MASS CUSTOMIZATION & OPEN INNOVATION NEWS

Notes and ideas on mass customization, personalization, customer integration, and open innovation – strategies to co-create value between manufactures and customers. Edited by Frank T. Piller, TUM / MIT.

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A new form for this newsletter: From collecting to blogging

This is the first edition of a new format for this long running newsletter. Since eight years, I report here about mass customization and other forms of truly customer centric value creation. While all previous newsletters have been distributed via e-mail to the (today) more than 5000 subscribers, I have now supplemented this measure by a RSS newsfeed based on a new blog on mass customization and open innovation:

- **http://mass-customization.blogs.com:** This is the **direct web link** where all new contributions to this newsletter will be published first. Once I discover an interesting item or new case, I post it there. Instead (or on top) of subscribing this newsletter, you can now also subscribe to its RSS newsfeed that will bring a new posting directly to your computer immediately after it is published. So you do not have to wait for the next newsletter *(look on my MC web page to learn what a RSS newsfeed is)*.

  To subscribe to the newsfeed, go to www.mass-customization.de. You may also bring the newsfeed to your own home page and include it as a feature for your own visitors (syndication).

- **More updates and comments:** This new way to publish the newsletter allows also easy updates – and you have now the possibility to **comment**, supplement or discuss each article. **Use this feature!!**

- **Newsletter as usual:** The familiar newsletter (you are just reading it) will be posted and mailed as before. Each 3 or 4 months, I will consolidate all past entries from the Blog into a newsletter and "push" it out as in the past eight years.

- **New mailing list tool:** The cooperation with Intellimail.de to administer the mailing list and manage its subscribers has ended. There is now a simple subscribe and unsubscribe field directly on my mass customization web site. All accounts from the Intellimail web service have been transferred into the new database.

I hope you like these new features – and enjoy this issue. Yours, *Frank Piller*.

Contents: What do you find in this issue?

Open innovation and mass customization are among the most popular and pertinent management tools

Since 1993, **Bain & Company**, a management consultancy, is investigating the use and performance of popular management tools. In this year's edition, **mass customization** and **open innovation** are included for the first time as **two of the 25 most popular and pertinent management tools**.

The survey is based on a findings from **960 global executives** surveyed during 2004, including 212 Chinese business leaders. Executives were asked questions about the use and satisfaction by their companies with the management tools and techniques.

Here is a summary of Bain's report on mass customization and open innovation:

Mass Customization is defined by Bain as "the large-scale production of personalized goods and services. To succeed at it, companies must harness technologies that revamp their speed, flexibility and efficiency at minimum expense. Combined with organizational changes to focus firms on the unique needs of very small customer segments, these technologies help companies affordably deliver custom versions of their offerings to profitable niche markets."

I was pleased to read that also Bain sees MC beyond being a pure manufacturing strategy: "Once considered a manufacturing and supply chain capability, Mass Customization now encompasses a company's ability to differentiate a product or service in any way—from distinct branding to unique delivery."
[**Read more**: http://www.bain.com/management_tools/tools_mass_customization.asp].

Open Innovation (called open-market innovation in the study) is characterized as applying "the principles of free trade to the marketplace for new ideas, enabling the laws of comparative advantage to drive the efficient allocation of R&D resources. By collaborating with outsiders—including customers, vendors and even competitors—a company is able to import lower-cost, higher-quality ideas from the best sources in the world."

According to the survey, companies need to focus on four areas to foster open innovation, including improving innovation circulation ("to build information systems to capture insights, minimize duplication of efforts, improve teamwork and increase the speed of innovation"), but also to increase innovation exports ("establish incentives and processes to objectively assess the fair market value of innovations, raise incremental cash and strengthen relationships with trading partners").

A strong focus on customers and users as partners of the corporate innovation process is lacking in Bain's interpretation of open innovation. But the notion of the idea anyway is already a big step forwards. [**Read more** http://www.bain.com/management_tools/tools_open-market_innovation.asp]

Article posted on October 09, 2005. Permalink to this article: http://mass-customization.blogs.com/mass_customization_open_i/2005/10/open_innovation.html

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Conference Report MCPC 2005: Learnings and observations from the 3rd MCPC World Conference

Third Interdisciplinary World Congress on Mass Customization and Personalization (MCPC 2005): Converging Mass Customization and Mass Production (Hong Kong, 18-21 Sept. 2005)

The MCPC conference series is the largest international event to address Mass Customization and Personalization (MCP) from a multidisciplinary perspective. Like the earlier events in Hong Kong (2001) and Munich (2003), the 2005 conference assembled again an international community of scholars and managers to discuss latest achievements in the field.

