Case study n°1

How to measure the smartness and sustainability of a city using international standards: The case of Pully.

Country: Switzerland

Level: Local

SDG Addressed: SDG 11 – Sustainable Cities and Communities

Summary

The objective of this case study is to show how the City of Pully (Switzerland) has used the key performance indicators of the United for Smart Sustainable Cities (U4SSC) to identify the city's strengths, opportunities for development and challenges. This programme supports several indicators under SDG 11; in particular, SDG 11.3: "By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management". The main agency involved was the administration of the city of Pully, in collaboration with Swisscom and ITU.

As Professor Peter Drucker said: "you can't manage what you can't measure". For this reason, the city of Pully was in search of tools that could help its politicians and administration to measure the effectiveness of the city's smart city projects and the city's progress in reaching different SDGs. Therefore, in 2017, the city decided to implement the U4SSC Key Performance Indicators (KPIs) for Smart Sustainable Cities (SSC) and began to collect data according the KPIs.

Background

For 4 years, the city of Pully has developed several smart city projects with the moto "step by step, success by success". In 2017, it was observed that the city was ready to develop a comprehensive smart city strategy. To do that, it was important to have a "picture" or "overview" and establish a baseline scenario on the level of digitalization of the city. Therefore, it was decided that Pully would participate in the U4SSC KPIs project and adopt the U4SSC KPIs for Smart Sustainable Cities.

The United for Smart Sustainable Cities (U4SSC) initiative is a UN initiative coordinated by ITU and UNECE with the support of 14 other UN agencies. It is dedicated to achieving SDG 11: "Make cities and human settlements inclusive, safe, resilient and sustainable". One of the tools developed by the U4SSC is the KPIs for SSC. The U4SSC KPIs for Smart Sustainable Cities are developed based on the international standards "Recommendation ITU-T Y.4903/L.1603 on Key Performance Indicators for smart sustainable cities to assess the achievement of sustainable development goals". The main purpose of the KPIs is to establish the criteria to evaluate ICT's contribution in making the city of Pully smarter and more sustainable, and to provide Pully with the means for self-assessments in order to achieve the SDGs.

Strategy

Pully collected the KPIs according to the "Collection Methodology for Key Performance Indicators for Smart Sustainable Cities" developed within the U4SSC initiative, which details how this implementation could assist in making management decisions. In

order to collect the necessary data for the KPIs, Swisscom brought human resources in order to support the city of Pully. Once Pully's participation in the KPIs for SSC project was officially confirmed by ITU, by April 2017, the city began to analyze the KPIs and send them to the city's departments, and to various offices such as the Vaud Statistic Office and the Federal Statistical Office, to collect the needed data.

After receiving the KPIs, Pully created a normalized file for each KPI, with all the relevant information (content, origin, quality, reliability etc.). By September 2017, all the data for the KPIs was collected. By February 2018, the collection of the data was certified by an external auditor. To further share the experience of the city's work on smart sustainable cities, Pully has delivered several presentations at the World Smart City Forum in Barcelona, the SmartSuisse conference in Basel, the Third U4SSC meeting in Malaga, Spain, and among others.

Results and Impact

A global overview of the smartness and sustainability of Pully has been established. This has enabled the Department for Industrial Services and Technical Office to identify the strengths of the city. With respect to achieving the SDGs, the noted strengths include environmental quality, air quality, waste, water and sanitation, safety, housing, health, education, food security, water and sanitation, urban planning, innovation, ICT infrastructure, and employment.
Implementation has further helped policymakers to identify opportunities for improvements, which include: energy, social inclusion, buildings, electricity supply and transport. Multiple related challenges have also been acknowledged such as: child care availability, renewable energy consumption, public energy consumption, cycling transportation, and open data.

The city of Pully, together with Swisscom and in collaboration with ITU, is currently developing a report to showcase Pully's experience in implementing the KPIs. This report is the key outcome document that the city will use to communicate with its politicians and citizens on the results of this project and identify the next step the city must take to continue its digital transformation. This report will also be a resource to set up future collaboration with other cities for the purpose of knowledge sharing. The report is expected to be published by the end of 2018.

Challenges and Lessons Learned

Translating the result of the KPIs into an easy to understand manner is very important. Policymakers and citizens alike must be able to interpret the results without any specialized knowledge in order to take actions based on the results. To that end, a graph that helps to illustrate the current situation of the city based on the results of the KPIs, has been developed.

While the U4SSC initiative has certified that Pully collected the data needed for the KPIs, it does not set a quantifiable or measurable target for evaluation. (for example, at what level of access to internet will it be considered sustainable?). Therefore, each city must define its own target levels which makes it difficult to measure its achievement and to compare the results with other cities.

KPIs can be used for self-assessment and adopting best practices. In the case of Pully, it is necessary to first determine whether the U4SSC KPIs for SSC are capable of reflecting the complex nature of the city. From the Pully experience, it was found that the choices made by the U4SSC indeed highlighted some of the most important aspects of a city but often to the detriment of others.

Potential for Replication

The U4SSC KPIs for SSC are designed with accessibility, flexibility and replicability in mind. The KPIs consist of a core set and an advanced set of indicators. Cities only have to provide data for the core set of KPIs in order to begin to evaluate its progress in reaching the SDGs. Over 50 cities worldwide have already implemented these KPIs including Dubai, Singapore, Maldonado, Kairouan, Manizales, Valencia, Wuxi and among others.

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