

Strengths and Prospects of Fujitsu's System Integration Business in Japan

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Kazuo Miyata, Senior Fellow,
Digital Transformation Business Group,
Fujitsu Limited

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Presentation Outline



1. Demand-Supply Balance in Japan's IT Business: Demand > Supply

2. Status of Fujitsu's System Integration Business: Experiencing Solid Growth

3. Strengths of Fujitsu's System Integration Business: High Expectations from Customers

4. Future Prospects: Growth through Dual Strengths

Demand-Supply Balance in Japan's IT Business

From "IT Personnel White
Paper 2018," Information-
Technology Promotion Agency
(IPA)

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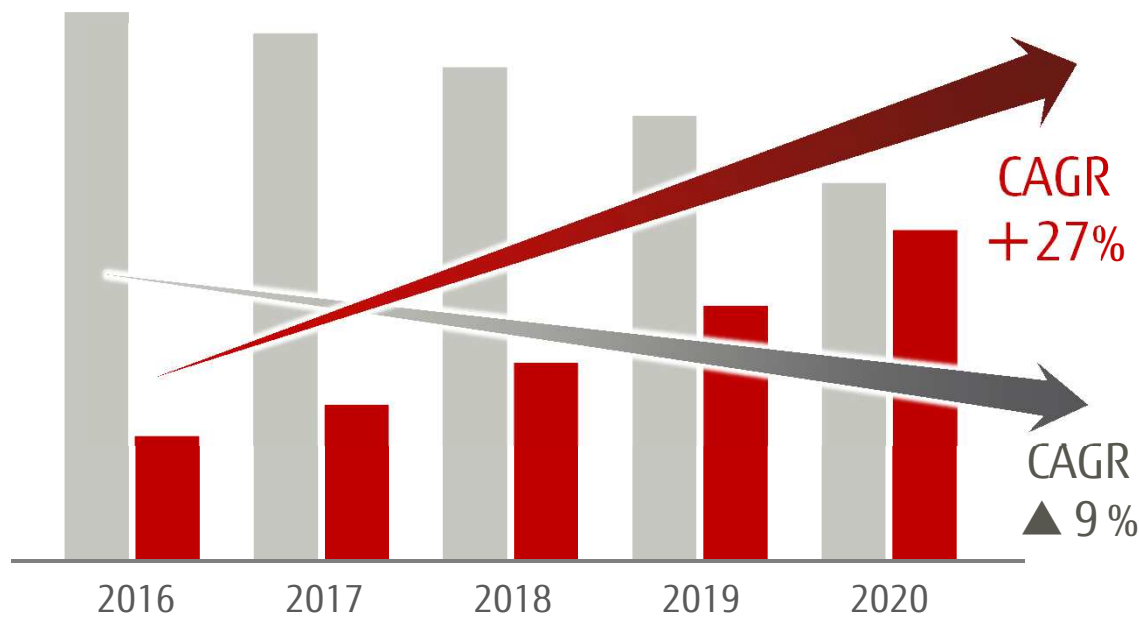
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In Addition to Existing Market, a Growing Digital Market



■ Scale of legacy IT business is still quite large in Japan's IT services market



■ 3rd Platform

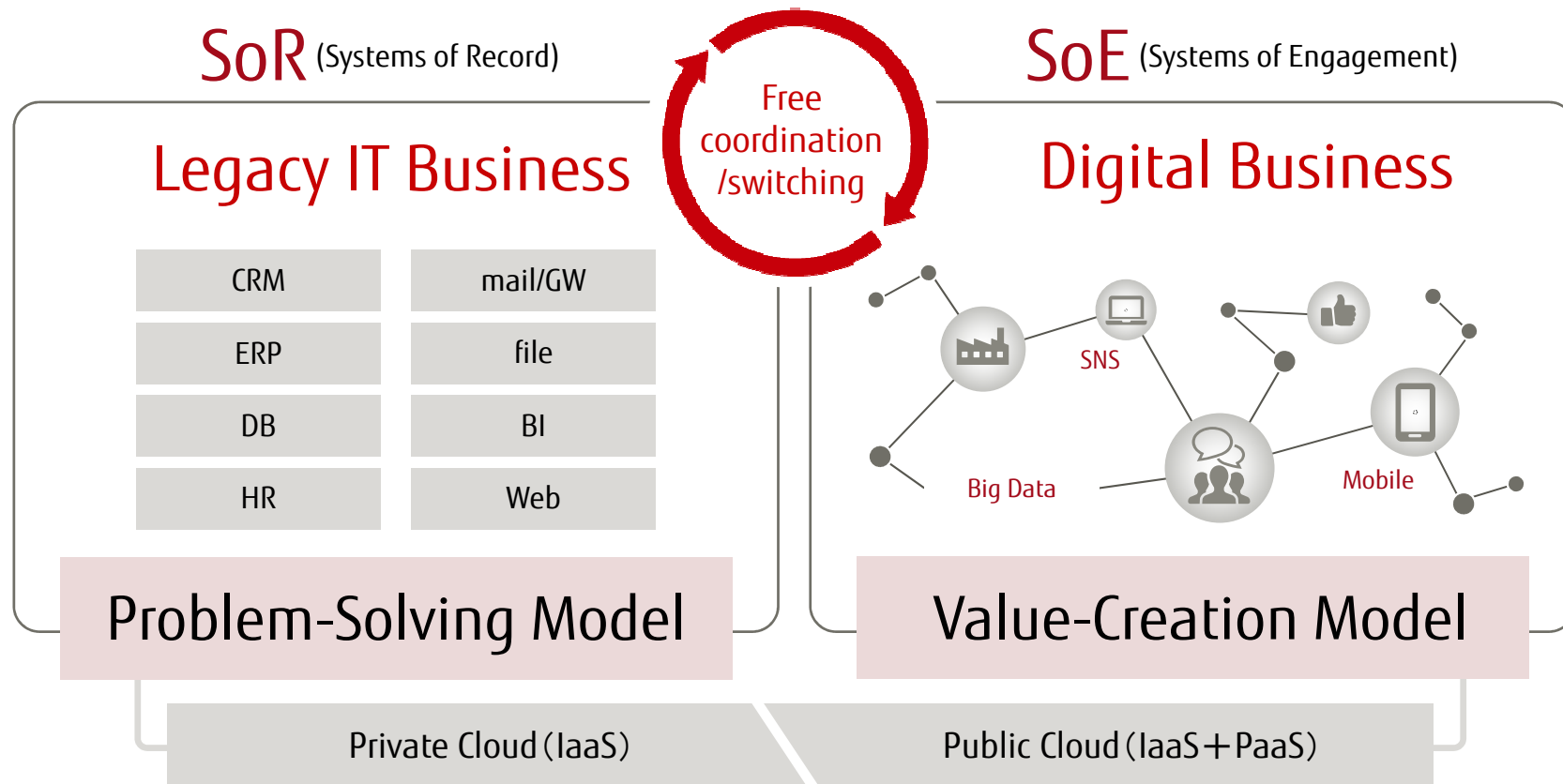
Projected CAGR is high, but FY2017 revenue was just 30% of legacy IT services business

■ 2nd Platform

CAGR projected to decline, but decline across the market from FY2016 to FY2017 was 4%

Source: IDC Blackbook 3rd Platform Edition_Forecast_2017H1_V1.2

Information Systems in the Era of Digital Business



Seeing Macro Demand and Supply in "IT Personnel White Paper 2018"



■ Annual survey of IT companies and companies using IT

Classification of IT business/IT operations based on differences in features

IT business of IT companies

Problem-Solving Model	With the objective of user companies being to increase efficiencies and reduce costs in their legacy business, their IT usage/requirement definitions are clear, and development is primarily through the Waterfall method, with an emphasis on reliability
Value-Creation Model	With the objective of user companies being value creation in their business, their IT usage/requirement definitions are uncertain, and development is primarily through the Agile method, with an emphasis on speed

IT operations of user companies

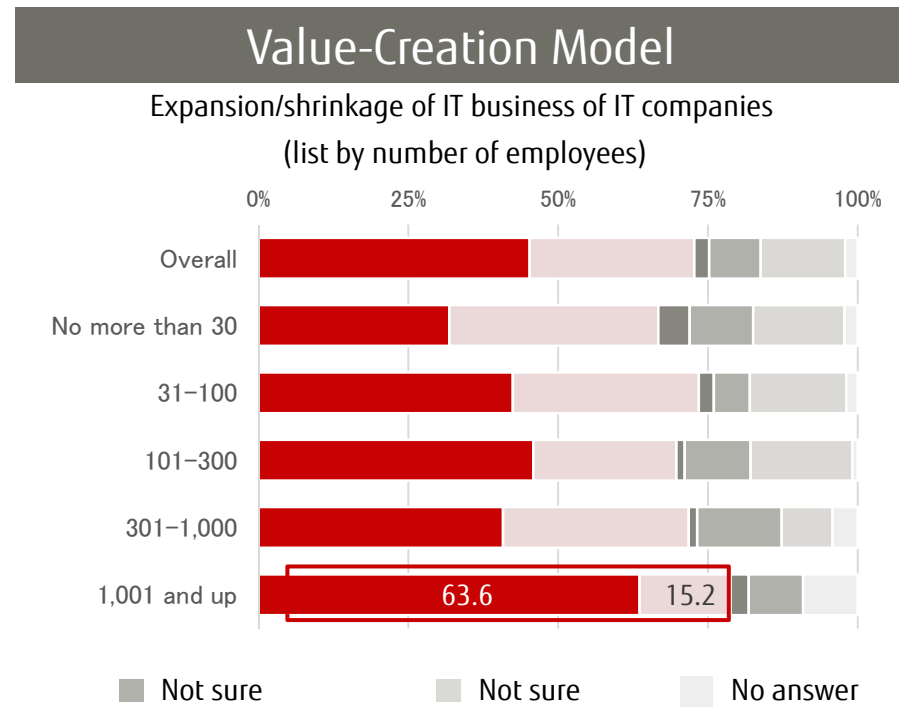
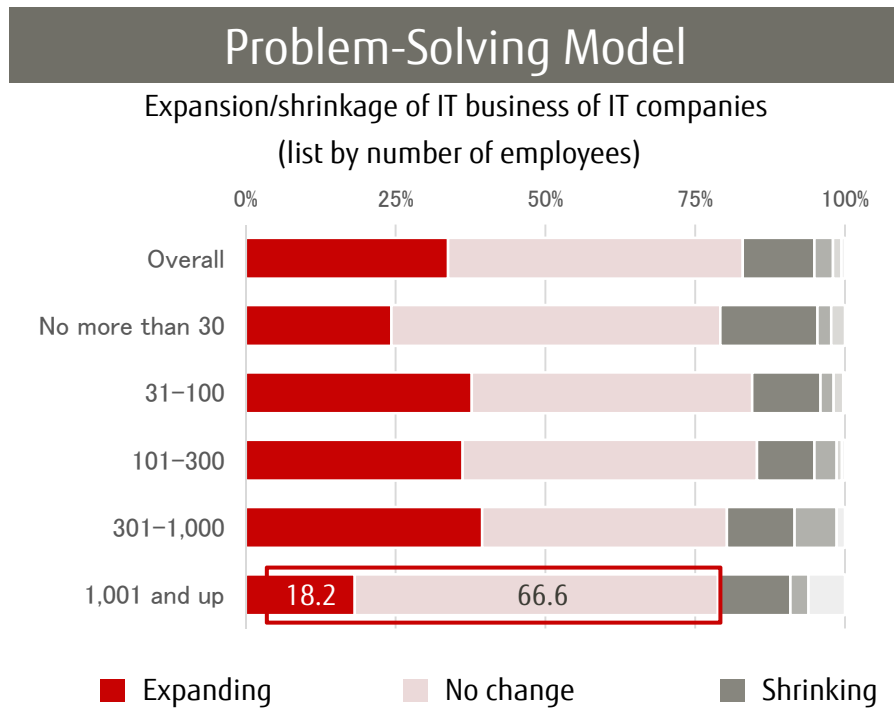
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Source: Fujitsu, based on "IT Personnel White Paper 2018," IPA

