

Expanding Software and Services for the Cloud Computing Era

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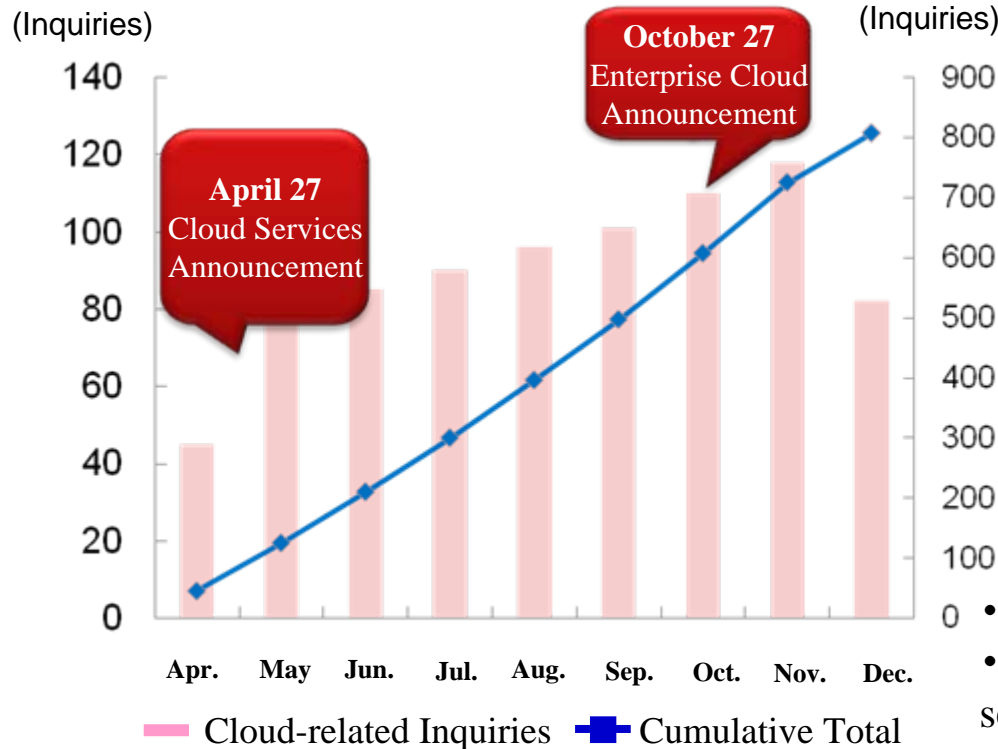


Cloud Computing Business Development Status and Market Forecast

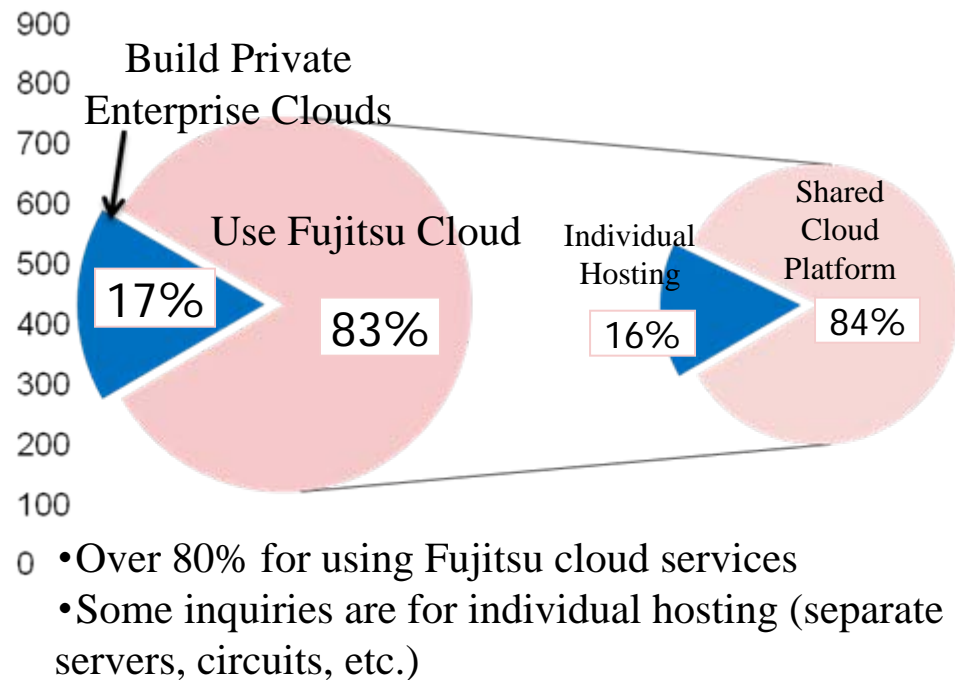
Cloud computing-related inquiries: 800+

- Announced cloud services in April, enterprise cloud development products in October
- Compared with inquiries related to using Fujitsu cloud services, slightly under 20% relate to building private enterprise clouds, but inquiries expected to grow

Cloud-related Business Inquiries (Apr-Dec)

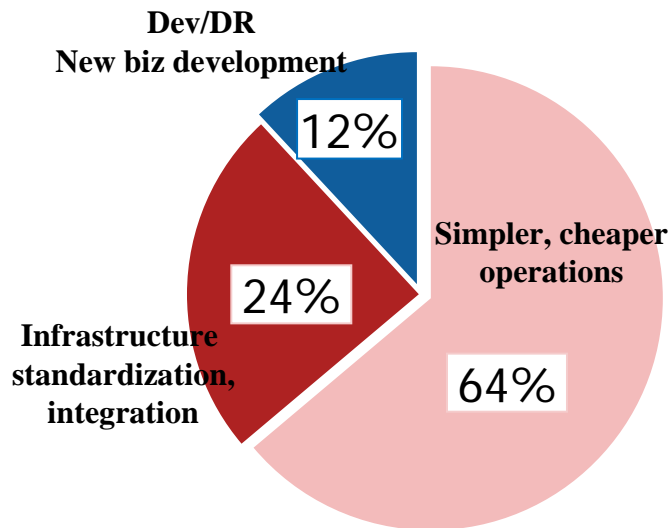


Trend ①: Using Fujitsu Cloud vs. Building Private Clouds



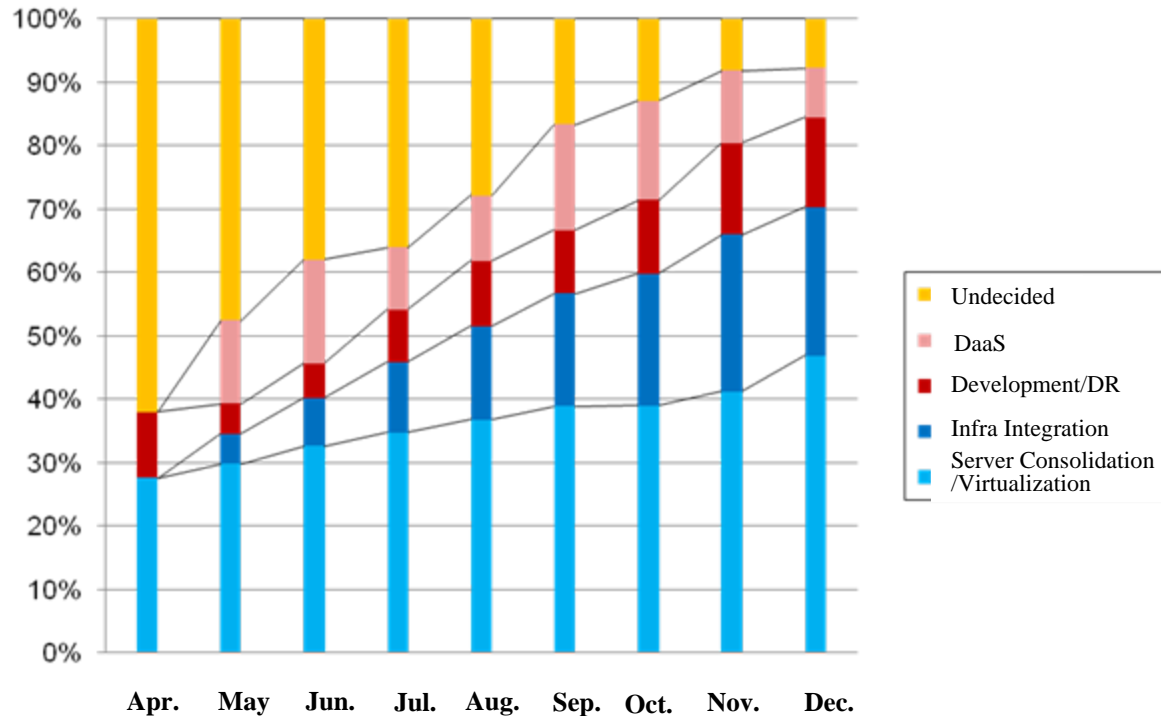
- Although most inquiries relate to server consolidation and virtualization for existing systems aimed at lowering costs, there has been a recent increase in inquiries for infrastructure integration and development/DR environments
- Previously, most customers were still considering how they would use cloud services, but now most have a specific use in mind

Trend ②: Purpose of Adoption



DR: Disaster Recovery

Trend ③: Usage Patterns

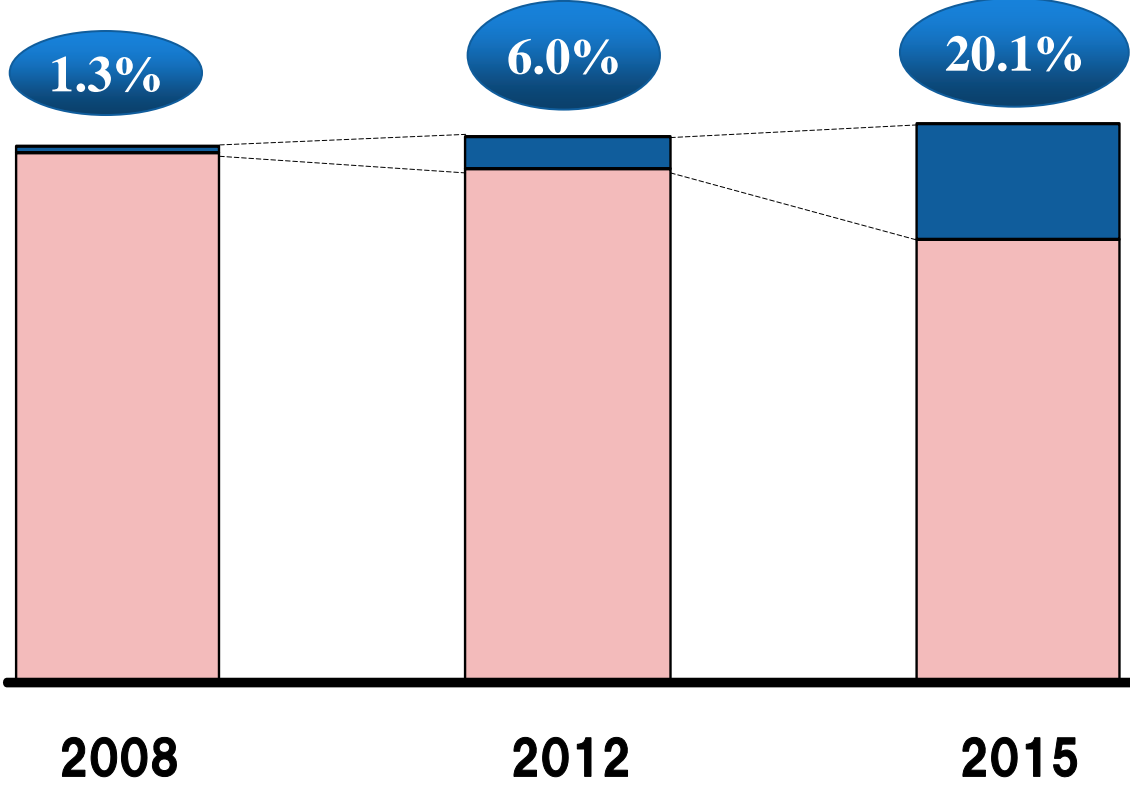


Projected Growth of Cloud Computing in Japan



- Market for cloud computing expected to grow by **16x** (2008⇒2015)
- Cloud computing expected to account for **20%** of IT market (2015)

