Pocket Book for Agile Piloting

Facilitating co-creative experimentation



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What is Agile Piloting?

ities are looking for new ways of working together with companies, residents and other stakeholders to solve the problems of rapidly growing and evolving cities. Helsinki, a city with about 650,000 residents, innovative companies and a vibrant start-up scene is the perfect setting for piloting new solutions to urban challenges.

The Agile Piloting Programme, a model developed in the Smart Kalasatama district of Helsinki, is used in Finnish cities, with the aim of experimenting with new services and technologies in a co-creative way. Smart Kalasatama Cook Book for Agile Piloting presented the model in a nutshell and provided a handbook for city developers.

Agile piloting is a model for quick experimentation of new services in a real-world environment. Agile pilots are short, early phase lowcost experiments, with the main goal of learning together - not to be confused with larger, resource-intensive pilots, which require costly investments and extensive pre-preparations.*

More than 50 agile pilots have been run in different urban labs in Helsinki by Forum Virium Helsinki. The thematic piloting rounds have ranged from climate positive solutions to education, mobility and wellbeing. The model has also been adopted widely in the six biggest cities of Finland, and in 2019, in the city of Stavanger in Norway.

The most important element in any smart city is people, so ensuring their abilities to participate is crucial. Agile piloting engages companies, residents, public sector and other stakeholders to co-develop and experiment with new solutions in the real-world environment.

Learning and generating new understanding about emerging services and technologies is at the heart of the process. Lessons learned pave the way for future services with better availability of data and interfaces, or learnings for better planning and policymaking. The impact of relatively small pilots comes from genuine real-life experiences and engagement of the wider ecosystem, opening opportunities for scaling up.

* Agile piloting in Finnish is "nopeat kokeilut", which means "quick experiments", literally translated.

Agile pilot

Agile pilots are quick experiments of early prototypes of innovative solutions (services or technologies) run in a flexible and co-creative way during a period of max. 6 months.

Experimentation

Testing ideas quick on a small scale. It is about iterations and learning. If you fail, it's time to stop and try something new.

Piloting programme

A piloting programme includes one or more piloting rounds. A programme has a theme, and each round may have a different, more precise focus.

Piloting round

A thematic round of simultaneous pilots within a piloting programme. Several individual pilots are run as a bundle to find solutions to a challenge defined.

Piloting team

A team conducting one agile pilot, typically a start-up or a team representing a bigger company.

Living lab

Living Labs are user-centred, open innovation ecosystems, based on a systematic user co-creation approach. Agile pilots are typically linked to physical or digital infrastructure of the living lab. "Urban lab" refers to a city environment as a living lab.

Facilitator

An organisation, team or person responsible for planning, implementing and coordinating activities within the piloting programme. The facilitator runs, orchestrates the platform activities and coordinates the process, and brings different actors together. The facilitator can be a city department or an intermediary organisation.

Facilitation

The role of facilitation is to bring the relevant stakeholders together, iterate and quickly solve problems, demand decisions, search for the right gatekeepers, simplify bureaucracy, perceive synergies and the big picture, and share pilots with the outside world. Here, facilitation means supporting the whole process - not only facilitating, for example, workshops.

Co-creation

The co-creation process engages multiple stakeholders to work together to reach a common goal. In an urban development context, the city acts as an innovation platform to co-create with residents, private sector and other stakeholders. Design thinking and citizen involvement tools are at the core of the co-creation process.

Agility by experimentation

hrough a culture of experimentation, a wide range of stakeholders can be involved in urban development as companies and city residents co-create solutions together with the city's organisations. Possibilities for development, as well as the city's opportunities and challenges, will be opened up as widely as possible, making it easier to find the actors who have something to contribute.

"We cannot know in advance who has the best ideas. Experimentation helps us find surprising parties who have something to offer to the issue at hand. The urban environment is also changing at a fast pace and experimentation helps to keep up with the change," says Pekka Koponen, Development Director of Forum Virium Helsinki.

When piloting activities are concentrated in selected city districts, individual pilots and projects create synergies, and development takes place on several different levels. Reaching the city's residents is also easier by district. All this provides long-term perspectives for the activities, and a developer community can be created within the district.