Scale of IT Companies' IT Business is Expanding



- In addition to the value-creation model, **problem-solving model business is also expanding**

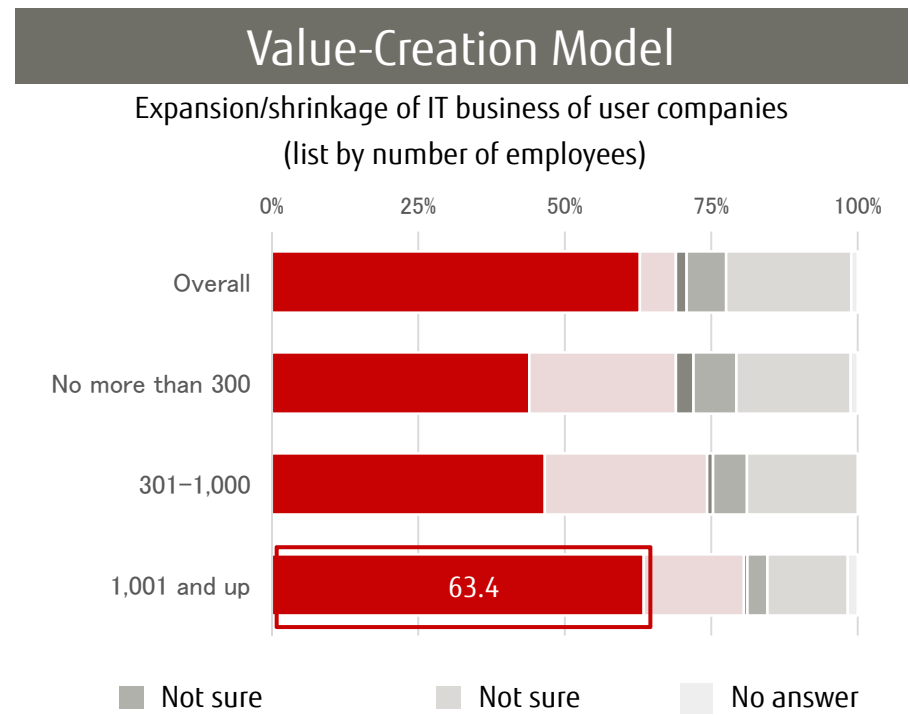
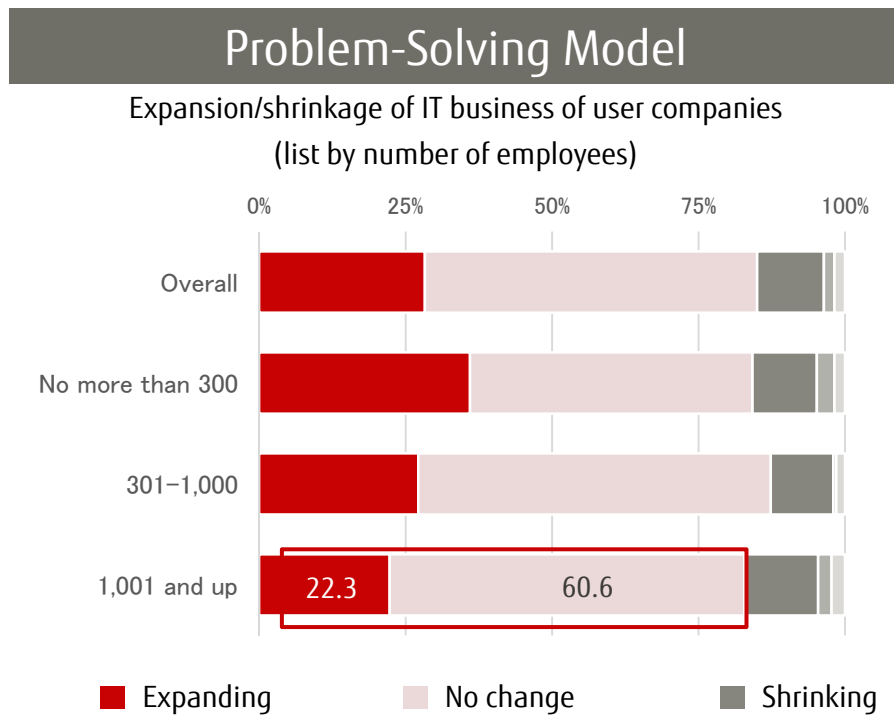


Source: Fujitsu, based on "IT Personnel White Paper 2018," IPA

Scale of **User Companies'** IT Business is also Expanding



- Along with value-creation model, **problem-solving model business is also expanding**

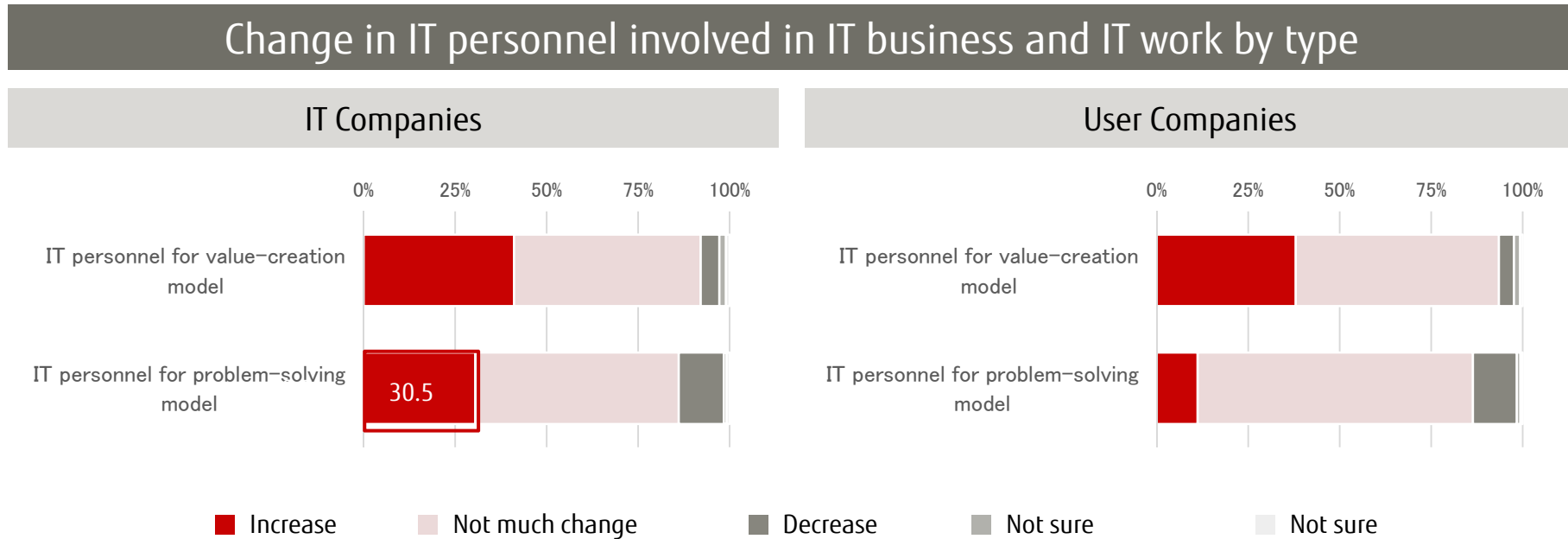


Source: Fujitsu, based on "IT Personnel White Paper 2018," IPA

Both IT Companies and User Companies are Increasing their IT Personnel



- Along with increase in personnel for value-creation model, IT company personnel for **problem-solving model** are increasing by 30.5%

