EasyChair Preprint

№ 116

Findings of the Nordic Enterprise Architecture Cooperation

Patrik Maltusch, Per Hörnblad, Esa Suominen, Ola Ljungkrona and Ari Rouvari

May 7, 2018

Findings of the Nordic Enterprise Architecture Cooperation[1]

1st Patrik Maltusch, 2nd Per Hörnblad, 3rd Esa Suominen, 4th Ola Ljungkrona, 5th Ari Rouvari

[1] Head of Enterprise Architecture team, Aalto University, Helsinki, Finland, patrik.maltusch@aalto.fi
[2] Umeå University, Umeå, Sweden, per.hornblad@umu.se
[3] Enterprise Architect, Helsinki Metropolia University of Applied Sciences, Helsinki, Finland, esa.suominen@metropolia.fi
[4] University of Gothenburg, Gothenborg, Sweden, ola.ljungkrona@gu.se
[5] Senior Enterprise Architect,CSC – IT Center for science, Espoo, Finland, Ari.Rouvari@csc.fi

Keywords
Enterprise Architecture, EA Meta model, EA modeling, Higher education institution, Nordic countries cooperation

1. ABSTRACT

This document describes the approach of establishing a pragmatic Meta model implementation of a "City plan" in cooperation between two Nordic countries describing the HEI services in accordance to a unified descriptive language and semantic vocabulary. It underpins the challenge to find a level of understanding, when describing organizational capabilities and the relation between academic model and the reality that exists in each individual HEI organization. The task to describe does not get easier as translations from original or natural native language to national translations and descriptions possess an additional barrier of conceiving that has to be mastered.

2. INTRODUCTION

The Nordic Enterprise Architecture Special Interest Group, in short NEA, was established out of the need to find synergy benefits in the HEI sector. Both the Swedish and the Finnish organizations had national plans to redesign a common student information system. The ambition was to tackle digitalization lifecycle challenge of students and administration with a modern Student Information System.

The discussion between the CIO forums recognized the potential to learn from the different approach of each country organization and an information exchange through lessons learned was initiated in 2014. What started as random meetings with simple topics of EA disciplines is now regular activities with yearly meeting and quarterly on-line session with a common agenda and specific questions to work on. The latest effort is displayed in this paper as a joint effort of cooperation.

3. NORDIC EA COOPERATION

The NEA group has built the knowledge transfer since 2015; covering simple topics of EA disciplines to pragmatic semantic vocabulary mapping that are interoperable between all HEI organizations. Other main topics covered during the past 3-year period have been, but not exclusive: (1) Interoperability through semantic tools (iow.csc.fi); (2) Integration patterns and practical documentation repositories; (3) IAM and federated trust models; (4) Master data models and Meta models; (5) EA maturity questionnaires and Peer review; (6) Discussion and building understanding on Capability and Business models and (7) Building a pragmatic Cityplan model and populating with live data.

[1] Known as NEA-SIG or NEA, participants are members of national special interest group in their own country. Chairpersons for each country take turns to lead the cooperation's agenda.

4. OUTCOMES OF THE COOPERATION

The cooperation has become a starting point for further work for both parties. E.g. from the Finnish part it has been noticed that they could have an option to use a business function element in their meta model and EA-repository. From the Swedish part, it has been a starting point to look at business functions and services at a more holistic view in the HEI sector in Sweden.

In future, we are looking for innovative practices to improve EA work in both countries and find solutions to integrate EA as a tool and method better into management and decision-making processes of the HEI organizations. One possible special task could be to benchmark our universities EA governance models.

5. ONGOING WORK AND THE FUTURE

NEA has collected feedback[2] from the group and listed the as simple bullet points: (1) Work on the service mapping will continue; (2) Merger of HEI – support for harmonization of School merger and faculties using EA; (3) Simplified model can help management to get the big picture in more detail but not overflow them with micro-level details; (4) Common taxonomy for Nordic use to populate the functional architecture and enhance it with business model approach; (5) Invite other Nordic countries to participate as the maturity to perceive and understand the subject itself is now reached and (6) EU GDPR – how to tackle the compliance issue from a lifecycle point of view and data handling descriptions. Displaying the functional capability view would expose the person data processing sweat spots.

