BELGOPROCESS SUSTAINABILITY REPORT 2019

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1

2019: AMBITION WITH A SOCIAL ROLE

Dear reader,

In 2019, we started implementing the new five-year plan for 2019-2023. This plan sets out the projects and budgets needed for the further professionalisation of our services. This involves dismantling works and new buildings, but also efficiency exercises and local anchoring. We are on track with our ambitions. It's therefore time for a discussion with Kris Vreys, Francis De Meyere and Wim Van Laer; respectively Chairman of the Board of Directors, Managing Director and General Manager.

Protecting society from the risks of radioactive waste. That is the social responsibility and priority task of Belgoprocess. 'A few years ago, in order to be prepared for the future challenges of the processing, storage and disposal of Belgian radioactive waste, Belgoprocess and NIRAS drew up a long-term strategy up to 2100, known as INSAP (industrial and remediation plan for sites 1 and 2). This strategy outlines the modernisation of site 1 and the remediation of site 2, with the corresponding financial estimate. On the basis of this plan, we always draw up a five-year plan, in which the most urgent projects are worked out and budgeted in detail', says Kris Vreys, chairman of the board of directors.
'For many 'classic' companies, five years is a period for a long-term strategy', says Francis De Meyere,

BOARD OF DIRECTORS: Front: Mrs. Nele Roobrouck (director). Middle: Mr. Francis De Meyere (Managing Director) and Mr. Luc Mabille (Vice-Chairman). Back: Mr. Geoffroy Blondiaux (director), dhr. Kris Vreys (chairman), Mr. Alberto Fernandez Fernandez (Federal Public Service Economy representative) and Mr. Wim Van Laer (General Manager).

Managing Director. 'For us, it's more like the medium term, while we regard the 'long term' as being decades! Moreover, the high safety requirements and the technological character of a number of projects require a lot of preparation, and therefore time. In addition, Belgoprocess works with public funds and we are thereby bound by the law on public procurement. All investments are therefore preceded by a public procurement. In order to make this procedure as efficient as possible, we have strengthened the purchasing department in recent years. Planning and budget must be in line with each other.'

DISMANTLING AND RECONSTRUCTION

'An important part of the projects and activities are dedicated to dismantling', adds Wim Van Laer, the managing director. As a result of the corona crisis at the beginning of this year, we have fallen behind somewhat, but we are going to catch up over the next two years. Fortunately, we realised a number of important projects in 2019. In this sustainability report, for example, you can read about the dismantling of the Pu tank, a tank containing radioac-

Construction work on building 151E.

tive liquids from the Eurochemic era. After thorough preparation, we were able to dismantle the tank last year. The construction of additional storage capacity was also started in 2019. Starting next year, for example, building 151E will provide us with additional storage space for low-active waste awaiting surface disposal. The surface disposal is a project of parent company NIRAS', adds Kris Vreys. But Belgoprocess is also closely involved. That's one of the reasons why we renewed the mutual collaboration. We thereby made great leaps in the amalgamation of our ICT systems. All Belgoprocess and NIRAS employees will soon be working with the same hardware and software, under the name of Corporate Service ICT.'

MORE EFFICIENT, MORE FLEXIBLE AND SUPPORTIVE

'It's not just Corporate Service ICT that will make our collaboration much more efficient. We have also concluded cooperation agreements with a number of external companies with a view to greater efficiency and flexibility', adds Francis De Meyere. Wim Van Laer confirms: 'The many investments created a lot of extra work, and this resulted in an increase in our own staff. External employees are also deployed. From the 1 January onwards, Solvus has been managing the employment of all external staff on our sites. Thanks to the partner-

ship with Solvus, we can find the right people more quickly, and we were able to implement an administrative simplification in our own HR department. Additional employees on the site also means additional safety challenges. We have thereby set up bilateral consultations for this. We have invested heavily in safety culture in recent years, and we want to keep this alive among external employees as well. Hence these safety talks in which safety conditions are discussed, but where people can also express ideas or reservations.'
Kris Vreys underlines the importance of safety at Belgoprocess. 'Safety is the most important priority', he states 'and this applies to the environment, the contractors and, of course, also to our own employees. Their well-being is the driving force behind our organisation.' He refers to the well-being survey, in which the psychosocial well-being of our employees was examined. This showed that mutual solidarity is one of our greatest assets. 'People can count on each other. They have confidence in the expertise and work attitude of their colleagues. For a company that has safety as its absolute top priority, that is, of course, an enormous boost', says Wim Van Laer.

SOCIAL ROLE

'Safety and the environment are completely intertwined in the activities of Belgoprocess', continues Francis De Meyere. 'It was not only the processing of historical waste materials that was the most striking event in recent years, but also the environmental efforts. Below, you can read about the investment we have made for the recycling of all non-radioactive condensation water, for example.
Last but not least, our social role is also about anchoring in the region. 'Belgoprocess currently employs more than 300 permanent employees and about 140 temporary workers', says Kris Vreys. 'We are an important employer for the region, and not only for highly specialised people. Starting last year, we have been working with De Sprong, a company in the social economy, for the green maintenance on the site. This enables us to offer new opportunities to people who are having a hard time in the labour market.'

COMMERCIAL

By shifting the focus to our social role and sustainable employment, Belgoprocess has focused its commercial section more on a limited number of themes in recent years. One of these focus areas is our internationally renowned expertise in the field of thermal techniques', says Wim Van Laer. 'For example, Belgoprocess built a mobile pyrolysis installation together with the Dutch company Montair. Companies from various countries are showing interest in this processing installation. It shows that the expertise of Belgoprocess is internationally appreciated.'

2

Removing the Pu tank

PU TANK, NEAT AND TIDY

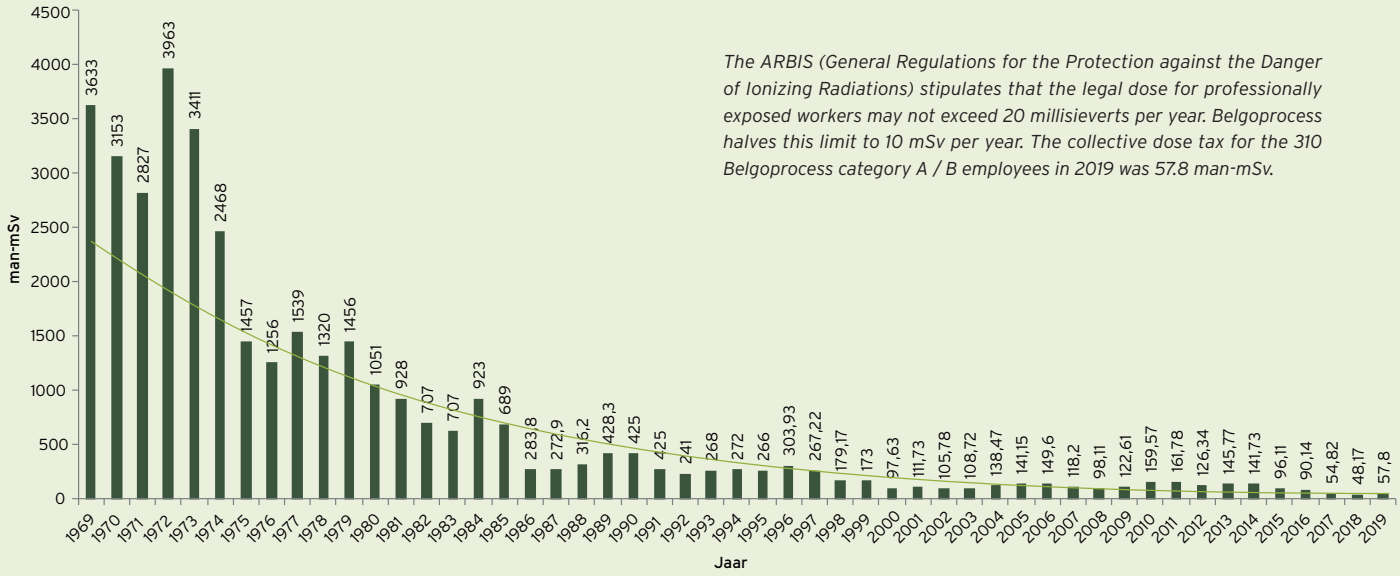
Steffen Cools

‘It was a technical challenge’, says Steffen Cools, talking about the removal and dismantling of the Pu tank. This tank was located in the basement of Building 123Y and contained radioactive liquids, including a quantity of plutonium. The contents, and especially the difficult accessibility of the tank made this dismantling a delicate task.’