Profiling certain districts as pilot areas also enhances communication. However, activities are not limited to these districts, but successful experiments are to be rapidly introduced on a larger scale. Harnessing district development projects as innovation platforms opens up new opportunities to solve big future challenges, such as in connection with sustainable development. Helsinki also



offers digital solutions that enable the use of, for example, open data and interfaces through which the city's data resources can be utilised.

Experimentation has brought, above all else, agility to Helsinki's innovation platform activities. Agile piloting, as a model, has accelerated development and provided an opportunity to react to changes even faster. *"Agile piloting also allows failing as quickly as possible. Thus, it helps the city determine a direction in which it is worth moving,"* says Koponen.

Agile piloting programme

The agile piloting programme provides a model to open up the city infrastructure, data and services as an urban lab for experimentation. It uses methods from service design, lean development, user research and fast prototyping, adopting these to the needs of urban development. The programme offers a facilitated platform for collaboration and co-creation with the whole ecosystem aiming to learn as much as possible.

The building blocks of agile piloting

Synergies from programme format

The programme format as a model is a cost-effective way to run several (3-5) pilots at the same time. It is a good way to open up a theme and provide several perspectives, solutions and user cases to a challenge identified. This creates synergies and collaborations between the individual pilots.

Experimentation in a real life environment

ment, like a city

district, a school

or a health care

center, is provided

as a Living Lab to

develop future ser-

vices together with

residents or users

and professionals.

experiment and

Facilitation of activities to support value co-creation

............... A real-life environ-The facilitator organisation

orchestrates collaboration and plans the activities of the programme to provide value for the different stakeholders.

Light procuremen model

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Pilots are procured through an open call from start-ups, SMEs or other actors. Typically, the procurement price of an agile pilot is 5,000-10,000 euros. The process is light and easy for the companies, avoiding any unnecessary

administrative

burden.

A new way to engage with companies

An agile piloting programme procures pilots through an open call from companies. The monetary compensation is meaningful for small innovative players, but the true value comes from facilitated experimentation in the living lab setting. The primary aim is to create and share new knowledge and understanding about emerging solutions. The process provides collaboration with the city, not subsequent procurements.

What kind of pilots?

> New and innovative, yet mature enough to be implemented quickly (max. 6 months) > Using data and technology in an innovative way > Enhancing an existing solution for a new user group, or context > Can test and validate new business models or new ways for involving partner companies > Can generate new knowledge, understanding and/or data



This is how it works

1 Defining the focus

A piloting programme needs a focus and scope. The process starts with stakeholder mapping. Who will define the theme and take part in co-development? Once the initial focus is set with the key stakeholders, more precise themes and challenges will be defined together. Creating the common focus and goals is a good way to build commitment.

Key questions in defining the focus

- > What are the challenges that you want to tackle?
- > What kind of results or impacts do you want to achieve?
- > What are the lessons you want to learn and share?
- > Who are the key stakeholders and what are their roles in the programme?
- > Are there restricting regulations, sensitive issues or other barriers to address?

The agile piloting programme is a framework for co-creative experimentation. One piloting round can be divided into five main stages, which are partly overlapping and run in parallel.

2) Open Call

The open call for pilots is the way to open the challenge for potential problem solvers and solution providers. Identify the partners and networks that help you to reach your target audience companies and other problem solvers.

In practice, an open call is a call for offers. Make sure it meets procurement regulations in your country and rules in your organisation. If you work with external project funding, check that the call complies with requirements of the funding programme.

Remember

> Communicate clearly what the programme offers to and requires from the teams
> Make your challenge a topic!
> Use diverse communication channels, networks and gatekeeper organisations in promotion



Selection of pilots

The pilots are selected according to the criteria set in the open call. Define criteria that allow selecting the best offers in a transparent way.

Engage your key stakeholders in the selection by inviting them to be part of the expert jury. Make sure the selected pilots are linked to local platforms or the collaborators' activities.

(4

Experimentation

The experimentation is the core of the piloting round. During this stage (max. 6 months), the piloting teams prepare, run and co-develop their agile pilot within the urban lab. The active piloting period with end-users may be shorter (1-3 months).

The facilitator orchestrates co-creation activities, stakeholder collaboration, integrating the pilot to the city infrastructure and services, and supports with permits, administrative issues and end-user recruitment. The facilitator also supports learning and transfer of information. The piloting team bears the main responsibility for conducting the actual experiment.

