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DOCOMO's Vision

Sustainability of DOCOMO

Environmental Responsibility

Research and Development, and Innovation

Customer and Community Engagement

Building a Safe and Resilient Society

Diversity and Job Satisfaction

Fair Business Practices

Research and Development, and Innovation

DOCOMO's R&D has been leading mobile scenes not only in Japan but across the world and has consistently created new technologies and services. Our R&D focuses every day on achieving sustainable growth in the 2030s by delivering new value for customers and resolving serious social issues.

Promoting R&D and Innovation	39
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Promoting R&D and Innovation | Promoting Open Innovation | Promoting Process Innovation (Top Gun)

Promoting R&D and Innovation

Basic Policy

Innovation in industry and technology, known as the fourth industrial revolution, is steadily advancing across the world and generating new economic value, particularly in regard to the Internet of Things (IoT), Big Data, artificial intelligence (AI), and robotics. Meanwhile, many social issues have emerged, including a declining birth rate and aging population, as well as adaptation to the new normal. In this social environment, DOCOMO R&D is promoting DX and realizing the IOWN concept by fusing cyberspace and physical space, where humans, things, and experiences in the physical world are digitalized to better predict the future and optimize the real world. Through this approach, we are able to create value such as providing new experiences, higher efficiency, optimization, improved productivity, as well as safety and security. DOCOMO is conducting research and development specifically in the following fields.

> 1. AI connecting a variety of data, predicting the future, and gaining knowledge
> 2. 5G and 6G connecting everyone and everything everywhere
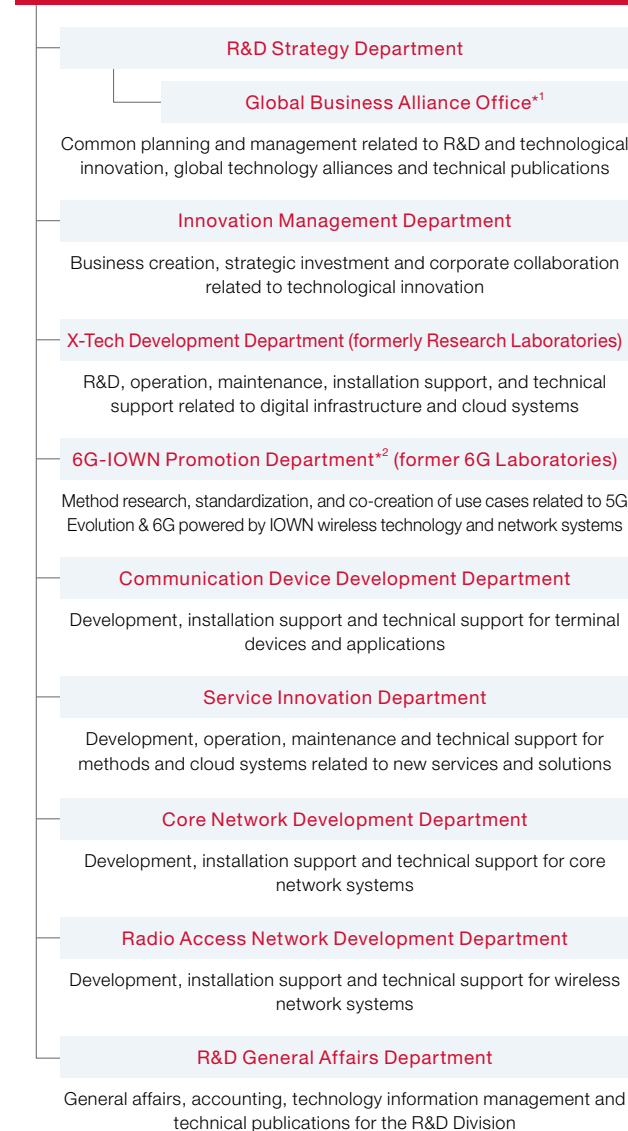> 3. IoT and devices gathering information and providing an extensive range of feedback

In addition, we are accelerating open innovation with external corporate partners. Through these activities, we will achieve social and industrial development through information and communication technology (ICT) while resolving social issues and providing new value for customers and our partner companies.

R&D System

DOCOMO's R&D on mobile communication systems and new products and services is primarily carried out at the Yokosuka Research Park. The R&D Division leads our efforts, while the R&D Strategy Department is responsible for overall supervision. Every R&D division collaborates with other divisions as part of our ongoing R&D activities and to further enhance the Group's devices, networks, and services. We also jointly develop technologies for devices and networks with major manufacturers. In regard to R&D for services, we focus on realizing new services conceived by business divisions while promoting an open innovation strategy that maximizes our diverse relationships with external entities. We publicize the results of our R&D efforts, such as for new technologies, in many ways, including strategic announcements to the media.

