

Development of People and Places for Accelerating Digital Businesses, and the Front Lines of Co-Creation

Connected Services: Aiming for the Co-Creation of Value with Our Customers

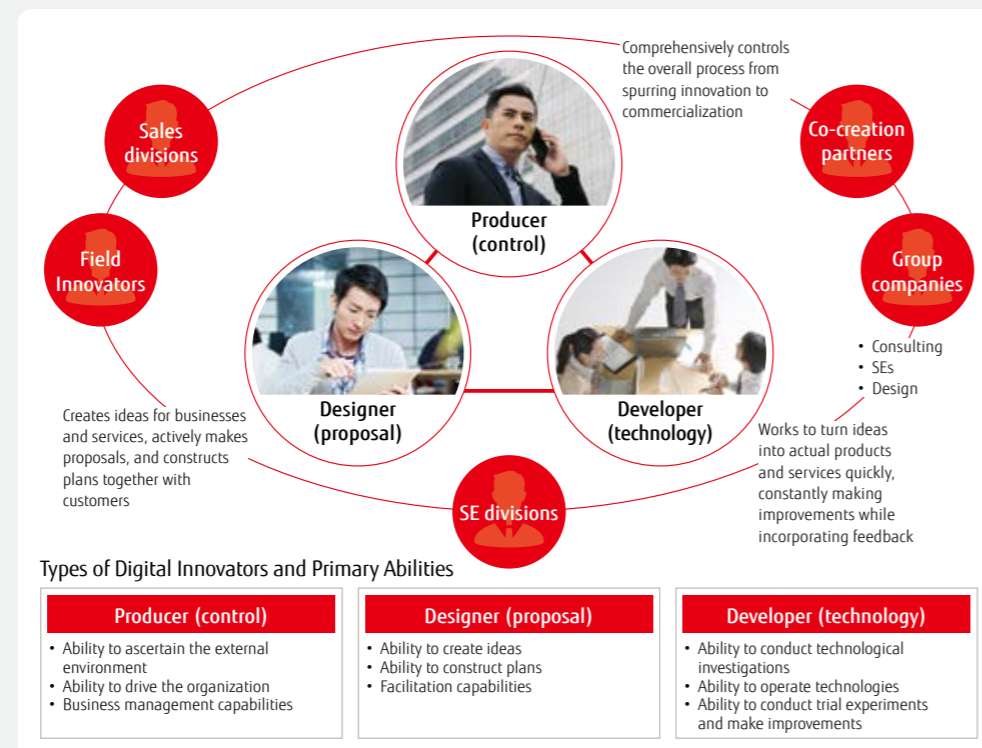
In recent years, amid the progression of innovation through digital technologies that transcends industries, the role our customers expect ICT to play has undergone a sea change, going well beyond the traditional role of enhancing operational efficiency and resolving already known issues. Our customers now expect ICT to realize new business creation and management transformation.

With a firm grasp of these new expectations, we have been promoting business model transformation, focusing our efforts on providing "Connected Services" that go beyond the boundaries of Systems of Record (SoR), which are systems for recording and storing a broad range of internal corporate information, and Systems of Engagement (SoE), systems that help realize digital transformation. We are currently aiming to make a significant contribution to the business processes of our customers by combining our long-cultivated and extensive know-how with our IoT, AI, and other cutting-edge technologies in order to realize the co-creation of value together with our customers.

Digital Innovators: Playing the Role of Co-Creation Promoters

Our Global Services Integration Business, which has approximately 30,000 systems engineers (SEs), is the largest such business in Japan and boasts a solid track record in system integration (SI) services. In January 2017, within the Global Services Integration Business we established the Digital Front Business Group (BG), which specializes in promoting digital businesses. The core members of this BG comprise digital innovators who make full use of digital technologies to pursue co-creation with our customers.

Our digital innovators possess the knowledge, skills, and mindset needed to pursue digital businesses. These personnel promote digital businesses by collaborating with our customers in everything from providing consulting services and creating ideas to developing, implementing, and verifying services and creating new value. The role of our digital innovators is divided into three types: producers, who take the lead in overall co-creation activities by maintaining close communication with customers; designers, who create ideas for new businesses and services; and developers, who turn ideas into prototypes to complete the creation of services while reflecting feedback received from customers' frontline operations. While drawing on their individual expertise, these three types of digital innovators bring together and mobilize the Group's human resources and technological assets, including internal SEs and external partners, to form the optimal team for each project.