As a part of INSAP 1 (Industrial and remediation plan site 1), Belgoprocess is preparing the redevelopment of Building 123Y on Site 1. This concrete slab building dates from 1978 and is a remnant of the former Eurochemic period, in which 123Y was used for the treatment of both low and intermediately radioactive solid waste (MAVA). When Belgoprocess was founded in 1984 as the successor of Eurochemic, Building 123Y initially retained its function. In recent years, however, 123Y has only been used for the further storage of contaminated glove boxes and barrels of concrete left over from the dismantling of Eurochemic. With a view to the further modernisation of Site 1, Building 123Y will be remediated and given a new function. Belgoprocess plans to use it to support the dismantling of the other buildings in Zone B. Nothing special therefore, considering the ambition and expertise of Belgoprocess, were it not for the fact that a tank full of radioactive liquids was located in a closed basement under Building 123Y. And this became quite a challenge for a project that initially had little to do with it’, says Steffen Cools, the decommissioning team leader. It was a precarious undertaking with a long preparation, but the tank was removed last year.

The tank was filled with radioactive liquids, and Building 123Y was used for solid waste. So where did these liquids come from?

Steffen Cools: ‘Building 123Y was divided into six cells. Every once in a while, these cells were cleaned. The water that was used in this process became contaminated, and was collected, via pipes, in the tank, from where it was pumped through to the water treatment. Just like when you clean up at home and the dirty water ends up in the water treatment plant via the sink and the sewers. During the preparation works, we noticed that there was still waste water in the tank. We would have pumped the tank empty before removal in any case, but there was still a layer of sludge at the bottom of the tank as a sedimentation product of the waste water. Measurements showed us that there was an amount of plutonium in it. This posed an additional risk for the removal and dismantling. When plutonium is dry, the dust can spread through the air and there is a risk of contamination by inhalation. We were therefore unable to cut apart the tank on site and dispose of it in separate parts to the PAMELA plant for processing. The whole tank had to be lifted out of Building 123Y so that the plutonium would be kept wet in the sludge.’



The ARBIS (General Regulations for the Protection against the Danger of Ionizing Radiations) stipulates that the legal dose for professionally exposed workers may not exceed 20 millisieverts per year. Belgoprocess halves this limit to 10 mSv per year. The collective dose tax for the 310 Belgoprocess category A / B employees in 2019 was 57.8 man-mSv.

Collective dose of cat. A/B workers from 1969.

Is that why you built a test stand to practice the decommissioning?

Steffen Cools: 'Because we don't take any risks when it comes to safety, we simulated the situation in order to prepare for the decommissioning. Given the real risk of contamination, it was not an option to send people into the cell to manually cut up the tank on site. In addition, the test stand gave us the opportunity and time to try out different saws, and to prepare for different scenarios than those planned.'

Not only the dismantling, but also the removal of the tank has been prepared for years. Because not only the contents, but also the polyester from which the tank was made, and especially the difficult accessibility, made this project a precarious undertaking. The tank was invisible to us and difficult to reach. In order to be able to reach it, we first had to break open the concrete floor. If any concrete debris had fallen onto the tank during this breaking work, there was a real chance of penetration through the polyester. At least that was our starting point during the preparations. Once we had lifted the tank from the basement, however, the polyester resin turned out not to be as brittle as we had prepared for.

How exactly did the removal of the tank work?

Steffen Cools: 'To start with, we placed a tent over the piece of concrete floor that we had broken open. This tent measured 10 by 5 metres, was 4 metres high and was under negative pressure, so that any contamination could not escape. An external company then used cable saws to open up the concrete floor so that the tank could be seen. Our first job was to disconnect the tank from the pipes through which the waste water flowed into - and out of - the tank. We sealed the pipes with PUR foam so that nothing could escape from them. Incidentally, we also extensively tested various types of PUR foam in the test stand for their sealing capacity. Some of these pipes are still in the ground or concrete floor, and will be removed and processed in the next phase. Once the tank was 'free', we lifted it out of the basement using a gantry crane and a manual

Stef Saenen

The Pu tank was transported to the PAMELA plant for processing.

'Because we don't take any risks in terms of safety, we first built a test stand to prepare for decommissioning.'

Steffen Cools

hoist. This was not so easy, as we were working in a tent and had to make a construction with trestles that was strong enough to carry the whole thing. This construction was still a technical challenge. Absolutely nothing was allowed to go wrong, the tank was not allowed to fall or the cable should not come loose or hit the polyester. Once out of the basement, we packed the tank in a cargo bag and attached it to a special cart. In addition, we welded the tank twice into a plastic bag and mounted a formwork around it. In order to prevent pressure build-up and possible contamination, an aeration filter was installed. The tank was then driven all the way to PAMELA, where it was unpacked again.'

Where the tank was dismantled.

Steffen Cools: 'In PAMELA, the corners of the tank were first cut open so that the sludge and plutonium could dry out under controlled conditions. This took a week, during which the evaporated liquid was discharged through the ventilation and filter system. The remaining sludge was scooped away with a robot arm and collected in drums for further processing. The tank was then cut into smaller pieces remotely using robotic arms in order to cement them in drums. Given the difficulty and the risks, this work actually went smoothly.'

3

Building 151E

ADDITIONAL STORAGE CAPACITY IN THE SCAFFOLDING

'Building 151E gives us extra storage capacity for 5000 drums or 5 years.'

Len Hodges

In 2019, NIRAS and Belgoprocess started the construction of a new storage module for low-level radioactive waste. 5,000 drums can be stored in Building 151E from next year. 'The main aim of this project is to address the capacity problem', says project manager Len Hodges. 'At the same time, we are creating space for efficient pre-sorting of the waste pending final surface disposal.'

Up to 1983, Belgian radioactive waste was stored at sea under OECD supervision. In that year, the Belgian government decided to no longer store low-level waste in the sea. Surface disposal became increasingly prominent as a solution for this type of waste, although experts and policymakers realised that it would take years to put it into practice. While waiting for a surface disposal facility, however, the low-level radioactive waste had to be stored safely. A simple building (Building 150) was first built, where the drums of conditioned, low-level radioactive waste were stacked with a forklift truck. The more sophisticated Building 151 was then erected in 1990, equipped with a walkway with a telescopic gripper to remotely store the conditioned LAVA (Low-level Solid Waste) drums. The storage capacity of Building 151 was calculated on the basis of the time that was expected to elapse before the surface repository was built, but this is now proving to be more complex than could have been estimated in 1983. In the meantime, there are approximately 36,000 LAVA drums in Building 151', says project manager Len Hodges. In other words, the building is full, while the surface repository is not yet operational. In order to bridge the period until the surface disposal is up and running, we therefore need extra storage capacity. In our search for solutions, expanding Building 151 proved to be the most realistic option. This is how Building 151E came into being, which is an extension of Building 151 in which we can store 5,000 extra barrels. As the CILVA (Central Infrastructure for Low-level Solid Waste) annually conditions around 1,000 drums, this extension will create a buffer for the next five years. Anticipating the urgent shortage of capacity is the main reason why we built Building 151E, but the extension has another function. The LAVA vessels are not just randomly placed in the surface storage. Their order and location depends on their radiation level. So we have to pre-sort the vessels before they are stored. This is all the more important because we want to fill the surface disposal modules as efficiently as possible. Pre-sorting requires space that we don't have today, however, but that will also be created with Building 151E.

