Uniforming Information Management in Finnish Social Welfare

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Abstract. This paper describes the phases and methods used in the National project for IT in Social Services in Finland (Tikesos). The main goals of Tikesos were to unify the client information systems in social services, to develop electronic documentation and to produce specifications for nationally organized electronic archive. The method of Enterprise Architecture was largely used in the project.

Keywords. Social welfare, social services, information management, enterprise architecture

Introduction

In Finland the duty of municipal authorities is to arrange social and health care. The law on Social welfare [1] stipulates the services that municipalities must organize. Social services are produced by both public and private service providers. There are 336 municipalities and nearly 3 000 private NGOs, associations and enterprises providing social services. The population of the municipalities is highly variable: the smallest municipality has only 110 inhabitants and in the largest city lives approximately 570 000 inhabitants. Social welfare sector employs about 170 000 people, which is about 8 % of the employed working force in Finland. Social care is widely capitalized by taxes. The production of the social services has been highly computerized on local level, but the information management is not centrally led [2].

The contents of the social services are stipulated by laws. Commissions of social services are based on 17 different laws.

In 1996 Ministry of Social Affairs and Health published the Strategy of utilization of information technology in social and health care. In order to concretize the strategy the ministry started the national Development Project for Social Services which included a comprehensive evaluation of what are the major areas in the use of information technology in social welfare services that should be promoted. As a part of the implementation of the strategy a National Project of IT in Social Services (Tikesos) was started in 2005. The Tikesos was implemented by The National institute for Health and Welfare, The East Finland Social and Welfare Centre of Expertice, The University of Eastern Finland and The Finnish Association of Municipalities. The work was done in multiprofessional groups since it required knowledge from social services, IT and

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terminology. The Tikesos project was finished in 2011 and since the national development of ICT in social welfare has been organized by the National Institute for Health and Welfare's Unit for the Operational Management of Health and Welfare Information.

This paper describes the main objectives and the major outputs of the development project Tikesos.

1. The objectives of the development project

The national development project was designed to improve the utilization of IT in social services in all levels: eServices, record management, process management, information management and client information system management. [3, 4] There were no special regulations or legislation about digital records management or data management in social services which led to a situation that every municipality or other service provider has its own ways to classify their records and manage the client information.

The first objective of the Tikesos was to promote a coherent data production in social care. The client data must be recorded in the client information systems using the common data structure and the agreed contents of data according to the equal rules by every service provider. [4] At the moment each service provider has its own way to collect and manage data of their own. Even if the information is collected similarly it is not semantic compatible with others. The same issue is related to technologies as well.

The second objective was to promote the compatibility of the client information systems and digital information sharing between organizations providing social services. The client data should be available when needed despite who has composed the original data. Achieving the goal requires not only the standardization of the content of information but also technologies with open interfaces and general standards have to be used.

The third goal was that centralized eArchive is planned and established. Equivalence to health care specification was taken into account. The digital archive would enable information sharing of authorities, storing and centralized statistics. At the end of the project none of these objectives are fully achieved but remarkable steps towards uniformed information management have been taken.

Act on Information Management Governance in Public Administration entered into force on september of 2011 in Finland [5]. A purpose of the new law is to ensure and promote the system-level interoperability which hopefully improves knowledge management of Finnish public services.

2. Results

The use of enterprise architecture method was one of the major achievements of the Tikesos project. The project was amongst the first pioneers who applied to the joint enterprise architecture for information management in public administrations designed to be used in Finland. In 2008 Tikesos started to develop the method for its own needs. The first official recommendation for information management in Finnish public administration (JHS-recommendations [6]) of the joint enterprise architecture method

weren't published until the end of 2011. In figure 1 the main outputs of the project are presented in the joint enterprise architectural model.

In business (see figure 1) point of view the development started by analyzing the information needs in social care production. Approximately 170 social workers or other social care professionals were committed to analyze and define the contents of the information they need in order to give or arrange services to clients. As a result of the work 26 reports concerning analysis of the information needs in different social services were published. [7]
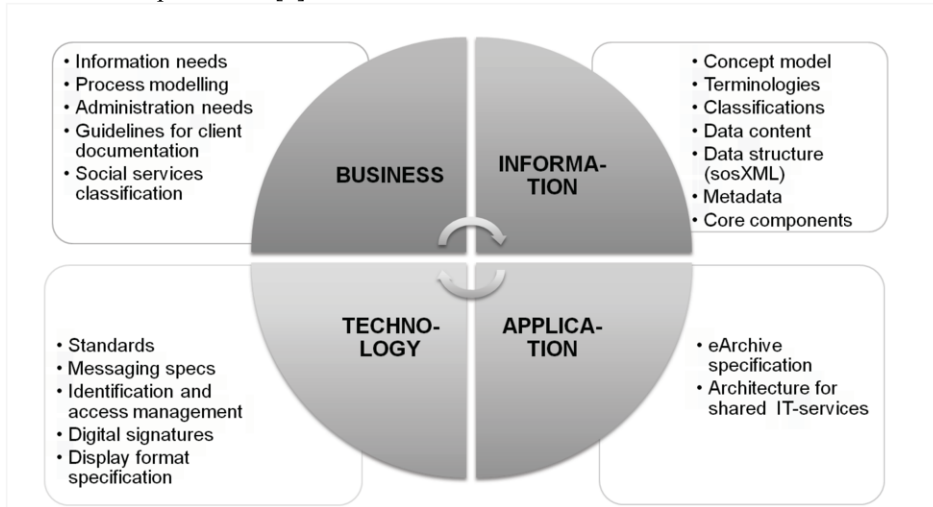

Figure 1. The main outputs of the Tikesos project in enterprise architectural point of view.

