

Updated evaluation of innovation partnerships

*Experiences from public contracting
authorities and the public funding apparatus*

September 2023

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Summary

- On behalf of the National Programme for Supplier Development (LUP), Oslo Economics has conducted an updated evaluation of innovation partnerships (IP) that builds on a previous evaluation (OE, Feb. 2022) and considers the development that has taken place since then.
- IP is a procurement procedure characterised by combining the development phase and purchase in one competition.
- Since its launch in 2017, 29 innovation partnerships have been initiated with support from Innovation Norway. As of August 2023, 13 partnerships have been completed, 11 of which led to a purchase of the developed solution.
 - Funding of IP was withdrawn in 2022 and the cut was maintained in 2023.
- Method: In this updated evaluation, we have interviewed selected employees from LUP, reviewed background documents on innovation partnerships from LUP and articles on developed solutions from LUP's website.
- LUP finds that several public agencies are interested in implementing innovation partnerships, but they are completely dependent on risk mitigation in the form of external funding for the projects to be initiated.
 - 84 percent of the public agencies would not have implemented IP without funding from Innovation Norway (OE, 2022)
- The opportunity to follow IP processes has increased the expertise of public agencies and several of them signal that they want to use the procedure to tackle challenges they face. Innovation partnerships as a method for procuring innovation has also become more robust on the basis of the experience gained by the enterprises.
- There are several examples of successful innovation partnerships. The solutions developed show great potential for scaling in Norway and internationally, and as more projects are completed, it is possible to collect data to assess their impacts more closely.

Content

- Background and mandate
- About innovation partnerships
- Results and lessons learned from the previous evaluation
- Experience from the public funding apparatus (“virkemiddelapparatet”)
- Examples of successful innovation partnerships
- Conclusion and recommendations



Background and mandate

Background and mandate

- On behalf of the National Programme for Supplier Development (LUP), Oslo Economics conducted an evaluation of innovation partnerships as a procedure in the winter of 2021/2022, based on experience from public agencies.
- At the time of the evaluation, 28 innovation partnerships had been initiated with support from Innovation Norway, four of which had been completed.
- Of the four completed innovation partnerships, two led to procurement, while the other two did not result in a purchase of developed solution.
- Since then, more innovation partnerships have been completed. As of September 2023, 13 partnerships were completed, out of which 11 led to purchase of the developed solution – either partially or completely.
- LUP has requested an updated evaluation which considers new developments in the period since the last evaluation.
- This report builds on Oslo Economics' report Evaluation of innovation partnerships – experiences from public agencies from February 2022.
- In this updated evaluation, we have interviewed selected employees from LUP, reviewed background documents on innovation partnerships from LUP and articles on developed solutions on LUP's website.

The need for innovative procurement

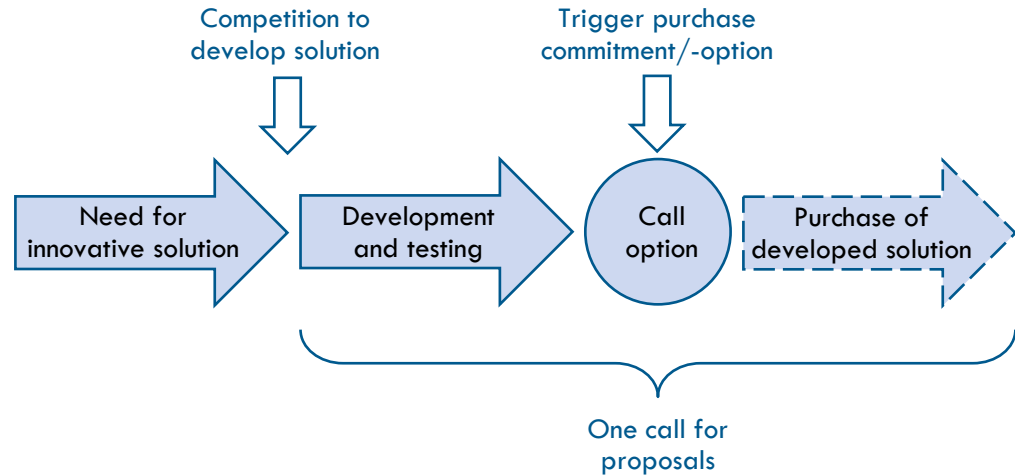
- Norway is facing societal challenges such as climate change, demographic changes (ageing population) and changes sparked by technological developments.
- Several government white papers have expressed a desire for public procurement to be a driving force for innovation and restructuring in the Norwegian economy.
- The primary and original goal of public procurement is to ensure the best possible coverage of needs at the lowest possible cost, which requires an efficient use of society's resources.
- Efficient use of society's resources requires adequate investments in research, development and innovation.
- The absence of public support schemes may result in underinvestment in R&D and thus a market failure.
- Access to risk relief in the form of financial and procedural support is crucial for suppliers and contracting authorities to be willing to take on the risk associated with developing new solutions.
- "Procurement of innovation" is a type of procurement in which the contracting authority actively seeks to attain a product or service that is currently not on the market and is thus a way of developing new solutions.
- The Innovation Partnership (IP) is an example of such a procurement procedure that combines the development and purchase phase into one and was introduced in the new procurement regulations that came into effect on 1 January 2017.



