



Fujitsu Technology and Service Vision 2016

Executive Summary



shaping tomorrow with you

What is digital transformation?

Today, digital technologies can be incorporated into products, services and processes, transforming customer outcomes and the way business and public services are delivered.

This is digital transformation. As a result, business, society, and our everyday lives are all undergoing profound change.



Waves of digital technology

Digital technology*¹ has grown through four major waves of development.

The first wave, the internet, made computing technology available to all, and was the first platform for digital services. The mobile internet followed by making digital services accessible anywhere.

Today, a third wave, the Internet of Things (IoT), is developing around us. It is the digitalization of the physical world. Not just computers and smart phones, but factory equipment, household appliances, roads, shoes and much more are connected to the internet.

A conservative estimate indicates more than 50 billion connected things in the world by 2020.

A fourth wave is beginning to gather momentum. Artificial intelligence (AI) and robotics are now becoming a reality, with machines learning on their own, discovering new knowledge and acting autonomously.

4th Wave

AI and Robotics

3rd Wave

Internet of Things / 50B+ (2020)

2nd Wave

Mobile Internet / 10B (2010)

1st Wave

Internet / 1 B (2000) The number of users or devices

*1 Digital is not a single technology, rather a set of connected technologies such as cloud, mobile, Internet of Things (IoT), analytics, artificial intelligence (AI), robotics, and supporting security technologies.

How does this change our view of technology?

These technologies give businesses new options for how they operate and innovate.


The IoT digitalizes physical objects, enabling the collection of digital data. The analysis of this data produces useful insights.

For example, a factory uses IoT technology to connect and digitalize the production line. This allows the operational status to be tracked in real time and manufacturing data to be visualized and analyzed, leading to significant improvements in productivity.

Digitalizing services and processes in this way can make companies significantly more competitive. On top of this, organizations can deliver even greater optimization by integrating emerging AI-based learning technology. Traditionally, information technology has been used to improve business productivity and control costs – the bottom line.

By contrast, digital technology can be integrated into products, services and the heart of the business processes. As a result, it can impact the top line - driving greater revenue, profitability, and customer satisfaction.



A man with dark hair, wearing a green polo shirt, is looking down at a smartphone he is holding with both hands. He is wearing a brown leather watch on his left wrist. The background is a blurred warehouse or retail store with shelves of products. Overlaid on the image are white, semi-transparent digital data patterns, including a grid of dots and lines, suggesting a digital or technological theme.

Digital transformation is impacting all industries

Digital initiatives are appearing in a range of different fields.

In retail, an omni-channel approach has become vital to maintain a healthy business. Retailers must integrate many types of information from different channels, such as purchasing records, web and social media, to understand individual customers and give them the best experience.

In the retail finance industry, it is estimated that more than \$12B was invested in Fintech across the world in 2014^{*2}. Fintech initiatives are collaborations between technology companies and financial institutions which harness digital technology to co-create innovative financial services^{*3}.

Digital transformation is ongoing in many industries. So how do we drive digital transformation?

^{*2} Source: <https://www.accenture.com/us-en/insight-future-fintech-banking>






^{*3} For example, mobile payment service via smartphone and P2P loan service

What is the key to success?

Digital transformation is, of course, founded on technology.
However, successful digital transformation will only happen if we take the right approach.
What is most important is how business and public services can best leverage the technology.
People are central to how we achieve this.



Human Empowerment

-  Better Experience
-  Quality of Life
-  Creative work
-  Decision support
-  Acquiring knowledge and skill

Human Centric Innovation

Digital transformation is about changing the way businesses create value for customers. In a digitalized, hyperconnected world, value is created for people from connectedness. For successful digital transformation, it is important to put people at the center of everything.

Human Centric Innovation is an approach to creating business and social value by empowering people with digital technology. It is about bringing together three key value drivers – creativity of people, intelligence derived from information and connectedness of things and processes. Each value is derived from dimensions of people, information and infrastructure.

Most importantly, digital transformation must deliver value for people. We have to make sure people are better off from adopting digital technology.



