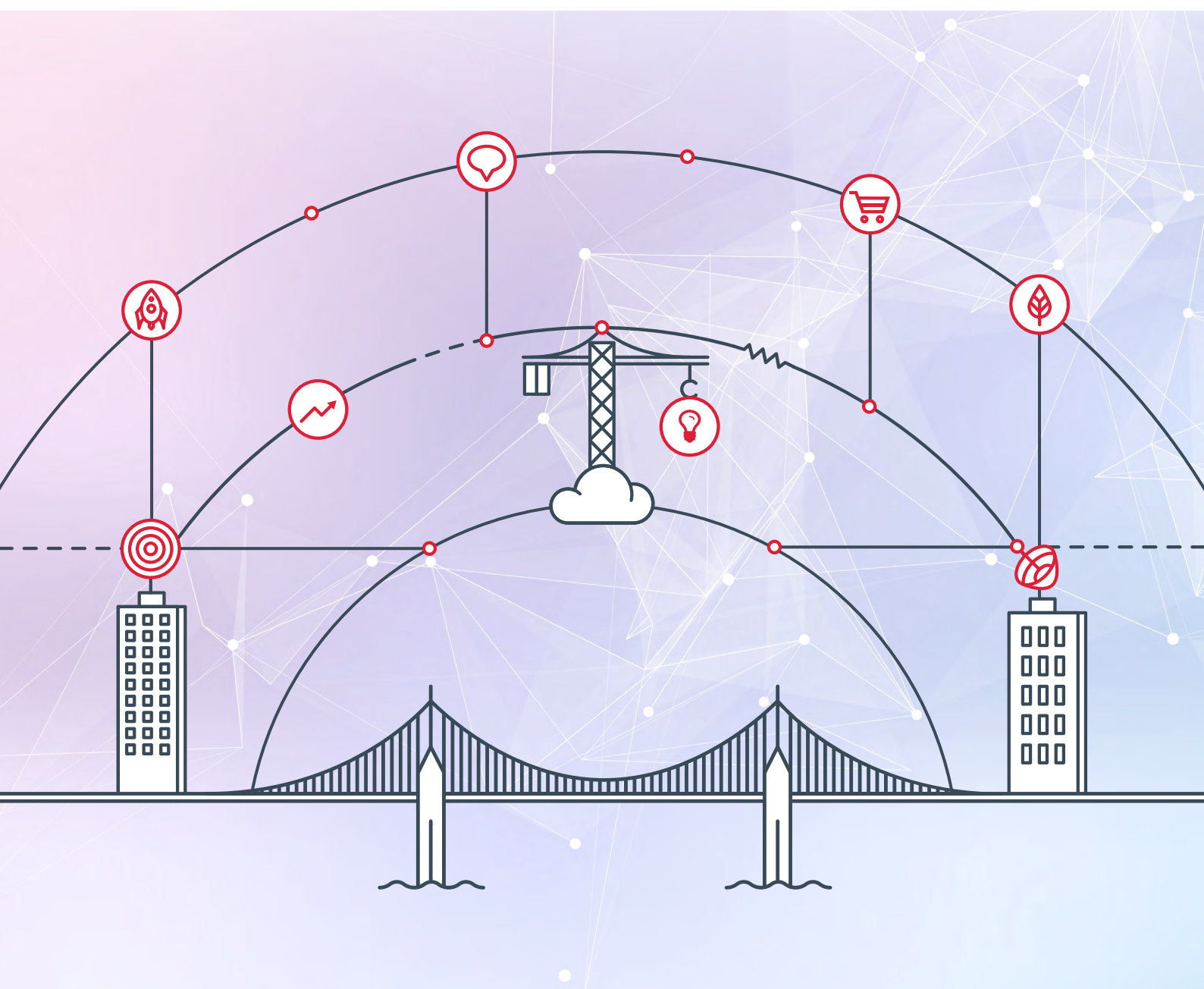


PPPI Annual Report

2019/2020



An initiative by

 Federal Ministry
Republic of Austria
Digital and
Economic Affairs

 Federal Ministry
Republic of Austria
Climate Action, Environment,
Energy, Mobility,
Innovation and Technology

In cooperation with

BBG BUNDES
BESCHAFFUNG
AUSTRIA

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We build bridges.

Between public procurers and
innovative companies.

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Preface

Few events have affected our lives as profoundly as the recent public health and economic crisis. Looking to the future, we see that the years ahead will be decisive in determining our future; years in which we will have to rise to the challenges of the climate crisis and shape the transformation to a green, digital age. We are aiming to reach our objective of climate neutrality by 2040, to make our economy more resilient and environmentally friendly, and to continue to modernise the way our administration is run.

Austria is approaching these challenges from a strong position. We can rely on a large number of innovative companies, developing future-oriented products and services that are in high demand around the world. However, their innovations cannot make a difference unless and until they are actually in use. This is where the state can and should act as a role model by procuring and using more environmentally-friendly and digital technologies developed by Austrian companies.

Public Procurement Promoting Innovation (PPPI), a joint initiative supported by the Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation, and Technology (BMK) and the Federal Ministry for Digital and Economic Affairs (BMDW), is making a significant contribution towards these aims. It is building bridges between suppliers and potential customers, supporting measures to strengthen skills and networks, and helping to ensure that innovative procurement projects come to fruition.

The initiative has made major strides in recent years. For example, cooperation with Austria's government procurement agency BBG has been further consolidated, and the PPPI Service Center is now firmly established for the long term. The arrival of the new PPPI Toolbox and our R&D innovation partnership, both of which are supported by the Austrian Federal Government's funding agencies, have spawned and delivered a number of new and exciting developments.

The establishment and expansion of the PPPI Game-Changer Programme, working together with some of Austria's most innovative companies, is worthy of special mention,

as are the PPPI summer calls for 2020, which aimed to find the best innovative solutions for climate change and digitalisation in the public sector.

It should also be highlighted that Austria's PPPI initiative is now second in the European Commission's ranking of the strongest national frameworks for innovative procurement, and is serving as an example to other countries.

Nevertheless, we have no intention of resting on our laurels. On the contrary, we will continue to encourage innovative public procurement, and to strengthen the underlying structure to make it as effective as possible. With that aim in mind, we are also developing PPPI strategy framework, as enshrined in the Austrian government's policy agenda, to ensure continued success of PPPI until 2030 and beyond.

We would like to take this opportunity to thank everyone involved in the success we have achieved thus far. And keep on innovating - especially when it comes to addressing the challenges of the future!



Leonore Gewessler
Federal Minister

for Climate Action, Environment,
Energy, Mobility, Innovation,
and Technology



Margarete Schramböck
Federal Minister

for Digital and
Economic Affairs

Opening remarks from the board of BBG

Austria's Federal Procurement Agency, Bundesbeschaffung GmbH (known as BBG), is constantly striving to be THE procurement partner for public bodies. Spurring innovation, contributing ideas, and providing our customers with solutions as quickly as possible are all core elements of our work at BBG. In 2020, PPPI was successfully integrated into BBG's standard procurement procedure, making innovation a given in all our procurement projects. This in turn means we can also react quickly to the latest product innovations and recognise our customers' requirements for new, ground-breaking solutions.



For the board of BBG
Gerhard Zotter (above)
Martin S. Ledolter

As part of this work, the PPPI Service Center is assuming a central role in developing BBG's range of services. It serves as an additional point of contact for innovative companies developing new products and services, as well as for innovators in public bodies. The way it has supported efforts to determine requirements for drones and drone-related services in a series of workshops is just one example of the Service Centers work. Thanks to PPPI, we have also succeeded in setting up our first innovation partnership, focused on automatic mulching for green spaces. The groundwork for the project had been laid as part of an PPPI open innovation challenge.

In addition, PPPI has also become a crucial element in the internal training provided to BBG staff over recent years. Since innovation does not recognise geographical borders, PPPI's work has expanded beyond Austria, and it has become a significant and reliable partner at a European level. PPPI is an active stakeholder and a trailblazer in the European Commission's 'Procure2Innovate' project, which brings together organisations from 12 EU Member States for regular discussions, helping them to exchange ideas and best practices and develop new services.

Working together with the Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation, and Technology (BMK) and the Federal Ministry for Digital and Economic Affairs (BMDW), BBG has been successfully operating the PPPI Service Center as a public-private partnership since 2019. This model, based on mutual trust and shared success, proved its worth again in 2020 when, despite all the challenges of this year, it provided the foundation for the PPPI Service Center not just to achieve its objectives, but also to make a valuable contribution in the midst of the crisis.

At BBG, we are committed to doing all we can to drive the PPPI Service Center on to ever greater success, for the benefit of public bodies and all Austrian citizens.

Opening remarks from the European Commission

The ongoing pandemic has hit severely the EU economy, and we need to work hard to help it recover. Public buyers will play a crucial role in strengthening the EU's resilience and fostering its green and digital transformation. They are critical investors in many sectors and industrial ecosystems, such as mobility, health, construction. They can also move and shape markets. They can actively engage with the market, SMEs, start-ups and more generally with ecosystems of innovation in order to obtain the best innovative green and digital solutions. With the Next Generation EU fund and the national recovery plans, public buyers are able to invest more and thus have a greater impact on achieving the EU political objectives.

I would like to congratulate Austria on being one of the European frontrunners in innovation procurement. That is why I am pleased to introduce this new issue of the PPPI Report.

I would also like to encourage Austria to continue being on the forefront and aiming high. The current challenges call for decisive actions and new approaches. The revision of its strategy on innovation procurement offers a great opportunity to Austria to chart a new course.

Better innovation procurement policies will also call for smart monitoring of strategic public procurement. Austria can already make strategic use of its core data registry on public procurement established in 2019. As of end 2022, public buyers will also be able to use the new generation of standard forms on public procurement, known as eForms that the European Commission has prepared. These new forms, fully fit for the digital age, will help monitor strategic public procurement if Member States opt for an ambitious implementation of this new tool. I would like to invite Austria to make the most of it and to boost further the digital transformation of public procurement.

The Commission is convinced of the potential of innovation procurement. It is also aware of the necessity to support public buyers in Member States. Unprecedented financing opportunities will be available for this purpose for the period 2021-2027, through programmes such as Horizon Europe, InvestEU or Digital Europe. To boost specific innovative procurement approaches by public buyers and their willingness to cooperate in a European context, the Commission has also launched the Big Buyers initiative. More than ever, solidarity and cooperation within the European Union are essential keys to achieving results for our citizens and the next generation.



Kerstin Jorna

Director General
European Commission

Internal Market, Industry,
Entrepreneurship and SMEs

Summary

It is now almost ten years since Austria's Federal Government formally adopted the PPPI Action Plan, which provided the foundation on which the PPPI Service Center was built. That basic idea has since developed into the PPPI Service Center we see today, a service provider with a dynamic team committed to helping people achieve their objectives. We are bringing together the best ideas from the public and private sectors to drive Austria forward.

The year 2020 was an object lesson in just how important innovation and support for innovative companies can be, both in Austria and across Europe. The crisis acted as a catalyst in a wide variety of areas across society, including in the public sector, and brought to fruition a large number of new technologies. At the same time, though, 2020 also showed the value of having local partners you can contact to resolve problems quickly as they arise.

Today, PPPI and innovation play key roles in all of BBG's processes, and recent years have shown us how we can experiment and adapt quickly to find new solutions and make them available to our partners.

Over the last two years, we have delivered 16 challenges and a raft of smaller brokerage projects, bringing innovators together from both sides of the economy. The relaunch of our innovation platform, which helped us to establish a simple, user-friendly procedure for all our projects, was a major factor in this success. However, the year was about more than just delivering established services with a new level of efficiency; it was also about providing new ideas and services to create added value for our partners. Working together with the Austrian Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation, and Technology (BMK) and the Austrian Federal Ministry for Digital and Economic Affairs (BMDW), the PPPI Service Center ran a successful initiative inviting Austrian companies to submit the nation's best ideas for promoting digitalisation and combating climate change. More than 160 companies took part.

Since 2019, we have also been breaking new ground in our efforts to support these innovations and get them to market, including by creating an accessible system for making new products available via BBG's e-Shop. The Direct Procurement Platform for Innovation (*Direktvergabeplattform Innovation*) is the first sales platform for innovative Austrian products that is directly geared towards public-sector procurement departments, and already offers everything from e-bikes to process automation software.

The years to come will doubtless bring their own challenges, and we will rise to them with plenty of new ideas and enthusiasm, helping to solve problems for our partners. In doing so, our aim is and remains to bring innovators in the private and public sector together, and to support them on their paths to success.



Stefan Maier

Head of the PPPI Service Center



1 Public Procurement Promoting Innovation in Austria

1 Public Procurement Promoting Innovation in Austria

Public Procurement Promoting Innovation (PPPI) is now well established as an important pillar of Austria's demand-side innovation policy, as well as playing a significant role in an impact-focused FTI policy mix. The aim of PPPI is to increase the share of public-sector procurement volume committed to innovative products and services. The potential for public procurement to drive innovation becomes particularly evident when we consider that total annual volumes are in excess of EUR 46bn.

Looking back

The PPPI initiative was initially conceived in the context of Austria's FTI strategy of 2011. This strategy formed the basis of the PPPI Action Plan, which was itself formally approved by the Austrian Cabinet in 2012. The establishment of the PPPI Service Desk in 2013, as part of the Federal Procurement Agency (BBG), marked an important milestone for PPPI. The PPPI scheme has been developing step by step ever since, and has begun to shift its focus into new areas in recent years. The arrival of the PPPI Toolbox (developed by aws) and the R&D Innovation Partnership (from the Austrian Research Promotion Agency, FFG) has helped to make the overall scheme more attractive, as has the establishment of a special PPPI Prize. This prize is awarded as part of the larger Austrian Civil Service Prize (*Österreichischer Verwaltungspreis*), in cooperation with the Austrian Federal Ministry of Arts, Culture, Civil Service and Sport (BMKÖS).

