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Our Institute has always been ahead of the major issues of its time.

Following its creation as a museum in 1831, the Institute pursued an intelligent policy of cataloguing nature and enriching collections through the end of the 19th and beginning of the 20th centuries. This was made possible by spectacular discoveries such as the Bernissart iguanadons, exceptional donations like the Dautzenberg collection of 4.5 million malacological specimens and active collection campaigns in Belgium and elsewhere. As such, the collection today contains unique evidence of global biodiversity which would otherwise be inaccessible.

The Institute soon understood the importance of protecting nature, and committed itself accordingly. In 1925 it initiated Africa’s first national park: Albert National Park, now Virunga National Park. In 1948, it was a founding member and the headquarters of the International Union for Conservation of Nature and Natural Resources (IUCN), the leading global organisation for environmental protection.

Meanwhile, the Institute’s research methods moved on. Over time, it has acquired tools in the fields of genetics, statistics, mathematical modelling and even remote sensing. It has worked to broaden the public’s knowledge of nature and evolution, revolutionising its museum and expanding the ways of engaging the interest of our fellow citizens.

The major issue ahead of us in the 21st century is the management of natural resources. Food security, emerging diseases, raw materials and other such challenges have to be seen in the context of climate change, population dynamics, urbanisation and the deficiency of the public’s knowledge about nature and how it functions. At the same time, the data available is increasing exponentially, thanks to new technologies which produce and treat it. Lastly, the intermixing of peoples and continued growth in levels of education are creating a completely new society.

With these global stakes at play, our Institution has its contribution to make, in line with its history. This forward-looking strategic plan, based for the first time on the recommendations of an international audit, is a roadmap to achieve this ambition.
The Royal Belgian Institute of Natural Sciences (RBINS) is devoted to nature, its long history and its sustainable management. The Institute is esteemed by the academic world and public authorities for its significant research activity and the public services it provides in terms of advice, expertise and studies. It is also much loved by the general public for the museum of natural sciences and the activities organised there. Lastly, it conserves, enriches and manages immense natural history collections of specimens, samples and archives. It also manages the Belgian oceanographic vessel, the RV Belgica, on behalf of the Belgian Science Policy Office (Belspo) serving the entire scientific community around it. The Institute’s annual budget is around 20 million euros, to which it adds between 10 and 13 million euros of its own revenues. These revenues mainly come from research activities and the provision of expertise. The Institute is one of the ten federal scientific establishments that are governed by Belspo. Up until now, the Institute has been an independently-managed government service, without the status of a juridical entity, although a reform of this status is currently underway.

Research
One in three people at the RBINS is a scientist. The scientific personnel includes mainly biologists, palaeontologists and geologists, but also oceanographers, anthropologists, prehistorians and archaeologists, as well as geographers, physicists, bioengineers and mathematicians, which enables us to conduct multidisciplinary research. The research is focused on the following areas:
- Biodiversity and geodiversity;
- Biological evolution and the history of life;
- Marine and freshwater ecosystems’ management;
- History of the human/environment relationship;
- Applied geology;

Collections
With 37 million specimens conserved as Belgian heritage of universal significance, the RBINS’s collections are placed just behind London and Paris in European classification and are some of the largest in the world. They are both a reference and a research tool, part of Europe’s ‘major research infrastructure.’ As such, they are visited and studied by researchers from around the world.

For several years now, the RBINS has been committed to an ambitious programme to digitise its collections and to do so has developed an open-source software, DaRWIN, which has made it possible to encode all the data on any collection of specimens.

Museum
For the general public, the Museum of Natural Sciences is the visible part of the RBINS. It has 16,000m² of permanent galleries, temporary exhibition rooms and educational workshops, enabling us to welcome roughly 300,000 visitors each year, approximately 30% of whom are school groups. Its Dinosaur Gallery is world famous and the largest in Europe.

The Museum highlights the collections by opening them up to the public, and actively promotes and disseminates scientific knowledge on nature. It aims to raise this awareness as widely as possible, both within and beyond its walls, notably through travelling exhibitions and events. We are pursuing our ambitious efforts to gradually renovate the premises, making the Museum more welcoming and meeting and exceeding our visitors’ expectations. We also seek to promote a more respectful approach to nature.
To provide the scientific world, public authorities and civil society with good and relevant science, appropriate advice, opening up avenues of discovery in nature, its long history and its sustainable management.

This requires us:

- **to produce good and relevant science:** complex issues need sound, modern, up-to-date knowledge;

- **to maintain and enrich our research infrastructure and make it available in the form of collections, databases and models:** sound forecasts need certified long term reference data;

- **to link our research to action and policy as much as possible:** to increase the impact of scientific results, we need relevant and targeted communication, providing independent advice at the appropriate level;

- **to enhance citizens’ understanding and knowledge:** in particular through our Museum, allowing them to make informed choices regarding their own lives and futures.
In 2015, Belspo undertook an in-depth peer review of the Institute’s scientific activity, led by a panel of international experts. The final report stated, “There is a significant amount of which RBINS can be proud – a strong history, a unique collection, a significant public focus through the Museum, and enthusiastic and dedicated staff with an excellent collection infrastructure.” These assets make us well-placed to carry out our mission.