Connected Infrastructure

-  Sensors
-  Smart Home
-  Smart Cars
-  Smart Factory
-  Smart Agriculture
-  Smart Healthcare
-  Smart City
-  Robots



Creative Intelligence

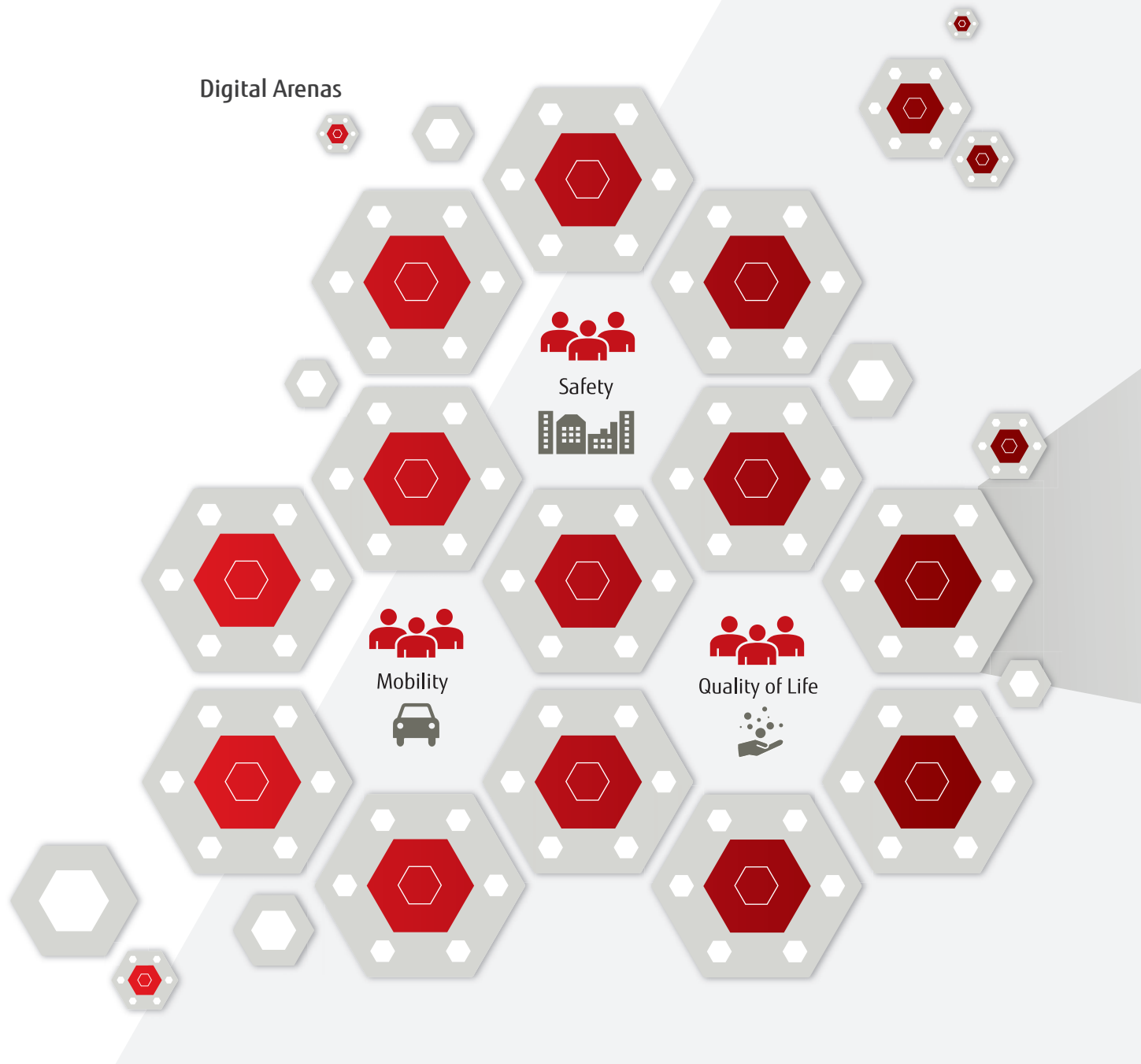
-  Information from people and things
-  Business and social information
-  Information Analysis
-  Algorithms and AI
-  Security and Privacy

A new digitalized economy

In the digital era, the borders of existing industries are increasingly blurred and become fluid. Diverse digitalized products and services will be connected via software, exchanging information, and delivering greater value for people. In this economy, value that consumers demand will be co-created by suppliers, partners and even the consumers themselves, in newly emerging digital arenas.