In response to global technological innovation, we have established R&D bases in the U.S., Germany, and China. These bases particularly contribute to international standardization activities for 5G and virtual network technology in collaboration with the R&D Division at the DOCOMO head office. In addition, DOCOMO, DOCOMO Innovations, Inc., and the Silicon Valley branch of NTT DOCOMO Ventures, Inc. collaborate with and invest in startup ventures in North America in order to invest in startups possessing advanced, innovative technologies that are applicable to mobile communications services.
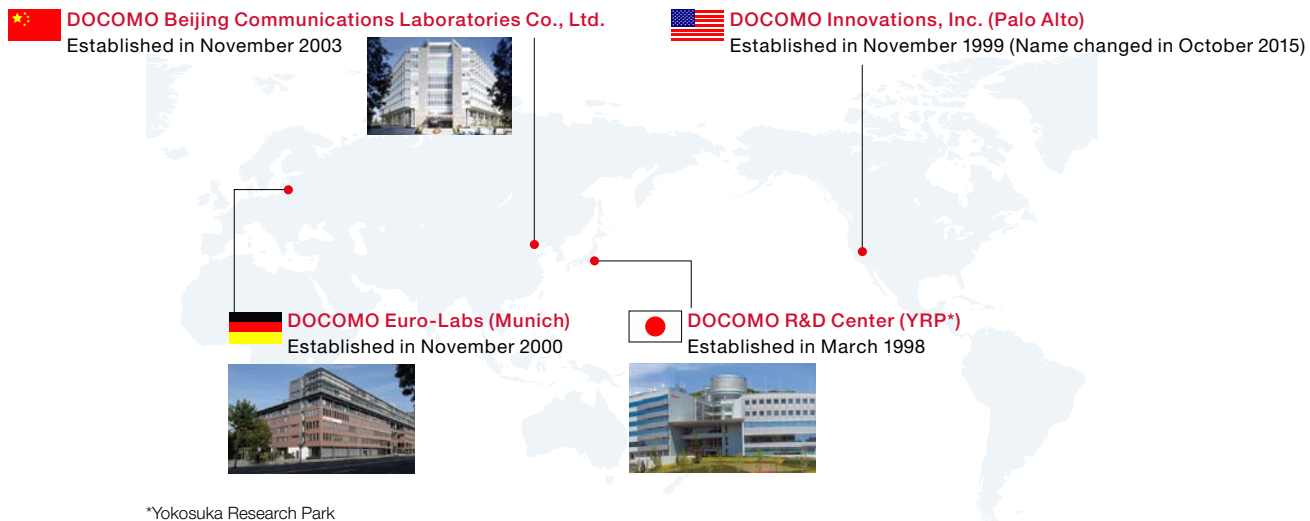
R&D Innovation Division

R&D Strategy Department

Global Business Alliance Office[1]

Common planning and management related to R&D and technological innovation, global technology alliances and technical publications

Innovation Management Department

Business creation, strategic investment and corporate collaboration related to technological innovation

X-Tech Development Department (formerly Research Laboratories)

R&D, operation, maintenance, installation support, and technical support related to digital infrastructure and cloud systems

6G-IOWN Promotion Department[2] (former 6G Laboratories)

Method research, standardization, and co-creation of use cases related to 5G Evolution & 6G powered by IOWN wireless technology and network systems

Communication Device Development Department

Development, installation support and technical support for terminal devices and applications

Service Innovation Department

Development, operation, maintenance and technical support for methods and cloud systems related to new services and solutions

Core Network Development Department

Development, installation support and technical support for core network systems

Radio Access Network Development Department

Development, installation support and technical support for wireless network systems

R&D General Affairs Department

General affairs, accounting, technology information management and technical publications for the R&D Division

[1] Established in July 2021
[2] Reorganized in July 2021

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🇨🇳 **DOCOMO Beijing Communications Laboratories Co., Ltd.**
Established in November 2003

🇺🇸 **DOCOMO Innovations, Inc. (Palo Alto)**
Established in November 1999 (Name changed in October 2015)

🇩🇪 **DOCOMO Euro-Labs (Munich)**
Established in November 2000

🇯🇵 **DOCOMO R&D Center (YRP*)**
Established in March 1998

*Yokosuka Research Park

Changes in R&D Expenses and Number of R&D Employees

Since the late 1990s, we have maintained a workforce of between 900 and 1,100 researchers in R&D and spent between 80 billion yen and 100 billion yen annually since the year 2000. We continue to lead in the global mobile communications business and provide innovations that represent the backbone of sustainable development.

(billion yen) —— R&D expenses —— Researchers (number of employees)

123

89

1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 (FY)

