



# SUSTAINABLE, CUSTOMER-ORIENTED TRANSPORT SERVICES

City of Rotterdam (Netherlands)

Winner of the 2018 Procura+ Innovation Procurement of the Year award

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## BACKGROUND

Every day, around 30,000 citizens in Rotterdam with special needs, such as elderly people or people with physical disabilities, rely on transportation services provided by the city (or 'modified transport services'). In total, this adds up to around six million traveller kilometres per year, with an annual procurement value of around €31 million.

Different modified transport services are required for different target groups, and in the past, this has led to fragmented and sometimes insufficient services. As such, towards the end of 2013, the City of Rotterdam decided to integrate all its modified transport services. By performing a joint procurement with integrated route coordination, the city aimed to improve service quality while reducing costs.

## PROCUREMENT OBJECTIVES

Modified transport services are highly regulated to protect end-users however, this can also leave little space for innovation. In addition, the market has become highly competitive in terms of price, with resulting contracts rarely being profitable for the supplier. There have also been several documented cases of providers of modified transport services getting into financial trouble or going bankrupt, with negative consequences for the contracting authority and end-users.

The objective of this procurement was therefore to provide a sustainable service, oriented around user needs and contributing a social return to the City of Rotterdam.

## PROCUREMENT PROCESS

### PRE-PROCUREMENT ACTIONS

#### 1) Setting objectives

Rotterdam decided to take a new approach, and established a set of procurement objectives to guide themselves, which include principles, such as:

- Service provision should revolve around end-users needs;
- Service should be as sustainable as possible (meaning electrified);

- Service should contribute a social return, and should combat loneliness in Rotterdam's population;
- In return, providers should be paid a fair and profitable price.

## 2) Determining need

In order to ensure the service met end-users' needs, Rotterdam undertook comprehensive customer-focused research to uncover the unmet needs and customer journeys that called for multidisciplinary solutions.

## MARKET SOUNDING AND ENGAGEMENT

The city used an innovative [Forward Commitment Procurement](#) procedure (that is, an agreement to purchase a product or service that does not currently exist, at a specified future date, provided it can be delivered to agreed performance levels and costs), with a competitive dialogue process that included representatives from end-user groups giving direct feedback.

Due to the different nature of the procurement process, Rotterdam organised four 'market meeting' days, held between September and December 2015, which brought organisations together from transport as well as communication, ICT (information and communication technologies), data analysis and healthcare, in order to facilitate the desired multidisciplinary approach. The call for tenders was published in October 2015, with market meeting days continuing after the publication, focusing on building consortia.

## PROCUREMENT PHASE

From information gathered during the pre-procurement phase, Rotterdam was able to design a call for tender structured around output-based specifications, which gives bidders more flexibility to design solutions which meet the buyer's needs.

## SUBJECT MATTER OF THE CONTRACT:

Integrally customer-oriented sustainable target group transport

## AWARD CRITERIA

The contract was awarded to the Most Economically Advantageous Tender, based on the following criteria and points scheme:

- Strategic match (18%) - that is, the extent to which the transport concept contributes to the social objectives of the City of Rotterdam.
- Quality, measurability and accountability of services (42%)
- Sustainability (24%)
- Social return on investment (16%)

To determine the degree of sustainability, tenders were scored according to the number of 'zero-emission' kilometres driven per contract year, as a percentage of the annual number of kilometres driven by the target transport group in Rotterdam.

0.01 points were awarded for every 287,000 zero emission kilometres travelled, up to 28,700,000 kilometres. Above this point, 0.01 points were awarded per 71,750 kilometres travelled.

## EVALUATION

An assessment committee was created to conduct the assessment and determine scores for the qualitative award criteria (Strategic match, quality and social return on investment). In these cases, a number of sub-criteria against which these award criteria could be measured were specified in the tender documents, and the sub-criteria were then scored on a scale of five to zero, with five being 'excellent', followed by 'good', 'sufficient', 'moderate', 'insufficient', and finally 'bad', which would score zero. Bidders were given clear instructions on how to answer these sub-criteria, in order to ensure comparability.

