Brief Summary of Intellectual Property Activities

FUJITSU LIMITED
Dec. 2017

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shaping tomorrow with you

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Transformation of Fujitsu Business & related Industry environment

A Digital Society

A digital society

- Instead of standardized service and products, personalized value is delivered to each individual in a digital society.
- IT, especially software, help people to create knowledge.
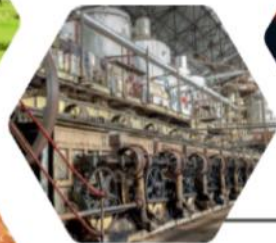
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A digital society

- Hunter-gatherer societies transitioned to agricultural societies
- Experienced a dramatic shift from industrial societies to post-industrial information societies.
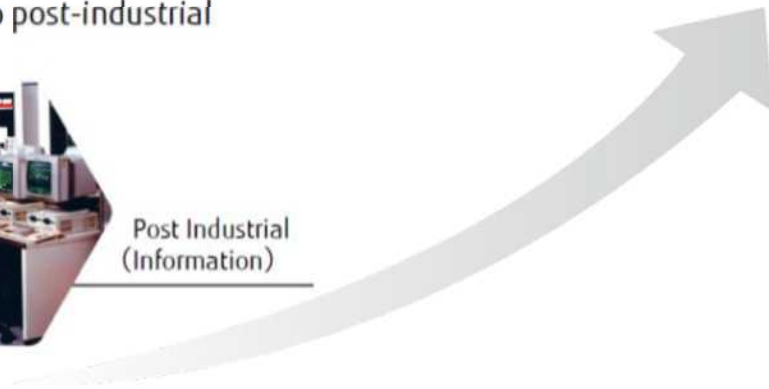
Agricultural

Post Industrial (Information)

Industrial

Hunter-gatherer

3

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Source: FT&SV 2017

Co-creating Digital Business

Case: Unleashing the creativity of people

Design Thinking Workshops **Digital Transformation Center**

Co-creation in Silicon Valley **Open Innovation Gateway**

Maker Space **TechShop Tokyo**

Co-creation with Start-ups **MetaArc Venture Program**
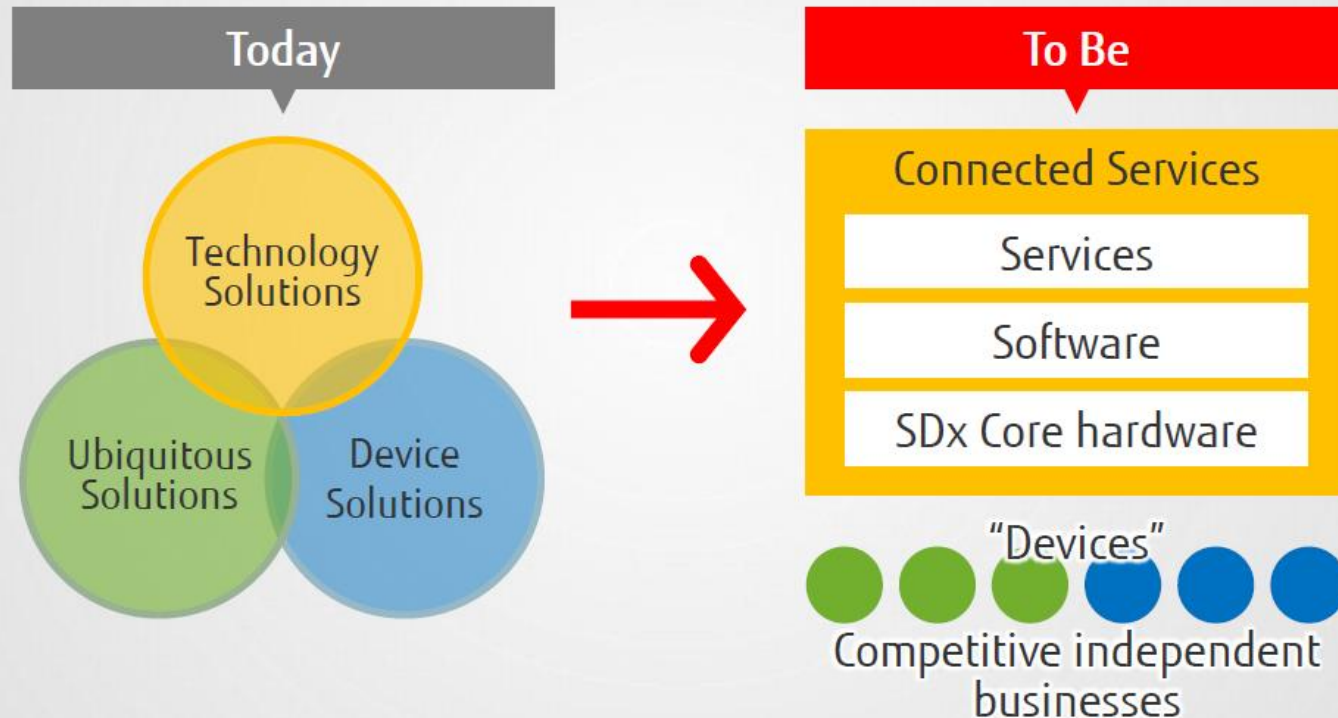
Co-creating Digital Business