Working together with the Federal Procurement Agency (BBG), the future of the PPPI Service Desk has been secured, and the range of services it provides is expanding steadily. Alongside existing products and services such as the PPPI innovation platform, training materials, advice services and guidelines, the Direct Procurement Platform in the BBG e-Shop is another product specifically created for innovative companies. Innovation is also increasingly taken into account as part of BBG's core procedures and at every stage of the procurement process, making full use of a range of tools including the PPPI Challenges, which allow an open-innovation-based approach to market research. As part of the PPPI Game-Changer Programme,

the PPPI Service Centers existing strategic partnerships with ASFINAG (the company that runs Austria's toll roads), the forestry agency Österreichische Bundesforste AG and Vienna's public transport operator Wiener Linien, have been deepened. At the same time, we have also worked to establish structured, reliable systems for working with our partners, which we keep under constant review to ensure that our partners' needs are met. Alongside these existing partnerships, this year also saw us attract another new partner to the Game-Changer Programme, in the shape of Austria's Agency for Health and Food Safety (Agentur für Gesundheit und Ernährungssicherheit, known as AGES).

The PPPI Competence Centers and Contact Points operate in partnership with other competence centers and contact points within the PPPI network, as well as with the PPPI Service Center. Together with the Austrian Federal Ministry of Digital and Economic Affairs (BMDW) and the Federal Ministry for Climate Action, the Environment, Energy, Mobility, Innovation and Technology (BMK), they make up the PPPI Council. The PPPI Council serves as the coordinating body for the PPPI network, and contributes to the development of the PPPI initiative by generating ideas and providing a platform for consultation and discussion, as well as acting as the interface between policy formulation and procurement practices. The Council also sets the tone for the involvement of all stakeholders in the initiative, and helps to raise awareness and use of PPPI.

Assessment and benchmarking

An interim assessment of the PPPI initiative was completed in 2018 to examine the way the PPPI Action Plan was being implemented and review the specific activities incorporated into it. The interim report was positive, although it made a number of recommendations for further improvements in areas including the political and strategic positioning of PPPI, creating incentive systems and carrying out impact assessments.

These recommendations were, and are being, taken into account as PPPI continues to develop, guided by the Austrian Federal Ministry for Digital and Economic Affairs (BMDW)



and the Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation, and Technology (BMK). An impact assessment carried out by Joanneum Research and the Austrian Institute of Technology (AIT) has also demonstrated the impact of pro-innovation public procurement plans and the added value they can bring in different fields (see Chapter 5.1).

Austria is at the forefront of PPPI in Europe, and has consistently performed well in international benchmarking studies since the Action Plan was first implemented. For example, in the latest benchmarking study carried out by the consultancy firm PriceWaterhouseCoopers (PWC) for the European Commission, the policy framework for PPPI in Austria was ranked second in Europe, bettered only by Finland. The study assessed the policy framework using ten indicators to represent the specific mix of policies adopted in each individual country. The indicators ranged from PPPI action plans and the way PPPI is embedded in policy (both horizontally and in different sectors of the economy) to incentives to encourage PPPI, PPPI targets, and monitoring arrangements. However, a closer look at

the connections between the policy framework and how PPPI is implemented in practice reveals that the policy framework may be falling short when it comes to applying PPPI across the full breadth of procurement projects.

Outlook: The PPPI Strategic Framework 2030

The current government's policy agenda contains a clear mandate to update the PPPI Action Plan. With this in mind, the PPPI Strategy Framework 2030 is currently being drafted. It builds on the existing PPPI Action Plan, drawing on both the FTI Strategy 2030 and the FTI Pact 2021-2023, as well as taking previous recommendations and assessments into account.

The Strategy Framework 2030 is intended to renew the existing political commitment to PPPI, and will incorporate a number of concrete steps designed to facilitate the development of the PPPI initiative, for example by strengthening the strategic position of PPPI, broadening the PPPI community, contributing to solutions to overcome social policy challenges, improving monitoring and available data concerning PPPI, and making the legislation governing public tenders more conducive to innovation.



2 PPPI success stories

2.1 Project database

In our PPPI project database at www.ioeb.at/erfolgreiche-projekte (in German only) you will find a summary of the innovative public-sector procurement projects delivered through PPPI. The examples give an indication of the huge range of potential applications for PPPI. For more information, contact the PPPI Service Center at ioeb@ioeb.at



2.1.1 viadonau: Using RPA to increase efficiency

As part of viadonau's 'digitalisation initiative', a functional Robotic Process Automation (RPA) bot was used to support internal company controlling procedures. The PPPI Service Center supported the market research phase of the project by organising a structured dialogue with the market. A number of different suppliers were invited to participate in this dialogue, giving them the chance to present their concepts and solutions.

- Project duration/date: 3 months/2020
- Procurement volume: EUR 18,000
- Project sponsor: viadonau -Österreichische Wasserstrassen-Gesellschaft mbH

Initial situation

viadonau was aiming to reduce throughput time, relieve time pressure, and make more productive use of time by shifting resources towards activities that create value. As part of a workshop, selected processes were set

out in detail, together with a rough cost-benefit analysis. Afterwards, the PPPI Service Center helped viadonau to drive forward its dialogue with RPA software providers, and viadonau became an early adopter of the technology, initially by using it for a single controlling process. The functional RPA bot was delivered to the company's controlling department in March 2020. The project was run as a part of a direct procurement process.

Innovative aspects

The pilot project aimed to use software-based bots to deal with parts of certain processes (thus increasing the overall level of automation) but also to ensure high levels of stability and compliance. As an innovative public-sector company, it is important for viadonau to ensure that updates to its software draw on the latest technologies. With this in mind, there was a requirement to make artificial intelligence (AI) tools easier for viadonau to use and deploy, including AI-supported translation technology.

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PPPI-award-winning
solutions on the innovation
marketplace

27

New success stories
in the PPPI database

16

New PPPI challenges
+ an external challenge

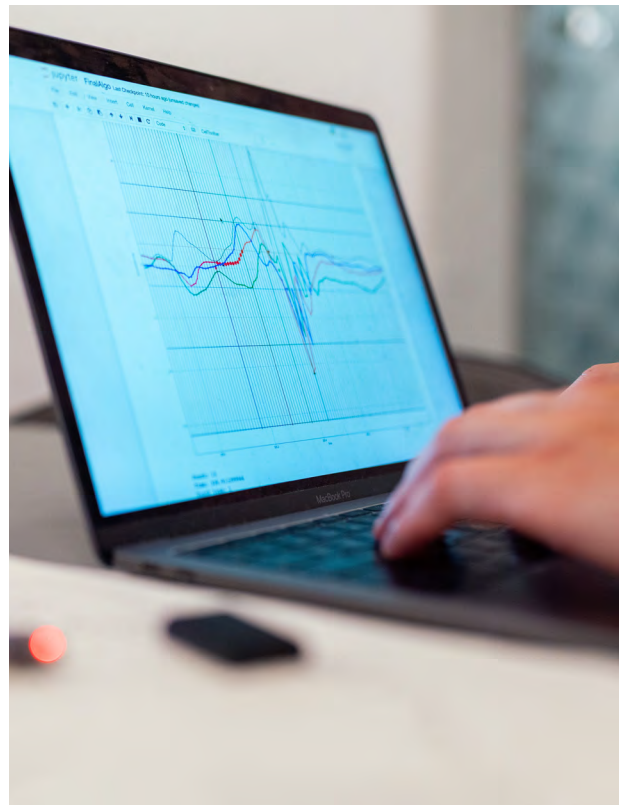
Procedure

Before work to develop the RPA bot could get underway, the reporting process steps had to be documented. The RPA software was delivered in an agile way using scrum techniques. All stakeholders were involved in the process, working together to internalise RPA expertise as quickly as possible. The implementation time for the bot itself was ten days. At the end of the pilot phase, a plan was drawn up to roll out the system across the company, with a particular emphasis on setting up an internal RPA Center of Excellence (RPA-CoE). Over the coming months the members of the RPA-CoE will be provided with foundation training before moving on to intensive, advanced training as part of a pair programming scheme, where they will be supported by external experts.

Outcome and added value

Proof-of-concept achieved the following objectives:

- Implementing the PoC process
- Identifying areas in which RPA could be used
- Drafting a cost-benefit analysis
- Recognising the added value to be gained from RPA
- Saving 120 man-hours per year (EUR 7,000.00)
- Using RPA for additional processes would open up potential for further savings.



viadonau: Processes automated using RPA software, saving time and money.

2.1.2 Schönbrunn Zoo: An energy-efficient historic giraffe house

The historic giraffe house has been expanded to include a very special winter garden, giving the giraffes internal space totalling 440m². The external grounds of the site has also been extended, to 1,770m². To make the building more energy-efficient, the glass roof of the winter garden incorporates a solar panel and an energy storage unit.

- Project duration: January 2016 to May 2017
- Procurement volume: EUR 7m.
- Project sponsor: Burghauptmannschaft Österreich (BHÖ) and Schönbrunner Tiergarten-Gesellschaft m.b.H.

Initial situation

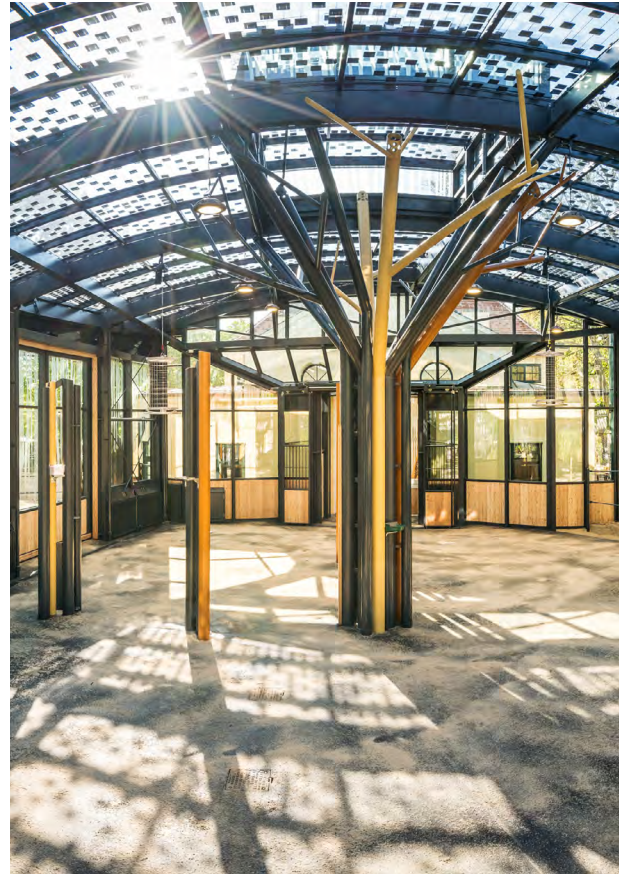
The historic giraffe house at Schönbrunn Zoo dates from 1828. It was the only building within the historic section of the *Tiergarten* still to be renovated. The giraffes' freedom of movement was restricted, particularly in cold winter weather. To ensure the giraffes are kept in conditions we consider appropriate today, the building had to be renovated, and the overall site enlarged. The requirements for the project were set in cooperation with Austria's Federal Monuments Office (*Bundesdenkmalamt*), and the giraffe house was converted and renovated based on these plans.

Innovative aspects

Aside from installing the kind of high-quality insulation that has become commonplace in modern buildings and using LED lights for building works, this project provided an opportunity to demonstrate two more innovative ways of increasing energy efficiency: incorporating a photovoltaic system in the glass roof to generate renewable energy, and storing heat energy in a fluidised energy storage unit.

Procedure

A photovoltaic system was installed over an area of 237m² of the glass roof, with a peak output of 16 kW. The system successfully combines form and functionality by creating a shaded area as well as generating electricity. A conventional 4.5 kWp photovoltaic module and solar col



lector units were also installed on the flat roof of the visitor walkway. The systems cover an area of 15m² and supply the hot water system. The fluidised energy storage unit installed underneath the winter garden stores heat energy during the day, and releases it during the night. This solution also helps to reduce the amount of energy required to heat the air entering the building through the ventilation system during the night.

Outcome and added value

The new system solves the problem of thermal spikes in the glass house and saves a lot of energy, particularly during transitional periods of the day. The project managed to strike the delicate balance between protecting historic buildings and improving energy efficiency, while improving the conditions in which the animals are kept.

The new solar panels generate enough power to cover the building's electricity needs over the whole year, while the heat storage system provides about 30% of the energy required to heat the winter garden.

2.1.3 Wiener Linien's Braking Energy Project: where intelligence meets efficiency

Braking releases energy. It was with a view to using this energy as efficiently as possible that Vienna's public transport operator Wiener Linien conceived its Braking Energy Project. The project allows braking energy to be recovered and stored in Wiener Linien's distribution network, from which it can be used to power escalators and lifts in its stations.

- Project duration: 12 months
- Procurement volume: EUR 617,000
- Project sponsor: Wiener Linien GmbH & Co KG

Initial situation

A study of the power network showed that the energy used in braking accounted for a significant portion of total energy requirement of the transport network.

This realisation highlighted an opportunity to innovate by using previously wasted braking energy in a targeted way. Storing it in Wiener Linien's internal network using a powerful inverter system would allow it to be recovered and re-used.

Wiener Linien are currently working to expand the use of this new technology, and eventually plan to set up six systems within their existing power network, as well as to install a further system as part of the extension of its U2 and U5 lines.

Innovative aspects

When the U1 underground line was extended to Leopoldau in the north of Vienna, it was decided to set up a dedicated electricity network to provide lighting and power in most of Wiener Linien's stations.

This power network is widely seen as a stable system with the capacity to manage additional energy. This capacity means that energy fed into the network can be used effectively within Wiener Linien's transport network. The inverter system used for the project is state-of-the-art.



Procedure

The window for feeding power in is controlled dynamically, allowing more energy to be generated. Project delivery was tailored to Wiener Linien's requirements, as were the operational and interface plans for the new system. The initial pilot system was installed at the Hardeggasse substation in September 2016, and comprehensive testing was carried out to ensure it was compatible with the energy supply and train safety systems. The pilot system has been in regular use since February 2017.

