

**FASOTEC**

# **About FASOTEC**



As of April 2016

# Company Profile

- Company Name FASOTEC Co., Ltd.
- Location Makuhari Techno Garden B-21F, 1-3 Nakase, Mihama-ku, Chiba-shi, Chiba 261-8501, JAPAN
- Date founded June 1, 1983
- Capital 2.6M US\$ ( 100% owned by FASOTEC Holdings )
- President & CEO Junichi Takeuchi
- Business Sales and Support of PLM (CAD/CAM/CAE/PDM ) Systems  
PLM Engineering Service  
PLM Custom SI Service  
Medical Engineering / Deveopment and Sales of Biotexture products
- Employees 136 (as of April 2016 )
- Offices Makuhari, Utsunomiya
- Group Companies Godo Solution, FASOTEC Jianda, Digital Core Service
- Business partners Dassault Systems, IBM, DCS, Inspection Expert , Stratasys Japan



# Message from CEO

- FASOTEC was founded in 1983 by machining engineers who had technology in the field of 3D CAD/CAM. Thanks to IBM and Dassault Systems, we were able to grow by CATIA® systems sales and delivering support services.
- Today, our greatest asset is engineering service capability which contributes to better QCD performance from design to production stages. We are dedicated to the success of our client's business utilizing our excellent performance of IT (PLM) skills and engineering insight. We are now aggressively expanding our service to oversea sites with our alliance partners.
- Our experience in 3D printer business since 2003 adds another value to our business. Distinguished medical institutes manifested interest in our technology and currently support our patent Bio-texture model technology. Medical engineering service is expected to be new innovation, providing safer training methodology and systems in the new field of robot surgery.
- We are always prepared to be your premier partner in adding new value to your business. Please feel free to contact us with any problems you may have; we firmly believe we have the right solution that best fits your needs.



CEO  
Junichi Takeuchi

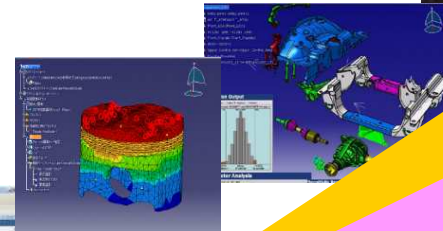
# Corporate History and Business Partners

## Our Vision:

“To be professionals in supporting our customer’s business globally with our **optimum digital technology**”.



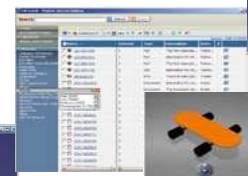
3D Printer



SIMULIA

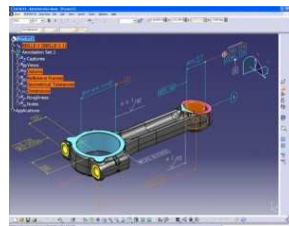
PDM ENOVIA®

Knowledge Ware for Design,  
CAA

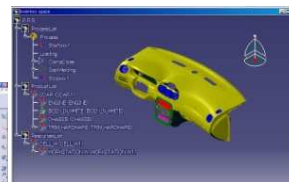


ENOVIA

Digital Manufacturing



5-axis NC data  
created by APT

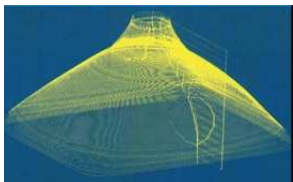


DELMIA

CAD/CAM & Education



FASOTEC: Technical skills and know-how from Machining experts



1983



# Customers

## Automotive

HONDA  
TOYOTA  
NISSAN  
Mitsubishi Motors



## Machinery

AMADA  
Ikegami Mold Engineering  
Kato Works  
Futaba Corporation  
Nippon Miniature Bearing



## Electronics & Consumer Goods

SONY      GLOBERIDE (Daiwa)  
IBM      Lion  
LENOVO      House Foods  
SHARP      Iwasaki Electric



## Auto Parts

Koito Manufacturing  
Hitachi Automotive  
NHK Spring  
Yazaki Corporation  
Musashi Seimitsu Industry  
NSK  
SANKO GOSEI