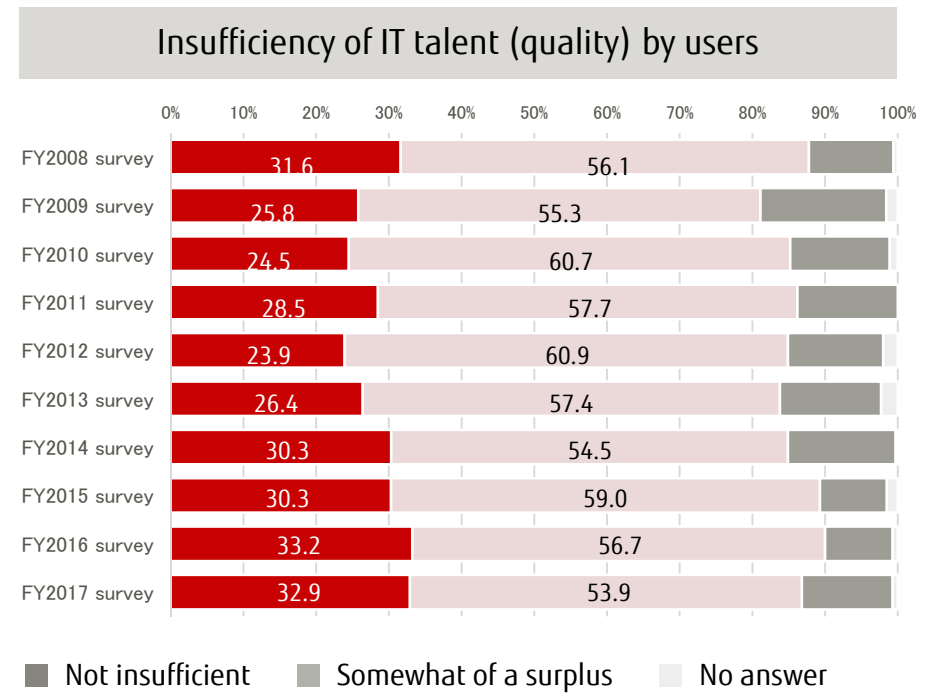
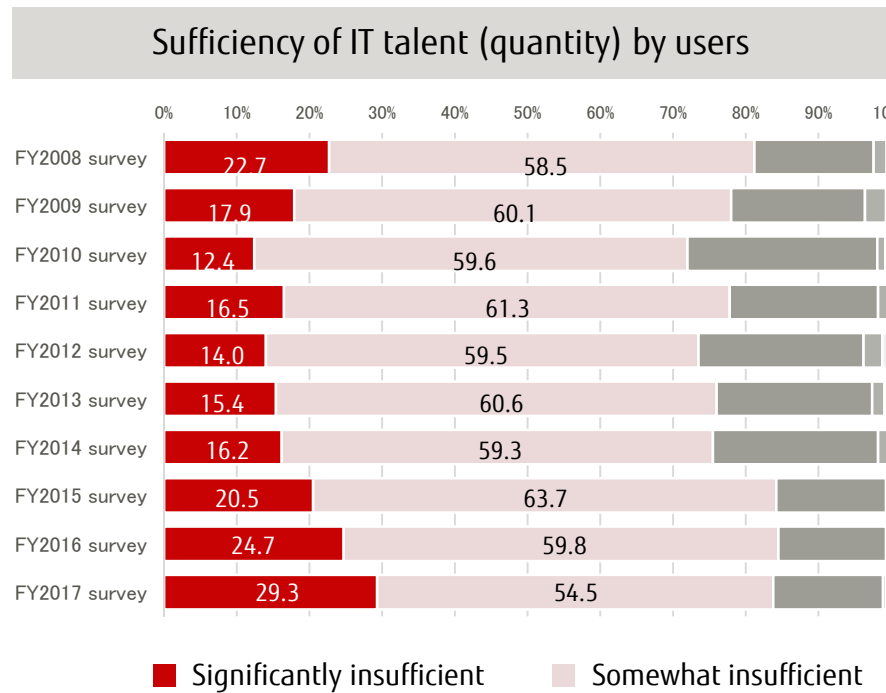


Source: Fujitsu, based on "IT Personnel White Paper 2018," IPA

User Companies' Growing Sense of Insufficient IT Talent, Both in Quality and Quantity



■ Growing sense of insufficiency, both in quality and quantity, over past 10 years



Source: Fujitsu, based on "IT Personnel White Paper 2018," IPA

Status of Fujitsu's System Integration Business

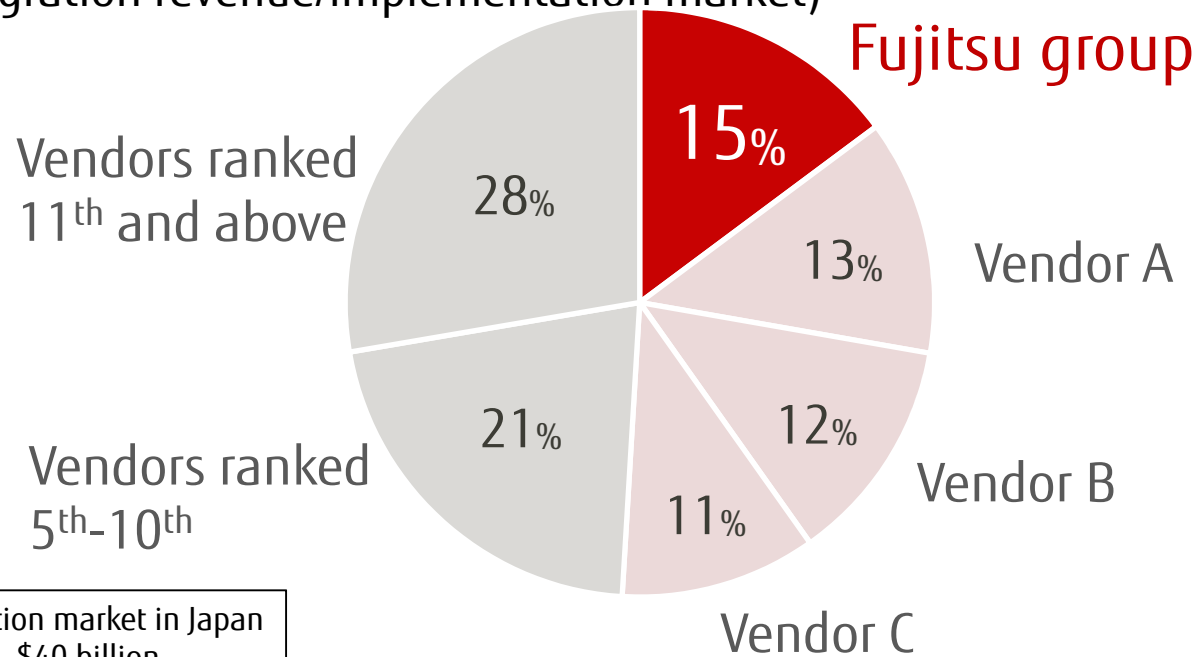


Fujitsu has Top Share of System Integration Market in Japan



■ Vendor shares of system integration market in Japan in 2017

(System integration revenue/implementation market)



Scale of implementation market in Japan
2017: Approx. \$40 billion

Diagram by Fujitsu based on Gartner research
Source: Gartner, "Market Share: IT Services, 2017," 11 June, 2018

In Japan, System Integration Market is Main Component, Where Fujitsu is Especially Strong



■ 2017: Composition of system integration business in WW/Japan markets and in Fujitsu's ICT Services business