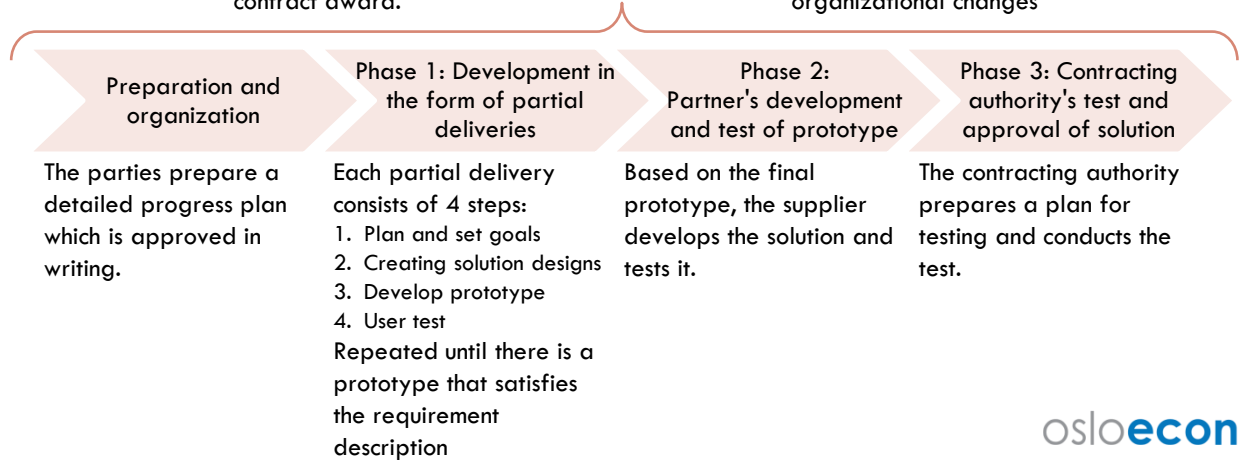
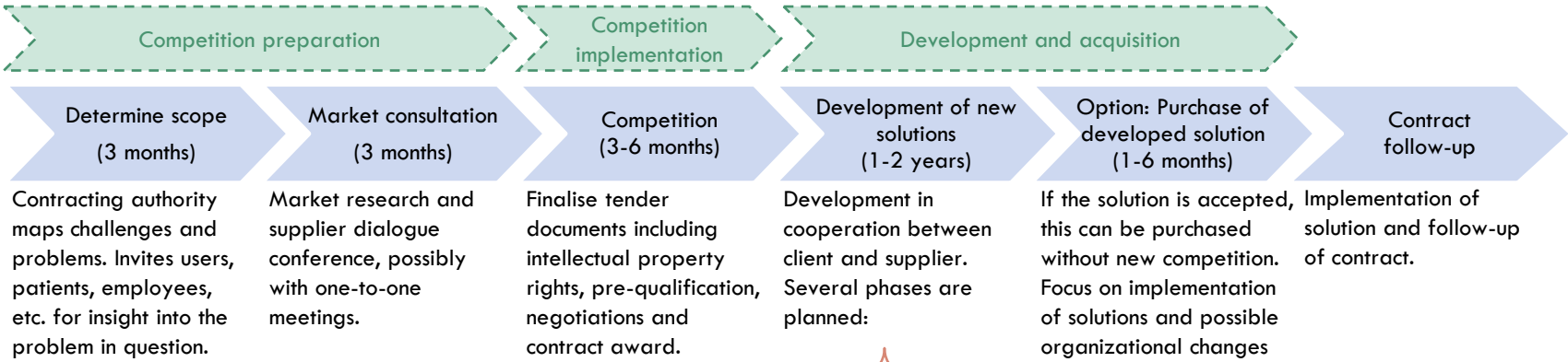
About innovation partnerships

Innovation partnership in brief

- Innovation partnerships are used when procuring solutions that are not on the market
- The procedure facilitates product and service development in a collaborative process between the client and supplier/developer
- Innovation partnerships combine the development phase and the subsequent acquisition in the same competition
 - Thus, IP differs from other forms of innovative procurement, in that there is no need to announce a new competition when the development phase is completed
- The purpose of innovation partnerships is to develop completely new solutions to the specific needs of public agencies
- Innovation partnerships were adopted in Norway in 2017, and the approach has since been further developed