Cloud computing as % of IT market

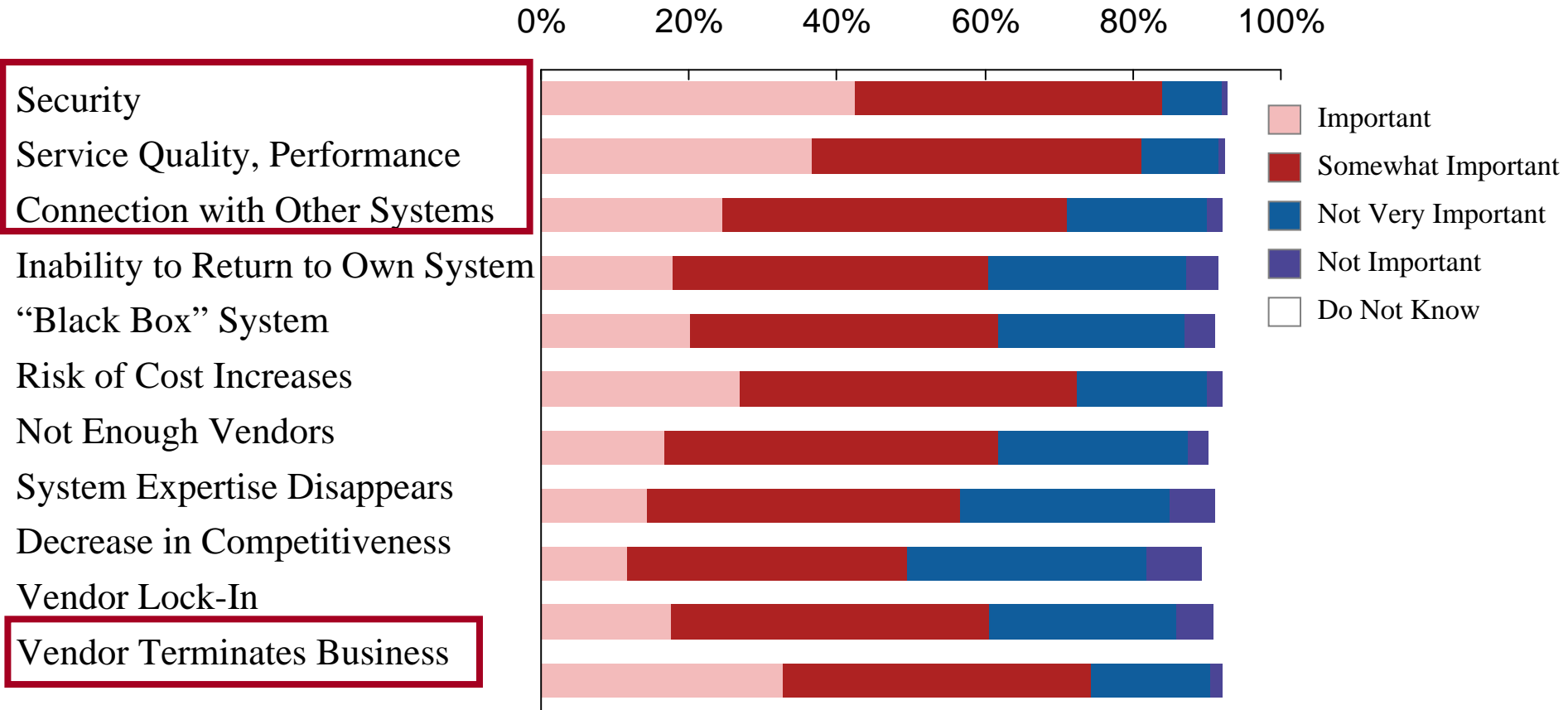


[Value basis]

※ On-premise: IT systems running within a company

Based on external research

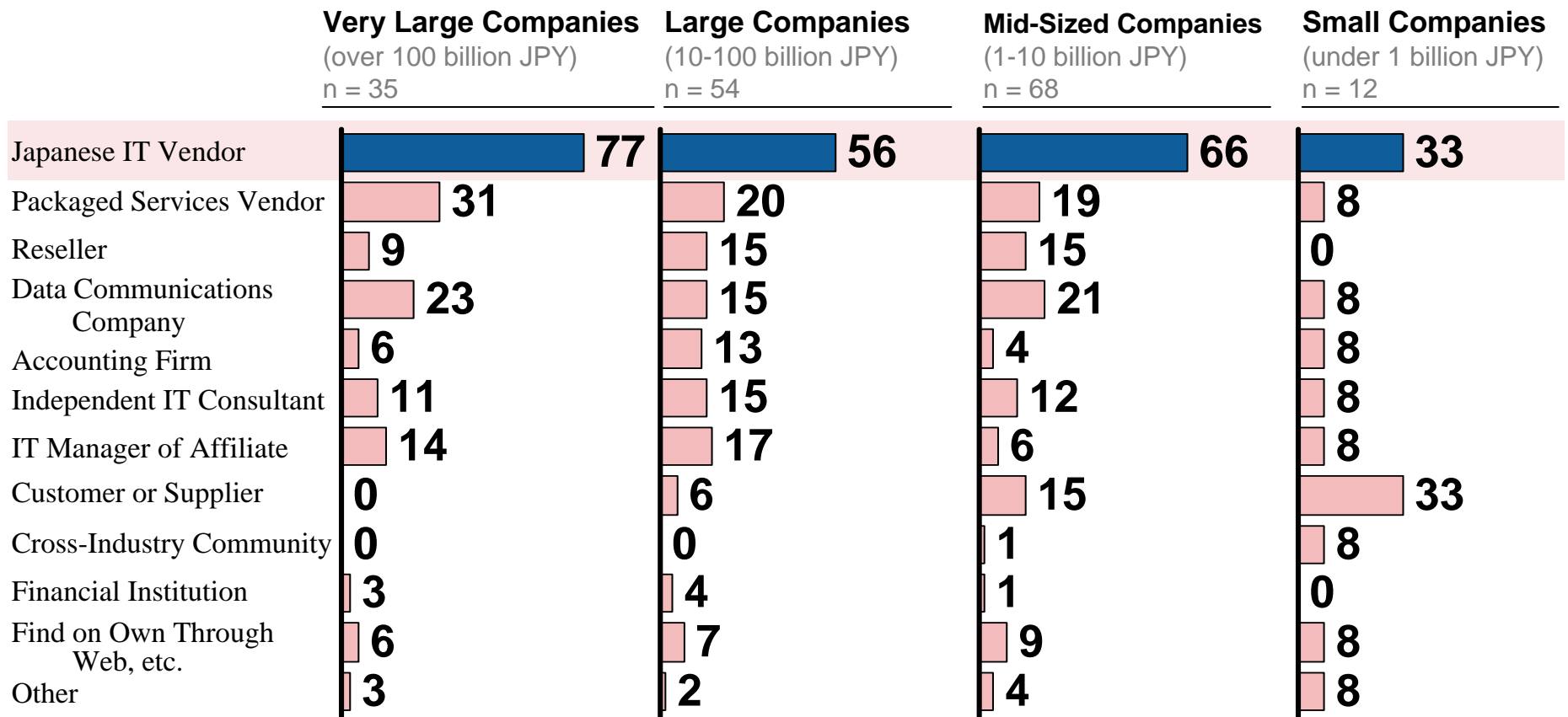
Concerns about security, service quality, connection with other systems and service continuity



From FRI web survey of 2,000 respondents from companies with over 100 employees (primarily from information systems departments). Conducted August 2009.

With regards to security, quality, data protection and other factors in deploying cloud systems, most customers in Japan want to deal with Japanese IT vendors

When deploying a cloud system, whom do you want to deal with?



(Outside survey conducted in September 2009)
Survey of 169 respondents (only those interested in shifting to cloud)

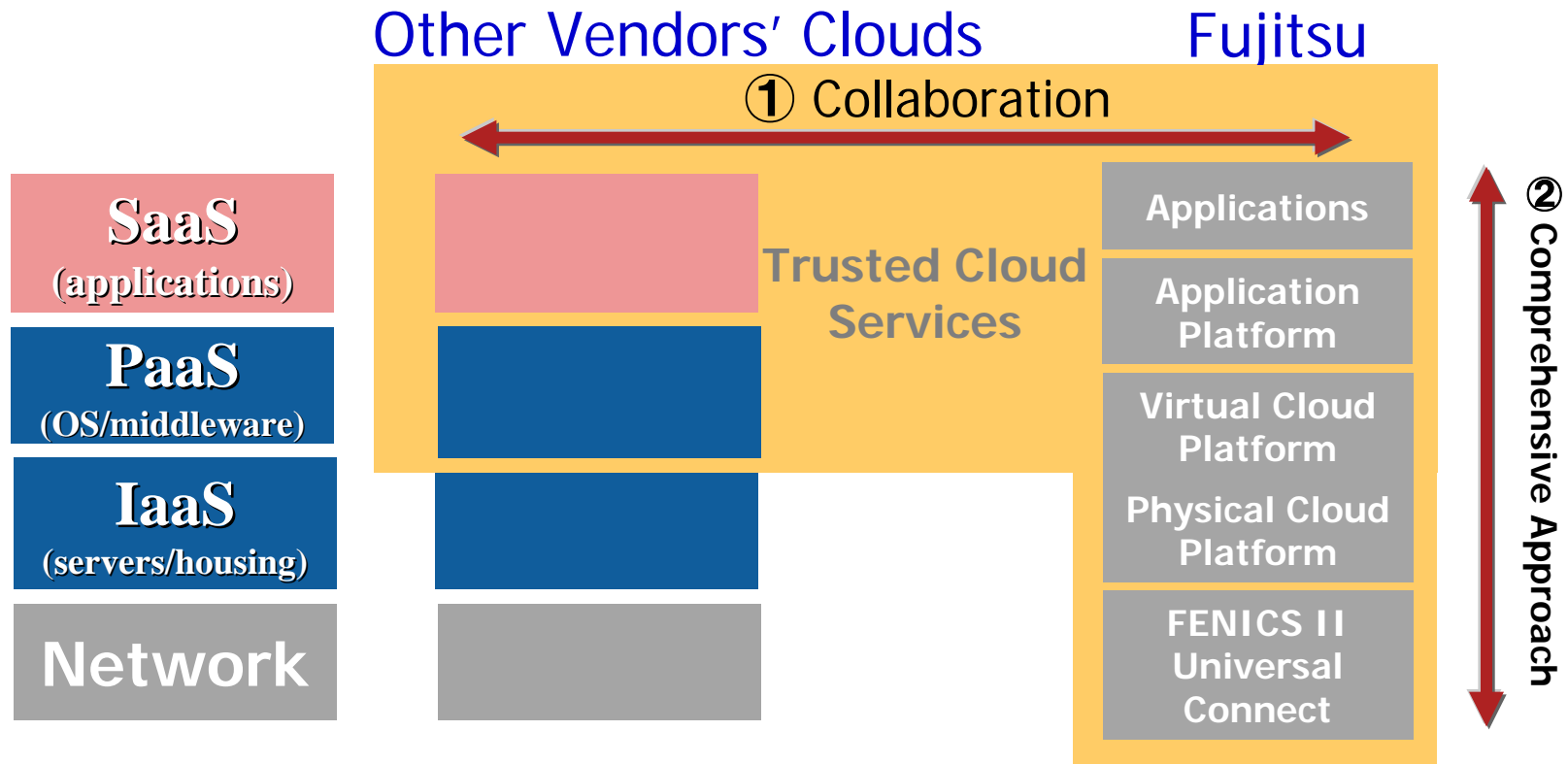


Fujitsu's Initiatives

1. Fujitsu's Approach to Cloud Computing

Brings together all of Fujitsu's services know-how and technologies

- Comprehensive cloud environments with priority on security and quality (trusted services)
- Developing cloud services in collaboration with partners (cloud vendors) to maximize offerings to customers and offer optimal cloud environment



IaaS: Infrastructure as a Service, PaaS: Platform as a Service, and SaaS: Software as a Service

- Fujitsu approaches cloud computing by taking into consideration both application development and infrastructure (network, servers, middleware)
- Strong track record in migration from legacy systems (mainframes → open systems)
- Equipped to manage system updates and upgrades as part of long-term system use



