

JOURNAL

PROJECT

DIACCESS - Digital
ACCEleration for
medium SizE
Sustainable cities
📍 Växjö, Sweden

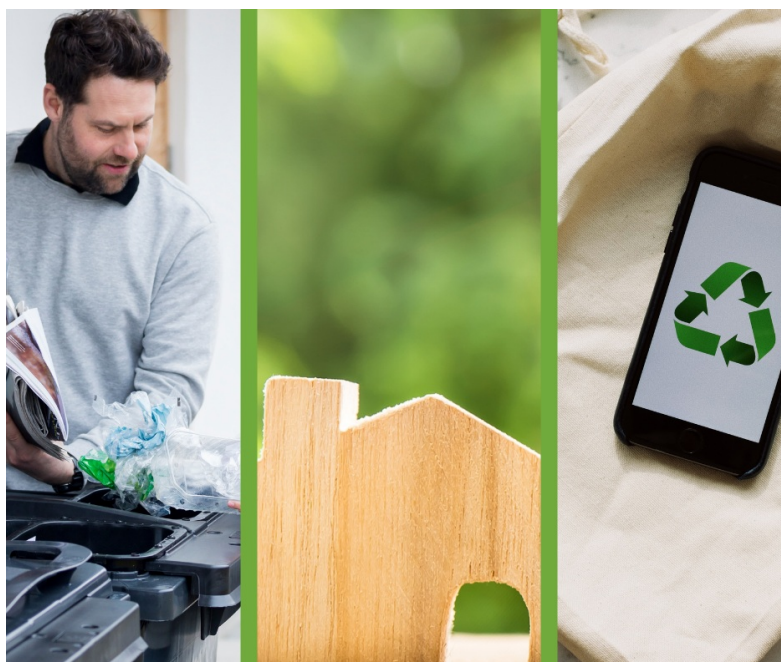
TOPIC

Digital transition

EDIT 03 MARCH 2021
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Procurement for innovation in action: DIACCESS Journal 1

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This journal gives an account of the first experiences in the DIACCESS project in Växjö, Sweden

Despite severe difficulties posed by the pandemic, the DIACCESS project is well on track:

- The first round of Innovative Public Procurement is being finalised;
- Companies have been selected for two challenges (one to develop a smart snow cleaning solution for roads, and one for a smart school heating system) and are now being contracted;
- The project's Digital Lab developed several prototypes, among which a chatbot prototype to assist citizens that apply for a building permit, and successfully hired and trained unemployed trainees;
- The IT platform is active now.

The project faced key challenges in the domain of communication, both externally (to find and motivate suppliers and explain them how this type of procurement is different) and internally (to make sure that city departments adopt the method and learn how to formulate open challenges), but they have been largely successfully addressed. It remains a challenge, however, to engage end users more in the design of new digital innovations, and to monitor and evaluate the outcomes of the project.

1. What the DIACCESS project is about

A cornerstone of the DIACCESS project is a series of **innovative public procurement (IPP)** processes/rounds, in which companies are asked to develop a solution (with a strong digital content) for an urban challenge. In five rounds, challenges are gathered from the city of Växjö or one of the city-owned companies; the city challenges are posted, and companies are invited to think about solutions for those challenges. IPP is different from “normal” procurement in the sense that the city does not purchase a well-defined and known product or service from a company; rather, it asks companies to co-develop a solution for a broader defined problem or challenge. After a selection procedure, the city signs a contract with a company (or consortium of companies), to enter the development phase, in which the new solution is co-developed. Only after this is done successfully, the company will become the city's supplier and will start to make a revenue. Ultimately, the city is not interested in owning the intellectual property rights (IPR) of the new

solution, product or service: that will stay in the hands of the company. So, the company can in principle also sell this solution to other cities. This should make it attractive for companies to enter in this partnership.

During the project lifetime, five rounds of IPP are planned; in each round, 2 challenges are to be tackled with new solutions. The project should show a learning curve, in which urban authorities learn how to use this type of procurement in a good way (and obtain better urban solutions that are useful for citizens, city staff and/or save taxpayer money), and in which companies also get used to this new way of dealing with city authorities and may develop new markets. It is hoped that this type of IPP will lead to more digital innovations in the public sector, and also helps companies to explore new markets and hence create economic development and job growth.