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[Innovation Chain]
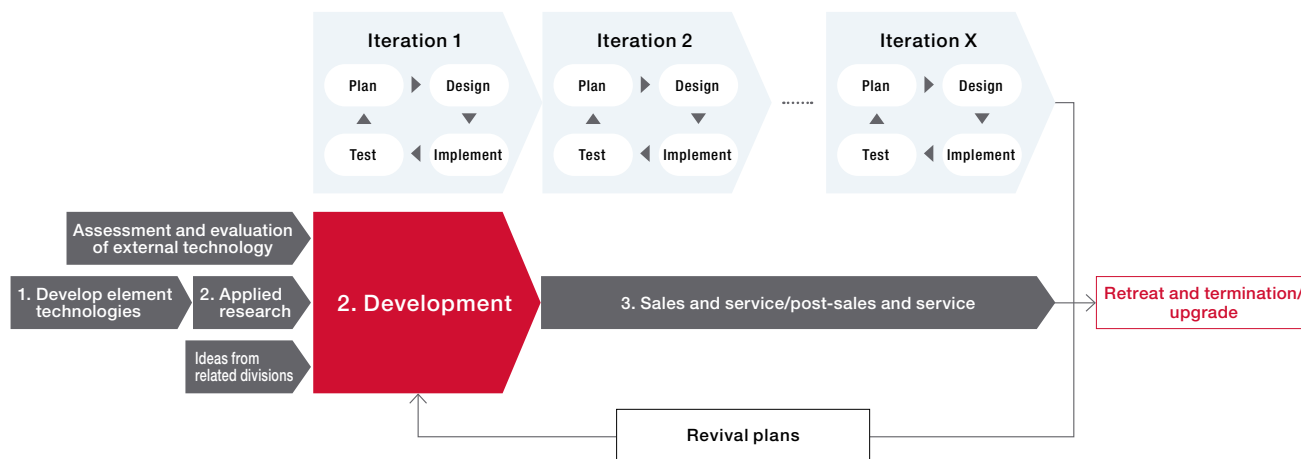
❶ Develop Element Technologies

DOCOMO, as a major operating company of the NTT Group, supports NTT's R&D system for basic technologies. The R&D divisions of NTT and DOCOMO closely cooperate in research to ensure that DOCOMO's business activities benefit from technological achievements made through these efforts. As an example, the laboratories of the holding company conducted basic research on voice recognition and intention interpretation technologies, which were then moved to the applied R&D phase at DOCOMO, leading to the recent creation of new services.

❷ Applied Research and Development

In the area of infrastructure, we engage in technological exchanges with major overseas operators, centered on the 6G-IOWN Promotion Department, and formulate strategies in response to external trends. We are consequently contributing to the establishment of global standards and leading the industry in ecosystem-related efforts by conducting proof of concept (PoC) experiments with major manufacturers. Even as we play a role in advancing this industry, we also ensure that we maintain competitive advantages in developing our own businesses. Furthermore, the Core Network Development Department and the Radio Access Network Development Department are heading up our joint development with major manufacturers to provide equipment and systems with internationally competitive functions.

As for services, concepts created by the business divisions are taken up by the Service Design Department to develop system infrastructure, while the Communication Device Development Department develops applications installed on the device. The Innovation Management Department is responsible for creating businesses related to technological innovation, extending strategic investments, and bolstering collaboration with other companies.

The Service Innovation Department develops element technologies and operates cloud systems related to new services and solutions utilizing AI and big data. It also establishes infrastructure and provides technical support to promote Group-wide data utilization. The X-Tech Development Department works closely with the business divisions to develop a technological platform that meets business needs.

As we create services, we accelerate the pace of their introduction to markets and increase their value by incorporating element technologies developed by NTT and the latest technologies developed elsewhere, in addition to DOCOMO's own technologies. We are also striving to further expand into new markets for services based on DOCOMO technologies.

❸ Sales and Service and Post-Sales and Service

Related divisions at DOCOMO actively present proposals that reflect social conditions, trends in technological development, and circumstances at shops as well as ideas for improvement from shops and the results of exchanges with external companies and customer marketing activities. We convene screening meetings as part of our deliberations to launch new services. This cross-sectional meeting structure allows for our quick holistic decision-making.

After sales and services are launched, each business promotion division closely monitors their status and formulates revival plans for those that appear unlikely to meet their initial targets.

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Promoting the Creation of Innovation

To accelerate the development of services that address social issues, we generate innovation by starting small. As the challenges faced by society and customers become increasingly diverse and complex and business competition intensifies, it has also become more important to identify underlying issues and needs by studying the frontline of our business, quickly develop solutions, and make business profitable. Applying this small start method allows us to reach the commercial trial stage more quickly than by using a standard development process and more rapidly develop businesses that address social issues.

In-House Venture System

The DOCOMO Group's In-House Venture System serves as a means for encouraging the creation of new businesses by supporting employees who aspire to set up and manage an enterprise based on their own business concepts or technology. Business ideas submitted by employees are screened, and DOCOMO invests in those that have passed the screening by establishing a company led by the employee who came up with the idea. During the screening process, the business idea is honed with the support of external mentors by conducting market analysis and verifying potential issues. Once a venture is set up, it continues to receive support from relevant departments of the DOCOMO Group as it seeks to grow. This system is intended to create businesses that stimulate synergies and impact DOCOMO Group businesses.

