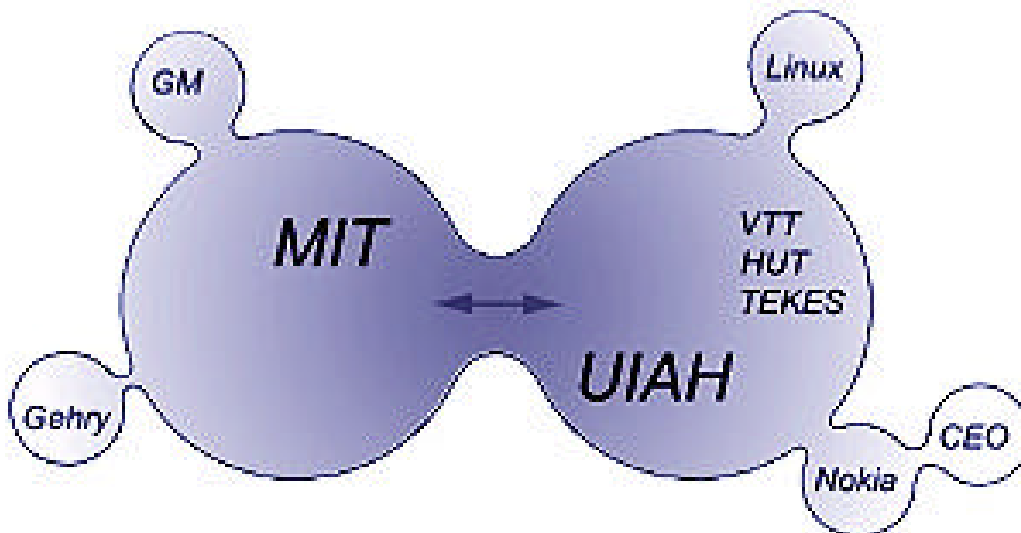




Massachusetts Institute of Technology
MIT Media Laboratory
Changing Places

Changing Places
MIT Media Laboratory
Future Home Institute
UIAH

Mass.B
MassCustomization in Building industry
(working title)



Draft Agenda
28042002
Jarmo I. Suominen
www.arksuominen.com/symposium
MIT MediaLab Bartos theater, Boston
UIAH MediaCenter Lume, Helsinki
Symposium date 20.09.02



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Summary

Mass customization aims at producing goods and services to best meet individual customers' needs with near mass production efficiency. On the surface, mass customization does not seem to differ greatly from the general goal of design and manufacturing. However, the tremendous economic difference over the years between variable costs and fixed costs has developed entrenched notions such as batch size, economic order quantity (EOQ), and lead time. Specifically, the prevailing practice of 'design, build, and then sell' causes producers to misjudge their customers' needs and thereby overstock their products. Simultaneously, producers often underestimate their customers' reception for certain products and therefore miss key manufacturing opportunities.

Can the recent advancement in computing and communication technology provide new solutions to better serve customers? Can producers gather sufficient information about customers' needs in order to build their capabilities accordingly?

Idea of creating standardized value through mass production is not working anymore, companies must come forward to creating customer-unique value through mass customization. The symposium examines many of the resulting changes in approach to strategy and operations — for example, moving from pushing products to fulfilling individual needs, from focusing solely on market share to measuring customer share, and from marketing to the masses to cultivating learning relationships with each customer

Classic strategies of differentiation are no longer sufficient in many sectors of industry. Globally interconnected markets merely offer enterprises marginal leverage for improving their operating results. Only enterprises which manage to build individual and enduring relationships with their customers can achieve strategic advantages in the face of increasing global competition. Customers are more and more demanding and firms must be able to produce similar basic products in hundreds of variations in order to offer first-rate service.

Building industry at large is very clustered and un-unified area, certain standards exist but they are primarily meant for manufacturing and assembling processes, not enabling new possibilities and services to grow .

Symposium about masscustomization in Changing Places

Simultaneous symposiums in MIT (*Bartos Theater*) / USA and UIAH (*Lume*) / Finland using web casting for collaboration between happenings and distant speakers.