If you missed this event, you can **download the full abstracts of all papers** from the website (**www.mcpc2005.com**). There is also an **order form for the full text proceedings (on CD Rom), containing more than 800 pages of research papers, case studies and reports (price: 95 USD,** credit card orders are processed by the conference administrators at the Hong Kong Univ of Science and Technology. Info: rtsang@ust.hk).

The MCPC 2005 Co-Chairs: Mitchell Tseng & Frank Piller

Here some of my personal observations from the MCPC 2005 conference:

Participants: I was very pleased that we could again increase the share of practitioners to more than 50 percent of participants. Among them, a number of large US consumer good companies had sent representatives to observe the conference and to get feedback for own upcoming initiatives. We will see a number of exciting new custom offerings in the next year.

Case study track: There was a very strong case study track this year. This provided great insight into the scope and diversity of mass customization. There is not one mass customization concept, but many forms and structures. As a result, we had several parallel conservations about the same term (see here for my recent revision of my mass customization definition).

The **apparel community** is already very advanced in their application and discussion of the concept. We had some very large Chinese apparel manufacturers and the main technology providers under the participants. For them, mass customization is already a commodity you just have to have to stay in business. But mass customization here is not only about serving individual consumers with custom clothes.

Just consider **mass customization on a retail level**. Powerful retailers nowadays demand that they get a different assortment of brand merchandise than their main competitors. They demand special editions or variants which can be only bought in their stores. One reason is to prevent direct price competition and to become less comparable. Another important reason is to get also an assortment that fits better to local preferences and trends. Leading brands and manufacturers react on this trend by offering mass customization programs on the retail level. Here, not an end-consumer customizes her custom garment, but a retailer's representative. Products are produced on demand, and in a small lot size.

In other industries, mass customization is still on a much more abstract level. One small, but very interesting track of the MCPC 2005 focused for example on **mass customization in architecture**. While many buildings are custom designed per definition, owner or user participation in the design process is just starting. Also, manufacturing in this industry is characterized by rather small and decentralized suppliers. Terms like product platforms, commonality, or interaction toolkits are just being discovered in this industry.

The market for customization: The conference could still provide no answer on the question about the market size of mass customization. Once again, the conference showed that we can not apply traditional market research and forecasting to predict the market size for mass customized offerings. Most customers have no experience with this model, and so they have to experience real offerings of mass customization before they can decide about their acceptance of this model and their willingness-to-pay it. Mass customization remains trial-and-error.

Mass customization demands critical mass: There was a lot of talk about dedicated competences and capabilities for mass customization. Research is progressing in this field, and we discussed the results of several studies and research projects focusing on the unique set of capabilities mass customization requires. I will report in upcoming contributions for this newsletter in more details about the specific capabilities mass customization requires. But: Conference participants agreed that the required competence set is large, and that as a result mass customization demands critical mass – it is otherwise too demanding.

But is seems that **customer integration competence is key**. The ability to interact with customers efficiently in order to understand their preferences and transfer them into an individual offering is seen as the

main cost driver of mass customization (as a result, the system also should be initiated by the actor with access to final customer).

The factor balancing a mass customization system is the selection of the **degree of variability (customization options).** This decision effects all following decisions. A mass customizing firm gets a main competitive advantage when it has a detailed mechanism how to set and maintain this optimal degree of customization.
Collaboration and interdisciplinary research: And a final conclusion by many participants: To make mass customization happen, we have to **cooperate and build multi-disciplinary teams** … this conference was all about this! It was a great pleasure to have some many disciplines and backgrounds at one place. Our community of practice is growing – and I am looking forward already to the next meeting in Fall 2007.

More information (Photo gallery, program, abstracts, proceedings order form):
www.mcpc2005.com

Read also the report on the China Study Tour, which took part after the MCPC 2005, in this newsletter below.

Article posted on October 08, 2005. Permalink to this article: http://mass-customization.blogs.com/mass_customization_open_i/2005/10/conference_repo.html

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Upcoming Mass Customization Related Conferences in 2006: MCP-CE2006, IMCM 06, and PETO 06

Conference Announcements and Calls for Papers

The **next MCPC** (World Conference on Mass Customization and Personalization) event will take place not before **fall 2007**. But there will several smaller meetings in 2006 which aim to provide a **platform for exchange around specialized topics on mass customization**. The MCPC committee strongly endorses these activities. We are glad that also other scholars step forward to give mass customization a larger platform. These events will be highly focused on specific urgent topics, providing a **great opportunity to learn more** about these topics. And **you are invited to present** you work as well!