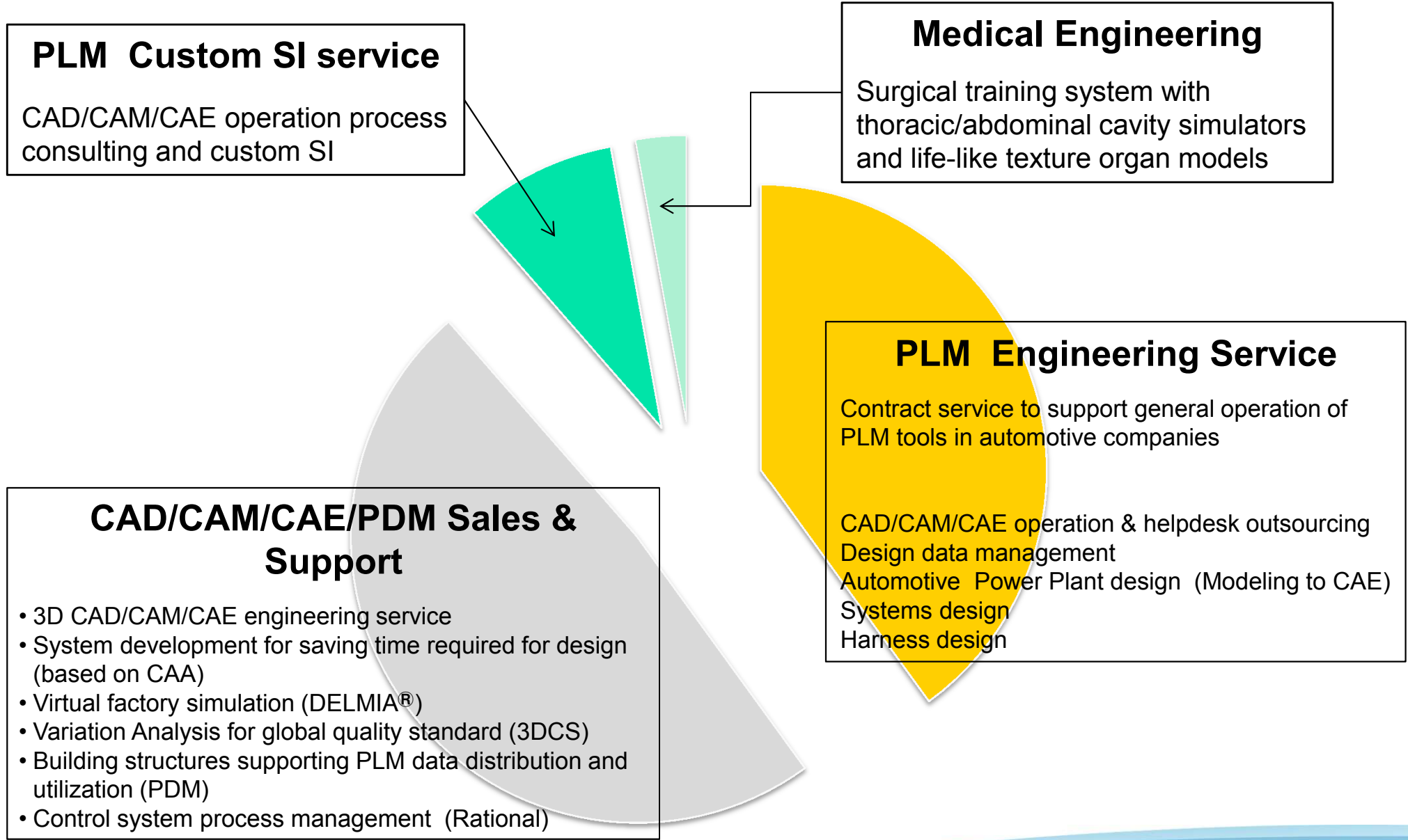
## Aerospace

Mitsubishi Heavy Industries  
Kawasaki Heavy Industries  
Fuji Heavy Industries  
JAMCO

## Medical Institutes

Kobe University  
National Cancer Center Hospital  
Chiba University  
The Jikei University  
Tokyo University  
Juntendo University  
Tokyo Medical Center