After collecting the information needs modeling processes of the different social services were started. The work included identification and modeling general work flows and record management processes. Process modeling is based on a social services classification which divides the 60 different services into 21 commissions of social services. Processes describe the phases of different commissions of services. [8]

At the same time with process modeling began the modeling and specifying of electronic records used in social care. The method was developed during the project and it is based on standards like XHTML, RDF/A and UN/CEFACT CCTS. All in all in the end of the project approximately 240 different social care client records were completed. The records are composed of 140 core components like Financial situation (incl. incomes, expense, capital and dept) and Working situation. Some of the core components include classifications, for example type of custody or type of foster place in child welfare. In addition the information model of social care client documents consists of concept model, terminologies and metadata as well. [9][3] Social care client records will be stored in client data files as specified documents. These documents are used in work with clients and they are also based on social services classification.

Client information systems must be compatible and enable information sharing between social care organizations despite of where the original data is composed. This means that sosXML-standard is being used and applications are able to produce and process it. Using eArchive requires definitions to technology like messaging specs, identification and access management, digital signatures and display format specification which all are qualified or at least described in the Tikesos project. [3] It is

noteworthy that also in technology specifications social services classification is used and utilized. For example principles of access management are based on social services classification which supports the business oriented information management.

All the results and methods of the project were published in the project's homepages. Among other things a road map for implementation is been published. The road map presents desired target state and objective plans step by step until the year 2020. The road map includes 270 individual proposals for actions like identified definitions, legislative work, organizing administrative acts and pilots, implementation guide and training plan for social care professionals. The main steps of the implementation schedule are shown in figure 2.
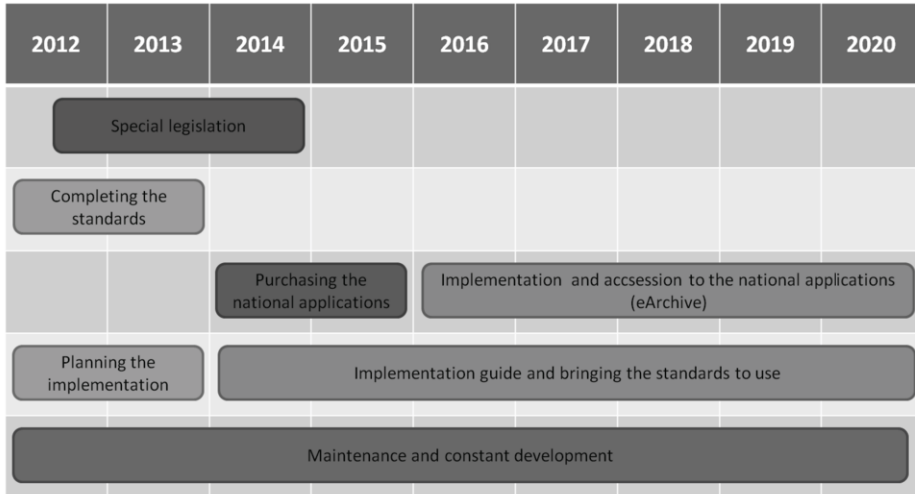
2012	2013	2014	2015	2016	2017	2018	2019	2020
	Special legislation							
Completing the standards								
		Purchasing the national applications		Implementation and accsession to the national applications (eArchive)				
Planning the implementation		Implementation guide and bringing the standards to use						
Maintenance and constant development								

Figure 2. Implementation schedule of national eServices in social welfare sector.

3. Discussion

The Tikesos project was mainly social care-specific information technology development program. The project was carried out by the influential actors and organizations of social welfare administration. Flexible organizations enabled to ensure enough resources like human capacity and expertise. Project taught that lack of key personnel from the project may reduce the operational capacity and interfere with achievement of objectives. The uncertainty of funding for each year of operation created challenges to functioning. The project would be better served if the funding had been secured.

Definitions of policy and in-line objectives were important [10]. The Tikesos project was partly similar with health care KanTa-project and therefore included to a larger development program which both were implemented by Ministry of social affairs and health. Political support was one of the main successes of the project. Similar needs with healthcare but still individual development work enabled social welfare sphere of authority and social-specific point of view. Many pitfalls can be avoided by thinking what can be reused. Regardless of the fact that the Tikesos project focused on social services, standards of the public administration and health care

national and international were used in the project. The most appreciable standards or methods used were SOA, HL7, JHS-standards, UN/CEFACT CCTS and TOGAF.

It was also verified that the goals of the project should be so common that participants can commit and that the goals can be reached. It was a challenge to coordinate national IT services to demands of local change management. In definition work should take into account both local needs and national service opportunities. Local needs can be met by national solutions but freedom of choice of means of implementations is usually at the local level. Therefore cost estimate of architectural choices and central services should be done early in the process, including cumulative cost of "doing nothing". Cost-effectiveness is a good argument to commit the municipalities and central government to the results achieved.

4. Concluding remarks

The Unit of Operational Management in Health and Welfare Information was established in the beginning of 2011. Unit is responsible for health and welfare client information electronic processing, information management and information systems services at nationwide level. It operates by planning, directing and monitoring national ICT applications like eArchive. From the beginning of the year the development of health and welfare ICT is national managed centrally, aiming to an architecture of shared IT services in social and health care. The development requires crossing of boundaries between the sectors. Requirements for convergence and reuse of data across sectors results in need for holistic service management for people and moving towards unified government interoperability.

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