

Enlighten Tampere

with the City of Tampere



6Aika



Leverage from
the EU
2014–2020



TAMPEREEN KAUPUNKI
SMART TAMPERE



CITY IoT



The City of Tampere is actively looking into better utilization and digitalization of built environment, in order to become a breeding ground for innovations. There is a huge potential to create a more sustainable city, a smarter maintenance management, a safer city environment, and ultimately to improve the lives of citizens. By taking advantage of the Internet of Things (IoT) and Big Data, completely new, innovative services and solutions can be built on the existing city infrastructure. Smart Tampere programme is now hosting an innovation challenge to find out what these could be, starting with the street lighting network as the playground.

This innovation challenge is a part of the following EU funded projects:

- 6Aika: Urban Big Data as Innovation Platform in Smart City Context (European Regional Development Fund)
- 6Aika: Future Operator Independent Data Integration Platform, City IoT (European Regional Development Fund)
- STARDUST (This project has received funding from the European Union's Horizon 2020 research and Innovation programme under grant agreement N°774094.)

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The Challenge

"Data is the new oil", you often hear. But what could it mean for a city? Let's take a simple part of the city environment, street lights, as an example. Currently, the operating of street lighting is based on levels of light. However, the current amount and sources of big data as well as the high-end network technologies being adopted by the city, could probably enable a smarter controlling of the lights. What if they responded to the amount of traffic or pedestrians in the area? Or the humidity of air or the thickness of snowfall? Or if they adjusted differently in different types of urban areas, or during big events?

All this data is already being collected, but not used to understand the city life in a more comprehensive way, and thereby to operate the lights more intelligently. Being able to simulate the city environment and life like this, would also enable other use cases, like planning street maintenance or designing traffic arrangements, maybe even creating totally new, data-driven services for consumers.

Last year, the City of Tampere organized their first innovation challenge (info in Finnish) looking for ideas on data collection and IoT solutions for the city environment. Now taking the next step further, the goal of this innovation challenge is to make the operations of the city more intelligent, and create new innovative services enabled by the data. The context of these solutions can be lighting, maintenance or some other. Thus, we are looking for new ideas, concepts and innovation partners to work with on two aspects of the challenge (you can choose to focus on either or both of them):

1 Enabling a Smarter City with Data Science

There are multiple data sources available, even publicly, describing the different aspects of city life. But to make the most out of the data and to be able to utilize it - for example for simulating, controlling or analyzing street lighting or any other context - we need to first be able to connect different data sources, perhaps also utilize the 3D model of the city, and apply some kind of logic, algorithm or other techniques to drive insights from them. We believe this is a crucial building block of a smart city, and something Tampere (and most cities) need help with to get started. Can you help us by building this kind of intelligence? You can use the street lighting as a demo context, but naturally we are interested in solutions with potential for other use cases as well.

2 Designing Data-Enabled Services for the Citizens

Imagining a connected and smart city environment, driven by data-enabled solutions like the ones asked for in the challenge above - what kind of totally new services could be offered by the city to the citizens? We are looking for service concepts that can make the city environment better, safer and more engaging for the individual citizen, thereby improving people's lives. You are free to use your wildest imagination, but naturally the most promising concepts are the ones that can be experimented with or tested on real users and data soon after the challenge.

Available Resources

To help the development of proof-of-concepts during the challenge, we have reserved some key people and resources to support your work.

Mentors & Experts

Each team will be assigned their own mentor from the host. There will also be other industry and service experts from the host to help the teams with their work.

Data, Software & Other Tech

The teams will get access to and are free (but not obliged) to use the following data sets:

- Unity-based 3D model of the City of Tampere (covering the upcoming tram line area)
- Publicly available data sources (including traffic light API and traffic data) and development tools, listed here: http://wiki.itsfactory.fi/index.php/ITS_Factory_Developer_Wiki
- Open data sources of the City of Tampere (in Finnish): <https://www.tampere.fi/tampereen-kaupunki/tietoa-tampereesta/avoin-data.html>
- Additional data sources may be presented during the kickoff visit.

Additional data will be made available through Microsoft Azure platform.