Implementation of innovation partnerships

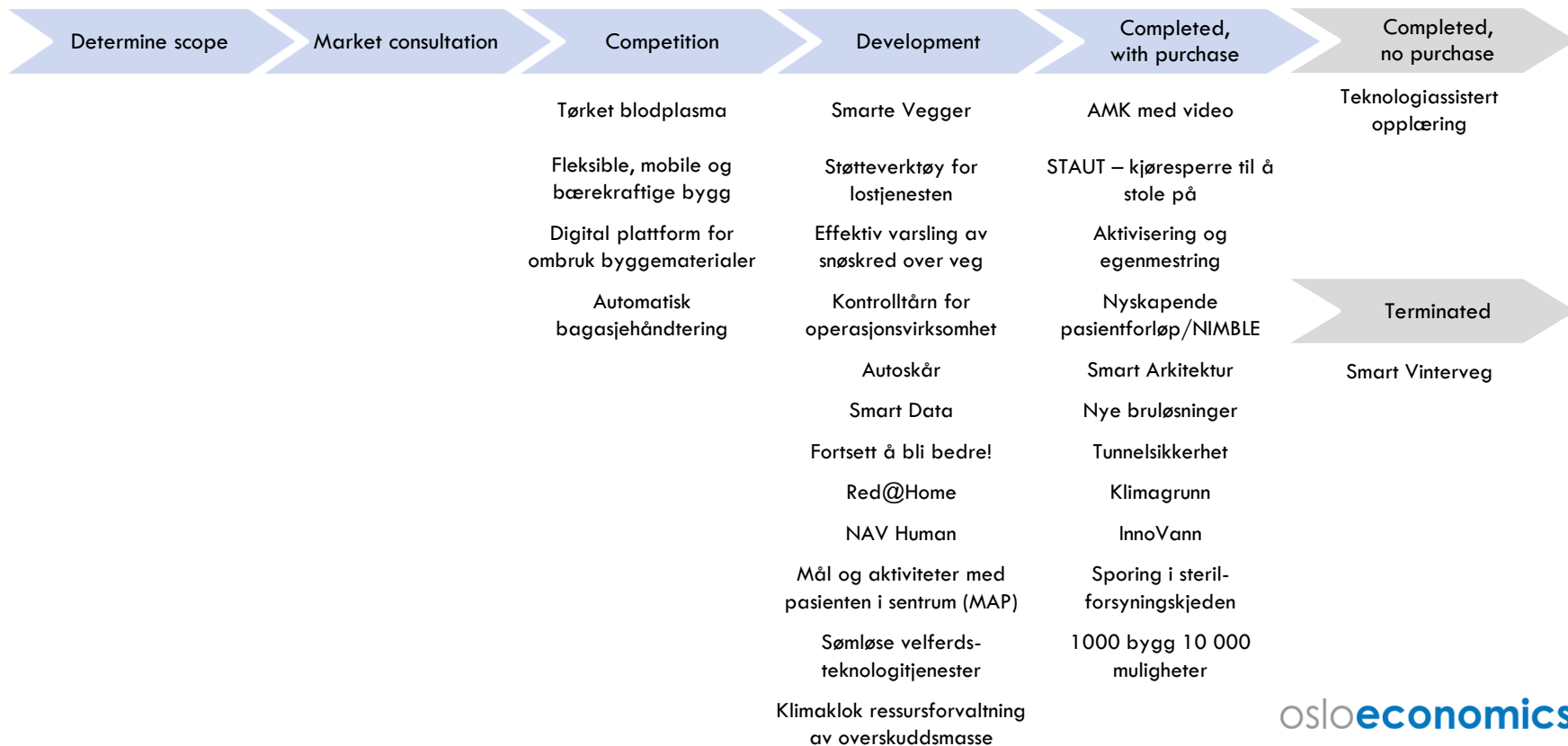


Financing from Innovation Norway

- In the period 2016-2021, Innovation Norway provided financial support to the implementation of IP between public and private enterprises.
 - Funding over the state budget was withdrawn in 2022 and the cut was upheld in 2023.
- Funding went to the supplier(s) with whom a partnership was entered.
 - The contracting authority can use a small proportion of the funds (~10%) to cover external expertise (service design etc.) and the implementation of market dialogue, but not salary expenses to its own employees.
- Since the first IP received funding in 2017, Innovation Norway has granted funds to Norwegian IPs for NOK 320 million.
 - An extraordinary innovation grant was awarded in autumn 2020 (mobilisation campaign – NOK 30 million)
- Each IP has received funds between 8 and 15 million.
 - The average amount of funding is NOK 11 million.
- There is a lack of data on and pricing of internal resource use among public agencies, but the previous evaluation (OE, 2022) showed that it is often substantial, approx. NOK 4-8 million in each IP. Suppliers also report substantial use of internal resources.

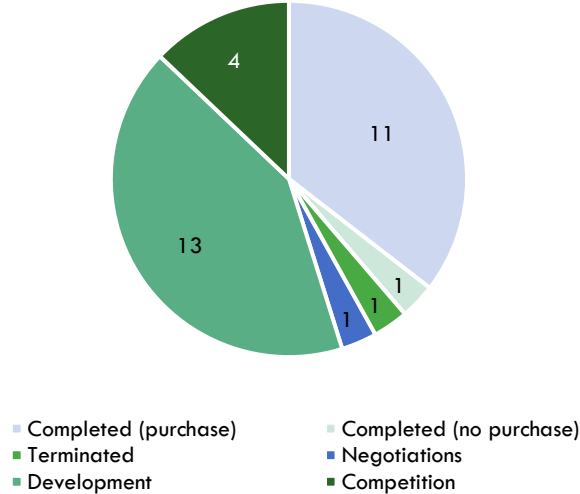
<u>Year</u>	<u>No. of IPs</u>	<u>Allocated funds (NOK)</u>
2016	1	12 000 000
2017	4	32 000 000
2018	4	34 000 000
2019	5	58 500 000
2020	11	128 850 000
2021	3	54 500 000
<i>Total</i>	<i>29</i>	<i>319 850 000</i>

Status of IPs with funding from IN (Sep. 2023)