SIMPLE DESIGN

In 2018, Belgoprocess and NIRAS started looking for additional storage capacity to complete the study work around Building 151E in early 2019. The contract has already been awarded during the summer, so that the work could start last September. After the floor slab had been poured with 800 cubic metres of concrete, the foundation stone was laid at the end of 2019. The walls and roof were then installed during the first months of this year. The works went so smoothly that a six-week lead on the schedule was booked. But then the coronavirus appeared, and the construction sector had to stop work. The coronavirus outbreak has partly cancelled out our lead, but we still expect to have the building ready this year, and earlier than initially planned, so we can start using the extra capacity in 2021', says Len Hodges. 'It's urgent. Building 151E needs to be constructed as soon as possible, which is why we deliberately kept the building file simple. To start with,

it's technically a simple building, namely a rectangle of 20 metres by 50 metres with walls, a thick roof and a thick floor slab. The building has to pass the stress test, of course. We have considered a direct connection between Building 151 and CILVA, but the implementation is delicate and time consuming, while the current works have little impact on the operational activities in other buildings.'

INTERNAL PERIMETER

In order to start work on Building 151E as quickly as possible, we even moved the internal perimeter so that the construction site would be outside it (the internal perimeter is the zone where the radioactive waste treatment and storage facilities are located, and where strict access conditions apply)', Hodges continues. 'Putting construction workers and other people to work within the internal perimeter isn't straight-forward. It's actually impossible without security clearance, and this is a time-consuming procedure. Fortunately, thanks to the location of Building 151, we were able to temporarily move the boundaries of the perimeter before work started, without any security risk.'

'We have also built a new access road between our site and the nearby business park for the use of the contractors, and also to reduce the burden on the surrounding area. A lot of building materials have to be supplied to Building 151E. Trucks coming to unload materials can now go to a waiting zone at the end of the access road. In this way, the surrounding roads are relieved of stationary freight traffic.'

PACKAGES AFFECTED

Another building that will be realised in the short term and be linked to Building 151 is the building for ASR (Alkali-silica reaction) affected packages, the so-called gel drums. These are also LAVA drums, but in which an alkali-silica reaction or gel formation has taken place. These drums do not pose a danger to humans and the environment, but their condition does not meet the provisions for surface disposal. These drums are currently in Building 151 among the other LAVA drums', explains Hodges. 'Given the congestion in Building 151, we have difficulty accessing these drums. In the new building, we will be able to isolate these gel drums and inspect, monitor and remove them more easily. In any case, with a separate gel drum building, we're not only creating extra room for manoeuvre to carry out interventions, but we're also relieving the burden on Building 151, and again gaining storage capacity. The low-level radioactive waste continues to come, and not only from the production of electricity. Industry and the medical sector also have many applications with low-level radioactive material. In any case, we are optimistic that we will meet the schedule for both projects. With a bit of luck, Building 151E will become operational this year.

4

Bilateral consultation

SAFETY MEASUREMENTS ALSO BOOST EFFICIENCY

'The safety meeting is an open dialogue where ideas as well as aspirations are discussed in mutual respect.'

Kristin Geboers, Prevention adviser

Kristin Geboers & Koen Adriaensen

In recent years, Belgoprocess has regularly organised safety meetings with its contractors. An evaluation shows that this not only improves safety, but also the quality of the work, as well as the planning and the cost price. 'The safety culture of our contractors is not the only reason for these meetings', says prevention advisor Kristin Geboers. 'Above all, we want to share information in order to arrive at best practice.'

In recent years, huge investments have been made in the further modernisation of Belgoprocess. Think of the upgrade of security including the construction of a perimeter and a new emergency headquarters on Site 1 or the many remediation and decommissioning projects on Site 2. A lot of investment is also planned for the next few years, such as Building 151E (see p. 16, Building 151), IPM (Monolith Production Plant) and the construction of the ROC (Reception and Storage Centre). All these investments have generated a lot of work, and will continue to do so in the coming years. This means that there are additional people on and around the site, which, consequently, also raises safety issues. 'From 2016, we have been organising four safety meetings a year with the foremen, project managers, prevention advisers, etc., of the various external companies active on our site. On average, around 20 people take part in such a safety talk, in which we discuss the safety conditions and expectations.'

Safety measurements have long been the norm In Seveso companies, such as in the chemical and petrochemical industries. Belgoprocess is only following now?

Kristin Geboers: 'There has been frequent collaboration with external companies in the sector of Seveso companies for some time now, while this is a fairly new fact for Belgoprocess. We have been working with companies such as Verbruggen (see p. 30, Purchasing Department and Social Economy) and BCS for many years now, but since INSAP 1 (Industrial and Remediation Plan site 1), the collaboration with contractors has been much more intensive and the need has arisen to include safety measurements.'

Belgoprocess has made great efforts and achieved results in terms of safety culture in recent years. Do external companies pose a threat to the safety culture?

Kristin Geboers: 'This is indeed one of the reasons for organising safety meetings in petrochemical companies. Too often they observed too big differences between their own safety culture and that of the contract companies. But Belgoprocess was less confronted with this problem, however. We note that the safety culture of external employees, who are constantly present here, is hardly less than that of our own people. This is probably because everyone is sufficiently aware of the seriousness of the risks and responsibilities associated with our sector.'

What exactly is discussed at these safety meetings?

Koen Adriaensen: 'To start with, the meetings are not linked to specific projects and we don't necessarily invite all the contractors. Some companies, for example, only work here for a month. Together with those

present, we go through the site regulations and explain the legal framework in which we work. This is not a one-way street where we tell them how to do it. After all, external companies bring experience that may also lead to improvements for ourselves. It is therefore an open dialogue in which ideas and approaches are examined and discussed in order to arrive at the best possible practice. This is the main role of the safety meetings. In addition, we discuss incidents and/or accidents at work, mistakes that were made, complaints and wishes of employees, as well as objections or complaints from contractors to us or to other companies. Mind you, we are not going to point the finger at anyone or to make charges against a contractor firm. We will formulate points for improvement and action in a general way. Our experience shows that external employees do everything they can to work safely. Feedback is therefore constructive and based on mutual respect and trust. As a result, external companies on our site work more with than alongside each other.'

The positive evaluation of these meetings should therefore not come as a surprise.

Koen Adriaensen: 'Thanks to these meetings we are making progress in all areas. There are fewer incidents, which means we work safer, the quality of the work is higher and we also see a positive effect in the planning and the cost price. Which all makes sense, as these meetings allow us to respond to complaints and wishes that are prevalent on the shop floor, but which otherwise would not, or not sufficiently reach us.

Such as?

Koen Adriaensen: 'Such as the orange overalls. We had the external staff on Site 2 wear orange overalls on a trial basis, while our own people were dressed in white overalls. This made it visually clear who was present on site as an external employee. This was discussed at a safety meeting. The external employees felt somewhat stigmatised as a result. They called it a 'Guantanamo Bay' outfit, and thought that the orange colour was meant to keep a closer eye on them. Which, of course, was not the case. We removed the orange overalls after that meeting.'

And what about the access procedure? Since the commissioning of the new emergency headquarters, everyone has to drive through the same gate to be scanned before entering the internal perimeter. Doesn't that slow things down?

Kristin Geboers: 'The internal perimeter checkpoint serves, among other things, as a gateway to the Belgoprocess nuclear zone or internal perimeter, but by no means all external employees are active within the internal perimeter. To start with, this requires security clearance. This is a strict procedure, in which we help our contractors out. Now it's true that the access procedure to the internal perimeter and the additional paperwork lead to frequent complaints. We show understanding, but we can't do anything about it here and we don't want to. The procedures are in the interest of everyone's safety. The security meetings help us to explain this to our contractors. At the same time, the strict and physical separation between the internal and external perimeter has created a more accessible external zone. And that makes working just that much easier for many contractors.

5

Condensate recovery

CONDENSATE RECOVERY ACHIEVES ENVIRONMENTAL GAINS

'In 1990 we looked at condensate recovery from an economic point of view. Today, the environmental gain prevails.'

Tony Bosmans

Tony Bosmans & Jacques Torfs

Belgoprocess has been recovering almost all non-radioactive condensate water from Site 1 since 2019. This means a saving on energy and water consumption, but above all a major gain for the environment. 'Although it is 'only' about the recovery of hot water from steam boilers', says mechanical expert Tony Bosmans. Which was a complex project, even for an environmentally conscious company like Belgoprocess.'

