High Potential Initiatives Profiles

1 Accelerator

FABulous

2 Project and Organization

3DSquare
TRIMEK

2.1 Country

Spain

2.2 Project Abstract

Additive manufacturing is a growing market with an outstanding forecast for the coming years. In this sense 3DSquare directly addresses the sectors (automotive, consumer products, medical…) that in the coming years will be introducing 3D printing and will need robust and traceable processes to assure the dimensional quality of their manufactured goods. Limitations of the 3D printing process derive from the need of post-printed machining to achieve the required dimensional quality. So, TRIMEK, through the 3DSquare project, aims to open a new service to the 3D printing sector integrating 3D optical scanning and certified measuring software with FI based enablers to continuously increase the printing quality reducing the machining phase. Firstly, 3D Scanning will digitalise of the entire surface of the printed part. Then, M3 software process the data, reporting the comparison of the real part with the CAD model envisioned and building deviation maps. Afterwards, information will be exploited to create a correlation program (at printing and CAD model level) that loops feedback to constantly improve the printing quality. If needed, this information will be used to drive the final machining phase. To achieve these, TRIMEK will exploit FIWARE web and cloud technologies. 3DScan offers the possibility of visualizing the 3D digitalized parts. Object Storage gives the opportunity to store the files generated by the digitalization of the printed objects in appropriate containers in the cloud. Finally, IdentityManager KeyRock provides security to the whole system with authentication. In conclusion, 3DSquare wants to generate a new TRIMEK business model including in the 3D Printing world the most advanced dimensional quality control methods used nowadays in the industrial sector, with the objective of improving the final quality of printed objects, as well as increasing the control and the traceability of the whole process.

2.3 Sector

Advanced Manufacturing and 3d Printing

2.4 Target Market

3D Square has a B2B and B2C model. Its customers are designers, engineers, measuring service providers and manufacturers.

To acquire new customers in 3D printing market, TRIMEK participates in exhibitions and offers 3D printing and measuring services directly. TRIMEK is not the main actor in 3D printing but it is offering 3D scanners and 3D software analysis capabilities to generate process knowledge related to the quality of manufacturing/printing. The advance compared to competitors is linked to the service request and the access to the information whenever customers need it. Moreover 3DSquare does not depend on software licensing or desktop programmes as the access to the information is based on a web application. There is no 3D interactive visualizers integrated in web applications for dimensional quality purposes.

2.5 Business Model

3Dsquare has a SaaS model (Software as a Service model) as its main revenue flow. Customers need to register themselves on the website and they pay per use. The price per use includes the measuring part and depends on the printing service configuration.

SMART CITY SOLUTION	NO
CLOUD SOLUTION	YES
SOCIAL MEDIA SOLUTION	NO
MOBILE SOLUTION	NO
BIG DATA/ANALYTICS SOLUTION	YES
IOT	YES

2.6 Website

http://www.trimek.com/

http://m3workspace.trimek.com/m3