Most of the completed IP projects resulted in purchase

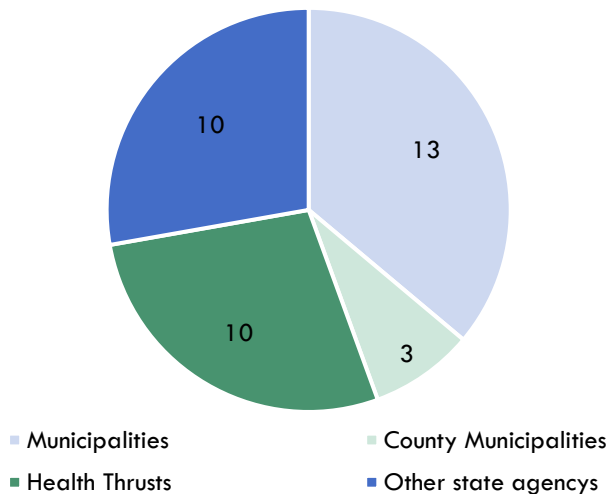
Status of commenced innovation partnerships
(per Sep. 2023)



- 13 projects have been completed, of which 11 have ended in purchases, 1 without purchase and 1 was terminated during the development process.
 - At the time of previous evaluation (Feb. 2022), only 2 projects had been completed and purchased.
- 1 project has ongoing negotiations for purchase.
- 11 projects in different phases of the development process (1 of these has been restructured and got a new project owner).
- 4 projects are in the competition phase.

Wide range of project owners

Distribution of project owner (sept. 2023)*



- Among other state agencies are Statsbygg, The Norwegian Defence Estates Agency, Avinor, the Norwegian Public Roads Administration and the Norwegian Coastal Administration.
- In addition to the project owners, more than 70 public entities with similar needs have followed the IP projects with the option purchasing the developed solution.
- Some of the enterprises have purchase options in several processes (e.g., the regional health authorities that have a purchase option on behalf of the local health authorities in the region).
- It varies whether these public entities have exercised the purchase option.

Innovation partnerships are widespread in the rest of Europe

A survey by the European Commission (2023) shows that IPs are widespread in Europe and that the procedure has had an impact on innovation and green objectives.

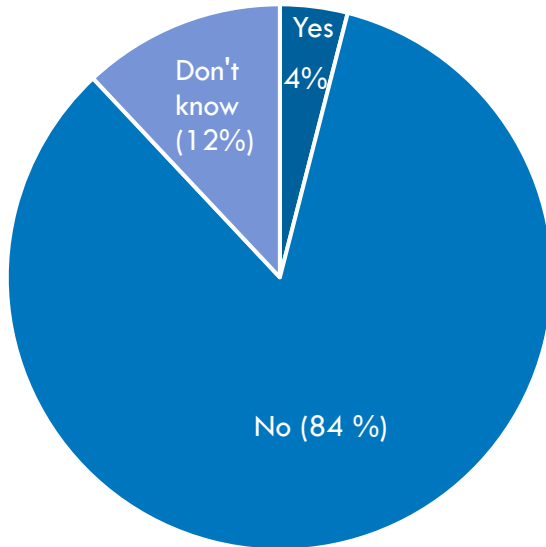
- The number of IP contracts awarded increased up until 2020 and peaked at 40 contracts but has since declined (probably as a result of the pandemic).
- The total value of IP contracts in the period 2016-2022 was EUR 8.3 billion (~NOK 83 billion).
- More than 50 percent of contracts in this period have been in the range of EUR <1 million (~NOK 10 million) in contract value. There is a large range between contracts, from EUR <10,000 to >5 billion.
- IP has been awarded in 18 different EEA countries. Following Norway, Finland (25), France (22) and Germany (22) have awarded the most IP contracts in EEA.
- Construction is the sector with the highest average contract value for IPs and total value (excluding outliers).
- "Green" and "Digitalization" are the most widespread policy objectives in IP contracts.
- 109/173 contracts have been awarded with the participation of SMEs (~63 percent) and EUR 741 million in contract value (44 percent of the total value) have been awarded with SME participation.



**Results and lessons learned from the
previous evaluation**

84 percent would not have carried out IP without funding

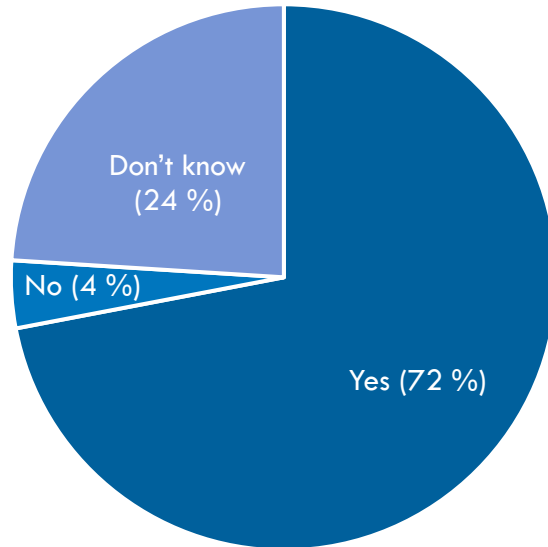
Would you have implemented IP without funding from Innovation Norway (IN)?



- Some say that they would look into other approaches to solve the need in a different way.
 - *"We would have chosen the easiest and fastest method. Not a given that it would have been innovation partnership."*
- Others say that they probably couldn't have solved their need without funding, which was crucial for a procurement to take place at all.

75 percent think IP is a suitable method for innovation...