Outcome and added value

The system has already proven itself fit for purpose, showing it can play a part in delivering modern, efficient, energy-saving railway infrastructure. The project is reducing the amount of energy consumed by the underground network, thus making a positive contribution to the ongoing effort to make public transport in the Austrian capital climate-neutral.

Using braking energy more effectively will allow Wiener Linien to reduce its CO₂ emissions even further. Calculations show that the two systems currently in operation can 'recover' about three gigawatt hours of braking energy every year. That is enough energy to power 720 average households, saving approx. 400 tonnes of CO₂.

2.1.4 Cool streets for Vienna

The City of Vienna's 'Cool Streets' project was analysed and assessed at three locations using a micro-climate simulation in order to test its climate resilience (i.e., the ability of a system to adapt to changes in climate). As part of these assessments, particular attention was paid to the effect of fogging nozzles and mobile green spaces in the area immediately surrounding the project.

- Project duration/date:
4 weeks approx./2019
- Procurement volume: N/A
- Project sponsor: City of Vienna Municipal Authority
(Magistrat der Stadt Wien)

Initial situation

The plan was to analyse and monitor the City of Vienna's 'Cool Streets' project using GREENPASS® technology to assess its impact on climate resilience. The primary objective of the project was to ensure thermal comfort for Vienna's residents and other project users. In light of this objective, the analysis was designed to show how sustainable and effective the system was from a climate point of view.

The analysis took the form of a before-and-after comparison, focusing on the selected areas of the city covered by the project and the measures taken to improve climate resilience. The study was also intended to underscore the importance of creating green spaces and, especially, of planting trees, through a comparison with the worst-case scenario (specifically, a completely sealed surface with no trees).

Innovative aspects

GREENPASS® is the world's first scientifically developed and internationally recognised assessment, planning and certification system for climate-resilient urban planning and architecture. The standardised analysis and assessment procedure incorporated into GREENPASS® Pre-Certification covers a total of 12 indicators across five different aspects of urban life - climate, water, air, biodiver-

sity and energy. The values and indicators are drawn from high-resolution 3D micro-climate simulations and multi-factor analysis, allowing planners to optimise individual plans for building works with a view to ensure climate resilience and thermal comfort.

Procedure

The contract for the City of Vienna's 'Cool Streets' project was awarded to GREENPASS® as part of direct procurement process. The GREENPASS® team then input the details of the current situation (based on an analysis of aerial photography and in-person surveys of the relevant areas) into the GREENPASS® Editor software, along with the locations of the cooling schemes, and used this data to generate a digital simulation model. Once the model was complete, it was used to simulate current plans, and climate resilience was measured against the exclusive GREENPASS® key indicators on the basis of the simulation. As part of this process, the plans for all the individual locations involved were also investigated separately to assess their effectiveness.

Outcome and added value

The results of the analysis carried out using the innovative GREENPASS® Pre-Certification system showed that the planned measures to increase climate resilience were very effective, resulting in a 16% improvement in thermal comfort and a 358% improvement in thermal exhaust flow.



2.1.5 Using virtual reality to teach coaching and leadership skills

At the Kufstein Tirol University of Applied Sciences, managers and students alike can now use a VR app to refine their coaching and leadership skills at their own pace. The software can be adapted to the time available for training and the prior knowledge of individual users.

- Project duration: 15 months
- Procurement volume: EUR 25,000
- Project sponsor: Fachhochschule Kufstein Tirol Bildungs GmbH

Initial situation

In an increasingly competitive market, Kufstein University of Applied Sciences needed to adopt a more service-focused and customer-Centered approach to make it more attractive. The university was also looking to streamline its internal processes and improve them over the long term. Its existing range of professional development options and, in particular, its lack of ability to provide some forms of training, were key reasons for commissioning a VR-based coaching application.

Innovative aspects

In contrast to other educational media, the system has the decisive advantage that it allows users to experience each virtual situation subjectively and 'for real'. When they put on the VR headset, users are immersed in the virtual 3D environment and experience the scenario—and the 3D avatars that feature in it—from a virtual first-person perspective. In learning mode, staff take part in a coaching conversation from the point of view of the two protagonists (the mentor and the mentee), allowing them to spend some time 'in the other person's

shoes'. Everything that is said during the exercises is automatically recorded via the VR app and stored on the hardware. Once they have played the role of the mentee, they then assume the role of the coach, look at their own avatar, and hear themselves speaking. Professionally-produced feedback questions help users to reflect on their own answers and get tips on how they can improve in future.

Procedure

As part of a direct procurement procedure, Innerspace was tasked with developing the VR app, and the project got underway in October 2017. The first phase of the project concentrated on design and developing ideas. During the second phase, new content and functionality were tested and refined on the basis of an existing prototype, working closely with the client. The third phase of the project concentrated on developing the VR application, and ended with delivery of the system in May 2019.

Outcome and added value

The users of this system over the medium and long term are the university's staff and students. On the one hand, these users are capable testers who can help to develop the VR training tool. On the other, they can use the technology as a way of honing their own coaching and leadership skills.

The VR tool is designed to leave students better placed to take on leadership roles in their careers. In the course of delivering the project, the relationship between the client and the supplier has become so close that additional VR projects are now in the pipeline.



Using a VR headset
to put yourself in
someone else's shoes.

2.2 Challenges

Over the last two years, public-sector bodies and their procurement staff have been confronted with a range of different challenges. The PPPI Challenges have helped them to find the solutions they need. In this section you can read more about some of the exciting market research that has been carried out using this successful model, which marked its 30th anniversary in 2020.



2.2.1 Greener Linien: New routes featuring green shelters

Wiener Linien were keen to build on their existing 'vertical greening' measures, originally planned as a cooling solution. The next step was to design their future shelters to incorporate greenery on their roofs. The PPPI Challenge called for highly-skilled specialist suppliers to meet the brief, and Wiener Linien CEO Günter Steinbauer was delighted with the response: 'We are delighted that so many architects, gardeners and landscapers submitted ideas', he said. 'They had a huge variety of ideas as to how we could incorporate greenery into our new stops and shelters, which gave us a great picture of what is currently available on the market.' At the end of the challenge, a demonstration model was produced together with architects from Hartung Architekturbüro. Both the back and the roof of the shelter incorporate

elements of greenery, and a water storage tank is built into the structure. The first shelter built according to Hartung's design has pride of place opposite the Austrian parliament building.

Wiener Linien work closely together with the PPPI Service Center as a PPPI Game Changer. Wiener Linien's affiliate WIENER STADTWERKE, which runs the Austrian capital's utilities, supported the initiative as part of the '*Greener Linien*' (Greener Lines) campaign.

Sponsor: Wiener Linien

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2.2.2 The first 'external' challenge: Using data analysis to improve the performance of wind farms - supported by the aws PPPI Toolbox

Energie Burgenland's wind turbines produce several thousand data points every day - data points they want to use to optimise and compare the yields generated from different types of turbines. A comparative analysis of the data can produce valuable insights to help the company ensure their turbines are set up to be as efficient as possible, thus maximising the amount of energy they can generate from wind power.

With this in mind, pioneers came together with Energie Burgenland to launch a challenge, asking competitors to come up with ways of unlocking the full potential of the datasets Energie Burgenland has been collecting over the last 20 years. The aim was to analyse big data, and to use the results to optimise performance. The jury chose the top 5 of the 22 proposals submitted, following discussions with the entrants as part of their innovation dialogue. Energie Burgenland is cur-

rently planning test projects for the top five systems. This challenge marked the first PPPI market research study conducted with external support, and was the first to draw on the aws PPPI Toolbox.

Sponsor: Energie Burgenland

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2.2.3 Collect, search, and pass it on: using intelligent systems to better manage knowledge

Knowledge is an important resource. We find it in our own heads, in our colleagues' heads, in our organisations, in databases and on hard disks. Knowledge can be consolidated, implicit or explicit; it can be created from scratch or as a by-product when we analyse what we know and make connections. The PPPI Service Center has run plenty of workshops with a wide range of public-sector contracting bodies, and one thing is clear: knowledge management is a real headache for almost every organisation, no matter how good their IT systems, tools and strategies are.

So, we launched a challenge to highlight which innovative products and services might be able to help. The response from the market made clear that there is a wide range of tools available to assist. A combined judging panel made up of representatives from Federal Govern-

ment ministries, ASFINAG, Wiener Linien and the Federal Procurement Agency (BBG) examined a total of 28 entries, and found a great deal of potential ready to be unlocked.

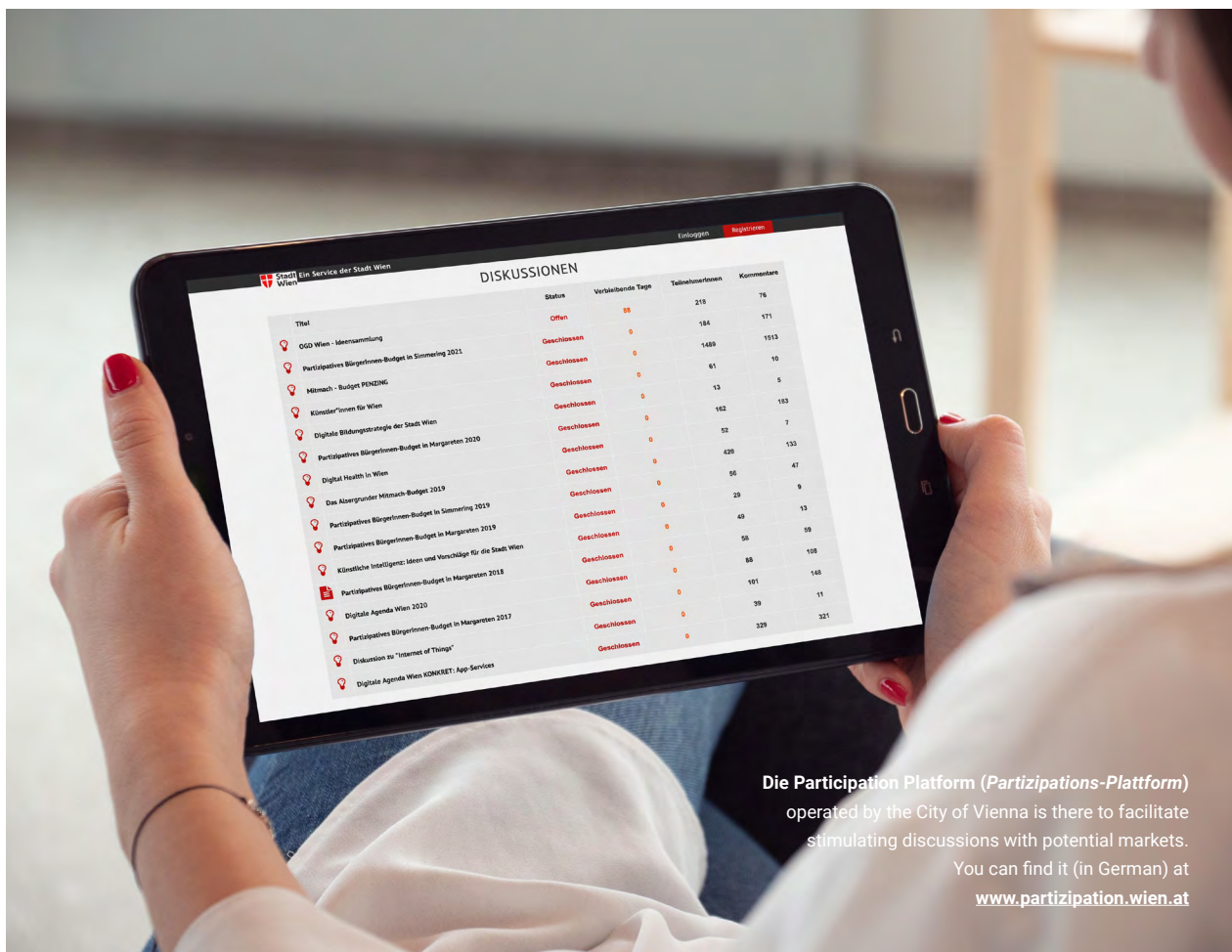
Following the initial judging procedure, discussions were held with six companies as part of the innovation dialogue. Given the great interest in this area among other public-sector contracting bodies, the PPPI Service Center then went on to offer these six companies the chance to take part in an online event in autumn 2020, so they could showcase their work to a wider audience.

Sponsor: PPPI

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Die Participation Platform (Partizipations-Plattform)
operated by the City of Vienna is there to facilitate
stimulating discussions with potential markets.
You can find it (in German) at
www.partizipation.wien.at

2.2.4 Designing Vienna together: a toolbox for participation

Ensuring that citizens have a stake in their city is a major priority for the City of Vienna. To achieve this, the city authorities have already set up their own participation platform, hosted in their in-house data Center, to help them take the views and opinions of residents into account. The system's main role is to generate ideas and facilitate discussion, including on official documents and proposals.

The platform has been in place for a number of years now, and the time has come to upgrade it. The new portal is intended to provide clear, timely and, ideally, innovative opportunities for residents to participate actively in how their city is run. As part of this project, the City of Vienna launched a challenge in the form of a structured

market research exercise, with a view to discovering interesting new ideas and applications in a wide variety of different areas. Their call for ideas was a great success.

31 companies submitted proposals, leaving the judging panel with the major challenge of identifying the most interesting submissions to take to the final, market discussions, stage. It is certainly no exaggeration to say the groundwork has already been laid for new ways of encouraging participation in the Austrian capital.

Sponsor: City of Vienna

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2.2.5 Sensory technology, automation, and remote monitoring: an efficient, environmentally sustainable way of storing timber logs

Climate change is damaging more and more trees, leading to the accumulation of ever larger amounts of fallen timber. Austria's forestry commission (Österreichische Bundesforste AG, known as ÖBf) operates wet storage facilities to conserve valuable timber logs. The forestry specialists are keen to modernise their wet storage facilities to make them as sustainable as possible.