The assessment committee included an implementation manager, a contract manager, an employee with responsibility for quality, a staff advisor who participated in the dialogue, an employee with student transport expertise, and policy officers from the mobility, the urban development and the work and income clusters. A procurement advisor and legal tender specialist also supervised this assessment process to ensure it was objective, transparent and non-discriminatory.

## RESULTS

Competitive dialogue was entered into with three different consortia. In total, 13 dialogue meetings were held over a nine-month period. The first five rounds focused on end-users' needs, and representatives of these users were also included directly in this dialogue process, ensuring that customer needs remained central to the procurement process. The next five meetings were used to fine tune concepts, and the last three meetings focused on the legal and contractual aspects of the procurement.

The dialogue was successful and the winning consortium received a seven-year contract worth €210 million (running from 1 May 2017 to 1 January 2025). This consortium was comprised of three local transport companies working in collaboration with 10 partners involved in various components of the contract. Virtually all members of the consortium are small and medium sized enterprises (SMEs). In recognition of the time intensity of the work which went into participating in the competitive dialogue and preparing bids, a €30,000 design and participation fee was also available for those bidders who submitted a successful tender but were not awarded the contract.

The winning contractor has implemented a user-centred transportation service, with mechanisms in place enabling constant improvement. Results include an accelerated transition to nearly fully zero emission (electric) vehicles (cars and minivans) and an annual investment exceeding €2m in social return on investment as defined by [Rotterdam's social return on procurement policy](#) - for example investing in labour market participation (for people distanced from the labour market), social activities (in-kind commitments such as training and company visits), or placing contracts with a 'social workplace' company.

In recognition of its outstanding use of innovation procurement, the City of Rotterdam was also awarded the 2018 [Procura+ Innovation Procurement of the Year award](#).

## ENVIRONMENTAL IMPACT

Since this service began, 100 electric vehicles have been introduced (out of 600). The speed of the transition is dictated by the amount of electric vehicles manufacturers can deliver, the speed at which the charging infrastructure can be rolled-out, as well as other barriers, including, legislative issues around driving licences in relation to vehicle weight (electric vehicles tend to be heavier than combustion-engine vehicles). As of yet, there are no electric minivans on the market, but the long timeframe for this contract allowed the winning supplier to invest in specialist electric buses for wheelchair users for the first time. City of Rotterdam will also measure the environmental impacts of this service after one year.

## LESSONS LEARNED

The scope and complexity of this procurement was high, and the dialogue process involved was costly, both in time and resources. Given the size of this contract, the costs were considered to be proportionate and justifiable, however, some elements could still have been improved upon. For example, the dialogue on legal aspects should have started earlier, to allow more time for contract conditions to be agreed. In this case, one bidder had to withdraw from the negotiation before tendering, because an agreement could not be reached in time. In addition, because this was a fully customised process, it proved complex and time-consuming to translate the winning offer into a contract. It is recommended that contracting authorities have the necessary experience in place before carrying out a tendering process of this complexity.

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For related information, please see European GPP criteria for [Transport](#) and the [Technical Background Report](#).



# **Pre-commercial procurement of innovative open cloud services**

**Helix Nebula Science Cloud, CERN (Switzerland)**

**Winner of the 2019 Procura+ Outstanding Innovation  
Procurement in ICT award**

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## BACKGROUND

Large scale scientific projects require huge amounts of data storage and analysis resources. European research projects in domains such as genome analysis, astrophysics, life science and photon science need to be able to share data globally as part of world-wide scientific collaborations and, to some extent, need this data to be available on demand.

To address the challenge of big data storage and analysis tools, ten public research organisations from seven European countries joined forces in a Pre-Commercial Procurement (PCP). All the members of this buyers group were interested in the potential benefits of hybrid cloud solutions and, by buying together, hoped to achieve:

- economies of scale to reduce cost of cloud resources,
- more elasticity to adapt to changing demands for faster and more efficient scaling,
- more concentration on science-specific services/demands not covered by commercial cloud providers, and
- standardisation to make computational and storage infrastructure changeable and replaceable.