5 Learning and reflection

The aim of the programme is to maximise learnings. Therefore, it is essential to evaluate and reflect the learnings and feed them back to the process. A fruitful way to support the programme is to engage a research partner or consultant, who follows the programme and evaluates its progress, impacts and learnings.

The progress and results of the pilots are documented by the piloting teams. Careful documentation is necessary for evaluation. It can be in the form of questionnaires or surveys in the different stages of experimentation, interviews, and face-to-face events that gather the key actors.

Check list

> Sign a contract or agreement about the pilot with the actors involved.
> Arrange a kickoff for all piloting teams and bring the key people together.
> Keep everyone updated about the progress.

> Be proactive; frequently ask the piloting teams if they need support.

Experimentation stage (6 months)







Pre-pilot

Experimentation

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Closing and scale up

—

 > Start meetings with piloting teams
 > Contracts with piloting teams
 > Agreements with key stakeholders > Kick off
> End-user
recruitment
> Co-creation /
end-user workshop(s)
> Stakeholder
meetup(s)

> Final event
> Communicating results and learnings
> Planning next steps with stakeholders

CASE

Selection criteria from the Last Mile project

Novelty and innovativeness	Feasibility	Impact
 has true novelty value and is innovative 	 demonstrates necessary expertise and resources for implementation 	 creates concrete solutions to identified mobility challenges
 creates new practices, solutions and perspectives to urban mobility 	 describes activities, schedules and team resources 	 does not increase negative impacts of traffic
 creates new meaningful information for the use planning 	> is user-oriented	 can be applied in other environments and with other user groups and stakeholders



Sharing rides to football practice after school was piloted by Helsinki-based football club Pallo-Pojat Juniorit (PPJ). The service saved parents' time and increased families' shared time in the evenings. The costs of mini-van transports were partly compensated by cheaper fees of earlier practice hours at sports halls.



Smart Pedestrian Crosswalk (2019)

Piloting

smart and

solutions

sustainable

Agile piloting offers means to engage the

wider urban community in the co-creation

of smart and sustainable services.

1

A Smart Pedestrian Crosswalk by Bercman Technologies was installed on Selkämerenkatu street in Jätkäsaari. The traffic sign, equipped with sensors and cameras, produced data about traffic (i.e. volumes, speeds, speeding violations) and environmental variables. Pedestrian warning functions were tested on site.





Urban food logistics (2019)

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The goal of the urban food logistics pilot was to minimise the carbon footprint with light transport vehicles. The experiment was carried out with local food service providers and a logistics operator providing light transport services with cargo bikes and e-scooters. The pilot run in the Abattoir district in Kalasatama provided insights on a new supplier-based ecosystem delivery service.

Miils personalized meal bags (2018)

Miils piloted a meal kit service offering personalised meal bags with home delivery guiding users towards a healthy diet. The service allows the user to view the daily nutrition values and carbon footprint of the meals.



Cargo-bike sharing (2019)

The Nezeco service introduced a cargo bike sharing scheme in Jätkäsaari. Six cargo bikes were located around the neighbourhood for one summer season. The bikes were locked, unlocked and taken into use with a smartphone application.



Prototype raingarden (2017)

Innogreen carried out a pilot in 2017, building a prototype rain garden utilising stormwater in a Kalasatama schoolyard. The pilot demonstrated the functionality of the modular structure and also the need to take similar structures into account in the planning of the construction phase.



Districts as urban labs

The district development projects and former brownfield areas under construction serve as urban labs in Helsinki. The city is large enough for piloting urban solutions on a systemic level, but still small enough to be agile.

Jätkäsaari

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Building rate (2019)

1300 apartmentsready**600** buildingpermits granted



City Centre

Over **7M** passengers / year **Regular connections** to Tallinn and St.Petersburg





Inhabitants 5000+ 25000 (2040)



Jobs

10 000 jobs (by 2040)

•••••••••••••••••







6 minutes from city center by metro.



Redi Center with commercial services and 8 highrise residential buildings planned.

Urban labs in Helsinki

istrict development projects are natural platforms for innovation and experimentation. Developing city districts provide, besides an active ecosystem, true needs for changing the traditional ways of working towards more collaborative processes. Smart Kalasatama and Jätkäsaari Mobility Lab, both located in former brownfield areas, provide particular opportunities for innovation and experimentation.