New Business Creation Programs

To promote innovation within the Company, DOCOMO takes on challenges to create new businesses such as launching and providing new services through the implementation of the 39works program, which is centered on R&D employees, and the docomo LAUNCH CHALLENGE program, a new business proposal program that welcomes applications from all DOCOMO Group employees.
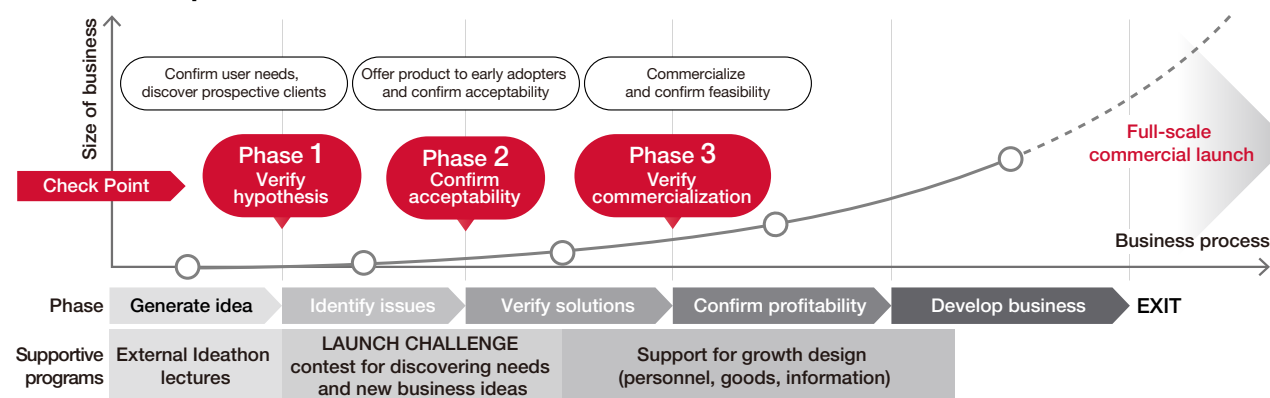
» 39works

Based on an open innovation strategy that leverages diverse relationships with external entities, the 39works program organizes joint projects with external partners and collaboratively implements the entire process from planning and development to operations and maintenance. The program is intended to support the quick start of small businesses and nurture them through continuously improving service quality in accordance with the market and public response through a high-speed PDCA approach. We launched four new services and started to provide three of them in fiscal 2021.

» docomo LAUNCH CHALLENGE

docomo LAUNCH CHALLENGE is an initiative for commercializing new business ideas with advice from a diverse group of mentors, each representing specialized areas of strength, such as entrepreneurs and designers, based on insights gained from 39works. All employees of the DOCOMO Group can apply. Each idea goes through a stage of considering which issues could be resolved by the business, verifying the real need, and determining the optimal solution while also reconfirming based on market feedback at every step. The ultimate goal is to encourage every employee to rise to the challenge of creating businesses that will have an impact on society and generate new revenue for DOCOMO. In fiscal 2021, there were 141 applications, and verification is underway toward commercializing some of these projects.

[Process of 39works]

Size of business

Confirm user needs, discover prospective clients | Offer product to early adopters and confirm acceptability | Commercialize and confirm feasibility

Check Point

Phase 1 Verify hypothesis | **Phase 2** Confirm acceptability | **Phase 3** Verify commercialization

Full-scale commercial launch

Business process

Phase	Generate idea	Identify issues	Verify solutions	Confirm profitability	Develop business	EXIT
Supportive programs	External Ideathon lectures	LAUNCH CHALLENGE contest for discovering needs and new business ideas		Support for growth design (personnel, goods, information)		

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Intellectual Property Initiatives

We are continuing to expand our intellectual property assets to increase the domestic and international competitiveness of our business.

For example, DOCOMO has promoted the research and development of technologies for upgrading its networks such as W-CDMA, LTE, LTE-Advanced, 5G, and 6G, as well as technologies related to new services such as AI and IoT, with the ultimate goal of enhancing mobile experiences for customers.

As a result of encouraging patent applications for these technologies, as of March 31, 2022, DOCOMO holds around 4,000 patents in Japan and 9,000 overseas.

[Patent Applications]

Number of patent applications in Japan: 1,079

Technologies related to new services
19%

5G
78%

Core network
3%

Technologies related to advanced network
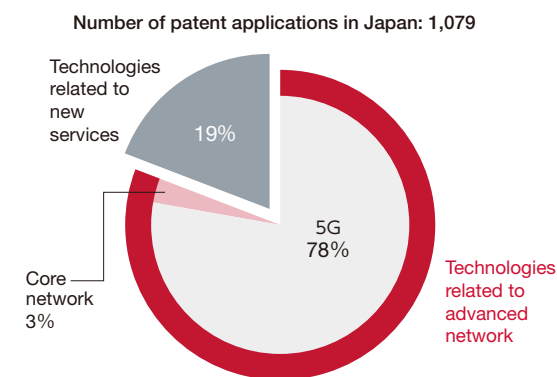
⬏ DOCOMO's intellectual property

Promoting Open Innovation

DOCOMO is seeking to transition from a conventional mobile communications company into a Value Co-Creation Company. It possesses diverse business assets such as its mobile networks and customer base, secure settlement systems, and customer referrals. We believe that we can create new businesses by making these assets available to partners with expertise and knowledge, and this in turn will lead to the co-creation of new social value.