For example, in the case of Fintech, technology startups and traditional financial institutions connect their systems via APIs^{*4} and co-create new services. Similarly, new values such as quality of life, better urban mobility, personal safety and more, are being co-created in digital arenas. Value is driven by connectedness.

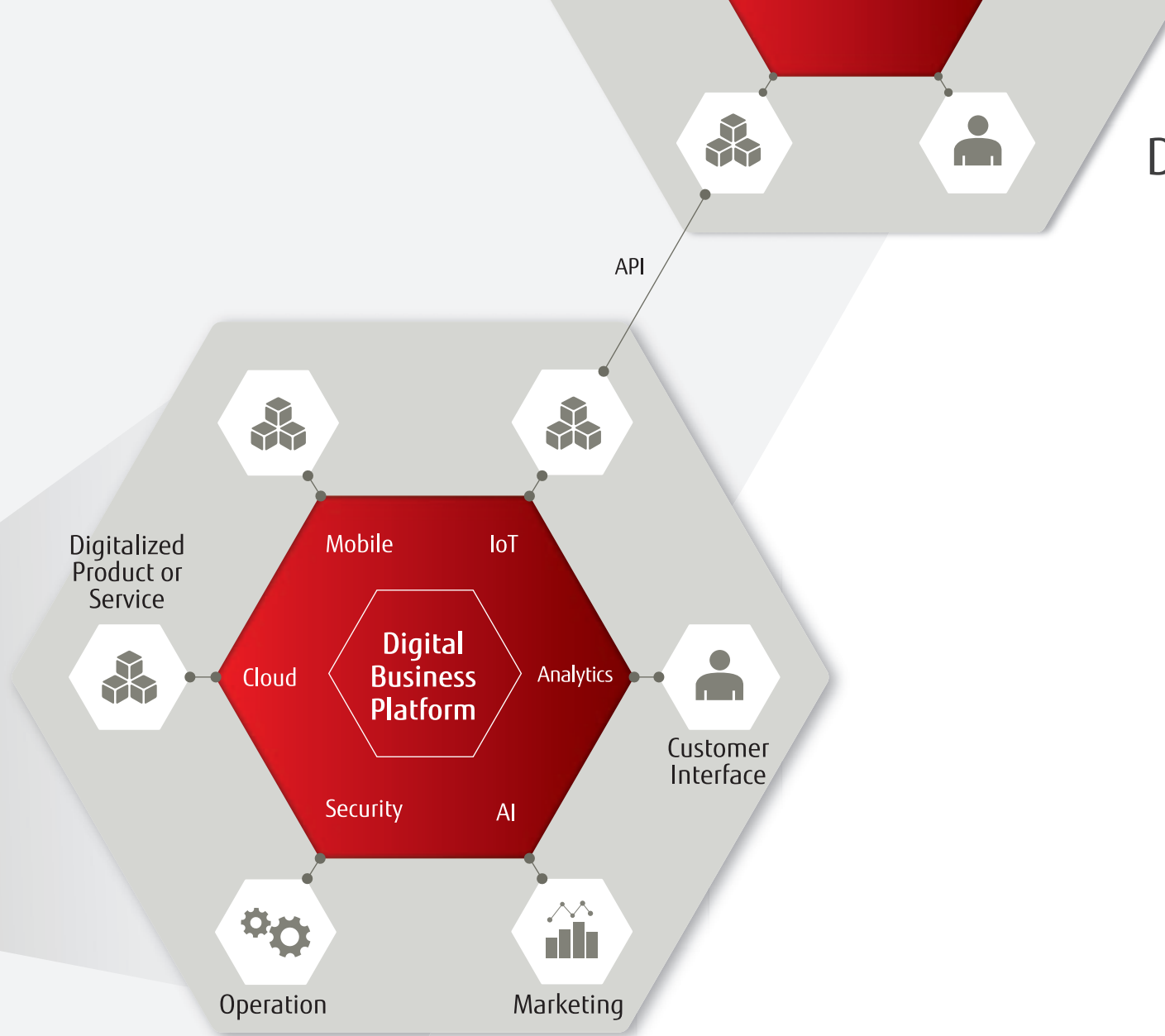
^{*4} Application Programming Interface : An API is a pre-defined set of functions which specify how software components should interact with each other.