**Research**

Our research performance was judged excellent, as was the reputation we have built worldwide. The number, quality and impact of scientific publications is steadily increasing. At national level, we are actively working with all the universities in the country, as demonstrated by the great number of co-published scientific articles. The bottom-up initiative is integrated collectively in the operational plan of every directorate of the Institute. This process is highly appreciated by researchers who are now more aware of the Institute’s objectives.

**Collection**

The collection itself is unique, and is at the heart of our work. Our natural history collection is among the largest in the world, with 37 million specimens of a rare richness and diversity. Collections management is a particular strength of the RBINS. The peer review rated this aspect very positively, noting our digitisation strategy as an additional asset.

**Cooperation**

We are considered a strong partner on dozens of European and international collaborative projects and we represent Belgium in a number of international treaties. The services we provide to government have significant impact on policy. Our exhibitions are often co-produced through stable partnerships. We have strong connections with our stakeholders and are considered a reliable and responsive partner.

**Management**

The Institute is governed by three external entities: the Management Committee which oversees its management; the Scientific Council which brings scientific input; and the Jury which supports the recruitment process. Furthermore, the General Director of the RBINS sits on the Belspo Steering Committee. The Institute is organised into six directorates or scientific services, each represented on the Management Board. The Scientific Service Heritage is the most recent of these. According to the evaluators, this new structure provides more clarity on tasks and responsibilities, better internal communication and increased multidisciplinary collaboration.
The peer review, and the self-assessment that went along with it, also pointed out many challenges for our Institute in the years to come.

**Financial challenges**

As with most museums in the current economic climate, the operating budget allocated to the RBINS is extremely tight. According to our peer review, the current budget is already too little to ensure the safeguarding and development of collections according to common international standards. The structure of the budget also presents difficulties, as it is mostly non-compressible and there is hardly any free, strategic budget that can easily be transferred.

**Communication challenges**

We need to work further on developing our internal communication strategy, and finding ways to help our staff interact on a day-to-day basis. The Institute also needs to promote its collections better among researchers, and to raise the profile of its research among the general public and stakeholders.

**Structural challenges**

Like many museums, our buildings require significant investment, but as a federal institution, we are constrained by a lack of autonomy when it comes to decisions about our buildings. Our federal status also affects our recruitment process, which poses significant challenges in terms of quality and respecting deadlines. Our ever-growing collection is running out of storage space, and the research vessel and surveillance aircraft that we manage need to be replaced.
Five strategic objectives provide an overarching framework for our plan and its actions. They aim to build on our unique strengths, drawing on our research, collection, cooperation and management to fulfil our mission. Built into these objectives are ways to address the financial, structural and management challenges raised by the evaluation, ensuring we implement the recommendations from the panel of experts. These five strategic objectives also respond to goals set out by the Secretary of State responsible for the Federal Scientific Establishments.

They are anchored in our missions and will influence how we direct our resources and focus our energies. We aim to:
- be accessible;
- strive for excellence;
- strengthen and broaden our engagement;
- be efficient;
- work together.

**Access**

This objective focuses on improving how our stakeholders use our resources: the collections, Museum, scientific tools and expertise must be relevant and shared. That means ensuring the collections and data are accessible. We also aim to improve professionalism in our publishing to ensure our data and results are spread more efficiently. As for the museum, a number of its services must be improved. Lastly, we must raise awareness of the scientific equipment at our disposal.

**Excellence**

We must prioritise investment in the services and areas of research in which our reputation is renowned or unique. To ensure this, we need to improve our research strategies at national and international level, positioning the Institute clearly. We will also explore new domains where we can provide relevant scientific advice for policy, decision makers and society at large. These strategies and their results must be monitored for their relevance and quality.

**Engagement**

At the heart of the Institute's mission is to ensure nature is better understood, loved and respected. We aim to define a global strategy which links all the relevant actors within the Institute who are already working towards this objective. We need to optimize existing activities, seek out new audiences and multiply our impact through new partnerships.

**Efficiency**

The RBINS aims to position itself as a high-performing, user-friendly and environmentally sustainable organisation. This means a strategic, reflective approach, building on management as one of our key strengths and improving efficiency in the face of financial challenges. As such, we will examine our accounting and HR processes, core duties with a focus on ICT and pricing policy.

**Cooperation**

Starting with our rich and active network, we continue to consolidate our working relationships with other research institutes and collections at European level in particular, moving towards a structural model. We also want to better involve every member of staff in the community at the Institute, notably by bringing people and teams together in reorganised office spaces. Real success lies in ensuring motivation and a sense of belonging, making each member of staff an ambassador and an actor in making this strategic vision happen.
STRATEGIC OBJECTIVE 1 : ACCESS
In order to ensure the RBINS’ work has the greatest possible impact on its users, opening up access is crucial. This applies to all a wide range of aspects of the Institute’s work which the Strategic Plan addresses. Our collection is at the heart of the RBINS, and work on improving the accessibility of the collections of specimens and data focuses on management, digitisation and visibility both online and through networks. With the same aim in mind, we will ensure the Institute’s work more is published and circulated according to a more rational and professional strategy. This is particularly important in very specific domains where our organisation is one of the rare information providers towards professionals.

At RBINS, around 37 million specimens are divided into 6 main collections with a specific scientific curator for each, and 650,000 works are managed by our librarian. This information capital is under the responsibility of the Scientific Service Heritage, a relatively recent entity. Curators and collection managers work to maintain the collections, scientific archives and databases and make them available to a range of audiences. Their priority in the years ahead will be to reinforce online access in order to ensure broader use by researchers. To do this, we need to develop tools which facilitate database importation, and make these databases and collections easier to find online, either by general or specialised search engines.