MIT presentations are about concepts of mass customization and co-configuration, Finnish presentations will highlight best practices already used in building industry in Finland.

Presentations are collected and archived for further reference purposes. Symposium starts in Finland 20.9.02 8.00 (local Finnish time)

Simultaneous presentations starts at 15.00 Finnish time, 8.00 am US eastern time, simultaneous part continues 3 hours and symposium then continues in MIT until 16.00 US eastern time.



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07.30 -08.15 **Registration and Breakfast (Lume lobby) UIAH**

08.15 -08.30 **Opening and introduction UIAH**

Yrjö Sotamaa, Rector University of Art and Design

08.30 -09.00 **Mass.B presentation and FutureHome Institute UIAH**

AnnaMaija Ylimaula PhD, UIAH, FHI

Structure of the meeting

Kimmo Rönkä MSc, Taik FHI

*Futerhome Institute project presentation and release of
new reseach agenda*

Ryan Chin, MIT Medialab

MIT presentation and LivingLab collaboration

09.00 -10.30 **Mass.B session.01 Masscustomization, research overview UIAH**

Peter McGrory Professor, University of Art and Design

Humanization and personalization of technology

Yrjö Engeström PhD Professor,

University of California, San Diego, University of Helsinki

Co-Configuration structures

Ulpu Tiuri PhD Professor, University of Technology, Otaniemi

Open Construction

Ryan Chin, Massachusetts Institute of Technology, MediaLab

Customizable products in car industry

Turkka Keinonen. PhD Professor, University of Art and Design

Personalized interfaces

10.30 -11.00 **Break (Lume lobby)**

Exhibitions (by sponsors) UIAH

NOKIA customizable personal trusted devices

LeftFoot, customizable shoes

Skanska, customizable homes

IKEA, customizable modularized products

11.00 -12.30 **Mass.B session.02 Case presentations UIAH**

Case.01 NCC (developer, constructor)

NCC representative

Customization logistics

Case.02 Skanska Finland (developer, constructor)

Skanska representative

Customized environments, Collaboration with IKEA from
Skanska's point of view.



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Case.03 IKEA (materials, furniture's, interiors)

IKEA representative
 Power of modularization
 Customized environments, Collaboration with Skanska
 from Ikea's point of view.

Case.04 Nokia (communications)

Nokia representative
 Customization as a marketing and selling strategy
 Personal Trusted Device PTD

Case.05 Huoneistokeskus (real-estate agency)

Huoneistokeskus representative
 Personalized services and products

12.30 -14.00 **Mass.B session.03 visions UIAH**

Jussi Nurmio MBa
 Director of Advertising, Marketing and Design company
 Taivas
Marketing Strategies
 Dr. Frank T. Piller
Masscustomization institute, Germany
MBA program of the Munich University of Technology (TUM),
Germany
 Philip Dean, Director of MediaLab UIAH
On-demand media and modularized interfaces

FI 15.00 -15.30
 USA 08.00 -08.30

First webcast from MIT

Jarmo I. Suominen Architect,
 Professor UIAH, MIT research affiliate
Masscustomization in housing industry
LivingLab.net project

FI 15.30 -16.00
 USA 08.30 -09.00

MIT Introduction and opening (Bartos, MediaLab)

William J. Mitchell
 Dean MIT School of Architecture and Planning
 Walter Bender
 Director MIT Media Laboratory
 Kent Larson
 Director of Changing Places Consortium

FI 16.00-17.30
 USA 09.00-10.30

Keynote speeches from Finland and USA (mixed order)

| | |
|---|------|
| Jorma Ollila, Nokia | |
| Personal trusted Devices | UIAH |
| Linus Thorvalds, Transmeta | |
| Open source interfaces | UIAH |
| Joseph B. Pine, Strategic Horizons | |
| MassCustomization strategies | MIT |
| Frank Gehry, Jim Glymph, Gehry Architects | |
| Ultimate customization | MIT |
| William Mitchell, MIT | |
| C-topia, customized utopia | MIT |



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USA 10.30-12.00 MIT session.01 Research overview