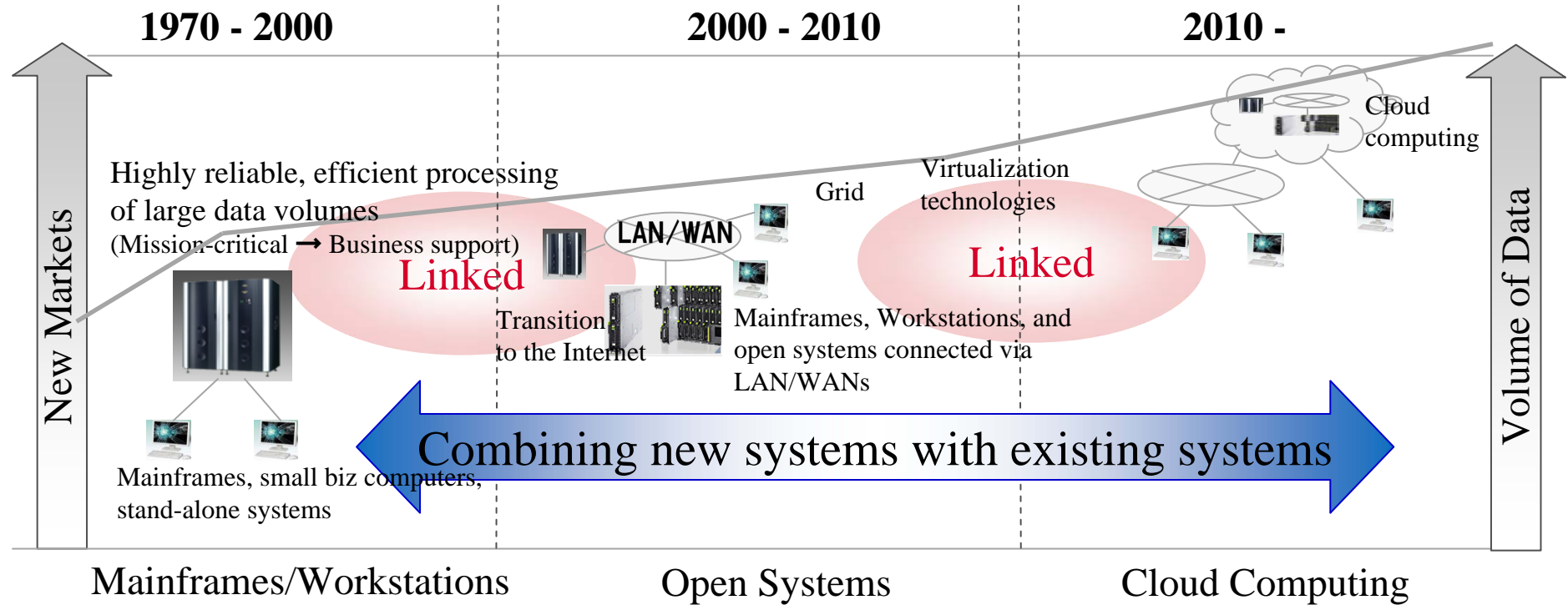
Overall
Capabilities

Track
Record

Fujitsu is the only vendor that can deliver outsourcing from the position of the customer, ensuring both high quality and reliability

2. Cloud Business in Tandem with Existing Systems **FUJITSU**

Co-existence of new and existing systems and increase in mixed system integration



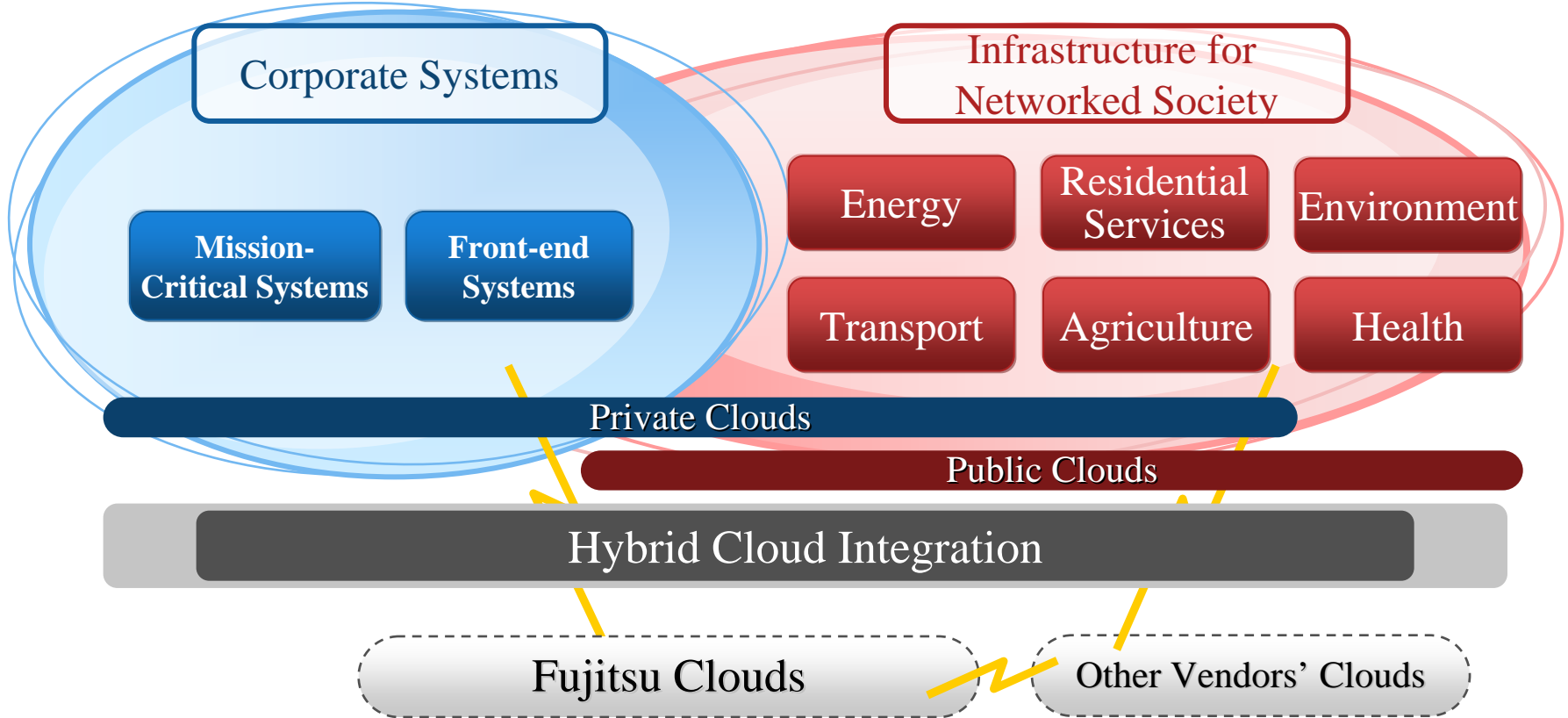
- ① Source of data is expanding to frontline work sites, with data volume rising
- ② Integration of virtualization/cloud environments
- ③ Integration that combines cloud systems with mainframes, small business computers and open systems

IT that contributes to customers' management

- Higher cost efficiency by consolidating, virtualizing servers of existing systems
- Quickly responding to change and speeding up the pace of management
- Expanding the applicability of information technology with IT that is personalized and can handle unlimited data

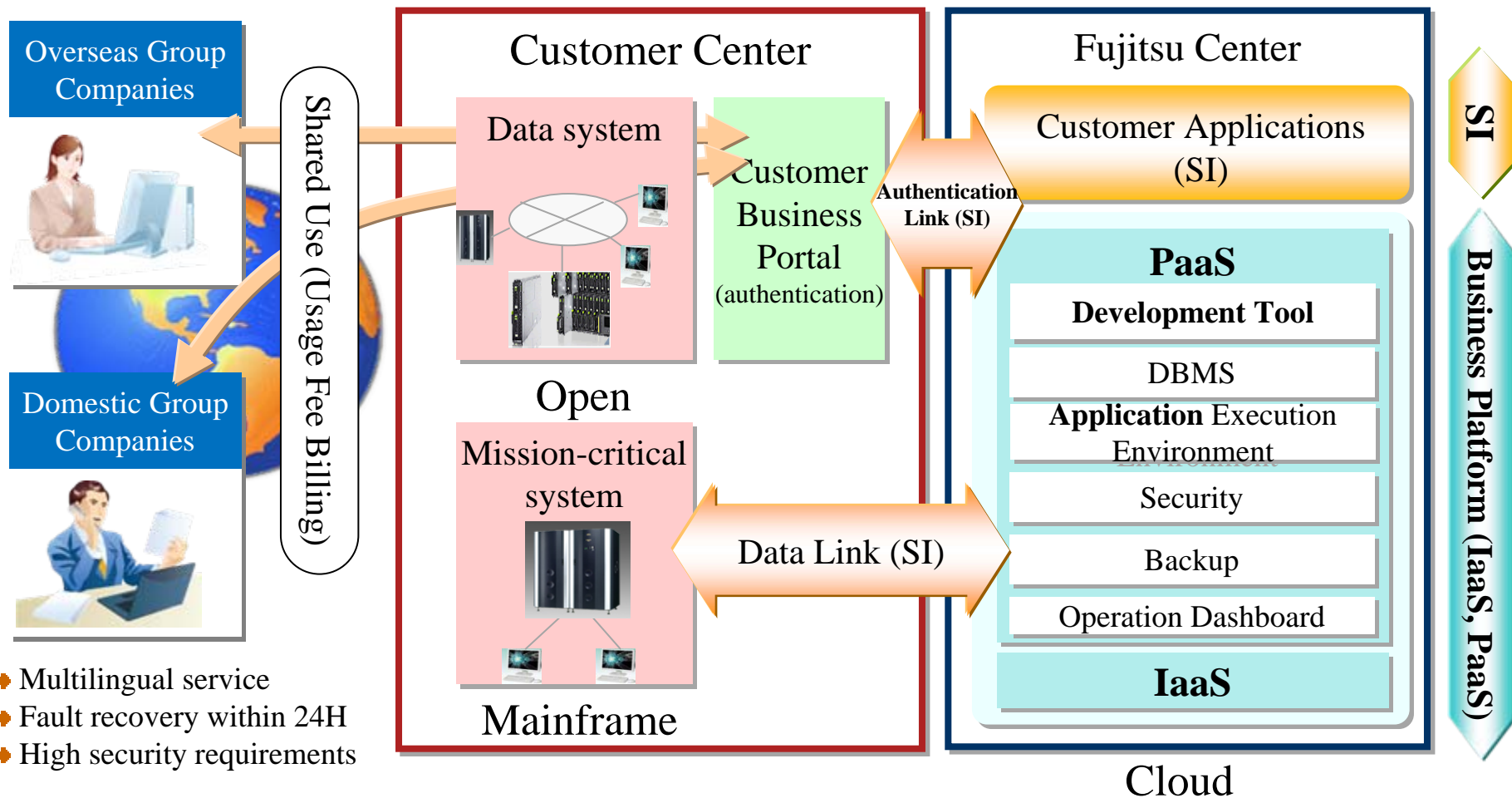
Existing Markets

New Markets



Implementing a shared, standardized business platform via cloud and SI

- Delivers standardized, high-quality business platform
 - Customer uses system globally
- SI work provided links to existing systems and application development on business platform



- ◆ Multilingual service
- ◆ Fault recovery within 24H
- ◆ High security requirements

Testing of service operability and maintainability, bottleneck verification and new business opportunities has taken place since July 2009

Internal/External Pilot Projects 30 Projects



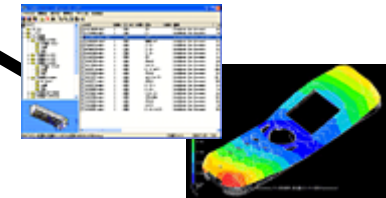
Agricultural SaaS



- ▶ Verification of operability and maintainability
- ▶ Verification of bottlenecks
- ▶ Verification of new businesses

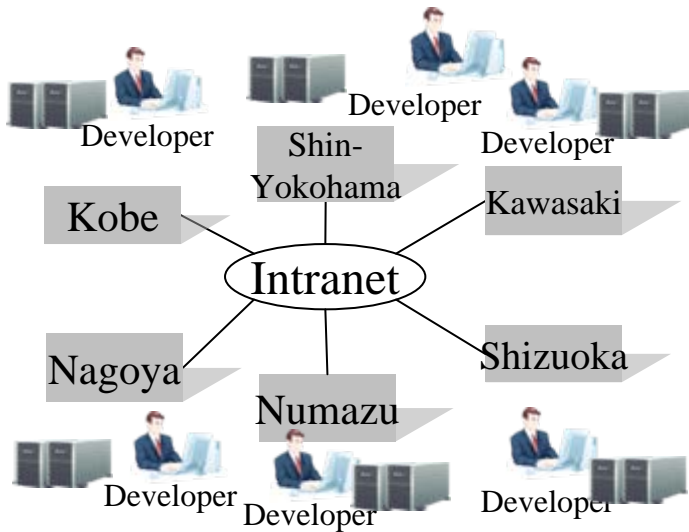


Traffic Info System



CAD
Video distribution over networks, etc.

