

# Identifying Measurable Targets for a City's Social and Welfare Sector Management

Pasi Hellsten\*, Kristiina Lumme\*\*

\*PO Box 541, FI-33014 Tampere Finland, [pasi.hellsten@tuni.fi](mailto:pasi.hellsten@tuni.fi), [kristiina.lumme@tampere.fi](mailto:kristiina.lumme@tampere.fi)

\*\*PO Box 541, FI-33014 Tampere Finland, [kristiina.lumme@tampere.fi](mailto:kristiina.lumme@tampere.fi)

*Abstract: Today's organizations face constantly challenges as the newer ways of working set newer requirements for the management. Management is required to monitor the operation like always, but now there are newer angles to the operation. The need for more holistic approach means that management is expected to use multiple sources for information from various parts of the operation. To improve the processes the management needs to have a wide big picture. The financial numbers are not enough alone. What do we know about the other measurable areas? Our findings show that potential measurables are multifaceted and numerous. This has further implications to the further development of the operation and the possible digitalization initiatives.*

*Keywords: Social and welfare sector, Public sector, Measuring, Management*

## 1. Introduction

Service provision is a task characterizing the operations in public sector (De Vries et al., 2016; Higgins, 2017). This interprets to the having multiple angles to the phenomena under scrutiny. Taxpayers and other funding sources form only one of these angles and stakeholders. Other factors, such as reducing resources, citizens' expectations, and public pressure resulted in the development need of operations are other constant concerns (Hellsten and Pekkola, 2019). Measuring these may prove to be more difficult. Public sector organizations have launched various digitalization initiatives, e.g. smart city initiatives ([smartttampere.fi/en/home/](http://smartttampere.fi/en/home/)), in order to meet the challenges presented by stakeholders, e.g. flexibility and easier reachability (Bakıcı et al., 2013; Hellsten and Pekkola, 2019; Taylor Buck and While, 2017). All these measures need exactly that, measures. How to measure the operation in order to meet the right decisions?

Public sector organizations are not always very savvy when it comes to utilizing the information and communication technologies (ICT) (Karagoz et al., 2020; Lecomber and Tatnall, 2014; Tatnall Victoria and Davey, 2013). Not all the members of the organization are necessarily prepared for using overarching and holistic technologies, such as info-searching, social networks, and communicating in the services they are to offer (Lindgren and Jansson, 2013). It is not uncommon that the services are 'siloed', targeted only to a single audience and purpose rather than being broad,

linking several sections or crossing organizational boundaries. The risk in this approach is that services may be disintegrated and isolated from one another thus giving the management hard time to fathom the big picture and to make the right decisions. Should this be the case, the impacts these individual parts perform on the organizational processes becomes minimal. At least when compared to the situation where the management has the transparent process to deal with. This may result in the whole digitalization phenomena being judged unsuccessful or even not useful at all.

The city of Tampere is continuously developing the reporting aiming to improve the productivity of the public services in all the service areas. The objectives are set in the city strategy. This paper is focuses on the social and welfare (SoWe) sector. The sector has decided to set six pilots for productivity observations and development: home care for the elderly, child protection services, living arrangement services, health centres, services for the disabled, and a welfare centre. The pilots aim to find out how the reporting in various levels of management could be improved to optimally support the managerial function. The visualization is to be developed and included in the observation at a later stage. Similarly, the need, the choice, and the use of tools is to be discussed.

Identifying and assessing the various angles to be included in the decision-making process is not necessarily easy (Ylinen and Pekkola, 2018). The branches need their own approach and the right measures observed in their context, according to the individual objectives. There may also be other types of implications caused by e.g. the changes in the political climate, citizens' expectations, or the process improvements. These developments may affect the impact evaluation of a digitalization tool or initiative. There is thinking to be done when the measures and their visualization is considered.

This motivates our paper. We answer the question: "What are the measures the management needs to have data of in order to manage?" by studying a mid-size city in Finland, and in particular the SoWe sector. The aim is to learn so that the possible expansion of measures is managerially, but also financially, feasible and justified. A number of key stakeholders were interviewed for their perceptions about the facts related to this issue. The results of a qualitative study show impacts, with a need for explicitly articulated goals. Section 2 presents our theoretical background. Sections 3 and 4 present the research setting and methods, and our findings. Section 5 discusses the results.