Source: FT&SV 2017

Co-creating Digital Business

Source: FT&SV 2017

Business Model Going Forward

Focus on Technology Solutions

Today
- Technology Solutions
- Ubiquitous Solutions
- Device Solutions

To Be
- Connected Services
  - Services
  - Software
  - SDx Core hardware
- "Devices"
- Competitive independent businesses

Source: Management Direction FY2015

"Connected Services"

Ecosystem for "Connected Services"
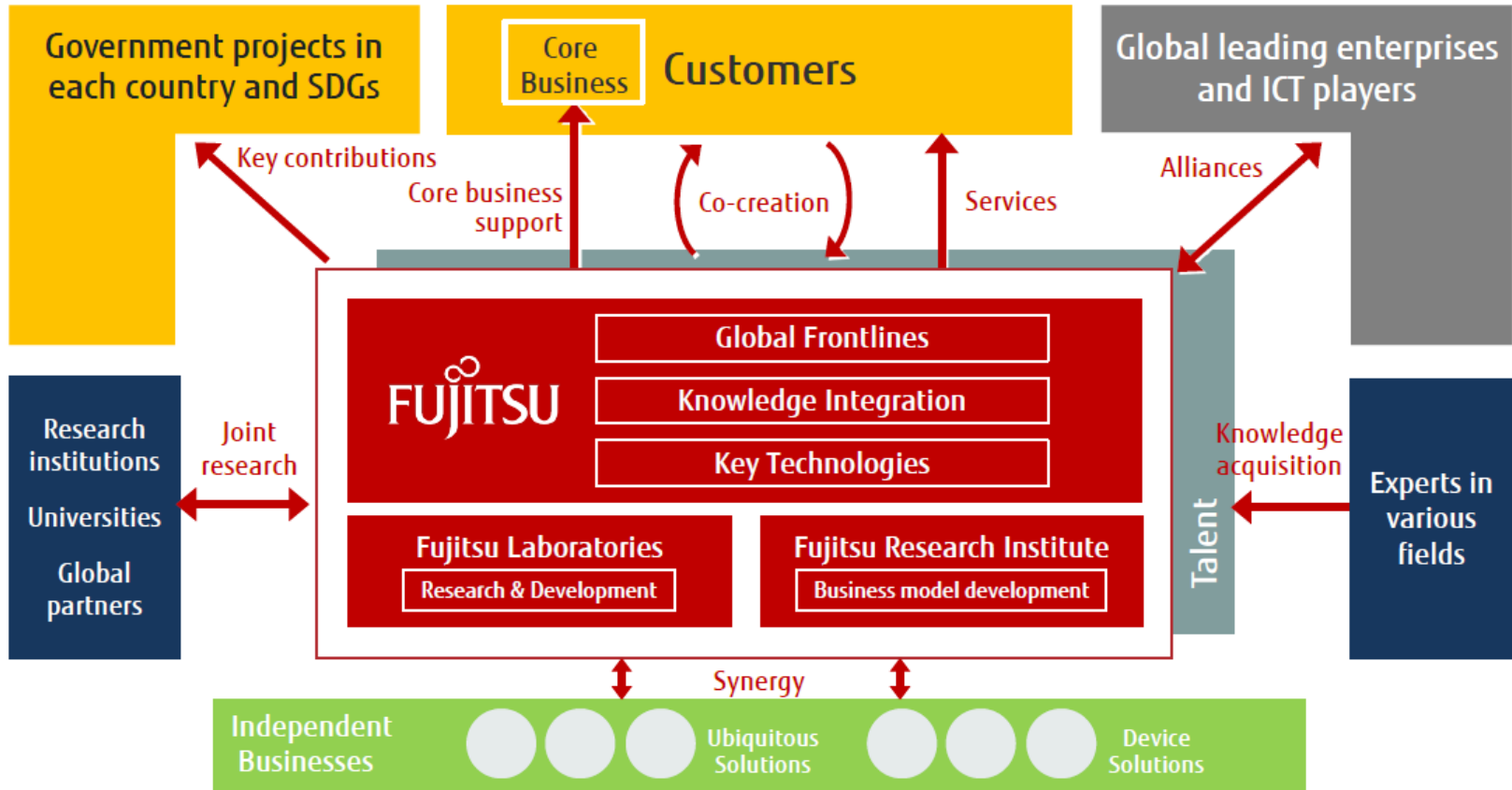
Source: Presentation Material for
Management Direction FY2017 Progress Review June, 2017