Digital business strategy

In the digitalized economy, the competitiveness of a business will be measured by the strength of its connections, both within the organization as well as with external ecosystems and partners. Businesses want IT to drive business value more directly, so it impacts their top lines. How can it be realized?

A digital business platform is the answer. It helps an organization do three things. To empower their employees, to use intelligence derived from data, and to build fast, reliable connections both internally as well as with the external ecosystem. Most importantly, to deliver innovative value, it is critical to align your existing business systems with new digital applications, as we have seen in the case of Fintech. It is a data-oriented platform, connecting all the data within an organization as well as their customers. In addition, it must help an organization to build resilience against increasing threats to cyber and physical security.



How can Fujitsu help drive your digital transformation?

Fujitsu provides technologies and services to drive your digital transformation.

We want to be your business partner.

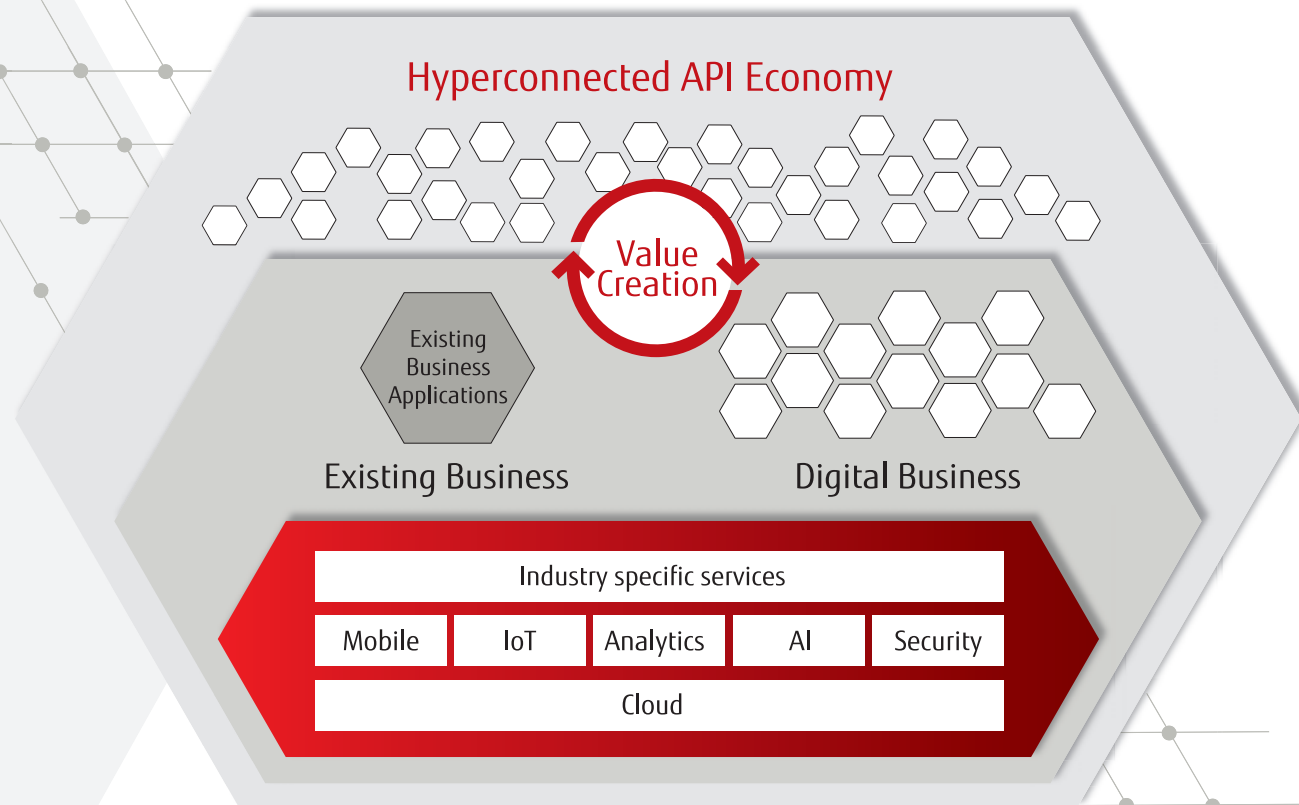
We want to share your challenges and objectives, and share the journey of digital transformation.