Have a look at the **following call for papers and consider your active contribution to these events:**

(1) IMCM'06 and PETO'06 (22-23 June 2006, Hamburg, Germany): Joint Conference of *The International Mass Customization Meeting (**IMCM'06**): "Customer Interaction and Customer Integration"* and *The International Conference on Economic, Technical and Organizational Aspects of Product Configuration Systems (**PETO'06**): "How to Build and Implement Product Configuration Systems"*

This joint event is co-organized by the Hamburg University of Technology (TUHH), Technical University of Denmark and University Klagenfurt. Both meetings took place for a first time in 2004 (PETO) or 2005 (ICMC). This year, they team up to broaden their scope and reach.

The general objective of **IMCM'06** is to discuss **new advancements in customer interaction and integration**, which are of particular importance in order to ensure a successful implementation of mass customization. In fact, the scope of customer interaction and integration goes beyond the fulfillment of individual customer requirements within a given mass customization framework.

PETO'06 is dedicated to research related to **product configuration systems**. The benefits of such software systems for the automation of order fulfillment are well-known. However, building and implementing them still remain a challenging task. In fact, not only technological but also economical and organizational aspects are of high relevance in order for companies to put successfully these systems into practice.

The conference organizers **welcome abstracts/papers** addressing topics relevant for customer interaction/customer integration and product configuration systems within the broad area of Mass Customization.

Relevant topics include:

- Custom order control in MC manufacturing

- Customer needs' elicitation
- Design and implementation of product configuration systems
- Design sales and engineering processes
- Implementation of configurators in practice
- Modeling a product assortment
- Organization effects of configurators
- Personalization and advisory systems
- Role of logistics service providers in customer integration
- Selection of standard configuration software for specific configuration tasks
- Short and long term economic impacts of product information systems

Authors are invited to submit original and unpublished research results/best practices for consideration in IMCM'06 and PETO'06. **An abstract is due until December 10, 2005**.

Conference Chairs: Thorsten Blecker, Hamburg University of Technology (TUHH); Gerhard Friedrich, University Klagenfurt; Kasper Edwards, Technical University of Denmark (DTU); Lars Hvam, Technical University of Denmark (DTU)

More information and full text of the call for papers and list of topics:
www.manufacturing.de/calls/imcm06+peto06

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(2) 2nd International Conference on Mass Customization and Personalization in Central Europe (MCP-CE2006) (24-26 May 2006, Rzeszow, Poland): *How to bridge Mass Production and Mass Customization in Central European Countries?*

The University of Information Technology and Management in Rzeszow (Poland) is hosting its second international conference dedicated to innovative business strategies, with a special focus on mass customization, in May 2006. The MCP-CE2006 is the 2nd event of its kind to approach **the field of MCP in Central European Countries** from an interdisciplinary perspective bridging scholar research and business practice.

The extended formula of the MCP-CE2006 includes a strong approach toward business practice. One of the key goals of the MCP-CE2006 is to discuss the development issues from the **perspective of SMEs sector**, which embraces over 90% of all companies in Central Europe. This issue will be addressed by keynote lectures, who will propose innovative and efficient approaches towards implementation, based on a close cooperation between industry and higher education sectors.

The conference organizers welcome abstracts/papers addressing the conference theme. **Relevant topics include:**

- Advances in MCP development in Central Europe
- Gaining competitive advantage through customer integration
- MCP best practices and case studies
- Manufacturing, logistics and supply chain management in the context of MCP development
- Information technologies as a key enabler for MCP
- Funding opportunity for innovative business approaches

Abstracts and speaking proposals are due on 28 February 2006.

Conference organizer: Maciej Piotrowski (mpiotrowski@wsiz.rzeszow.pl)

More information and full text of call for papers and list of topics:
www.mass-customization.pl/MCP-CE2006

Article posted on November 09, 2005. Permalink to this article: http://mass-customization.blogs.com/mass_customization_open_i/2005/11/two_new_mass_cu.html

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Lego bridges mass customization and open innovation with LEGO Factory: Children become toymakers and can design sets of their dreams – and users "hacked" the offering just two weeks after its launch

Some days after I published my last newsletter, Lego announced the opening of LEGO factory, its new mass customization & open innovation operation. I posted the following article one day after this announcement on the MC&OI Blog. And within a couple of days, the site got an interesting drive. What happened in the two weeks after LEGO factory opened is reported in the following article.

Finally another *large scale mass customization application*: "LEGO Group unveils LEGO Factory, a consumer experience that combines today's hottest kids trends -- technol-

ogy, mass customization and community -- to enhance and build relevance for its classic toy offering. Beginning August 29, children of all ages can visit *www.LEGOFactory.com* to design, share and purchase custom models".

This is the **start of a press release** (see below for full text) that finalizes a long pilot phase with mass customization at Lego which started several years ago. On our **2003 MCPC conference** (www.mcpc2003.com), **Marc Hansen** from Lego presented some early ideas of mass customization and toolkits for user co-design. The company has experimented with mass customization since 2001. Customers could order customized Lego mosaics build on a uploaded picture, or could customize some of the trains. On the MCPC 2003, we could also get a glimpse of the great new design software, where kids could create Lego models in 3D, a kind of very easy to use CAD program.