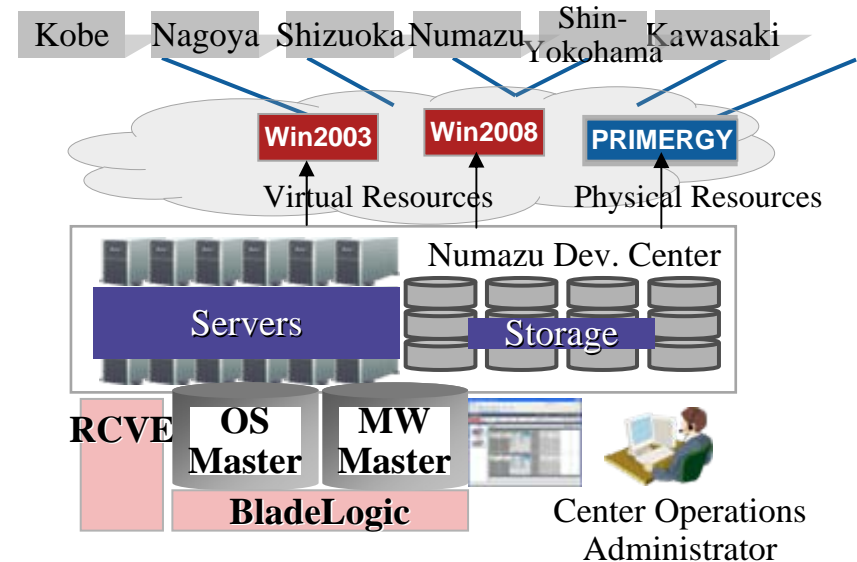
Pre-Deployment



Circumstances Prior to Deployment

- Servers dispersed between development centers, leading to a deficiency in processing power during peak development times
- Growing number of test patterns and sluggish development speed
- Building test environments burdensome for developers

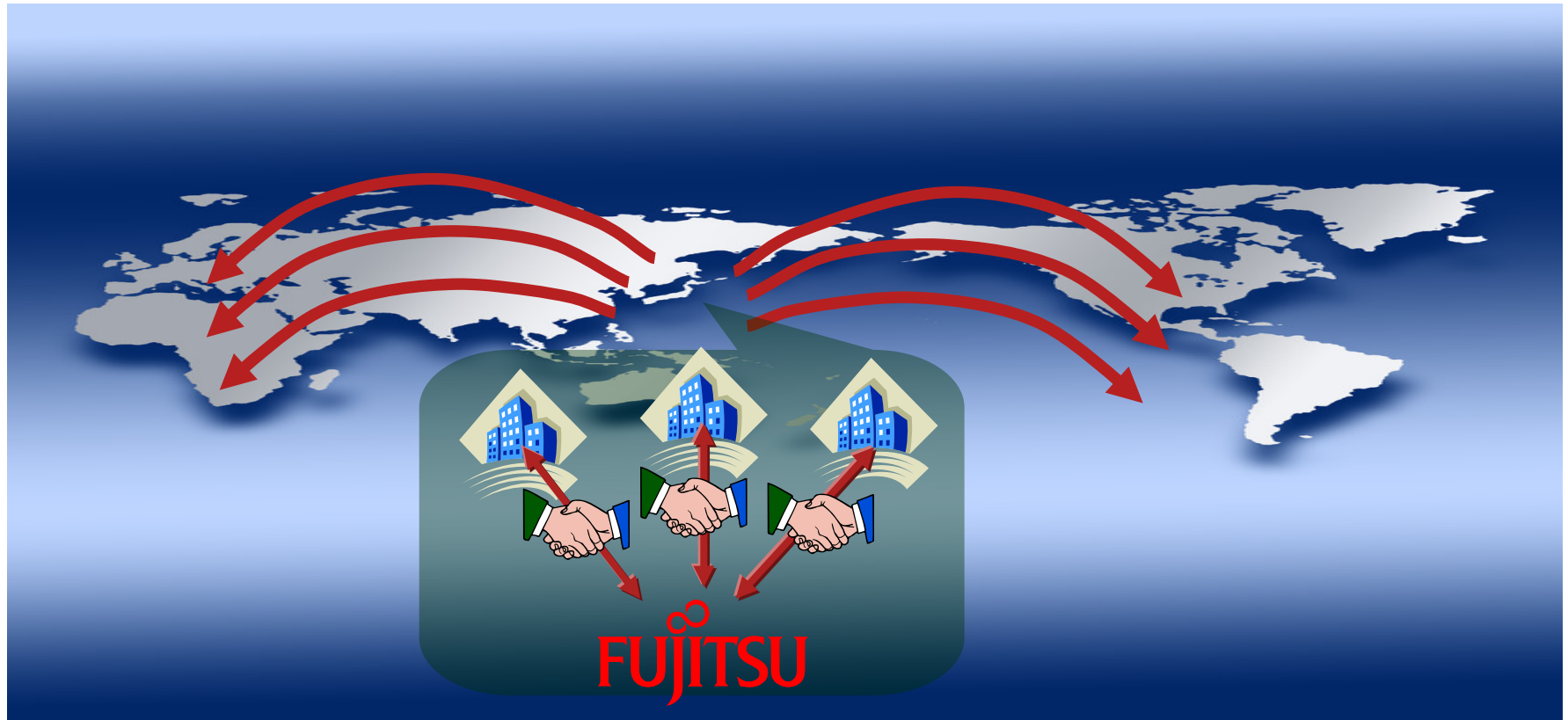
Post-Deployment



Purpose and Results

- To consolidate servers dispersed between development centers and automate operations
 - **12** virtual servers per physical machine
 - Time required to build test environment reduced from **6 hr to 10 min**
 - Developer administrative burden reduced to **zero**

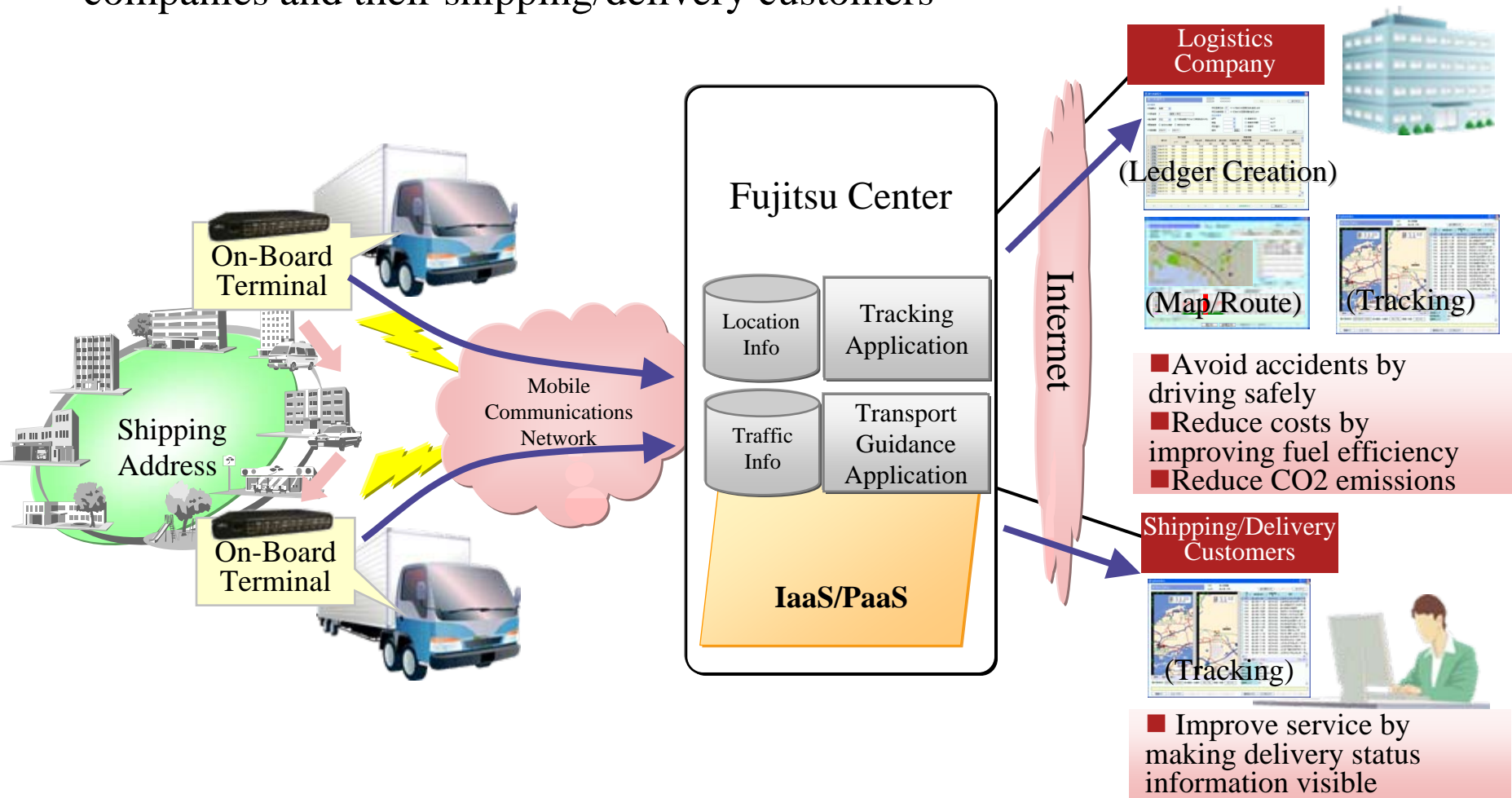
Co-sourcing and globalization to develop new business in collaboration with customers



Fujitsu will partner with companies in Japan to develop and offer high-quality cloud services that can be rolled out globally