Smart Kalasatama

Smart Kalasatama, is a former brownfield area, developed to a residential district. By 2040, the district will offer a home for approximately 25,000 residents and jobs for 10,000 people. From 2013, Forum Virium Helsinki has been orchestrating the innovation platform activities in this model district for smart city development. Today, it is pioneering the city's carbon neutrality goals and is a vivid Smart City innovation platform to co-create smart sustainable urban infrastructure and services. The district as a living lab includes the area's key infrastructure (e.g. smart energy network and waste collection system), local services, Kalasatama health and wellbeing centre, school, and commercial centre.

The agile piloting programme was created to accelerate smart city development and public private collaboration. The agile pilots in the district have been widely exploring smart and sustainable everyday life, such as energy and resource efficient services, the sharing economy, health and wellbeing. Recent themes related to sustainable everyday life are green infrastructure, food services and last mile deliveries to support a healthy liveable city.





Kalasatama Wellbeing

The Kalasatama Health and Wellbeing Centre was opened in 2018, but experimentation with the themes of health and wellbeing in the district was initiated already during the construction phase. The new centre has provided possibilities for experimentation with end-users and professionals. Kalasatama Wellbeing piloting programme, sought means for residents to better take care of their health in everyday life. The role of corporate partners on the side of the City was accentuated with three partners active in the district: Kesko, SRV and CGI Finland. Corporate partners on board brought new to the process, resources such as optional test beds, as well as potential partners and customers for the start-ups.



New Solutions in City Logistics

The New Solutions in City Logistics project aims to organise the last mile solutions in a more environmentally sound and lighter way. The project is mapping the whole delivery chain from a city perspective. It is also serving both the delivery needs of smaller entrepreneurs and tackling residents' needs for smooth services and a liveable district. Piloting supports ecosystem building as well as takes the development of new solutions further.



Jätkäsaari Mobility Lab

Jätkäsaari is a centrally located neighbourhood in Helsinki. The Jätkäsaari district development project is coverting the brownfield areas of the former logistics port into homes of almost 21,000 people and 6,000 jobs.

Helsinki is one of the busiest passenger ports in Europe, due to extensive ferry traffic between Helsinki and Tallinn. Over seven million passengers pass through Jätkäsaari annually, and the district suffers from traffic peaks from the port.

Jätkäsaari offers a living lab and urban testbed for smart mobility development in Helsinki. Numerous pilots, experiments and projects have been conducted in the lab, focusing on innovative mobility services, traffic safety, mobility data, and behaviour change. Local residents are actively involved in the living lab activities. "The first installation of Bercman's Smart Pedestrian Crosswalk in a real street environment was in Jätkäsaari. The Last Mile project helped us with the permits and installation, including electricity connections and roadworks. We found the support to experimentation and contacts to the city very valuable."

Mart Suurkask, Bercman Technologies

CASE

Last Mile project

The Last Mile project sought innovative mobility solutions for the use of residents, tourists, and commuters in Jätkäsaari. The project conducted two agile piloting rounds in Jätkäsaari, with four smart mobility pilots in both rounds. Forum Virium Helsinki, as the facilitator, orchestrated the co-creative experimentation with companies, local residents, planners and other local actors.

What has Helsinki learned from agile pilots?

gile pilots, and using the city as an innovation platform has brought many learnings for the City of Helsinki. Agile piloting has been a good means for the companies to develop the solutions with the different city sectors. Thinking about the city as an innovation platform is especially important for business development.

"Agile pilots are, as the name implies, good at quickly highlighting the obvious: Does this work or not, what needs to be developed and in what direction should we move? We have attempted to make use of the most promising pilots and support their wider scale-up," says Mikko Martikka, Senior Advisor, Smart & Clean Solutions at the City of Helsinki.

The key to success is to actively support the teams throughout the piloting process. Close facilitation opens up discussion between stakeholders, and hence improves collaboration. A good connection guarantees active listening and understanding between the different partners, and provides meaningful insights.

In concrete terms, agile piloting has made it easier to draw up guidelines for innovative solutions, such as the introduction of renewable energy solutions. Being a frontrunner in innovation practises, such as formulating piloting programmes and offering possibilities for experimentation, makes Helsinki an attractive partner in international networks. The pilots have also contributed to the city's service ecosystems. For example, in Smart Kalasatama it has been easy to test and pilot sharing economy solutions, such as car sharing.

The importance of facilitation is especially evident when working with businesses and start-ups. There is a need to translate the needs of the city into business potential for the companies. The same principles apply to resident collaboration, and interpreting residents' needs as input for creating service prototypes.