## 2. Theoretical Background

A city operation is a multifaceted entity with a large number of tasks. To make a city administration run smoothly, one needs to consider development schemes emerging from different sources with different aspirations (Aichholzer and Schmutzer, 2000). The general management is advised to consider a number of areas, such as the community and the environment, economical viewpoint, education and culture issues, social and healthcare areas (Finnish association for municipalities, "Kuntaliitto.fi" 2018). Each administrative area has its own practices, processes, and personnel. Similarly, the management, even if they do have similar features, the information and process beneath the surface is different in each area. The requirement of the digital innovation is present in today's public sector and its management (Bason, 2018; Demirkan et al., 2016). This presents requirements for the management. The knowledge needs should be well thought of and justified. Finding unified rules and solutions may prove to be difficult, case-specific to say the least.

Digital transformation refers often to the renewal of the business model. This includes different ways of executing the daily operation. Digital transformation deals with the actual operation and also later resource allocation (Agutter et al., 2017). Changing the logic in the operation influences not only operational activities and functions but also the very processes. This manifests itself also in the organizational culture (Wirtz, 2016). The change into bottom-up thinking may prove to be advisable (Lönn and Uppström, 2013; McDermott et al., 2015). While the process is developed, simultaneously the commitment of the employees may be developed (Agutter et al., 2017). The extent of digitalization and the success of its implementation depends largely on the attitude towards renewals and the organization's readiness to promote and participate in developing itself (Ding et al., 2014). Organizations with such features are prone to gain benefits from novel experiences.

Merely maintaining the level of services may prove to be difficult when the resources are scrutinized (Arnaboldi et al., 2015). The many departments need attention and development, while the resources are decreasing. At the same time, however, the service offering should be improved, developed (ibid). Moe et al. (2014) shows the importance of personnel and their readiness to use new services. There has been also arguments for need for better allocation of resources in providing public services (Fox, 2002). Both mentioned perspectives aim at increased productivity and improvement of the services in the public sector.

When developing organizations, the management need their employees to continue to be active and productive in their everyday routines. This stresses the significance of managerial skills, the need for understanding of the workplace dynamics (Beck and Cowan, 2014; Hellsten and Pekkola, 2019). To commit the employees and ensure their support to the novel way of operating is assured to lower potential resistance (Fernandez and Rainey, 2006). In best case scenarios, this results in beneficial outcomes and improved operation (Huitt, 2003; Zhou and George, 2001). The openings in implementing new technological solutions are made to improve the services, to streamline the organizational processes (Bongiorno et al., 2018). This surely includes equally the management.

Managing digitalization initiative is not easy, the organizational transparency and full use of more holistic approach necessitates a different management approach (Goldfinch, 2007). To develop measures for assessing the impacts and comparing the results is equally challenging (Baily et al., 2008; Srai and Lorentz, 2019). Differences in perspectives, actions, and cultures make this management task difficult and needing qualitative, often subjective measures.?

### 3. Research Setting

This paper covers a case study (Yin, 2008) of a city with some 240 000 inhabitants, a third largest in Finland. A hub in the area that attracts new inhabitants by its schools and university and vivid industry. Tampere employs some 14000 people, of which a little over 10 000 are employees in the service area of wellbeing (e.g. nurses, nannies, doctors, teachers, support personnel, etc.). The area of wellbeing is divided further into social and welfare (SoWe) sector and education and culture services. This paper scrutinizes the SoWe sector. That particular service area, the two sectors together, is responsible for 66% of the city's personnel costs. ([www.tampere.fi](http://www.tampere.fi)) The SoWe sector

together with education and cultural services covers e.g. services for the elderly, pre-schools, grammar schools, health services, housing services, and various supportive services mandated by the national legislation. Not only the technological developments but also the legislation presents the public sector with new requirements regarding the services offered (A statement from the Finnish government, "Hallituksen esitys sote-uudistukseksi ja uudistusta koskeva lainsäädäntö etenee eduskuntaan -," n.d.). The operation, and indeed the management, is required to comply to these.