But some users wanted much more: The Lego user community LUGNET – totally independent by the company – is one of the best examples of a community where users co-create and co-design based around a manufacturer's products. Here, users do not only swap parts or share pictures of their individual models, but also build together an open source based design software to create great expert constructions. Also, a whole number of small user shops sell unique models and designs. When Lego introduced its Mindstorms Robotic toys, after several years of development, some users "hacked" the robotic kit and improved the performance of the construction kit and its processing capabilities by several dimensions in just a few weeks (this is one of the best documented and fascinating of user innovation). All these user activities, however, were not facilitated or really utilized by Lego.

But now the company strikes back: I quote below the official press release of Lego where the company announces the opening of LEGO factory, a very advanced toolkit for user (kid) innovation and co-design. With this new business unit, Lego combines its original mass customization pilots, which were able to pick an individual assortment of Lego bricks according to one customer's order, with its strong software and interaction skills. The Lego Factory seems to combine several trends and developments which were before invented in the user domain, and which are now incorporated into a business model of the company -- also a form of open innovation.

In addition, the site finally features real open innovation at Lego: It highlights the fact that the company is now selling Lego sets which are designed by other Lego users. Children can not only create their own unique designs, and order the corresponding bricks in a customized set with the help of their father's credit card, but can also submit these designs to the company. Lego may then produce an extraordinary design as a mass product for other children as well. This ideas has been also tested before (in the German Lego catalog, some user designed Lego sets were included since 2003), but never utilized in large scale.

It is too early to share anything about the success of this new Lego mass customization venture. It is a great new application that makes a lot of business sense for the struggling toy manufacturer: It combines a number of trends, but still stays perfectly in the unique selling proposition of Lego: Enabling creativity of children and making them to co-designers of their dreams. This has been the promise of the company since its beginning, and mass customization is just the next step in the evolution of this idea.

Here the official press release with more information. But just try it by your own: *http://www.LEGOFactory.com*

"August 29, 2005: Celebrating the 50th anniversary of its System of Play, LEGO Group today unveils LEGO Factory, a consumer experience that combines today's hottest kids trends -- technology, mass customization and community -- to enhance and build relevance for its classic toy offering. Beginning today, children of all ages can visit www.LEGOFactory.com to design, share and purchase custom models.

LEGO Factory is powered by LEGO Digital Designer (LDD) -- a proprietary virtual building program available as a free download for PC and MAC users. Drawing upon a virtual warehouse of bricks and elements, children can design 3-D models just like professional LEGO Model Designers. Factory models are micro scale -- smaller than traditional LEGO minifigure proportion (roughly 1:50 life-size) found at retail -- but still provide precise detail and functionality.

LEGO Factory sets arrive in custom packaging that shows a child's model and name, and include all of the LEGO elements needed to build the virtual design in physical form. Every customized LEGO Factory creation will have a unique price dictated by the size of the model and elements used. Custom models will take from 48 hours to a week to arrive, depending on which shipment method consumers choose. LEGO Factory is also designed to create a community of builders who share their virtual creations with consumers around the world. Children can view other builders' custom creations, add and remove bricks, rotate the 3D view and zoom in on the details, download the building instructions to build from their existing LEGO collection, or even purchase someone else's model for themselves.

"Giving children access to a virtual warehouse of LEGO elements to design their own models is a fantastic extension of everything the LEGO System of Play represents and has provided for the last half century, and marks a rare opportunity for true mass customization and community in today's toy market." says Mark Hansen, director, LEGO Interactive Experiences. "With LEGO Factory we can expand beyond our 100 in-house product designers to marvel at the creativity of more than 300,000 designers worldwide."

During its Beta phase, LEGO Group sponsored a contest to better understand the types of models that consumers would design using LDD. The contest lasted for 11 weeks and 8,000 models were custom designed. Ten models were voted by consumers and LEGO Master Model Builders to become real LEGO sets available exclusively through the company's Shop-at-Home division. Contest winners, whose ages ranged from 9 to 38, will receive royalties based on sales of their winning designs: "It's only fitting as we celebrate 50 years of a classic play pattern in an increasingly electronic toy world that we elevate the experience of building what you imagine by blending the best of both the virtual and physical worlds of play," says Soren Torp Laursen, president, LEGO Systems. "We look deep into our compatible system of play to reinvent ourselves year on year, and we only incorporate technology where meaningful and complimentary to the core LEGO building experience."