Their specific aims for the project are to ensure that water, electricity and fuel are used as efficiently as possible, minimise downtime and reduce staffing costs. Of the 17 companies to have submitted proposals in connection with the project, five were chosen to present their innovative ideas to a panel of experts and ÖBf representatives.

The five winners stood out thanks to their new and promising approaches to humidification and control, specific experience and interesting ideas, all of which



could be applied in multiple different ways. Österreichische Bundesforste AG works closely with the PPPI Service Center as a PPPI Game-Changer. It uses its procurement policies as a tool to manage innovation within the organisation.

Sponsor: Bundesforste AG

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2.2.6 Using technology to reduce noise on motorways and main roads

ASFINAG, the company that runs Austria's motorway system, is committed to reducing noise pollution by taking a responsible approach. It wants to deploy a range of innovative technologies and techniques in its quest to reduce noise pollution even further, which is why it commissioned a PPPI challenge. The challenge allowed both internal and external experts to refresh their view of the market, as well as send a signal to companies that ASFINAG has a

strong interest in new, improved approaches to reducing the noise generated on Austria's roads. The challenge put a total of ten proposals on decision-makers' radars. The judging panel felt that three of the submissions were of particular interest, and invited the companies concerned to discuss their solutions to the problem. Finally, in 2021, ASFINAG was able to use the proposals submitted during the challenge and the insights gained from it to complete the purchase a number of innovative products. ASFINAG works closely together with the PPPI Service Center as a PPPI Game-Changer). It uses its procurement policies as a tool to manage innovation within the organisation.

Sponsor: Asfinag Service GmbH

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2.2.7 Electric charging infrastructure for communities in Lower Austria

The Province of Lower Austria is looking to step up the fight against climate change by increasing the support it provides to projects designed to encourage the switch from fossil-fuel powered transport to more environmentally-friendly electric vehicles. Besides increasing the number of electric vehicles on roads is, you need to make sure you have the charging infrastructure to go with them. That is why the provincial government of Lower Austria (*Land Niederösterreich*) joined forces with its local Energy and Environmental Agency (eNu) to sponsor a challenge calling for ideas on how to deliver comprehensive electric charging infrastructure throughout the province.

Of the 20 companies who answered the call, six were invited to present their proposals for rolling out a tight-knit charging network across Lower Austria. The judging panel felt that the ideas advanced by these six firms



represented a promising starting point for delivering a comprehensive, global system. eNu was able to draw on these ideas when providing local authorities with advice on e-mobility solutions.

Sponsor: Land Niederösterreich (Lower Austria Provincial Government)

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2.2.8 A simple, accurate, digital way to certify seed

Seed released into circulation has to meet demanding quality standards. Austria's 'field recognition' scheme is used to assess fields in which seed-producing crops are grown and check the seed for quality. This process currently generates a lot of paperwork, as well as being time-consuming and labour-intensive in the follow-up procedures.

This is why Austria's Agency for Health and Food Safety (Österreichische Agentur für Gesundheit und Ernährungssicherheit GmbH), known as AGES, launched a challenge to help it find ways of digitalising the seed certification process, with a view to making it more efficient and putting an end to constant paperwork. Five companies were able to impress the judges with their comprehensive approaches to the problem, and were



invited to present their solutions to them in person as part of the innovation dialogue. The insights gained through the challenge helped AGES to set up the first pilot projects for some types of crops in time for the 2021 seed certification season.

Sponsor: AGES

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2.3 The innovation marketplace

The innovation marketplace (ioeb-innovationsplattform.at) is the virtual shop window for entrepreneurs looking to present their products and services to potential buyers in the public sector.

All the products on the platform have won PPPI awards, and have been thoroughly checked to ensure they are suitable for use in the public sector.



2.3.1 SLOC - Smart Waste Management

The SWB-200 sensor from SLOC GmbH is a smart device that uses the Internet of Things (IoT) to make the rubbish bins of the future smarter. The sensor generates data on the bins' fill levels, temperatures (including fire alerts), the position of the lids, and the number of times the lids are opened and the bins are emptied. Data can be transmitted using the narrowband IoT (NB-IoT) or the long-range, wide area network (LoraWAN). The product has already proven its worth in a number of projects designed to achieve proof of concept (run by organisations including Saubermacher, AGR and the City of Graz) and is now being rolled out for production. The technology provides a complete waste management system, ensuring that bins are emptied as required and saving time, money, and CO₂ emissions, as well as cutting the number of collection vehicles on



roads. The complete smart waste management system is made up of the SWB-200 sensors and a route planning tool. The sensors are already in use for glass and textile bins, at waste collection Centers, in underground waste storage facilities and in household waste bins. The route planning tool allows clients to manage the areas they cover, their vehicles and containers using the data from the SWB-200 sensors, and to generate waste collection routes automatically.

SLOC's information-as-a-service pricing model means clients have guaranteed access to a profitable business model from day one. Since the service is paid for through a monthly subscription, there are no high upfront investment costs for the sensors, and the system begins generating a return on investment immediately.



2.3.2 ilvi – the digital healthcare platform

A huge variety of health data and measurements are collected every day in the healthcare sector. In many cases, this data is still recorded manually or painstakingly photographed and loaded into hospital information systems. ilvi has been created to solve this problem.

ilvi is a mobile software application designed for the healthcare sector. It aims to support medical staff in their day-to-day work and simplify their processes. It can receive data about a patient's vital signs directly from measuring instruments and be used to photograph wounds, while staff can enter other details (e.g., regarding pain or fluid balance) manually and store it in ilvi.

Once stored, data can be transferred quickly and easily to the appropriate information system via a wireless connection. ilvi can be expanded to include additional functionality and serves as a platform for all sorts of other useful apps (including those made by other manufacturers) that make everyday care easier. A single end device brings together all the functions required at the

point of care. The system is designed for use in clinics, hospitals, care homes, mobile care services, home care services and telemedicine.

Advantages

ilvi is small, easy to carry, and fits in any scrub pocket or belt. It is also shockproof and easy to use, helping staff to get through their daily tasks faster. Very importantly for a tool designed for use in the medical sector, it can also be quickly and easily disinfected.

Moreover, it can be configured flexibly to suit customers' requirements, either for individual users or to ensure compatibility with existing IT systems. The fact data is available immediately reduces the amount of follow-up work required, while the system's simple IT infrastructure helps to reduce costs. In short, it optimises daily tasks so that medical professionals can get on with the most important thing - looking after their patients.



2.3.3 Turning sewage sludge into a business model

Green Sentinel GmbH is using a comprehensive recycling system to turn expensive and environmentally harmful sewage disposal into an environmentally-friendly business model. Mobile and modular equipment allows Green Sentinel to turn sewage sludge from local treatment plants into an organic, climate-neutral substitute fuel and recover valuable substances from the waste at the same time, including phosphorous. This means the machinery can operate with zero discharge, thus

helping to reduce transport and waste disposal costs. The ability to recover essential materials from the sludge means that the sewage treatment plants are already operating in compliance with future regulations. The recovered sludge resources (or RSR) process can process sludge from the full range of treatment plants,

provided it is made up of between 0.1% and around 30% dry matter. This means that ready-dried or thin sludge can be loaded straight into the machine with just a few minor changes to the way the system is set up. The system can also handle sludge containing even higher levels of dry matter, depending on the type of sludge required and the system settings.

The RSR unit is designed to be mobile, and is delivered to customers in multiple ISO containers. Sewage is fed into the system, where it is

subjected to the RSR process and multiple stages of processing. This turns it into a base for NPK (nitrogen, phosphorous, potassium) fertilisers and a fully-fledged fuel substitute. The process does not generate any additional disposal costs; indeed, the process actually creates value.



Green Sentinel
Valorising Sludge



2.3.4 SAFEDI – Highly accurate contact tracing with no personal data

SAFEDI is a clip-on device the size of a coin and weighing just 15g. It is worn on the upper body near the face - an area of the body that is particularly exposed to viruses. If two SAFEDI devices come too close to each other, both optical and acoustic alerts will be triggered.

If the contact persists for three seconds, the ID numbers for the SAFEDI devices are transferred to an anonymous log of close contacts. Recording both IDs this way - a procedure known as a 'double check' - makes SAFEDI the world's best contact tracing system. The data is transferred over Bluetooth using the SAFEDI Synchro Hub - a stand-alone system for companies that does not require a smartphone or an app.

If someone wearing a SAFEDI device becomes infected, the anonymised SAFEDI ID for that person is entered in the secure SAFEDI portal by a trusted individual, and a notification is sent to all the other SAFEDI devices that were in contact with the infected individual according to the contact diary. The SAFEDI ID - a unique 15-digit ID number assigned to each individual device during produc-

tion - helps to ensure that the individuals themselves remain anonymous at all times, because the system makes it impossible to store any personal data. SAFEDI and its anonymous contact diary system offer a number of significant advantages over the smartphone-based solutions currently on the market.



If the SAFEDI device is worn on outer clothing and is flashing, it will automatically be active, and people around the wearer will be able to see it. Since it switches on and off automatically, there is no need to operate the device as such, and it is impossible to set the device up incorrectly. There is no way you can switch off or deactivate SAFEDI by accident. In addition, since SAFEDI tracks the distance between devices, it helps to significantly reduce infection risk, particularly around the face area.

SAFEDI is designed to be used wherever people meet and spend time in close proximity with one another, including in public buildings, on production lines, in schools and universities, in hospitals, at events, in cafés and restaurants, outdoors and at leisure facilities.



2.3.5 Thinkers.ai – the intelligent search engine

The team at thinkers.ai develops and markets Internet search engine technology that uses artificial intelligence to deliver the search results that are most relevant to you, instead of giving you millions of hits.

It saves users countless hours spent searching the Internet, meaning organisations save money paying them to search at work. Most importantly, individuals and organisations alike get previously unheard of levels of clarity about the topics that matter most to them. Conventional search engines are funded by advertising, so it is in their commercial interest to keep users on their sites for as long as possible. thinkers.ai is different. It delivers information without needing to keep users on the site, because it charges them for the ad-free service it provides.

This is good for users, because it gives them clear, relevant information on whatever they are looking for at the touch of a button. That saves valuable working time that users can spend analysing and interpreting search results instead of conducting repetitive searches, creat-

ing added value for their organisation. The system can be used for a wide variety of applications. On the one hand, it is suitable for 'standard' applications like continuous market monitoring, innovation and trend monitoring, directing sales and marketing effort or monitoring the media for mentions of specific organisations or topics of interest. On the other hand, it can be used for a variety of individual applications that can differ significantly depending on the industry concerned (including for security purposes), and can be linked to search systems for internal documents or databases.

In addition to simple search functionality, thinkers.ai also allows you to analyse the relevant results it finds. This means you can process even very large quantities of data to find 'hidden information'. Current search engines cannot do this, so thinkers.ai offers more scope than traditional search engines as well as a wider range of services.



2.4 The BMK and BMDW PPPI summer calls 2020

Climate change and protecting the environment are major issues of our time, as are digitalisation and transformation. Solving the problems they pose requires a coordinated approach covering policy, the economy and administration. The public sector has a particularly important role to play, since it can make a major contribution by demanding innovative, sustainable solutions to problems.

With this aim in mind, the PPPI Summer Calls for 2020 aimed to unearth Austria's best and brightest innovations in the areas of environmental protection and digitisation. The initiative was sponsored by the Federal Ministry for Digital and Economic Affairs (BMDW) and the Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation, and Technology (BMK), work-

ing together with the PPPI Service Center. The aim of the PPPI summer calls was to raise awareness of innovative Austrian products among a wide public-sector audience, and to offer the companies behind them a platform to realise their potential by influencing public bodies, companies and society at large.

The call for proposals from the two ministries was answered by a total of more than 160 companies, all of which submitted details of their products and services to the PPPI innovation platform. Of these, 77 innovative and sustainable solutions won PPPI awards, granting them access to a digital shop window for their products. It is definitely worth taking a look at the innovation marketplace to find out more!

2.4.1 BMDW call for digital innovations

The PPPI summer call for innovations on digitisation aimed to find the best new ideas to support public-sector bodies in fulfilling their duties and to offer new services for citizens, thus transforming the state sector's approach to its day-to-day work. Over 100 companies answered the call on digitalisation, and their entries were judged by our expert panel. The winning proposal came from Vienna-based startup Robo Wunderkind. The award for their children's robot construction kits was presented by Austria's Minister for Digital and Economic Affairs, Margarete Schramböck. The other podium places were filled by the artificial intelligence operation system from Leftshift One Software GmbH, and the AI-supported COVID-19 self assessment system developed by Symptoma GmbH.

- Winner: **'Robo Wunderkind Baukästen' (Robo Wunderkind Construction Kits)** from Robo Technologies GmbH
- Runner up: **'AIOS – Das Betriebssystem für künstliche Intelligenz' (AIOS - The Operating System for Artificial Intelligence)** by Leftshift One Software GmbH
- Runner up: **'Symptoma – Better diagnosis'** by Symptoma GmbH

The PPPI expert panel awarded the coveted PPPI award to a total of 39 digital innovations from Austrian companies, all of which can now make use of the digital shop window provided by the innovation marketplace. A particularly large number of awards went to ideas with the potential to encourage efficiency and modernisation in the public administration and take public administration into the digital world of the future.



2.4.2 Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation, and Technology (BMK) call for innovations to fight climate change

The PPPI summer call for solutions on climate change called for ideas that could encourage environmentally or climate-friendly use of buildings, help us to protect precious resources, or take sustainable mobility to the next level.

An impressive total of 75 climate-friendly solutions were submitted by Austrian companies. The expert judges selected the top three entries, which they felt showed most promise when it came to supporting the public sector in its efforts to protect the environment and fight climate change. The overall winner was the Smart Hall Cooling system from INFRANORM Technologie GmbH, just edging out the Bee-O-Meter from IoT40 Systems GmbH and the Smart Boiler from A1 Energy Solutions, delivered in cooperation with Austria Email AG.