The stakeholders have varying needs and capabilities regarding the technologies they use and the reports the systems may produce. The complexity of the sector presents the management with a multitude of sources for the empirical material for the decision making. The organization gathers data, but not necessarily uses it. The newer way of operating resembles more the 'bottom-up' approach based on the pilots that were undertaken in the areas. This work is ongoing. Another feature that emerged, is the wish for automatization also in other areas of operation besides just the financial data. The pilots aim to develop the managerial reporting, i.e. digital services to ease the everyday life and the development of the operation. For the inhabitants of the city indirectly increase wellbeing and security by enabling better flow of data and improved management.

The researcher 1, being a member of the case organization, is working currently in planning function of the city's SoWe sector. She is well informed over the situation and the needs of the decision makers as well as the possibilities of the information systems and their users. She is well acquainted with the existing plans and documentation. The basis of the study is formed by thorough knowledge of the city's documentation regarding the SoWe sector and the plans therein. To better understand the bigger picture and to fully fathom the needs of the decision makers, a set of 24 interviews was conducted twice to collect qualitative data from the city's SoWe sector. The themes emerged from the area and the objective of the activity; what is needed for a transparent and wide-scoped reporting. The interviewees covered also the city's financial sector experts in addition to the personnel from the SoWe sector. The key personnel of the city administration were interviewed to illuminate the financial reporting and to shed light on the city administration's overarching viewpoint.

The SoWe sector is divided into five service areas introduced in the next chapter. Four of these were covered in the interviews. The fifth is formed only from the beginning of 2021. The interviewees ranged from the director via the service managers to the operative level. The interviews concentrated on the management of the function, its resources and effectiveness.

The data analysis was performed following the interpretive research approach (Walsham, 2006). The first researcher went through the material to gain an overview of the topic. She acquainted herself with the issues related to potential impacts and formed an overall picture of the proceedings. Process diagrams and stakeholder maps were drawn and iterated with the city representatives of the relevant offices. The second author supported the compilation of the study. In the final stage the findings were collectively discussed.

## 4. Findings

Successful management of the whole social and welfare (SoWe) sector requires data flow from various sources. This may be drilled down to a case-specific level. In order to gain benefits from the various systems, the measures needed to be re-thought. The productivity was divided into three categories: the main indicators, the complimentary indicators and the explanatory indicators. The indicators are used differently at this point; some are used in the sub-levels of the city administration and some are on the highest, city-level. Some are still being developed. These indicators are partly developed by the city's main financial office and partly in the individual sector, in which case the financial office was in an advisory role to oversee the proceedings.

The main indicators include various monetary measures; the operating costs, employment costs, service acquisition costs, net costs. All the four are calculated to euros per inhabitant, which is easy to follow. A fifth indicator, productivity of service, is still being developed. This is meant to be calculated by finding out the output/input, or return on investment. The centric observation point being economical approach and the cost-efficiency of the operation.

The complimentary indicators aim to measure the quality of services and their effectivity. The measurables in this category are the customer experience, the satisfaction towards the digital operating channels and the cost efficiency. The measures in this category are still being developed as their qualitative nature is more novel and merits closer scrutinizing and more thorough planning. Similarly, the way these measures could be used in order to support the management function optimally, needs further thinking.

The explanatory indicators are both qualitative and quantitative by nature. There are the digital operating channels, efficiency of procurement, procurement know-how, the use of premises/spaces, absence due to illness -%, employee experience (net promoter score, NPS), employer experience (eNPS), and productivity improving projects and initiatives. The measures are followed case-specifically in dedicated meters.

Not to make the case overly simple, one needs to consider the many areas and aspects there are to the SoWe sector. The knowledge-based management is executed in areas of which the pilots were. The services for elderly, divided further into home care and living arrangement services. The services for children, youth and young families, of which the child protection services were mentioned before as one focal feature in this area. In this area there are both social and health-related services under observation. Psycho-social services is another area of which the pilot area is the services for the disabled. Housing services and living arrangements are in this area too. The health area covers the health centres, which has a pilot, as well as dental health services. The hospital services are as their own category. Considering this list, it becomes evident that the management in this broad field needs to have tools well thought of and then equally carefully executed.

The ultimate goal of digitalization is to offer improved services for the inhabitants of the city and the city employees (Flak and Solli-Saether, 2013; Paivarinta et al., 2007). In our case, the measures touched this by enabling better managerial practices as an instant benefit. Broader understanding from different perspectives supports this. This, in turn, helped to comprehend the role of each area

among others. Development of the thinking patterns includes the managerial function and the subordinate issues. Individual tasks are to be reflected through the understanding of the operations and the city strategy. The areas rethink their processes to meet the needs for the management.