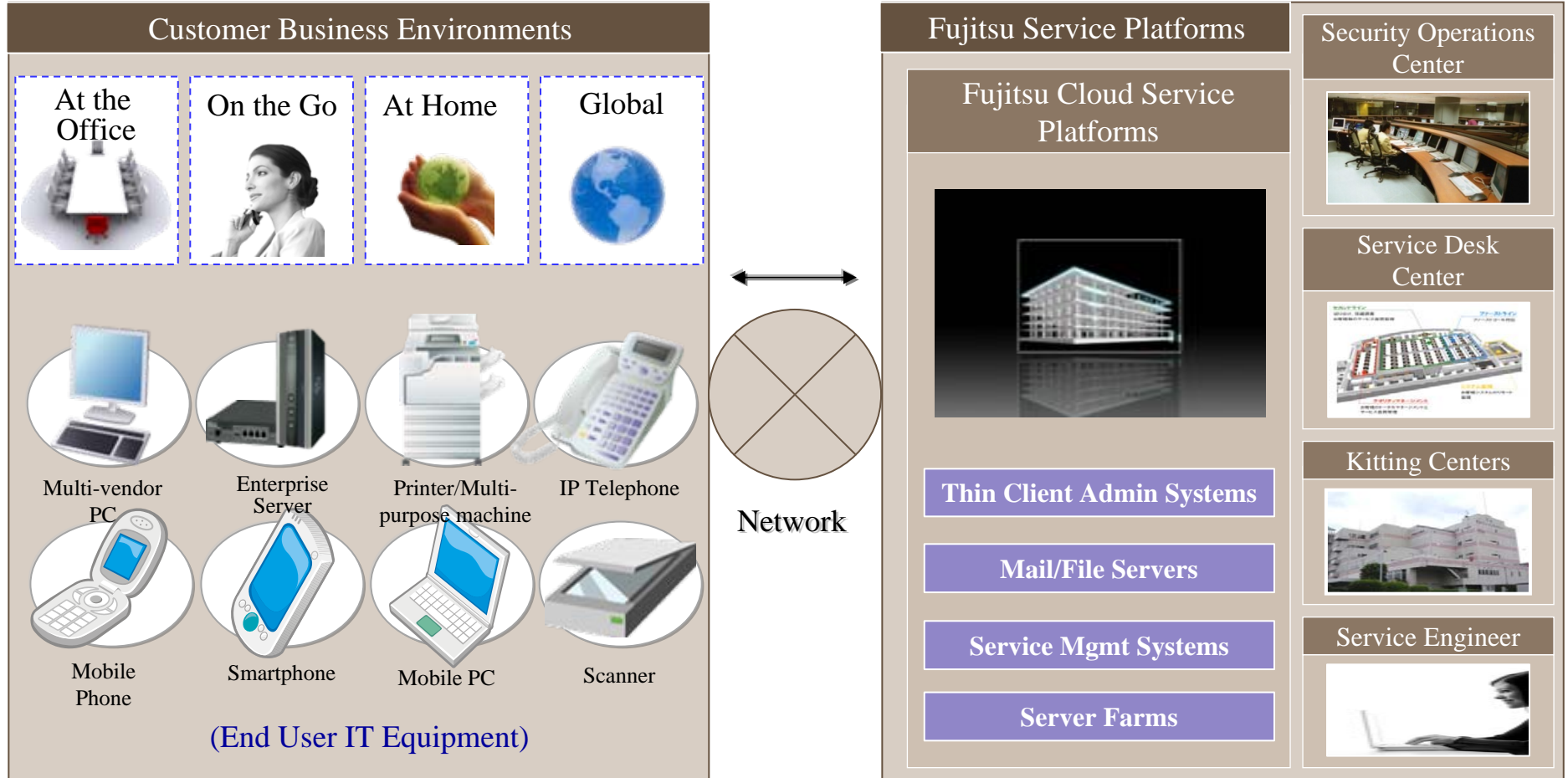
Making eco-driving and delivery status info visible through the cloud

- Service combining on-board terminals and mobile communications with cloud-based applications for transportation guidance and location tracking for logistics companies and their shipping/delivery customers



New Cloud-Based Services for the Office

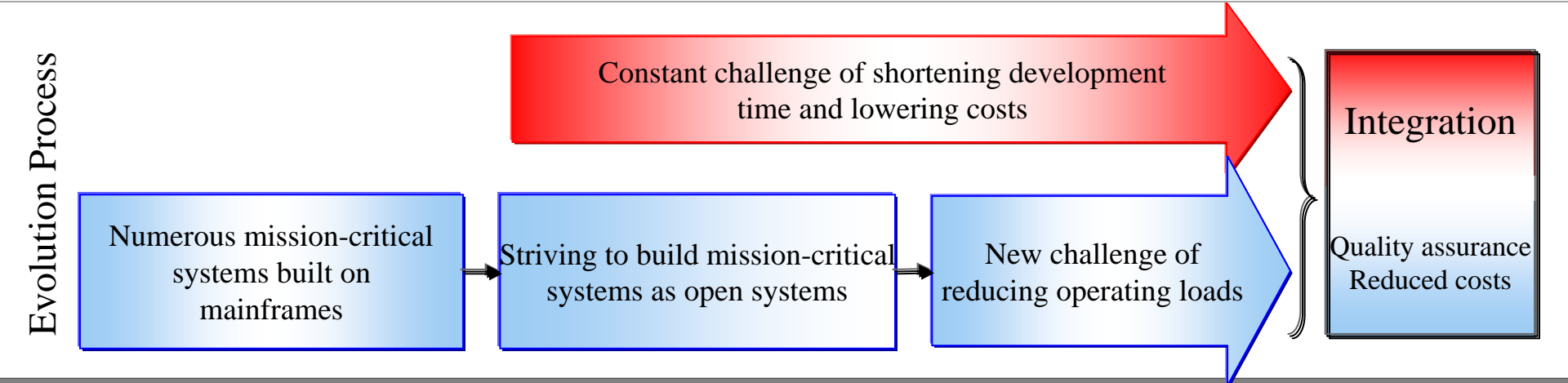
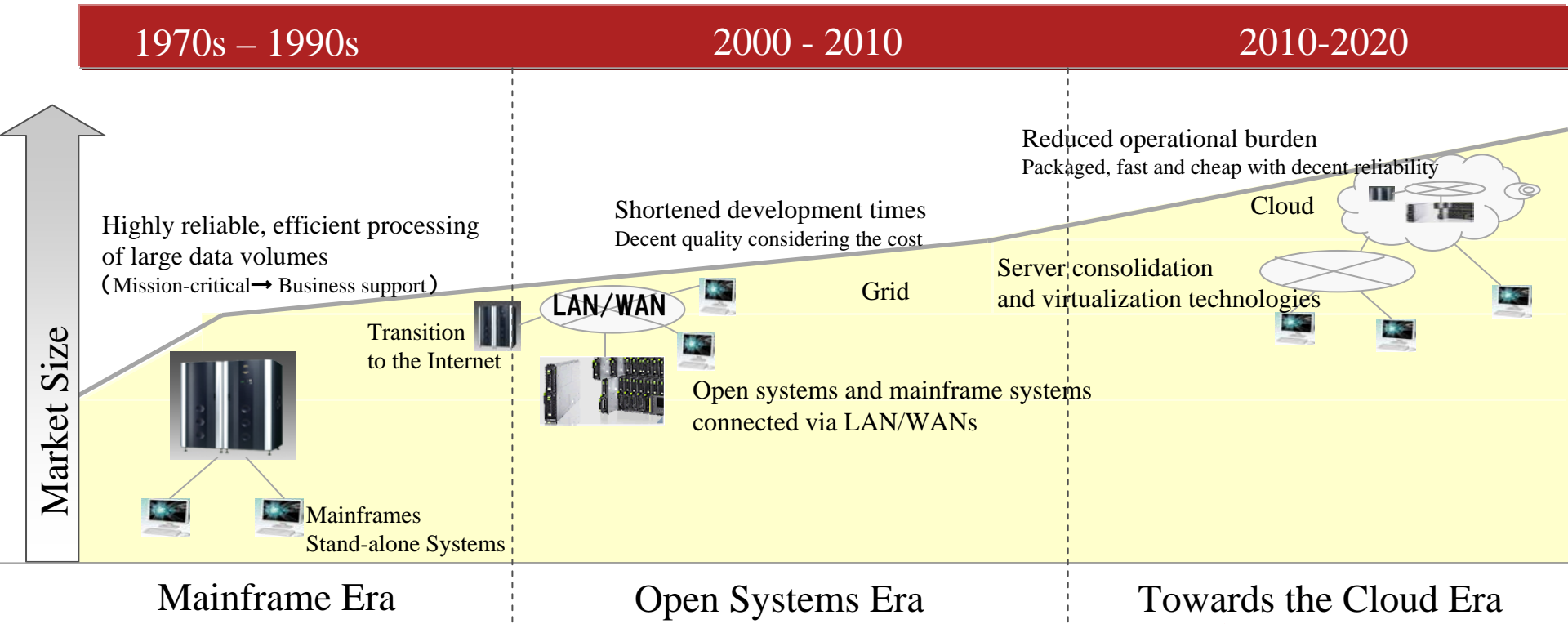
By leveraging the cloud, Fujitsu delivers solutions that provide comprehensive global support to end users for their IT equipment across its entire life cycle (planning, design, deployment, operations, retirement, and disposal)





System Integration Initiatives

The Evolution of System Integration



**Although the definition of the cloud is vague, customer expectations are high.
But there is also a big gap in understanding what the cloud really is.**

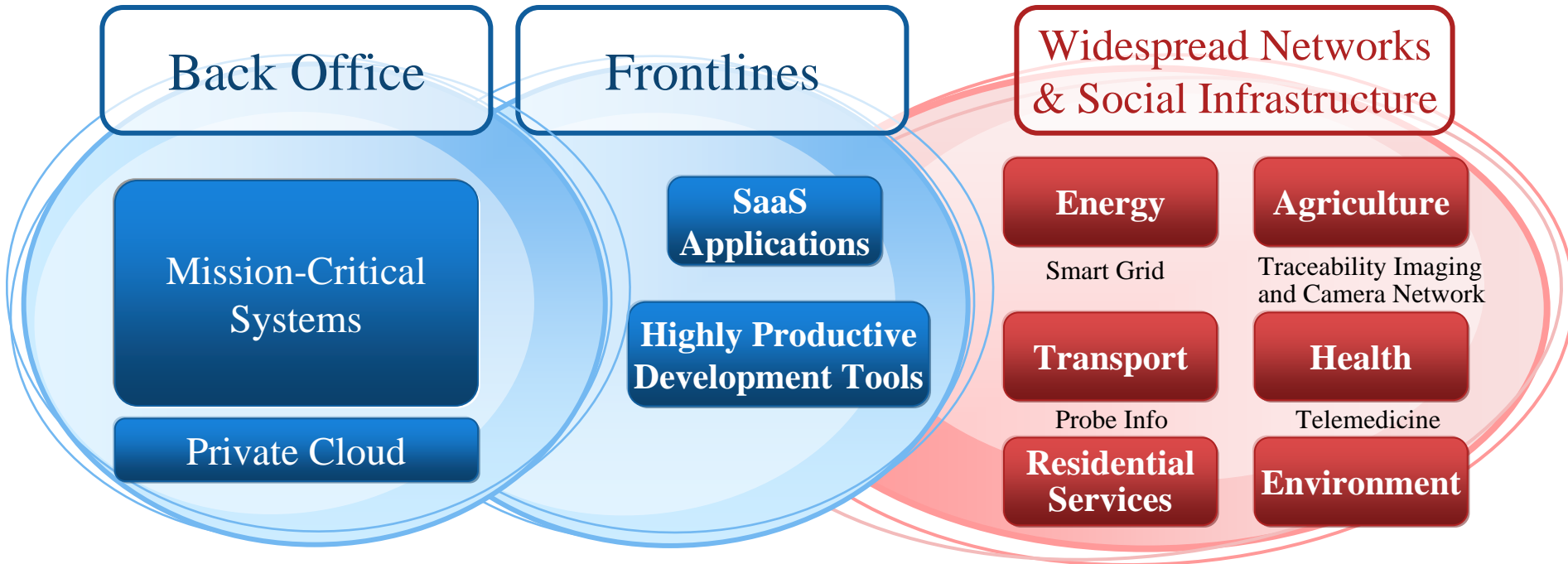
		Customer Expectations Regarding the Cloud	Gap with Reality
1	Immediate	Based on the concept that “computing power can be immediately used,” customers think services can start quickly	Time required to design and develop applications cannot be significantly shortened
2	Cheap	Expectation that system development is inexpensive	Customers have not shed previous attitudes about wanting to make various special requests
3	Easy	Assumption that applications are “platform-free” and that building infrastructure requires little time or effort	Infrastructure work is actually more difficult, and companies need to consider how to maintain the confidentiality and security of data
4	Non-professional	Assumption that computing environment can be maintained without need for specialists and that applications can somehow be delivered	Companies need to consider the importance of maintaining and preserving long-term application resources

Expansion of SI Domain in the Cloud Era

Fujitsu's traditional core market, which was primarily the back offices of corporations, is saturated and shrinking in size. From now on, the market is shifting to a services-oriented integration business encompassing the overall business of customers and society as a whole.