The RBINS publishes numerous scientific publications, all related to research or expertise. These books, series, journals manuals and memoirs are released by various entities within the Institute. An internal audit in 2010 made various recommendations about the publishing strategy, many of which have been implemented. The next step in improving this output is to establish a centralised unit which brings together the means, in terms of budget and personnel, of optimising production and especially improving circulation. Biblio4Plone is the Institute’s online reference tool for its publications, and work continues to ensure all RBINS publications are made freely available there alongside their references, which should also appear on Belspo’s Open Access repository.

Colleagues and partners need to know what scientific tools and technical platforms are available at the Institute, as the evaluators highlighted. The Strategic Plan will take measures to ensure more users are able to access these tools and platforms in the coming years. The overall expected impact of this section of the plan can be defined as an increase in the number of users, and a higher level of satisfaction, in terms of internal as well as external stakeholders.
Natural history collections worldwide are the results of decades or even centuries of collection and inventorying of global biodiversity. Some of the species in these collections have disappeared, their natural environments often completely transformed. These collections as a whole therefore contain huge potential for knowledge, for example for the study and analysis of global changes. These collections do work together, but by groups or by region, never globally. This global perspective is nonetheless essential to managing collections in a way which maximises the potential of our collective resources. For the first time, directors of twelve of the largest natural history collections from Europe and North America met in 2015 in Chicago to exchange information and points of view on their activities in general and their collections in particular. This first meeting brought out comparable elements – for example, the RBINS only has two full-time equivalent (FTE) staff per million specimens, whereas the European average is three FTE. Most importantly, it launched work on a database gathering the number of specimens per geographical zone for each collection. Current inventories are often detailed but limited, whereas this overview will give a general perspective on the entirety of the collections, mapping our natural history collections by broad geographic zone and general taxonomic group. The aim is to position our collections in terms of global biodiversity, current and past, to help orient research projects, inventories, revisions and digitisation. Once online, the database will be available for directors of collections worldwide.

Access flagship project 1:
A strategy for scientific publications

The Institute has always published journals and bulletins: twelve series in total, including three journals with impact factor. The publications also include monographs, which bring a particular strength. The time necessary to produce these reference works is undervalued by the research evaluation systems that universities use. However, the Institute’s researchers can produce both. The fact that these detailed, in-depth publications are relatively rare means they are appreciated all the more. Publications are currently conceived, developed and circulated by the Institute’s departments and sections. This has resulted in a prolific but fragmented production process which is sometimes irregular and therefore lacks visibility. This is why a strategy was drawn up to ensure that publishing is managed more rationally, financed more effectively and that the output is more coherent and visible as a whole.

Access flagship project 2:
International overview of collections uploaded online

This strategy means concentrating production on three lines of periodicals (research journals with impact factor; studies, reports and manuals aimed mainly at professionals; and biodiversity inventories in Belgium) and on monographs. For each type of publication, the type of production (internal or co-edited), circulation (online, on demand, through exchanges, etc), promotion and publishing is determined. In terms of content, each thematic series has its own editorial committee. A scientific editor-in-chief oversees the coherence of the set. In terms of organisation, a team will be set up to manage scientific publications, led by an experienced publication manager. An agreement with the Royal Museum for Central Africa allows this competence to be shared. The aim is to optimise the production, circulation and visibility of these publications, thereby improving their impact.
Constantly striving towards the best possible scientific standards is crucial to all research institutions and museums, and RBINS is no exception. The Institute’s rich set of resources puts it in a good position to continue to produce excellent research and expertise. A strategic approach is vital to maintain these high standards, in the face of increasingly tough competition and limited resources. This requires the establishment of an RBINS Research Committee responsible for a clearly defined research strategy, meeting regularly to ensure its implementation. Collaboration, multidisciplinarity and improved tools must be the cornerstones of this research strategy.

The RBINS does not only conduct research; it also delivers various scientific services. To ensure their quality, it has to constantly assess its position and impact with regard to the end users of its work. These include governments, research centres, large professional associations and private companies. The Institute works with many of these external stakeholders in a very structured way, but with others on more of an individual and occasional level, opportunistically. We must therefore catalogue these services, clarifying their strengths and harmonising their methods, to put together a streamlined portfolio of tasks and services. Current research can also bring new expertise, and a more prospective study will examine developments to be fostered in the coming years. A new working group will be set up for this task composed of members from across the directorates, in order to ensure the diversity of our current and potential services is reflected in the strategy.

One of the main roles of our expertise is that of policy support to government – federal administrations for the Environment, North Sea, Science Policy and sometimes Public Health, as well as regional administrations in the field of environment, archaeology and geology. By analysing our current role, we can identify possible improvements and also new domains, particularly in archaeosciences (natural sciences applied to archaeology), applied geology and subsoil data (resources, risks and energy) for which the RBINS has the archives, samples and knowhow of the Geological Survey of Belgium available.

Its role in the regional, national and international scientific landscapes should be clearer both for our team and for our partners. In terms of expected impact, we anticipate an improvement in the quality of our outputs and greater recognition for our results and services.
Excellence flagship project 1: 
More strategic research

Currently, research at the Institute is most often performed at the initiative of each researcher. However, the team at the Institute has been aware of the need for a more integrated research strategy for a while. The panel of experts in the 2015 peer review further underlined the need to move from a completely bottom-up research structure to a strategy where research is more closely guided by the Institute’s priorities.