## 5. Conclusion

One major outcome of the development scheme this paper is based on is the city's realization of needing to observe the proceedings more broadly than before. To rethink the indicators and their meanings gives wider perspective on the proceedings. The initiative is seen as individual parts combining into one. The progress and the attitude towards the innovations at large were perceived as a positive development. The sector is now more transparent for management and the management can rely on the data they have for the decision-making.

The model being used in this undertaking resembles roughly the information management process model (Choo, 2002). The model entails information needs as a basis for further development. The following step of defining the storage issue, the various systems and data-warehousing was dealt with as some changes needed to be made in the existing systems. The refinement of the data flow is the next step based on a well justified definition of the information needs. This step starts to bring content to the data repository from the previous step. Knowledge products and their dissemination are in the midst of the process. The next step, partly simultaneous with the previous one, visualizing the information content is the point that is the next undertaking within the city's SoWe sector. After this phase the use of the information products is something that the management does. They make decisions based on the best possible information and changes these decisions into actions. The question is, how good can the information be?

The current toolset, information systems, for information handling and the possibilities it provides are not yet quite final. This is indeed the next step the city's SoWe sector is taking. To consider and plan, how the information could be visualized into even more useful form. There is a need for drilling down to the data, more useful visualizations etc. To accomplish this, a need emerges for both knowledge of the operation and technical skills and understanding of the tools in use.

The measures need to communicate but also implement the city's strategy, and also to formulate a mission for the departments. The goalsetting and defining the objectives for any digitalization undertakings is important. This needs to be done simultaneously with the planning. The objectives need to be defined individually for different parts of the sector. The needed actions may not be easily compared with one another; thus, the same metrics are not necessarily possible to be used in all the targets.

The contribution is two-fold. Firstly, we show areas of interest for the management of social and welfare sector and also measures to be considered. The transparency improved and the understanding about the operations was clearer. Secondly, we point out the next important step for the smart city and/or digitalization initiatives. We argue that planning and executing the initiatives is difficult since they all require different goals, actions, and measures.

There are limitations to this presentation: this is just one case of SoWe sector, and this is made in its environment in Finland. This needs to be taken into account when considering whether any major generalizations are to be made based on this paper. Moreover, the transparency and wide scope are needed to understand a working environment. This in turn may be seen as a prerequisite for a successful development scheme. Further and deeper research is needed to verify the findings and take stand on the actual measuring of the operation, which was here left out. Having said that, we argue that it is plausible to assume that similar starting point will provide comparable results.

## References

- Agutter, C., van Hove, S., Steinberg, R., England, R., 2017. VeriSM-A service management approach for the digital age. Van Haren.
- Aichholzer, G., Schmutzer, R., 2000. Organizational challenges to the development of electronic government, in: Proceedings 11th International Workshop on Database and Expert Systems Applications. Presented at the Proceedings 11th International Workshop on Database and Expert Systems Applications, pp. 379-383. <https://doi.org/10.1109/DEXA.2000.875054>
- Arnaboldi, M., Lapsley, I., Steccolini, I., 2015. Performance management in the public sector: The ultimate challenge. *Financ. Account. Manag.* 31, 1-22.
- Baily, P., Farmer, D., Crocker, B., Jessop, D., Jones, D., 2008. Procurement principles and management. Pearson Education.
- Bakıcı, T., Almirall, E., Wareham, J., 2013. A smart city initiative: the case of Barcelona. *J. Knowl. Econ.* 4, 135-148.
- Bason, C., 2018. Leading public sector innovation: Co-creating for a better society. Policy Press.
- Beck, D.E., Cowan, C., 2014. Spiral dynamics: Mastering values, leadership and change. John Wiley & Sons.
- Borins, S., 2002. Leadership and innovation in the public sector. *Leadersh. Organ. Dev. J.*
- De Vries, H., Bekkers, V., Tummers, L., 2016. Innovation in the public sector: A systematic review and future research agenda. *Public Adm.* 94, 146-166.
- Demirkan, H., Spohrer, J.C., Welser, J.J., 2016. Digital innovation and strategic transformation. *IT Prof.* 18, 14-18.
- Ding, F., Li, D., George, J.F., 2014. Investigating the effects of IS strategic leadership on organizational benefits from the perspective of CIO strategic roles. *Inf. Manage.* 51, 865-879.
- Fernandez, S., Rainey, H.G., 2006. Managing successful organizational change in the public sector. *Public Adm. Rev.* 66, 168-176.
- Fox, K.J., 2002. Efficiency in the Public Sector - Google-kirjat. Springer Science+Business Medi, LLC, New York.
- Goldfinch, S., 2007. Pessimism, computer failure, and information systems development in the public sector. *Public Adm. Rev.* 67, 917-929.