- Winner: **'Smart Hall Cooling'** by INFRANORM Technologie GmbH
- Runner up: **'Bee-O-Meter'** by IoT40 Systems GmbH
- Runner up: **'The Smart Boiler'** by A1 Energy Solutions in cooperation with Austria Email AG (solution submitted by World-Direct eBusiness solutions GmbH)



The three winning projects received their prizes from the Minister for Climate Action and the Environment, Leonore Gewessler, in a online ceremony. A total of 38 solutions were deemed sufficiently promising to be featured in the e-Shop window of the innovation marketplace. Austria's public administration now has an opportunity to redouble its efforts to tackle current challenges by making greater use of these and other solutions.

Finally, here's a tip for your next market research project: If you go to the innovation marketplace, you can see the key outcome of the PPPI summer call in the shape of 77 new, verified solutions ready to be deployed in the public sector to encourage transformations of all shapes and sizes on digitalisation and environmental issues.

To see the innovation marketplace for yourself, go to www.ioeb-innovationsplattform.at

3

The PPPI Service Center and its service portfolio



3.1 Training and professional development

In line with its long-held tradition, the PPPI Service Center is continuing to offer a wide range of training on public-sector procurement for public-sector employees. These seminars and workshops are being delivered together with the Austrian Civil Service Academy (Verwaltungsakademie des Bundes - VAB), BBG and other partners.

When we talk about our 'tradition', we are actually referring to our deeply-held belief that continuous professional development is hugely important for people working in public-sector procurement. The reason it is so important is that mutual exchange and continuous learning help us to refine our approaches to procurement planning and projects, not least by helping us to discover and practise new methods and techniques.

Public-sector procurement is focusing more and more on activities that create value. Accordingly, it is increasingly important for customers to act intelligently and show their understanding of the procurement process. In turn, this means the demands being made of procurement specialists in the public sector today are very different from what they were in the past, not least because tight budgets and commercial realities are forcing them to concentrate on finding efficient, effective solutions to problems and, by extension, to make sure the products and services they are buying are both innovative and sustainable.

The PPPI Service Center looks to provide a range of effective, attractive initiatives to support public-sector procurement specialists, helping them to meet the demands placed upon them at the same time as initiating and delivering innovative projects. The different modules provided by the Service Center are constantly being developed, in terms both of the content itself and of the formats and tools used to deliver it.

There is no doubt that 2020 brought with it some major changes. When the pandemic broke out, a number of IT and software tools suddenly became essential for

simply keeping in touch, let alone running joint training courses. Seminars that were originally planned to be delivered in-person over a whole day were re-worked so they could be given as series of webinars and individual units. Digital pinboards (co-creation tools) were used to make these digital training sessions interactive. All in all, this meant that both trainers and students alike had to adapt and try new approaches. This in turn kick-started a process of trial and error, which of course led to improvements in existing processes.

Indeed, this process turned out to be extremely useful and rewarding, especially given that the use of digital tools has now become second nature. Much as we are looking forward to meeting people in person again, there is no doubt that webinars and online workshops give more people the flexibility and opportunities they need to take part in events they would otherwise have been unable to attend, for example because getting there and away would have taken up too much of their time.

Webinars also tend to encourage speakers and audiences to concentrate on the matter at hand - a useful skill given we all seem to have less and less time available these days!

The list below shows part of our current schedule of events, as well as some of what we have planned for the future:

The VAB seminar on 'Rechtliche Aspekte des Innovationseinkaufs' (Legal issues in innovative purchasing) was held in the spring of 2020. It was originally planned to be a full-day, in-person event, but it was converted at short notice into a series of webinars and short units.

The event was attended by about 30 people, and they were able to draw on the expertise of a highly-qualified group of speakers, including Felicitas Zacherl (legal specialist at the Research Promotion Agency - FFG), Klaus Richter (legal specialist at BBG) and Karlheinz Moick (a procurement specialist at FSM Rechtsanwälte).

The experts were happy to pass on their expertise, par-



ticularly on the best ways of tweaking existing legal procedures so that procurement could realise its full innovative potential while ensuring compliance at all times. The sessions focused particularly on the legal aspects of the new 'innovation partnership' tendering process.

In the autumn of 2020, VAB held a seminar on 'Praktische Instrumente des Innovationseinkaufs anwenden' (Using practical tools for innovative procurement). The event had to be moved online rather than held at Schloss Laudon, but hosts Manuel Schuler and Andreas Laux made a virtue out of necessity. They suc-

ceeded in attracting a large number of expert guest speakers who could provide the 30 or so students with first-hand, practical experience. Thomas Greiner (Strategy Owner Innovation, ASFINAG), Christian Fencz (Head of Innovation Management, Wiener Stadtwerke GmbH), Nik Widmann (Prisma Solutions), Johannes Stalzer (Schönherr Rechtsanwälte), Wolfgang Handl (Project Manager, Schönbrunn Group) and Klaus Richter (Legal specialist at BBG) all proved to be assets to the event, and provided plenty of inspiration for the attendees. We plan to continue in the same vein with our 2021 events, again working together with the Civil Service Academy.

3.2 Networking and events

Austria is home to an active innovation community! Over the 2019/2020 period, the PPPI Service Center took part in a large number of external events, as well as organising more events of its own. The list below gives you an insight into what the PPPI Service Center has been working on over the past year:

- 30 January 2019: El Motion 2019
- 2 April 2019: GovTech Pioneers
- 11 April 2019: GSV – Die Strasse der Zukunft (The Road of the Future)
- 12 June 2019: Co-Creation Wirtschaftsagentur Wien (Vienna Economic Agency Co-creation)
- 27 June 2019: Gemeindetag Graz (Graz Communities Day)
- 30 October 2019: Innovationstag ASFINAG (ASFINAG Innovation Day)
- 5 November 2019: Innovate 2019
- 7 November 2019 naBe Aktionstag (naBe Action Day)
- 28 January 2020: Innovationscafé MA01 Stadt Wien (The MA01 Innovation Café, City of Vienna)
- 30 January 2020: El Motion 2020
- 10 November 2020: Innovate 2020

Many planned events had to be cancelled or postponed to 2021 due to the COVID-19 pandemic, including ECO-VATION 2020 and Nutzen.Leben 2020.

Nutzen.Leben 2019

On 21 April 2019, one of Austria's biggest specialist public-sector trade fairs was held in Vienna. Visitors could look forward to an exciting event, this year focusing on the topic of facility management. Innovative firms that received a coveted PPPI award were invited to attend and present their products and services at the PPPI Service Centers stand. The companies given access to the PPPI Service Centers stand were:

- BMB® Gebäudehygiene GmbH
- Dry Ice GmbH
- Telecontact Handel und Service GmbH
- viewpointsystem gmbh

Robotics and Process Automation (RPA) - Optimising processes digitally to improve efficiency (Robotics & Prozessautomatisierung [RPA] – Prozesse digital optimieren und Effizienz steigern)

On 29 October 2019, Austria's Federal Computing Center (known by the German acronym BRZ) and the PPPI Service Center invited attendees to the BRZ Innovation Factory for an exchange of views and experience on RPA. The event brought together participants from the public administration, companies and other organisations to build a picture of the potential of current robotic process automation technology.

Break-out sessions offered more opportunities to discuss experience gained with the technology in a variety of different areas, as well as current issues surrounding individual forms of automation (including fully-automated processes, partial automation, and AI-supported process support).

PPPI hosted by FEEI

On 23 September 2020, the PPPI Service Center joined forces with the FEEI, Austria's industry association for electrical and electronic engineering, for an evening of digital discussions on the theme of 'New opportunities for innovative procurement'. Approximately 50 people dialled in to hear the keynote speech delivered by Dr. Stephan Heid of Heid & Partner.

His address was followed by a virtual panel discussion featuring contributions from various experts in the field and entrepreneurs, including Regina Braunsteiner (Director of Sprecher Automation), Michael Brugger (PPPI Coordination, BMK) and Klaus Richter (procurement law specialist at BBG). The fascinating exchanges were hosted by head of the PPPI Service Center Stefan Maier.

GSV Green, Smart, Digital – innovative Lösungen im öffentlichen Bereich (Innovative solutions in the public sector)

Working together with the Austrian Association for Transport and Infrastructure (known as GSV) and its mobility platform, PPPI helped to organise 'Green, Smart, Digital – innovative Lösungen im öffentlichen Bereich' (Green, Smart, Digital - Innovative solutions in the public sector) on 12 October 2020, underscoring the importance the mobility sector for digitalisation and fighting climate change. Car-sharing schemes, parking management systems and e-mobility were just a few of the areas covered in the discussions between public-sector bodies and innovators.

The PPPI Knowledge Management Event

This online summit on innovative knowledge management tools was held on 22 October 2020. The conference was opened by our expert Michal Sedláčko, who gave a speech on the topic of technology as organisational change and accepting technology within organisational cultures. Attendees also enjoyed pitches from four companies with the potential to catapult knowledge management systems within public bodies to the next level, all of which were major highlights of the event. The companies involved were:

- Ubitec
- Leftshift One
- Theum®
- KMA/Semantic Web Company

The event was rounded off by a keynote speech from BRZ expert Matthias Lichtenhaler on whitespace management. His address was inspired by the PPPI challenge 'Collect, search, and pass it on: using intelligent systems to manage knowledge better', which was held in spring 2020 and put a range of useful, innovative tools into the spotlight.

A new format: 30-minute innovation

Our new, interactive, 30-minute online sessions give innovative companies in the innovation marketplace the opportunity to introduce themselves to public-sector contracting bodies and hold discussions with them. The sessions are held once a month, and are intended to focus on the most pressing issues of the day.

The discussions give innovative companies in the marketplace the chance to talk directly to public-sector purchasers in a short, interactive online format, and to convince them of the merits of their products and services. Each session gives two companies the chance to introduce themselves, with each being given a five-minute slot.

Their introductions are followed by a 15-minute discussion with representatives of public bodies, with questions being put directly or via the chat function. The discussions are moderated by the PPPI Service Center.





3.3 Strategic consultancy

PPPI workshops are a core element of the strategic consultancy services the PPPI Service Center provides. The workshops bring together 15 people at a time to brainstorm issues they are facing, present the results of their work, and engage in intense discussions. In between, they take the odd break to fortify themselves with coffee and sandwiches, as well as to chat and get to know each other. Back in January, just before the pandemic broke out, we managed to run our workshop with the innovative thinkers at ASFINAG.

The discussions lent crucial momentum to a number of PPPI projects, which could then be driven forward over the following months by a combination of consultations and PPPI challenges, all organised by the PPPI Service Center. Shortly afterwards, the world became a very different place, and social distancing became the order of the day to keep everybody safe. We soon realised that the pandemic would not be going away any time soon.

However, the PPPI Service Center remained determined to pave the way for contracting bodies to find new and innovative projects by running workshops throughout 2020, which meant breaking new ground in cyberspace.

We soon found a suitable video conferencing tool, came up with a new range of virtual pinboards, flipcharts and cards, and learnt new skills. Then, in late summer, our work was put to the test when Wiener Linien, one of our Game-Changer partners, decided against postponing its PPPI workshop yet again, and instead brought a dozen of its staff together via the Internet.

This pilot online PPPI workshop was a complete success, and just a few weeks later it was the turn of experts from AGES to provide insights into the new world of remote working and get involved in our joint quest to uncover more potential for innovation.

Last but not least, the cherry on the cake came from Innsbruck-based utilities provider Innsbrucker Kommunalbetriebe (IBK), whose very first collaboration with the PPPI Service Center was conducted entirely using this new, digital system. Given all that, it is safe to say that 2020 was about more than just coronavirus, and generated real momentum for innovation. The PPPI Service Center made the most of that momentum, and in doing so, it showed more than a few of its partners, customers and colleagues how to make a virtue out of necessity.

3.4 Financial support - the aws PPPI Toolbox

The PPPI Action Plan, PPPI assessment procedures and the Council for Research and Technology Development all stress the importance of developing incentive mechanisms to encourage purchases of innovative goods and services within the public sector. This approach is endorsed by internationally recognised best practice. That is why Austria Wirtschaftsservice Gesellschaft mbH (aws) decided to develop a funding scheme for innovative purchases in the public sector, working together with PPPI's sponsors, the Federal Ministry for Digital and Economic Affairs (BMDW) and the Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation, and Technology (BMK). Initial preparations for the scheme got underway as far back as 2017, and it finally took shape in 2018.

A request to fund the aws PPPI toolbox was submitted to Austria's *Nationalstiftung für Forschung, Technologie und Entwicklung* (National Foundation for Research, Technology and Development), and the project was granted funding worth EUR 2m for 2019-2020. The funding was geared toward public-sector contracting bodies in Austria, and was allocated to two modules. Funding from the 'prepare' module of the aws PPPI Toolbox is designed to support planning and delivery of PPPI challenges as an innovative market research tool, while the 'transfer' module of the aws PPPI Toolbox is intended to encourage the execution of innovative procurement plans. The delivery of the scheme and the provision of the associated fund-

ing were carried out in close collaboration with the PPPI Service Center. For example, the innovation criteria for the scheme (on the basis of which applications for funding are assessed) were drawn up jointly by aws and the PPPI Service Center.

The scheme opened for funding applications for the first time in April 2019. The applications were then subjected to checks by aws to ensure they met formal requirements before the substance was assessed by an external panel of experts. Recommendations as to which applications should be granted funding were issued in quarterly meetings of the panel. In total, 37 applications were submitted, requesting total project funding worth EUR 5.6m. The panel approved 30 of these projects, and a total of EUR 1.8m of financial support. The vast majority of the projects submitted to the panel asked for and received support from the 'transfer' module of the scheme. The scheme covers a wide spectrum of procurement categories, and the projects funded from the aws Toolbox are sponsored by a diverse range of organisations, including the Austrian Federal Government, the Federal Provinces, local and municipal authorities and sector-specific contracting bodies.