Article posted on August 30, 2005. Permalink too this article:
http://mass-customization.blogs.com/mass_customization_open_i/2005/08/lego_factory_ch.html

Lego Factory hacked by users -- and the company loves it

I have reported in the last article (published on August 30) about the new LEGO mass customization venture, Lego factory. Just a couple of weeks after its launch, the venture got a new drive and development. Here is an update:

At Lego Factory, users can create their own unique Lego models – using interactive software that helps them to overcome the engineering problem of combining basic modular elements (Lego bricks) into a new creation. Also, compared to the conventional building sets of Lego, the users are not restricted to the distribution of bricks in a pre-fabricated kit.

This is where mass customization comes into play: With Lego Factory, the company manufactures the bricks necessary for the model and ships them to users so they can assemble their models. Customers can also buy the bricks necessary to build from other people's designs, which are posted on the site.

Lego Factory is based on a toolkit for user co-design, called Lego Designer, a free, downloadable, 3D modeling program that lets users choose from digital collections of bricks to compose their own unique models. But as in many cases, once a company offers its users an innovative, more interactive way to create new products, some users want even more.

Already 15 days after its launch, the web site was hacked. The problem was that Lego used a simple algorithm to assign bricks to a user's unique creation. Instead of matching the blueprint with the exact number of the correct bricks, the Lego assembly center has pre-packed packages of bricks, and matches a user's designs with these packages.

The result: users got (and paid!) often for far more pieces than they really needed. At the same time, they were missing a few others that were integral to the creations, and had to purchase more packages. That made designing and buying models sometime very costly. While a child using her father's credit card wouldn't bother with this problem, adult fans of Lego, who adopted the Lego Factory rapidly, did.

So the adult Lego community became innovative: They collected information about the exact combination of each brick package (called a palette in Leo Factory language)

and compiled this information in a database that lists which bags must be purchased in order to collect specific bricks. On top comes an algorithm that optimizes the number of bricks based on a user's design by making modifications in the design or at least promoting a warning if a user selects a part that would cause an additional order of a package of bricks.

In a great article about this user initiative on CNET Networks, the author **Daniel Terdiman** quotes **Dan Malec**, one of the user developers (Malec is a software engineer from Stow, MA):

"You'd see a lot of fan creations [on Lego factory] costing $400 or $500 because fans are not using the bags efficiently. If you could see it at the bag level (instead of the larger digital palettes offered by Lego), maybe you might make a different decision. Maybe (instead of buying) that one piece which takes a whole bag that you're not going to use, you might choose a different bag."

So users created a very beneficial addition to the company's offering, however once that undermines Lego's sales opportunities. But most astonishing, Lego's reaction has been largely positive. Terdiman quotes a Lego executive that "the adult community found out within a few days (of the Lego Factory launch) how these bags were mixed together. It was a puzzle to us. They took us completely by surprise." But the Lego manager added: "We really encourage and embrace some modifications of our software."

And while in the moment Lego has not incorporated the development of the Lego fan community into its proprietary Designer software, it may do so in the future:

"It's not surprising to us that they're doing the hacking, because that was the hope, that they would take the core of what we're doing and own the system" for themselves, **Jacob McKee**, Lego's global community relations specialist is quoted in the CNET Networks article. "We want to release more and more content and development tools to help that process along. The hope is that they really start to take this on and start to do things we haven't even thought of yet."

This is really an astonishing remark and could serve as a role model for many other companies who often fight against user modifications and do not recognize the input from the company. And will it pay off? I strongly believe so. Just google for user comments on Lego's reaction on this user hack, and you see that customers just love a company that encourages its users to become innovators.

Article posted on November 01, 2005, Permalink to this article: http://mass-customization.blogs.com/mass_customization_open_i/2005/11/lego_factory_ha.html

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Mass Customization of Books: Amazon.com finally jumps on the unbundling trend

Amazon.com announced on Nov 3, 2005 that it will finally offer readers the possibility to **customize books from various publishers**. Building on its "Search Inside the Book" technology, which allows customers to search the complete interior text of hundreds of thousands of books, the company is currently developing two new programs that will enable customers to **purchase online access to any page, section, or chapter of a book**, as well as the book in its entirety.

Amazon thus is finally offering on a retail level what innovative publishers like **MetaText, Cinado.com, Symposion** or **Addison Wesley** have done since years: Providing readers the opportunity to purchase just the pages they really need. What might be not a good idea for novels, is great for edited books or also many trade books, where often the first and last chapter are giving you 80% of the information you want to know.

Indeed, also **my most recent book** on mass customization and open innovation has been published in this manner (in **German** language: *"Mass Customization und Kundenintegration: Neue Wege zum innovativen Produkt", co-authored by Frank Piller and Christof Stotko, 2003*). This was the **first customizable book on mass customization**. The book's first part discusses the implementation of a mass customization strategy and extends the concept towards open innovation. Readers can order all chapters of this

book separately (here, of course, the 80% rule mentioned before does not apply).