To document the possible lines of strategy and bring researchers into the discussion, a Research Committee was set up consisting of a Head of Research and scientists representing each of the three operational directorates, the Scientific Service Heritage and the head of International Relations.

This group must identify the research themes the Institute is currently working on and propose a structure which highlights their links with the mission of the organisation, their current scale (number of researcher, publications, projects etc.), their potential overlap or clustering and their link with current – and if possible, future – hot topics in science.

In line with our aims in terms of excellence, the strategy will then aim to invest in the Institute’s strengths which are already recognised, and in areas where the Institute has unique competences or specialities. This research strategy is a major asset with which to structure and further develop partnerships with universities in Belgium.

Having integrated the Scientific Board’s views, the strategy will be implemented, making the most of the staff and budget available. It will be regularly evaluated during its implementation. The Committee will also put forward indicators for quality and performance.

Excellence flagship project 2: 
Developing geoscientific services

The Geological Survey of Belgium (GSB) is a unit of the Institute with a focus on applied geology. Part of its role is to provide geoscientific services to a range of stakeholders on an independent and non-commercial basis.

This unit gathers this data on a federal level, but geological data is also gathered and processed in Belgium’s three administrative regions, Flanders, Wallonia and Brussels Capital, by separate bodies. Currently, cooperation among the data owners in Belgium is sporadic and limited to a few projects. The flow of geological information is therefore rather fragmented at national level.

At the same time, there is great demand from European authorities for complete and coherent geoscientific data about each member state, regarding use of resources (water, raw materials), energy or natural risks. It is a strategic challenge to address this fragmentation and respond to this expectation.

The GSB is well-equipped to fulfil this role. It is the only Belgian member of the European body EuroGeoSurveys. Thanks to this membership, it participates in a range of European projects, which can benefit from regional as well as federal partners while remaining profitable for them. It therefore set up a geoscientific ERA-NET project GeoERA, developing a collaborative approach at EU level. This ERA-net signed up regional partners (such as Leefmilieu, Natuur en Energie and Vlaams Milieu Maatschappij for Flanders) as full partners alongside the GSB.

The strategy is therefore in place to increase communication among the GSB and its regional counterparts and find better ways of cooperating in order to provide more cohesive output at national and international levels. This began in 2015, with meetings every three months. The next step is the joint submission of a pilot study within GeoERA. In the second half of 2016, the GSB will sign bilateral collaboration agreements with its regional partners, securing this more structured approach to cooperation.
Laboratories are crucial advantages for the quality of our research work, as well as to attract partners in a system of exchanges. They are currently managed by research teams, since they are central to the activities of many of them. Integrated management of laboratories would allow us to ensure quality through anticipating replacements, tracking maintenance and supplies, as well as clarifying and aligning rules of usage and access. It was therefore decided to put this integrated management in place with the dual aim of managing more economically and better promoting these strategic tools. The principles of ISO 17025 will form the basis of this integrated management, to constantly keep standards high. Our ecosystems chemistry group in Ostend has already obtained this certification, which is the main standard for testing and calibration laboratories.

Under the responsibility and coordination of a single project leader, representatives of the current laboratories will be assigned the development of various aspects of this integrated management: technical (maintenance, supplies etc); functional (terms of usage and access, training, logbooks); and economic (renewal, rates). Once in place, the information on the equipment and terms of its usage will be uploaded to our website, to raise the profile of our equipment and the conditions for accessing it. This will bring a significant boost to our work partnering and collaborating with other research teams.

Excellence flagship project 4: Completion of the Museum renovation

The Museum made the decision to begin an extensive plan for complete renovation of its exhibition spaces in 2003, phase by phase, always remaining open to visitors. In Spring 2018, the process will be complete with the opening of Living Planet, a new permanent gallery in the Convent building, for which works are well underway.

As it concerns the final set of renovations, the period 2016-2018 is a crucial one, working towards a fully renovated Museum. We are taking this opportunity to install a new signposting system, which will provide a full, continuous circuit throughout the Museum for the first time. The test phase has just been launched. Most entry prices have not increased since 2007 for visitors to the Museum, and others are still at the prices set in 2002 with the switch to the Euro. An internal audit, with support from BELSPO, and a benchmarking process with other comparable museums will allow a pricing and access policy for 2018 that will be better adapted and more attractive.

Since 2008, the Visitors Observatory of the Federal Scientific Institutes has undertaken studies to analyse visitors, both individually and in groups, measuring their satisfaction with the Museum experience after their visit. Our aim is to improve these ratings by half a point after 2018. With this in mind, the data will be analysed, initiatives taken and their impact tested with a monitoring system and quarterly evaluation.
The RBINS is an important provider of services to society: research results; advice to authorities; provision of collections or scientific information to the general public. This requires continuous monitoring of the quality of our service and ironclad reliability to achieve and maintain a high level of recognition.

To this end, the RBINS began the work to become certified for its processes, and obtained ISO 9001 certification in 2014 for knowledge transfer, efficiency of processes and management. Processes are documented, and the indicators measured and tracked, on a regular basis. This guarantees continued improvement of the system, which is an important element of certification.