When water is heated, steam is created; and when this steam then cools down, you get condensate. At Belgoprocess, steam is used for two applications. Firstly, for heating the buildings and secondly, for some waste processing processes, for example to transport radioactive liquids. These activities produce a total of 12 tonnes of condensate per hour. Belgoprocess has recently started recovering half of this condensate from the heating circuit. 'We have been recovering the heating condensates from Building 109, our offices, for several years now', Tony Bosmans explains. But these are only small flow rates. With the completion of this project, we are now recovering almost all the non-radioactive condensates on Site 1.
The only heating condensates that we are not yet recovering from the controlled zone on Site 1, Zone B as we say (strictly regulated zone because of radiation and contamination risks), as the working and safety conditions make it difficult to find a contractor for this (see p. 20, Bilateral consultations and p. 30, Purchasing department). We therefore plan to carry out these works ourselves. We already have the building materials, as these were part of the public procurement. The condensates from new projects such as IPM (Monolith Production Plant) and the ROC (Reception and Reception Centre) will also be linked to the recovery circuit. The building plans provide for this. We will not recover the condensates from the installations where radioactive substances are used. They flow to the water treatment plant on Site 2, which was designed for this purpose.

GAIN FOR THE ENVIRONMENT

As early as 1990, Belgoprocess investigated the possibility of reusing as many of the heating condensates as possible. 30 years ago, this exercise was carried out purely from an economic point of view, but the environmental argument now has more weight. 'In 1990, energy was cheap compared to today', says Tony Bosmans. 'The reasoning at the time was that we couldn't recoup the investment in a condensate recovery system. Things are different today. Energy and water prices take a bigger bite out of company budgets, but,

Tony Bosmans and Jacques Torfs in Condensate Recovery.

above all, the environmental gain is great. And that's decisive. In the past, all our condensed water went into the ground (see box). Along with the energy, because it was hot water. This is no longer in accordance with the VLAREM requirements (Flemish Regulation on the Environmental Permit). So we needed a solution for these condensates to raise site 1 to a higher level.'

INVISIBLE, BUT COMPLEX

Although the entire condensate recovery installation is barely visible on the site, it is a very extensive system network. Hundreds of metres of pipelines were laid underground, and large storage tanks were placed at strategic locations. The only visible parts of the installation are the pipes from the condensate pots, which protrude above the ground here and there. How does condensate recovery work? The heating from the various buildings condensate is collected in the tanks. The heat is then recovered for re-use in the tanks via an ingenious system. When the condensate in the tanks has reached a certain height, it is pumped via pressure pipes to the steam plant, where it is degassed and returned to the circuit. In this way, not only the heat, but


SPIRAX
SARCO

also the water is recovered. 'The design looks simple on paper', says Tony Bosmans. 'Although it was a little more complicated in practice. The condensate would originally be discharged to the tanks by gravity, with a gradient of 1 percent, or a drop of 1 centimetre per metre. In order to reach the CILVA (Central Infrastructure for the Treatment of Low-level Solid Waste) collection tank, however, we had to bridge 200 metres. This means that the outlet point must be 2.80 metres deep. And the tank itself is already 3.65 metres deep. Digging a well of more than 6 metres in depth was - quite logically - rejected by our safety services. So we looked for a solution to drain the condensate to the tanks with a smaller gradient. This can cause problems when a lot of steam is consumed and the condensate flow rate is high. But we were able to prevent this problem by placing pipes in the condensate traps. The excavation works also brought difficulties. In particular, the debris we found underground slowed down the work. This was material that had been underground for decades, probably from the construction of PAMELA (a former vitrification plant), at a time when people were not so strict about construction waste. We sorted all this rubble and dealt with it according to the prescribed procedures. It took a lot of work, literally and figuratively, but we now recover more than half of all our condensates. And the plant can handle an additional 3 tonnes per hour. So we will soon have 9 tonnes of reusable energy and water recycling. That's good for the environment.

CONDENSATE RECOVERY AS A SUSTAINABLE ALTERNATIVE

Belgoprocess uses ordinary tap water in its steam boilers. But tap water contains a lot of lime, however which can damage the pipes and installations, resulting in expensive maintenance costs. That's why Belgoprocess filters the lime and minerals from the tap water, producing demineralised water, also known as demi water. Additives are added to this to give the boiler water anti-corrosion properties. The steam boiler water is heated in the boilers to superheated steam, which is used in the installations for controlling processes (transfer of liquids, heating, etc.). During use, the steam cools down to condensate, but still contains the additives and a lot of heat. The water, the heat energy and the additives are recycled when the condensate is recovered, with the condensate then being heated again in the steam boilers. This continuous recycling is many times more sustainable than discharging.

6

Purchasing management and social economy

PURCHASING DEPARTMENT EXPERIENCES STRONG GROWTH

The purchasing team

'As a company with a social role, we are actively thinking about how we can further involve the social economy.'

Tina Caeyers

'From a pack of coffee to a new building, every purchase is a public procurement and is subject to procedures that have become much stricter and more complex over the past ten years', says Purchasing Manager Tina Caeyers, explaining the considerable expansion of the purchasing department.

Tina Caeyers worked as a maintenance engineer at Belgoprocess for eight years before becoming Purchasing Supervisor in 2009. 'When I started in this department ten years ago, we more or less bought what we wanted from whoever we wanted', says Tina Caeyers. 'That's unthinkable today. The law on public procurement has been tightened enormously over the past decade and, as we work with public funds, every purchase is a public procurement. Every purchase is made according to a strict procedure that is closely monitored. Not only by the government, but also by suppliers and contractors. When we tender for a new contract, there is always a risk that 'losing' companies, who don't feel rewarded for their efforts or who feel disadvantaged, could lodge an appeal. Procedural errors must obviously be avoided at all times in order to reduce this risk.'

And has that already happened?

Tina Caeyers: 'The procedure was started twice in the last ten years. The first time we were upheld by the court, and the second time the complainant withdrew the complaint before it came to court. Which confirms that our service is doing a good job.' We now have ten employees working in the purchasing department. Ten years ago, we did this work with three people. The purchasing budgets have not increased to the same extent, however, while the strict regulations have turned almost every purchase into an entire enterprise. All the more so because we are in a security-sensitive sector. This is not always obvious to our customers either, and we have to take them through the strict procedures. So our job does not only consist of administrative work, but also requires a lot of investment in people.'

Raf Bartholomeus

Has the introduction of ERP (Enterprise Resource Planning - a software package that supports companies in their operational management (see p. 60, Corporate Service ICT)) not resulted in efficiency gains?

Tina Caeyers: 'Sure, although this has also uncovered a major point for action. Within ERP, Purchase, or Purchase to Pay, is very extensive due to the strict regulations. The entire process of every purchase, from a pack of coffee to a new building, and from government order to invoice, is registered here. The size of this means that our purchase files take up a lot of time. In particular, the speed with which an order is converted into a delivery is a point that has to be worked on. Our flows have to be faster, and we are working hard on that. There is a fast procedure for purchases under 30,000 euros. Purchases that are higher require a starting invoice, the preparation of a specification, and often also the publication of the order and a thorough evaluation of all quotations. This is complex and time-consuming work. We have already been able to remove a number of non-essential steps in the approval procedure, both for small and large purchases. For purchases of up to 250,000 euros, the department director's approval applies today, and purchases of up to 1 million euros can be approved by the general director. Everything above that requires the approval of the board of directors.'

Tina Caeyers

ATTENTION TO THE SOCIAL ECONOMY

After going through the standard procedure, Belgoprocess awarded the green maintenance on the site to TM Tuinarchitectuur Verbruggen - De Sprong last year. This company is a temporary partnership (the former temporary trading company) between Tuinarchitectuur Verbruggen from Mol and vzw De Sprong from Meerhout. De Sprong is a tailor-made company (the former sheltered and social workshops) that employs long-term unemployed, low-skilled and other people who find it more difficult or impossible to enter the regular labour market. With about one hundred people employed, of whom about three quarters are from the target group, the company is active in recycling or waste management, bicycle repairs and green maintenance. 'When our purchasing department issued the new calls for tenders for green maintenance at Belgoprocess, it included a separate clause at the specific request of our managing director Wim Van Laer stating that part of the contract had to be carried out by people from the social economy', says Tina Caeyers. Public procurement legislation also provides for this working method.