This innovation challenge was addressed by the [Helix Nebula Science Cloud](#), a PCP action co-funded by the H2020 Framework Programme. The initiative brings together leading IT providers and some of Europe's biggest research centres – CERN, CNRS, DESY, EMBL, ESRF, IFAE, INFN, KIT, STFC and SurfSARA – charting a course towards sustainable cloud services for research communities.

## PROCUREMENT OBJECTIVES

The objective of this procurement was to address the challenges outlined above, which required a combination of services under an innovative Infrastructure as a Service (IaaS) model:

- Compute and Storage – support a range of virtual machines and container configurations;
- Network Connectivity and Federated Identity Management – provide high-end network capacity for the whole platform with common identity and access management;
- Service Payment Models – explore a range of purchasing options to determine the most appropriate ones for the scientific application workloads that will be deployed.

The consortium, as first buyers of new research and development (R&D) with important technological needs, chose a PCP approach in order to drive innovation from the demand side. The cloud platform needed to be available to end-users around the world in an on-demand and elastic manner, meet the essential criteria of Reliability, Availability and Security (RAS), including providing cost-effective services exploiting capacity-style CPU cycles and online storage connected via high-speed networks to execute a range of scientific workloads from computing intensive simulations to data intensive analysis. The core of this innovative approach was in the connection with publicly funded e-Infrastructures based on open source solutions, to build a hybrid platform on top of which a range of higher-level user specific services can be deployed.

## PROCUREMENT PROCESS

### PRE-PROCUREMENT ACTIONS

The [Science Cloud Strategic Plan](#) was adopted by representatives of all stakeholder groups at a workshop hosted by ESA/ESRIN in summer 2011 and, thereafter, a public-private group of end-users of the cloud services and commercial service providers was formed and a common vision was consolidated. Preparation for this PCP began in January 2016, including the analysis of end-user needs, current market capabilities and relevant standards. Based on this, a set of procurement objectives was established to guide the process.

### MARKET SOUNDING AND ENGAGEMENT

The prior information notice (PIN) was published in January 2016, and soon after an open market consultation was held by CERN, at which potential suppliers were invited to get to know the end-users' needs and ambitions. The buyers group also used the market consultation and a subsequent survey of market players to better understand market capabilities and, thus, ensure appropriate tender criteria and provider participation. Following the publication of the contract notice in July 2016, an information session was held by CERN in September 2016 to resolve any doubts about the tender. A website (<http://www.helix-nebula.eu/>) was set up containing all relevant information on the tender provided to potential suppliers, Q&As and proceedings of the market consultation.

### PROCUREMENT PHASES

This procurement followed an open procedure and was co-funded by the European Union's H2020 Framework Programme under Grant Agreement 687614. The total contract was worth €5,383,332 and ran from January 2016 to December 2018, including preparation, implementation and dissemination.

R&D for the services contracted was split into phases, with the number of competing suppliers being reduced after each evaluation phase.

— **Phase 1.** Solution design of the Hybrid Cloud Platform: establishment of a written detailed design report including architecture and technical design of components. Budget: €466,291 From: November 2016 to January 2017.

— **Phase 2.** Prototype implementation of the Hybrid Cloud Platform: complete prototypes were built and made accessible to the buyers group. During the prototyping phase, basic functionality, interoperability and security tests were performed by IT specialists from the buyers group. Budget: €1,378,707 From: February 2017 to November 2017.

— **Phase 3.** Pilot deployment of the Hybrid Cloud Platform: deployment of expanded pilots and exploration of service payment models. Further testing on scalability and robustness was performed. Budget: €3,454,900 From: February 2018 through November 2018.

During the second half of 2018, the PCP project drew upon the previous phases and focused on sharing best practices, developing recommendations, and training.

### **SUBJECT MATTER OF THE CONTRACT:**

Joint Pre-Commercial Procurement of Cloud Services

### **AWARD CRITERIA**

The contract was awarded based on Most Economically Advantageous Tender (MEAT) criterion. Each phase of the PCP was competitive.