The scope of the certification is currently focused on Heritage, Supporting services and General Direction. The aim is to extend it in time to the scientific services. The first step is to consolidate this certification by having it renewed in 2017 after a first cycle of three years. Following this success, the second three-year cycle will be an opportunity to extend the perimeter, taking advantage of the experience gained, to extend this international certification by 2020. This will need to be consolidated again in the following 2021-2023 cycle. It therefore requires a long-term effort, but the method brings significant advantages in terms of knowledge transfer and good practices, by the label and in the recognition from our users and partners. These factors are powerful incentives for this strategic action.
STRATEGIC OBJECTIVE
3 : ENGAGEMENT
Knowledge and respect for nature are at the heart of our social responsibility as an institution and societal actor. We contribute to this through our research and actions towards governments and citizens.

Citizen engagement requires a global, coordinated strategy which brings together all relevant actors within the Institute, bringing RBINS’ research closer to the work of the Museum. The focus will be threefold: making our existing activities more cohesive and impactful; extending them to new target groups, and developing them via new partnerships.

The Museum is our main tool to achieve this. It welcomes around 300,000 visitors per year, of which around a third is made up of school groups. Increasing visitor numbers is a major challenge. This strategic plan includes several actions to address this, including outreach, aiming particularly at opening up access to existing activities. We will improve external and internal signposting around the museum, reinforce our presence and visibility on social media: small initiatives, but which can help to increase numbers. The Museum also seeks to create a second momentum in our annual programme. This new event could take a range of formats to complement the traditional temporary exhibition opening in the autumn.

As well as improving numbers, we must also work to diversify our audiences. This, in turn, means diversifying our offer in terms of education and information, reaching groups of users that were not already coming through the doors. Addressing these obstacles requires cooperation with key partners to reach these groups.

One way to learn and engage with science is to participate in research. Strengthening the connection between citizens and research will focus on three key target groups: volunteers, Friends of the Institute and participants in citizen science activities. The RBINS benefits from a number of volunteers who contribute greatly to the Institute’s work. Many are retired researchers with a great deal of expertise. They represent a significant workforce, in close cooperation with the employees of the Institute. The Friends of the Royal Belgian Institute of Natural Sciences is a non-profit organisation that supports the activities and objectives of the RBINS in many ways. Citizen science is participatory: working with non-professionals to gather reliable data for research. This has a long history in natural sciences, but is now booming thanks to new technologies. We aim to develop the contributions of these three target groups to the Institute’s scientific work.

Lastly, it is not enough to bring people together. As an organisation, we have to bear in mind the environmental impact of our work. This is not easy with such a range of activities worldwide, ageing buildings and 360 working days per year! Obtaining EMAS certification was a significant first step showing our commitment. Maintaining this certification is one of the challenges of this Strategic Plan.
2018 will see the completion of the renovation of all the permanent rooms (see Excellence, flagship project 4). We are also working to make this the beginning of a new offer that can reach more diverse audiences than is currently the case. Visitor numbers often peak in the autumn with the opening of our temporary exhibitions. We would like to provide an additional reason to visit, attracting new audiences, by focusing our energies on a large event every spring. In 2016 this will focus on digital tools for visitors.

Research is not always reserved for researchers; non-scientists, amateur scientists and volunteers can play a key role in research. This is particularly true of natural sciences, and citizen science projects have been underway at the Institute for a long time, in a range of forms. Bird-ringing is another example of an area where citizens’ contribution as volunteer ringers is absolutely essential. More recently, volunteers have taken a crucial role in supporting the Institute’s own externally financed research projects, from fieldwork to sorting and measuring samples.

Part of this Strategic Plan aims to breathe new life into this tradition.

Engagement flagship project 1: Expanding our reach

For the Brussels-wide 100 Masters programme, the Museum will launch its first tablet and smartphone app tour; with commentary about the exhibits. Spring 2017 will focus on the addition of a huge 6-metre-long Plateosaurus to our Dinosaur Gallery. 2018 will see the launch of our new permanent exhibition, Living Planet. Diversifying our audiences is a real challenge: we aim to address it by targeting specific audiences that are not currently well served in terms of culture. The strategy is currently at the first phase, identifying these groups by analysing visitor studies. Next, products will be created for underrepresented groups, and by 2018, we will develop and test one per year for each. This could range from specific activities for over-65s to guided tours for the hard of hearing, or even “nature adventures” for companies looking for staff team building activities.

As well as adapting our offer based on target audiences, we also focus our offer based on our areas of expertise. Biodiversity is one area in which the RBINS has a great deal of expertise and experience in training and education for a very diverse range of audiences: professionals, children and regular citizens. There is something for almost all ages and interests. We will inventory this, completing it for audiences and age groups not currently served, in order to launch this set of activities in 2018 under the label of a Biodiversity Academy.

Engagement flagship project 2: Citizen participation in science

Part of this Strategic Plan aims to breathe new life into this tradition.

Amateur scientists are a particular type of volunteer; often of a very high level, brought together in specialised associations. We wish to establish a series of partnerships with these associations to provide impetus to the publishing plan of monographs which make up the inventory of Belgian fauna (see Access, flagship project 1). Among the first titles planned is a major monograph of terrestrial and freshwater bivalves, in partnership with the Royal Belgian Society for Conchology.