Managing Director Wim Van Laer has always stressed the social role of Belgoprocess

Tina Caeyers: 'And this contract is a fine testimony to that. People who, for whatever reason, are struggling on the labour market now have at least 4 years of job security. We are then obliged to re-tender the contract. In the meantime, De Sprong has been active on the site for almost a year now, and we are satisfied with their work. The cooperation with Verbruggen is also an advantage for De Sprong. Verbruggen is well acquainted with Belgoprocess because they have been doing green maintenance here for years. They can guide the people from De Sprong and coordinate the work. What's more, both companies derive additional added value from it. Verbruggen is regularly looking for extra people who can now possibly move on from De Sprong.'

Are there any other assignments in which you want to involve the social economy?

Tina Caeyers: 'The people from De Sprong also do bicycle repairs for the company bicycles on the site. As a purchasing department, we are actively thinking about how we can further develop our cooperation with the social economy, but this is not always easy to combine with our strict safety requirements. This is another reason why the cooperation with Verbruggen is an asset. The people at Verbruggen take care of the maintenance within the internal perimeter (the internal perimeter is the zone where the installations for processing radioactive waste and storage are located), for which a safety authorisation is required, while the people from De Sprong work outside this zone. They therefore complement each other perfectly. This approach may also be used for other procurement files in the future.'

7

Solvus and partnerships

NEW COLLABORATIONS BOOST EFFICIENCY

Ken Goeyvaerts

'Solvus has the expertise and the network to find the right people to work with us faster.'

Tini Van der Veken

The employment of external employees at Belgoprocess has been managed by an MSP (Managed Service Provider), Solvus, since 1 January 2019. For us, this means administrative relief plus easier and broader access to the labour market', says HR Manager Tini Van der Veken. In addition, Belgoprocess has entered into a number of partnerships for maintenance, automation and project engineering. 'We work more flexibly and more efficiently today', says EIA manager Ken Goeyvaerts.

In recent years, Belgoprocess has often collaborated with external employees (see p. 20, Bilateral consultation). Today, for example, some 130 freelancers, seconded employees (employees of external companies) or people on an interim basis are working on both Belgoprocess sites. Up to the end of 2018, Belgoprocess did the recruitment, selection and administrative follow-up of these external workers itself, but this has been partly outsourced to Solvus, a Managed Service Provider (MSP) from the USG People group, since 2019. 'Finding and recruiting temporary employees is time-consuming, and doesn't always yield the desired results', explains HR Manager Tini Van der Veken. 'All the more so because Belgoprocess works with public procurement, which means that every recruitment falls under the Public Procurement Act (see p. 30, Purchasing department). We must give each supplier the same opportunity to provide candidates for a particular position, and doing this for each individual external employee is a time-consuming and complex process. We were looking for a solution, both operationally and administratively, and we ended up with Solvus, via a single public procurement. Solvus has a broad network within the labour market and, as the umbrella manager of external recruitment, specialises in the specific regulations and administrative follow-up in this area. For us, the collaboration with Solvus not only means an administrative relief, but also gains in efficiency. Thanks to Solvus' network, we can find the right people more quickly, especially for positions that are scarcer on the labour market.'

Tini Van der Veken

MSP - VENDOR MANAGEMENT SYSTEM

Solvus is thereby now responsible for the entire process management of external employees at Belgoprocess. In practical terms, the collaboration between Belgoprocess and Solvus runs via the Vendor Management System or VMS digital platform. 'When we want to hire additional temporary employees, we first determine the profile of the position to be filled together with the department involved', explains Tini Van der Veken. 'We upload this profile into the VMS, after which Solvus searches the market for suitable candidates. Solvus acts as a forum on which suppliers, such as temporary employment agencies, can present their candidates. As an MSP company, they are the link between supply and demand. Solvus then makes a careful initial selection from the candidates it receives, based on our selection criteria. Our HR department receives this selection and submits the proposed candidates to the relevant department. The final decision is thus taken by us. Belgoprocess itself decides which of the proposed candidates can start work, of course. From then on, Solvus takes care of the administrative follow-up of the recruitment, including invoicing. In this way, there is a uniform working method for all external employees, while seconded and temporary employees

Unloading cell in Building 136.

'Thanks to the partnerships, we can flexibly fall back on competencies that we do not immediately have in-house.'

Ken Goeyvaerts

require their own, separate approach. Solvus has also linked the VMS to our time registration system, so that the work organisation of temporary employees is aligned with that of our own people. This is, of course, a great improvement in terms of clarity and planning. In addition, Solvus also provides the necessary safety certificates for external employees.'

The price that Solvus charges for this service depends on various factors, such as the difficulty of filling the vacancy and the duration of the assignment. According to Tini Van der Veken, however, the cost of this outsourcing is compensated by the relief of the own organisation. 'All the more so because it is not only the HR department that is relieved, but also the Purchasing department, as they are responsible for the procedures relating to the Public Procurement Act', says Tini Van der Veken. 'Thanks to this outsourcing, our own departments can refocus on other core tasks. Coupled with the know-how and connections of Solvus, this increases our effectiveness, which logically has a positive impact on cost control. I am therefore confident that this collaborative project will provide us with a great deal of added value throughout the company over the next few years.'

PARTNERSHIPS

In addition to the agreement with Solvus, Belgoprocess has also concluded a number of partnerships for maintenance, automation and project engineering in 2019. Cooperation agreements for maintenance and automation were concluded with Engie Fabricom. The project engineering is supported by the engineering office of Fluor. 'These partnerships are an absolute added value', says Ken Goeyvaerts, EIA (Electricity, Instrumentation and Automation) expertise manager and co-responsible for the further automation on the site. 'To start with, we are more flexible in our organisation today. We can respond more quickly and easily to market changes and new developments. When the workload increases or if an employee drops out, it was not always easy in the past to find extra people immediately. This is because we are bound by the public procurement law, but all the more so because, within our services, we are often looking for very specific profiles and these are scarce. The companies with whom we have partnerships have these profiles available, plus additional expertise and experience. So we can quickly, flexibly and, where necessary on a part-time basis, call on competencies that we as Belgoprocess do not immediately have on site. And we can also learn from the experience they bring to the site. Just as we also have a lot of experience and expertise on the site. Knowledge sharing is therefore an important additional benefit of these partnerships. We gain both expertise and efficiency.'

8

Environmental permit

BELGOPROCESS DOUBLE-LICENSED FOR ENVIRONMENT

Sandra Vanarwegen

'As a company with a major social responsibility, the environment receives our full attention.'

Sandra Vanarwegen

Belgoprocess is double-licenced for its impact on the environment. In addition to the nuclear licence, Belgoprocess received a new environmental licence (i.e. environmental permit) for the existing conventional installations on both sites. In recent years, a lot of actions have been taken to obtain these licences. This only involved the regional licensing of all installations and activities on the sites according to the VLAREM regulations. The operation of all nuclear installations was already covered by a federal operating licence for Class I companies, according to the ARBIS regulations. 'In any case, we already largely complied with the VLAREM regulations, and even though we now have the environmental permits, we continue to make continuous efforts in the field of the environment', says Sandra Vanarwegen, Belgoprocess environmental coordinator.

Belgoprocess had a VLAREM compliance audit carried out to identify the shortcomings with respect to environmental legislation. VLAREM stands for the Flemish Regulation on the Environmental Permit, and includes the conditions that must prevent and limit environmental pollution. With this audit, Belgoprocess wanted to know the extent to which they already complied with the VLAREM provisions. 'We carried out two audits, one on Site 1 and one on Site 2 of Belgoprocess', says Sandra Vanarwegen. 'Non-conformities and recommendations were listed for both sites together and the main points for attention were implemented immediately. For all other identified non-conformities, concrete actions were laid down in a plan of action for each site. A number of new projects were implemented. These included the improvement of the storage of hazardous products and gases and the associated administration. We installed a new steam boiler running on natural gas (formerly heavy fuel oil), as a result of which our emissions were greatly reduced. An example

The installation of a new steam boiler running on natural gas significantly reduced our emissions.

of the progress we have made in this area is that we have succeeded in reducing our NO_x emissions by a factor of 8. An energy plan has also been drawn up for Site 1. The other major projects mainly concerned our water management (discharge of various streams of (non-radioactive) industrial waste water). The largest project in this respect was the installation to recover our steam condensates and send them back to the steam boiler for re-use (see p. 24, Condensate recovery). Another project collects the rinsing water from the reverse osmosis plant (concentrated PIDPA water with increased salt concentration) in a large 1,000 m^3 tank, which we treat so that the water meets the VLAREM conditions and is suitable for discharge into the surface water. The rinsing water from the cementation is also now discharged in accordance with the VLAREM regulations. Just like the washing waters of our commercial vehicles. For this purpose, we have provided a car wash in which the waste waters are transported to a hydrocarbon separator before being discharged into the public sewerage system. These are just a few examples of the actions we have taken in recent years in relation to environmental legislation.'