We will particularly focus on 5G, AI, and IoT, promoting co-creative innovation by applying various mechanisms to the technologies of DOCOMO and its partners to create new value for customers while also seeking to address social issues. In the process of creating new businesses, we identify challenges facing customers, including social issues, and conduct trials with customers before commercializing the business and seeking growth. We offer diverse mechanisms for co-creative innovation, such as 39works ( ), in which we nurture an idea from the ground up by conducting verification and commercialization with our business partners, and Top Gun ( ), in which we proceed with verification and product development with our corporate customers.

As part of this initiative, the DOCOMO 5G Open Partner Program®, launched in February 2018, has been driving the development of new applications with a broad range of partners since the start of the 5G era, so that customers can keep enjoying innovative 5G services.
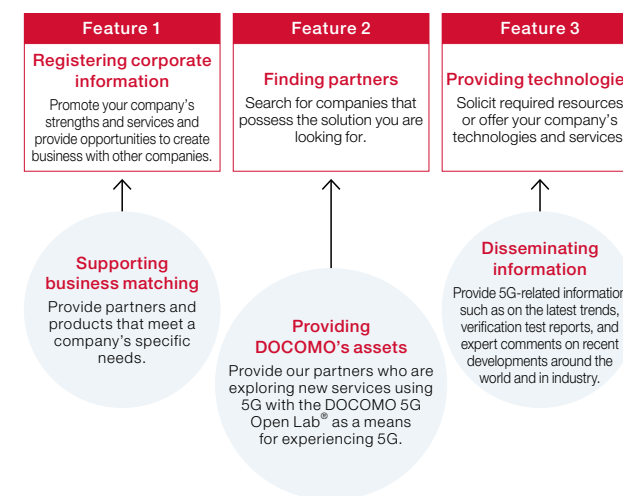
» DOCOMO 5G Open Partner Program

As of June 2022, more than 5,300 partners have joined this program, which provides opportunities for co-creation through 5G. Furthermore, for participating companies and organizations, we established DOCOMO 5G Open Lab®, a permanent testing environment for 5G technology with 10 locations in and outside Japan. We have also launched DOCOMO 5G DX Square as a space for experiencing solutions

with advanced technologies such as 5G, video AI, XR, and robotics, to drive DX and innovation through co-creation with businesses that support local industries. As of July 2022, there are 53 DX Squares nationwide, and some are promoting collaboration with partner business sites. Furthermore, we constructed Beyond MEC as a testing environment connected to a cloud infrastructure. We are forging ahead with initiatives for creating new 5G applications in collaboration with a wide range of partners.

Under the DOCOMO 5G Open Partner Program®, we conduct online seminars to introduce the 5G solutions we have launched. The seminars introduce specific examples of business matching and the creation of solutions for participants to grasp the key points for co-creating business. We also hold the docomo 5G DX AWARDS® to promote the creation of new co-creative 5G solutions.

[What you can do with the DOCOMO 5G Open Partner Program®]

Feature 1	Feature 2	Feature 3
Registering corporate information	**Finding partners**	**Providing technologies**
Promote your company's strengths and services and provide opportunities to create business with other companies.	Search for companies that possess the solution you are looking for.	Solicit required resources or offer your company's technologies and services.

Supporting business matching
Provide partners and products that meet a company's specific needs.

Providing DOCOMO's assets
Provide our partners who are exploring new services using 5G with the DOCOMO 5G Open Lab® as a means for experiencing 5G.

Disseminating information
Provide 5G-related information such as on the latest trends, verification test reports, and expert comments on recent developments around the world and in industry.

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≫ docomo 5G DX AWARDS

We have been holding docomo 5G DX AWARDS® since fiscal 2020. The competition invites companies to apply their technologies, product devices, and services to co-create new business by working together.

In fiscal 2021, we selected 36 themes, 3 social issues for each of the 12 industries, and invited applications representing unique assets possessed by each company. Furthermore, we reviewed and awarded applications that offer valuable 5G services. Two of the prize winners, DataMesh Director and Buddycom, were commercialized as 5G solutions.

In fiscal 2022, the third competition will be held under the theme of the SDGs. We will uncover assets held by companies and use 5G mobile communication to accelerate creation of solutions for contributing to achieving the SDGs in various industries.

Co-creation with Ventures

Considering future social environments and industry trends, DOCOMO is assisting with the growth of venture companies through investments and supporting co-creation via the Group subsidiary DOCOMO Ventures, Inc.

As for investments, we are making strategic investments in anticipation of generating synergies with our business toward realizing the New DOCOMO Group Medium-term Strategy announced in October 2021. In addition, looking into the future beyond the medium-term strategy, we are operating DOCOMO Innovation Fund III, L.P. of 15 billion yen, established in April 2022, to build relationships with promising startups inside and outside Japan that have the potential to create a new world.

In terms of supporting co-creation, for the purpose of strengthening contact points with entrepreneurs, we have provided a coworking space and key follow-up support such as incubation programs. We have selected and supported 23 seed, or early-stage, startups. Moreover, we hold periodic

business seminars for startups and match our businesses with those of ventures, support co-creation by promoting exchanges between our employees and entrepreneurs, and support young entrepreneurs.

