Notes from MFG4.0-workshop 28/02/2019: Dos and Don'ts of Big Data for Foresight

[Mikkel Stein Knudsen](#), Project researcher Manufacturing 4.0, Finland Futures Research Centre, University of Turku

Organisations today, whether public or private, are trying to figure out how to capture new opportunities through application of Big Data. For forward-looking organisations this might be one of the most pressing concerns of the ongoing digital transformation. It is often considered an important strategic imperative to succeed, yet we have found many organisations to be struggling with how to even approach the subject. Increased integration of Big Data can also lead to better foresight-models in organisations, research and society. This could be an important step towards better decision-making in general.

Introduction, Manufacturing 4.0 Work Package-leader Dr. **Jari Kaivo-Oja**

Identifying good practices of Big Data for Foresight is therefore a topical research topic to tackle in order to make Finland thrive in an era of rapid change. How to integrate Big Data into Foresight-methodologies is also an important and highly topical research question for the academic foresight and futures research community.

Addressing this issue Finland Futures Research Centre, University of Turku and Kazimieras Simonavicius University of Lithuania arranged a Manufacturing 4.0-workshop in Turku 28th of February 2019 with the topic of "*Dos and Don'ts of of Big Data for Foresight*".

Manufacturing 4.0 Work package-leader Dr. **Jari Kaivo-oja** provided an introduction to the event and to the MFG4.0-research project, as well as a new international research project on *Platforms of Big Data Foresight* with clear synergies with Manufacturing 4.0.

Afterwards Dr. **Milla Wiren** of Turku School of Economics presented new research on *Strategic Positioning in Big Data Utilization*. Drawing on her doctoral dissertation she presented a state-of-the-art overview of research on strategic utilization with the challenges and opportunities this provide. This typology of inherent dilemmas within the utilisation of Big Data is a highly valuable contribution to making Big Data accessible for a broader range of organisations. [i]

More about MFG 4.0 Project

In a local spin of the event, development manager **Tuomas Piippo** presented topical activities of City of Turku. City of Turku has a stated vision of *using data science resources to create a smart and wise Turku,* and improving the utilization of the city's data assets is a current flagship project. In order to achieve this the city is in the process of creating a new city-owned commercial company *Turku City Data Oy* which will operate on open and competitive markets.

The ideas and thoughts of the local government system created a fruitful discussion among the workshop participants related also to broader topics such as privacy, ethics, and democracy. As the presentation and the discussion illustrated, there is a great mutual interest from research teams – e.g. in the Turku School of Economics or in the Manufacturing 4.0 project – to collaborate for the digital transformation journey of smart cities in Finland. The 6Aika-cooperation platform is also an important platform for this collaboration.
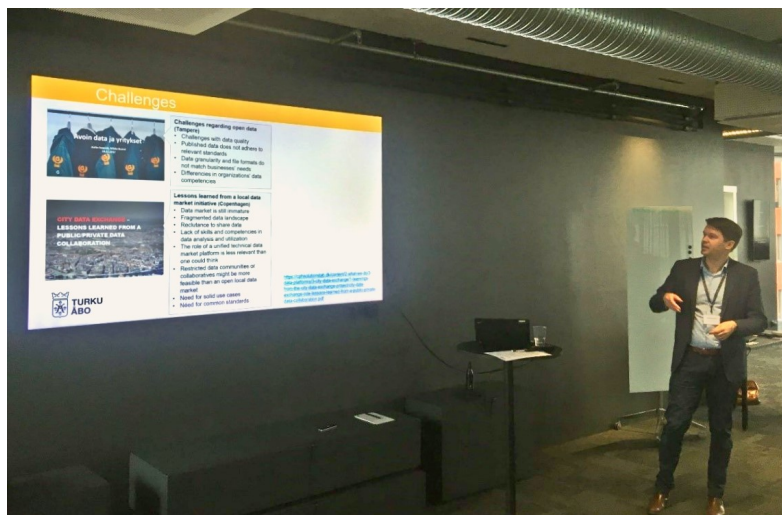
Tuomas Piippo, City of Turku and Turku Data City Oy.
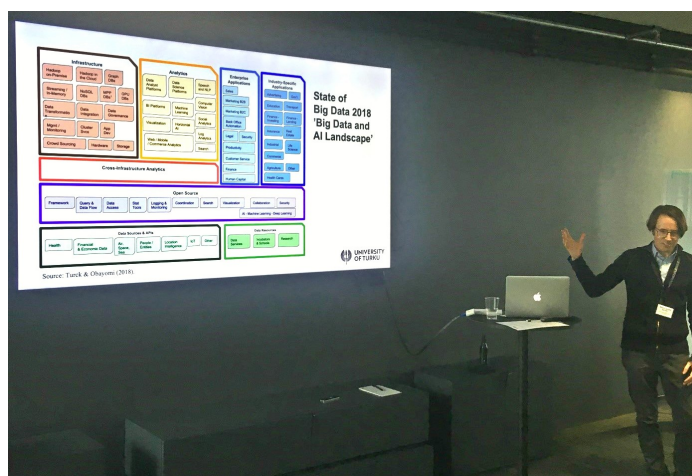
Nick Balcolm Raleigh, Finland Futures Research Centre, Big Data for Territorial Development 2019

Another example of an attempt to use Big Data for territorial policymaking is the ESPON Big Data & ECG-project aiming at integrated territorial policy development in the European growth corridors. The project is running 2018-2019 and project researcher **Nick Balcolm Raleigh** of Finland Futures Research Centre presented some of the initial findings of the ambitious international project.

Highly relevant for the topic of the day, this included an assesment of the state-of-the-art of the Big Data research field, and clear notes on some of the challenges derived from attempting to apply Big Data for policy develpoment. The final report of the project is expected to be available later this year [ii].

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The two final presentations of the day by **Mika Ilari Koskinen** of Futures Platform and **Teemu Santonen** of Laurea University of Applied Science provided the workshop participants with practical examples of integrating Big Data and foresight methodology.

The Futures Platform is providing organisations with a software tool combining data with foresight analyses[iii]. Teemu Santonen discussed how crowdsourcing methodology in certain cases can be a wise supplement to Delphi-studies, which is a very widely used method in futures research.

Teemu Santonen, Laurea University of Applied Science

Workshop participants MFG4.0

i The basis of the presentation can be explored **HERE**

ii The final report will be published on the project website, where an Inception report (2018) and Interim report (2019) are already **available**

iii See: https://www.futuresplatform.com/

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