Designing The Future

KDDI

https://global.kddi.com

KDDI - Global Networks and IT Solutions

Networking, Colocation, System Integration around the world

Designing The Future

KDDI

TELEHOUSE

BUILDING YOUR BUSINESS TOGETHER

KDDI solutions are at the cutting-edge in all fields of information and communications

KDDI, a Fortune Global 500 company, is one of Asia's largest telecommunications providers, with approximately US$45 billion in annual revenue and a proven track record extending over many years and around the world. We deliver all-round services, from mobile phones to fixed-line communications, making us your one-stop solution provider for telecommunications and IT environments. The high praise and trust enjoyed by our TELEHOUSE data centers positioned around the world have kept us at the forefront of service and quality.

Since our establishment in 1985, we have expanded our presence into 28 countries and 62 cities, with over 100 offices around the world supporting the success of our international customers through our high quality services.

KDDI's mobile telephone brand "au" has achieved significant market share in Japan, one of the world's most comprehensive communications markets.

KDDI's relationship with over 600 carriers worldwide enables us to provide high-quality international network services in over 190 countries. Our exciting ventures, built on extensive experience, include entry into the overseas telecommunications business in countries such as Myanmar and Mongolia, as well as investment in the "South-East Asia Japan 2 Cable", which connects 11 locations in 9 countries and territories in Asia. Moreover, as the world moves toward the age of IoT and 5G, KDDI is taking steps to promote IoT business, such as connected cars, support for companies engaged in global business, and the creation of new value for our society.
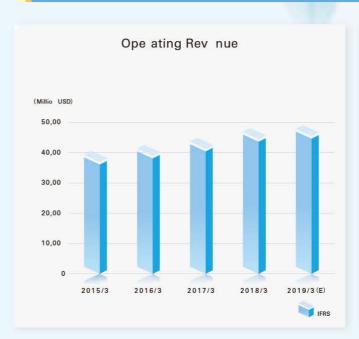
Our contributions to customers' businesses through cutting-edge technologies, seamless networks and a ubiquitous, powerful IT infrastructure will continue to propel us going into the future.

KDDI leading the way in Global Business

- ICT Total Solution
- Data Wholesale
- Global & Regional Network
- International Mobile Business
- Global Data Center — TELEHOUSE
- Solution & Local Support

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KDDI Financial Highlights

Operating Revenue

(Million USD)

Bar chart with years 2015/3, 2016/3, 2017/3, 2018/3, 2019/3 (E). Y-axis: 0, 10,00, 20,00, 30,00, 40,00, 50,00. IFRS

Operating Income / Operating Margin

(Million USD)   (%)

Legend: Operating Income, Operating Margin

Y-axis left: 0, 3,000, 6,000, 9,000. Y-axis right: 0, 6.0, 12.0, 18.0. Years: 2015/3, 2016/3, 2017/3, 2018/3, 2019/3 (E). IFRS

EBITDA / EBITDA Margin

(Million USD)   (%)

Legend: EBITDA, EBITDA Margin

Y-axis left: 0, 4,000, 8,000, 12,000, 16,000. Y-axis right: 0.0, 10.0, 20.0, 30.0, 40.0. Years: 2015/3, 2016/3, 2017/3, 2018/3, 2019/3 (E). IFRS

Capital Expenditures / Depreciation

(Million USD)

Legend: Capital Expenditures, Depreciation

Y-axis: 0, 1,500, 3,000, 4,500, 6,000. Years: 2015/3, 2016/3, 2017/3, 2018/3, 2019/3 (E). IFRS

GLOBAL NETWORK

KDDI provides reliable, trustworthy business support

KDDI's top-class network throughout Asia — along with a global system of affiliates — delivers a seamless network environment tailored to your particular business. As well as global networks, we also provide local network provisioning services and maintenance support within EMEA, the Americas and Asia. To guarantee a reliable and stable network, our Global Network Operations Center in Ho Chi Minh City, Vietnam, provides 24/7 maintenance services for our international network.

