021) Manager Innovation Programs

Barco NV, Courtrai Philppe Collette

Director R&D. FN Herstal SA. Herstal

Marc De Baere

Managing Director, Panasonic Energy Belgium nv, Tessenderlo

Annelies Deltour

CEO, Paneltim NV, Lichtervelde

Dominique Demonté

General Director, Agoria Wallonie, Brussels

Peter Demuynck

General Director, Agoria Vlaanderen, Brussels

Piet D'haeyer

Managing Director, Pedeo NV, Oudenaarde

Vincent Duprez

Director Innovation Safran Aero Boosters, Herstal **Nicolas Keutgen** (mandate until 22/06/2021) Chief Innovation Officer, Schréder, Liège

Peter Bos (mandate from 22/06/2021) Chief Technology Officer, Schréder, Liège

René Konings

Chief Brussels region, Agoria Brussels, Brussels

Vincent Lekeux

Managing Director, Metakor NV, Heule, Courtrai

François Macq

Managing Director, Macq NV-SA, Brussels

Dominique Maes

Manager Technology, Vandewiele NV, Marke, Courtrai

Christophe Pagnoulle

Research & Development Manager, Physiol, Liège

Geert Palmers

CEO. 3E. Brussels

Nicolas Poulet

Deputy Managing Director, JTEKT Torsen Europe SA, Strepy-Bracquegnies

Kristof Roelstraete

R&D Manager, Picanol NV, leper

Wim Serruys

Director Engineering, LVD Company NV, Gullegem, Wevelgem

Wim Soens (mandate until 22/06/2021) Director of Innovation, Research & Development EY Cognistreamer, Courtrai

Trudo Motmans (mandate from 22/06/2021) Chairman, Asco Industries

Herman Van der Auweraer

Corporate Director RTD, Siemens Business Software NV, Heverlee, Louvain

Stijn Vanneste

SVP Manufacturing Excellence Bekaert, Zwevegem

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Bart Steukers (mandate from 01/03/2021) CEO, Agoria, Brussels

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DOOR HET ALGEMEEN BELGISCH VAKVERBOND - ABVV

Marc Lenders

Secrétaire politique de la Centrale des Métallurgistes de Belgique, Brussels

Hillal Sor

Secretary General, ABVV, Beez, Namen

DOOR HET ALGEMEEN CHRISTELIJK VAKVERBOND - ACV

Bart De Wit

Service d'études et de formation, Socioéconomique, CSC-ACV Metea, Brussels

William Van Erdeghem (mandate until 22/06/2021)

Chairman, ACV-CSC Metea, Brussels

Gabriel Smal (mandate from 22/06/2021) Secretary General, ACV-CSC Metea, Brussels

MEMBERS CO-OPTED BY THE INDUSTRY

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Professeur à l'ULB/VUB, Brussels

Patrick De Baets

Professeur à l'UGent, Gent

Laurent Francis

Professeur à l'UCL, Louvain-la-Neuve

Anne Marie Habraken

Professeur à l'Ulg, Liège

Bert Lauwers

Professeur à la KU Leuven, Heverlee, Louvain

MEMBERS APPOINTED BY THE PUBLIC AUTHORIT

Bart Candaele

Department head, VLAIO, Brussels

Jean-Francois Heuse

Inspector General, Ministry of the Walloon Region, Jambes, Namur

Katrien Mondt (mandate until 22/06/2021) General Director, Innoviris, Brussels

Stefaan Sonck Thiebaut (mandate from 22/06/2021)

General Director, Innoviris, Brussels

Leo Van de Loock

Transition manager, Industrie 4.0, VLAIO, Brussels

Diederik Van Vaerenbergh

General Advisor, FPS Economy, SMEs, Selfemployed and Energy, Brussels

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Senior Director Transformation Programs, Nokia, Anvers

Patrick Candry (mandate until 22/06/2021) Director Technology and Innovation, Barco NV, Courtrai

Arnout Vetsuypens (mandate from 22/06/2021) Manager Innovation Programs Barco NV. Courtrai

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Director Strategy & Corporate Development

Herman Derache

Managing Director

2021