DOUBLE-LICENSED

In March 2019, Belgoprocess received an environmental permit (class 1) for all existing conventional (non-nuclear) installations on Site 1. The corresponding permit for Site 2 was issued last February by the deputation of the Province of Antwerp. As a result, both sites are now also fully regionally licensed. Examples of regularised installations are our combustion plant, fuel oil tanks, emergency diesels and associated diesel tanks, transformers, compressors, air conditioners, storage sites for gases and hazardous products, groundwater extraction, etc. Belgoprocess is thereby now double-licensed (federal & regional). As a nuclear company, Belgoprocess is first and foremost subject to the establishment and operating licence of the FANC (Federal Agency for Nuclear Control). From its inception in 1984, Belgoprocess has had a (federal) nuclear operating licence that includes the radiological environmental requirements. These include, for example, the radiological discharge limits of the purified radioactive waste waters for discharge into the Molse Nete. 'We have had an environmental permit from the Flemish Region for the discharge of purified industrial waters into the Molse Nete right from the start, so we have been complying with the physico-chemical discharge limits for years', says Sandra Vanarwegen. 'All new buildings and installations that have been planned or already built, such as the new IPM building (Building 160, Monolith Production Plant), the new utility building (Building 164) or the gel drum building (Building 167), also have a double permit. Moreover, we had already invested in the environment before the VLAREM compliance audit. For example, we previously installed an ultrafiltration installation on the water treatment plant, and the CILVA incinerator was fitted with a dioxin filter, a new heat exchanger and the scrubber was optimised to improve air emissions. Measurement equipment (continuous emission measurement) was also installed to monitor emissions of the incinerator's classic pollutants such as CO, SO_2, NO_x, HCl, HF, dust and TOC.

More examples of achievements can be found in this and previous sustainability reports. They are all achievements that are based on the policy of Belgoprocess, which includes the following focus areas: safety, environment and quality, professionalism and social responsibility.

Belgoprocess already largely complied with the provisions of VLAREM and, even now that we have the environmental permit, we continue to make continuous efforts to comply with the legal and permit requirements and to improve the environment.

Continuous improvement in terms of quality, safety and the environment is guaranteed by the Integrated Management System (IMS). From 2006 onwards, Belgoprocess has built up a safety, environmental and quality management system according to the requirements of ISO-45001 (replacement of OHSAS-18001) (safety), ISO-14001 (environment) and ISO-9001 (quality) for both sites. We continuously monitor our environmental performance and compliance with the relevant laws and regulations. Objectives are put forward annually with the aim of improving performance.

As a company with a major social responsibility, we take the environment seriously. The safety and health of employees and local residents, as well as the protection of the environment, are our absolute top priorities. These priorities are therefore inspired by Belgoprocess' policy. In our sector, safety and the environment are, of course, closely linked.'

9

PRIME

BELGOPROCESS BACK AT THE CUTTING EDGE OF NUCLEAR INNOVATION

Jan Deckers

'The great advantage of pyrolysis is mineralisation.'

Jan Deckers

As a co-developer of a mobile pyrolysis installation, Belgoprocess is once again at the cutting edge of nuclear innovation. Our PRIME can count on worldwide interest', says engineer Jan Deckers. And that is how Belgoprocess is also able to convert its expertise into economic added value.

In collaboration with the Dutch mechanical engineering company Montair, Belgoprocess has developed a mobile pyrolysis installation, known as PRIME (Pyrolysis Resins In Mobile Electric installation). 'The installation is now fully tested and is ready to be used', says Belgoprocess engineer Jan Deckers.

But first of all, what is pyrolysis?

Jan Deckers: 'Pyrolysis is a thermal process in which radioactive waste is heated to 600 °C in an oxygen-free environment. The high temperature and the absence of oxygen causes the molecules to decompose, forming a mineralised material, i.e. a charred residue as the end product. The production of charcoal is actually a perfect example of pyrolysis. Charcoal is obtained by heating wood while limiting the flow of oxygen. Most of the wood does not burn, while the volatile components evaporate. We do the same with certain radioactive waste products in which we capture and treat the volatile components, i.e. the gases. The mineral end product is inert and suitable for disposal.'

So you've been using this technique for a long time?

Jan Deckers: 'We have had a pyrolysis installation on our site since 1999. It is an expertise that we have indeed had in house for some time now, and of which, for several years now, we have also been convinced that it has a promising future. That's why we have entered into a partnership with the Dutch machine manufacturer Montair for the construction of a mobile pyrolysis installation. The result is an electrically driven installation with as few moving parts as possible, in order to eliminate defects or malfunctions as much as possible, but also to keep installation and dismantling simple. This simplified design also ensures safety and ease of maintenance. PRIME is also easy to operate, and this was done by a single operator throughout all the tests. The entire installation fits into a standard 20-foot container, making it easy to transport.'

The interest in PRIME is thereby mainly due to the simple design?

Jan Deckers: 'That as well, but much more with the type of waste that we can process with PRIME, namely medium-level radioactive resins from the purification circuits of nuclear reactors. Look, the heat that fissile materials generate in a nuclear reactor is absorbed by water. This reactor water is systematically purified by resins. From time to time, however, the resins themselves have to be replaced. The old, saturated resins are then logically processed as radioactive waste, and spent resins are stored in special containers. In many places, awaiting processing. This is currently done by homogenously cementing the resins, as an example. But there is a clear tendency towards mineralisation, and this is due to the stricter acceptance criteria. Mineralisation can be carried out, for example, by pyrolysis. After pyrolysis, only small grains of carbon remain in the resins, in which all the radioactivity is trapped. Another benefit is the reduction in volume, which makes disposal cheaper. Pyrolysis is therefore the solution of choice for resins, and, in addition to its expertise and experience, Belgoprocess now also has the installation to market the technology.'

PRIME can look forward to a lot of international interest, and Belgoprocess is already in concrete contract negotiations with a Canadian company. Meanwhile, another foreign commercial project is also fulfilling its promises at the same time. The plasma furnace that Belgoprocess built in Bulgaria is now running at full speed. In contrast to pyrolysis, plasma combustion is combustion at extremely high temperatures. This makes it clear that Belgoprocess has a great deal of internationally renowned expertise in thermal techniques, and Belgoprocess also holds a patent for the tilting technology in the plasma furnace. 'As the successor of Eurochemic, Belgoprocess was at the very beginning of the nuclear era', explains Mieke Roos of the International Business Development department. 'Knowledge and experience have been built up here for more than half a century - knowledge and experience that we can market today. A patent is also pending for the PRIME installation.'

Mieke Roos

'Commercial assignments generate know-how. It keeps us on our toes.'

Mieke Roos

Yet despite all the know-how, the core business continues to process its own domestic radioactive waste streams.

Mieke Roos: 'The priority task of Belgoprocess is to safeguard society from the risks of radioactive waste, and this will remain so. This means that we carefully implement the Belgian processing and decommissioning programme. At the same time, there is a great demand in the international market for our expertise in thermal techniques, as well as in nuclear decommissioning and waste processing. We must not be blind to this. Safety is our absolute top priority, but commercial assignments can also contribute to the optimisation of our operations and generate know-how. It keeps us on our toes.'

In what way do commercial assignments contribute to the optimisation of your daily operations?