KDDI Backbone, Connecting the World

TEA
UNITY
RJCN
EMEA*1
SJC
FASTER
TAT-14
ASIA
AMERICAS

EMEA* ——— ASIA	ASIA	AMERICAS ——— ASIA
KDDI holds capacity on multiple cables giving us the ability to create proposals mixing and matching routes, including the low-latency RJCN cable connecting Asia and Europe.	SJC and SJC2*2, connecting Japan and Singapore, covers the entire Asian region, including South Korea, China, Taiwan, Hong Kong, the Philippines, Brunei, Singapore, Vietnam, Cambodia and Thailand.	KDDI connects Japan and the US using 2 cables — UNITY, with the shortest route, and FASTER, with huge capacity.

*1: Europe, the Middle East and Africa
*2: In service 2020 – planned

Cable Ship KDDI CABLE INFINITY
(In service May 2019 - planned)

Submarine Cable

Diverse Network

KDDI Global IP-VPN

A full mesh global network can easily be built with just local access from each site — by deploying KDDI's Global IP-VPN to over 190 countries. The security and high quality of our IP network services deliver extensive scalability and flexibility, resulting in speedy development of global networks tailored to your business. Using highly secure MPLS technology in building our flexible services, we deliver the best network environment possible for each individual customer. KDDI also provides fully managed Internet access (IP-SEC Type) for companies with low traffic volumes or as a backup circuit. Internet gateways from our global backbone enable a reliable and cost-effective global VPN service.

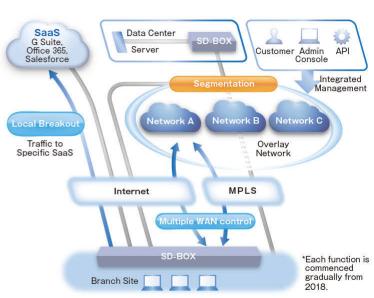### International Private Leased Circuit (IPLC)

Point-to-point service that connects two fixed locations anywhere on earth, with IPLC allowing dedicated communications 24/7. Unlike public networks, IPLCs will not be affected by any network congestion and so provide a stable connection. We support your business by providing full service — from ordering, through circuit construction to operations and maintenance.

KDDI Internet Gateway

KDDI provides wide-area, low-latency Internet connections using a high-capacity global backbone connecting major international cities through its TELEHOUSE data centers. Recommended for customers expanding their business internationally and requiring high-capacity and high-quality global IP transit service.

KDDI SD-Network Platform

KDDI SD-Network Platform is a network virtualization solution using SD (Software Defined) technology. By installing a dedicated device in the customer's office, customers can get access to specific public cloud services directly over the Internet from their offices, distribute traffic for a pleasant, low-latency cloud experience, and save money that would otherwise be spent on establishing private lines. Available in 37 countries*1, KDDI SD-Network Platform supports enterprises in optimizing their networks in order to adapt to various business environmental changes, such as growing cloud service usage, an increasing number of overseas offices, and ongoing global business expansion.

*1: Planned to be expanded to other countries.

SaaS
G Suite, Office 365, Salesforce
Data Center
Server
SD-BOX
Customer Admin API
Console
Segmentation
Integrated Management
Local Breakout
Traffic to Specific SaaS
Network A Network B Network C
Overlay Network
Internet
MPLS
Multiple WAN control
SD-BOX
Branch Site
*Each function is commenced gradually from 2018.

TELEHOUSE DATA CENTER

Security gate

Generator

Superior data centers to protect your invaluable IT assets

Our TELEHOUSE data centers provide both shared and dedicated space to fulfil your needs, especially if you are expanding internationally, and looking for a highly trusted partner to create a secure IT environment. Putting our entire energy behind securing your data, TELEHOUSE provides a highly redundant power and cooling system, with 24/7 maintenance.