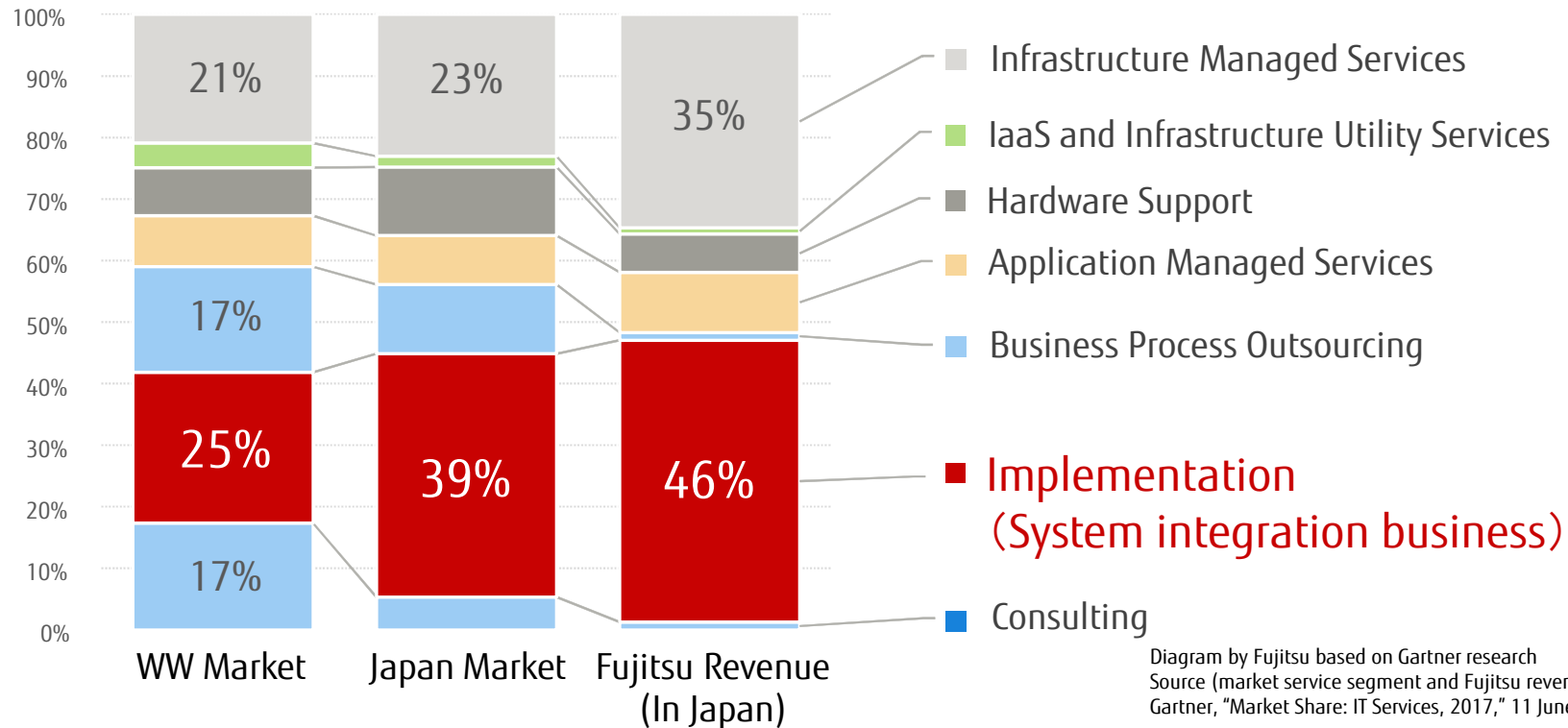


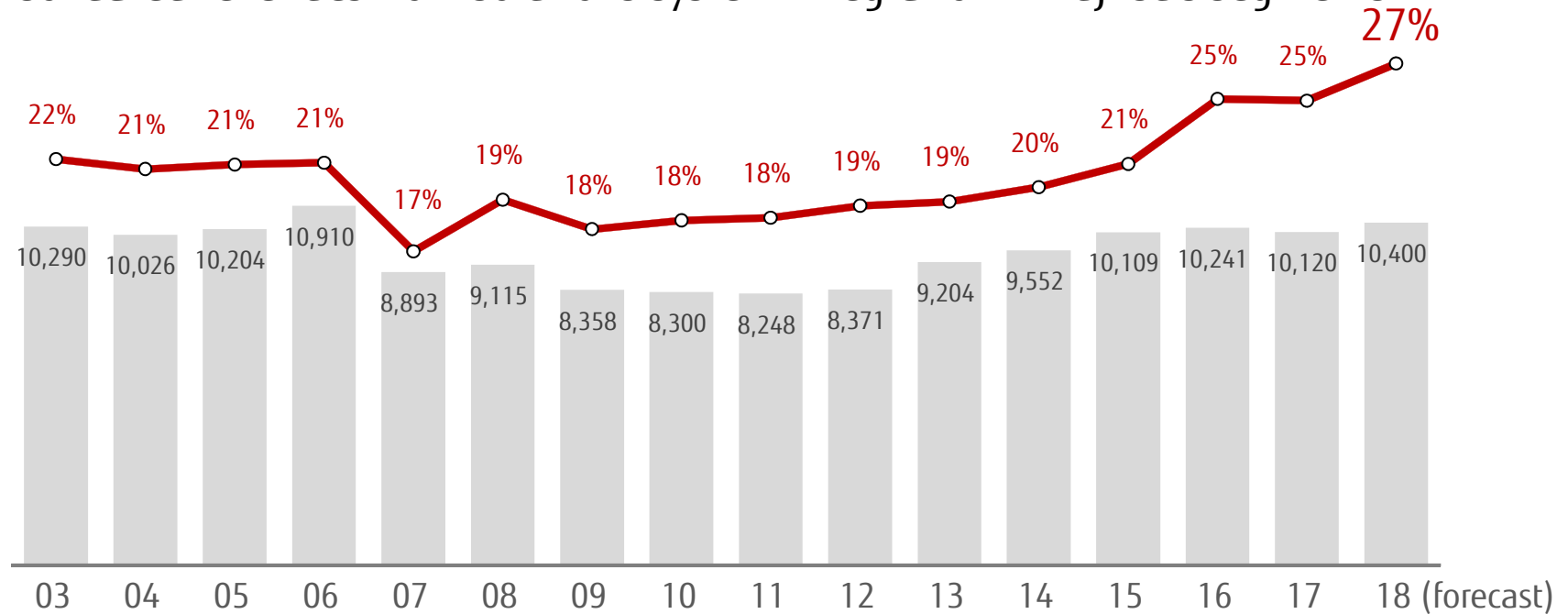
Diagram by Fujitsu based on Gartner research
 Source (market service segment and Fujitsu revenue breakdown):
 Gartner, "Market Share: IT Services, 2017," 11 June, 2018

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Solid Growth in Revenues from Solutions/System Integration



■ Consolidated revenues from solutions/system integration in Fujitsu's segments



Unit: Billions of yen

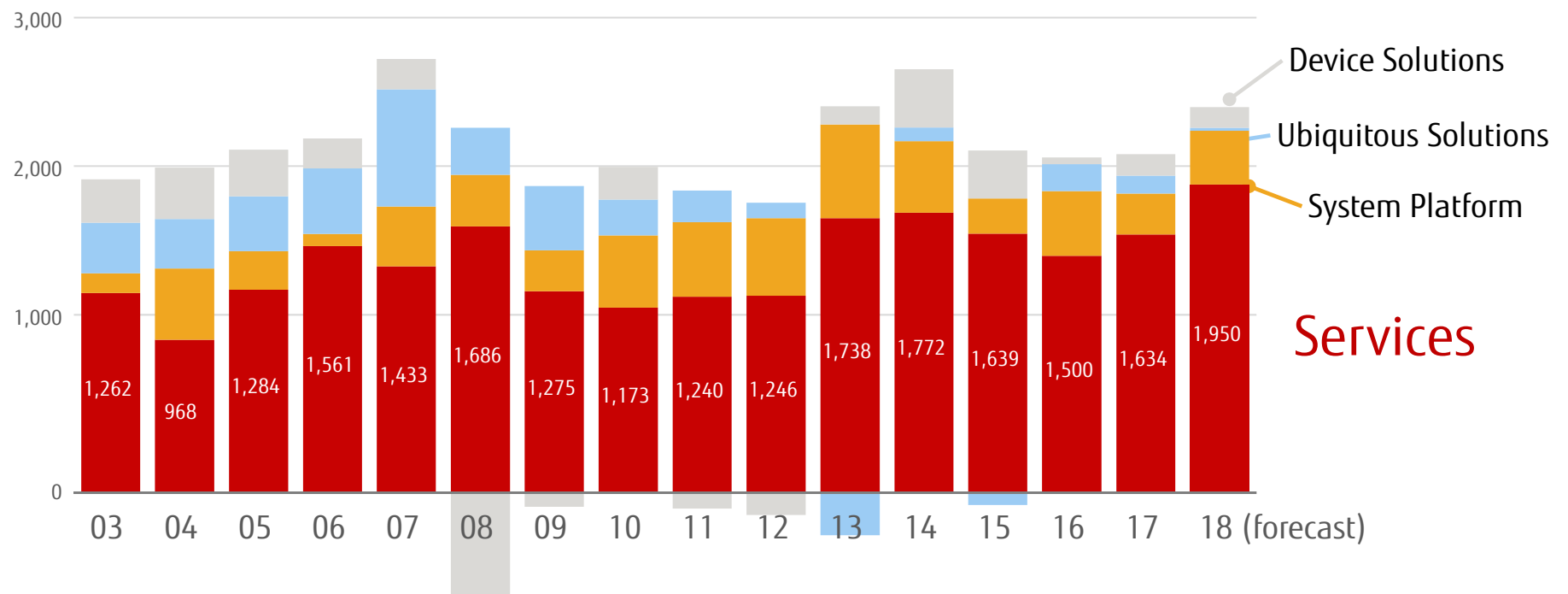
■ Revenues from solutions/system integration

○ Share of solutions/system integration in total revenues

Services Business Accounts for Most of Fujitsu's Operating Profit



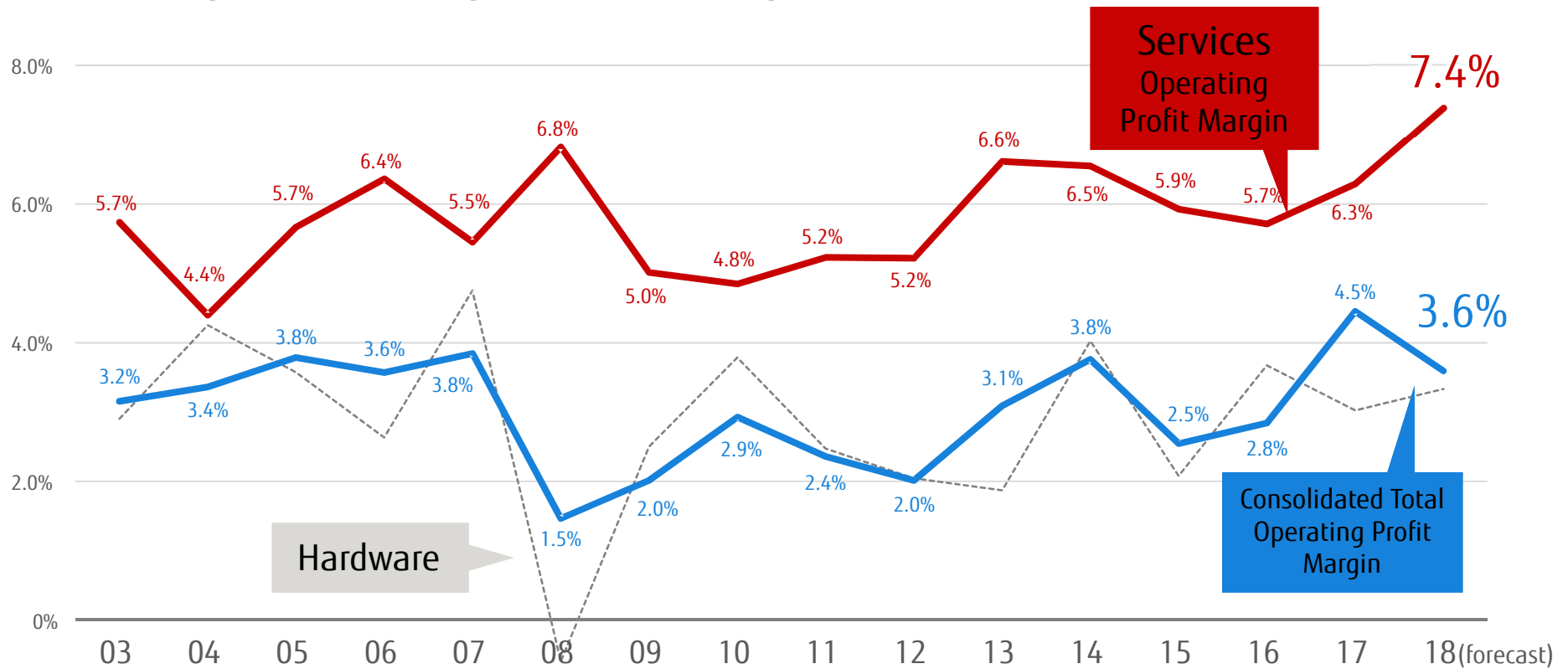
■ Revenues from solutions/system integration



Services

Unit: Billions of yen

In Services, Operating Expenses are being Absorbed, and Operating Profit Margins are Rising



Strengths of Fujitsu's System Integration Business

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Unique Features of Japan's Market



Inferior International Competitiveness of Japan's Software Industry



■ Significant widening of the trade deficit in software over past 10 years

(Contributed by Professor Yoshifumi Nakata, Doshisha University, SEC Journal, Vol 13, No. 4, March 2018)

(Millions of dollars)

	2007	2016	% Change from 2007 to 2016
Imports	856	1,459	70%
Exports	620	447	-28%
Trade Balance	-236	-1,012	329%

Source: Bureau of Economic Analysis, U.S. Department of Commerce

Where Did Japan Go Wrong?

