



October 2016/ January 2017

## Design your own customised toys

The iBUS' consumers will become designers, designing, customising and placing orders for their own products online in the iBUS cloud. This fact will introduce the consumers within the production core, in such a way that final products will fully meet their requirements and specifications. Thus, iBUS is a real demand-driven innovative business model, where the consumer has a very relevant role.

It was very significant for the project to deeply know the customers' customisation requirements. Thus, the iBUS project made a deep study on the consumers' preferred toys for customisation, the customisation likeability according to the level of customisation and the additional cost the consumers would assume for a customised toy.

According to this, the preferred toys for customisation would be included in the dolls, board games, action figures and role-playing toys, among others (Figure 1).

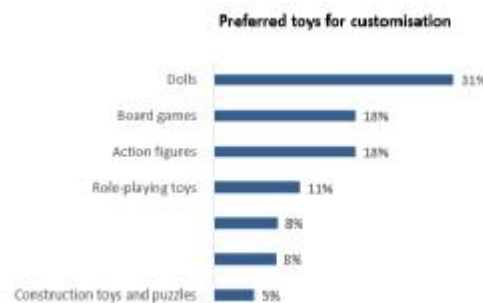


Figure 1 Preferred toys for customisation

This study also analysed the customisation likeability, which revealed that all the categories, except the personalised one, would be appealing almost in the same grade (Figure 2)

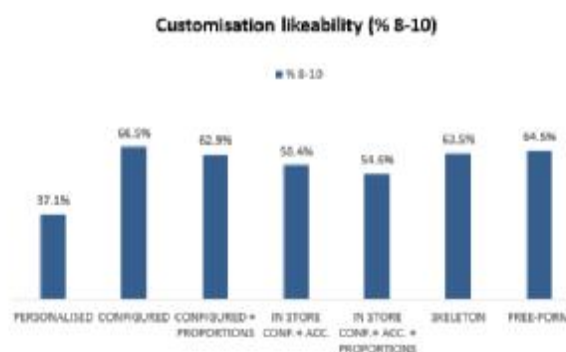


Figure 2 Customisation likeability by type of personalisation

Other parameter analysed in the study was the additional price the consumers were willing to pay for such a customised product. The range of additional percentage on this regard depends on the type of article as well as the grade of customisation acquired. For instance, average increase for a Toy vehicle and radio controlled toys are much higher (144%) than role playing toys and Playhouse (17%). Average is established in 58%. The same happens with the level of customisation where free form cost could be 2.8 times higher than simple personalisation. The average for all categories is almost 59%.

The study also analysed the user's abilities to create their desired toy. With this aim, the study distinguished among 5 levels of customisation; personalisation, configuration, in-store configuration, skeleton and free-form. The results revealed that among 65% and 94% of the parents, depending on the level of difficulty, have the required skills. These results in the case of children were among 49% and 66%, generally for children over 6 in all the customisation techniques, except in the case of free-form modality which was over 8 years old.

In the designing of a toy, parents and their children will have a playful and creative experience while jointly having a time of quality. The design module to be integrated within the iBUS platform will be simple, accessible and intuitive and will allow the creation of a virtual environment that supports the customer in the design experience and enhance its inspiration through the design process. This module will additionally consider the materials, processes and safety standards (UNE EN-71) applicable.

The conducted market study was focused on the Spanish scope. The aim of the consortium is to abroad the scope of the study (please, enter [this link](#) if you would like to contribute to fill the questionnaire in).

## Project News and Activities: iBUS at the Solid Freeform Fabrication Symposium 2016

The "major high-level research conference dealing with all aspects of Additive Manufacturing" was held in Austin TX last August, 2016. The partner of the Consortium UPB participated in this event with a publication titled "[Product Optimisation with and for Additive Manufacturing](#)". The iBUS project was mentioned in several occasions all along the document as an example of easy- to-use 3D design tools that allow the customer co-design their own toys or parts. It specifically mentions the WP3 which will develop a Design Virtual Environment for Customised Product. All this will boost the deployment of mass customisation in this consumer goods industry (toys).

### Publications/ iBUS in the press

In this section, you will have access to a series of press links on publications and dissemination actions carried out by iBUS project:

- Publication: *Product Optimisation with and for Additive Manufacturing*, Solid Freeform Fabrication 2016: Proceedings of the 27<sup>th</sup> Annual International Solid Freeform Fabrication Symposium – An Additive Manufacturing Conference – Reviewed Paper, [online: <https://sffsymposium.engr.utexas.edu/sites/default/files/2016/179-Reiher.pdf>]

- [Toys for customisation through the iBUS platform have been assessed at the 2nd General Assembly](#)
- [IBUS Project Determines Customers' Choices for Toy Customisation](#)
- [Customers' Choices for Toys Customisation](#)

## iBUS at the Inside 3D Printing Conference

The partner of the Consortium UPB has been involved in the co-organisation of the Inside 3D printing Conference for B2B networking and transfer actions on 3D printing and Additive Manufacturing. It was held in Dusseldorf on 2 – 3 February 2017.

Some interesting topics on digitisation, applied design, AM within Europe, Digital and Virtual engineering, legal aspects and other related issues were displayed. The iBUS project had an active participation with three related presentations:

1. Con Sheahan - iBus - An Integrated Business Model for Customer Driven Custom Product Supply Chain
2. Thomas Reiher - Product Optimization with Additive Manufacturing - From Aerospace to Everyday Applications
3. Ulrich Jahnke: Production Integrated Markings for Traceability of AM Parts in The Context of Industry 4.0



## Dissemination events attended by iBUS

Partner/s	Event	Activity Type	Audience Size
UPB	RapidTech	Presentation + Exhibition	100 + 4 500
UPB	Dupra Touch Point 3D fab + print	Presentation	100
UPB	Kunststoffland NRW	Workshop	70
UPB	Formnext 2016	Exhibition	13 000
UPB	Inside 3D Printing 2017	Presentation	100

## Upcoming Events

### [Maker Faire Grenoble](#)

Date: 18<sup>th</sup> March 2017

Venue: Grenoble (FR)

### [Maker Fair Ruhr](#)

Date: 25<sup>th</sup> – 26<sup>th</sup> March 2017

Venue: Dortmund (GE)

### [Maker Fair UK](#)

Date: 1<sup>st</sup> – 2<sup>nd</sup> April 2017

Venue: Newcastle (UK)

### [Maker Faire Luxembourg](#)

Date: 25<sup>th</sup> March 2017

Venue: Luxembourg (LU)

### [3D Printing days](#)

Date: 28<sup>th</sup> – 30<sup>th</sup> March 2017

Venue: Kielce (PL)

### [Maker Fair Saschen](#)

Date: 22<sup>nd</sup> – 23<sup>rd</sup> April 2017

Venue: Chemnitz (GE)

## Co-ordinators message

The iBUS project is now at a very interesting stage where we are seeing early software prototypes. It is interesting to note, from our many dissemination events, that iBUS is addressing barriers that are applicable to the additive manufacturing industry in general, not just the toy industry. Many of these barriers relate to the business model; particularly what is an appropriate business model for AM; where and how should it compete with traditional manufacturing and will the market for customised products be large enough to sustain AM industries?

Therefore, do not hesitate to get subscribed to the [Special Interest Group contact list](#). Being a component of this networking list, you will be able to test and validate the customised product design virtual environment, as well as all the demonstrators issued within the iBUS development framework. Please, subscribe at: [h2020ibus.eu](http://h2020ibus.eu).

You can also follow us through the iBUS social media [Twitter @DesignIBUS](#); [Facebook](#) and [LinkedIn](#).