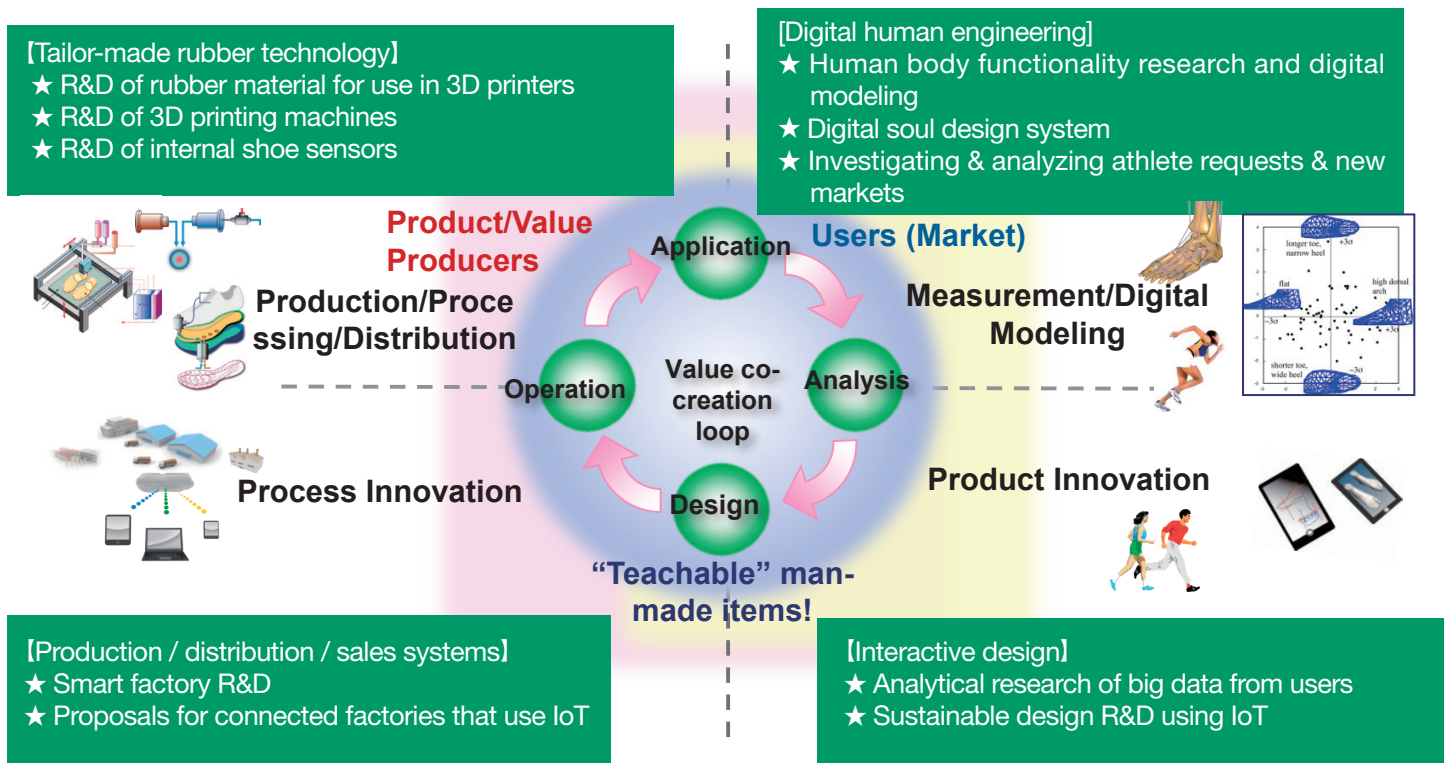


The Perfect Fit for your Body from a Rubber 3D Printer - Developing the World's First 3D Printer for Rubber Products -

About this Project

With shoes, Kobe's representative local industry, as our target for advanced, **we are developing the world's first 3D printer technology that uses rubber**, a local resource in the Kobe region. Furthermore, we offer users not only an inquiry into just product quality, performance, or price, but instead, by continuously interfacing with users directly through an IoT (Internet of Things) information network, we can improve their level of satisfaction with their products. Thereby, we 'co-create' the value of our products along with our users, and continue to pursue innovative manufacturing.