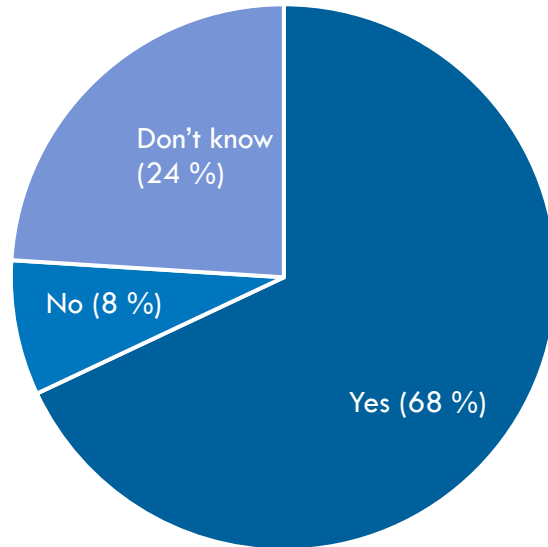
All in all, does your agency think IPs are a good way to create innovation together with private suppliers?



- Most contracting authorities are satisfied with IP as a method and find it to be a good way to create innovation together with private suppliers.
- Among the completed IPs, all responded that they think the method is suitable for innovation.
- Emphasis on the partnership methodology – working together to find a solution is perceived as productive and useful.
- Among less satisfied agencies, it is mentioned that the procedure is perceived as rigid which can come at the expense of innovation.
- At the same time, the framework and structure are highlighted as a perceived safety mechanism by others.
- It is pointed out that the need must be suitable – not all needs can be solved by IP.
- Approximately equal distribution in responses when selecting public agencies who are in the early phases (needs and market dialogue).

... and 71 percent would like to participate in a new IP

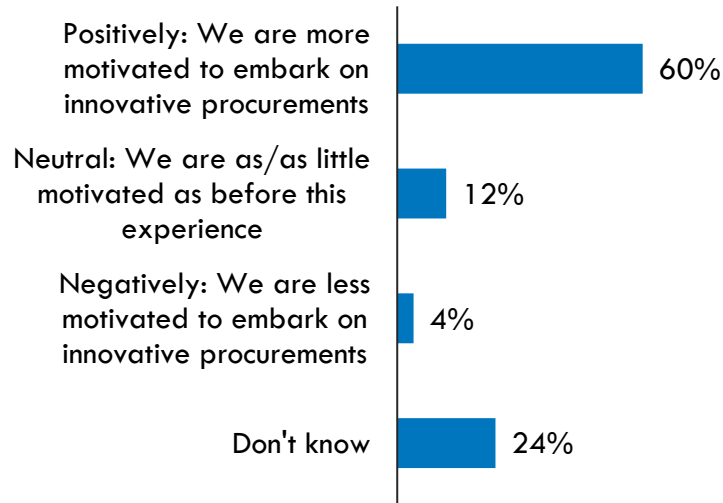
Has your experience with IP made you want to do more IPs?



- A clear majority want to take on a new IP.
- The method is resource-intensive – some people feel a little "exhausted" now but imagine that with a small "break" from IP, they may well embark on a new partnership.
- It is pointed out by several that if considering a new IP, careful consideration should be given to whether the need is sufficiently concrete to be suitable for the method.
- Other success criteria mentioned include project management experience and anchoring within management to ensure access to sufficient internal resources.
- However, public agencies who do not want to participate in more IPs do not regard their experience as wasteful – emphasis on great learning outcomes.

Experience with IP has had a positive effect on public agencies' motivation to carry out innovative procurements

How has the experience with the innovation partnership affected your organization's motivation to carry out more innovative procurements in general?



- Interdisciplinary involvement within the enterprises helps more people become familiar with IP and the innovation process.
- Some believe that knowledge about and motivation to carry out innovative procurements have improved, but that there is still a need for increased competence when it comes to innovation in public agencies.



**Experience from the public funding
apparatus (“virkemiddelapparatet”)**

Completed IPs succeed in developing new solutions that result in purchases, but the scope of purchases varies

- 11 out of 13 completed IPs have resulted in purchases – either partially or the full extent.
- The scope of purchase varies, and depends, among other things, on:
 - Whether the developed solution is ready to be put into operation. The results of the processes often lead to a version 1.0, which must be adapted and tested further before it can be put into full operation.
 - Whether technical infrastructure is in place at the public agency.
 - Funding. In some cases, the budget situation in the organization has changed during the project, and in other cases there has not been sufficient focus on end goal of purchase (and need for financing)
- In several of the IPs, the accompanying public entities that followed the projects have triggered the purchase option.
- Preliminary signals from projects in the final phase indicate that new purchase decisions may be made in 2023.
- Several of the solutions have potential for international sales (e.g., tracking of surgical equipment and vehicle barriers from Prodtex).

High level of interest in innovation partnerships among suppliers

- Many suppliers have participated in dialogue activities with the client.
- In most partnerships, there has been great interest in being prequalified.
- Around 60 suppliers are involved in the development process, and most are part of consortia that have won the competition.
- Suppliers that have won the competition highlight the close cooperation with end users in the public sector as a success factor.
- Experience shows that the suppliers participating in IP also invest their own funds in the projects in addition to external funding – up to as much as they are allocated for development.
- The contract-winning suppliers vary in size. The smallest companies have been start-ups with 1 to 2 employees and the largest are international companies.
- LUP has received many inquiries from suppliers wishing to participate in innovation partnerships and has requested this type of call for proposals in the period since the funding from Innovation Norway was withdrawn.