Award criteria in the tender included non-technical aspects (40):

- Merit of the resources (12),
- Merit of the technical capacity (12),
- Merit of the time schedule (8), and
- Commercialisation approach (8),

as well as technical aspects (100):

- Large data sets (10),
- Data access (10),
- Container support (10),

- Network peering (10),
- Support for identity and access management services (8),
- Business models (8),
- Service level agreements - SLAs (8),
- IaaS Innovative cloud service requirements (8),
- Cloud services (5),
- Data protection and security (8),
- Reporting, accounting and management portal (5),
- Support desk (5), and
- High-performance computing as a service - HPCaaS (5).

Apart from those non-technical and technical criteria, price was weighted as 60 points. The financial offer of each bid was scored on “Actual Price” according to the following formula:  $Points\ awarded = (1 - (tender\ price / maximum\ price)) * maximum\ of\ points\ on\ Price$ . In total, the overall possible score for each bid was 200 points. Tenderers were to surpass a threshold of 50% (70/140) on quality criteria to proceed to the subsequent phase.

## EVALUATION

At the end of each phase, the bids were tested by technical experts of the buyers group for quality, and evaluated against the tender criteria by the Evaluation Committee, which assessed each tender individually, independently and remotely. All tenders considered had eligible financial offers, but some were eliminated for not meeting the 70-point threshold on quality criteria. Only contractors that successfully completed the previous phase were allowed to bid in the subsequent phase.

A total of 28 multinational companies, SMEs and public research organisations from 12 countries submitted bids in the first round. From an initial set of ten bids, four were selected to produce designs in Phase 1, for which those four providers entered a Framework Agreement with the buyers group. At the end of Phase 1, three providers were selected to develop prototypes in Phase 2. Finally, in Phase 3 two providers were selected to fully develop and pilot a hybrid cloud service with the buyers group. A Total Cost of Ownership (TCO) study for selected use cases was introduced in the pilot phase to help the buyers group understand the impact of the contractors’ commercialisation plans.

## RESULTS

Two consortia (T-Systems and RHEA) were selected to deploy platforms offering each 10,000 CPU cores, 1 petabyte of storage and 40Gbps network connectivity. The group of procuring research organisations have successfully deployed applications and datasets used by end-users from astronomy, high energy physics, life sciences and photon/neutron sciences on these innovative cloud services.

The consortium of end-users are now actively using the Helix Nebula Science Cloud ([HNSciCloud](#)). This solution is a hybrid cloud platform that links together commercial cloud service providers and publicly funded research organisations' in-house IT resources to provide innovative solutions supporting data intensive science. Many reports documenting the process as well as guidelines and online platforms facilitate the sharing and wide replication of this PCP approach and its resulting innovative cloud service.

The PCP process, and specifically the consideration of the resulting total cost of ownership (TCO), has permitted the public research sector to make use of the latest, most energy-efficient IT technologies hosted in recent data centres with excellent power usage effectiveness, meaning the energy consumption required for intensive computing is minimised.

The HNSciCloud pilot phase also identified a gap in the current market offering for long-term data preservation services. The lessons learned and experience gathered in HNSciCloud are being applied in a new PCP action to fill this gap called ARCHIVER (<https://www.archiver-project.eu>).

As a further outcome of the initiative, innovative cloud services will be made accessible to a larger set of public research and higher education organisations in the context of the Open Clouds for Research Environments (<https://www.ocre-project.eu/>).

In recognition of its outstanding use of PCP for the HNSciCloud, CERN was also awarded the 2019 [Procura+ Outstanding Innovation Procurement in ICT Award](#), which is supported by the EU-funded [Procure2Innovate](#) Project.



*CERN winning the 2019 Procura+ Award for Outstanding Innovation in ICT Procurement.  
Photo credit: Jan Inge Haga*

## LESSONS LEARNED

Based on their experience with PCP for cloud services, the HNSciCloud consortium found the following to be valuable lessons:

- Invest effort in the tender preparation phase (between 9-12 months) to agree and precisely define the R&D challenges, the objectives and the expected outcome of the PCP.
- Prepare an in-depth needs assessment and an open market consultation activity during the tender preparation phase. Organise events where the procurers and potential tenderers can progressively refine the focus under the guidance of experts. Launch a survey among the known market players to allow the procurers to detect the capabilities and the willingness of the market to participate in the tender.
- In the tender process, nomination of a lead procurer who already had longstanding relationships with all members of the buyers group proved a successful approach. Close cooperation between the members of the consortium as well as with the contractors has been an important element of this initiative's success.
- Include provisions in the award criteria to ensure that proposed solutions by competing providers are sufficiently distinct and multiple solutions for each challenge are developed. Strive to contract a higher number of providers during each phase to ensure sufficient competition and increase the likelihood of a successful completion.
- Schedule intermediate reviews and payments as important checkpoints for the buyers group and contractors, to ensure all parties remain active and engaged.
- Establish mechanisms for the buyers group to prioritise the challenges, communicate these priorities to the contractors and take them into account when allocating resources during the execution phase.

### CONTACT

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# Developing ICT solutions for smart and efficient building management

**Bundesimmobiliengesellschaft mbH (BIG), Austria**

**Winner of the 2020 Procura+ Outstanding Innovation Procurement in ICT award**

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## BACKGROUND

The Austrian Federal Real Estate Agency (BIG) owns and manages more than 2,200 properties across Austria - including schools and universities, office buildings, residential buildings and urban districts - with over 500,000 using the buildings every day.

BIG wanted to unify essential functions and processes in user-friendly solutions. All stakeholders (owners, property and facility management, tenants, users, contractors etc.) should be able to use the property more conveniently e.g. by checking the occupancy of workplaces, reserving rooms or get the way through a buildings shown on an interactive room plan.

BIG opted for an innovation partnership because the required solution was not available on the market. It wanted a procedure which could combine the innovative ideas of bidders with BIG's know-how and experience regarding public real estate.

Two companies entered the partnership with BIG and are currently developing a solution, which by the end of the process will also be made available to third parties.

## PROCUREMENT OBJECTIVES

BIG wanted to optimise the way buildings are being utilised to achieve two goals. The first is to make space available for new uses. Often, buildings are only utilised for a few hours a day, especially educational buildings. The second is to only heat or cool rooms when they are in use. Together, these two goals aim to make better use of space, and better use of energy.

The main aim of this procurement was to find partners with whom to develop a software / app solution that unifies essential functions and processes in a user-friendly administration tool. BIG's vision was to network all stakeholders involved (including building owners, property and facility managers, tenants, users, contractors, and so on), in a single app which allows them to use the property more conveniently. This includes being able to easily check occupancy of workplaces, and reserve rooms for classes or meetings, and find directions within buildings. The ultimate goal was to optimize the use of public buildings throughout Austria.

## PROCUREMENT PROCESS

## PROCUREMENT PHASES

In order to meet their unmet needs, BIG decided to use an innovation partnership procedure. What set this procedure apart for BIG was the fact that once the actual procurement procedure for commissioning a contract partner is completed, innovative services are developed together with one or more enterprises to be used directly by the contracting authority without the need to conduct a new procurement procedure. In addition, a key aspect of this innovation partnership was the joint further development of functionalities and the potential joint distribution of the developed software to third parties within the scope of a joint venture.

The procurement was conducted using a two-stage process between May 2019 and December 2019. Stage 1 was a prequalification stage.

Stage 2 was held in the form of a negotiated procedure ending with a last and final offer. Offers were assessed by a jury compiled by the contracting authority, who were announced to the tenderers at the beginning of the negotiation round.

## SUBJECT MATTER OF THE CONTRACT:

Formation of an innovation partnership with several companies for development, implementation and delivery of a software and app solution for an electronic administration tool in the area of property and facility management.

## AWARD CRITERIA

In the development phase, the contract was awarded to the most economically and technically advantageous tender. The award criteria was weighted as follows: 80% quality (of which 40% was awarded for the concept, and 40% for presentation), and 20% price.

Bidders were asked to share technical details of the software, as well as a full business plan, including:

- A deep market analysis showing the potential of the joint venture product;
- A SWOT analysis containing future extensibility for further innovations, usability and design flexibility, plus;
- A return on investment calculation from the perspective of the investor (BIG aimed a sales partnership after the development phase and therefore asked for partnership models including potential investments in the bidder companies or the establishment of a joint company).