The scheme was closed for applications in September 2020, when it exhausted its budget. In light of the high demand for funding under the scheme, discussions with the relevant government ministries on maintaining the aws Toolbox began in the autumn of 2020. The programme will continue to operate in 2021, with a budget provided by the Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation, and Technology (BMK).



3.5 The PPPI innovation platform - 'We love being a digital procurement match-maker'

The PPPI Innovation Platform has been providing support to both public-sector contracting bodies and innovative companies for more than five years now, and facilitating dialogue between them.

Public-sector contracting bodies can now launch open innovation challenges online, giving them an efficient and effective way to research the market. For their part, innovative firms can use these challenges to promote themselves using digital shop windows.

In April 2019, the long-awaited relaunch of the PPPI innovation platform finally went live, and it has been available to view ever since in all its glory. So, what has changed? The platform has a fresh new design, and a raft of new features to boot. For example, public-sector contracting bodies can now launch and submit their own open innovation challenges independently.

3.6 The Direct Procurement Platform for innovation - innovation in the BBG e-Shop

The DPP for innovation – buy innovative products direct

In 2019, as part of their innovation strategy, the Federal Procurement Agency (BBG) and the PPPI Service Center created a new system allowing innovative products to be showcased more effectively within the BBG portfolio.

Innovative products and services that have received our expert panel's coveted PPPI Awards and are represented on the PPPI Service Centers innovation marketplace now have access to their own dedicated direct procurement platform, known as the DPP for innovation.



Companies can also use the new version of the platform to submit their own ideas online, complete with images. Our expert judges now assess these ideas entirely online using a digital system. The overhaul of the platform was very much focused on providing an intuitive, accessible service for users. To find out more, go to www.ioeb-innovationsplattform.at and discover the platform for yourself.

Of course, relaunching the platform is not an excuse for us to put our feet up. It is very important to make sure the system is constantly being developed. This is one reason why the PPPI Service Center is so grateful for the feedback it regularly receives from the platform's users, because it helps them to make sure the innovation platform remains a solid, reliable service.

What is a direct procurement platform (DPP)?

A direct procurement platform gives clients the opportunity to purchase products and services electronically in accordance with the applicable procurement rules and arrangements. The DPP is an integral part of BBG's internal purchasing portal, also known as its e-Shop. It allows innovative products and services to be acquired directly from Austria's biggest public-sector procurement market. Public-sector contracting bodies can also use the e-Shop to enquire about services or prices, as well as to purchase them directly, while companies can use the platform to showcase their innovative solutions.

Between July 2019 and December 2020, firms were able to make use of the platform free of charge. From January 2021, the PPPI Service Center will cover half of the basic fee for access to the DPP.

3.7 The PPPI Practical Guidelines - The A-Z of pro-innovation public procurement

Who is actually responsible for purchasing innovative solutions? How are projects set up, how can workshops help, and what do I need to think about at each stage of the process? What funding and support is available? How should I manage risk? And what do I need to do once the tender process is completed? You will find practical tips on all these questions in the new PPPI Practical Guidelines - and plenty more besides!

The PPPI Practical Guidelines are designed to provide advice and serve as a reference work for anyone working to deliver public-sector procurement plans. The guidelines are a complete A-Z guide to the innovative procurement process, with examples and descriptions of the different phases and the key roles in the public-sector to help you every step of the way.

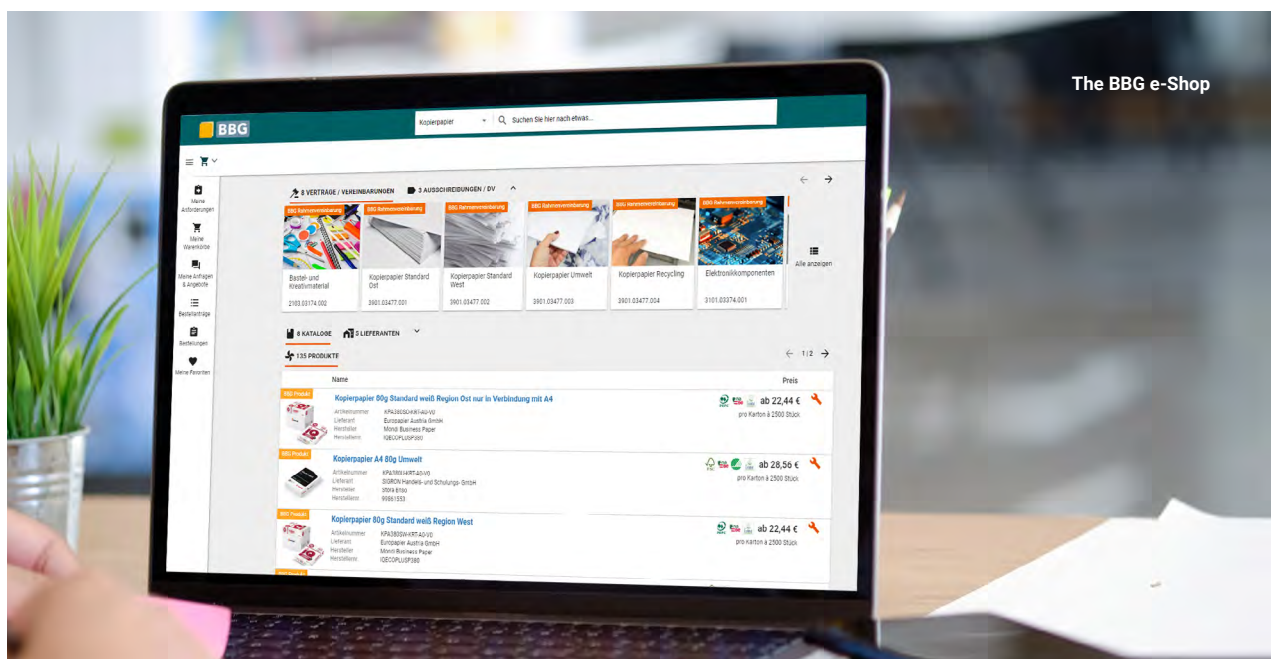
If you are looking to specialise in a particular aspect of the procurement system, the guidelines are supplemented by five detailed modules to help you deepen your knowledge.



The main guide + the 5 modules (available in German only) consist of:

- Module A: Voraussetzungen und erste Schritte (Pre-requisites and first steps)
- Module B: Vorbereitung des Einkaufs (Preparing a purchase)
- Module C: Finanzielle und sonstige Unterstützung (Financial and other support)
- Module D: Strategische Aspekte des Innovationseinkaufs (Strategic aspects of innovative procurement)
- Module E: Management und Nachbereitung als neuer Startschuss (Management and following up ahead of your next purchase)

To take a look at the guidelines for yourself, go to www.ioeb.at/leistungen/infothek



3.8 PPPI Game-Changers

The PPPI Game-Changers set an example for other organisations. They actively use their purchasing procedures as a tool for innovation management. The PPPI game-changers operate in active partnership with the PPPI Service Center. They use PPPI workshops to stay informed about the situation in their respective organisations and identify potential for innovation, and they offer a listening ear at an early stage of the procurement process as part of PPPI challenges.

We work together with the Game-Changers to develop new formats and ideas to boost innovative thinking in the public sector.

'Working together with the PPPI helps us to test the functionality of new technologies and find out whether they make operational sense for us. We are looking for-

ward to expanding our partnership in the future.' (Thomas Greiner, Strategy Owner Innovation, ASFINAG)

'The Federal Forestry Service is committed to innovation, including when it comes to procurement. The services provided by the PPPI Service Center are a big help to us in that respect.' (Manfred Hofstätter, Head of Innovation, Österreichische Bundesforste AG)

'We have already worked together with PPPI to run a number of different challenges, including one for the green shelters project. We are looking forward to continuing to work closely with the PPPI Service Center in the future, and we are really excited to see what potential and solutions we will discover.' (Cornelia Nussbaumer, Innovation Manager, Wiener Linien)

3.9 Work in the time of lockdown

2020 was another challenging year for the PPPI Service Center. Like many other areas of Austria's economy and civil service, it was forced to adapt to the circumstances it found itself in.

At a number of points during the year, the entire team had to provide services and advice from home, changing their working practices literally overnight. But - thanks to high-quality equipment and our highly-motivated internal IT experts - they made a completely seamless transition. They say 'where there's a will, there's a way', and 2020 proved there is more than a grain of truth in that.

Although ECOVATION could not take place in 2020, a number of other events successfully moved online into cyberspace, and the fact there are no space restrictions in the digital world allowed large numbers of people to take part. Teleconferencing: the method of choice. We spent a lot of time on the phone in 2020. As well as operating our service hotline, which is staffed Monday to Friday, we also had to get used to making internal



arrangements and conducting business over the telephone. As it turned out, the transition was so successful that it led to the development of a number of new working methods alongside and beyond our 'routine' business.

Photos: unsplash (2)



3.10 Outlook for 2021

The PPPI Service Center wants to continue to engage with public-sector clients and the innovation community throughout 2021, and respond quickly to meet their needs. We know that if you are standing still, you are going backwards, and we have a number of new initiatives in the pipeline, but that does not mean we are about to abandon our tried-and-tested methods. The DPP for innovation will continue to serve as a sales channel for PPPI Award-winners alongside the innovation marketplace, and

the PPPI Service Center will assume a portion of the costs involved in joining the DPP. The self-certified innovative product mark will remain a key product identifier in the BBG e-Shop in 2021.

Suppliers and providers can designate their products and services as 'innovative' on the basis of a self-assessment, provided the products or services concerned are either especially innovative or represent a major improvement over previous models. To strengthen our support for innovative companies on the innovation

marketplace even further, the PPPI Service Center has introduced its new '30-minute innovation' format, which ran for the first time in November 2020. These interactive sessions allow innovative companies to introduce themselves to public-sector contracting bodies and to engage in discussions with them and with each other.

The format is focused on addressing the most pressing issues of the day, and we plan to continue running the sessions on a monthly basis in 2021. Video footage is becoming an ever more important element of communications, to the point where integrating short videos to provide news or information is now recommended practice across all channels, from social media to websites and newsletters.

With this in mind, the PPPI Service Center commissioned a series of new videos in 2020. It plans to produce more videos in the future using its own equipment, and to make them available to a wide audience. Watch this space to find out what surprises 2021 will bring!



4 The PPPI Service Network

4.1 The Competence Centers



AUSTRIAN ENERGY AGENCY

4.1.1 The Austrian Energy Agency (AEA)

The Austrian Energy Agency (AEA) is the PPPI Competence Center for the energy sector, focusing on the issues of energy efficiency, renewable energy and new technologies.

The AEA supports a range of events covering a variety of important issues, as well as providing details of the latest technology trends and market developments.

It also encourages contact and collaboration between Austrian companies, and serves as a source of expert advice on technical questions for public-sector procurement bodies. For more details, go to www.energyagency.at.

During this reporting period, the AEA was involved in a number of initiatives, including:

- drawing up thirteen examples of best practice for potential inclusion in the PPPI project database, eleven of which were finally added to the system.
- conducting detailed analysis of the thirteen examples, focusing on how they could be applied to the use of renewable energy and improving energy efficiency. Four

of the examples could be applied directly once key energy-related information was provided to the AEA.

- Identifying twenty-two energy-related solutions for the innovation marketplace, after encouraging and engaging in intense discussions with the companies that submitted the original proposals. Around two thirds of the ideas submitted were deemed to be suitable for PPPI.
- Promoting the aws PPPI Toolbox among potential customers, leading to a number of high-quality submissions to the aws scheme.
- Raising awareness among potential customers within the AEA network (including KEM, e5, Klimabündnis, klimaaktiv and topprodukte) by advertising on AEA channels (such as their newsletter and website), providing networking opportunities and training, and participating in workshops.

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4.1.2 Austrian Federal Real Estate Company (BIG)

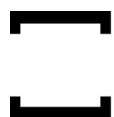
The Austrian Federal Real Estate company (Bundesimmobiliengesellschaft m.b.H., known as BIG) is one of the country's largest owners of property, which means it has a major responsibility to protect the environment, as well as society at large. The BIG manages a portfolio of properties that need to fulfil a range of different roles, both now and in the future. That is why innovation and developing existing technologies are part of BIG's core

business, and are driven forward via innovation and research partnerships like PPPI, working closely with our stakeholders. BIG's specific priorities are geared towards the company's strategic objectives. Enquiries on projects and collaborative initiatives are examined by the relevant specialist departments, and a decision is taken internally on whether to proceed on the basis of a strategic assessment. In this reporting period, BIG

won the Procura+ Award 2020 in the 'Innovative procurement in information and communications technology - ICT') category. Collaborative research projects on priority issues, including one entitled 'Outcomes monitoring and assessing applicability for the portfolio' also helped to develop innovative internal processes and innovation partnerships.

One example of BIG's work is the installation of a 'view elevator' - a VISUAL EMERGENCY CALL SYSTEM designed to put display screens into a visually-based help mode in an emergency. The system can be used in a number of different ways, including to help rescue trapped passengers from lifts. BIG is also working on the future of infrastructure.

As part of its innovation partnership with Verbund X Accelerator, BIG is helping to develop a digital buildings model known as Build Informed, which is intended to make managing their current infrastructure assets even more efficient and environmentally-friendly. The system, designed as a 'digital twin building', is aimed at creat-



BIG

ing a framework for deploying the very latest technology on sites. BIG is committed to driving forward new technology and innovation, working together with its stakeholders. Its specific priorities are geared towards the company's strategic objectives: Energy-efficiency and the future of learning. Enquiries on projects and collaborative initiatives are examined by the relevant special departments, and a decision is taken internally

on whether to proceed on the basis of a strategic assessment. BIG consults with its tenants to make premises available for research purposes, for instance, and can also act as a coordinator. Digitalisation is spreading into many sectors of the economy, and real estate is no exception. New technologies and digital networking will be crucial for long-term, successful and sustainable property management in the future.