Alongside these IPP rounds, the DIACCESS project sets out to create a **Digital Lab** to develop and prototype new urban innovations. The Lab works in the service of the city: departments can approach the Lab with challenges or problems, to have it explore if there is a possible solution. Another role of the Lab is to make prototypes that demonstrate how digital technology can work in practice. For municipal departments, it may take a lot of imagination to foresee how a solution might work, and in that case, a prototype, even an imperfect one, can help to demonstrate in practice what can be achieved. The Digital Lab has also a social function: it trains unemployed people to obtain new skills that may help them to find a job. On a half-year rotation basis, four selected trainees, supervised by experienced IT experts, learn how to develop digital solutions.

Finally, the project sets out to develop an urban **IT platform** to store, process and visualise the data that are generated by (and used by) the new digital innovations. The platform should provide its users with insights and information for better decisions and automated activities. The platform is to be open for all actors to provide and collect data with a built-in payment mechanism that will encourage private actors to deliver data on commercial terms.

2. How the project fits in the policy context at the EU, national and regional level

The project fits in several policy frameworks. At EU level, the project fits in the EU Partnership on Digital Transition that identified several bottlenecks and created a corresponding action plan to be implemented by European cities. Regarding the ERDF, the project contributes to the following thematic objectives (TOs):

TO1/IP.1.a DIACCESS will enhance research and innovation infrastructure and capacities as the IT-platform developed in WP 5 enables development of R&I excellence.

TO3/IP.3.a-d DIACCESS will enhance the competitiveness of SMEs by opening up the city administration for innovation close to operations (WP4) that can lead to new business models and development of new products and services.

TO4/IP.4.c DIACCESS will support the shift towards a low-carbon economy supporting energy efficiency, smart energy management and renewable energy use in public buildings as well as enabling winter biking (WP6).

TO10/IP.10 DIACCESS will contribute to education, training and lifelong learning for persons far from the labour market in the digital lab (WP7).

TO11/IP.11 DIACCESS will improve the efficiency of public administration enhancing institutional capacity of public authorities and stakeholders and efficient public administration through the new way of developing projects through open innovation (WP4).

Link with local/regional/national policies

DIACCESS also matches with national and regional policies. The [regional innovation strategy](#) (RIS) for the Kronoberg region promotes challenge-driven innovation as a way to improve innovation in its region, and sees digitalisation as a key factor for success. One major challenge to be tackled in this programme is to open the public sector for innovation. This project will contribute to the goals in RIS, for example to Target 1: Kronoberg shall in 2025 develop the county's strengths by challenge-driven cooperation between university, industry, public and civil sectors.

On the national level, Sweden's National Strategy for Sustainable Regional Growth and Attractiveness states innovation and entrepreneurship as one of 4 priorities. The public sector needs to demand innovative, sustainable solutions in order to enable to meet our public service commitments in the future. This project does exactly that through the [novel innovation process](#). Finally, the project contributes to the ambitions of [DIGG](#), a new Swedish government authority, created to think creatively, address new challenges and identify new opportunities within digitalisation.

3. Update of the project

This section provides an update of the progress of the project at the time of writing (January 2021) in the three main domains: the innovative public procurement, the digital lab, and the IT platform.

3.1 Update of the innovative public procurement (IPP)

As of January 2021, the project is finalising the first round of IPP; companies have been selected for two challenges (one to develop a smart snow cleaning solution for roads, and one for a smart school heating system) and are now being contracted. Meanwhile, in the autumn of 2020, the second round started, in which solutions are sought for smart bin emptying and for smart waste recycling (these challenges came from the waste treatment company owned by the city).

Introducing a new type of procurement proved to be far from straightforward, because it entails a completely different relation between the city and companies. For both sides, it requires effort, change, communication, a willingness to learn, and acceptance of some risks and hiccups that any innovation always brings. In the first year of the project, the project partners (and involved suppliers) bumped into many such hiccups and challenges. First of all and most importantly, the pandemic put a big challenge. It made f2f meetings difficult if not impossible, whereas the development of new approaches asks for a lot of communication and trust, which is better facilitated when you see each other in person. Also, the pandemic, especially in the first months, asked already a lot from the flexibility, capacity and ingenuity of the city staff to maintain their daily work; it was not easy to engage people in a new way of working with IPP. Apart from the pandemic, several other challenges emerged:

1. Companies (the prospective suppliers) found it hard to understand what IPP is about, and how it is different from normal procurement. In the beginning, they tended to see the city still as a “client” that should tell them what to do, rather than a partner in innovation. In the first round of challenges, there were many questions from their side. As a response, the project leadership decided to create a detailed Q&A so that suppliers could better understand what their role would be in the IPP project, and invested much time in communication with the suppliers.
2. Related to that, communication with companies (suppliers) turned out to be a key aspect. It is a challenge to find companies that are able and willing to contribute to the urban problem at hand, and at the same time are open interested to work with the city in this new type of partnership. In the early months of the project, the communications function was somewhat understaffed due to position changes. Nevertheless, in autumn 2020, a very pro-active and experienced communication expert took the helm, with positive impact on the project.