The second part of our book consists of more than 25 case studies and plenty of additional expert chapters on specific parts of the book. These chapters can be identified with an easy, but useful configurator, helping readers to decide which chapter is fitting best to their needs (more information on the book: www.mass-customization.de/ibook.htm, **the configurator can be found here**: http://www.symposion.de/msc/inhalt.htm).

So, while Amazon's announcement is nothing new, it will affect the market for customization in the book sector enormously as it will offer readers an **one-stop-shopping** and combine customization with Amazon's market power. In one of the planned offerings, called **"Amazon Pages"**, the physical-world experience of buying and reading a book will be "un-bundle" so that customers can simply and inexpensively purchase and read online just the pages they need. For example, an entrepreneur interested in marketing his or her business could purchase the relevant chapters from several best-selling business books.

A second program, **"Amazon Upgrade,"** will allow customers to "upgrade" their purchase of a physical book on Amazon.com to include complete online access. For example, a software developer who buys a Java programming book will not only get the physical book delivered to his or her home, but will also get Web access to the complete text of the book. Buy a cookbook and you will not only have it on your shelf, but also be able to access it anywhere via the Web. However, many publishers still have to sign so that Amazon can offer these services. In the moment, only very few books are available in this mass customization program.

For customers, this is great news. It will make access to books faster and more accessible. And will finally also provide to customers the convenience that purchasing one chapter is cheaper and more convenient than copying this chapter from the library page by page.

Article posted on November 10, 2005. Permalink to this article: http://mass-customization.blogs.com/mass_customization_open_i/2005/11 mass_customizat.html

An overview of recent customization offerings in footwear and apparel

Footwear and **apparel** are the most common products being customized today. I get many e-mails asking about some major examples in these areas. Thus, here a **short collection of some more recent examples**.

This is not a comprehensive list !! If you know an important example missing here, just e-mail me and I will be glad to include it in the list. Or just add a comment on the web site!

The following list was initiated by the web blog '*World of Custom*, An Overview of Current Custom Consumer Offerings', as compiled by Jason Davis/Merge Design.

FOOTWEAR – SPORTSSHOES

Adidas Mi (http://www.miadidas.com): Six shoes (running, soccer, tennis, indoor, basketball) with three areas of customization; fit (length and width of each foot), performance (outsole and midsole options and seasonal upper materials) and design (choosing from over 100 color combinations and embroidered lettering). All of which has to be done in person at select Adidas store locations.

Converse (www.converse.com/converseone/): Three shoes (Chuck Taylors high and low and Jack Purcells) with the One Star coming soon. Custom color and embroidered lettering online using the Nike iD engine.

Nike iD (http://www.nikeid.com/): Fifty-one shoes (thirty-one for men, seventeen for women and three for kids) six bags, five watches and three golf balls. Custom color and lettering on Nike's third generation site.

Puma Mongolian BBQ (www.puma.com/ mongolianbbq/): Single style served up at hands on kiosks open for limited times at select Puma locations. Very tactile with a DIY flavor.

Vans (http://shop.vans.com): Two shoes. Custom color and patterns online with a solid and well thought out interface for color selection.

Timberland (www.timberland.com/ customboots/): new website, now with state of the art configurator, many color options for men and women (more extensive review here).

JG Customs (http://booktown.com/jgcustoms/): hand painted, real actual personalization, small batch sizes, DIY approach.

O'Neill (http://www.oneill-action.com/ designy-oursneaker.php): Open innovation experiment, co-creation of new styles and design competition, but no custom manufacturing
FootJoy GolfShoes (http://www.myjoys.com/): Popular golf shoe. Custom color and individual length and widths for both right and left shoes.

FOOTWEAR -- DRESS SHOES

Selve (http://www.selve.net): Munich based custom footwear company for women's shoes. Latest design and custom fit (based on foot scan). Stores in Munich and London. Manufacturing in Italy.

Leftfoot (http://www.leftfootcompany.com): Leading European provider of custom footwear for men. Stores all over Europe, production in Finland. Custom fit and design.

Otabo (http://www.otabo.com): Upcoming US brand and manufacturer for mass customized men's shoes. Growing number of stores, manufactured in the US (Florida).

APPAREL

Adidas Team (http://www.adidas.com): new Japanese offering, create your own team outfit, nice and easy configurator

Land's End (http://landsend.com): Nine apparel pieces (Jeans, Chinos, Shits and a Jacket for men and women). Color and custom sizing all offered up on the **Archetype** engine. **Target**, **JC Penny**, **Tommy Hilfiger**: Similar offerings to Lands' End (mostly jeans and pants with a shirt or two). All use same Archetype engine.