One of the activities for supporting co-creation in fiscal 2021 was the expansion of a video viewing experience in the 5G era. The growing demand for the remote and casual sharing of highly realistic videos requires the development of an optimal system by integrating various aspects, such as content and devices. Since it was essential to co-create with business partners, we established a partnership for providing effective solutions to customers by combining venture assets with our infrastructure.

Co-Creation with External Partners

≫ Lifestyle Co-Creation Lab

In September 2021, we launched the Lifestyle Co-Creation Lab to realize a well-being society where everyone can shine, engage in mutual support, and have ample opportunities to explore their abilities.

Under the initiative, DOCOMO will utilize the multiple technologies it has researched and developed, combine them with the technologies and assets held by DOCOMO and business partners, verify the value of the technologies, and hone them to create new lifestyles to enrich and add convenience to daily life. Together with our partners, we will specifically leverage the Innovation Co-Creation Platform, which will make the technologies of DOCOMO and NTT Laboratories accessible to various industries, accelerate development, and create new value across industries.

≫ Examples of Initiatives

- New fashion experience using virtual technology for Generation Z
- Improving peoples' lives through the use of regional apps (Kaihin Makuhari area, Chiba City)
- Smart city initiative with Kobe City
- Promote migration to and tourism in Goto City
- Demonstration test using AI for preventive healthcare services for the elderly in Toyota City
- Promoting city development DX by advancing Mobile Spatial Statistics
- Virtual Ginza
- Open Innovation Office

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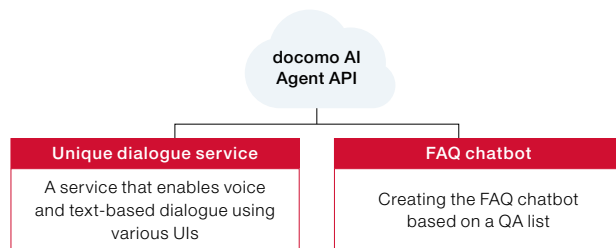
Promoting R&D and Innovation | **Promoting Open Innovation** | Promoting Process Innovation (Top Gun)

Commercial Provision of the docomo AI Agent API

DOCOMO has been providing corporate customers with the interactive AI service, docomo AI Agent API®, which is also used for DOCOMO's "my daiz." Creating a scenario for each purpose enables contextual Q&A services and a natural dialogue with users. In addition, the interactive original agent created through this service incorporates voice recognition, natural language processing, and voice synthesis, enabling voice dialogue for users.

[How the docomo AI Agent API Works]

docomo AI Agent API

Unique dialogue service

A service that enables voice and text-based dialogue using various UIs

FAQ chatbot

Creating the FAQ chatbot based on a QA list

Through this service, we provide the docomo AI Agent API Partner Program to promote new dialogue-based solutions in collaboration with partner companies, creating dialogue services that provide new experiences for end users, and forge win-win business relationships with partners. For example, in the case of multi-language translation, DOCOMO's service to automatically translate a Japanese scenario into foreign languages is enabled through collaboration with an outside partner that offers this service. We will realize AI agents to familiarize users with the diverse services offered by partners through natural communication supported by AI to deliver benefits, satisfaction, and security for every customer.

docomo AI Agent API

Partner

World of dialogue realized by docomo AI agent API

Partner | Partner | Partner | Partner | ⋯⋯ | Partner

docomo

Commercial Provision of docomo MEC*1

We are providing docomo MEC™, a service using computing facilities (hereinafter, MEC platform) connected to DOCOMO's network that realizes low latency. In addition to compatibility with 5G SA and realizing low latency access using MEC Direct™, it is equipped with technologies such as the image recognition API*2 developed by DOCOMO and also 12 solutions, including video transmission, VR, and AR, provided by DOCOMO and its partners.
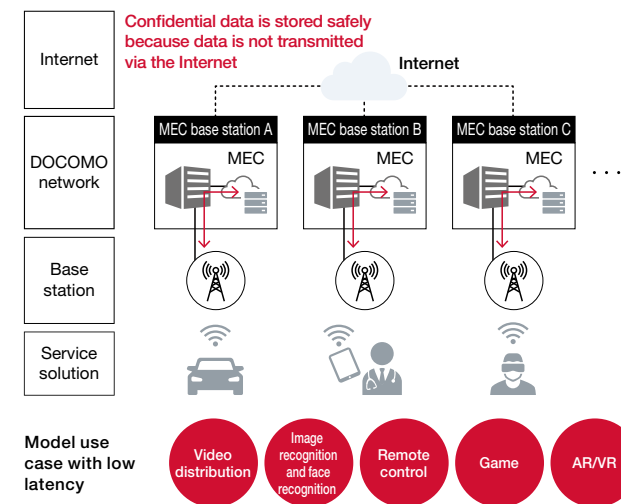
MEC platforms were set up in five additional locations across the country by May 2022, bringing the total number of bases that offer low latency DOCOMO network service to nine. This has enabled access to low-latency, high-security networks to places as needed in a way that addresses regional challenges.