Fujitsu IP Strategy & IP Activities

■ IP Strategy for supporting Digital Co-creation

$$"EX^3 \times IP^2"$$

Fujitsu IP Strategy "*EX³×IP²*"

■ Handling Intellectual Property as an Innovation Pilot,
Strengthen Fujitsu technologies by IP EXpertise,
EXplore in the digital ocean for connecting technologies and business,
Co-create new value with customer and provide User-EXperience

EXpertise   EXplore   EXperience

IP × IP
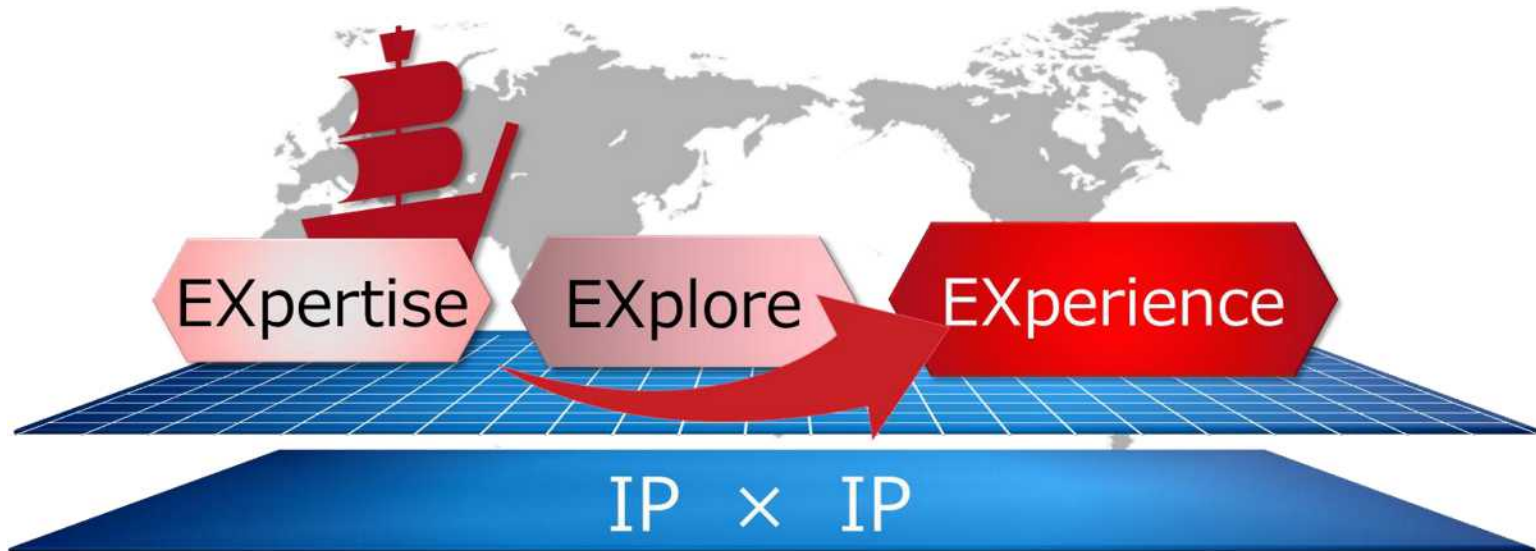
Intellectual Property × Innovation Pilot