TELEHOUSE

TELEHOUSE Interconnect

TELEHOUSE brings together more than 3,000 business partners, including 800+ carriers/ISPs; mobile, and content providers, enterprises and financial services companies. With Cloud Interconnect (connections into cloud providers) and Carrier Interconnect (connections to telecom providers), TELEHOUSE provides fast, efficient and secure interconnections within our data centers, empowering you to globally expand your business seamlessly. TELEHOUSE co-locates 5 major Internet Exchanges around the world — in New York, London, Paris, Hong Kong and Tokyo — that are critical to routing global traffic.

Internet Exchanges in TELEHOUSE Data Centers:
- LINX - London Internet Exchange
- NYIIX - New York International Internet Exchange
- LAIIX - Los Angeles Internet Exchange
- France IX - France Internet Exchange
- JPIX - Japan Internet Exchange
- DE-CIX - Deutscher Commercial Internet Exchange
- HKIX - Hong Kong Internet eXchange

Our global standardized data centers

The TELEHOUSE Global Guidelines — adopted at all TELEHOUSE data centers around the world — set the industry benchmarks for basic equipment specifications, operations, and service levels. We also have realized results of 100% power availability in our latest facilities.

TELEHOUSE Cloud Link

TELEHOUSE Cloud Link provides a direct, private and secure connection between your networks and public cloud services. This allows you to access multiple cloud providers through a single connection, simplifying and speeding up data transfer.

Available cloud providers in Telehouse*:
- Amazon Web Services
- Microsoft Azure
- Office 365
- Google Cloud Platform
- Alibaba Cloud (Aliyun)
- Oracle Cloud
- IBM Cloud

The latest environmental technology

TELEHOUSE is playing our part in reducing global warming and helping protect the global environment. TELEHOUSE is promoting energy conservation and greater efficiency ("Green IT") at each site the world over. In our latest TELEHOUSE London North Two data center, we have installed a vertical Indirect Adiabatic and Evaporative cooling system, significantly reducing power consumed for air conditioning, achieving a designed PUE of 1.16. With this, TELEHOUSE London won the 2017 Data Centre Solutions Awards (Data Centre Energy Efficiency Project of the Year category).

*As of October 2018, TELEHOUSE Cloud Link is available in our New York, London, Paris, Frankfurt and Hong Kong facilities. Services and available cloud providers differ at each facility.

United Kingdom
London North Two

Germany
Frankfurt

France
Paris Voltaire

China
Shanghai Jinqiao

United Kingdom
- London North
- London East
- London West
- London North Two
- London Metro

Germany
- Frankfurt (3)

Beijing
- Beijing BDA
- Beijing BEZ

Russia
- Moscow

Shanghai
- Shanghai Zhangjiang
- Shanghai Jinqiao

US West Coast
- Los Angeles

US East Coast
- New York Teleport
- New York Chelsea

France
- Paris Voltaire
- Paris Jeûneurs
- Paris Magny-les-Hameaux (2)

Turkey
- Istanbul

Vietnam
- Hanoi

Japan
- Sapporo
- Sendai
- Oyama
- Tokyo (11)
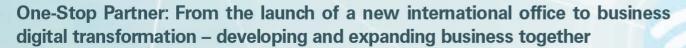- Nagoya (2)
- Osaka (2)
- Hiroshima
- Fukuoka
- Naha

South Africa
- Cape Town
- Johannesburg

Hong Kong
- Hong Kong CCC

Singapore
- Singapore

Global Footprint
- 40+ Data centers
- 20+ Cities worldwide
- 400,000m²+ Space

US West Coast
Los Angeles

US East Coast
New York Teleport

South Africa
Cape Town

Hong Kong
Hong Kong CCC

For details on TELEHOUSE data centers, visit www.telehouse.com

SYSTEM INTEGRATION

One-Stop Partner: From the launch of a new international office to business digital transformation – developing and expanding business together

When customers decide to take their business internationally, they come to us. We provide one-stop support, from the installation of office IT environment elements such as servers, LAN and PBX, to the provision of security measures, cloud access, SaaS, ERP, IT outsourcing, mobile solutions, AI and RPA.