MeJeans (http://mejeans.com): A new custom jeans maker in the US, offers more than 89 trillion possibilities for truly custom jeans, self measurement, rather complex configurator, for people loving and knowing jeans very well. Very good pricing (about 100 USD per pair).

UJeans (http://UJeans.com): Founded in Oct 2005, this Canadian jeans manufacturers offers custom jeans as well, self measurement, again only for people knowing jeans very well. Good pricing (less than 100 USD per pair) and a great "workbook" to educate the customers about eans customization (the configurator is still very basic, though).

Polo Ralph Lauren (http://www.polo.com): Fourteen apparel pieces (four shirts and one tie for men, four shirts and one bikini for women and four shirts for kids). Basic color and monogram choice via straightforward web page.

Nunatak Kobuk Mountain Jacket (www.nunatakusa.com): Custom hiking jacket; rather simple design, style choices come down to pockets on the front or inside and a hood. choice of nylon; custom arm and chest measurements for perfect fit (review here). Alternative offerings from **Beyond**, ME: www.beyondfleece.com

NeighborHoodies (http://neighborhoodies.com/): Growing chain of personalization stores. Plethora of base products (sweatshirts, t-shirts, pants, shorts, hats, underwear, baby clothes, etc.). All customized with lettering and iron-ons.

Pixeltees (http://www.pixeltees.com): Easy and simple t-shirt customization site. Many similar sites like this on the web.

GEAR

Fossil (http://www.fossil.com): Very simple customization offering, but reinforcing the trend.

Time121 (http://www.factory121.com): Swiss made custom watches, high quality, many customization options, nice configurator.

Ultimate Ears Earbuds (www.ultimateears.com): Pricey ear buds with superior sound quality and custom buds based on silicone casts of customers' auditory canals and outer ears taken by an audiologist.

Timbuk2 (http://www.timbuk2.com): One bag (classic messenger in four sizes). Custom color, options and accessories through well built online site. Was one of the first mass customizers in existence.

Freitag (http://www.freitag.ch/f-cut/): One bag. Based on custom, utilizing used truck tarps for base material with online interface that lets you select the actual pieces made to build your bag.

L.L.Bean (http://www.llbean.com): Three bags (boat tote, classic backpack and messenger bag). Custom color and feature selection (extra pockets, strap lengths, etc.).

Article posted on October 15, 2005. Permalink: http://mass-customization.blogs.com/mass_customization_open_i/2005/10/an_overview_of_.html

Mass Customization in China: China as a market and manufacturing place for customized goods. The example of Youngor

Following the MCPC 2005 conference (http://www.mcpc2005.com), about 40 of our participants went to a three day field trip to China. This was a great experience. During a workshop at **Zhejiang University in Hangzhou** we could discuss with 50 Chinese business people, consultants and scholars about the state of mass customization in China, both as a market and as a manufacturing location for customized goods. A company visit at **Youngor**, a Chinese apparel manufacturer, demonstrated a very far advanced mass customization manufacturing and sales operations. And the beauty of the Hangzhou landscape and its lake impressed all of us.

The MCPC 2005 China Study Tour: Workshop Venue and Closing Panel

China as a market for customized goods

China is such a large local market with a more and more heterogeneous consumer base. While in many segments still the focus is on fulfilling early demand in local households, other segments, mostly in the large eastern cities, have already a large and sophisticated consumer base. The increasing chasm between income levels creates two more or less separated markets form many goods. Companies like Youngor (see below) target with their mass customization offerings the upper end of the market. Here, demand for customization may be strong according to a **number of cultural specialties of Chinese culture**:

(1) China has a *long tradition in craftsmanship*, providing the country both high flexibility and a highly skilled workforce, but also a dedication of some customers regarding highly personalized service.

(2) *Crowded cities and communities:* Society is still rather uniform but changing fast into a way where uniqueness is honored and appreciated, so customization has a special appeal to many (especially younger) consumers.

(3) *Food culture:* The Chinese cuisine is highly regional and customized to specific tastes; many Chinese people are highly sensitive to shop for their favorite dish. This may also encourage them to adopt or even demand custom offerings.

And there is **weak evidence that China is already moving towards customization**: Car manufacturers report that since 2004, more and more cars for the consumer market are not made-to-stock, but are being configured and made-to-order (still not conceivable in the US car market!).

Haier, a large manufacturer of appliances, offered already in 2002 customizable refrigerators. While this offering flopped in the consumer market due to a lack of an adequate front-end, it became a hit in the retail market where retailers can order custom versions to differentiate themselves from local competition. And **Youngor** (see below) has introduced mass customization of suits to the Chinese market at a price point of about 320 Euro / 378 USD a piece.