# Business Portfolio

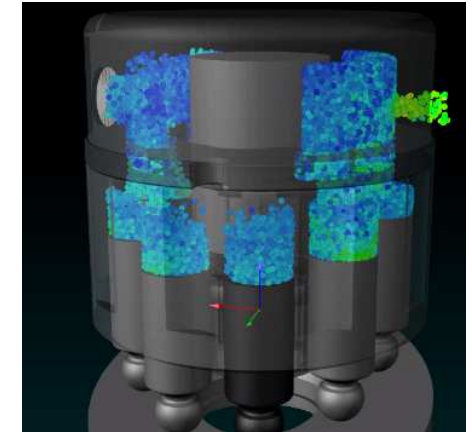
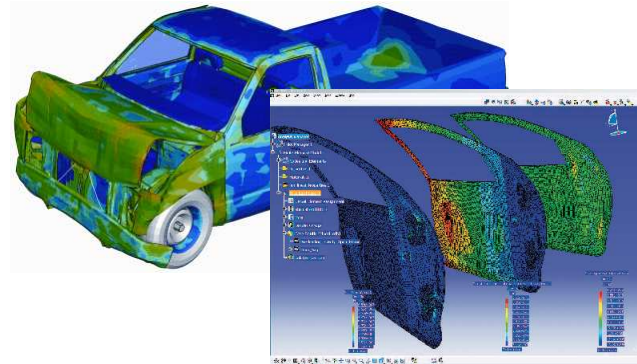


# PLM Business – Business Domain

## ◆ CAD



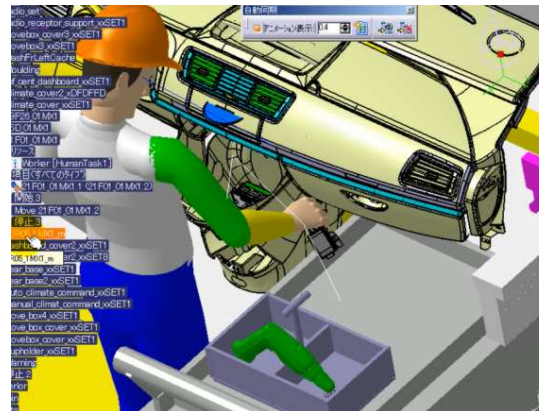
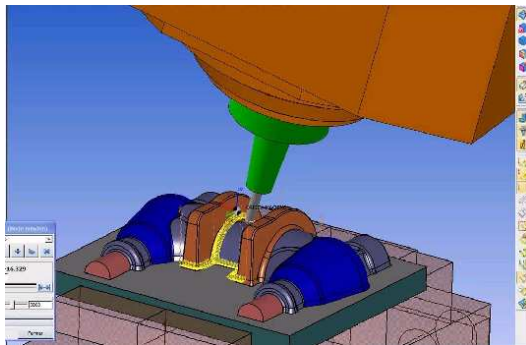
## ◆ CAE



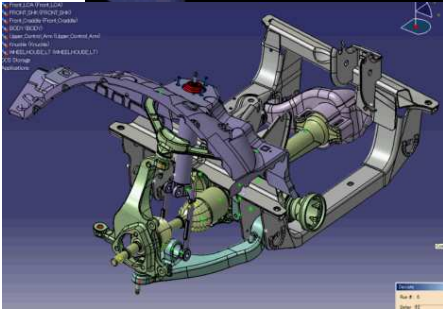
## ◆ Global Quality Management

## ◆ Simulation of manufacturing

## ◆ 3D printer



## ◆ CAD



CAD has been the core expertise of FASOTEC

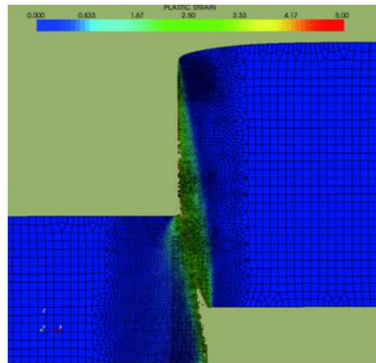
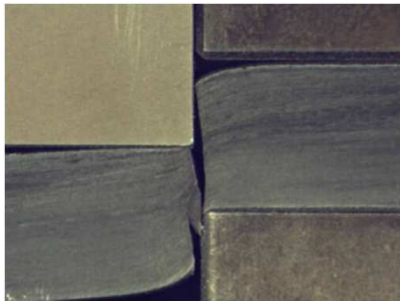
- 3D-CAD, especially CATIA
- Auto Industry Experience
- Design Process Automation / Optimization