In addition, as IoT advances and we move toward a world where just about everything is connected to the Internet, KDDI is working to provide an IoT Worldwide Architecture. We aim to offer the ability to gather and analyze a vast array of richly varied data from products, facilities and equipment, aiding the efforts of companies to create value such as new services and business models.

Office／Factory Relocation

- Implementation of network and IT environments for new offices and plants
- System installation and migration
- Business Continuity Plan (BCP) and Disaster Recovery (DR) measures

SaaS & Unified Communications (UC)

- Workstyle efficiency improvement with SaaS
- Multiple communication services
  (Cisco CUCM, Webex, Teams, Microsoft Skype For Business, etc.)

Project Management

- Network, IT-related consulting
- Design and planning of network and IT environments
- Local vendor/carrier management

Managed Services and Outsourcing

- ITIL (Information Technology Infrastructure Library) operation and management
- IT support help desk
- IT asset management
- Network equipment

CISCO Gold Partner :
- KDDI Singapore
- KDDI Myanmar

IoT

- Factory visualization/Machine failure prediction
- Worker safety management
- Vehicle management
- Security cameras
- Smart city

AI／ML

- Advanced data analytics
- Machine learning, deep learning

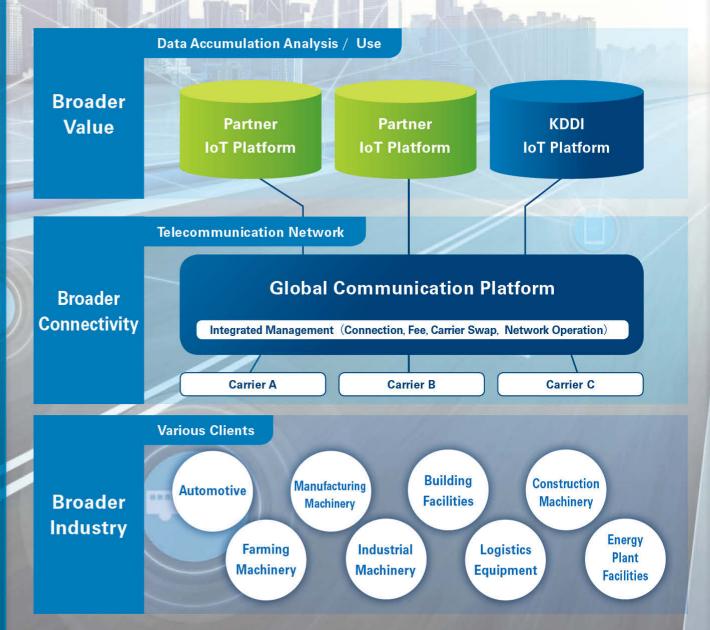### RPA

- Work automation through RPA robots

Cloud

- Own infrastructure and backbone
- Superior stability and quality
- Hybrid (cloud & on-premise) cloud computing

Security

- Security management consulting/IT investment evaluation
- Global IT governance/on-site investigation
- Cyber security/Information security
- Security against targeted attacks

KDDI IoT Worldwide Architecture

Providing support from global IoT connectivity to data analysis and everything inbetween

Data Accumulation Analysis ／ Use

Broader Value
- Partner IoT Platform
- Partner IoT Platform
- KDDI IoT Platform

Telecommunication Network

Broader Connectivity
- Global Communication Platform
- Integrated Management（Connection, Fee, Carrier Swap，Network Operation）
- Carrier A
- Carrier B
- Carrier C

Broader Industry

Various Clients
- Automotive
- Manufacturing Machinery
- Building Facilities
- Construction Machinery
- Farming Machinery
- Industrial Machinery
- Logistics Equipment
- Energy Plant Facilities

KDDI
GLOBAL PRESENCE

Over 100 offices in 28 countries, 62 cities worldwide
Approximately 5,700 employees working internationally supporting
our customers' businesses

LEGEND
- 🔴 KDDI office
- TELEHOUSE data center
- In-service submarine cable
- Planned submarine cables
- Terrestrial network

JAPAN LANDING CABLES