Test Uses / Application Examples

- Currently progressing on social implementation of developed technologies on our value co-creation platform (started September 2017)
- Conducted a durability demonstration for test model shoes at the 2017 Kobe marathon
- Conducted an effectiveness test for improved shoes at the 2018 Kobe marathon



Test model shoes

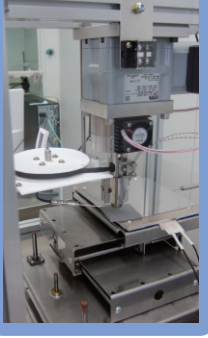


A view of the Kobe marathon

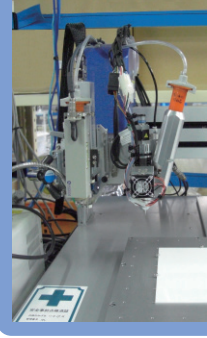
Research Achievements

- Development of the world's first 3DP machine and proprietary rubber material**
 We aim to develop a 3DP machine and proprietary rubber material for it, then implement it practically for businesses.
- Proposals for innovative manufacturing that makes use of co-created value**
 We have developed individual adaptive design tools based on digital human engineering.
- Construction and social implementation of a value co-creation platform with an eye to stimulating local economies**
 We started the value co-creation platform in September 2017. It supports innovative manufacturing in local businesses by holding symposiums and seminars.


For vulcanized rubber



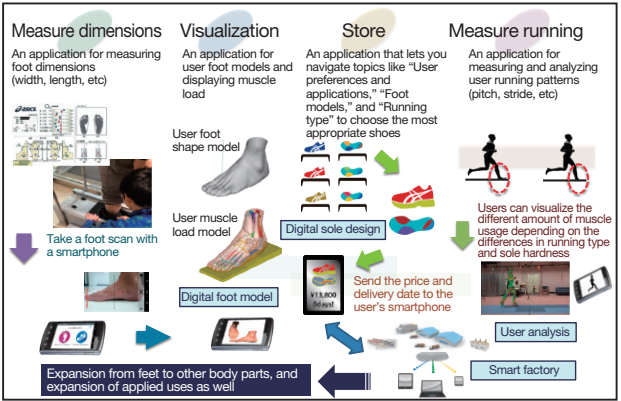
For UV-curable rubber



For polyurethane rubber



Development of 3 types of reactive 3D printer technology



Mobile app development

Future Outlook

We have opened a value co-creation platform (utilization hub) in the Hyogo Prefectural Institute of Technology. It provides tools such as vulcanized 3D printers, polyurethane rubber 3D printers and apps with implemented user interfaces for individual use. By gathering product users, manufacturers, and tools developers under one roof, we have constructed a joint research environment, and are this further able to encourage these tools to be implemented in society.



Research Theme : Research on Innovative Design/Manufacturing Methodology of Tailor-made Rubber Products and Socio-Economic Value Co-Creation with Reactive 3D printer

Members : KOBE UNIVERSITY, Hyogo Prefectural Institute of Technology, National Institute of Advanced Industrial Science and Technology, ASICS Corporation, KOBE MATERIAL TESTING LABORATORY CO.,LTD., SUMITOMO RUBBER INDUSTRIES, LTD., BANDO CHEMICAL INDUSTRIES,LTD., TENMA FACTICE MFG. CO., LTD., SHIBATA INDUSTRIAL CO.,LTD.

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Utilization Hub : Hyogo Prefectural Institute of Technology (Contact:<http://www.hyogo-kg.jp>)