Going forward, we will gradually expand the solutions installed in the MEC platform to contribute to the creation of new value and resolution of social issues.

*1 The service was offered under the name docomo Open Innovation Cloud® until the end of June 2022.
*2 Part of the image recognition technology constitutes AI corevo® of the NTT Group.

High Security Realized by Low Latency and Closed Network with Cloud Direct

Internet

Confidential data is stored safely because data is not transmitted via the Internet

Internet

DOCOMO network

MEC base station A — MEC
MEC base station B — MEC
MEC base station C — MEC
⋯

Base station

Service solution

Model use case with low latency

Video distribution | Image recognition and face recognition | Remote control | Game | AR/VR

* MEC Direct can be used at the following 9 MEC base stations: Tokyo, Kanagawa, Osaka, Oita, Tohoku, Tokai, Hokuriku, Chugoku, and Shikoku (Tohoku base station to start operation soon).

docomo R&D Open House

We hold docomo Open House every year to showcase the Company and the NTT Group's latest technologies and solutions.

In fiscal 2021, "docomo Open House'22" was held in a hybrid style with 11,892 people participating online and 2,506 in person.

The event featured a variety of programs, including initiatives from various domains, such as 5G/6G, AI, and XR technologies and solutions for smart city, workstyle reform, and globalization. In addition to the 233 initiatives introduced online and 102 introduced on-site, nine lectures were distributed

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online to present the newest initiatives or discuss co-creation. We also indicated the specific SDGs linked to all exhibits, to convey how each contribute to the achievement of the SDGs.

This event represents a key opportunity to strengthen our collaboration with various partners because of its broad appeal to stakeholders associated with our efforts to improve added value for customers and create social value through DOCOMO and the NTT Group's initiatives.

## Topic   5G Open RAN Ecosystem (OREC)

Open RAN is a radio access network that allows devices and systems of various vendors to interconnect via standardized, open-specification wireless base stations.

OREC was launched in February 2021 as a project by DOCOMO and 12 global vendors to promote the dissemination of open RAN. As of June 2022, 13 vendors are involved in the project. DOCOMO is taking on the leading role given its achievement in making its LTE adaptable to diverse vendors.

DOCOMO launched the world's first, nationwide, open RAN 5G service. In February 2022, it rolled out Shared Open Lab, a service that allows overseas carriers access to DOCOMO's verification environment from outside Japan.

OREC will facilitate flexible wireless access networks to be built in various countries and regions and help realize a prosperous future that leaves no one behind, in addition to normalizing the price of the device and providing a stable communication environment.

[5G Open RAN Ecosystem]
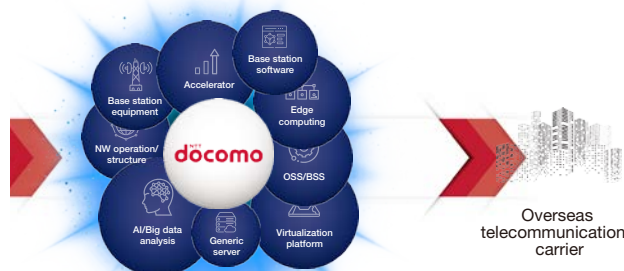
Topic   Remote Medical Support

We are advancing demonstration tests for remotely assisting and guiding surgeries with the hinotori™ Surgical Robot System, the first, made-in-Japan system of its kind, by capitalizing on our 5G network and cloud platform. We are working hand in hand with Kobe University, Medicaroid Corporation, and Kobe City to accomplish full remote robotic surgery in the future. Along with our partners, we have also launched demonstration tests on an endoscope image simultaneous remote viewing system and an ECMO vehicle assistance system that use 5G, a cloud platform, and a high-resolution real-time video transmission system, to help resolve regional health disparities in addition to developing next-generation medical solutions.

Topic   XR World, a Multi-device Metaverse

In March 2022, DOCOMO launched XR World, a multi-device metaverse that allows users to readily experience various content in a virtual space. Accessible from multiple devices, it is one of the projects the NTT Group is developing under the new NTT XR brand.

In XR World, people can communicate with each other using avatars while enjoying a wide variety of content such as music, anime, dance, sports, education, and sightseeing. Users can easily access the metaverse from a smartphone, tablet, or PC via a web browser, without having to download an app. Most of the content is offered free of charge and does not require a special head-mounted display (HMD). We will expand the content and functions by cooperating with various partners. Through the metaverse, we will offer customers a new communication culture, uniquely possible in virtual space, while contributing to diverse industries focused on XR.
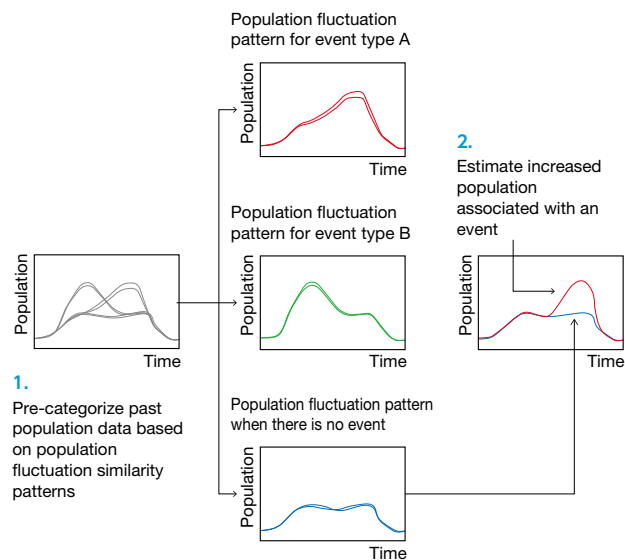
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Topic — **Technology Forecasting Train Station Congestion**