■ Europe

Approached software as a science

ITIL, structuring requirement specifications, reusing objects

■ US

Approached software as a business

Minimum quality and structure that can be sold is fine
Become de facto standard, control global business

■ Japan

Approached software as a manufacturing industry

Demand for excessive quality slowed development speed and costs are high, resulting in inability to make aggressive IT investments

Comparing different approaches to software



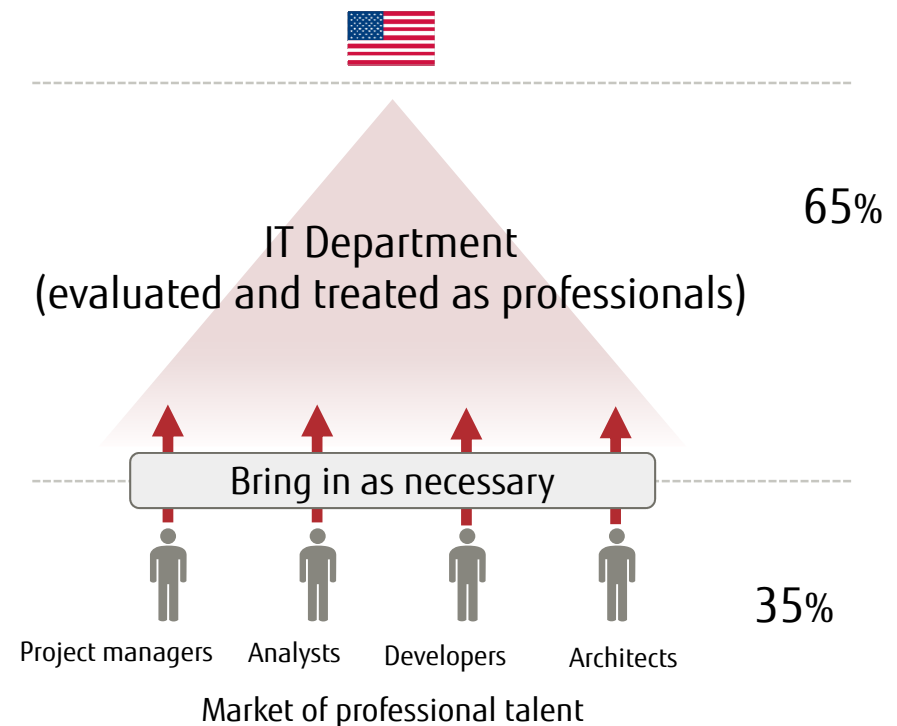
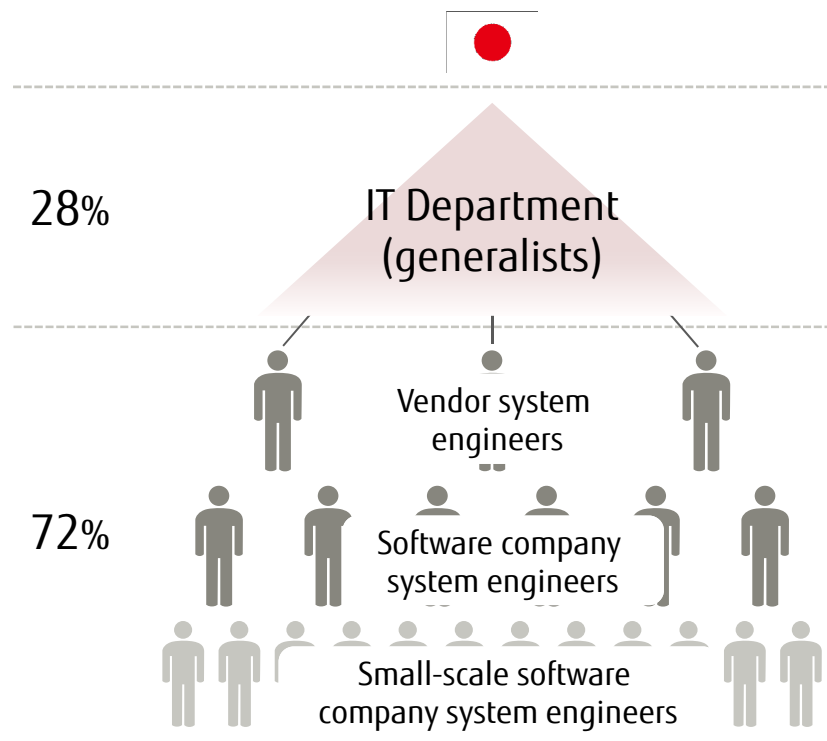
Abstracted from *The Business of Software*
by Michael A. Cusumano



Japan's Structural Problem



- Multilayered subcontracting model (Japan) vs made in-house model (US)



Analysis by Former Editor of Nikkei Computer



“Eyes of a Reporter: 45 Harms from IT Industry’s Approach to Selling Man-Hours per Month”
Part of series published in Nikkei Computer Itpro, July 24, 2015

- System integrators at top of a “hierarchical society”
- Foul play born from hotbed of **multilayered subcontracting structure**
- Young employees avoid Japan’s IT field
- Suffering from “boiling frog” syndrome, IT departments and IT vendors lack sense of urgency



Problems of Japan's Software Industry (Research Paper)



"The Japanese Software Industry: What Went Wrong and What Can We Learn from It?"

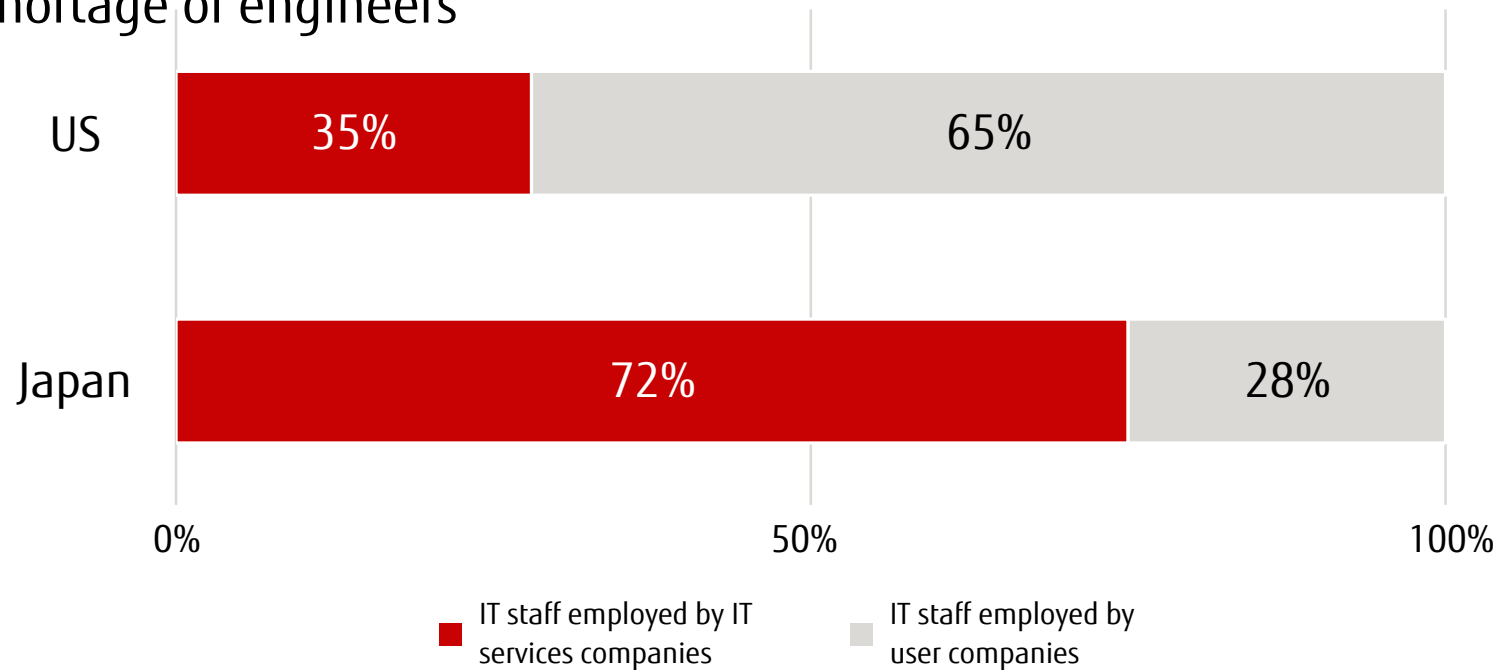
Professor Yoshifumi Nakata of Doshisha University Graduate School, UNIVERSITY OF CALIFORNIA, BERKELEY VOL. 57, NO. 1 FALL 2014

- Universities are not teaching state-of-the-art software methodologies
- Companies are not using iterative development approaches
- Instead of approaching IT strategically, managers view IT as a tool for raising efficiency and lowering costs; CIOs are not studying IT
- Many top managers of manufacturers have backgrounds in hardware and do not promote engineers who understand software
- There is a misunderstanding that confuses "high quality" with "innovation"

Unique Features of Japan's Market: Affiliations of IT Engineers



- It is difficult to develop software in Japan, particularly for customers, because of a shortage of engineers



Source: Fujitsu, based on "IT Personnel White Paper 2017," IPA

Unique Features of Japan's Market: Gap in Labor Mobility



- Japan unable to source IT talent in a timely manner



Source: For Japan, based on *Survey of Employment Trends* from the Ministry of Health, Labour and Welfare, and for the US, based on publicly disclosed materials from the Bureau of Labor Statistics, with reference to "Significantly Behind in Agile Initiatives," Nikkei SYSTEMS, August 2012, pp. 40-41.

Unique Features of Japan's Market: System Integration Model Unique to Japan



Multilayered subcontracting structure

To cope with fluctuations in demand for system development, created subcontracting structure analogous to structure used in the manufacturing industry. To cope with such fluctuations in the US and Europe, talent is sourced from a market of professionals.

Hollowing out of IT departments

(With reference to Reform Your IT Departments! by Shinji Hasejima, former CIO of Sony Corporation)

A core function that should have been kept in-house was completely outsourced. As a result, IT departments were hollowed out, raising dependence on outside help. In the US and Europe, core IT functions were kept in-house as a management tool.

Wonderful Custom-Made Systems that incorporate the unique demands of the front lines

Given the importance placed on the front lines, with a culture of continuous improvement, Japan continued to build high-cost internal systems from scratch, incorporating detailed demands of the front lines. In the US and Europe, because it is felt that the front lines are for workers, and because not much management value is placed on administrative work, global standard packaged systems were selected to keep costs down, with IT investments concentrated on market-facing initiatives.