Digital Business Platform MetaArc

In 2015, Fujitsu began providing a digital business platform, we call MetaArc. This is a comprehensive framework to help our customers drive their digital transformations. MetaArc is based on scalable cloud computing infrastructure. It is designed to offer the capabilities of mobile, data analytics, IoT and AI as a service. It enables customers to create digital business solutions, quickly and easily, by mashing up and integrating digital technologies and services. Its cloud also enables a marketplace of third party solutions and services to help businesses form digital ecosystems. MetaArc offers resilience to businesses with its security functionality.

With our long-term experience in working with many organizations in a wide range of industries, Fujitsu helps our customers align and balance the full potential of digital with their existing technologies, to deliver powerful new insights and create valuable innovation for their businesses.



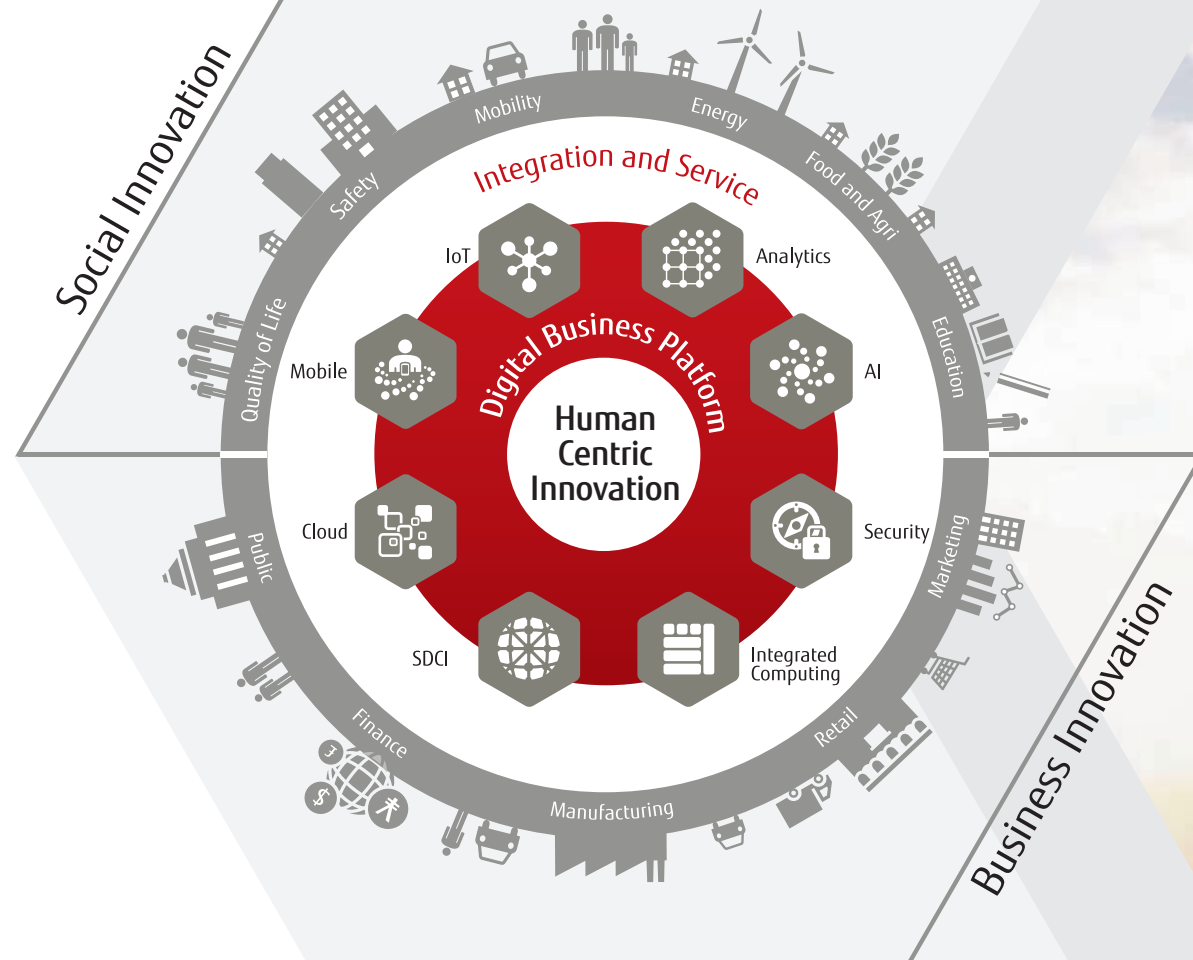
Our technologies and services for driving digital transformation