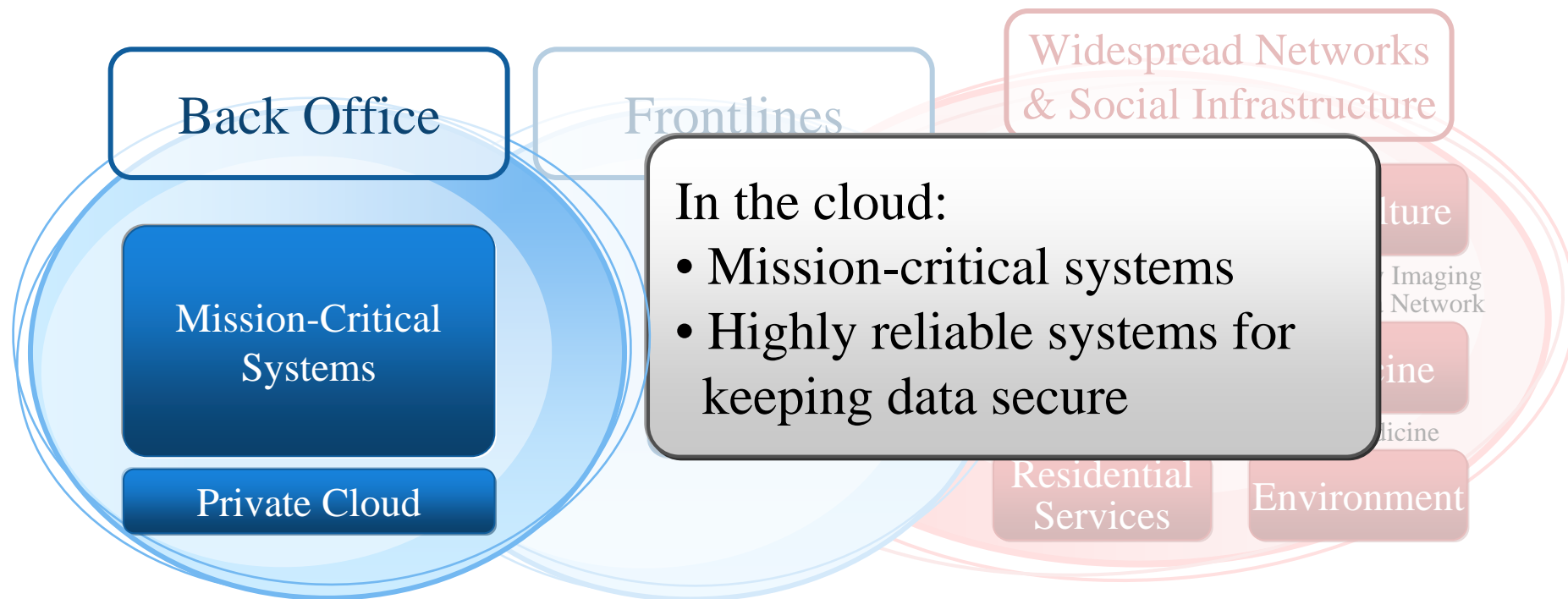
Fujitsu's Traditional Core Markets

New Markets

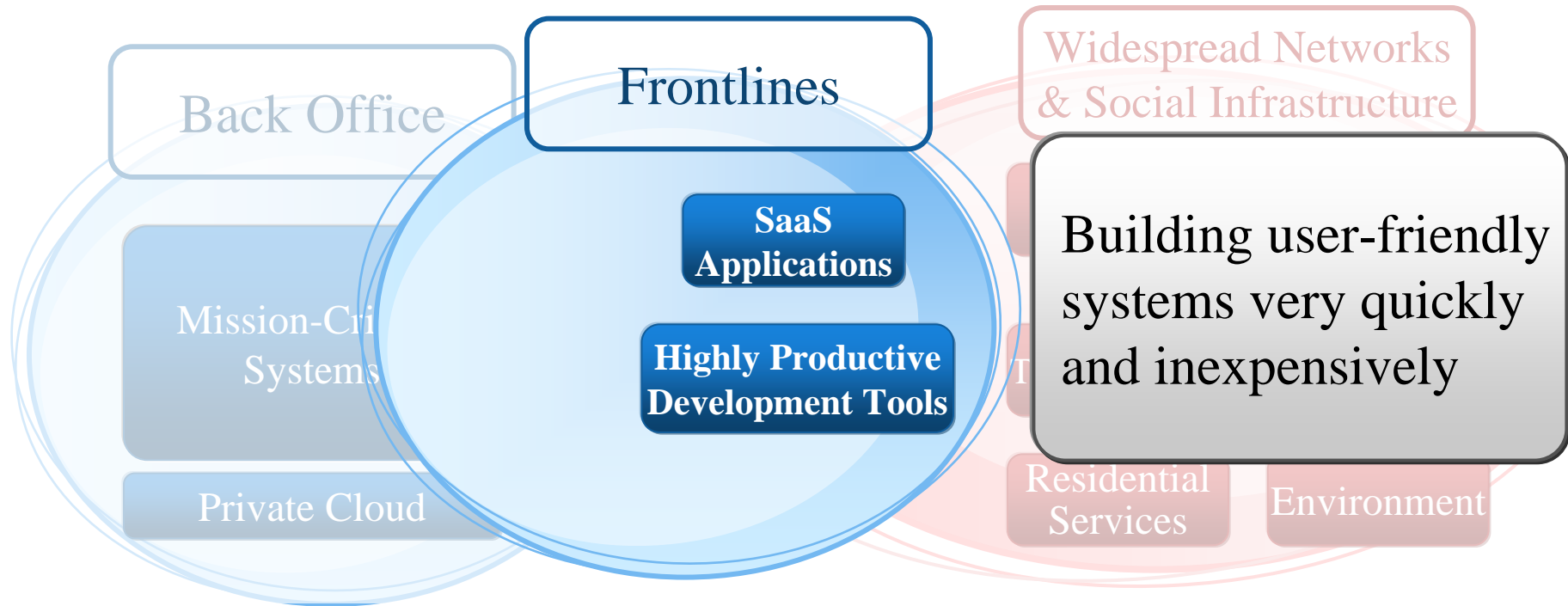


Complete Integration: Hybrid Cloud

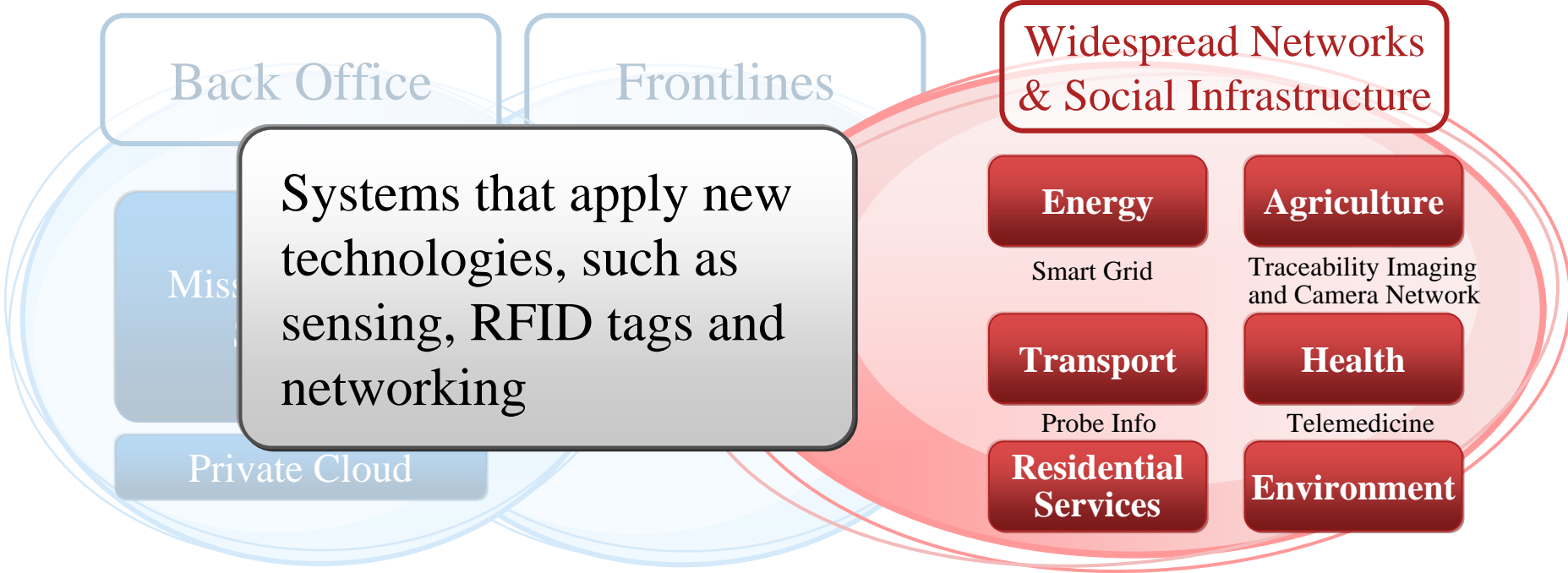
- ① SI to migrate existing systems to the cloud
- ② SI focused on mission-critical databases
- ③ SI for a management system to handle large volumes of data

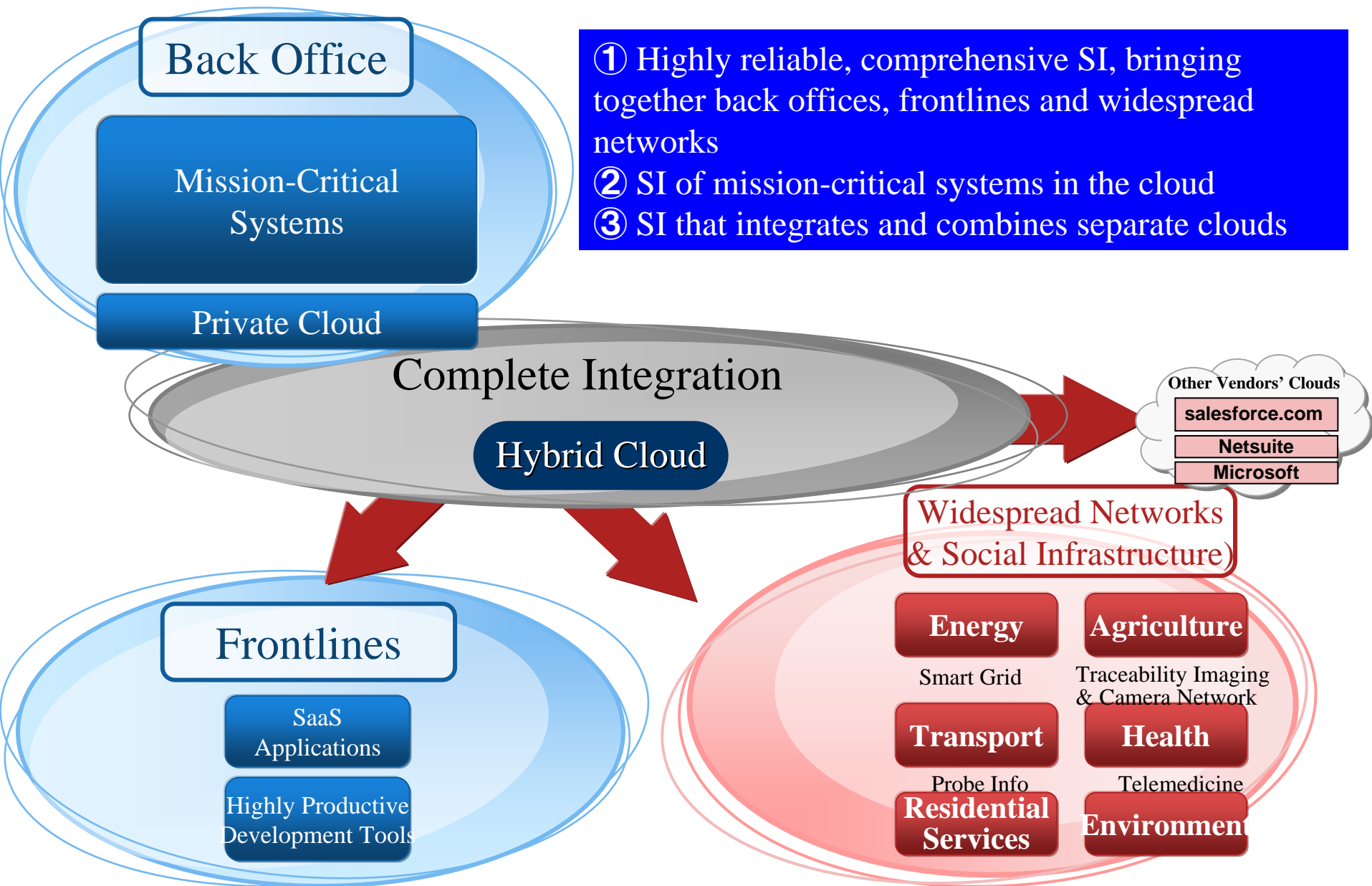


- ① SI to enable customers to migrate to SaaS
- ② SI to improve the ease of use of internal systems (by promoting web-based services)
- ③ SI to leverage the power of data