We will also integrate the recent diversification of participatory science activities, following new developments notably in mobile digital tools and social networks. With the aim of clustering experiences and contacts, the plan is to identify initiatives and existing possibilities, then associate the volunteers themselves with the development of particular activities. We anticipate sharing of methods for leading participatory science activities, a coordinated financing strategy and stronger engagement from citizens themselves. On the long term, a web page will allow greater visibility and will contribute to the development of this type of activity.
As an institute for natural sciences, we must practice what we preach. This includes monitoring our activities and reducing their environmental impact. Having already received a 2* label from our governing regional administration, we were keen to obtain EMAS certification for our environmental management system. Key targets were put in place for a range of aspects. Having achieved certification, procedures are now in place to continue this attention to reducing our environmental impact.

Our technical service is monitoring our waste production and consumption of energy and water. The number of pages we print and sorting of waste are other parameters that are tracked and planned to be reduced.

For missions, modes of transport are adapted according to distance. This consolidation phase includes working to ensure an annual shift of 2% in three years towards less polluting modes of transport in the way our staff come to work. To this end, a soft mobility plan has been established. EMAS conditions are also taken into consideration within our purchasing process. For example, we are installing LED lighting in our Museum and the technical service is focusing on ordering environmentally-friendly maintenance products. After a first consolidation cycle, we will start afresh with 2018 as the reference year. The arrival of a team of 55 people on our main Vautier-Jenner campus (see Collaboration, flagship project 3) will have a significant impact on our performances. As such, we will need to adjust our ambitions for the next three-year cycle.

As we ensure staff and visitors know about these actions, we also help to engage them by example through activities which contribute to protection of nature and the environment.
STRATEGIC OBJECTIVE 4: EFFICIENCY
The RBINS aims to be a high-performing and user-friendly organization. This part of the plan is designed to make the most of our resources such as time, finance, competences and infrastructure, to support our research and services to visitors.

Working practices are the first area where improvements will be made. The ISO 9001 standard of quality management is now applied to collection management and support services. As such, we aim to document our processes in detail, to make changes accordingly to optimize them when needed and improve knowledge transfer. All aspects of collection management are therefore documented and tracked: entry into the catalogue, the satisfaction of visitors studying them, methods of preventive conservation, management of loans, and so on. Support services include finances, human resources, ICT, security and logistics. For them, a management cycle or project methodology should aim to anticipate and respond to the needs of the organisation’s many key initiatives. One of the expected results of this optimization is to free up 1% of the operational budget to finance strategic actions.

Next, attention will be paid to developing our automated services for financial and HR management: invoicing, missions abroad, personal files, budgets updated daily for project leaders, monitoring of time spent and so on. All these small but necessary improvements will streamline administrative procedures and the reporting necessary for project funding agencies.

Efficiency is also about attention to the quality and accessibility of our infrastructure, which is essential to achieving our other objectives. Our national oceanographic vessel, the Belgica, is one such priority. This research ship spends around two hundred days a year at sea, monitoring the quality of the marine environment and undertaking numerous expeditions for scientific research. As managers of the vessel, it is a priority in our general interest to put every effort into ensuring it is replaced.

Another example is that of the quality of spaces open to visitors. These spaces have doubled since the beginning of the Museum’s renovation, and existing spaces for services are not satisfactory, from the cloakroom to the workshop spaces to the conference rooms. A dossier including the needs and description of necessary works will be presented for funding.
The Institute’s collections have been managed by each scientific department for some time. In 2013, the establishment of the Scientific Service Heritage brought the management of these collections together under one entity. This launched a process to ensure uniformity among collection management methods, procedures and documents and led to successful ISO 9001 certification for our collections management. This procedure improves the acquisition, the documentation, the conservation and the valorization of the collections, allowing knowledge to be managed and shared more efficiently. The client-oriented focus ensures that the collection better meets the needs of its end-users: researchers and museum professionals both within and external to the Institute. The more the collection is accessed by stakeholders, the more research can be done on its specimens, and the greater the potential outcomes for the advancement of science.

Now that this certification is in place, it has to be maintained on a three-year cycle, implementing adaptations and improvements along the way. Annual audits are also implemented to ensure this process is respected. One key indicator for collections management is the collection visitors’ satisfaction index which began in 2015 with the preparation for certification. Every external researcher that works with the collection or loans specimens is asked to evaluate the service we provide, and the results are analysed and fed back into the collections management.

An open question in terms of quality management is whether the Institute’s library services will also work towards ISO certification, to come into line with the Heritage, Support and General Direction services. This question will be addressed at the end of the first cycle of implementation for the collections at the end of 2017, taking account of the experience acquired.

In 2018, we will open our doors to a Museum space where every exhibition space has been renovated after a ten-year process. Throughout these renovations, the Museum achieved a string of successes: the visitors to permanent galleries and the audiences for educational activities have doubled. The service spaces for visitors are now crowded or obsolete: our entrance hall, auditorium and educational spaces, shop, cafeteria, cloakroom, as well as the relevant back office spaces such as reservations. Moreover, security devices will need to be adapted to the new context we are faced with since late 2015. For all of these reasons, we must renovate, redistribute and improve these spaces to ensure visitors have a coherent and pleasant experience visiting.