The transition from development to purchase has been challenging in many of the innovation partnerships

- The development process requires close contact between contracting authority and supplier. When the process moves to a purchase decision, the roles change, and some find that the parties in this phase have slightly different objectives.
 - Differing objectives regarding pricing models, business strategies, pace and scale of implementation, etc.
- This phase therefore requires a professional and solution-oriented approach from both parties.
- The first innovation partnerships stipulated a 90-day deadline to trigger a purchase option. This proved to be a short deadline and presented challenges. In particular, the public funding apparatus noticed a lack of time for consequential activities. The deadline has therefore been set at 180 days in the most recent processes.
- Some of the projects have resulted in a version 1.0 of a new solution, with need for further testing and development in order to be put into daily operation.
 - Solutions that need to be implemented in existing (technical/organizational) infrastructure are more often a 1.0 version than solutions that do not require such implementation (e.g. vehicle barriers adapted to the Nordic climate).
 - Solutions that do not require implementation in (technical/organizational) infrastructure are often easier for suppliers to sell in a larger market.

Collaboration between Innovation Norway, DFØ and LUP has been important for the procedural support for IPs

- Cooperation has been important as the public funding apparatus as a whole has been able to offer both financial and procedural risk relief.
 - Innovation Norway has been responsible for the awarding and financing of IP projects, as well as conducting experience exchange gatherings for public agencies.
 - LUP has provided process assistance and support to public agencies in the implementation of IP and connected public agencies and suppliers.
 - DFØ has offered general guidance and competition and contract templates for innovative procurements, including IP.
- Experience shows that, on the one hand, the parties can achieve a lot of good things by joining forces and working together on common goals. At the same time, it is challenging when framework conditions change along the way.
- The loss of funding for innovation partnerships has resulted in less follow-up and advice from Innovation Norway to the project managers in the individual innovation partnership.
 - Experience exchange gatherings across public agencies for innovation partnerships are particularly in demand among project managers.

When are innovation partnerships suitable for acquiring innovation, and when might other procedures be appropriate?

Factors indicating that IP is suitable:

- The need that the solution is intended to cover is specifically defined and the need is recognised on both the management level and the operative level in the organisation.
- The solution to be developed will be relatively easy to implement in the public organization and will not require further investments in (technical) infrastructure, system development, etc.
- The contracting authority has allocated sufficient resources internally to the implementation as IP is a time-consuming process (the development process lasts 1-2 years).

Factors indicating that other procedures are more suitable than IP:

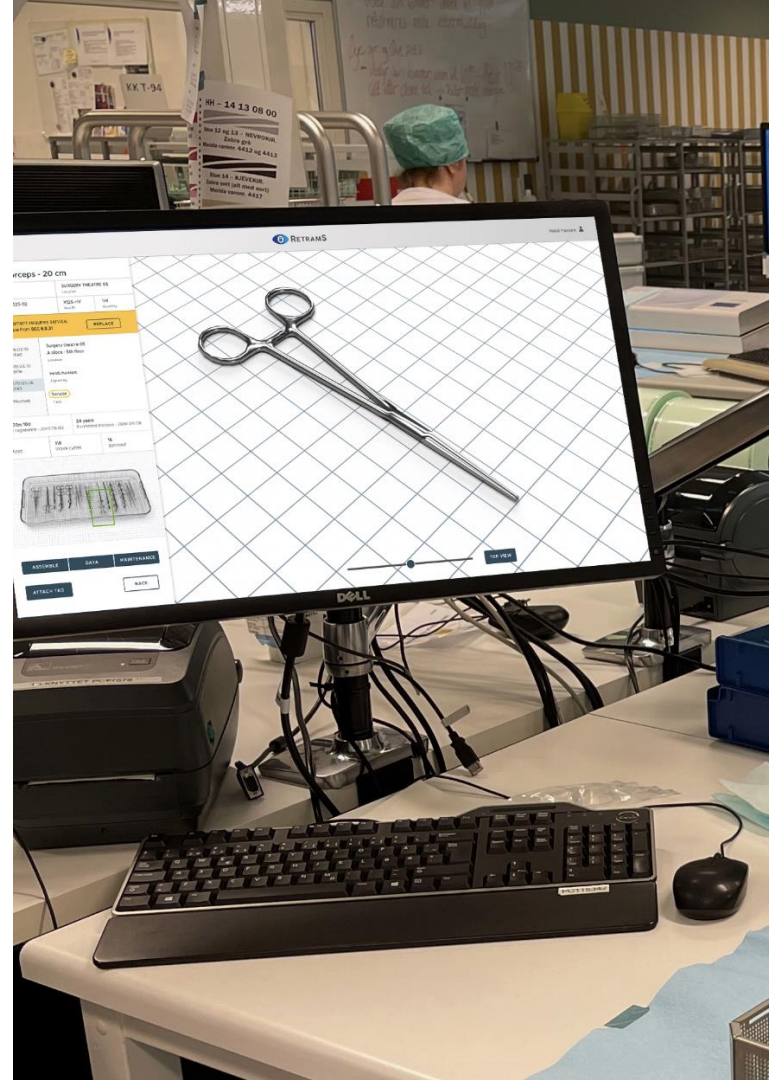
- A lack of concrete description of need makes it challenging to carry out IP. A pre-commercial procurement or an R&D project might be more suitable.
- The need can be solved by market with many suppliers.
 - If a potentially slow development process may be surpassed by technology development in the market, other types of procedures that allow for innovation might be more suitable, e.g. competition with negotiations.
- The solution to be developed is far away. It can be challenging to set the price for a final solution when signing the contract, and an R&D project may be more suitable.