Kent Larson, MIT Changing Places
Research overview
John Fernandez, MIT dept of Architecture
New Technologies
Jarmo Ilmari Suominen, MIT / UIAH
MassCustomization and Co-Configuration
Stephen Intille, MIT mediaLab
Customizable interfaces
William Porter, MIT, dept. of Architecture
Customizable agile environments

USA 12.00 -12.30 Break

USA 12.30 -14.00 MIT session.02 Case studies

Car industry (examples)

GM General Motors

Representative from GM
Car industry viewpoint and best practices in customization
and personalization of products
Customization in selling and delivering processes

Furniture industry (examples)

Herman Miller

Representative from HM
Modularization as a strategy
Industry's viewpoint and best practices

Computer industry (examples)

DELL

Michael Dell
Modularization as a strategy
Industry's viewpoint and best practices

Clothing industry (examples)

Levis

Representative from Levis
Tailor-made solutions
Industry's viewpoint and best practices

Building industry (examples)

Skanska USA

Representative from Skanska
Customized environments

Disney corporation

Representative from Disney
Taking care of individual needs
Industry's viewpoints and best practices



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USA 14.00 -14.30

Panel discussion

Panel members from:

GM, Herman Miller, DELL, Levis, Skanska, Disney, Nokia,
MIT

USA 14.45-16.00

MIT session.03 Future

Michael Schrage, MIT E-markets

Rapid prototyping for testing MC processes

BettyLou Marsh, MIT MediaLab

CC++, masscustomized processes in car industry

Ely Dahan, Sloan School of Management

Services, strategies in marketing

Sloan School of management

Customer as innovator

MIT, Medialab

Digital profiling

USA 16.00 -17.00

Breakout sessions (MediaLab conference rooms)

Design processes

Kent Larson, MIT, MediaLab

New design processes and new interfaces to the existing
design processes

Manufacturing and logistical processes

John Fernandez, MIT, Architecture

New Manufacturing processes and modular component
strategy

Marketing and selling processes

Ely Dahan MIT Sloan School of Management

New marketing processes and interface to selling
processes

Co-configuration and new services

Jarmo Suominen, MIT Changing Places

New services and customer care interfaces and
technologies

USA 17.30 -19.00

Evening reception, WrapUp (MediaLab atrium)

Customized offerings based on survey done between
participants.



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Subjects

Mechanism in MassCustomization

Developing of manufacturing processes

- Towards modularized solutions
- Towards CNC solutions
- Towards real-time solutions
- Towards on demand solutions
- Towards rapid and constantly changing solutions

Developing of design processes

- Towards modularized designs, object oriented designs
- Towards CNC designs
- Towards real-time designs
- Towards on demand designs
- Towards rapid and constantly changing designs

Developing of subcontract processes, networking

- Towards modularized processes, flexible sub contractions
- Towards CNC processes, logistics
- Towards real-time processes, how to handle changes
- Towards on demand processes
- Towards rapid and constantly changing processes

Developing of construction processes

- Towards modularized processes, allowing flexible site scheduling, assembling
- Towards CNC processes in construction
- Towards real-time processes, how to handle changes
- Towards on demand processes
- Towards rapid and constantly changing processes

Developing of material, building parts, systems

- Towards materials that allows easy modularization and assembling
- Towards CNC processes
- Towards real-time processes
- Towards on demand processes
- Towards rapid and constantly changing processes

Developing of marketing processes

- Towards modularized processes, new marketing strategies
- Marketing of not existing end product, how to know what to market
- Real-time processes, how to handle changes, what information gather form customer
- Marketing of on-demand processes
- Identifying customer needs
- Marketing of suitable solutions
- Marketing of rapid and constantly changing processes

Developing of selling processes

- Identifying end product
- Identifying end price
- Identifying add-ons needed, services
- Feedback to production

Developing of customer care processes

- How to maintain relationship with customer
- How to maintain environment that is not standardized
- How to develop learning relationship
- How to offer add-ons, updates, and services
- How to offer upgrade, new home

Developing of learning processes

- What to learn in business to business side
- What and how to learn in customer to business side
- What and how to learn in customer to customer area