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— Finnish Metals and Engineering  
Competence Cluster



# Evaluating the levels of design management in user experience-oriented companies – experiences from Finnish metals and engineering industry

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*Using UX to make a difference in the industry and business.*



# Once Upon a Time

FIMECC UXUS 2010-2015 (User Experience and Usability in Complex Systems) is a research program targeting to build a new competitive advantage for Finnish metals and engineering industry by user experience (UX)



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# Storyline of FIMECC UXUS saga

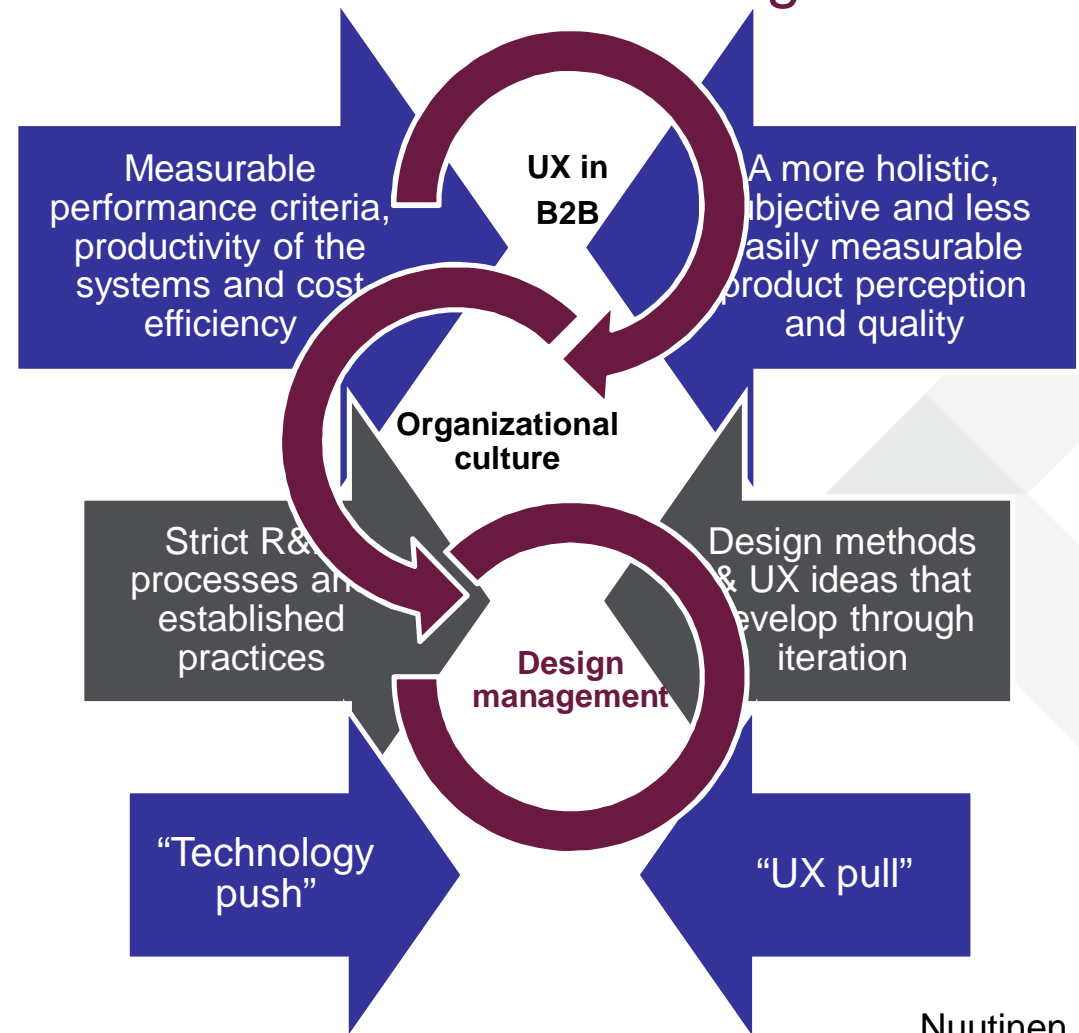


- ▶ Part I: Contradictions between "MEI thinking" and "Design thinking"
  - Nuutinen et al. 2011 presented at CADMC 2011
- ▶ Part II: Learning from design management:
  - Evaluating the levels of design management in user experience-oriented companies
  - Empirical study on Finnish metals and engineering companies (MEI)
- ▶ Part III: The happy end?





# Part I: Contradictions between "MEI thinking" and "Design thinking"



Nuutinen et al. 2011



## Part II: Learning from design management

- ▶ The aim is to explore the potentials of a design management approach
  - in contributing to solving the contradictions
  - we claim to reflect Finnish metals and engineering industry culture and
  - which might prevent them fully benefiting from user experience orientation as their new competitive advantage.
- ▶ To this end, we empirically study three case companies' selected user experience -related efforts from design management perspective by applying a framework proposed by Borja De Mozota (2003, 2010)



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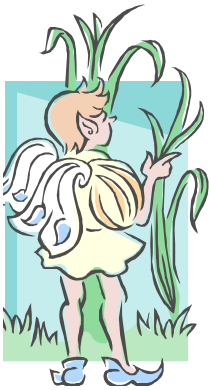


# The empirical study

- ▶ A case-study based research approach, a multiple-cases study (see e.g. Yin 2009, Eisenhardt 1989).