The goal will be helping and supporting HEI organizations to reach the strategic goals and both benchmark and learn from each other. Meta models of HEI consortia helps us to understand the importance as a fundamental structure of modeling. However, Meta models do not need to be fully compatible in short term, but at least we have to understand why they are not fully interoperable.

Nordic EA co-operation is a platform for future HEI co-work of Nordic countries and alternatively also for other EU countries to join.

6. LESSON LEARNED ABOUT WORKING BOTTOM-UP AND TOP-DOWN (NAT. LEVEL)

A significant difference between EA work in Finland and Sweden is that EA work in Finland is a requirement set by the government, as in Sweden, EA work is not required as a legal/administrative discipline and thus not coordinated in the same way.

To put it in a more simplified context: in the bottom-up view, you collect lot of details about your environment. Then you list and categorize them and every little detail is important. You face the problem not to see the forest for the trees. As with the top-down view, you see the big picture, but you cannot see the detailed trail that leads you out of the forest.

Common for both views is the need for pragmatic EA governance model. Neither top-down nor bottom-up working is a solution, if University organizations do not have approved EA governance model in use. Through this NEA cooperation, we have gained a common insight and are working on closing this gap.

7. REFERENCES

Gerben Vierda (2012). *Mastering ArchiMate*. Netherlands

Hörnblad, Ljungkrona (2015). *National Collaboration Between Swedish Institutions Concerning Enterprise Architecture – A Bottom-up Approach*. EUNIS 2015

Suvi Remes, Miika Alonen, Patrik Maltusch, Mikael af Hällström (2016). *Interoperability + semantics = check! Smart and Cost Effective Data Modelling and Tools of the Future*. EUNIS 2016

Nestori Syynimaa, Patrik Maltusch, Esa Suominen (2016). *State of Enterprise Architecture practice in Finnish Higher Education sector*. EUNIS 2016

[2] Quarterly NEA online meeting survey

8. AUTHORS' BIOGRAPHIES

Patrik Maltusch is the head of EA architecture team at Aalto University, Finland. He is also chairperson of the Finnish EA-SIG and one of the lead educators who have coached administration staff in the national Higher Education EA schooling program. Past experience, include working as a customer service instructor for nearly ten years and further fifteen years as network architect and business owner for internal infrastructure design in a global Telco company. Patrik is also a distinguished and accredited security professional, risk manager, system auditor and a certified Higher Education Enterprise Architect. As entrepreneur and start up facilitator, Patrik understands what staying practical means for business. For Patrik interoperability is the key to success in an ever growing and more complex and complicated ecosystem landscape.

Per Hörnblad has a Master's Degree at Umeå University (1987-1992). Since 2010 he has been working as an Enterprise Architect at Umeå University in Sweden. He has also been working as a Project Manager and System Architect in several national IT projects. Currently he is the project coordinator of several national projects as well as the coordinator of the Swedish national group of Enterprise Architects within the HEI sector.

Esa Suominen works as an Enterprise Architect at Helsinki Metropolia University of Applied Sciences (as of 3th April at University of Helsinki). He is also secretary of the Finnish EA-SIG. He has long experience in IT sector at HE Institute. He has worked as Team leader at Information System Development group, Project Manager, IT Manager and in IT Support. He holds M. Sc. from University of Lappeenranta, Finland. He is interested in to implement Enterprise architecture and Project Portfolio Management in practical way at organizations.

Ola Ljungkrona has a Master's Degree at Chalmers University of Technology (19921997). Since 2008 he has been working as an Enterprise Architect/Business Analyst for the Chalmers University in Gothenburg and University of Gothenburg. He has been involved in several different national project including the new national study documentation system and the HEI City Plan-project.

Ari Rouvari is a Senior Enterprise Architect at CSC – IT Center for Science Finland. He has Master degree in Computer and Information Sciences at University of Tampere, Master of Arts – MA in Culture studies at University of Helsinki and Continuing education in Business Economics, Accounting at Helsinki school of Economics. He has worked for The National Library of Finland as Chief Enterprise Architect (2012-2016) and Chief System Manager (2003-2016). For Ari the most interesting EA issues are meta models, business models, business architecture, interoperability and visualization of strategies.