Handling Intellectual Property as an Innovation Pilot

Based on EXpertises

EXploring in the Digital Ocean

for Providing User-EXperience

Intellectual Property team coined the phrase "Innovation Pilot" (new IP definition) to denote:
Internal-External Networking and Connecting together Fujitsu intelligent units, such as R&D Units and Business Units

Summery of Fujitsu IP Strategy

■ IP Strategy for supporting Digital Co-creation; "*EX^3×IP^2*"
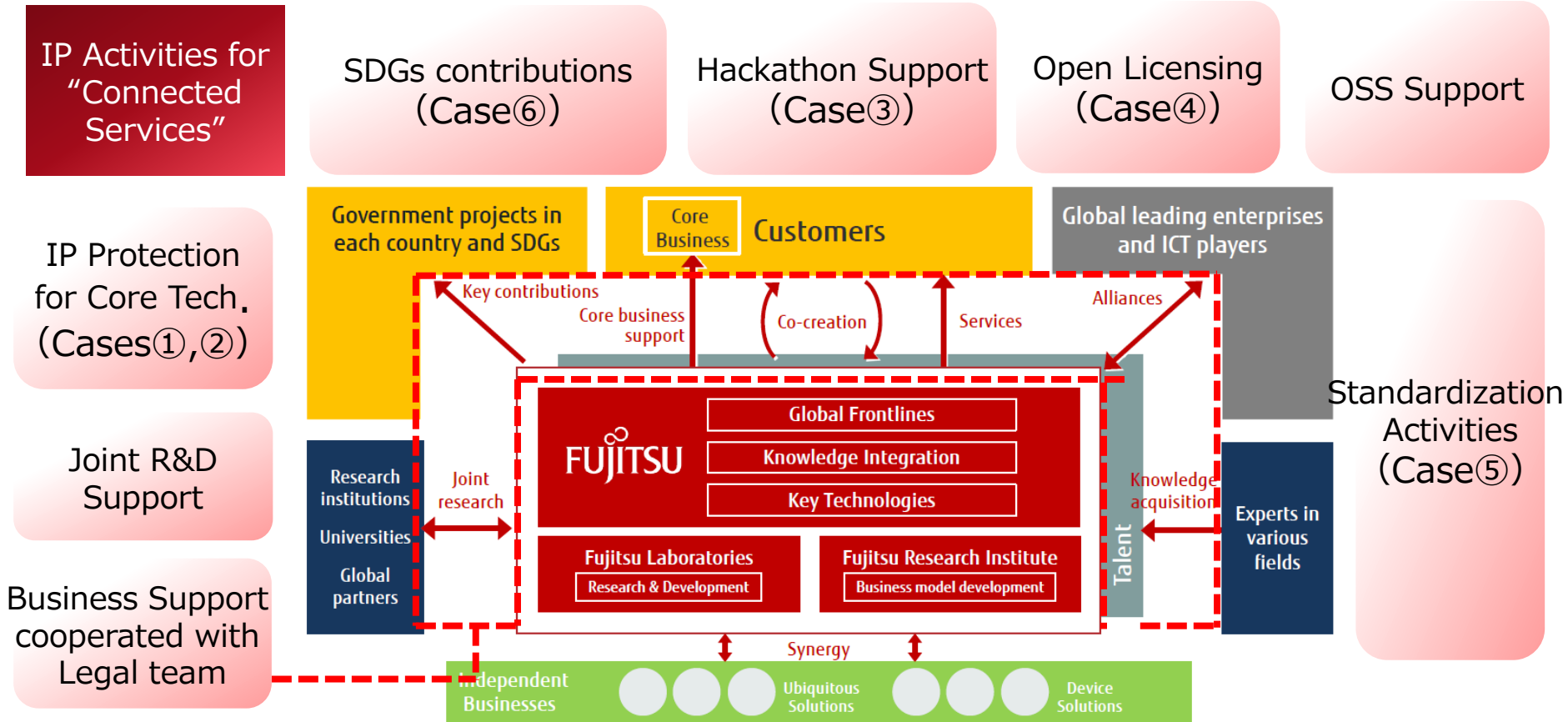
Case①:TOMOE Corporation