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4.1.3 GSV - The platform for mobility

The Austria Agency for Transport and Infrastructure (GSV) platform takes a comprehensive approach to all aspects of mobility infrastructure, from railway lines to waterways, and from air travel to pipelines. GSV is economically and politically independent; its only duties are to serve the interests of its members and continue developing Austria's infrastructure to ensure it remains an attractive place to do business in the future.

GSV is working on behalf of its members in many ways: In its role as an impartial mobility platform, it regularly organises specialist events that allow participants to share information, as well as spurring organisations and institutions to make the most of their existing potential to create synergies and innovate. During 2019 and 2020 GSV aggressively promoted PPPI initiatives in the mobility and energy sectors, especially the PPPI project database and the innovation marketplace, as well as or-

ganising several events of its own. These events focused on the themes of 'The intelligent roads of the future' and

'Green, Smart, Digital - Innovative solutions in the public sector'. The high number of visitors they attracted bears witness to the widespread interest in driving forward innovative solutions, and the importance of raising awareness of the PPPI initiative across the public sector was underscored by the presence of Andreas Reinhard, former Secretary General of the Austrian Ministry for Transport, Innovation and Technology (then known as BMVIT), and Christian Weissenburger, Head of Section at the Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation, and Technology (BMK).

GSV works constantly to promote PPPI, especially at a personal level. This approach reflects our conviction that research and innovation are essential for ensur-



ing Austria remains an attractive place to do business in the future. Higher levels of innovation in the public sector will bring benefits for the environment and ordinary citizens.

With this in mind, we plan to organise more events on exciting and relevant topics together with our partners at the Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation, and Technology (BMK),

the Federal Ministry for Digital and Economic Affairs (BMDW), and the PPPI Service Center, and we look forward to continuing to drive innovation in our role as a PPPI-Competence Center.

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4.1.4 AWS – Austria Wirtschaftsservice GmbH

Austria Wirtschaftsservice GmbH (aws) has extensive experience in financing commercial and marketable innovations by private-sector companies, and it brings that experience to bear in its role as a PPPI-Competence Center. The innovations it helps to fund go well beyond the technology sector to encompass the creative industries and other innovative business models. It is making a particular effort to support innovative deep tech start-ups.

aws is taking a comprehensive range of PPPI-related measures that help them make a substantial contribution towards raising the share of public-sector procurement spending earmarked for innovative projects. One of the main aims behind all of aws' work in this area is the need to connect the latest trends in technology and innovation with the requirements of innovative purchasers in the public sector; its presence on the expert panel judging submissions to the innovation marketplace is especially noteworthy in this regard.

Another important part of aws' role is to use its network, which extends beyond applicants for funding to include multipliers such as banks and funding agencies run by Austria's provincial administrations, to disseminate information about PPPI initiatives. In the 2019/20 reporting year, aws was particularly instrumental in disseminating PPPI-related information (such as on the PPPI challenges or the summer calls on digitalisation and climate action) via its social media channels.

austria
wirtschafts
service



aws' other communications channels, including its newsletter, events, and services provided by its funding advisers, were also used to provide information about the latest PPPI challenges and the innovation marketplace.

Staff from aws advise the organisation's customers and clients about how they can take part in PPPI challenge and how the products and services featured on the marketplace can benefit them. During 2019 and 2020, their advice focused on deep tech start-ups in the early stages of their respective development curves. The experience gained over the reporting period then informed aws' role as a stakeholder in the further strategic development of PPPI.

Finally, 2019-20 saw the implementation of the aws PPPI Toolbox scheme, funded by Austria's National Foundation for Research, Technology and Development. The scheme was conceived as a result of intense discussions between the aws PPPI-Competence Center, the Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation, and Technology (BMK) and the Federal Ministry for Digital and Economic Affairs (BMDW).

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4.1.5 The Austrian Research Promotion Agency (FFG)

The Austrian Research Promotion Agency (known by its German acronym, FFG) is the Austrian Federal Government's funding agency for research, development and innovation in and for companies. It also acts as a PPPI-Competence Center, and the R&D innovation partnership is a key priority in connection role, alongside the agency's core tasks.

The 2018 amendment to the Austrian Federal Procurement Act (*Bundesvergabegesetz*) provided public-sector procurement with an additional and attractive tool, in the shape of the innovation partnership. The FFG has developed this statutory provision to create a bespoke funding mechanism, known as the R&D innovation partnership. The R&D partnership builds on the model of a traditional innovation partnership, including by adding provisions that make it easier for the FFG to fund development costs. The final offers of an R&D innovation partnership can also be used here as funding applications and concluded together with the innovation partnership contracts, funding contracts with the FFG or its funding bodies, delivering a significant reduction in risk.

ASFINAG's *Strassenkraftwerk* ('Road Power Station') innovation partnership, run in cooperation with FFG, is the first R&D innovation partnership to be delivered in Austria. After an exciting initial tendering phase, the 'Road Power Station' innovation partnership got underway at the beginning of 2020, with the beginning of the initial research and development stage. Now that the research phase has been completed, work is ongoing to determine whether the results achieved in laboratory conditions can be transferred to the real-life system.



Following this assessment, a prototype system will be developed and tested for practical suitability.

FFG also provides a range of additional tools designed to meet different requirements. You can find more information about FFG's role in public procurement on its dedicated webpage at www.ffg.at/beschaffung (in German only). The FFG actively advises purchasers, political actors and its sister agencies on promoting innovation through public-sector procurement, and promotes the dissemination of relevant information, including expert opinions and lectures and events held by the European Network of Innovation Agencies' TAFTIE Academy, which is run by FFG.

FFG's European and International Programmes (EIP) department analysed and promoted EU tenders on innovation, as well as supporting applicants and project stakeholders in delivering their plans. Their work in this reporting period was focused on tenders in areas SC1 (Health, demographic change and well-being) and SC7 (Secure societies). Austria has now taken part in 4 successful projects, in the shape of THALEA II, Instand-NGS4P, BroadGNSS and iProcureSecurity, and gained five partners in PCP and/or PPI projects. As part of the consultations on Horizon Europe, FFG/EIP gathered and provided feedback on the Pre-Commercial Procurement (PCP), or Public Procurement of Innovation Solutions (PPI) tools.

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4.2 The contact points

4.2.1 The Federal Provinces

4.2.1.1 The PPPI Contact Points for the Federal Provinces

At the end of 2018, it became clear that Austria's Federal Provinces harboured a keen interest in getting involved in PPPI. In 2019, the first steps were taken to turn that interest into a concrete initiative. At the latest meeting of the Federal Provinces, a majority of the provinces declared their interest in taking part in the initiatives. This was not the only positive PPPI-related development in 2019: Information about PPPI was consistently distributed throughout Austria's Federal Provinces, including in forums such as the Conference of Regional Procurement Experts and by leveraging personal relationships (including with providers of e-procurement tools). Building on experience gained in Upper Austria, joint projects were set up in Carinthia and Burgenland, and other Federal Provinces were encouraged to establish projects and/or workshops of their own.

Unfortunately, the pandemic put an end to these positive trends. For example, the Conference of Regional Procurement Experts planned for April 2020 had to be cancelled, meaning there was no chance to reach a joint agreement on the next steps before the end of 2020. Other activities also had to be scaled-back due to the public health crisis. Given that interest among the Federal Provinces remains high, plans to stabilise PPPI activities are likely to be a major priority for 2021. Efforts to shift the focus of PPPI work towards activating and bundling public-sector procurement activities within the Federal Provinces are likely to be another focus as we look to attract stakeholders from across the waterfront who can drive PPPI initiatives forward.

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4.2.1.2 Upper Austria PPPI Contact Point

The highlight of 2019 was winning the Civil Service Award in the PPPI Innovation category - a deserved reward for years of work by Upper Austria's provincial administration.

The award generated new motivation, and we were aiming to take that motivation into 2020 and set up more projects and challenges. Unfortunately, the pandemic brought our best-laid plans to a sudden halt.

However, plans are already in place for Upper Austria to complete the PPPI-award-winning AltUni project in 2021, and to hold another awareness-raising event with the PPPI Service Center to generate new momentum.

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Source, Province of Upper Austria: from left to right:
LAD Dr. Watzl, Mr Pühringer, Mr Burgstaller,
Mr Pöcklhofer, Provincial Governor Stelzer

4.2.1.3 Salzburg PPPI Contact Point

2018 saw the advent of the PPPI Federal Provinces Team, following a suggestion by the PPPI Service Center in Upper Austria. The first team meeting was held in Salzburg, allowing representatives of the different contact points to meet, discuss relevant issues and report on their activities and successful innovative procurement projects, as well as sharing their experience. Salzburg-based innovation service ITG was also able to play an active role in drawing up the guiding principles for PPPI.

Unfortunately, the ECOVATION events that had been planned and organised for Salzburg in 2019 and 2020 had to be cancelled due to the coronavirus pandemic. A large number of Salzburg-based companies are now represented on the innovation marketplace, and taking part in PPPI challenges.

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4.2.1.4 City of Vienna PPPI Contact Point

The City of Vienna's Department for the Economy, Work & Statistics (MA 23) has been working together with a number of experts from as early as 2016 in an effort to embed innovative capacity in the local administration in a systemic way. To achieve this objective it has delivered several events, all focused on promoting innovation in public-sector procurement. The first step was to set up a 'PPPI Lab' workshop, designed to get commitment at board level and to convince senior managers, decision-makers and procurement professionals of the merits of an innovative approach to procurement.

This was followed by 'Innovation-Inside - G'scheite Projekte kopieren' (Innovation inside - copying clever projects), which made innovation in all areas - including in procurement - more visible within the local administration. The city administration is also involved in *Klappsesselw-*

erkstättte, or 'deck-chair workshops', which provide crucial inspiration for new innovation in some unexpected surroundings, and can lead directly to purchases that encourage innovation.

At the same time, Vienna has submitted a number of pilot projects to the national PPPI Service Center and the Vienna Business Agency's Co-Creation Lab as challenges, including the incontinence solutions challenge (KAV); challenge on impact protection tools in public spaces (MD-BD) and the virtual assessment Center challenge (Wien Energie).

Two PPPI challenges were successfully delivered in partnership with the City of Vienna in 2021. We joined forces with the Vienna City Administration *Magistratsdirektion* to identify tools for new participatory procedures within the city. The challenge generated more than 30 different suggestions as to how analogue and digital systems could be brought together to encourage citizens to participate in the way their city is run.

The second challenge focused on the issue of circular building processes, and was held in collaboration with the Department for Buildings and Technology. We asked entrants to answer the question 'If you could create a self-sustaining marketplace that also laid the foundations for circular construction processes, what would it look like?' The raft of fascinating, future-focused ideas they came up with did not disappoint. Our judges selected the five most convincing ideas, and conducted detailed discussions with those entrants as market dialogues.

In 2021, the City of Vienna's Department for the Economy, Work & Statistics will introduce a new approach to innovation management that will provide innovative plans with new forms of budgetary and qualitative support. A large number of new ideas are also likely to be submitted to the Co-Creation Lab and the national PPPI Service Center.

As mentioned in the individual provincial reports, activity has been stepped up across Austria's Federal Provinces. This has been reflected in the submissions received as part of the PPPI Project Competition, in which four

provinces took part. A few projects that had already won awards were recognised again in both 2017 and 2018, including 2SEC (an accessible emergency call system using all the senses) and the AltUni (a shared vehicle featuring fully-automatic device pairing).

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4.2.2 Business and industry

'The Austrian Federal Economic Chamber and the Federation of Austrian Industries see themselves as strong partners when it comes to public procurement promoting innovation in Austria, and are helping to raise the profile of this issue.'

The Austrian Federal Economic Chamber (WKÖ) and the Federation of Austrian Industries (IV) act as 'points of contact for business and industry', and represent an important interface between the PPPI Service Center, companies and policy-makers. Both organisations are active partners when it comes to planning and coordinating the work of the PPPI Service Center. They support PPPI-related activities in a variety of different ways, including by actively disseminating relevant information via their media channels (such as their websites, newsletters and social media accounts) and by taking part in networking opportunities and other events.

Public procurement promoting innovation (PPPI) is an important tool for boosting innovation-focused demand-side policy in Austria. The potential of PPPI is greatest where potential public-sector clients account for a high proportion of overall demand, innovative products or services are required to tackle a specific challenge, and the public sector can be used as a reference market. The WKÖ and the IV both believe that even more emphasis should be placed on PPPI with a view to increasing the share of public-sector procurement spending allocated to innovation.

PPPI is an element of both IV and WKÖ's current FTI strategies. The willingness to innovate and ability to adapt demonstrated by companies and the public administration are key factors in our economic success

and societal development, and it is therefore crucial that they continue to grow and expand. In addition, during the COVID pandemic we have been able to see for ourselves how digitalisation has made our economy more dynamic and opened up new opportunities and challenges for Austria's public sector. In particular, it is important to raise awareness of innovation partnerships and how they work. We also need more pilot projects from government departments and provincial administrations, as well as to make sure that all stakeholders within the procurement process are constantly honing their skills and qualifications.

IV and WKÖ are strong partners when it comes to ensuring PPPI-related issues are on the agenda in political and strategic debates. By doing so, they are also helping to spread the word about PPPI within their networks.



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4.3 International PPPI activities

Despite already being in the vanguard of PPPI in Europe, Austria never stops working to improve the PPPI initiative. In this regard, the Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation, and Technology (BMK), the Federal Ministry for Digital and Economic Affairs (BMDW) and Bundesbeschaffung GmbH (BBG) all set great store by international exchanges and learning from each other.

This ambition to learn as much as possible from international counterparts is reflected in our involvement in a number of EU-projects, as well as our constant dialogue with our international partners on specific projects (with the relevant bodies and departments directly involved).

Innovating together: the EU-Project 'Procure2Innovate'

The EU's 'Procure2Innovate' project is a flagship PPPI initiative, and one in which BBG is playing an active role, with the support of the PPPI Service Center. The project is focused on expanding and improving the network of 'competence centers' for public procurement promoting innovation across the EU.