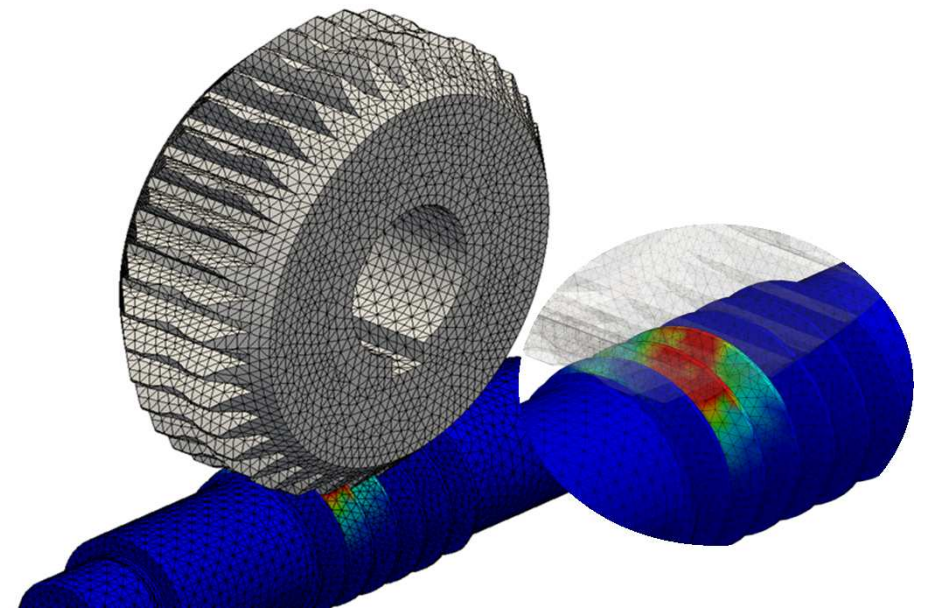
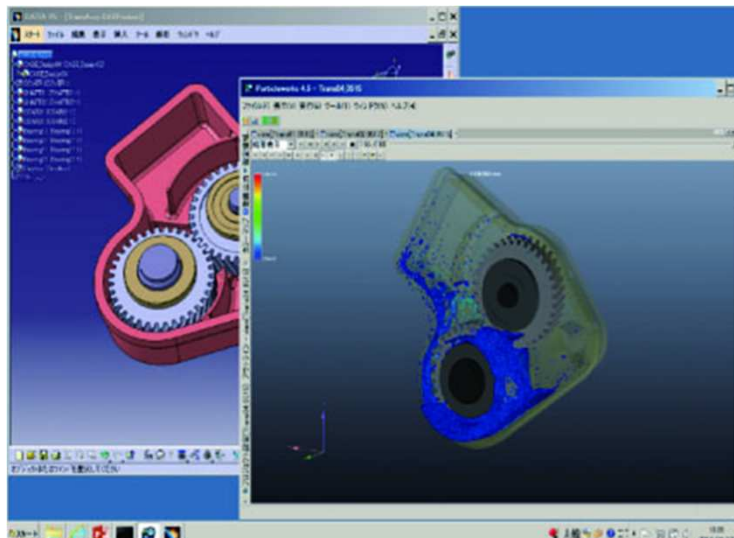
# PLM – CAE and Simulation

FASOTEC provides advanced simulation service and consulting service, collaborating with with engineering institutes. It contributes to solve QCD issue.

Hi-speed camera



Metal fracture surface analysis



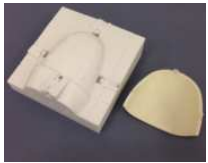
Contact problem analysis + Tolerance simulation

CFD analysis by particle method (Particleworks<sup>®</sup>)

# PLM – Global Quality Management



Quality big data analysis tool



Inspection Jig by 3D printer



Quality inspection report

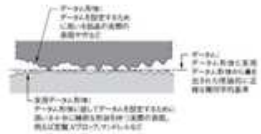
## 8. Control and Feed Back



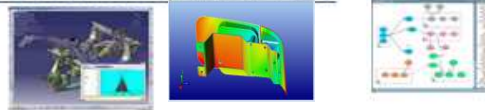
## 7. Measurement Plan



## 6. GD&T (in detail)



## 5. Tolerance Analysis



Incorporating Gravity/Thermal in Simulation

## 1. Program Directive



## 2. Build Objective



## 3. Build Strategy



## 4. Initial GD&T



Spec study by 3DCS/RTT

Closed Loop Process in Dimensional Engineering (DE)