Cultivating Digital Innovators at "Digital Bootcamp"

In fiscal 2017, we started a program nicknamed "Digital Bootcamp" in a Groupwide effort to cultivate digital innovators. The Digital Bootcamp gathers together elite personnel with various backgrounds, including not only SEs but also middleware engineers and sales staff, who participate in training sessions over the course of three to six months. In the initial year of Digital Bootcamp, we cultivated approximately 200 digital innovators. Going forward, we aim to nurture a total of 1,000 digital innovators by the fiscal 2019 year-end.

Digital Bootcamp is a training program that enables participants to acquire knowledge on the latest digital technology trends and design thinking. In addition to lectures given by engineers from inside and outside the Group, entrepreneurs, and IT analysts, one major characteristic of Digital Bootcamp is its incorporation of practical learning exercises, such as ideathons*¹ and proof of concepts (PoC).^{*2} In addition to classroom lectures and exercises, Digital Bootcamp provides opportunities for participants to understand the speed at which the frontline operations are carried out, including through participation in the projects of the Digital Front BG, on-the-job training in relevant Group divisions to acquire technological know-how, and secondment to external venture companies.

*1 A term derived from the combination of "idea" and "marathon." An ideathon is a formal training event in which groups brainstorm ideas regarding a particular problem and work to resolve it.
 *2 Proof of concept is a demonstration that verifies the feasibility of new ideas, theories, and principles.



Stimulating Innovation at Venues Where Diverse People Interact

Together with cultivating people to oversee co-creation, we also establish places to pursue co-creation with our customers. FUJITSU Digital Transformation Centers (DTCs) have been established in Tokyo and Osaka as well as in New York City, Munich, and London, and are intended to promote co-creation geared toward digital technologies. DTCs function as workshops where we work with our customers to tackle the array of issues that they face, using cutting-edge technologies for digital transformation to innovate workstyles and create new businesses.

Open Innovation Gateway (OIG), which was established in June 2015 in the San Francisco Bay Area on the Company's 80th anniversary, functions as our gateway to open service innovation. OIG provides a venue for collaboration between relevant customer and internal divisions and a wide range of organizations that are active in Silicon Valley, including government agencies of various countries, universities and research institutions, experts, business operators, and progressive start-up companies, with over 3,300 people visiting OIG since its establishment. Digitization continues to proceed on a global scale, and OIG has received requests from the management of numerous customer companies. It has been implementing projects related to the pursuit of new business domains and the transformation of existing businesses.



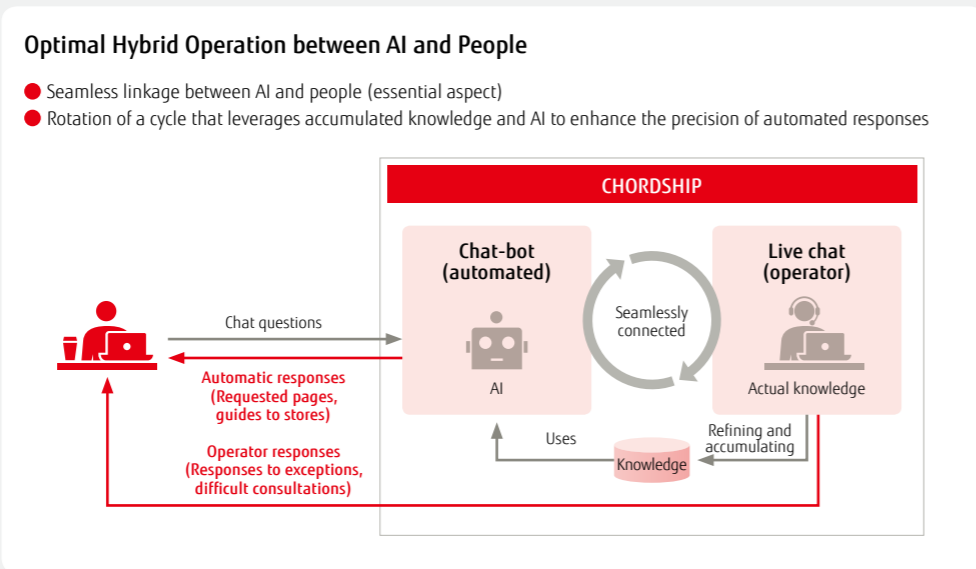
**CHORDSHIP:
Integrating Business
Understanding and
AI Technologies**

The Customer Engagement Solution CHORDSHIP was launched by the Company in November 2017, and is a result of the co-creation activities carried out by the Digital Front BG.

CHORDSHIP is a solution that centers on a chat-bot,^{*3} which enables automatic response at contact centers and help desks. This chat-bot is equipped with hybrid communication and machine learning AI technologies, allowing it to provide highly precise answers by narrowing down the content of questions based on the FAQ information of call centers and help desks. Unlike deep learning AI technologies, this hybrid technology does not require the acquisition of a large volume of training data, making it possible to introduce in a short period of time.