With a strong focus on business and social outcomes, we provide a portfolio of technologies and services to drive digital transformation for our customers:

- Cloud
- Mobile
- IoT (Internet of Things)
- Analytics
- AI (Artificial Intelligence)
- Security
- Integrated Computing
- SDCI (Software-Defined Connected Infrastructure)

A key advantage of working with Fujitsu is we provide all of these technologies and services in a single place. Overlaying this, Fujitsu offers a set of integration services to ensure the best possible outcomes for customers.

We stand committed as a joint partner in our customers' digital transformations.



A photograph of a man with dark, curly hair and a beard, smiling broadly while carrying a young girl with blonde hair on his shoulders. The girl is also smiling and looking towards the camera. They are outdoors, with a bright, hazy sky in the background. The image is partially obscured by a large, white, diagonal geometric shape that serves as a background for the text.

A Human Centric Intelligent Society

The world is facing serious social challenges. Poverty, shortage of food and water, underdevelopment of social infrastructure, education and healthcare, urbanization, aging societies, natural disasters, climate change and environmental damage, these are all matters of profound concern.

Fujitsu believes that ICT has an important role to help solve these difficult challenges. Our vision is to leverage the power of technology to enable people to build a safer, more prosperous and sustainable society. We call it a **Human Centric Intelligent Society**.

Fujitsu is committed to fulfilling this vision by working with our customers and partners to generate greater business and social value.

Customer stories



Sberbank

Transforming the school canteen experience helps increase security and safety

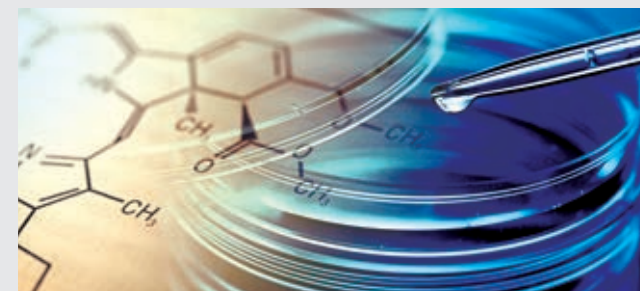


Tokyo Stock Exchange, Inc.

Never Stop! – Upgrading the cash market trading platform “arrowhead” in the quest for world-class reliability



Fujitsu has a solid track record in delivering digital transformation with customers around the world.



Mitsui Chemicals, Inc.