This is a large-scale project which involves major structural and infrastructure work, requiring special financing largely from the Building Agency which manages the RBINS’ buildings, with additional funding very likely to be needed from other sources such as the National Lottery. RBINS will of course have to cover part of the costs. The action to be taken is thus double: an economic and sponsorship plan to constitute the RBINS’ contribution, as well as the submission of a funding application to Brussels Capital Region. It is a long procedure, and we hope to have completed it by 2020. The result will ensure that in the future, visitors are welcomed into a forum where all visitor services are consistent and up-to-date, with a focus on accessibility for all, including people with reduced mobility, and a lighter, fresher atmosphere. The aim is to provide the perfect starting point for the visitor experience which encompasses every space in the Museum, as well as a place to enjoy before leaving with an excellent memory of the visit.
The RV Belgica is our national research vessel, launched in 1984, and managed by the RBINS on behalf of BELSPO. The ship is crewed by the Naval Component of the Belgian Armed Forces. Since its launch, the ship has served an average of 300 scientists per year; thousands in total. The ship is reaching the end of its lifespan, and will be in the dry dock from April 2016 to address safety issues and obtain a renewal of its class certification. Thanks to financing from the federal government, this maintenance should keep it running until 2020.

Supporting the scientific community with a reliable and well-equipped vessel for all types of oceanographic research is obviously a strategic advantage in carrying out our service missions and developing our own research. As such, we have put steps in place to secure a new vessel to replace the RV Belgica. This is a multi-stakeholder process. The political authorities must first give their agreement: the proposal must be approved by the Council of Ministers. Under the auspices of the Science Policy Office, a working group bringing together the Ministry of Defence, the Institute and BELSPO has been put in place to manage the replacement process. The Navy has already formally committed its support. The team will consult researchers and users of the vessel and the data it generates and their needs will be integrated into the definition study. Dialogue with industry related to the use of the marine environment is also in place, to study the ways they could make use of the vessel. A full technical description will be drafted by the end of 2016 as well as the refined financial estimate. If the budget proposal is approved by the Council of Ministers, this will set the wheels in motion towards a European call for tender in 2017, followed by construction and the launch of a new research vessel by 2020.

Brand image is a complex task for the RBINS. In Belgium, the Museum is more widely known than the Institute, whereas among researchers internationally, the opposite is true. Moreover, some units which have been brought into the Institute already had a strong image in the eyes of their stakeholders. The challenge now is to move from multiple identities to a single, strong, cohesive brand image of the Institute as a whole, a solution which all involved recognize as beneficial. The aim is to launch the new identity alongside the reopening of the complete Museum, after the last phase of renovation works. The work takes a stepwise process, supported by an external consultant, following a participatory process based on focus groups, a method which has proven its worth when it comes to gathering expectations about the image of an institution. The focus groups will bring together internal staff and external stakeholders to integrate all aspects of our activity in a brand image that can reflect the underlying unity throughout the Institute’s work.

For the Communication service leading the process, it is a first. It will work with a small group of key people at the Institute to determine the guidelines for the next step. After a first assessment phase looking at existing logos, names and visual identities and summarising the main expectations and needs, a new brand identity will be drawn up. A marketing plan will then be established and implemented both internally and externally. The final phase will aim to improve brand equity to ensure its long-term sustainability.
STRATEGIC OBJECTIVE
5: COLLABORATIONS
Our final strategic objective is to ensure we are team players, nationally with our mainly university partners, internationally in terms of our European and global networks, and internally, among colleagues.

We have numerous active collaborations with universities and research centres in Belgium. Our ambition is to reinforce them, organising them better within the framework of a research strategy, structured around our strengths.

The RBINS has significant international visibility, representing Belgium in treaties and international conventions and as hosts and active members of several large European networks. What is more, as a scientific institution, this visibility is based on the excellence of our research and collections.

But it is also enhanced by our capacity to collaborate, and the quality of our common work. With up to 55 European and international projects in parallel, the Institute is well established as a partner. The trust that our worldwide counterparts have in us represents some serious capital. This allows us to add not only to the extent of our collections, but to their depth. We can therefore use our equipment more effectively to address the types of complex challenge we see arising today. This is the ambition of this part of the strategic plan: to establish a common research agenda among institutions of various countries, reframing our infrastructures and collections as a single “facility”. This requires a trust which is built on experience and the acknowledgement of a community of interests. The RBINS has a mature network of partners to help achieve this ambition.

This focus on cooperation and partnership must also be implemented within our organisation. We need to involve every member of our staff as an ambassador and a key actor in making our strategic vision a reality. It is essential that everyone at the RBINS feels that they are a part of the team and knows that their contribution is crucial in achieving our mission. We can improve this atmosphere in a number of ways: by working on our internal communication, better structuring the communication within and among the directorates, inviting staff to participate in collective initiatives and so on. This part of our strategic plan brings teams together, not only metaphorically but physically, with the masterplan to reallocate office spaces. This will unite teams who are currently dispersed, allow the labs and scientific equipment to be shared more effectively and open up spaces for collective use.

Concretely, the overall impact we should expect from the actions in this part of the plan is to structure partnerships better at national level, raise our profile internationally and increase the number of staff members that are proud to be part of the RBINS team, and identify with its story and culture.
The European Union is home to many of the world’s leading natural history museums, which already work together closely in many ways. However, meetings among directors of some of the larger museums led to the conclusion that their collective potential could be developed further, by putting together a common research agenda based on their institutions as an ensemble, considered as a joint research infrastructure.

Since this agenda has the ambition and capacity to respond to several of the challenges set by the European Union in its Horizon 2020 framework programme, a first meeting took place in June 2015 with representatives of the European Commission. Considering the levels of interest shown, the participants decided to continue this line of thought, aligning with Horizon 2020’s grand societal challenges.