In August 2021, DOCOMO announced it has developed a technology for forecasting train station congestion, including the level of congestion after an event. By developing a model that shows the relationship between the estimated number of people getting on and off at a station during past events, population distribution data, as well as weather information, and applying AI, the technology can predict the number of people who will use a station even if the event is being held for the first time.

[Event Participant Population Extraction Technology]

Population fluctuation pattern for event type A

Population fluctuation pattern for event type B

Population fluctuation pattern when there is no event

1.
Pre-categorize past population data based on population fluctuation similarity patterns

2.
Estimate increased population associated with an event

Topic — **Platform for Human Augmentation as 6G Use Case Early Development**

To create new value in the 6G era, DOCOMO developed the world's first platform to materialize human augmentation, a technology that enhances human sensing and activity through the use of networking. The announcement was made in January 2022. We hope to realize a "ubiquitous body" and "skill sharing" by sharing the natural movements of people with different physical features with robots, re-creating delicate movements based on big motions, and making skillsets downloadable through the platform.

We expect to realize a network speed that is faster than nerve impulses by taking advantage of ultra-low latency, a feature of 6G technology, and then connect brain and body information to the network and expand human senses through it.

The platform realizes human augmentation by optimizing and transforming information about human muscle movements obtained from a sensing device into physical movements.

↗ Developed a platform to materialize human augmentation, a new value provided in the 6G era. (in Japanese only)

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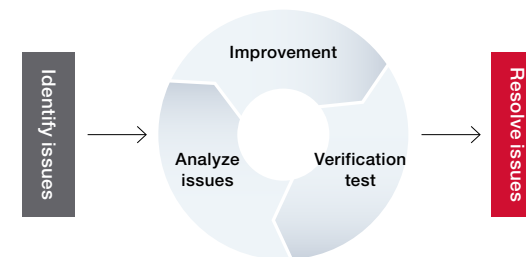
Promoting Process Innovation (Top Gun)

We promote the Top Gun initiative, in which our customers, the R&D, and corporate sales and marketing departments work in concert to address customer challenges by turning DOCOMO's technologies into value for customers. Top Gun collaborations between R&D and corporate sales and marketing are not limited to the departments at the head office. Corporate sales and marketing staff at DOCOMO's regional offices and branches in Japan voluntarily join the initiative to resolve issues faced by local companies and governments. We also set up a system for sharing information about Top Gun nationwide to encourage greater interaction and collaboration between the R&D and corporate sales departments at our regional offices and branches nationwide. We will accelerate the creation of solutions by having R&D members responsible for developing the technology visit customers to make on-the-spot decisions on the relative effectiveness for resolving a particular issue and to present even better solutions. Having R&D staff visit customers together with corporate sales and marketing staff facilitates the connection of needs with potential solutions, with collateral benefits such as promoting process innovation, by quickly and simultaneously verifying and resolving issues, turning technological possibilities into value for customers, and opening the way to solutions for customer challenges by fully applying cutting-edge technologies. We will pursue this initiative to accelerate the pace of co-creation. As of June 2022, we had engaged in 56 projects, of which 16 have been commercialized and 3 are ongoing.

1. Trinity development system to connect issues to technology
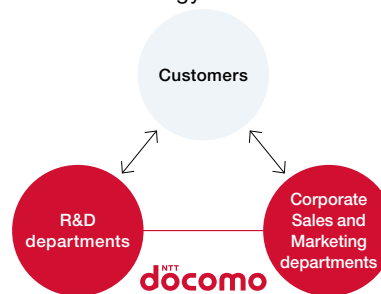
2. Simultaneously verifying and resolving issues

3. Turning technological possibilities into value for customers

Issues and Problems	Solutions	Business Models
Model case	**AI engine**	**Application**
Optimize management of the number of pastured cattle	· Image recognition engine · Japanese Language Training AI · Talking information board, etc.	Business Model A
Accurately predict the number of visitors and optimize the staff shift schedule	**IoT**	Business Model B
Vitalize communication with foreign staff	· Location Net · Sensor programming · Smart Home, etc.	Business Model C
More efficiently manage the location of carts and wheelchairs	**Data analysis**	⋮
⋮	· Big data analysis · Image recognition engine · Sports scene sensing, etc. ⋮	