"It is essential to make the topic, such as the energy efficiency of buildings, interesting and motivating enough for residents, who then make the decisions within their own housing association. Many learnings have been gained through agile pilots run in other sectors too, such as education, health and wellbeing. It is also important to reflect, how to apply the activities in different environments and city sectors in the future," says Martikka.

Agile piloting is about co-creating value

In a living lab setting, all the parties gain from the collaboration. But how to facilitate co-creation of value within a multistakeholder process?

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Co-creating value

All parties bring their input and gain something from a co-creative process.



he motivations for different actors to participate may vary. Start-ups' motivation is typically to get a market reference. The city may want to learn about the feasibility of emerging technologies or services, or purely learn on futureuse cases, or gain new knowledge for planning, policy-making or upcoming investments. Often collaboration with the city is a shared motivator for companies.

Furthermore, value is co-created in the multi-stakeholder process, and engaging additionally corporate partners as collaborators brings new dynamics, and attracts more mature start-ups to participate. Research partners are valuable

Engaging stakeholders

Engaging the key actors and ecosystem building starts early on. Think about how to build and maintain the relationships with your stakeholders throughout the process. The role of the facilitator team to ensure that the participating stakeholders stay motivated and have resources to be committed during the whole innovation process. The more value they perceive gaining from the process, the more active they will be. The facilitator proactively finds different ways for key actors to participate in the programme. collaborators that can take different roles, such as project partner, programme evaluator, or representative of the innovation ecosystem. Research organisations may use agile pilots as case studies for their research, or may act in an advisory role.

Agile piloting offers experimentation as a service. Consider how to demonstrate the added value of your programme. Clearly state what your piloting programme and your living lab can offer and what kind of commitment is expected.

But how to facilitate co-creation of value? Next, we open three perspectives to orchestrating collaboration: engaging stakeholders, fostering co-creation, and learning & knowledge sharing.

CASE

Smart Kalasatama Innovators' Club

Smart Kalasatama Innovators' Club is a model for district-level co-operation. It is a collaboration network for everyone involved in developing the district. The open network meets 3-4 times a year. It helps local actors to regularly share news and get information about current and future projects. Through networking and sharing, the goal is also to speed up innovation by finding new matches for collaboration and projects.

The collaboration partners can offer:

- > new ideas and insights
- > channels for communication, networking and collaboration
- > financial resources
- > a lab environment (physical or digital environment, end-users)
- > other resources and support (data, technology platforms, supporting personnel)



Agile pilots engaging

CASE

the ecosystem players

New Solutions for City Logistics project engaged the ecosystem players and residents to define themes for piloting rounds. The idea for the "Home-on-Demand" challenge originated from the insights from a resident survey conducted in Kalasatama and was further co-developed in a workshop with the potential service providers and in dialogue with corporate partners. The experiment - with an autonomous courier serving the needs of local foodservice providers and residents - will be run in close collaboration with the corporate partners SRV and Kone.

"Piloting programmes offer us a great opportunity to be involved in the co-development of innovative services. Making the every day of the residents smoother with new services is in the heart of our operations. The Home-on-Demand collaboration enables us to learn about the residents' experiences and needs as the experiment progresses."

Lotta Toivonen, SRV

Communicate, Communicate, Communicate!

Innovation programmes are never at the forefront of the masses. You will need to communicate intensively, in a compelling way and continuously to make your piloting programme topical. Open, proactive communication is the key to active engagement, and it is needed in coordinating and orchestrating living lab activities.

Real life experiences bring human interest and provide potential angles for storytelling, when the pilots give concrete examples of smart and sustainable future solutions in the urban environment. Invite your collaboration partners to share the common message. Create a transparent process to build credibility and trust. Smooth communication with piloting

teams is crucial.

Remember

> Be proactive towards the piloting teams. Encourage them to ask for your support.

- > Keep the tone constructive and inspiring.
- > Encourage the teams to speak openly about problems and difficulties.
- > It's a joint learning process. There
- are no failures, only learnings!

Fostering co-creation

Agile piloting is a good way to create innovation ecosystems. This requires constant nurturing of the stakeholder network. The facilitator needs good people skills and abilities to coordinate several simultaneous processes.