Four themes were identified: One Health (which links human health, animal health and the health of ecosystems in a broad sense); “the Anthropocene Challenge” (which explores past and present interactions between humankind and its environment to draw learnings for the future); “Next-Generation Biodiversity” (which reviews our knowledge of biodiversity through “omics”); and Citizen Science (engaging citizens in research thanks to new communication and information technologies).

In the years to come, partners will refine this agenda and implement it through common projects. In parallel, the Institute, taking account of the peer review recommendations, is developing its own research strategy (see Excellence, flagship project 1). It will integrate these key theme, even if its scope is broader.

The collections housed in natural history museums across the European Union are particularly rich and varied. By working together strategically, through loans and joint initiatives, each collection can benefit from its neighbours. Over time, this has led to a proliferation of collaborative projects based on collections and funded through the European Commission’s series of research framework programmes. The SYNTHESYS project is a good example. It brings together almost all European collections of a certain scale and promotes their use by facilitating study visits. SYNTHESYS 3 ends in 2017, and will be followed by SYNTHESYS 4 with a focus on access to digital collections and digitisation. In this context, the RBINS decided to equip itself with microscanners when exceptional funding was granted by the Secretary of State for Science Policy in 2015.

However, these European partners are already well-structured and aiming further: to ensure these resources are maintained and exploited to their full potential across European borders, it is necessary to obtain formal recognition as a distributed research infrastructure by ESFRI, the European Strategy Forum on Research Infrastructures. The organisation of the application, which requires the support of a certain number of EU member states, is in place and aims to place our common project on the ESFRI roadmap in 2018.
A major project for 2017 is the transfer of one of our research teams, currently at Gulledelle, 1200 Brussels, to the main campus on Rue Vautier. This arrival of 55 people and a data centre requires a complete rethink of space allocations. This allows the Institute’s currently dispersed team to be centralised, facilitating daily exchanges. It is also an opportunity to make improvements in internal communication and collaboration, with a new phone system and shared management of meeting rooms and lunch spaces.

Furthermore, the Intranet will be reworked, with a more visible information space where the minutes of meetings of the Operational Directorates, Management Board and Belspo will be more clearly displayed. The monthly Operational Directorate meetings will also play an important role in dialogue among employees and bottom-up communication. In this way, management can be more responsive to staff views and the functioning of the management cycle should improve.

The General Assembly will continue to be organised twice a year, in order to ensure all staff are informed and can express their opinions and questions on strategic aspects as well as other issues.
CONTRIBUTION TO THE FEDERAL MANAGEMENT PLAN FOR SCIENCE POLICY

The federal department responsible for Science Policy, BELSPO, is the department which oversees the work of our Institute. As such, when drawing up our Strategic Plan, care was taken to ensure coherence with BELSPO’s Management Plan 2016-2018 for Science Policy.

Naturally, the two plans share a lot of common ground. Many of the abovementioned examples contribute to the four objectives defined by the Secretary of State for the federal scientific institutions: excellence in research and expertise, collection management in line with international standards, services to society and heritage digitization.

In many ways, the RBINS contributes to these objectives with additional actions to those cited. The continued digitization of our collections feeds into online resources, enriching them notably with high-definition micro CT images, directly usable for research. The referencing of our scientific publications in BELSPO’s Open Access depository contributes to the objective regarding transparency and accessibility of public research. Our efforts to place European natural history collections on the ESFRI roadmap at European level are very much in line with BELSPO’s plan for research infrastructure. Many of Belgian federal administration’s general or transversal objectives also apply to all federal governments. Improving efficiency and reducing costs, administrative streamlining, sustainable development: the RBINS has its role to play in each of these. The certifications we obtained in 2015 also demonstrate our alignment with BELSPO’s plan: EMAS for environmental management, and ISO 9001 for quality management of our administrative, financial and technical support services.

Last but not least, the RBINS takes an active role in the current discussions around the implementation of the government’s programme. We participate proactively in the debates around the reform of research programmes, bringing proposals and comments, and engaging future partners in dialogue.
The priorities defined by this plan will serve as the principles of our action in the years to come. They will guide us in our choices on how to invest our time as well as our finances.

Most of these actions will be carried out using existing funding. Organisation of tasks and planning priorities will be the factors which allow us to optimise use of increasingly limited means.

However, some require additional resources – often human means – that we will need to find as part of a fundraising strategy to ensure their implementation.

Finally, many of them depend on external factors, and will not be brought to fruition without political support. The support of the federal government and federal administration remains invaluable. We count on providing quality, reliability and relevance in order to be convincing. Embedding these values in our plan is not a gratuitous choice, but a clear display of the efforts we intend to make. Of course, the calendar for its implementation has been established within the current context. If new cost-saving measures were adopted, the plan would need to be adapted as a consequence. Adaptability is crucial for us not just within the plan but on a larger timescale, as an organisation.

This strategic plan is a demonstration of the potential for change that was built into our organisation from the outset, and which is increasingly necessary, given the grand challenges we now face as a society. All the efforts in our plan support us in ensuring we achieve our mission in everything we do. They help us along the path to our goal for 2020: to become a centre of reference in Belgium on nature, the diversity of life and our behaviour towards it – whether we are experts, politicians, entrepreneurs, managers or just citizens.

Because nature is an integral part of all of our lives.