## EVALUATION

The quality evaluation was conducted by evaluating the proposed solution according to sub-criteria, which also includes the presentation of the planned business model for the joint sale of the developed software / app. Furthermore, the quality was assessed in the context of hearings, which were to be attended by the project manager and project manager deputy.

The 'concept' sub-criterion was assessed according to the below:

- (i) Project structure (including comprehensibility / plausibility of the further milestones, of the resources used and of a schedule optimization);
- (ii) project organisation (including suitability and effectiveness of the measures presented, sufficient number of staff and sufficient availability of the named employees, suitability and effectiveness of the tools presented for meeting costs and deadlines, sufficient level of detail in the documentation, comprehensibility / plausibility of the entire elaboration);
- (iii) Project Leader and Deputy Project Leader (including sufficient availability of the project manager and project manager deputy, suitability and effectiveness of the measures for internal coordination with projects running at the same time, plausible and effective assignment of tasks and sharing of responsibilities);
- (iv) Distribution Strategy (including comprehensibility / plausibility of the sales strategy, high level of participation by the client in the project company, sufficient scope of services for further development and maintenance of the software / app, suitability and effectiveness of the measures for further sales).

The 'presentation' sub-criterion was assessed according to the below:

- (i) conclusive and comprehensible communication of the elaboration and results of the concept;
- (ii) conclusive and comprehensible answers to any additional questions about the concept;
- (iii) communication skills, performance / personal and social skills.

The price evaluation was carried out by assessing the bidder's development costs as target prices that were estimated for achieving the interim targets on the basis of the total net price. The total net price related to the total net prices offered by other tenderers with the cheapest price offer reaching the maximum number of points.

## RESULTS

The call for tender attracted a lot of interest, with over 90 companies downloading the call.

In the end, 11 companies from three European countries submitted applications to the prequalification stage. Out of these 11 companies, 6 fulfilled the innovation specifications, and would have qualified for stage 2. Unfortunately, formal errors in the applications meant just four companies could be invited to stage 2.

Contracts were signed with two companies in February 2020. The companies have both reported positive benefits from participating in an innovation partnership with BIG.

The developed solution makes use of IoT devices which provide real time data on public buildings and simplifies targeted communication and information provision in real time via a central platform for all users. The advantages range from news, surveys, FAQs, calendar and booking functions, damage reports to canteens' menu plan.

The result is a system which provides all users real-time information in a user-friendly manner.

Specific user groups also benefit in the following ways:

- Landlords:
  - Predictive maintenance with direct access to craftsmen
  - Direct communication to many people about new business model opportunities
  - New short-term rent opportunities for landlords (e.g. shared workplaces) or tenants (sublet options during unused periods).
- Tenants:
  - Individual access authorization for all kinds of users.
- Users:
  - Indoor navigation features guide users to meeting rooms, lecture halls – or when combined with IOT devices – study- / work-spaces

In recognition of its outstanding use of an innovation partnership, BIG was also awarded the 2020 [Procura+ Outstanding Innovation Procurement in ICT Award](#), which is supported by the EU-funded [Procure2Innovate](#) Project.

## LESSONS LEARNED

- Although innovation partnerships take more time than a standard public procurement competition, they provide the contracting authority with more possibilities.
- The main challenge of the whole process for BIG was to fulfil the legal requirements of the innovation partnership on the one side, but to simplify the process as much as possible in order to attract companies (including start-ups) to bid. The lack of know-how of this new procurement method both within BIG and in bidders meant it took a lot of time to develop objective assessment criteria. Small entities, in particular, struggled with the complex procedure. In this case, two very promising bidders were excluded in Stage 1 because of a technicality. In future innovation projects, BIG plans to make more legal expertise available to potential bidders.