Another key issue was the ownership and management of the data that are generated/collected by these urban innovations. On the one hand, the city wants to own (and be able to use) the data, and wants data to be stored in the city’s data platform (that is being developed in DIACCESS) and open. On the other, companies have their own data systems, and in some cases want a degree of control over the data, because data are valuable from a business perspective. The project evokes discussions how to manage data ownership and management, but the situations vary widely with the types of challenges addressed.

The newness of IPP is not only on the side of companies; also city departments and city-owned companies are not yet used to this new way of procurement. The first two challenges (snow clearing and heating system for schools) were already pre-defined in the project proposal; but for the next rounds, the challenges must come from city departments that are already overstretched due to the pandemic and oftentimes still have not full grasp of what the IPP method entails. For the second round (out of five), that has just begun, the municipal waste company has been able to formulate two new challenges; for the third and further rounds, a main task of the DIACCESS leadership will be to convince/seduce city departments to come up with new ones.



3.2 Update of the Digital Lab

A key role of the Digital Lab is to make prototypes that demonstrate how digital technology can work in practice. For municipal departments, it may take a lot of imagination to foresee how a solution might work, and in that case, a prototype, even an imperfect one, can help to demonstrate in practice what can be achieved. During the reporting period, the lab developed several prototypes, among which a chatbot prototype to assist citizens that apply for a building permit. It was not perfect, it could not answer all questions, but it helped the department to understand much better what a chatbot can and cannot do, and to make the decision if it makes sense or not to make a full version. The Digital Lab has also successfully trained unemployed people to obtain new skills that may help them to find a job. The first batch of trainees did a remarkable job, but not all found regular employment after their training yet. This also has to do with the difficult labour market, as due to the pandemic the number of vacancies, also in IT, has decreased dramatically. Moreover, for the second and third semesters, the Digital Lab had difficulty to find new trainees that would meet their requirement.



3.3 Update of the IT platform

A licence has been bought for an IT platform for the limited period of one year. It will be tested in the coming year, to see if it fits with the ambitions of DIACCESS and the city as a whole. For now, it is too early to tell whether this is the case.

4. The challenges

4.1 Leadership

The leadership in this project is well established and functions well. The project leadership is adequate and on top of things. Moreover, in the municipal organisation, there is strong backing for the project on the highest level, and also on the political level. As written above, the project faces the issue of finding enough interesting urban challenges; they will have to be formulated by urban departments or urban companies. So, the leadership of all departments will have to play a role to make that happen. Changes in the leadership have not happened so far.

4.2 Public procurement

In this project, innovating public procurement is a central element, if not the foundation: a key objective is to foster new digital solutions through innovation partnership method.

Innovation partnership has been established as a new type of procurement procedure in 2014 by the EC. It is a restricted procedure followed by a contract with milestones on the research and development part (creating innovative solution) and the supply of the newly found solution (supplying the innovative solution adapted to the specific needs of the public procurer). The main feature of the innovative partnership is that the innovation process happens during the contractual phase, once the innovation partner(s) is (are) selected and awarded the contract. In other procedures, innovation typically occurs in the pre-contracting phase and at the moment of the conclusion of the contract; the public procurer already knows what type of solution it is buying. In innovation partnership, the public procurer is entering into the contract with the best potential supplier(s) of innovation who should be able to create the innovative solution and