- ① SI to employ cutting-edge technology in specific industry segments, such as sensing networks and smart-grids
- ② SI to build capability to collect all kinds of data from anywhere

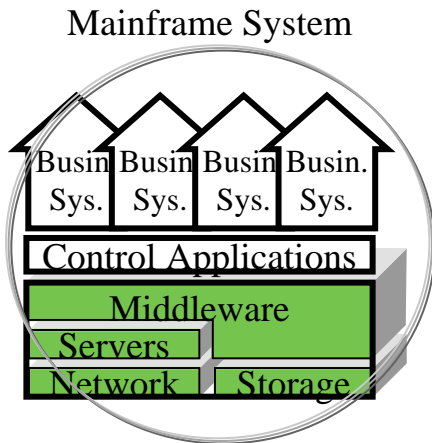




QCD (quality, cost and delivery) is needed in any era

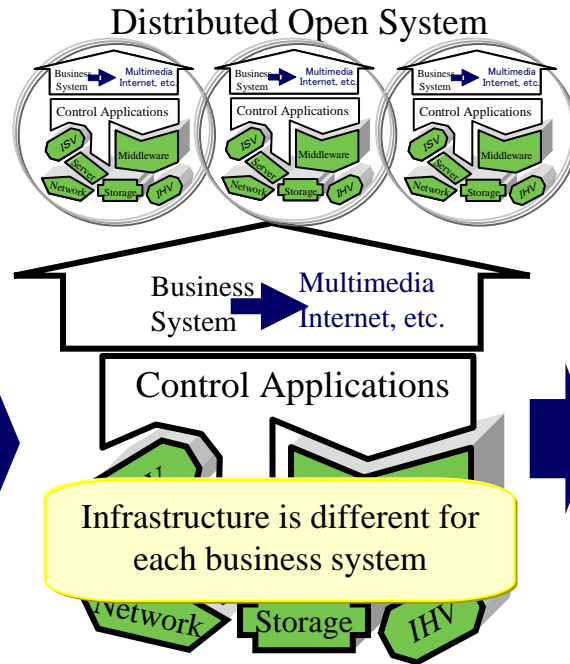
1980s

Era of Centralization
(IT Dept. Perspective)



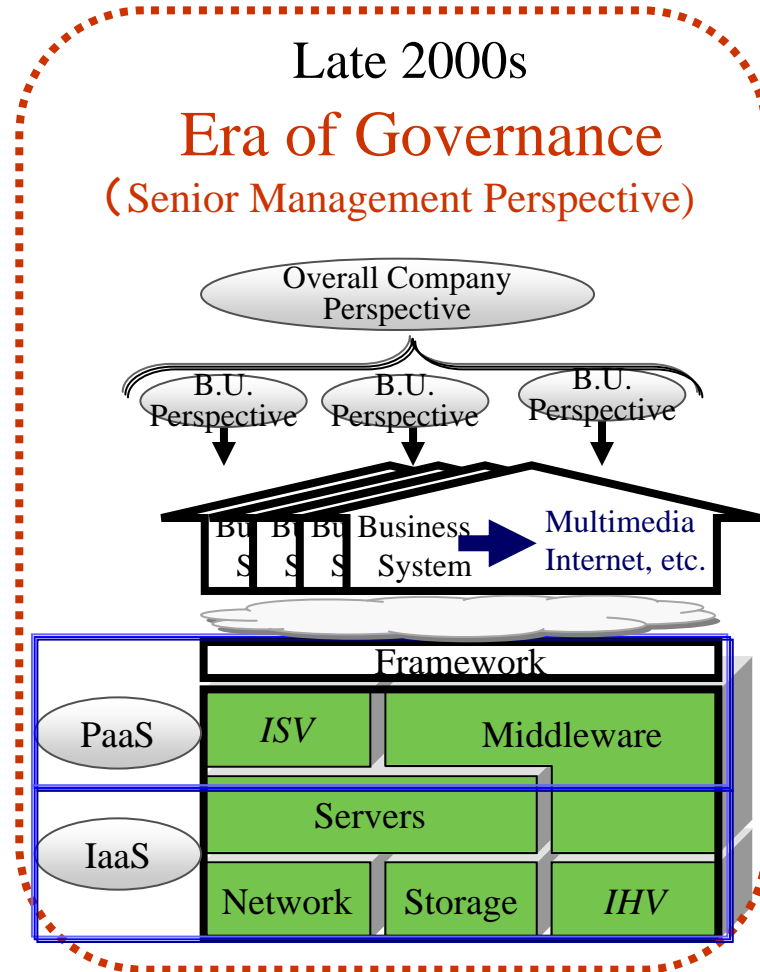
Late 1990s

Era of Distributed Computing
(Business Unit Perspective)



Late 2000s

Era of Governance
(Senior Management Perspective)

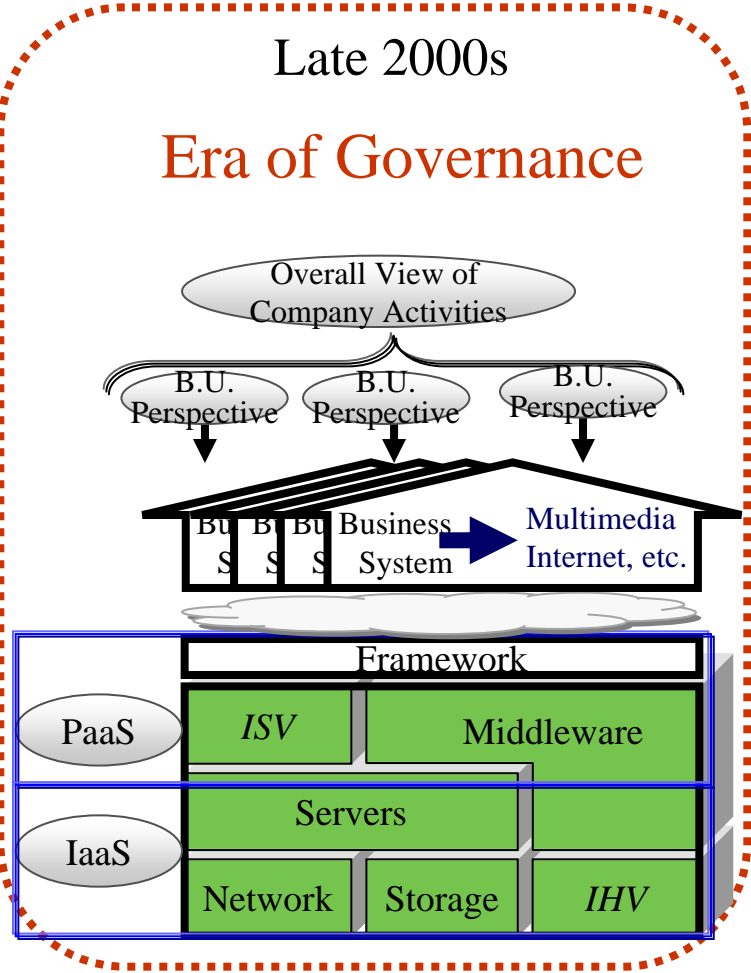


Highly accurate and reliable technology that integrates everything, from specification determination method to design, development and maintenance

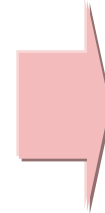
Know-how in integration of business unit perspective
+
Know-how in integration of overall view of company activities

System support technologies that incorporate cloud-based operational know-how

Technologies to build complex cloud environments that include networks, servers, and storage, as well as OS, databases and middleware, including products from other vendors



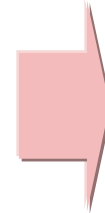
Highly accurate and reliable technology that integrates everything, from specification determination method to design, development and maintenance.



Integrated Transformation of Design, Production and Maintenance

Collective management of information on operations, from design to production, including management-level needs, to deliver services that take LCM into account

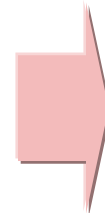
Technologies to build complex cloud environments that include networks, servers, and storage, as well as OS, databases and middleware, including products from other vendors



Standardized IT Platform (TRIOLE) for the Cloud

Integrating massive, complex cloud technologies into a cloud-based platform

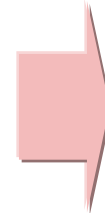
Providing integration services based on combined knowledge of reliability and cloud technologies



Transformation of Workstyles

Leveraging the system development and support know-how that Fujitsu has accumulated over many years

Know-how in integration of work skills
+
Know-how in integration of overall corporate activities

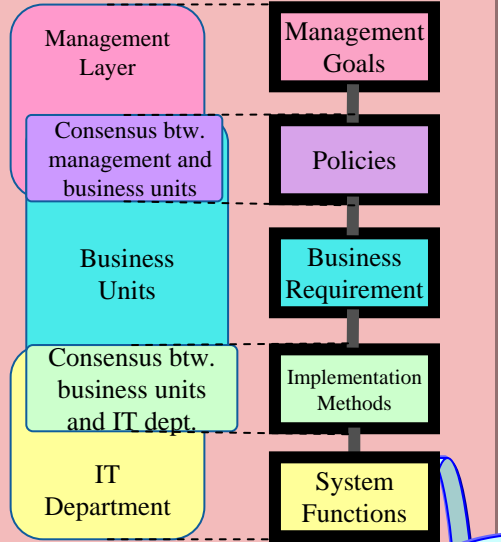


Dedicated Organization for Cloud Systems

A group of system engineers to deliver system integration for the cloud era, working across industry boundaries

Transformation of Design, Production and Maintenance

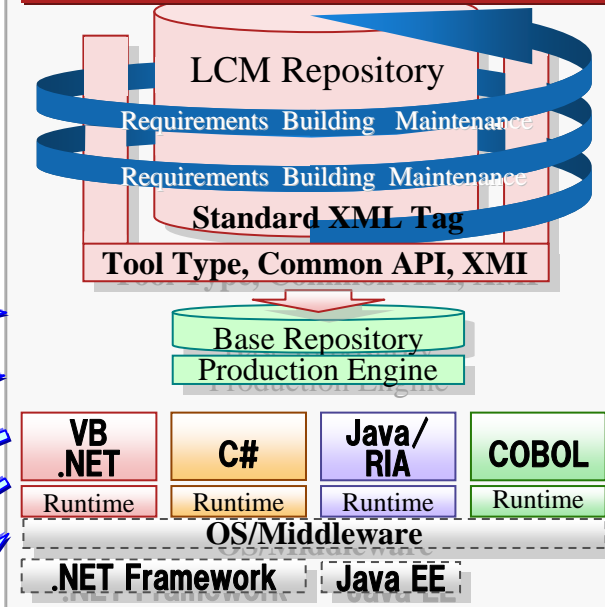
New Method for Determining Specifications



Specification determination method is critical for successful system development

Japanese press release, October 7, 2009

PaaS-Enabled Integrated Framework



Framework

- Techniques, methodology, mechanisms (specification determination, model development, design)
- Work standards, work guides
- Rules, standards, etc.

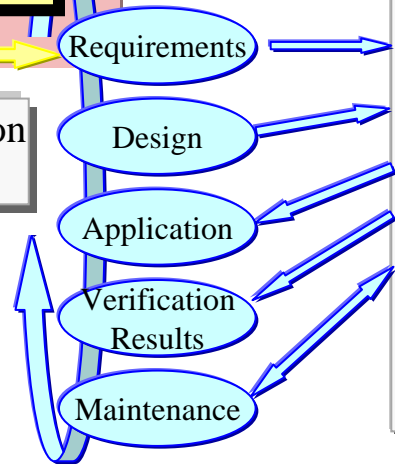
Support Tools

- Requirements/Design info check program generator
- Vulnerabilities/Symbolic check test generator ...