Increased efficiency of assembly inspection by using AR technology

※AR: Augmented Reality

TOMOE Corporation

- Being engaged in a broad range of business areas, from general construction to specialized steel towers, bridges
- Relied primarily on visual inspection of its assemblies, but defective inspections resulted in significant rework

- Developed an assembly inspection system combining AR technology and existing 3D CAD data
- Achieved taking only 2 to 3 minutes for inspection, which is about 10% of the time required for visual inspection as well as elimination human errors.
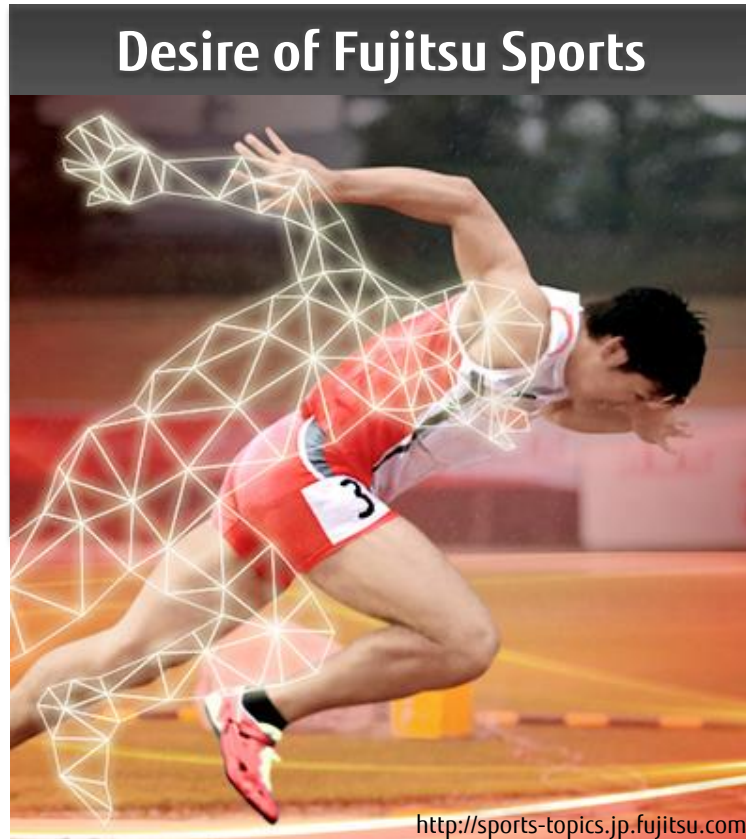
➢ In Co-Creation project with TOMOE Corporation, Fujitsu AR core technologies, protected by IPR, are combined to resolve inefficient inspection by the customer to create new value.

Source: FT&SV 2017

http://www.fujitsu.com/global/about/resources/news/press-releases/2016/1227-01.html

Case②:Sports ICT

- For Sport ICT, design Fujitsu core technologies (3D sensing, 3D data processing, etc.) for sports science.

- Providing new User-Experience by the Co-creation, connecting customer's needs and knowledge with Fujitsu core technologies.