Co-creation practices within the process help to create shared meanings and vocabulary and an atmosphere that encourages collaboration, trust and openness. Facilitation is also about creating an empathic atmosphere and trust among all parties involved. The facilitator needs good listening skills, and a sensitivity to detect and solve conflicts.

Remember> Bring teams and people from the key

networks together. Plan the activities to support learning and synergies.
Co-creation workshops provide a

participatory way for engaging residents and other stakeholders and offer a neutral environment where residents and experts are equal participants.

> Use service design methods to facilitate collaboration and assuring a user-centric approach.

> In environments like school or healthcare, make sure that your living lab is not interfering with the professionals' work, or make a back-up plan for support.

CASE

Residents as co-creators

The Last Mile project engaged residents in solving local mobility challenges in the district of Jätkäsaari. In order to define focus, a web-based survey was conducted with local residents, with the aim to map mobility challenges and pain points, people's hopes and concerns, and ideas for services to be piloted. The results were elaborated in four open workshops, with residents, and traffic planners. The iterative workshops resulted in an open call with three topics: 1) innovative mobility and transport services, 2) shared vehicles, and 3) traffic safety. The co-creative approach secured a relevant focus, which motivated residents to participate and give feedback about the pilots. A dedicated website jatkakokeilee.fi was created for agile pilots, in order to inform residents and to motivate them to participate.



Means to co-create with the ecosystem

Collaboration can be nurtured in different stages of the agile piloting process by using participatory methods.

Defining the focus

 Workshops for co-defining focus together with city, programme collaborators and/or with residents
 Insights from the residents by using a survey and qualitative interviews

Experimentation

Kick-off event
 to bring together
 the teams and key
 stakeholders
 Informal midterm
 meet-ups: proceedings
 of the pilots, learnings
 to-date and next steps.
 Co-creation
 workshops and
 prototype testing
 sessions



Open call and selection

 Common info session to open up the theme.
 The selection can be supported by interviews with the top 3-10 pilot teams.
 A more intense way is inviting top 5-10 companies to an Innovation Sprint with pitching session.

Learnings and evaluation

Surveys and
 interviews to evaluate
 the pilots from the
 perspective of the
 end users and the
 professionals. Collect
 feedback from
 piloting teams and
 collaboration partners.
 Final event to
 share learnings and
 experiences



Learnings & reflection

Learning is at the heart of agile piloting. Documentation and evaluation play a central part in the programme, generating new understanding and insights. The role of evaluation depends on the objectives of the piloting programme. It may open insights from the perspective of companies, end users, city representatives, and other collaboration partners.

Evaluation should capture the key results and learnings, but it should be light enough to be easily run. Define clear scope for evaluation, but leave room for unexpected findings, as those are often the most valuable ones. Moreover, analysing what did not work and why offers invaluable results.

The facilitator and research partners provide a structured framework for documentation. Self-evaluation by piloting teams can be supported using light e-questionnaires and interviews. Other methods found suitable are end-user surveys and observation of events, workshops and pilot implementation. Pick the methods which best suit your purpose.

	How to document agile piloting		
	Method	Conducted by	Target group
Before	Pre-pilot questionnaire	Facilitator or research partner	Piloting teams and/or key stakeholders
	Pre-pilot interviews	Research partner or facilitator	Piloting teams
	Observation (kick-off meeting)	Research partner	Facilitator, piloting teams and/or key stakeholders
During	Mid-term questionnaire	Facilitator or research partner	Piloting teams
	Observation (workshops, events, meetings, pilot implementation)	Research partner	Facilitator, piloting teams, key stakeholders and/or end-users
	End-user surveys and interviews	Research partner, facilitator or piloting teams	End-users
After	Post-pilot questionnaire	Facilitator or research partner	Piloting teams and/or key stakeholders
	Post-pilot interviews	Research partner or facilitator	Piloting teams and/or key stakeholders

It is useful to define a basic hypothesis for each pilot and a few simple key indicators for them. These will help to reflect on results and learnings generated. A midterm review may reveal that the plans should be revised. Experimentation is iterative by nature, and it is recommended to apply "quick fixes" in the light of first experiences - or even to change the course of the pilot, if necessary.

Plan in advance on how to support the evaluation in your programme. Universities or other research partners provide the right skills, and have an objective view. Another option is to use consultants with ethnographic skills, and competence on innovation studies and living lab activities. Often, it is more interesting to evaluate the programme as a whole, instead of individual pilots.