Reusable Materials

Reusable materials by domain
General use reusable materials

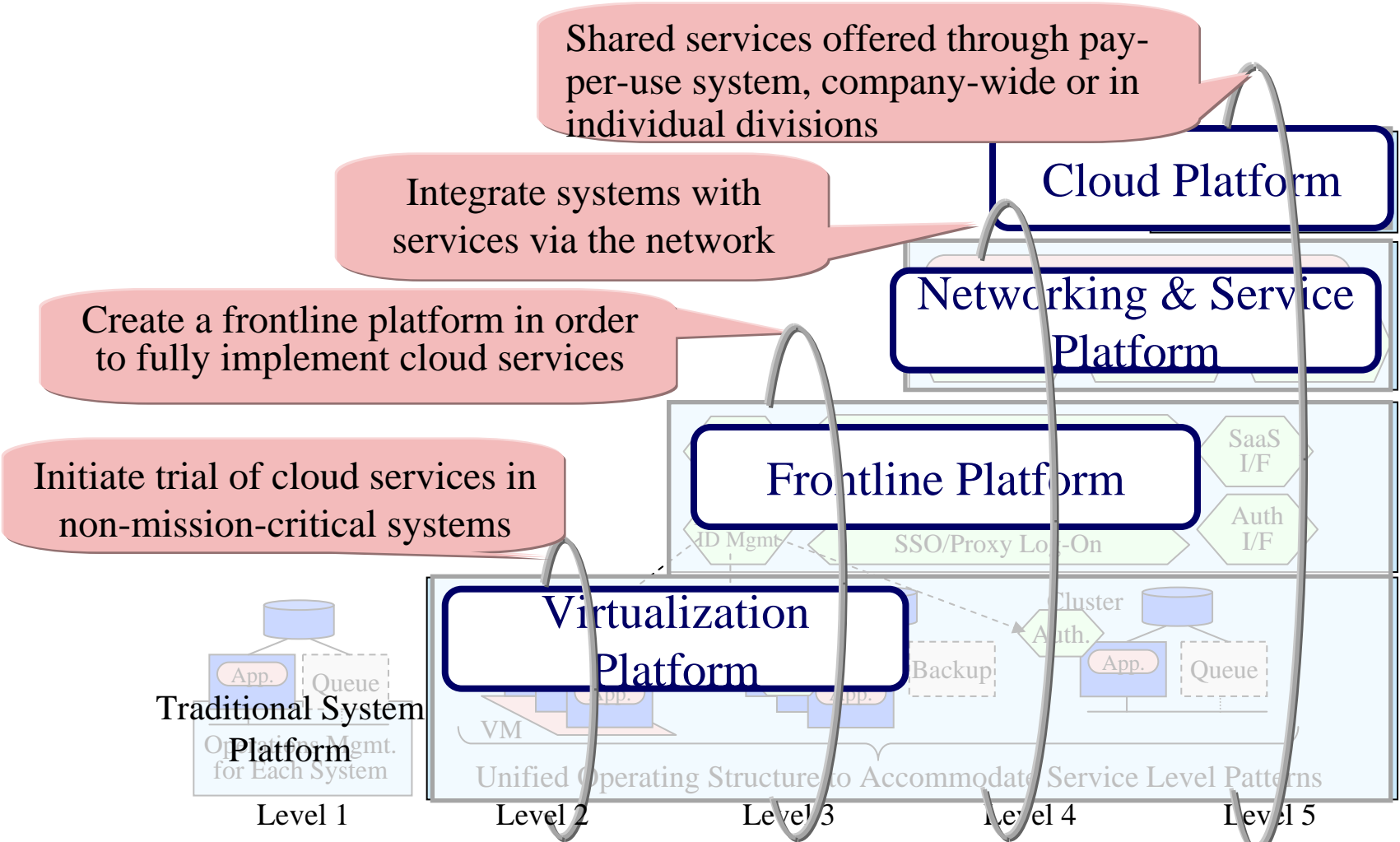
Implementation of ALM



ALM (Application Life Cycle Management)

Standardized IT Platform (TRIOLE) for the Cloud

In the open-system era, middleware environments were not standardized. In the cloud era, middleware will be standardized. Fujitsu will provide standardized middleware for each level of IT system platform.



Bringing together different knowledge and leverage the collective wisdom in order to transform workstyles for the cloud era.

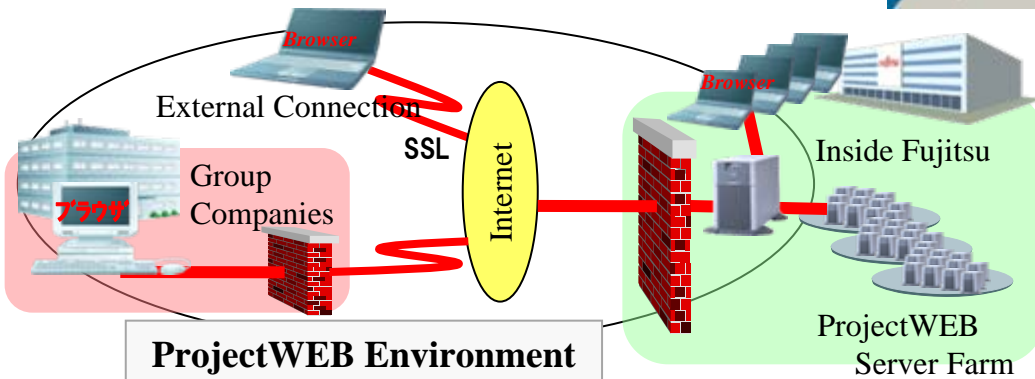
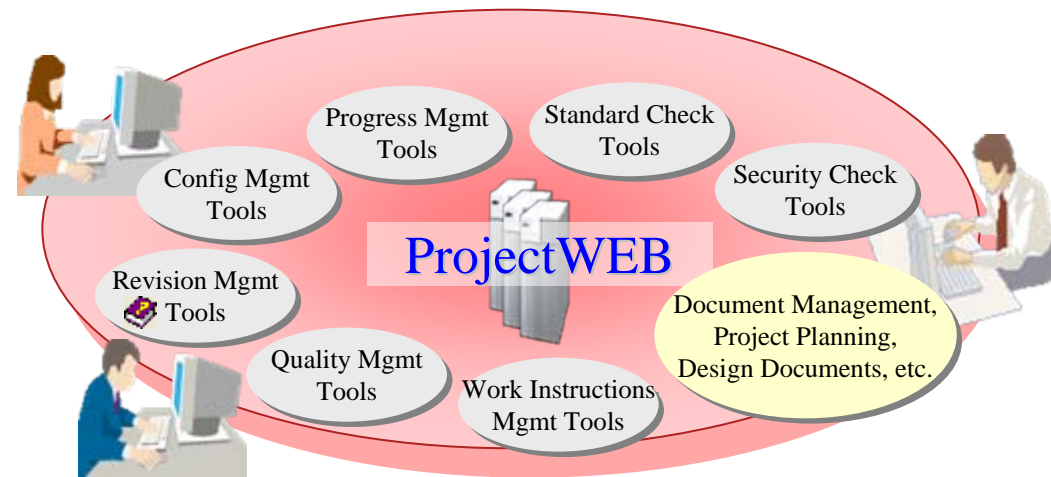
- ① Sharing: Creating a space for sharing information throughout the lifecycle
- ② Re-using: Storing processes as knowledge, in addition to contents, to enable them to be re-used with better quality
- ③ Personnel Development: Using process knowledge to effectively train new employees

Fujitsu System Development Environment as an Example of SaaS

Name: ProjectWEB

- Links all Fujitsu SEs
- English supported. Has been applied to some locations outside Japan
- Especially useful for joint development work with offshore locations

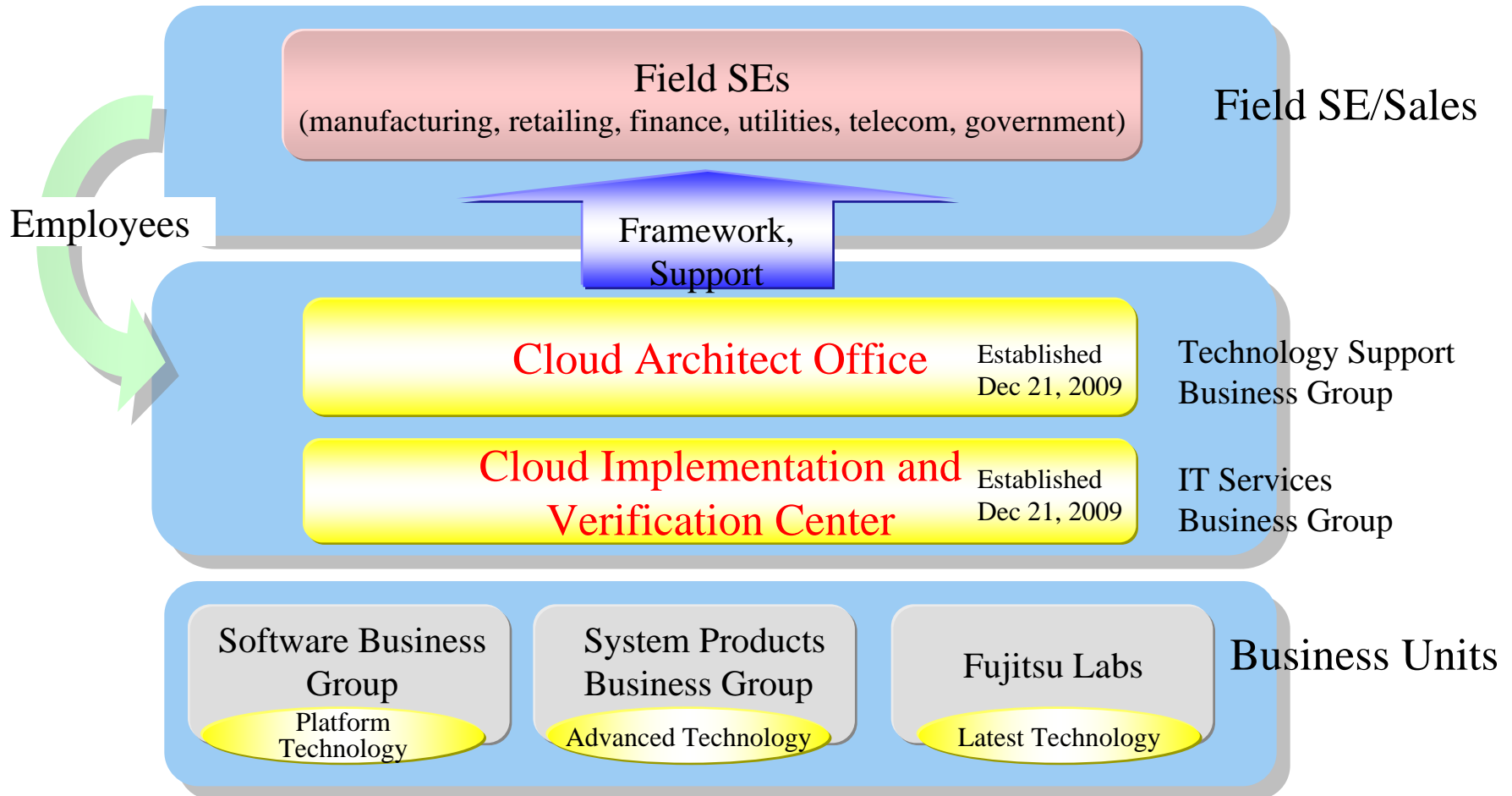
Has been used for approximately 7,800 projects



Dedicated Organization for Cloud System Integration

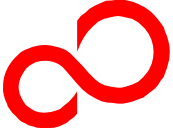
Organization of experts selected from among all Fujitsu Group field SEs

- Bringing together the best SI technology in the Fujitsu Group to take services to an even higher level
- Bringing together the best product technologies in the Fujitsu Group and ensuring the latest technologies are applied to frontline operations



- Providing comprehensive cloud computing services, encompassing networking, hardware, middleware, and application development, with superior quality and security
- Integrating or migrating legacy systems with new cloud-based systems or systems from other vendors
- Working in partnership with customers to develop new uses of, and value from ICT and to create new business models and markets

Fujitsu's comprehensive strengths allow it to leverage the cloud to deliver “integration and transformation”



FUJITSU

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- general economic and market conditions in the major geographic markets for Fujitsu's services and products, which are the United States, EU, Japan and elsewhere in Asia, particularly as such conditions may effect customer spending;
- rapid technological change, fluctuations in customer demand and intensifying price competition in the IT, telecommunications, and microelectronics 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 effect of realization of losses which may result from such transactions;
- uncertainty 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 access financing on commercially reasonable terms, insolvency or bankruptcy of Fujitsu's customers, any of which factors could adversely affect 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 or in which Fujitsu's assets and liabilities are denominated, particularly between the yen and the British pound and U.S. dollar, respectively.