China as a manufacturer for customized goods

Most often, China is however discussed in western countries as a manufacturing place for custom goods. While there is a large debate if logistic disadvantages would not favor local manufacturing of custom goods close to the markets, several western brands are sourcing the custom goods from China: Most custom sneakers and fashion shoes are produced in Guangzhou for the US and European market, Also, several large US brands like Nordstorm, Polo Ralph Lauren or

Tommy Hilfinger are producing some of their custom garments in China.

This trend may increase. China has shown in the past years that its main capability is to build lacking infrastructure very fast. In addition, it can counterbalance coordination demands and complexity handling still with cheap human labor (in one factory which I visited before the conference, almost each single custom order was coordinated and tracked by an individual worker – an easy way to balance the lack of an ERP or MRP system).

But more importantly, Chinese factory managers show no resistance to switch to custom manufacturing if they see a profit opportunity. In many industries, the steadily decreasing order size of standard variants has increased the flexibility and switching capabilities of manufacturers anyway. In addition, the organization of Chinese manufacturing around local industry clusters supports customization perfectly as all players along the value chain are in close proximity to each others.

Most impressing was a visit a **Youngor**, one of the largest Chinese manufacturers for apparel, including an own custom apparel operations. Youngor produces about 60% of its garments for the local market. It's suit manufacturing capacity is about 2 mio pieces p.a., and within this segment, custom suits are the strongest growth factor, targeting about 15% of the total capacity. The suits are sold in about 100 of 2000 retail stores owned by the company in China and Japan, using a simple, but clever measurement system combining traditional tape and an easy procedure to set reference points.

The retail price is between 1200 and 5000 RMB (about 150-600 USD), quite a heavy price tag for the Chinese market. Production took place in a very modern, integrated production facility in Ningbo at the corporate headquarters. Individual cuts are calculated in a CAD room, cutting is performed on modern single-ply cutters, sewing operations are performed to a large extend within the normal line producing also standard garments.

I was also very much impressed the executive manager introducing us to this system. Han Yong Sheng, Vice General Manager and CTO of Youngor, provided a very insightful introduction into mass customization which was very much ahead of the state of discussion beyond many western manufacturers. He shared a great vision of the potentials and challenges of mass customization, and seemed 100% confident in what he was doing and planning. For mass customization, this is a bright future. For western manufacturing, not.

Visit at Youngor Suits Factor and Mass Customization shop: Production line. Mass Customization Store

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Metric System to Be Customized for the U.S. Market

Conceptual Artist Offers Consumers Personalized Kilogram, Watt, Calorie... Mass customization as major victory for democracy in the 21st century

[HUMOR!] Well, I never thought that mass customization may graduate into a form of performance art, but this is exactly what happened with the following article published by

PR Newswire, a huge network distributing press releases. Have a look … this is really cool (but do not take it too seriously).

SAN FRANCISCO, Sept. 28 /PRNewswire/ -- Following several years of highly- secretive privately-funded research, conceptual artist Jonathon Keats announces comprehensive improvements to the metric system, anticipated finally to make the meter a viable unit of measure in the United States. The system will be introduced to the public at Modernism Gallery, in San Francisco, on October 27, 2005. Mr. Keats will be available to provide expert calibration.

"The metric system was developed in the 18th Century as an alternative to measurements based on the dimensions of kings' fingers and feet," explains Mr. Keats. "It was a decisive break from monarchy, but it wasn't decisive enough." The trouble is that one totalitarian system was replaced with another. "We did away with Louis XVI and Henry VIII, only to chain all measures, of everything in the universe, to the circumference of the Earth."

More specifically, the standard meter is 1/10,000,000 of the quarter- meridian, redefined by the Conference Generale des Poids et Mesures (CGPM) in 1983 as the distance traveled by light in 1/299,792,458 of a second. What Mr. Keats has proposed is an approach as rigorously mathematical as the metric system, that will prioritize the individual rather than the planet. His modification is simple, yet the consequences are profound: Instead of using the earth's spin as the basis of time, he's elected to use people's heartbeat.

[...] Mr. Keats's system makes everyone's clock personal. Because his own heart beats 1.1 times faster than the terrestrial second, for example, his day is a mere 21.816 terrestrial hours long, and his year is nearly 33 days shorter than you'd see on a calendar (except in leap year). From that, it's a straightforward calculation to derive the length of a personal meter, the distance traveled by light in 1/299,792,458 of a heartbeat.

[...] “In this day and age, everyone has an iPod, and most people have TiVo," Mr. Keats argues. "Mass-customization is the cutting edge of democracy. By taking this personal approach to measurements -- to standards of time and space and energy and power -- we can each become completely autonomous." [...]

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Impress and Contact

Mass Customization & Open Innovation News -- Notes and ideas on mass customization, personalization, customer integration, and open innovation.

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