Mieke Roos: 'A number of installations at Belgoprocess are currently running at only a limited percentage of their capacity. This is because our country opted for central processing of radioactive waste at the time. We can process everything at one location, namely here in Dessel. Belgoprocess has a processing installation for every type and category of radioactive waste. The major advantage of this is that the safety risks are considerably reduced. The disadvantage is that the quantity of Belgian radioactive waste is too limited to use the full capacity of installations such as the incinerator. This investment therefore does not fully pay off, but Belgoprocess could increase its efficiency by attracting foreign customers. We have the ability, the experience and the know-how to process the most diverse types of waste, and we have the techniques to do so. That's why we're an interesting partner for many foreign companies, because they can come to us with everything, instead of sending waste batches to different waste processing plants spread over different countries. That of course makes it more practical and cheaper for these companies. And for us, too, the profit is double: we boost the efficiency of our installations and keep in touch with international developments.'

10

Welfare survey

WELL-BEING AND SAFETY GO HAND IN HAND

Elke Claes

'We attach great importance to the well-being of our employees. After all, our human capital is essential for safety.'

Elke Claes

In 2019, Belgoprocess organised a satisfaction survey among its staff for the third time. The solidarity among colleagues and the development opportunities were the strongest positive points to arise from this well-being survey. The main action point remains communication. 'In general, we can conclude that our employees feel good', says HR Officer Elke Claes.

Belgoprocess has organised a welfare survey among its more than 300 employees every three years since 2012. This is not a random survey, but a scientific analysis that assesses the psychosocial well-being in the workplace based on the 5A's (Labour Content, Working Conditions, Labour Relations, Working Conditions and Labour Organisation). Belgoprocess called on IDEWE, an external service for prevention and protection at work, to help steer this research in the right direction. 'From the beginning of our collaboration, it was clear that Belgoprocess attaches great importance to the well-being of its personnel', says Katrien Mertens of IDEWE. For example, every company is legally obliged to carry out a risk analysis of psychosocial aspects. Belgoprocess does this every three years, and does so very comprehensively. Moreover, the involvement of both managers and other employees is high. Experience shows us that an average of about 60 percent of the employees in a company participate in such surveys. This figure was 73 percent at Belgoprocess. So this welfare survey certainly gives a representative picture.'

As an HR officer at Belgoprocess, that must sound like music to your ears?

Elke Claes: 'We attach great importance to the well-being of our personnel, because a company like Belgoprocess benefits in particular from a sustainable personnel policy. A high staff turnover or dropout rate would not only have a negative impact on the image, but possibly also on the safety culture. Our people are well acquainted with the strict safety requirements and the specific responsibilities. They know their department through and through, and immediately know what to do in the event of unexpected incidents.

Teambuilding day Sunparks Kempen Lakes.

Both to protect themselves, their colleagues and the environment. Their experience is at the service of safety and, although we continue to invest in safety training, we cannot train new people in experience. Our human capital is therefore essential to realise this company's top priority on a daily basis: protecting the environment from the potential dangers of radioactive waste. The psychosocial well-being of our people is therefore a serious issue.'

Talking about the survey itself, starting with the positive points. A large majority of employees consider the mutual solidarity among colleagues to be an asset.

Elke Claes: 'This was also a positive element in the 2016 survey, but did not appear as strongly as it does today. What is important here is that solidarity dominates the entire company structure. Employees therefore not only experience support from their colleagues, but also from managers. We are, of course, very pleased with that. Not only is it a good indicator of the general well-being of our employees, it also says a lot about the safety culture. With regard to solidarity, our people also indicate that they feel safe when working together with colleagues. There is trust in each other's skills and work attitude.'

Katrien Mertens

Two other positive points are the opportunities for development and the degree of participation that employees enjoy.

Elke Claes: 'We have made considerable efforts in terms of development opportunities in recent years. There were already compulsory training courses for staff, but we now also offer popular, non-mandatory training courses. People appreciate the opportunity for further training, and also make use of it because they find it important to do their job well. The fact that participation scores so well is related to that. In recent years, we at Belgoprocess have put a lot of effort into increasing the involvement of employees. And this is also done from a safety culture perspective. Where safety is concerned, it is important that employees dare to speak to each other and to the managers in confidence. And that works. Employees feel themselves being listened to, have the feeling that their opinion counts and that managers are easily approachable. For the sake of clarity, however, the agreements and procedures regarding nuclear safety requirements are, of course, strict. There is no room for compromise there.'

Despite the great level of participation, communication remains a point for action. This was also the case in the 2016 survey.

Elke Claes: 'The image is nuanced and the criticism is different. The communication runs smoothly in some departments, while it's a point for action in others. At the same time, some employees think there is too little communication, while others think there is too much, with too many people involved. It's true that a lot of participation does indeed go hand in hand with a lot of communication and with safety. We know, for example, that external employees (see p. 36, Solvus) also find the multitude of communications and meetings burdensome, but when it comes to safety, we prefer to say things one more time.'

'It's true we scored lower on this three years ago. We have taken action in this area since then, such as the day start and day stop, in which each team reviews the progress, the opportunities, the challenges, etc. of the work at the beginning and end of each day. But we now know that there is room for improvement. We are reflecting on this and, given the divisions, it is a challenge to formulate additional action points around this.'

What are the main lessons that you draw from this survey?

Elke Claes: 'During our previous survey in 2016, we worked together with another partner who no longer conducts this scientific survey. We also provided IDEWE with the figures, in order to make a careful comparison and to map out a route from there. But, in general, we can already conclude that our employees feel good.'

Katrien Mertens (IDEWE): 'That conclusion is correct. After the survey was carried out, we first of all looked at the results with the Welfare workgroup. After all, psychosocial well-being is not about facts, but about experiences. That's why it was important to first clarify the figures from the survey with the staff of the study group. Each manager in turn discussed the group results with his team in order to provide background information for the figures. Each team also drew up an action plan for itself. At the same time, we organised two focus groups at organisational level to make a number of elements from the company-wide results more concrete. The amount of involvement from both managers and employees is striking. For Belgoprocess, psychosocial well-being is clearly more than an obligation. There is even a separate Welfare working group, with director Wim Van Laer as a member. That is exceptional.

11

Corporate Service ICT

BELGOPROCESS AND NIRAS INTEGRATE DIGITAL PROCESSING INTO CORPORATE SERVICE ICT

'For us, hosting data in the cloud is always a compromise between security requirements and the needs of the operational function.'

Guido Janssen

Peter Van Lier & Guido Janssen

Belgoprocess and its parent company NIRAS made considerable progress in the further unification of their ICT services last year. In particular, the restructuring of this Corporate Service ICT proved to be a bull's eye. 'In previous years, we focused on the foundations of the new digital construction', says Guido Janssen. 'We started with the above-ground part of the new construction in 2019.'

From 2017 onwards, Belgoprocess and NIRAS (National Institute for Radioactive Waste and Enriched Fissile Materials) have been working on a unified ICT service called 'Corporate Service ICT'. For the sake of better understanding: Belgoprocess and NIRAS bear a similar responsibility, namely the safe management of Belgian radioactive waste flows, but both companies have their own specific task in this respect. NIRAS, headquartered in Brussels, operates in the policy, administrative and financial context, while, from Dessel, Belgoprocess takes on the industrial part of waste processing. Two different functions from which two different ICT services have grown, each with its own business infrastructure, applications and working methods. In 2017, however, with the Corporate Service ICT, both companies undertook to support their digital operation from one integrated service, based on a common vision and a single set of procedures and standards. The assignment was to make maximum use of the shared ICT infrastructure and applications, so that all employees of Belgoprocess and NIRAS could share and process their information in a safe, efficient, uniform and user-friendly manner. Guido Janssen from Belgoprocess and Jos Geenen from NIRAS were given the task of managing this transition. 'We had to realise a new digital structure, as it were, in which both NIRAS and Belgoprocess could be accommodated. During the first two years of the transition, we focused on the foundations for this new digital structure', explains ICT manager Guido Janssen. 'This was a challenge, because we started from two totally different ICT cultures. The infrastructure, the sets of applications, the working methods and operating resources within both companies had little in common. Despite these differences, we achieved good results in the first years of the transition process. Both company networks were linked, were better secured and the data centres were shared. These foundations enabled us to provide an internal community cloud. This is a central park of servers from which we can offer applications to the employees of both NIRAS and Belgoprocess. The first jointly used applications were a fact: NBdoc (document management), MS Project Server (project management), MS Dynamics AX (ERP) and UMT (management notifications). Belgoprocess and NIRAS share one helpdesk tool within the UMT application. This is crucial in the transition to a joint Service Desk. All helpdesk reports come in via UMT and are assigned there to the ICT employee who is best placed to solve the reported problem. The efficiency gains speak for themselves. Another very important achievement from the first phase is the development of a joint ICT Security policy. Security is the top priority of Belgoprocess, and strict security requirements also apply to ICT. We are simply not allowed to move all the company data and documents to the external cloud. And, of course, our data centres and networks must be professionally protected against intruders from outside.'

