



Personalized products at costs of mass production

“Prelude of the Performance Centre Mass

Personalization«

On 3rd May 2018 the Fraunhofer Society and the University of Stuttgart will be presenting the “Performance Centre Mass Personalization« to invited guests from business, science and politics. The Performance Centre researches interdisciplinary and cross-sector methods, processes, production systems up to business models to manufacture personalized products. Patrons of the event are the Baden-Württemberg Ministry for Economic Affairs, Employment and Housing and the Baden-Württemberg Ministry for Science, Research and Art.

Individualising products upon request and as required by the customer in such a way that they can be produced as 1 unit at the cost of mass production sounds paradoxical. Yet it is precisely this objective that the Performance Centre Mass Personalization has set itself. A new business relationship business-to-user (B2U) is to be developed with personalized products. »Individualisation is considered to be a megatrend in society. This also includes the personalization of products and services that we are increasingly observing«, stated Professor Wilhelm Bauer, Institute Head of the Fraunhofer IAO and Head of the Institute of Work Sciences and Technology Management (IAT) at the University of Stuttgart. »Mass personalization and B2U thereby enable completely new business models. This is an opportunity for the companies in Baden-Württemberg to develop new markets.«

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From consumer to »proactive consumer (prosumer)«

If the classic business relationships were characterised between companies (business-to-business) and the production of bulk commodities for consumers (business-to-consumer), in future the users will increasingly influence the product design. They will change from being consumers to so-called prosumers and in this way be actively integrated in the added value (business-to-user).

In this respect mass personalization includes a comprehensive restructuring of the product development, ranging from setting up a holistic user understanding up to the smooth implementation into personalized products and services. »The ability to develop, to design and to manufacture personalized products as 1 unit at costs of a mass product and from viewpoints of sustainability is the main challenge«, is a fact Professor Thomas Bauernhansl, Institute Head of Fraunhofer IPA and Head of the Institute for Industrial Production and Factory Operation (IFF) at the University of Stuttgart is aware of. »Our concept ›Mass Personalization – with personalized products to business-to-user (B2U)‹ has identified three areas of needs we believe will play a central role in future: mobility, health and living. These three areas are therefore the focal point of the work at the Performance Centre«, Mr Bauernhansl went on to say.

Professor Wolfram Ressel, Rector of the University of Stuttgart, emphasised: »Personalized products open up new cross-sector market potentials. We will research and process central topics of mass personalization in the new Performance Centre. The expertise of all participating research facilities and companies will contribute towards making attractive and successful solutions for the economy available.«

For example the Fraunhofer IGB: »The institute will make its expertise in the field of bio materials for medical technology, in personalized diagnostics as well as in manufacturing medical products and innovative medicinal products available to companies. With this we will be fulfilling an important task in the transfer of scientific results into application«, explained Dr Markus Wolperdinger, Institute Head of the Fraunhofer IGB.



Baden-Württemberg funds Performance Centre with a sum of five million Euros

The state government is funding the establishment of the Performance Centre Mass Personalization with a sum of five million Euros. The funding will be assumed by the Ministry for Economic Affairs, Employment and Housing as well as the Ministry for Science, Research and Art. »Personalized solutions will be given a further boost through digitalization and thus become increasingly significant for our economy. The ability to arrange mass personalization will therefore become a decisive success factor for companies. However, it is a particular challenge for smaller and medium-sized companies to acquire the competence in how personalized products can be made available efficiently and flexibly and how relevant value-added chains can be established. The Performance Centre is to support the companies in mastering these challenges«, emphasised the Minister for Economic Affairs and Employment, Dr Nicole Hoffmeister-Kraut. Minister of Science Theresia Bauer added, »Individualized products and their production offer a high innovation potential. The Centre will uphold the important tradition of production science at the Stuttgart location in the future. The campus needs these locations where innovation culture is lived«.

The Fraunhofer Society and the University of Stuttgart are contributing towards the finances. Moreover, the involved institutes are fundraising an additional five million Euros from external funds from business, so that in total 12.5 million Euros will be available for the financing.

Research partners in the Performance Centre are the four Stuttgart Fraunhofer Institutes IAO, IBP, IGB and IPA as well as eight Institutes from the University of Stuttgart. Added to this are comprehensive cooperations with numerous companies from various sectors of the industry. Through bundling numerous competences, the proximity to the location of the involved institutes and a network with industrial partners, the Performance Centre has competences at its disposal that are necessary for the personalized solutions.



Mass Personalization *Leistungszentrum*



Universität Stuttgart



Fraunhofer Institute for Work Management and Organisation IAO | Fraunhofer Institute for Building Physics IBP | Fraunhofer Institute for Interfacial Engineering and Biotechnology IGB | Fraunhofer Institute for Production Technology and Automation IPA | University of Stuttgart, Institute for Work Science and Technology Management (IAT) | University of Stuttgart, Institute for Acoustics and Building Physics (IABP) | University of Stuttgart, Institute for Electrical Energy Conversion (IEW) | University of Stuttgart, Institute for Interfacial Engineering and Plasma Technology (IGVP) | University of Stuttgart, Institute for Industrial Production and Factory Operation (IFF) | University of Stuttgart, Institute for Sport and Kinesiology (INSPO) | University of Stuttgart, Institute for Control Engineering of Machine Tools and Manufacturing Units (ISW) | University of Stuttgart, Institute for Beam Tools (IFSW)

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