### CONTACT

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# PROCURE2 INNOVATE

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The original case study is available at

[http://ec.europa.eu/environment/gpp/pdf/news\\_alert/Issue\\_85\\_Case\\_Study\\_164\\_Rotterdam.pdf](http://ec.europa.eu/environment/gpp/pdf/news_alert/Issue_85_Case_Study_164_Rotterdam.pdf)

[www.procure2innovate.eu](http://www.procure2innovate.eu)



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PROCURE2  
INNOVATE

**InDemand, a new demand-driven co-creation model that helps to procure innovation in public organizations.**

**Servicio Murciano de Salud, Spain**

**Winner of the 2021 Procura+ Outstanding Innovation Procurement in ICT award**

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## BACKGROUND

The Servicio Murciano de Salud (SMS) is the body responsible for the system of public health services in the Spanish autonomous community of the Region of Murcia, belonging to the National Health System created in 1986. With its participation in inDemand, The Servicio Murciano de Salud (SMS) demonstrated its commitment to innovation and its commitment to digital health, counting on healthcare professionals (intra-entrepreneurs) and supporting the real implementation of innovation.

Three partners in the Murcia region coordinated and led the project: Servicio Murciano de Salud (public procurer), Ticbiomed (a local business cluster), and INFO (the Regional Development Agency). Servicio Murciano de Salud (SMS) has already made a full procurement of one solution that was successfully co-created and tested within inDemand, that is called EPICO (which stands for Epilepsy Communication Channel). Other piloted solutions are planned to be fully procured beyond their innovation phase in 2021 leveraging Next Generation Europe funding.

The European project inDemand brought together procurers from 3 European regions (Murcia, Paris and Oulu) to test a new co-creation model - inDemand - which is presented as being leaner, faster and requiring less organisational resources and overheads through pre-commercial procurement (PCP), and is therefore more suited to rapidly changing technologies, like digital solutions. So far, 22 innovation projects have tested the model, including one led by the Murcian Health Service (EPICO).

## PROCUREMENT OBJECTIVES

InDemand's big bet is to promote innovation by combining two factors: that it is the demand that identifies what it needs (in this case, the health professionals of the Murcian Health Service) and that the development of the solution is in the process of co-creation (health professionals together with technology companies). The result is a higher success rate in digital solutions, since they have been developed together with the client, with a continuous process of feedback and a global vision of the needs. In addition, in the Region of Murcia, companies will have the opportunity to carry out a pilot experience in SMS medical centers.

As an added value, a Community of Practice with 12 other regions in 8 European countries was set up

during the EU project lifetime (inDemand project ended in December 2020). Two of these regions (Aragon and Navarra) have already launched tenders to procure innovation following the inDemand model with their own resources and budget.

## PROCUREMENT PROCESS

### PROCUREMENT PHASES

Working with the Neurology Department of Santa Lucia Hospital, EPICO used the inDemand model to identify the challenge of improving accessibility for and follow-up with epileptic patients. A call to companies to co-create an innovative solution alongside clinicians was then launched. After a tender procedure, one company – Oxiframe (renamed Aircrum it) - was selected by a decision committee of stakeholders. Working with neurologists and patients, the company engaged in a 5-month co-creation process of an all-in-one app of 120 patients for 12 months. SMS then prepared an open tender for a solution, which a bigger company specializing in providing Health solutions (PULSO), in collaboration with Oxiframe (Aircrum it) won.

### SUBJECT MATTER OF THE CONTRACT:

“The Patient Health Circle” for Servicio Murciano de Salud seeks a global solution for digital follow up of chronic diseases, such as epilepsy. The patient is the center of attention for assigned professionals, family members and others important to the patient. The objective of the project is to ensure the continuity of care that is increasingly invoked as one of the most important issues of healthcare activity, directly related to the quality of the same, and seen as a prerequisite to improve the efficacy, effectiveness and efficiency of healthcare.

### AWARD CRITERIA:

Main criteria for the public innovation procurement were settled by technicians and healthcare providers. Solutions offering a collaborative environment or dashboard including an alert system, file sharing, interoperability and integration with electronic clinical history, were awarded. Solutions should also provide patients with an easy-to-use App. Experience in development of health digital solutions was mandatory.

### EVALUATION

Four technological companies applied to the public tender. Pulso, in collaboration with Oxiframe (Aircrum it) offered their experience with EPICO as the foundation for an ad-hoc broader solution, The evaluation committee awarded them with the highest score both for their team expertise and for the solution roadmap presented.