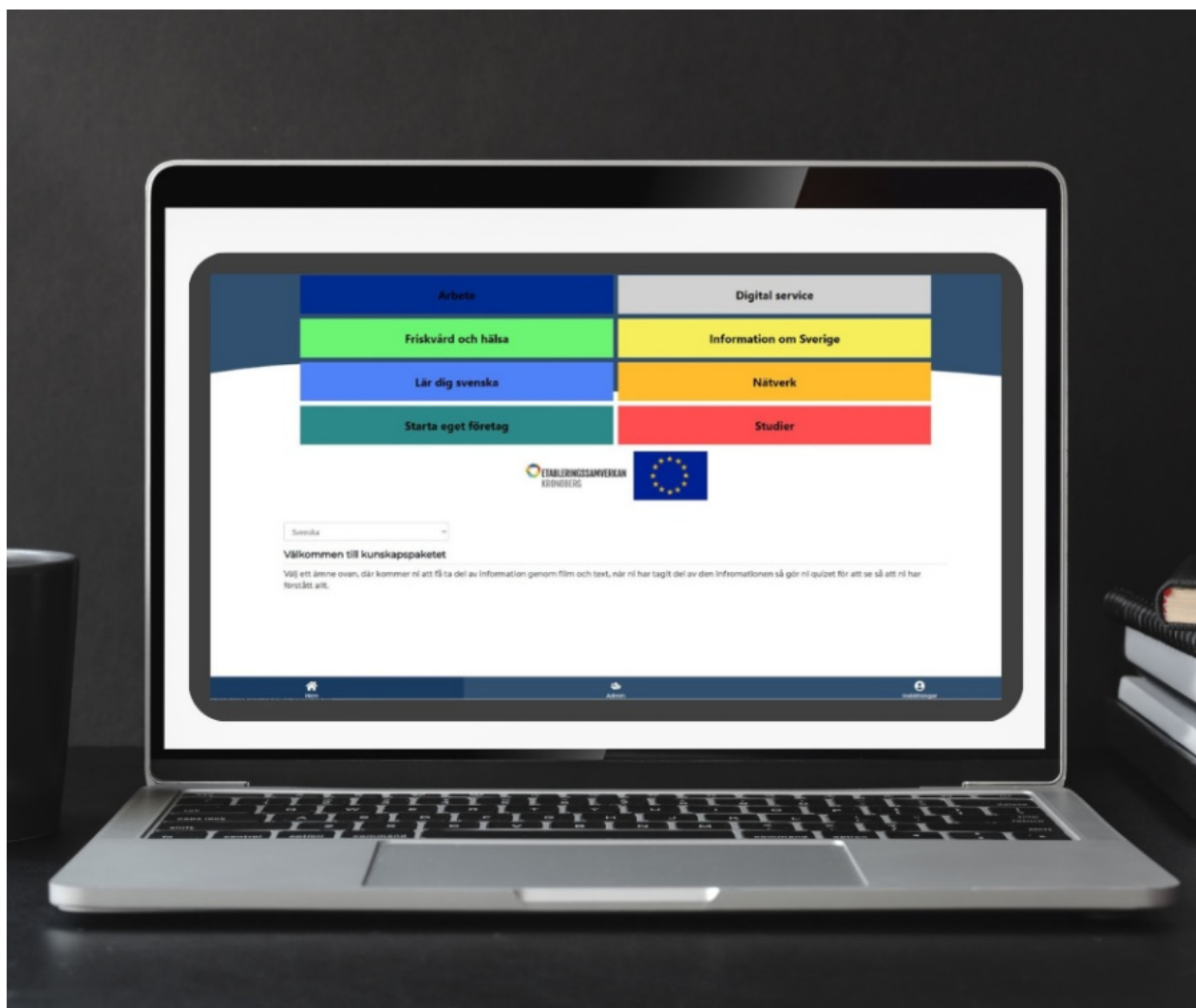
supply its real scale implementation for the public procurer.

The project so far demonstrates that it is far from straightforward for city departments to formulate challenges, based on which private companies can develop innovative solutions. Departments are not used to work in this way, their procurement methods are still traditional. It will take much effort, and a change in mind-set and culture of the municipal organisation. Municipal services can become better and/or more efficient using digital technology, but there is no structure yet of how challenges can be collected from the various city departments, and capacity building among city staff will probably be needed to realise the change. Some good experiences or practices of how this can work will help.

So far, several matchmaking meetings were held, to connect the urban challenges with companies that might be interested to co-develop solutions; these meetings turned out to be critical to clear up issues, to improve mutual understanding, and to answer many questions from the side of the companies.

4.3 Organisational arrangements within the urban authority (cross-department working)

This project connects different city departments because it evokes a new way of working, in which procurement does not take the form of precise descriptions but more of open challenges for which several creative solutions can, in theory, be developed. Several municipal departments/companies have been closely involved so far: education department (the school heating challenge), infrastructure department (snow clearance), the waste company (waste collection and separation projects), but more should follow and active steps are being taken to achieve that. The challenge for the municipal organisation is to integrate the collection of challenges in the business development process, rather than setting up a separate structure. In the long run that will be required in order to keep these initiatives coming even after the project has ended. So it's the integration of innovation in the already existing business development that's key.