Work style innovation encourages creativity, harnessing the aspirations of all employees



Leopalace21 Corporation

Turning apartment rooftops into ‘virtual power plants’, green energy through mega-solar power generation



The Agency for Science, Technology and Research (A*STAR) Singapore Management University

Industry, Government and Academia establish partnership for sustainable urbanization



Comboios De Portugal(Trains of Portugal)

Transforming customer experience and minimizing fraud with a new ticketing platform



Nikkei Business Publications, Inc.

Advanced marketing in the new digital era:
Rapid integration of dispersed data on customer attributes



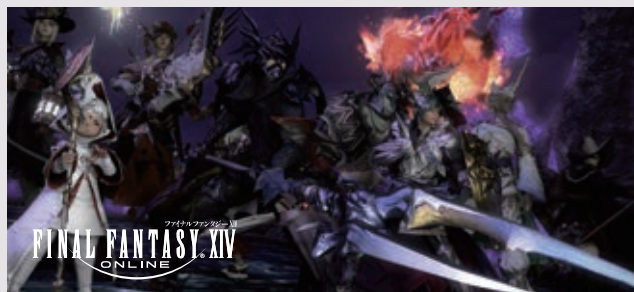
Scottish Water

Cyber Threat Intelligence transforming security protection and safeguarding business



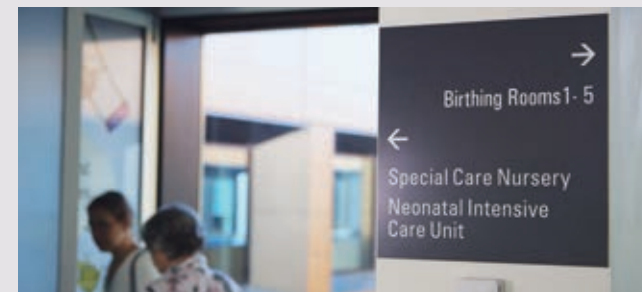
Richardson Police Department

Using RFID technology to transform the management of police inventory



Square Enix Co.,Ltd

Bringing world-famous online games to users much faster with a new delivery platform



ACT Health (Canberra Hospital)

Human centric technology brings parents and their babies together



Iwata Smart Agriculture Project Joint Venture of Fujitsu, ORIX, and Masuda Seed

Co-creating a business model for strong, dynamic agriculture that uses diverse sources of knowledge

Related Information and Website

The Fujitsu Technology and Service Vision 2016 is created by a team of Fujitsu people from around the world. We are globally communicating it in these formats:

- Executive summary (this booklet) is a visual book of our vision.
- Book 1 sets out our vision along with some insights on how business leaders leverage digital transformation.
- Book 2 provides insights on how IT leaders can provide digital leadership. It also features stories of our customers' digital transformation as well as Fujitsu's portfolio of services, solutions and products.
- Website : <http://www.fujitsu.com/global/vision/>
- Contact : +81-3-6252-2220

FUJITSU LIMITED

Shiodome City Center,
1-5-2 Higashi-Shimbashi
Minato-ku, Tokyo 105-7123, JAPAN
Tel. +81-3-6252-2220
<http://www.fujitsu.com/global/>

Trademarks

All brand names and product names are trademarks or registered trademarks of their respective holders.

A Note Concerning Future Projections, Forecasts and Plans

This publication contains forward-looking statements in addition to statements of fact regarding the Fujitsu Group's past and current situation. These forward-looking statements are based on information available at the time of publication and thus contain uncertainties. Therefore, the actual results of future business activities and future events could differ from the forward-looking statements shown in this publication. Please be advised that the Fujitsu Group shall bear no responsibility for any of these differences.

Unauthorized copying, reproduction, or reprinting of any part or all of the Fujitsu Technology and Service Vision is prohibited.

©2016 FUJITSU LIMITED

Consideration for the Environment

- It is printed on FSC® Certified Paper as designated by the Forest Stewardship Council® in order to help preserve forestry resources.
- It uses vegetable oil inks that do not include volatile organic compounds.



Fujitsu
Technology and
Service Vision
Website

April, 2016

Printed in Japan
FV0034-2