## RESULTS

The inDemand model has been leveraged in more than 50 procurement of innovation projects. It can be estimated that 200+ organizations (most of them SMEs) have submitted a bid, alone or in consortia, for the different calls based on the inDemand model from multiple procurement organizations. This impact is expected to grow because the organizations in the inDemand Community of Practice (CoP) plan to leverage soon to be available sources of funding, eg. Next Generation Europe or ERDF, to trigger new procurements of innovation based on the model. To maximize optimal implementation, the organizations that joined the CoP after the project start did receive training and personalized mentorship (on site and remote).

There was a 100% acceptance of the tool, which was found to significantly improve communication between doctors and patients affected by epilepsy. It has increased patient satisfaction by 50%, and led to a quality of life improvement of 2.5 points (according to the QOLIE-10, NDDI-E test) for direct communication between patients and doctors. The developed solution was then tested with 54 patients at the Hospital of Cartagena for 2 months, and then a wider group. It can therefore be considered to be a very good example of how to use a co-creation model with companies and with the involvement of clinicians and patients. Moreover, it is good that it has been possible to show positive results in the user group.

The strategic results are:

1. To design a demand map based on the needs of professionals (from bottom to top) subsequently prioritized by management (from top to bottom).
2. To create a talent map, identifying innovators.
3. To value co-creation that has been shown to add value to both professionals and companies.

The combined contractual value of the innovation developed in the 22 projects within the inDemand project was 791.518€. The regions of Aragon and Navarra, members of the inDemand community, have contractually procured innovation for a combined total of 150.000€ out of 6 projects. More regions from the community are expected to launch similar calls in 2021/22. The contractual procurement of innovation under Cherries is a total of 150.000€ for 3 projects. The combined procurement of innovation under inDemand-RCT is 350.000€ for 20 expected projects. The follow up procurement of EPICO by Servicio Murciano de Salud (The Patient Health Circle) was a total of 269.500€.

## LESSONS LEARNED

### 1. Demand-driven co-creation works.

- a. Demand driven, at least in the Healthcare sector, is a much better approach than Technology-push. The promoters of inDemand were previously frustrated to see the numerous solutions proposed that did not have commercial traction because they were addressing needs that were not perceived as important by procurers.
- b. Solutions created in co-creation are a world apart from those done 'in the cave', especially when the technological partner is a relatively young company or new in the sector. The level of insight acquired by directly exchanging needs, ideas, legal limitations or standard practices is probably much more valuable to the company than the money received to deploy the pilot.

**2. New procurement of innovation instruments are needed.** In Demand proves that there are alternatives to the standard ones, that are faster and require less burden. Promoters of the inDemand project have experimented with other instruments promoting open innovation, namely PreCommercial Procurement (PCP) as proposed by the European Community. They were put off due to the amount of internal resources needed to set them up and the time taken to co-create a solution. Especially in areas like ICT/digital, long development means that initially proposed technology may be phased out by project end.

**3. Ecosystem collaboration adds value.** One of the success of inDemand model is that it not only involves the procurer and the supplier, but also other members of the ecosystem like Funders (eg. a Regional Development Agency that locally manages public funding geared to innovation) or Supporters (eg. a business cluster that delivers business support to maximize commercial traction). This collaboration makes the inDemand approach much more valuable and sustainable than other approaches, because, among others, ERDF funding is available every year and successfully piloted solutions need to be procured by other organizations in order to have a positive economic impact in the company.

**4. Adoption of innovation is still a challenge.** As originally proposed, inDemand ends with the assessment of the co-created solution (like PCP). If it works or not. The unfamous ‘valley of death’ towards adoption is still there. Though Servicio Murciano de Salud has managed to scale EPICO into a corporate procurement, no process is in place to systematically adopt successfully piloted innovation. This is work in progress, as several proposals to address it are currently being evaluated.

**5. Culture eats strategy for breakfast.**

At the end, what really matters is how the culture towards innovation changes. Management can set up as many strategies/actions as they want but if their personnel do not buy them, the game is over. Especially in public administration. Changing perceptions towards identifying needs, being innovative, open to collaboration and devoting personal time to solve problems is what delivers sustainable impact. No procurement project, no matter how big or strategic, changes an organization in the long run. Culture does.

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# PROCURE2 INNOVATE

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