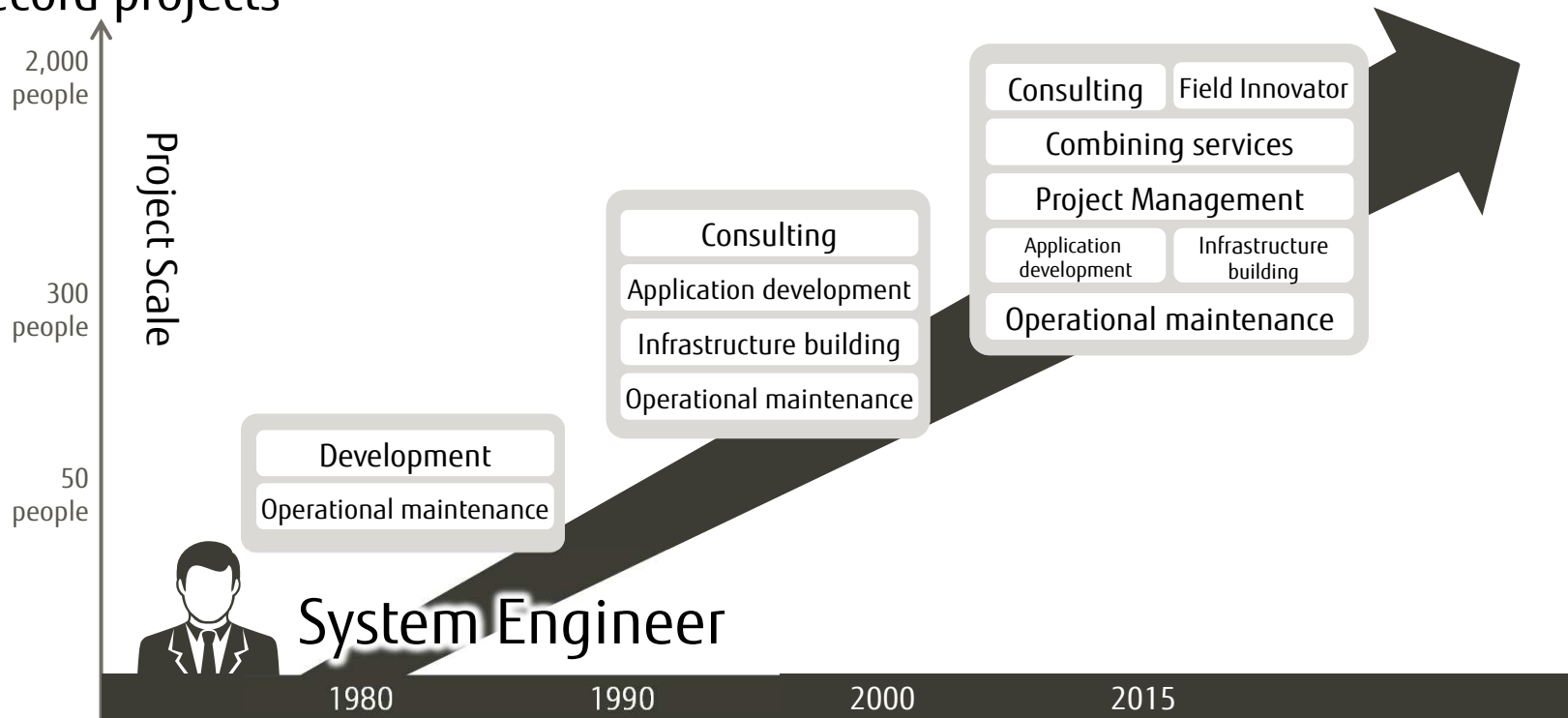
A low-angle, upward-looking photograph of several modern skyscrapers against a clear blue sky. The buildings are made of glass and steel, with some showing curved facades. The perspective creates a sense of height and scale.

Strengths of Fujitsu's System Integration Business

Thoughts Based on My Experience

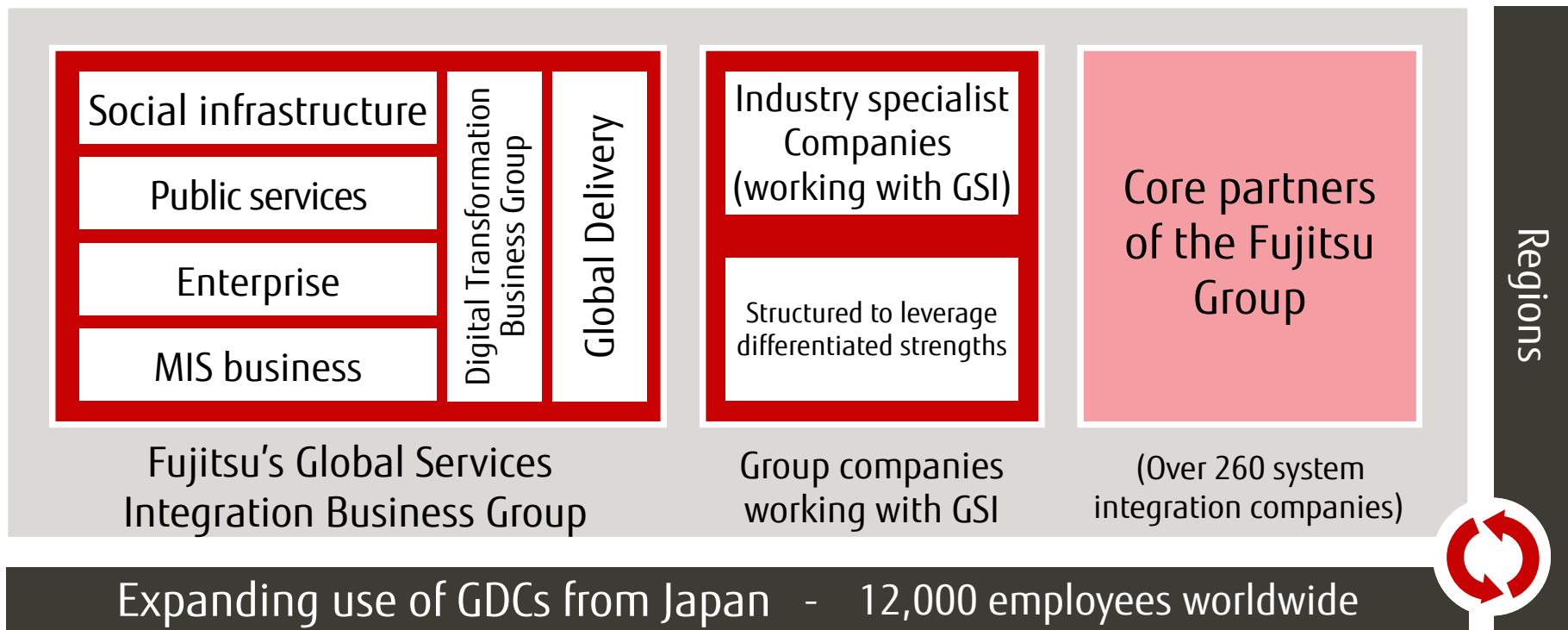


- Talent developed through the experience of working on many Systems of Record projects



① The Power of 100,000 System Engineers, Largest in Japan

- Seeking to further increase IT engineers in accordance with demand from customers



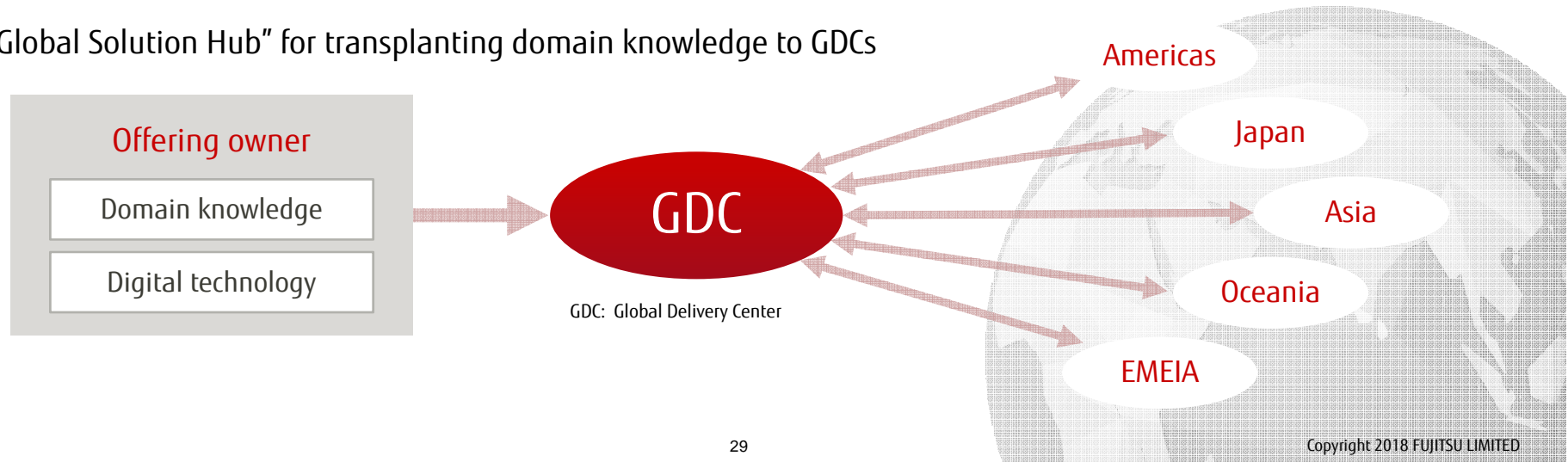
② Ability to Dispatch Talent for Large-Scale System Integration Projects



■ Comment from large global company:

“The Japanese company we had been working with has exited the system integration business. With the globalization of our business, we still have a significant demand for system integration work. We want Fujitsu to allocate its engineering resources more quickly to keep pace with our needs. In Japan, there is only Fujitsu for us.”

“Global Solution Hub” for transplanting domain knowledge to GDCs



③ The Complementary Relationship between Customers in Japan and System Integrators

■ Comment from a non-Japanese corporate provider of security services”

“We are a world-famous service provider, so why is it that, in Japan, we do not do direct sales?”

➡ It is because Japanese customers lack professionals who can talk about specialized technology matters. It is said that 90% of customers want to receive proposals through their system integrators.

■ Comment from non-Japanese packaged software vendor:

“I have been told that it is the system integrator’s job to fix bugs, so rather than creating a workaround, I want the bugs fixed!”