## Three case companies:

- ▶ At companies A and B foci were on a UX-led product development processes
  - ▶ that were initiated both to develop a product with improved UX and to increase understanding about the meaning of UX in the organisation
- ▶ At COMPANY C focus was on a training concept
  - ▶ aiming to change the organisation's mind-set towards UX orientation.





# Empirical data



	Employee interviews	Customer interviews	Total
COMPANY A	15	8	23
COMPANY B	10	5	15
COMPANY C	6		6
Total	31	13	44

- ▶ The interview topics included:
  - the overall goals and the current state regarding the position of UX in their business (All) ,
  - the development processes of the new products aiming to better UX as well as their sales and marketing, delivery process and experiences from the use of the new products (A&B); and
  - the background and development of the training concept, the organising and success of the event and the experiences from the last training (C)



# Results

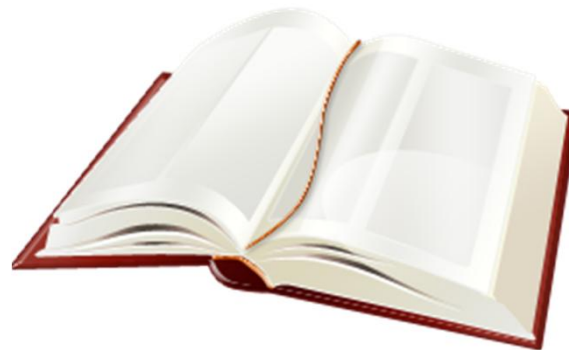
► Analysis aimed to describe companies' efforts in each level and evaluate them in relation to the literature.



Level of design management	COMPANY A New product development	COMPANY B New product development	COMPANY C Training concept
<b>Design action</b> <ul style="list-style-type: none"> <li>Design's impact on customer behavior</li> <li>Design differentiation through branding</li> </ul>	<ul style="list-style-type: none"> <li>Direct impact on customer behaviour.</li> <li>Brand renewal as a basis of design management.</li> </ul>	<ul style="list-style-type: none"> <li>Direct impact on customer behaviour.</li> <li>Brand does not yet support design management efforts</li> </ul>	<ul style="list-style-type: none"> <li>Indirect but clear impact on customer behaviour.</li> <li>Brand renewal as a basis of design management.</li> </ul>
<b>Design function</b> <ul style="list-style-type: none"> <li>Design's impact on new product development (NPD) process quality</li> <li>Design in increasing cooperation between R&amp;D and marketing</li> </ul>	<ul style="list-style-type: none"> <li>NPD process was improved through the cooperation in a large project group</li> <li>Cooperation between R&amp;D and marketing is not systemised</li> </ul>	<ul style="list-style-type: none"> <li>NPD process was improved through intensive working of small group of R&amp;D employees</li> <li>Cooperation between R&amp;D and marketing is not systemised</li> </ul>	<ul style="list-style-type: none"> <li>NPD process may be improved through improved customer and user understanding gained in the event.</li> <li>The conditions for cooperation between R&amp;D and marketing may be improved.</li> </ul>
<b>Design vision</b> <ul style="list-style-type: none"> <li>Design's strategic positioning</li> <li>Design as an internal and external competitive advantage</li> </ul>	<ul style="list-style-type: none"> <li>Design is learned by experience, aim to build a core competence</li> <li>Internal: Design as a resource (design team)</li> <li>External: a unique new product in the market</li> </ul>	<ul style="list-style-type: none"> <li>Design is learned by experience, aim to build a competence</li> <li>Internal: design is on the responsibility of R&amp;D, some elements outsourced.</li> <li>External: new and innovative user interface in the market</li> </ul>	<ul style="list-style-type: none"> <li>Design is learned by experience, aim to build a core competence</li> <li>Internal: a large design unit established</li> <li>External: indirect influence on the customer experiences</li> </ul>



# Part III: Is there going to be a happy end?





## Conclusions & discussion 1/2

- ▶ The companies in the FIMECC UXUS programme seem to utilize all levels of design management and
  - are heading towards the direction of increased competitiveness through better UX
  - and ultimately they can drive renewal of the whole industry by their example.
- ▶ Investigating companies' UX efforts from design management viewpoint gives new insights into understanding the direction of these efforts.
- ▶ We suggest that
  - all the levels of design management are needed and
  - that the unique situation and present organisational culture define the useful design management level and the suitable efforts.



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## Conclusions & discussion 2/2

- ▶ The more deep impact of the efforts on the contradictions depends if
  - they turn into daily practises of the companies as well as their relationship with other "design management activities" (brand building, marketing etc.).
- ▶ In the future:
  - There is an obvious need to understand the design management efforts and their progress in more detail
  - We suggest that longitudinal studies on how design management efforts are changing the business logic of organisations, their networks and the whole industry should be conducted later on.

To be continued...





# FIMECC UXUS information

- ▶ [http://uxus.fimecc.com/sites/uxus.fimecc.com/files/uxbooklet\\_issue1\\_online\\_2\\_0.pdf](http://uxus.fimecc.com/sites/uxus.fimecc.com/files/uxbooklet_issue1_online_2_0.pdf)
- ▶ <http://uxus.fimecc.com/>
- ▶ [www.fimecc.com](http://www.fimecc.com)
- ▶ FIMECC Ltd. (Finnish Metals and Engineering Competence Cluster) is cooperation platform that offers for research institutes and companies new way to cooperate and perform long term research
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# Thank You!