Desire of Fujitsu Sports

http://sports-topics.jp.fujitsu.com

- 3D Sensing

3D Laser Sensor

Laser Beam(Pulse)

- Smart Arena

free viewpoint video generation technology as well as sport IoT technologies

Shot Success
Shot Failure

Data-oriented scientific training
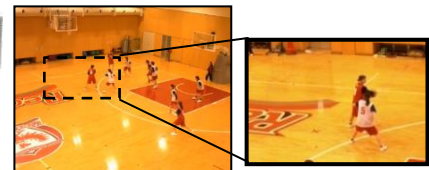
A new style for watching games with fascinating images

Case③:IP Support for Hackathon

- In Fujitsu Hackathon*, "Hackathon participation Agreement" provided by Fujitsu enables participants to generate or co-create new ideas at their ease.

* Hackathon is an coined word ("Hack" plus "Marathon"), and means design sprint-like event in which several teams, including (internal and/or external) application service engineers, project managers, experts or students, collaborate intensively on given theme for a short term (typically, from one day to one week).

- Outcome of the Hackathon is full of unique and excellent ideas to attract customers. Securing the created IP in a timely manner, enables swift launch of the outcome to the agile business prototyping.

Delivery to customers

Patent Filing
Risk Hedge

Creating Ideas

Participation Agreement

Prototyping

Outcome presentation

Case④:Open Licensing

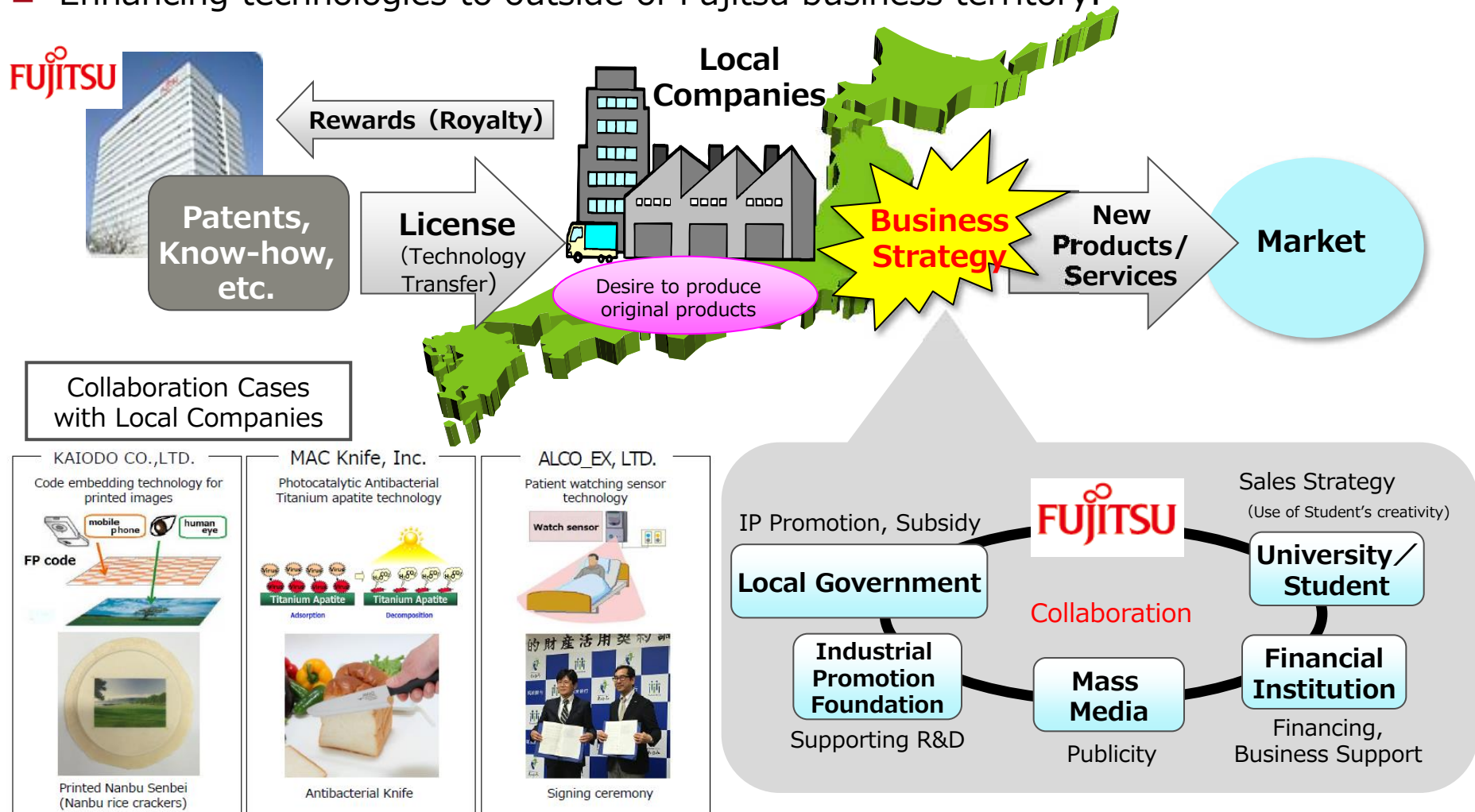- Community contribution to create new business utilizing Fujitsu IP
- Collaborate with local governments or financial institutions. Promote to produce new products or services.
- Enhancing technologies to outside of Fujitsu business territory.