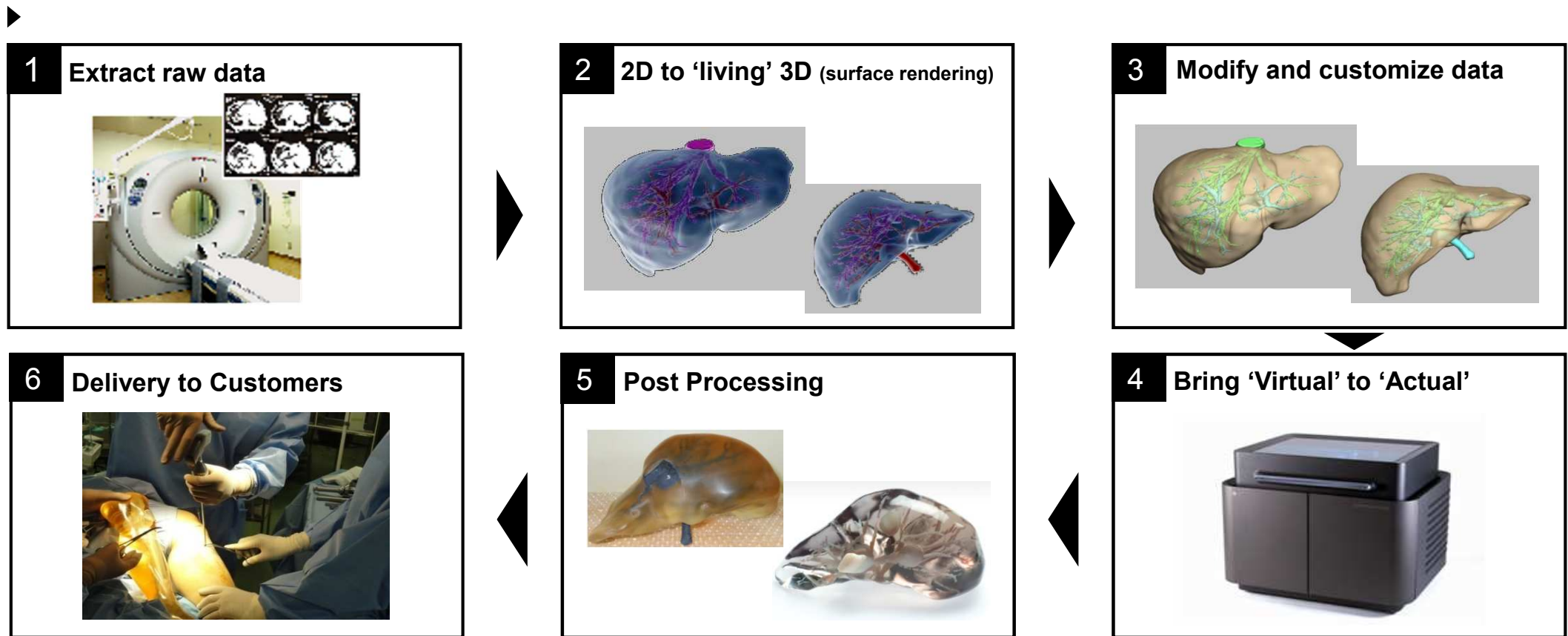
“Global QMS (Quality Management System)” is a new business concept launched by FASOTEC in 2011, with the aim of establishing a business style with strong global perspective. Today, more and more globalized companies are facing difficulties in managing quality such as perceived and process quality utilizing local material and plant (human) capability. In such cases, we need to coordinate our services and solutions that best fits their needs at their offshore sites. Global QMS is a methodology to comprehend our customer’s needs globally and provide them with the most suitable solution.

# Medical Engineering - Our Approach

Apply PLM 3D engineering to the medical field, with digital and analog technology collaboration



## Steps to produce Bio-Textured models



# Medical Engineering – Biotexture Products

BIOTEXTURE Dry Model is production of patient-specific 3D printed models converted from CT/MRI scans.

The highly accurate 3D models help surgeons enhance pre-surgical planning and achieve optimum surgical outcomes.



**Dry Model**

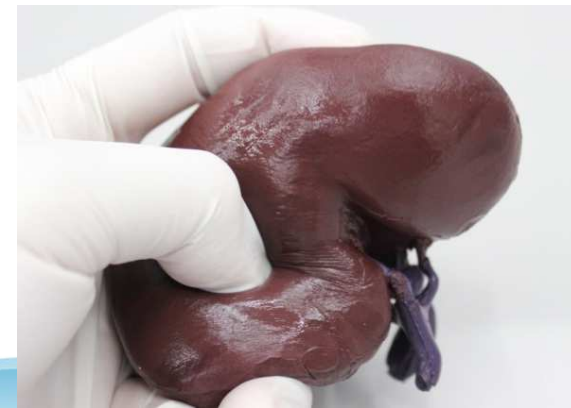


BIOTEXTURE Wet Model is an excellent alternative to the use of animals in demonstrating medical devices.