CASE

Learnings create culture of experimentation

Within Kalasatama Wellbeing programme the research and development partner, Laurea University of Applied Sciences, observed the co-creation process and conducted surveys and interviews, on the five pilots supporting residents' health in everyday life. The perspectives of users, health professionals, teams and three corporate partners were important feedback on the process. A carefully documented programme served as a way to build a culture of experimentation in Kalasatama Health and Wellbeing center. Today, a dedicated team of health professionals is scouting needs from the daily working environment.

"Facilitation by Smart Kalasatama team has been essential. The co-creation workshops and common events are a good way to generate learnings, and bring the right people together. This also requires expertise and a relevant network. A well-facilitated process can create value as well as save time and resources for all parties."

Sanna Hartman, City of Helsinki



Skills and resources

Implementing a high-quality piloting programme requires resources, in terms of working time, money, expertise and other resources. A facilitator is like a coach who supports the teams, but also a producer who makes things happen and steers the pilot in the right direction. A good facilitator is socially skilled and actively asks questions and listens, proactive to interfere and inspire the teams to iterate!

A team with a complementing skill set is the best for running the process. Build a committed team which has the right combination of expertise. If you find a gap in skills of your team, consider how you get support from your organisation or collaboration partners. What may the other key stakeholders bring in to support the piloting programme?

You will also need money and time. Someone will be covering the costs for the pilots, and compensation although moderate is valuable for start-ups. Pilots can be financed by city, external project funding or collaboration partners. In a

Expertise needed to facilitate an agile piloting programme:

> Project management and coordination skills

 Design-thinking expertise and tools to facilitate co-creative process

- > Understanding of change leadership
- Marketing skills
- Communication skills

> Basic understanding of small procurements

living lab setting, the resources are also relevant: do you have a dedicated person in the real-life lab setting or people who are interested in contributing? This is crucial in the end, as the experimentation stage may be intensive. Also consider whether you have means to support the experimentation stage with additional resources such as student collaboration.

Scaling up and beyond

Agile piloting drives a culture of experimentation. Cities learn about feasibility of new innovative solutions, and companies get concrete feedback on their solutions to drive development further. The impacts of the piloting programme extend beyond individual experiments.



What do we mean by scaling up?



> Learnings from the piloting programme provide insights and understanding that may scale-up in city planning, decision-making, or investments. If the agile piloting programme is linked to concrete development activities of the city, well-documented results can help to drive change.



Individual pilots may evolve from short experiments to continuous activity and to commercial services. Or they can reveal the need to take the product development in another direction, which is an important result as well.



> Piloting can initiate future collaboration: Experimentation as all collaboration generates new projects and partnerships. Several start-ups and companies have continued collaboration with the city or Forum Virium Helsinki.



> The pilot themes are scaling up in follow-up projects, and thus serve project development within the city context. Themes related to, for example, mobility, green infrastructure, carbon footprint and food waste have continued their path from pilots to new projects.

How to scale up?

Agile piloting makes the challenges visible and involves a range of stakeholders. Scaling up requires facilitation throughout the piloting process. Results and learnings scale up through committed stakeholders.

caling up can be viewed from different perspectives. Scaling up of individual services may be a goal of a programme, but not the only one. The immediate impact of relatively small pilots may be limited, but the results, learnings and created partnerships can have significant influence on how cities and collaborators act and cooperate, plan and drive change in their everyday processes.

Agile pilots, as early stage prototypes, provide valuable insights on the development of a service for the companies. Cities benefit from the insights on larger scale planning, policy-making, and implementation - and drive culture of experimentation and innovation in the public sector.

The model provides a neutral ground for co-creation with a wider ecosystem. Experimentation in a real-world environment reveals the barriers of taking up new technologies and services, and allows all parties to learn. In most cases, the challenges are similar, such as lack of business ecosystems, legislative and regulatory issues, lack of interoperability and the slowness of change in behaviour of the users in adapting new services. Agile piloting may pre-reveal critical



pain points and potentials of a solution, before more resources are invested in more extensive planning or investments. Unanticipated learnings, revealed by real-world testing, have been proven particularly valuable for both private and public actors.

Although an agile pilot is not an automatic shortcut to procurement, collaboration may follow! Agile piloting is a means for the smaller companies to learn about the needs of the city and how best to collaborate with them. Potential procurement is always a separate process, but the positive experiences may initiate a purchasing decision in the future.