- Hallituksen esitys sote-uudistukseksi ja uudistusta koskeva lainsäädäntö etenee eduskuntaan - [WWW Document], n.d. . Soteuudistus. URL <https://soteuudistus.fi/-/1271139/hallituksen-esitys-sote-uudistukseksi-ja-uudistusta-koskeva-lainsaadanto-etenee-eduskuntaan> (accessed 3.16.21).
- Hellsten, P., Pekkola, S., 2019. The Impact Levels of Digitalization Initiatives. EGOV-CeDEM-EPart 2019 109.
- Higgins, B., 2017. Reinventing human services: Community-and family-centered practice. Routledge.
- Huitt, W., 2003. A systems model of human behavior. *Educ. Psychol. Interact.*
- Karagoz, Y., Whiteside, N., Korthaus, A., 2020. Context matters: enablers and barriers to knowledge sharing in Australian public sector ICT projects. *J. Knowl. Manag.*
- Lecomber, A., Tatnall, A., 2014. Project management for IT professionals: Education and training issues, in: IFIP Conference on Information Technology in Educational Management. Springer, pp. 12–24.
- Lindgren, I., Jansson, G., 2013. Electronic services in the public sector: A conceptual framework. *Gov. Inf. Q.* 30, 163–172.
- Lönn, C.-M., Uppström, E., 2013. Process management challenges in Swedish public sector: a bottom up initiative, in: International Conference on Electronic Government. Springer, pp. 212–223.
- McDermott, A.M., Hamel, L.M., Steel, D., Flood, P.C., Mkee, L., 2015. Hybrid healthcare governance for improvement? Combining top-down and bottom-up approaches to public sector regulation. *Public Adm.* 93, 324–344.
- Moe, C.E., 2014. Research on Public Procurement of Information Systems: The Need for a Process Approach. *Commun. Assoc. Inf. Syst.* 34, 78.
- Srai, J.S., Lorentz, H., 2019. Developing design principles for the digitalisation of purchasing and supply management. *J. Purch. Supply Manag.* 25, 78–98.
- Tatnall Victoria, A., Davey, B., 2013. Major eGovernment Projects in Health, Education and Transport in Victoria.
- Taylor Buck, N., While, A., 2017. Competitive urbanism and the limits to smart city innovation: The UK Future Cities initiative. *Urban Stud.* 54, 501–519.
- Wirtz, B.W., 2016. Business model management, 2nd ed. German University of Administrative Sciences Speyer, Speyr.
- Zhou, J., George, J.M., 2001. When job dissatisfaction leads to creativity: Encouraging the expression of voice. *Acad. Manage. J.* 44, 682–696.

## About the Authors

### *Pasi Hellsten*

Pasi Hellsten, PhD. Holds a position of a university lecturer at the Tampere University, Finland. Dr. Hellsten is currently head of degree programs and a team leader, and also a researcher in the NOVI Knowledge research group. Dr. Hellsten's research interests lie with information systems and their renewal. He is also interested in change management, business intelligence and tools thereof, knowledge management and



processes. Dr. Hellsten has supervised numerous master's and bachelor's thesis and is currently supervising two post-grad students.

*Kristiina Lumme*

Kristiina Lumme, Master of Science in Economics and Business Administration, holds a position of a Planning Manager and head of team concentrating on knowledge management in the social and health services in the City of Tampere, Finland. She has strong interest in developing measuring especially managerial accounting, productivity and effectiveness. Mrs. Lumme also currently works at the Finland's health and social services reform in the Pirkanmaa region. There her main task is to develop knowledge management as well as create new knowledge products on a regional level.