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Rewards（Royalty）

Patents, Know-how, etc.

License
(Technology Transfer)

Local Companies

Desire to produce original products

Business Strategy

New Products/ Services

Market

Collaboration Cases with Local Companies

KAIODO CO.,LTD.
Code embedding technology for printed images
mobile phone → human eye
FP code
Printed Nanbu Senbei (Nanbu rice crackers)

MAC Knife, Inc.
Photocatalytic Antibacterial Titanium apatite technology
Virus
Titanium Apatite — Adsorption
Titanium Apatite — Decomposition
Antibacterial Knife

ALCO_EX, LTD.
Patient watching sensor technology
Watch sensor
Signing ceremony

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Sales Strategy
(Use of Student's creativity)

IP Promotion, Subsidy

Local Government

Collaboration

University／Student

Industrial Promotion Foundation
Supporting R&D

Mass Media
Publicity

Financial Institution
Financing, Business Support

Case⑤ : Standardization Activities

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■ Standardization of Key Technologies for "Connected Services"

IoT

IIC (Industrial Internet Consortium) activities to build eco system (2014〜)	SEPs and strategic patent filing on 3GPP LTE/LTE-Advanced/Advanced Pro (2010〜)	Standardization activities for 5G (2016〜)

Web of Things standardization activities (2015〜)

Knowledge Integration

AI

Cloud

Big Data

IoT

Data

Value Proposition

Customer

Cloud

Full contribution to issue a guideline for improving DC (Data Center) environment performance（2015〜2017）

OpenStack activities for enhancing Fujitsu specs.（2013〜）

Security

Activities to establish a security platform for connected vehicle (2003〜)	Standardization activities for biometric authentication (2002〜)

Case⑥:Collaboration with International Framework for Co-Creation

■ Partnership with WIPO GREEN in September, 2017

Enhancement of Fujitsu Technologies

WIPO | GREEN
The Marketplace for Sustainable Technology

Partnership

Collaboration with Global Companies

Co-Creation with Global Companies toward SDGs goal

SUSTAINABLE DEVELOPMENT GOALS
17 GOALS TO TRANSFORM OUR WORLD

200 patents (HEMT AC adapter, etc.) registered to WIPO Green
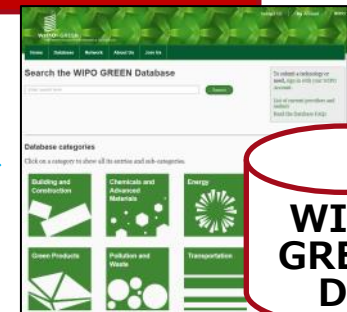
WIPO GREEN DB

WIPO GREEN provides world wide DB for entry of technologies and needs, and holds matching events supported by government institutions.