Examples of successful innovation partnerships

Case: Tracking surgical instruments in hospitals

- **Need:** Haukeland Hospital wanted to get a better overview of where individual instruments are located in the sterile supply chain at the hospital, as well as the condition of the instruments.
- Many suppliers participated in the competition to enter into an innovation partnership with Helse Bergen. Retrams AS won the competition.
- **Result:** Retrams developed a solution that locates where in the sterile supply chain surgical re-use equipment is located using DNA markers in the steel of the instruments. The technology helps streamline the process of finding, washing and sterilizing equipment.
- Retrams has entered a long-term agreement with Helse Bergen HF and Sykehusinnkjøp for use of the solution at Haukeland Hospital.
- In practice, the absence of similar solutions nationally and internationally means that all hospitals in Norway can procure the solution directly.
 - The accompanying public entities (other hospital trusts) have been offered a piloted version of the solution.
- The solution has potential for scaling to other industries where there is a need to document and differentiate special tools, such as in the airline and aerospace industries.



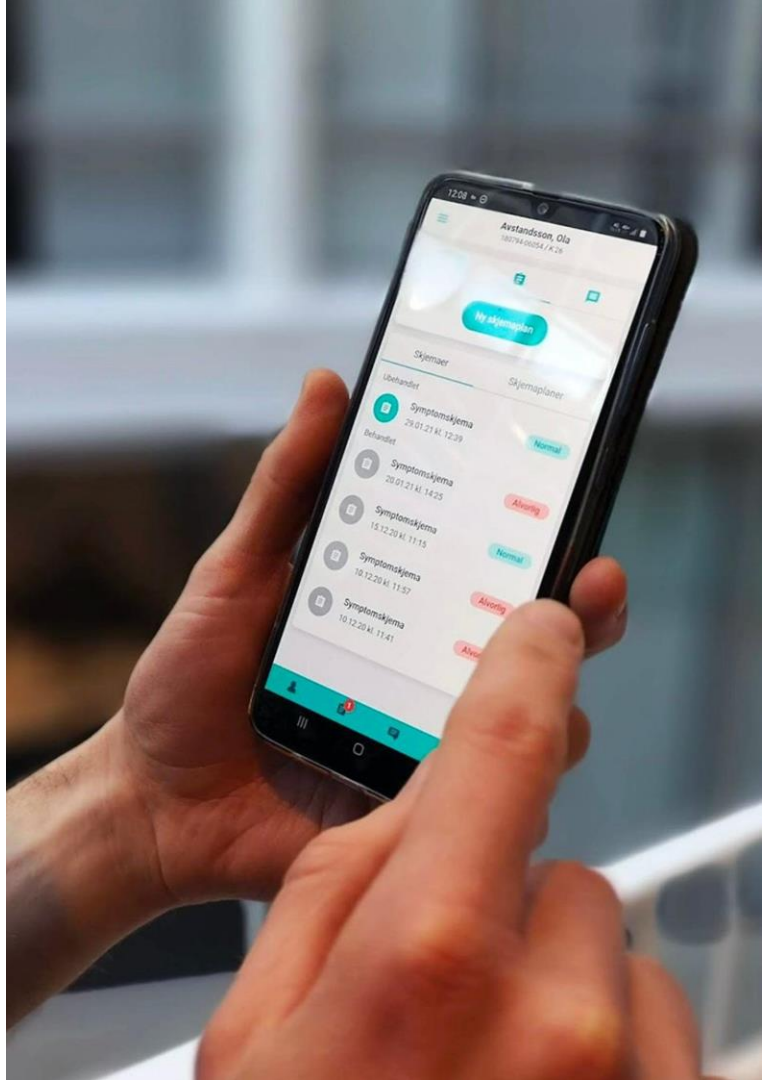
Case: Vehicle barriers adapted to the Nordic climate

- **Need:** Statsbygg wanted to develop vehicle barriers for the Norwegian government building complex adapted to a Nordic climate.
- With NOK 9 million in funding from Innovation Norway, Statsbygg entered into two innovation partnerships in 2022: one with Cody AS, and one with Prodtex AS. The two companies were each to develop their own solution for movable and reliable vehicle barriers.
- **Result:** After completing the project, Statsbygg finally decided to purchase the Prodtex solution.
- The vehicle barriers are specially designed for Nordic conditions and can therefore withstand large temperature fluctuations, salting, ploughing, erosion, water and ice.
 - If maintenance is required, the barriers can be lifted off the ground and replaced by new barriers within a short period of time.
- The development of the solution was completed in 2 years and is thus the fastest innovation partnership in Norway (3 years is most common).
- Prodtex has entered an agreement with Statsbygg to deliver 57 barriers.
 - There is great potential for selling the solution internationally to other countries with similar weather conditions as Norway.