➡ Why do you correct bugs in the old version? Customers around the world prioritize new features, and have no interest in past bugs. Why can’t Fujitsu properly guide your customers?

Future Outlook

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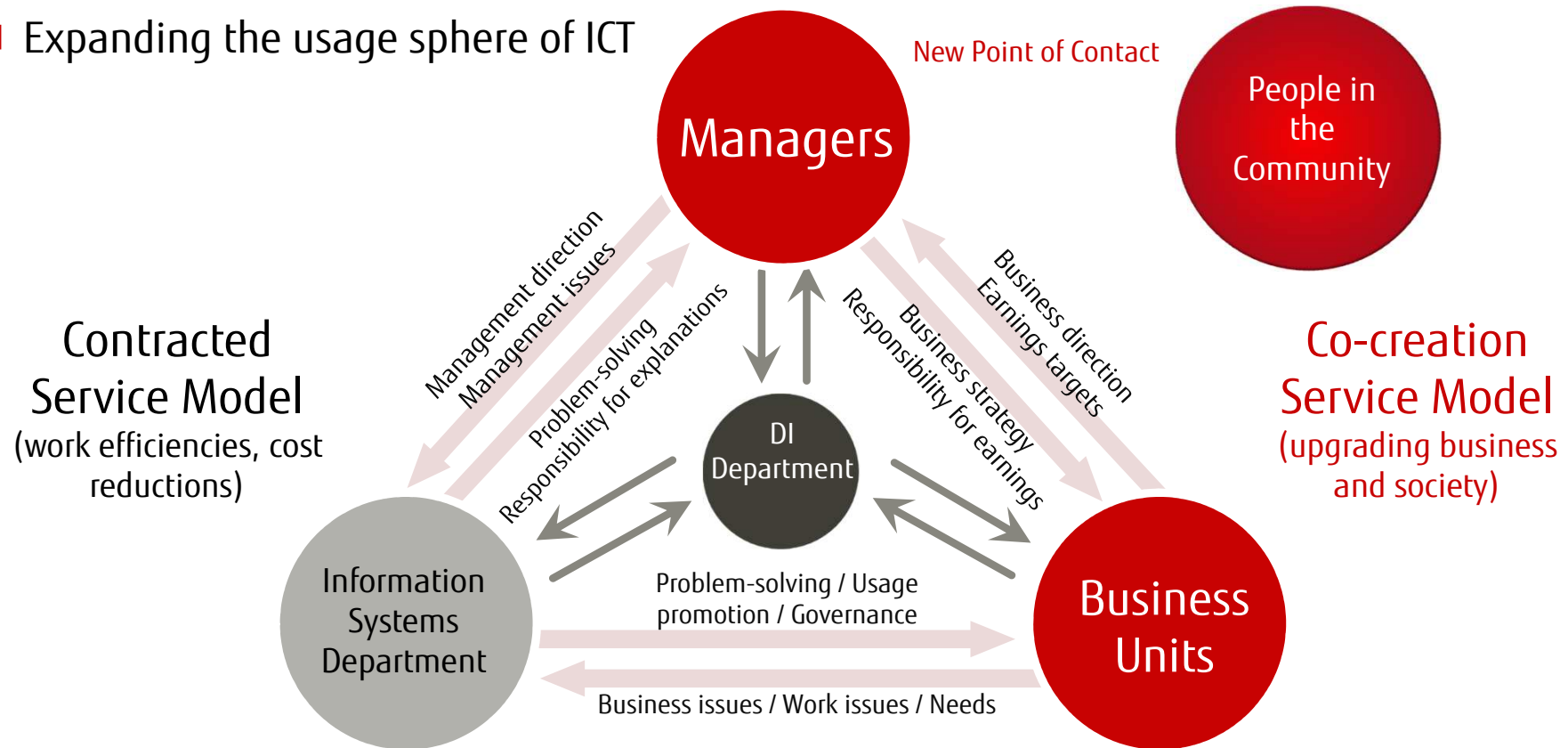
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New Point of Contact in the Digital Business Era



- Expanding the usage sphere of ICT



Source: Created based on materials from Mr. Satoshi Uchiyama of ITR

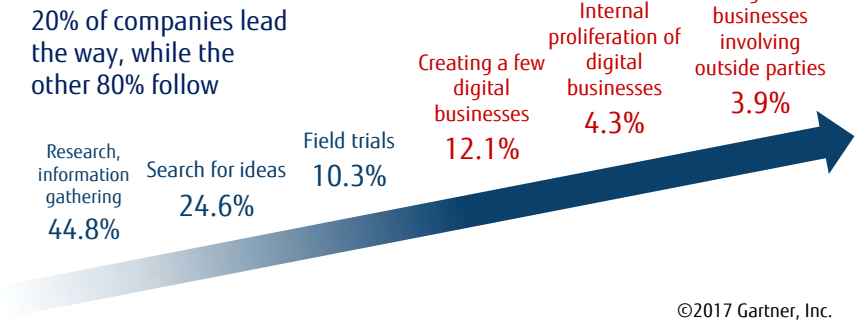
User Companies Worrying about Digital Initiatives



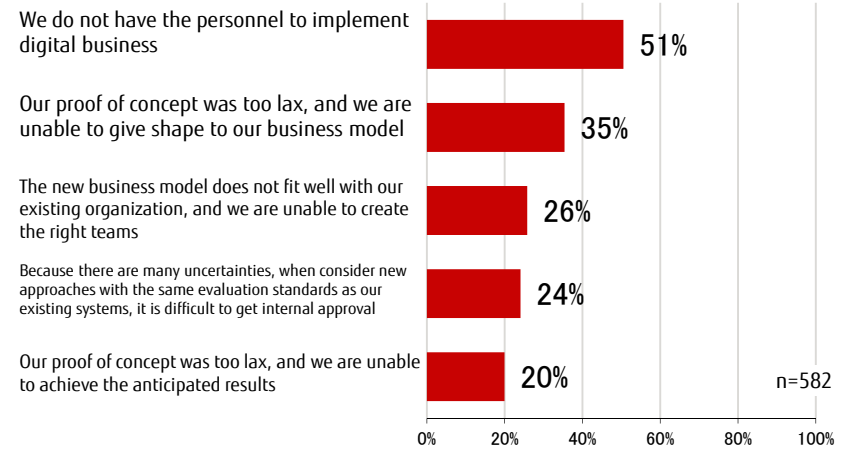
- While digital business initiatives are expanding, the problem is a lack of sufficient skills and expertise

Digital business initiatives by Japanese business *1

Approx. 70% are working on digital business initiatives



The top 5 points you anticipate having the most difficulty with in implementing digital business *2



Source: Gartner

*1. Digital Business: Progress and Challenges of Japanese Companies (2017) (Publication Date: 20 October 2017, ID Number: INF-17-150, M. Suzuki)

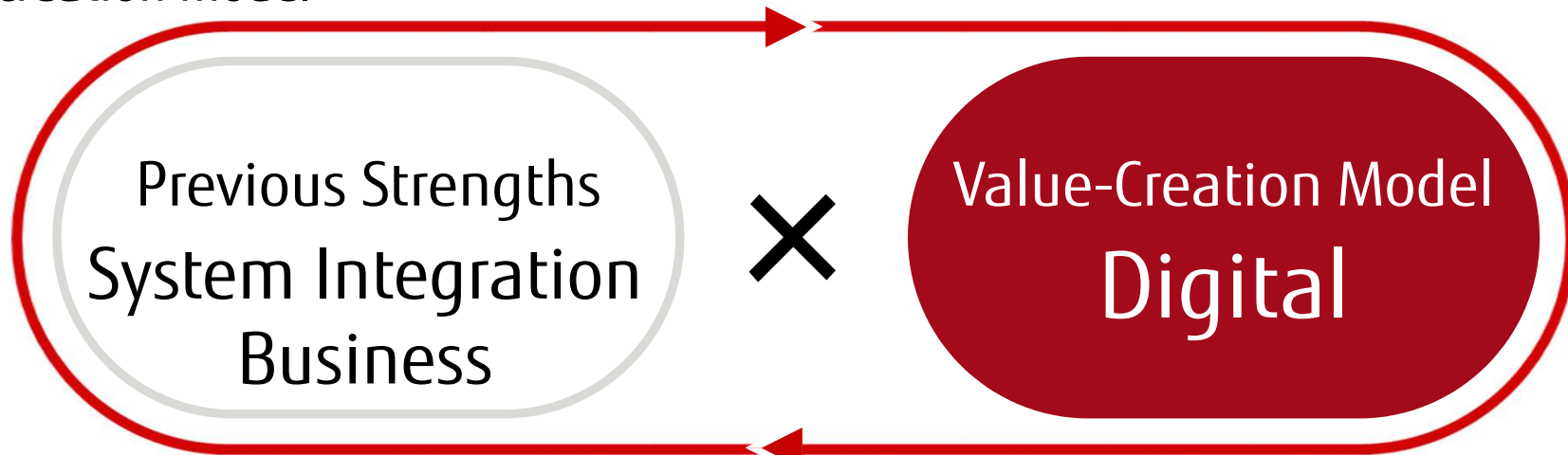
Sample: Among Japanese companies with 500 or more employees, the percentage with digital business initiatives (n=281)

*2. 2017 Second-Half Survey of IT Demand from User Companies: Part 3, IT Latest Trend (Publication Date: 23 February 2018, ID Number: ITD: DMLT-JA-FR-1702, R. Narisawa). Graph created by Fujitsu based on Gartner Research (n=582) using the top 5 responses from "Diagram 2-1-10: The points you anticipate having the most difficulty with in implementing digital business (more than one answer is acceptable)."