Texture of human tissues are reproduced to enable surgeons enhance testing, practicing, and evaluating the use of surgical instruments, including energy-based devices.



**Wet Model**



# Medical Engineering – Biotexture Surgical Training System

BIOTEXTURE Surgical Training System offers a new training style – not available with conventional surgical training using virtual reality of animals – in which surgical simulation experience is made possible.

Biotexture Wet Model is installed inside the Biotexture Thoracic Cavity Simulator / Abdominal Cavity Simulator to offer the realistic environment for surgical training.

Developed as a result of the pursuit of a system to reproduce the texture, visual sensation, structure, and space of the human body, this system provides a realistic environment and sensation, which enable users to feel as if they are performing actual surgery.



GOOD DESIGN  
AWARD 2015



*Thoracic Cavity Simulator*



*Abdominal Cavity Simulator*



# Medical Engineering – Ultra-realistic 3D Organ Model

AFP broadcasted movie '3D printed organs offer ultra-realistic practice models', FASOTEC engineer had interview by AFP in this news. Mar. 2015

<https://www.youtube.com/watch?v=JMc4X9JxriI>



# Medical Engineering - NHK Overseas News Line

<http://www3.nhk.or.jp/nhkworld/en/tv/medicalfrontiers/>



The screenshot shows the NHK World TV website interface. At the top is a navigation bar with links for Home, News, TV (highlighted), Radio, On Demand, Life & Culture, Food, Learn Japanese, Live, and Language. Below the navigation bar is a breadcrumb trail: NHK WORLD > NHK WORLD TV > Medical Frontiers. The main heading is "NHK WORLD TV". There are two tabs: "TV Programs" (active) and "Schedule". The main content area features a large image of a woman in a white lab coat standing in a hospital setting, with the text "MEDICAL FRONTIERS" overlaid. To the right of the image is a red box labeled "Science & Nature". Below this is the program title "Medical Frontiers" in large black text. A short description follows: "Japan is a world leader in health care. This medical technologies and tips for a healthy I". Below the description is the broadcast schedule: "Broadcast on Monday & Tuesday (UTC) Check schedule for your local time [here](#)". Further down, it states "This program is available on [video on demand](#)". At the bottom, there is a section for "Next Broadcast" with the text "Tuesday, June 28" and "0:30 - 1:00".

Contact us at...

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Conference with partner companies in 2015



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# Appendix

# FASOTEC Group Companies

- Since its establishment, FASOTEC has specialized in the field of “Monozukuri” and supported the customers by utilizing our optimum digital technologies.
- With sensitivity to changes in the business environment of manufacturing industry and with our optimum digital technologies, all FASOTEC group companies continue to strive in supporting our customers as valued partners.

## Godo Solution



Software development for small and medium-sized enterprises, with over 10,000 users

Godo Solution has developed CAD/CAM software (NAZKA Pro series) over the years to respond to needs and expectations of more than 10,000 users, including mold industry which has underpinned manufacturing industry in Japan.

Focused on the future of digital design, Godo Solution, as a software developer, has always been challenging to develop new and innovative software to support its users in Japan.

<http://www.godo.co.jp/en/about/>

## FASOTEC Jiangda



Global PLM support in China

The mission of FASOTEC Jiangda is to provide Japanese affiliated manufacturers in China with optimum digital technology in order to contribute to their customers’ “monozukuri.”

Utilizing FASOTEC’s know-how, FASOTEC Jiangda firmly supports Japan-based manufacturers so they are capable of making a great leap forward in their businesses as global factories in China.

HQ: Shanghai  
Offices: Guangzhou & Tianxing

## Digital Core Service



System integration service for CAD/CAE in design process

Digital Core Service is a company 100% owned by FASOTEC Holdings. From April 2015., the company provide service by strong capability of system development and consulting of design process. Especially 3D design template development with process streamlining consulting enable powerful design process automation. Engineers understand 3D data format of CAD,CAE and propose productive operation process with user friendly interface.

Through over 30 years development experience in Numerical Control machine post processor and over 15 years CAA service for CATIA user , FASOTEC has great asset for process integration. DigiCore succeed such asset and skilled talent. And it deliver high quality service for client .