NEW ORGANISATIONAL STRUCTURE

In early 2019, Belgoprocess and NIRAS hired an external consultant, Peter Van Lier, who set out a clear path for the further evolution towards unified ICT support. 'The Corporate Service ICT had already laid the foundations in previous years', says Guido Janssen, 'but there was a need for one person at the wheel of the new digital construction, someone with new ideas, someone with a fresh perspective on ICT operations

in order to steer the further integration in the right direction. Peter Van Lier's 'IT Master Plan' was right on target in the further professionalisation of the NIRAS-Belgoprocess ICT support. The plan included an adapted organisational structure for the Corporate Service ICT, with a clear separation between the operational operation and the project-based operation. All project managers within ICT ended up in a separate, new team, called 'IT Project Management', away from the operational ones, in order to give full attention to projects there. The role of the team leads, one at the head of each team, was strengthened. Within the operational support, the adapted organisational structure clarified the collaboration between the 1st and 2nd line support. A brand new role, that of ICT Architect, was introduced and implemented. This is someone who can concentrate full-time on advising and supporting the ICT Management Team in defining the ICT strategy, ICT policy and ICT standards. In short, a wide range of organisational adjustments that lifted the Corporate Service ICT to a higher professional level in 2019', says Guido Janssen.

MODERN ICT TOOLS FOR EVERYONE

'2019 was not only a successful year in organisational terms, but also in terms of the ICT infrastructure. After rolling out the new standard for multifunction printers, it was the turn of PCs and portables in 2019. All the workstations at Belgoprocess and NIRAS were upgraded to Windows 10 and the most recent version of Office. This roll-out to the more than 650 devices was spread out over several months, and will end in mid-2020. This is a milestone in the group-wide standardisation of ICT resources that are made available to every employee', explains Guido Janssen. 'From 2019, a brand new, state-of-the-art data centre has housed the central servers that are responsible for, among other things, the above-mentioned community cloud. All shared applications are safely housed there. The ICT Master Plan provides for a number of projects that will modernise the often invisible, yet crucial, network infrastructure, and NIRAS and Belgoprocess will be able to enjoy high-quality wireless access to the company network (WIFI) in the future, without compromising the security of company information. The bandwidth of external connections will be drastically increased, which will benefit the performance of the external and mutual exchange of data. Plans to dive into the external cloud are also ready. The licenses for Office 365, the online web-based variant, are in place. This was preceded by a great deal of research. More stringent security requirements apply in our sector than in average companies', explains Guido Janssen. 'Given our nuclear context, the external storage of company data is accompanied by extensive safety considerations and preparations. Safety is the absolute priority, but, at the same time, we don't want to lose efficiency by ignoring web technologies and digital progress. Within Office 365, we sought and found a compromise between the safety requirements that are specific to our business sector and today's needs for efficient operational functioning. Precisely because of the safety conditions, Belgoprocess and NIRAS will still be offering a number of applications from their own data centres. The business-critical software, in particular, is still under our own management, and this includes applications developed in-house. We have already put new applications in a modern web-based approach. 2019 was a pivotal year for Corporate Service ICT. We switched from laying the foundations to visible modernisation. The new ICT organisation is equipping us for the many challenges that await us. We have come a long way, and are quite proud of the many achievements of our ICT staff.'

ASSETS (IN 1,000 EUR)	2019	2018	Δ EUR	Δ %
FIXED ASSETS	1,511	1,072	439	40.97
Intangible fixed assets	56	75	-19	-24.70
Tangible fixed assets	1,454	996	458	45.96
Buildings	0	0	0	0.00
Installations	816	660	156	23.72
Office and IT equipment & vehicles	638	336	301	89.55
Assets under construction	0	0	0	0.00
Financial fixed assets	1	1	0	0.00
Participation in enterprises	0	0	0	0.00
Cash deposits	1	1	0	0.00
LIQUID ASSETS	61,497	55,687	5,811	10.43
Accounts receivable after 1 year	0	0	0	0.00
Stocks and orders in progress	6,656	6,747	-90	-1.34
Stocks	3,184	3,530	-346	-9.80
Orders in progress	3,472	3,216	256	7.96
Accounts receivable within 1 year	18,682	20,474	-1,792	-8.75
Trade receivables	18,572	20,426	-1,855	-9.08
Other accounts receivable	110	48	62	129.11
Investments	7,272	9,407	-2,135	-22.69
Cash	28,760	18,916	9,844	52.04
Accruals	128	143	-16	-10.92
TOTAL ASSETS	**63,009**	**56,759**	**6,250**	11.01

LIABILITIES (IN 1,000 EUR)	2019	2018	Δ EUR	Δ %
SHAREHOLDERS EQUITY	24,494	23,314	1,180	5.06
Capital	5,000	5,000	0	0.00
Gains	0	0	0	0.00
Reserves	1,700	1,700	0	0.00
Profit carried over	17,794	16,614	1,180	7.10
PROVISIONS AND DEFERRED TAXES	3,581	3,482	99	2.84
Pensions	0	0	0	0.00
Major repairs and contracts	0	0	0	0.00
Other risks and costs	3,581	3,482	99	2.84
Deferred taxes	0	0	0	0.00
CREDITORS	34,934	29,963	4,971	16.59
Accounts payable after 1 year	2	2	0	0.00
Accounts payable within 1 year	29,043	24,724	4,319	17.47
Trade debts	7,129	7,577	-448	-5.91
Advances received on orders	17,582	12,157	5,425	44.62
Debts relating to remuneration and taxes	4,332	4,990	-657	-13.17
Taxes	126	740	-614	-83.00
Remuneration and social security	4,207	4,250	-43	-1.02
Other debts	0	0	0	0.00
Accruals	5,889	5,237	652	12.45
TOTAL LIABILITIES	**63,009**	**56,759**	**6,250**	11.01

INCOME STATEMENT (IN 1,000 EUR)	2019	2018	Δ EUR	Δ %
OPERATING INCOME	66,199	62,373	3,826	6.13
Turnover	64,806	61,107	3,698	6.05
Changes to order in progress	256	604	-348	-57.58
Produced fixed assets	0	0	0	0.00
Other operating income	1,138	662	475	71.81
Non-recurring operating income	0	0	0	0.00
OPERATING CHARGES	65,121	61,340	3,781	6.16
Commodities	6,109	6,630	-521	-7.86
Purchases	5,659	7,264	-1,605	-22.10
Increase/decrease in stock	450	-633	1,083	-171.13
Services and other goods	25,961	22,553	3,408	15.11
Remuneration, social security and pensions	29,880	28,899	980	3.39
Depreciation and amounts written off	533	565	-32	-5.66
Depreciation of stock	-104	88	-193	-218.02
Appropriation/use provisions	99	0	99	-
Other operating costs	2,643	2,604	40	1.52
OPERATING PROFIT (-LOSS)	1,079	1,033	46	4.44
Financial result	177	156	22	14.00
PROFIT BEFORE TAXES	1,256	1,188	68	5.69
Withdrawal deferred taxes	0	0	0	0.00
Tax on result	76	78	-2	-2.46
PROFIT OF THE FINANCIAL YEAR	1,180	1,110	70	6.27
Transfer to tax-free reserves	0	753	-753	-
Withdrawal to tax-free reserve	0	-750	750	-
PROFIT APPROPRIATION FOR THE YEAR	**1,180**	**1,113**	**67**	5.99

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Publisher: Wim Van Laer, Gravenstraat 73, B-2480 Dessel • Final editing: Bart Thieren • Copywriting: Jochen Vandenbergh, photography: Bart Deseyn, design: EHBOntwerp.be