Timeline

- Applications close - May 4th 12:00
- Applicants informed about the selections – May 8th
- Challenge kickoff visit (mandatory for all team members) – May 24th 16:00-21:00 (Tampere)
- Co-development Camp (mandatory for all team members) – June 4th 9:00 - June 5th 18:00 (Tampere)
 - Decisions on innovation partners
- Pilot phase - June-September
 - Procurement decisions - October

Rewards

Each team selected to participate in the innovation challenge during spring/summer 2018 will be paid a reward of 1500 eur. The teams chosen as innovation partners will receive an additional 10 000 - 30 000 euros for their work during the pilot phase in June - September 2018. Rewards are paid against invoice after the team has completed all tasks related to the phase completed (this will happen within 30 days).
Estimated Time Commitment

The teams are expected, in minimum, to work full-time on the challenge during the co-development camp (2 days), take part in the kickoff visit (0,5 days) and invest an estimated 1-2 days of their time per person in working on the idea between the kickoff visit and the camp, also together with their assigned mentor.

After the camp, the chosen innovation partners are expected to work on their pilot project (building and testing an MVP) and take part in 2 workshops (kickoff and finalization), and the final jury presentation to discuss the final proposal for procurement. The latter two events will be scheduled in the pilot kickoff workshop.

Rules and Selection Process

This page is a request for proposals in a national procurement, organized as an innovation challenge. The process is designed in accordance with the public procurement law (1397/2016), and a modification of the EU's innovation partnership procurement procedure (applicable for larger public purchases). This procedure gives innovation challenge organisers an opportunity to acquire the service or product the participating team has developed during the challenge without a separate competitive tendering (given that all regulatory requirements are followed). The teams applying to the challenge must get familiar with the public procurement notice at HILMA (in Finnish).

During the challenge, teams will develop and conceptualise their suggested solutions together with Tampere mentors. The aim of the challenge is to find one to three solution suggestions that can be further tested in real environment in the piloting phase. The teams behind these best solutions are selected as innovation partners. The work during the partnership is divided into a development phase (pilot) and an implementation phase (after pilot). After the pilot, teams make their proposal and agreement with the City of Tampere, using JYSE 2014 Services or other applicable general terms.

Elimination of the applying and participating teams will be done in three stages: * Six to eight teams are selected to the innovation challenge that includes a negotiation phase, during which teams produce their solutions and proposals * One to three teams might be selected as innovation partners to participate in the development phase of the partnership (pilot) * One or more innovation partners might be selected to complete the procurement and deliver their solution (after the pilot)

The City of Tampere reserves the right not to select any of the proposed solutions.

Requirements and Selection Criteria for Applicants

In Enlighten Tampere, applications are accepted widely from among different companies and backgrounds. All teams need to have two to three members in order to be selected to the innovation challenge.

The applying teams must represent one or more companies (an entity with business ID). If a team represents more than one firm, it needs to clarify how their mutual roles and responsibilities are divided during the process and in following phases of delivery.

Applicants will be evaluated by their perceived technical knowledge and skills needed for creating solutions asked for in the challenge description, and the relevance of their initial approach described in the application. Previous experience in developing data-driven digital solutions to match various needs is of advantage to the applicants. However, any specific industry experience is not emphasized.

Evaluation Criteria for Selecting Innovation Partners

When selecting innovation partners for Tampere, the final offer co-developed by participants during the challenge is emphasized more than the size or the financial status of the company. This means that the proposed solutions are primarily assessed and compared based on their quality and adaptedness to the purpose.

Additionally, the participating teams and the companies they represent will be evaluated on the technical knowledge and skills needed for producing the concepts they are proposing. Previous experience in developing data-driven digital solutions to match various needs is of advantage to the applicants. However, any specific industry experience is not emphasized.

At the end of the innovation challenge, one to three teams will be selected as innovation partners to further develop their solution. The selection is based on price/quality ratio. The price ceiling for the development phase (pilot) of the innovation partnership is 10 000 - 30 000 €.

Qualitative criteria for the comparison of proposed solutions include:

Solution:

- Impact and relevance; does it truly address the defined problems
- Uniqueness or novelty of the idea or its application to the problem
- Technical feasibility
- Economic viability

Project plan:

- The development phase:
- Sub-phases and goals
- Required resources (human and other); both from the team and the Host

The delivery phase:

- Schedule and pricing
- Required resources (human and other); both from the team and the Host
- Available service and support

Team:

- Readiness for fluent collaboration with the City of Tampere
- Capability to plan, produce, and maintain a digital service based on the defined challenge and needs
- References

Who Will Own My Idea?

Ideas are free for everyone to use but the IPR for any software codebase or documents produced during the competition will remain with the team. The host has the first right of refusal to negotiate further collaboration with the team to purchase or continue working on the project initiated during the challenge.

Inquiries

All inquiries need to be sent through the Questions & Answers functionality below by 16.00 on April 27, 2018. All questions and answers will be published there by April 30, 2018.