Set the table for scaling up

> Link the piloting programme to the City's strategic aims and topical development activities

- > The results scale up through committed
- organisations and individuals
- Think of the potential ways forward from the pilot (funding, collaboration partners, city contacts)
 Make a plan for communicating
- programme results through networks,
 events, and publications.
 > Nurture creation of new partnerships
- and collaborations along piloting

CASE

Ride-sharing to kids' hobbies

In the Last Mile project, football club Pallo-Pojat Juniorit (PPJ) conducted an agile pilot on kids' hobby transports. The kids were provided a possibility to take a shared ride to football practice with other kids and the coach. A mini-van took the kids to practice directly from school in early afternoons. The service saved parents' time and increased families' shared time in the evenings. The transportation costs were partly compensated by cheaper fees of earlier practice hours at sports halls. The pilot was a success and will become a permanent activity in the PPJ club. A guidebook to arrange shared rides in any sports club was published, in order to scale up the model (download it here!).

CASE

Harvesting growth: green infra

The theme of green infrastructure as an integral smart city solution started growing in Kalasatama in 2017. Throughout the journey, insights and collaboration possibilities from other Nordic cities were sought.

Two pilots by companies, Innogreen and WSP, showed how new technologies in green infrastructure and its digital modelling can bring benefits to urban areas.

Promising pilots were followed by a year-long co-creation project Virtual Verdure, engaging these companies in deeper collaboration with city planners and other experts, the theme has now reached a significant scale.

In the newest international project B.Green, the focus on green infrastructure is expanding to cover all remaining areas under planning in Kalasatama - thus offering now new and wider potential for companies to test their solutions.

"Kvikk testing" in Stavanger

The city of Stavanger in Norway followed the footsteps of the Finnish cities within the Nordic Smart Cities Network and adopted the model for agile piloting. They found the light procurement and participatory approach interesting, and the city council decided to fund the first piloting programme with 1 500,000 Norwegian crowns during 2019-2020.

"We were looking especially for a way to involve smaller companies. That's why we got interested in the Agile Piloting programme model. First we had to of course convince the decision-makers about this approach and with their approval we are now starting to test this", says Gunnar Crawford, Smart City Lead for the city of Stavanger. The agile piloting programme will focus on Lervig Park and the surrounding district, currently under development and planned to be ready by 2023-2024. The first piloting round focuses on solutions to support an inclusive, active and engaging park area. Five agile pilots will be selected for implementation during the spring 2020. The Smart City team of Stavanger has adapted the agile piloting model for local settings and invited local actors to the collaboration.

"It helps to cooperate in the municipality, engaging everyone. In case we can work this out successfully, we aim to run the piloting rounds on a continuous basis," says Gunnar Crawford.



Ready, set, experiment!

Agile piloting is a way to start anything - initiate a systemic change, co-develop and experiment new services and activities. Experimentation provides a fast way to gain more insight into city challenges. It accelerates change by making barriers and problems visible. The collaborative process enables the whole urban community to learn as much as possible during the intensive piloting period.

Agile piloting provides a framework for co-creating urban futures. It is not a rigid model that fits automatically everywhere, but rather a flexible framework that should be - and has been adapted in varying ways in different settings.

This pocket book compiles the learnings from several piloting programmes and dozens of agile pilots. It is an attempt to identify and condense the key findings for the use of anyone who wishes to use agile piloting as a way to enhance urban innovations. It serves as a source for inspiration and a checklist to avoid the pitfalls.

We, as facilitators, have found agile piloting to be an inspiring and impactful model for speeding up innovations and creating sustainable solutions for smarter everyday. However, we hope you read this guide book critically. Pick the parts that fit your case, adapt them as you wish, and disregard others.

Take the best learnings and combine your own toolbox to experiment in your way!

Pocket Book for Agile Piloting

This pocket book presents the model for agile piloting, a framework developed for cities to experiment with innovative solutions in an urban environment. The book provides concrete examples of how to use a co-creative approach to engage companies, citizens and other stakeholders in the development of more functional sustainable solutions.

The book builds on the experiences from Smart Kalasatama and Jätkäsaari Mobility Lab in Helsinki and condenses the key learnings in a pragmatic and easily digestible way. We hope to inspire urban innovators to apply experimental approaches in creating better cities.













Regional Council