4.4 Participative approach for co-implementation

The main novelty of DIACCESS is in the way urban innovations are initialised as interaction between the city (and its departments/companies) and suppliers. Evidently, the resulting innovations should benefit the “end users”, but they

come in many disguises: citizens (in their various roles), civil servants, school children, or heads of department, all depending on the specific innovation or challenge that is being addressed. From the innovation literature, it is well known now that end user engagement is crucial for the success of many innovations. In the DIACCESS project however, direct end user participation is not a strong issue; it is taken for granted that urban departments engage with them during the process. For example, in the 2nd round of challenge definition, the waste company invites suppliers to come up with solutions for more effective logistics, and for waste separation. Clearly, citizens (in their role as waste disposers) should be involved in this process, but the project leadership assumes that this will be done by the waste company.

4.5 Monitoring & evaluation

In DIACCESS, monitoring and evaluation is taken care of on different levels; most evidently, the project leadership monitors if the project goals, timelines deliverables and milestones are met. This is unproblematic so far. On a second and more complicated level, monitoring & evaluation is about result indicators for the innovations that are developed during the project. The question here is: to what extent do these innovations improve the baseline situation, and how to measure that. It turns out difficult to find/collect baseline data and results/performance indicators for the specific challenges, but in the end, for the first two challenges addressed (snow clearing and school heating) the project has managed to make it. Third, it is not so easy to qualitatively monitor the wider overall objectives of the project, such as “increased supplier participation”, “satisfaction with suppliers”, or “satisfaction with the municipality”, again there is a lack of baseline data, departments so far have delivered little relevant information, partly because they do not have it and partly because they are occupied with so many other things due to the pandemic. Hence, it will be a challenge for the project to collect the needed data, but also to develop more qualitative methods to assess the various types of impacts.

4.6 Communication with target beneficiaries and users

Communication with the suppliers has so far been the most challenging part of DIACCESS; the innovation method is new and it took much time and effort to communicate how it works. In the first months of the project, the communication function was not fully staffed, and there also was a lack of experience on how to communicate with the business sector. Since mid-October, a new communication manager is in charge, who very pro-actively reaches out to the business community, not only in the region but also nationally, and also within the municipal department; this begins to bear fruits. A key lesson here is that online communication is not enough, a personal touch is needed to go after the right audiences.

So far, there have not been large meetings/events to communicate what DIACCESS is or does; the kick-off meeting was postponed due to the pandemic but will be planned for March 2021.

4.7 Upscaling

The upscaling in DIACCESS has three dimensions:

1. The project should, on the longer run, lead to a wider application of innovation procurement methods and a culture of co-development and experimentation in the city. Here, progress is being made, DIACCESS is becoming known among the departments.
2. Scaling is relevant for the suppliers that co-develop solutions with the city. Here, the idea is that the city will not own the digital solutions developed by the companies, but rather buy a licence. The IP remains with the companies, so they can sell their solutions also to other cities. It is too early to tell if this type of scaling is going to happen in practice.
3. DIACCESS may scale up in the sense that it acts as catalyst for the adoption of innovative procurement and digital innovation for smaller municipalities in the wider region. Also, here it is too early to tell, but it would be good if DIACCESS would help to build capacity in those smaller and less resourced municipalities.

5. Conclusion and lessons learnt

In conclusion, DIACCESS is developing well, despite severe difficulties posed by the pandemic. The IPP process is set in motion for the first two sets of challenges.

A key lesson for other cities here is to put much effort in communication, both externally (to find and motivate suppliers and explain them how this type of procurement is different) and internally (to make sure that city departments adopt the method and learn how to formulate open challenges). Communication should take the form of reaching out personally, but also through matchmaking and information meetings, complemented by online checklists.

The city departments are getting acquainted with IPP and the digital lab, but still a culture change is needed for them to formulate more open challenges and work with companies in a co-development process. In the process of developing digital innovations, end user involvement is key. Now, this is implicitly embedded in the digital innovations, but a more

explicit attention from the side of DIACCESS could improve the end result further.

Concerning monitoring, it will be a challenge to set baselines and find methods to assess in a reliable way if improvements are being realised, both in the practical fields where the innovations are developed, and more in general in terms of client/employee/supplier satisfaction with the city.

Finally, the city could reach out pro-actively to smaller towns and municipalities in the region, so they can get acquainted with IPP methods; Vaxjo could develop into a regional leader in capacity building and culture change in this respect.

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