CHORDSHIP is about more than just providing software; it is a solution that starts with consulting about the use of chat-bots, as well as their introduction, development and operation. It also can be operated in a hybrid fashion that links the response by the chat-bot and contact center operators. Based on the Group's experience in managing the contact centers of over 600 companies, CHORDSHIP helps improve contact center efficiency by integrating our skills and knowledge related to business operation and AI technologies. In addition, CHORDSHIP helps create new communication channels through the digitization of customer relationships.

*3 A term derived from the combination of "chat" and "robot," a chat-bot is an automatic conversation program that utilizes AI.



**A Customer- and
Design-Oriented,
Agile Development
Approach to
Solutions**

What makes CHORDSHIP an excellent example of the kind of digital business the Company is aiming for is the fact that it is a solution that was created through an SoE-type business model, which involves the co-creation of value with our customers. The development process for CHORDSHIP involved three major aspects.

Responding to customer needs was the foremost impetus for service development. Winning the business of customers that were enthusiastic to work with Fujitsu to create solutions that address issues facing their frontline departments and generate new value was what spurred us on to commence development of CHORDSHIP. From the moment of the project's launch, the development team was keenly aware that the project's purpose was not the utilization of cutting-edge technologies but rather the creation of solutions and services together with customers—a "customer-oriented" approach that can resolve the management issues they face.

The second part of the process was development based on a "design-concept" approach. A design concept is a methodical process that entails systemizing design sensibilities and methods in a manner that makes them applicable in business. This process starts with considering an overall vision for a product or service based on empathy with the user and repeatedly brainstorming, verifying, and evaluating ideas to reach this vision while making constant improvements. Accordingly, design conceptualization garners significant attention as an effective method for turning ideas into actual

products and services. In the development of CHORDSHIP, we established a clear vision for the kind of product we wanted to create, examining all kinds of aspects from market trends and needs, product appeal, and means of differentiating ourselves from competitors to delivery times, price, and business plans. Ways to achieve our vision were repeatedly examined using design concept-based thinking.

Thirdly, an "agile-development" approach was applied, in which we submitted temporary results from CHORDSHIP's development during the middle stages of the development process and worked to complete the service by communicating with our customers. Through agile development, we examined features that would bring us closer to resolving various issues while confirming customer needs and conditions on the front lines, subsequently creating and recreating prototypes. By doing so, we repeated a cycle in which we carried out verification activities based on actual data. This, in turn, enabled the extremely prompt completion of the service.

Customer Oriented	Design Concept	Agile Development
<ul style="list-style-type: none"> Acquire customers willing to take on challenges with us as our partner Keep a close eye on needs and issues on the front lines 	<ul style="list-style-type: none"> Begin from a sense of empathy with customers (users) Create a vision Brainstorm ideas Repeat inspection and evaluation activities 	<ul style="list-style-type: none"> Examine features to address issues and needs Create prototypes Verify based on actual data Carry out inspection and evaluation activities with customers Repeat the above through a rapid cycle while constantly making improvements



**Promoting Digital
Businesses as
Social Innovation**

A design-concept approach is synonymous with our "Human Centric Innovation," a key tenet of the Company. Human Centric Innovation is a process in which we create new businesses and innovation for society by empowering people through cutting-edge technologies. In addition, design conceptualization relates closely with social innovation, which involves tackling issues faced by our customers and society through our business.

One major driving force behind the introduction of our digital innovator system was the social contribution activities we had conducted as a company, including measures to take during times of a large-scale disaster. In particular, during the Great East Japan Earthquake of 2011, a project team created four days after the earthquake and dispatched to areas impacted by the disaster came up with ideas for new services to meet needs and address conditions in disaster-stricken areas. These ideas were then molded into specific services, such as the establishment of a system that could summarize the conditions at evacuation centers and upload the information to a cloud environment in which the information could be shared between national government agencies, local governments, and NPOs. They also added a feature to this system that enabled medical institutions on the front lines to share patient conditions and information on any medication patients were taking. The engineering experience we gained through this process became the prototype for our "Connected Services," which we are currently promoting.

Going forward, we will leverage the strengths that provide us with a competitive edge, including our insight into customer businesses and operations, cultivated through our track record of reaching the No. 1 share of Japan's SI business, and our digital technologies. At the same time, we will make full use of our integration capabilities, which combine various corporate and individual ideas, skills, and specialties with our expertise. In this way we will further accelerate our digital businesses.