Since the beginning of 2018, the project has served two functions. On the one hand, it has helped to establish a permanent network between the EU's existing competence centers (located in Austria, Germany, The Netherlands, Spain and Sweden), so they can learn and copy good ideas from each other. On the other, it is also supporting new competence centers in other EU states by encouraging those involved to share their experience and best practice.

How Austria has contributed so far: a retrospective

Each existing competence center is expected to support one new competence Center per year, to help it become established. The PPPI Service Center was partnered with Portugal in 2018 and Italy in 2019. In 2020, the PPPI Service Center is working hand in hand with Greece. Dialogue between established competence centers about their services and the issues and challenges they are facing is another important aspect of the project. This dialogue takes the form of peer-to-peer discussions. Over recent years,

the network has also begun to assume active roles in running events, lending them a broader European perspective. In 2019, our work as part of the project was dominated by developments to the services provided by the PPPI Service Center. The primary objective was to make better use of the European network that was already in place. We arranged for our PPPI challenges to be translated into English so they could be advertised across the network, allowing our customers to choose from even more ideas with the potential to solve their problems. We also helped to promote calls for proposals from the European Commission, and to handle the associated submissions. At a meeting of the project partners in Lisbon, a video about the services provided by the PPPI Service Center was shot in English. This was a positive experience, and prompted the PPPI Service Center to film a similar piece in German shortly afterwards.

Another highlight was the study visit featuring representatives from Finland, Sweden, Germany and Austria, which took place in the autumn of 2020. Although the event was held online, it still allowed the ministries involved to engage in focused, cross-border discussions, as well as to collect ideas and information.

A number of additional workshops were also held under the auspices of the wider project, designed to help develop services or to present best practice. With these aims in mind, the project gave presentations at the EIC's 'e-pitching' events. The PPPI Service Center also attended the digital Innovation Week Sweden event, as well as giving presentations as part of other EU-projects.

Unfortunately, some of the planned events and workshops had to be cancelled as a result of the pandemic. They will be re-scheduled as soon as the situation improves.

Other objectives for the project

'Procure2Innovate' aims to help establish a network that works together to develop expertise and share examples of best practice. Ideally, it should also build expertise across the EU to facilitate cross-border collaboration and tendering. For more details about the project, go to procure2innovate.eu.



5 Expert opinions

5.1 PPPI impact analysis for 2019

Detail, effects-based analysis of projects promoting innovation in public procurement across a range of fields.

The objectives behind the impact analysis were to measure the effects of various different types of public procurement projects designed to promote innovation, to identify lessons learned from applying the support mechanisms used to date, and to raise awareness of the issues involved in assessing complex effects chains.

The study was carried out by JOANNEUM RESEARCH POLICIES and the Austrian Institute of Technology (AIT) on behalf of the Federal Ministry for Digital and Economic Affairs (BMDW) and what was then known as the Ministry of Transport, Innovation and Technology (BMVIT - since renamed as the Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation, and Technology [BMK]) between mid-2019 and March 2020.



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The impact analysis was built around a systematic approach to assessing individual procurement projects and the procurement environment surrounding them, paying particular attention to the stakeholders involved and any external factors that might be facilitating or hindering the projects. The assessment was made on the basis of a theoretical view of effects (change theory), implemented in the form of a contribution analysis. The methodology used was founded upon a comprehensive case study design and case study analysis of procurement activity in the fields of mobility, construction, energy, healthcare, sustainability and digitalisation.

The results paint a wide-ranging picture of the many different levels at which PPPI can be effective, as well as the range of target audiences for these effects. Procurement is usually focused on optimising the performance of public bodies and improving services for citizens.

Innovation is perceived as a means to an end. In large part, the case studies considered as part of the analysis show clear and direct benefits for specific target audiences (and indeed for the population at large).

The study also identified effects on the future development of innovation and/or the ability to innovate, as well as commercial effects extending beyond the financial value of the projects concerned, such as cost savings, reduced consumption of resources or the creation of added value and/or employment. In addition, the analysis also considered relevant factors and circumstances that could influence the extent to which the effects associated with individual projects actually materialised, as well as unintentional effects.

Our investigation underscores the importance of engaging with the effects chain associated with PPPI at an early stage, which itself entails collecting relevant data at project level. It thus provides a clear starting point for improving the way procurement is planned and implemented in the future, as well as for providing evidence of the wider societal impacts of PPPI.



5.2 PPPI benchmarking: How Austria compares in Europe

Since it implemented the Action Plan for public procurement promoting innovation (PPPI) in 2012, Austria has scored consistently well against international benchmarks. (ERAC 2015¹, OECD 2017²). The latest benchmarking studies (PWC 2021³, 2020⁴, EC 2020⁵) confirm that Austria is continuing to play a leading role, although there are also clear areas for development in the future.

Austria is performing well on PPPI policy, and should continue working to improve further.

The PWC benchmarking study, carried out on behalf of the European Commission with a view to assessing national policy frameworks for PPPI, ranked Austria second in Europe, bettered only by Finland - an excellent performance. (fig.1). The study assessed the political framework using ten indicators to represent the individual mix of policies adopted in each individual country, ranging from PPPI action plans and the way PPPI is embedded in policy horizontally and in different sectors, to incentives to encourage PPPI, targets,

and monitoring arrangements. However, this strong performance does not mean we can rest on our laurels - and neither can Finland or any of the other 'good performers' identified by PWC. Even Finland is only realising 66.6% of its potential to support PPPI through its policy framework (an overall score measured across the ten indicators), while Austria scored just 51.2%.



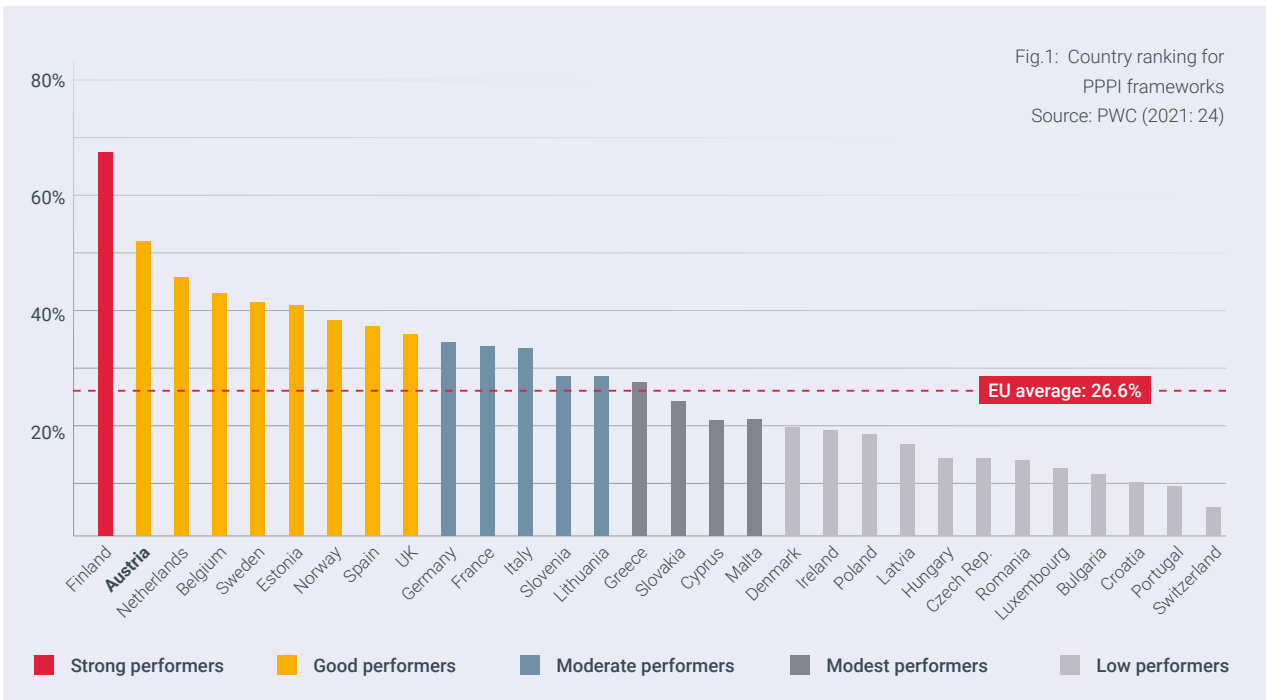
Eva Buchinger
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AIT Austrian Institute of
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Innovation Systems & Policy

So where do Austria's strengths and weaknesses lie?

According to the benchmarking study, Austria's strengths include its well-formulated PPPI Action Plan and the way it complements comprehensive PPPI capacity-building measures (including the website, examples of successes, training sessions, services, tools, coordination, networking and the one-stop shop). The study also stresses that Austria has established a well-structured system of incentives and monitoring. Austria scores especially highly when it comes to embedding PPPI in sectoral policies, among other areas. Nevertheless, the study also sees plenty of room for improvement,

and monitoring arrangements. However, this strong performance does not mean we can rest on our laurels - and neither can Finland or any of the other 'good performers' identified by PWC. Even Finland is only realising 66.6% of its potential to support PPPI through its policy framework (an overall score measured across the ten indicators), while Austria scored just 51.2%.



particularly as far as the objective of increasing spending on PPPI is concerned and in the way capacity-building activity is coordinated with the financial incentives in place. There is a need to refine the existing monitoring system, for example by collecting data on a regular basis. The authors of the report also call for Austria to embed PPPI more effectively in horizontal policies (such as its R&D and competition policies) and to adopt a PPPI IPR policy.

Austria is rated as average on PPPI delivery, and it needs to make up this deficit.

The PWC benchmarking study commissioned by the European Commission classifies Austria as a strong performer in European terms; Austria ranks 10th for the proportion of total procurement volumes committed to PPPI projects (fig. 2). The figures are taken from European assessments (EUROSTAT, TED data⁶), together with national data on public-sector tenders and some additional research.

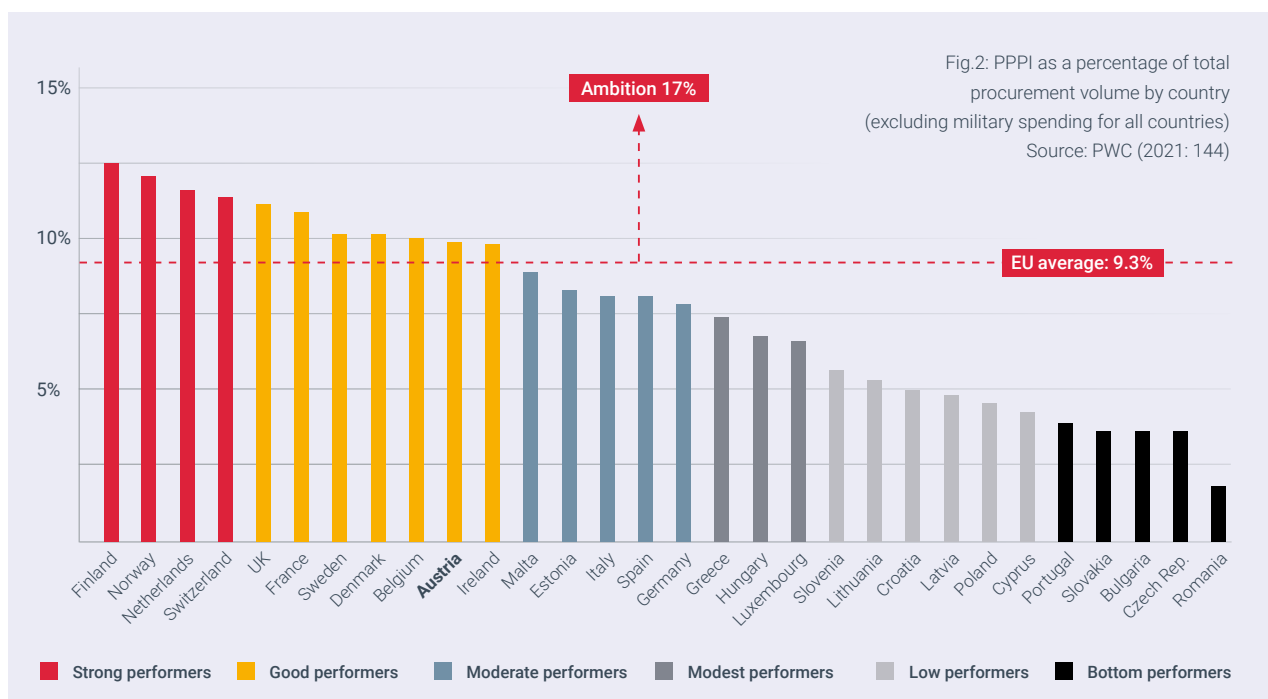
However, it should be stressed that the figures for PPPI spending used in the benchmarking study differ markedly from those compiled by Statistics Austria, Austria's office for national statistics^{7,8}. For the 2013 reporting year, Statistics Austria calculated that between 2.3% and 3.3% by value of all procurement in the state sector was allocated

to PPPI projects. These figures were based on statistics collected directly. By contrast, the benchmarking study calculated that the equivalent figure for the 2018 reporting year was 10.0%. Since the two figures are based on different reporting years and different collection methodology, they cannot be directly compared.

However, for the purposes of assessing where Austria stands in the international area, the benchmarking study can continue to be used as evidence. That study makes very clear that Austria has some catching up to do when it comes to delivering PPPI - it needs to increase the number of PPPI projects, and a significant proportion of them need to be high-volume projects (attached to higher-value contracts).

Conclusion

Overall, it can be said that Austria is in the vanguard of PPPI in Europe. However, a closer look at the connections between the policy framework and how PPPI is implemented in practice reveals that the political framework may fall short when it comes to applying PPPI across the full breadth of procurement projects. This is an issue to which the PPPI Strategy Framework 2030, designed as an update to the overarching PPPI plan of 2012, should consider particularly carefully.



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