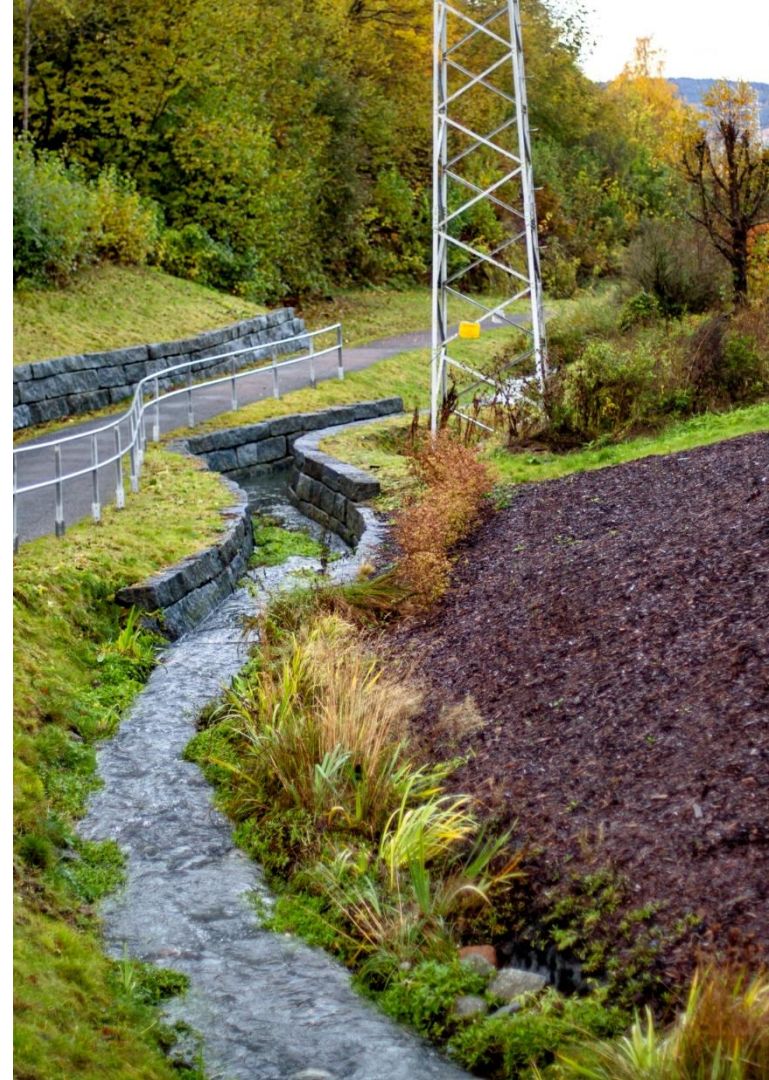
Case: Digital home follow-up

- **Need:** In light of the major capacity challenges facing the health care services, Østfold Hospital saw a need for a comprehensive digital service for home follow-up of cancer patients.
- With NOK 15 million in support from Innovation Norway, the hospital started the first innovation partnership within the specialist health service and signed a contract with Diffia in 2019.
- **Result:** Diffia further developed the functionality of an existing app, resulting in the new Nimble Homeaways app.
- Using the app healthcare professionals can follow up patients in a simple and safe way through digital forms for mapping symptoms, as well as measuring weight and temperature, among other things. Procedures that previously had to be performed in hospitals can now be done via digital home follow-up.
- Østfold Hospital has started using the service in its oncology ward, and seven out of nine hospital trusts under the South-Eastern Norway Regional Health Authority (accompanying entities) have agreed to purchase the solution and are in the process of implementing it at hospitals in the region.
- The IP have helped secure Diffia growth capital, which has enabled further growth in headcount and several commercial agreements. The solution has potential for international scaling.



Case: InnoVann – future-oriented stormwater management

- **Need:** Norway is facing increasingly extreme weather with more frequent and intense downpours. This makes it important to have an overview of where and how stormwater can cause damage.
- To tackle this challenge, Bærum municipality initiated an innovation partnership with a Danish-Norwegian consortium, led by Envidan, with the goal of a more future-oriented stormwater management (InnoVann).
- **Result:** The solution is twofold – a new working methodology has been developed for working with stormwater in addition to a digital cloudburst plan. The latter means new functionality in an existing stormwater management platform (Scalgo Live), which makes it possible to simulate future rain events and see where the water flows.
- The tool is adaptive in a way that considers changes over time, such as new waterways created from changes in the terrain and construction. In addition, it has a cost-benefit module that provides calculations on a socio-economic level of measures worth implementing.
- The project has received a lot of attention and work is currently underway to spread the solution to the rest of the municipal Norway.





Conclusion and recommendations

Experience shows that innovation partnerships contribute to the development of innovative solutions with potential for scaling

- LUP finds that several public agencies are interested in implementing this type of innovative procurement, but they are completely dependent on risk mitigation in the form of external funding.
- Experience from IPs has increased the expertise of public agencies increase and several signal that they want to use the procedure to tackle challenges they face. Implementation is hampered by a lack of funding and opportunity to allocate resources to development projects alongside regular operations.
- Findings from the previous evaluation (OE, 2022) and feedback to LUP show that financial and procedural support has been crucial for the projects to be initiated.
 - Several of the projects have been initiated with encouragement from LUP and have been motivated by financial and procedural support in implementation.
- Funding of processes as IPs can be included in a portfolio of funding opportunities where the most suitable procedure is chosen based on findings from market dialogue with suppliers.
- There is a need for more knowledge about the wider effects of completed innovation partnerships.
 - Several developed solutions show great potential for scaling in Norway and internationally, and as more projects are completed, it is possible to gather statistics and assess their impacts more closely.

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