Expansion of Digital Business



- In addition to previous strengths, expanding the digital business “value-creation model”



FUJITSU Knowledge Integration

Hackathon Participants Getting Practical Experience



- Learning the process of generating innovation
- In addition to internal training, opening the sessions to customers and people in the community

During FY2015-2017, more than 3,000 total participants



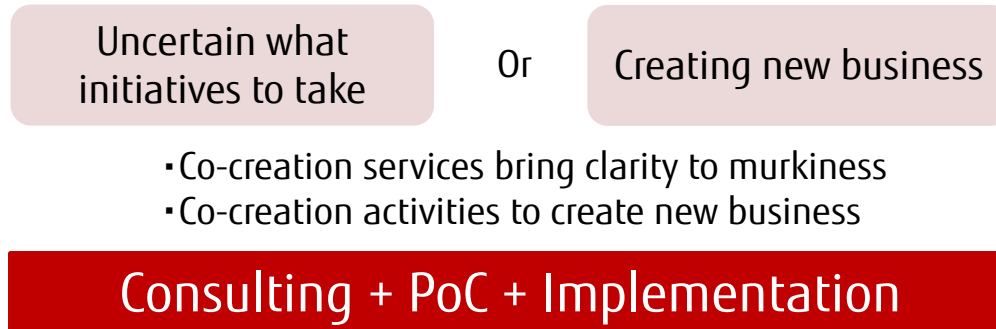
Digitization is a journey in which you seek your goal while searching



“Digital Journey”

Fujitsu advances in step with travelers on this journey

Two Approaches to Digital Business



Producing Business through Co-Creation



- Fostering the development of **digital innovators**



**Producers
(supervision)**

Generating innovation
and converting it to
business



**Designers
(proposals)**

Planning and proposing
ideas based on customer
needs



**Developers
(technology)**

Quickly bringing ideas
into reality

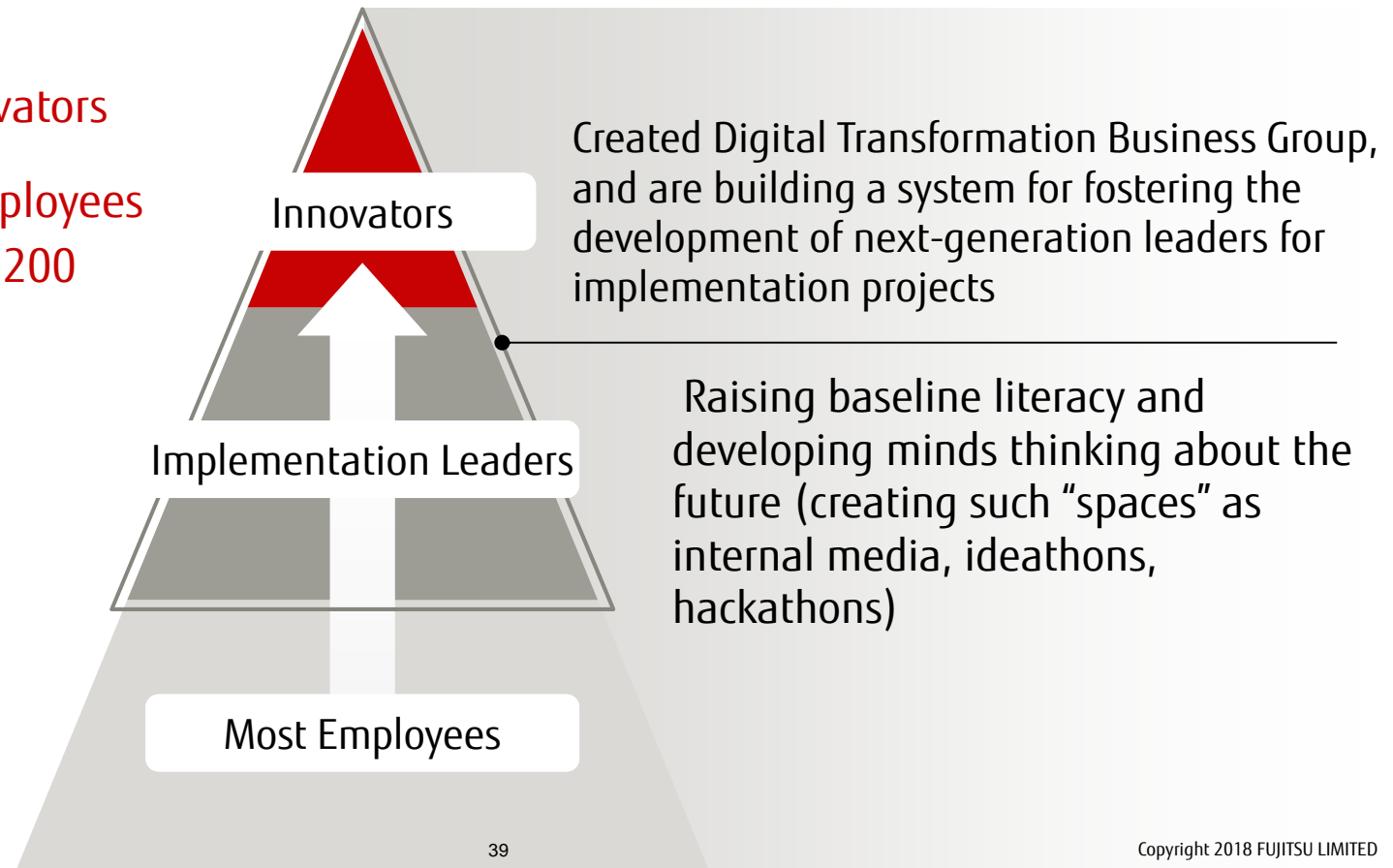
Starting to Develop Human Resources for Co-Creation

Including from the Sales Unit in fiscal 2018



Dier: Digital Innovators

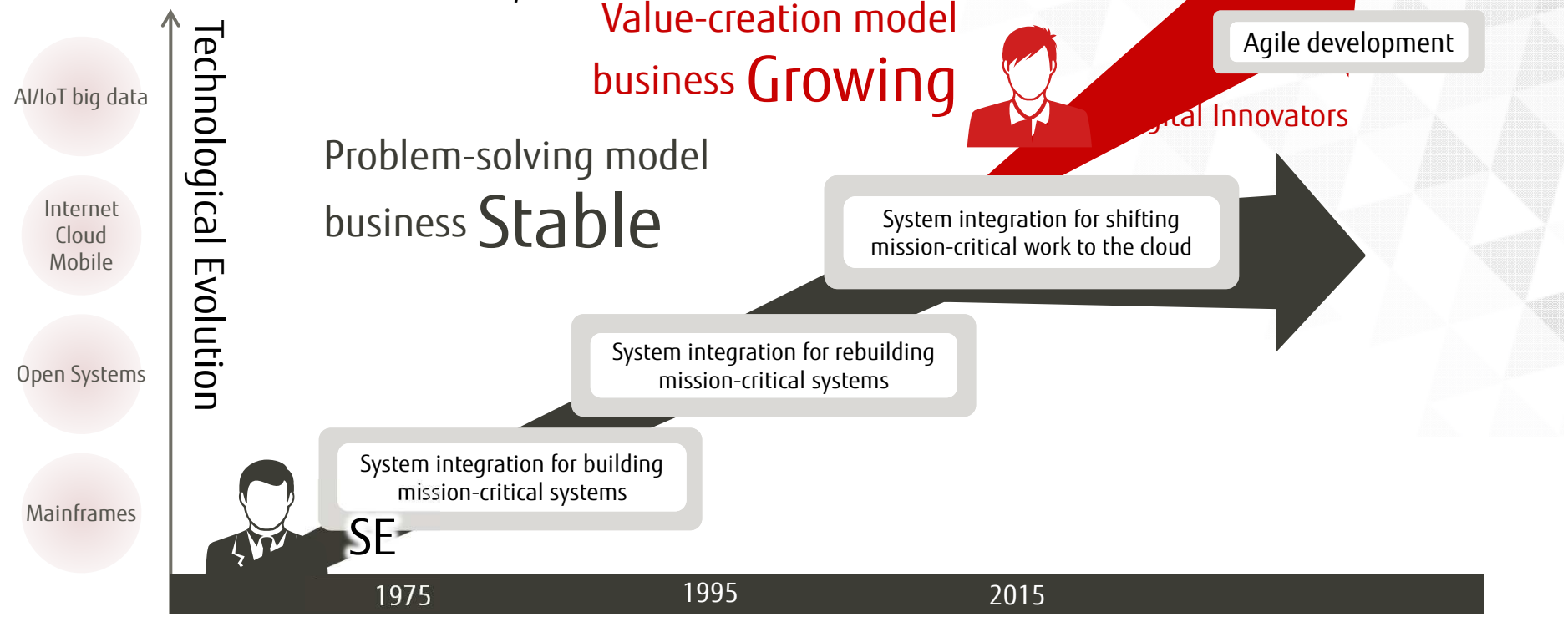
→ FY2017: 200 employees
In three years: 1,200 employees

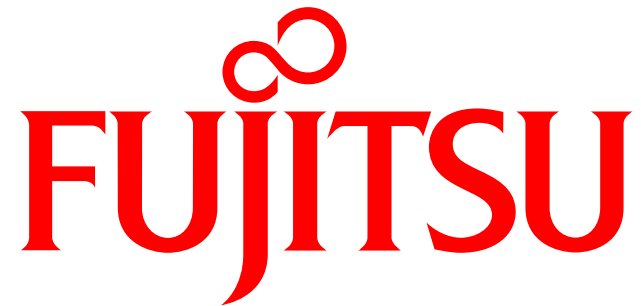


Starting to Allocate Human Resources to Advance in Step with Customers in the Digital Era



- In addition to problem-solving model, becoming Japan's top vendor in the value-creation model, too





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- Macro-economic environments and market trends in the principle geographic markets for Fujitsu's services and products, which are Japan, EMEA, the Americas, Asia, Oceania and elsewhere, particularly such conditions that may effect customers' IT spending;
 - Rapid technological change, fluctuations in customer demand and intensifying price competition in IT, telecommunications, and electronic device markets in which Fujitsu competes;
- Fujitsu's ability to dispose of non-core businesses and related assets through strategic alliances and sales on commercially reasonable terms, and the impact of losses which may result from such transactions;
 - Uncertainties as to Fujitsu's access to, or protection for, certain intellectual property rights;
 - Uncertainty as to the performance of Fujitsu's strategic business partners;
- Declines in the market prices of Japanese and foreign equity securities held by Fujitsu which could cause Fujitsu to recognize significant losses in the value of its holdings and require Fujitsu to make significant additional contributions to its pension funds in order to make up shortfalls in minimum reserve requirements resulting from such declines;
- Poor operating results, inability to obtain financing on commercially reasonable terms, insolvency or bankruptcy of Fujitsu's customers, or any such factor that could adversely impact or preclude these customers' ability to timely pay accounts receivables owed to Fujitsu; and
- Fluctuations in rates of exchange for the yen and other currencies in which Fujitsu makes significant sales and profits or in which Fujitsu's assets and liabilities are denominated, particularly between the yen and Euro, British pound and U.S. dollar.