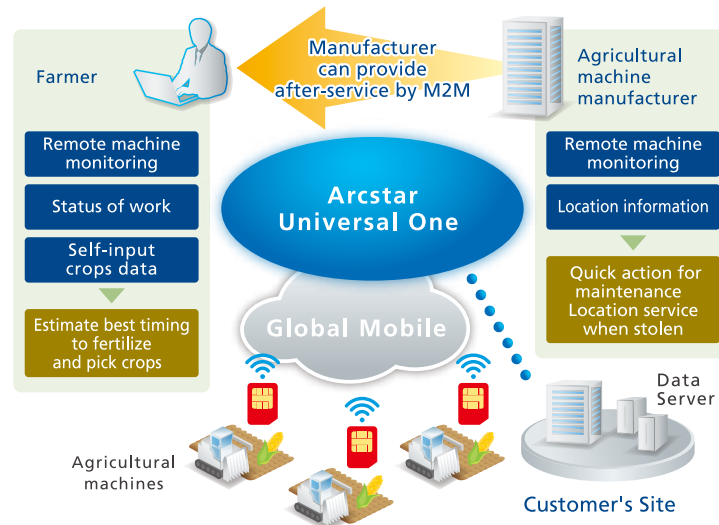## Global M2M Solution

Case | Agricultural machines
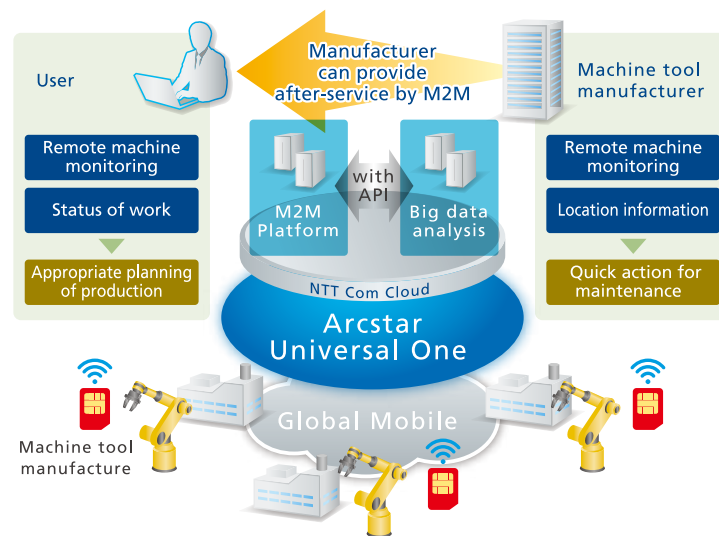
Large-scale agriculture needs more efficient management to minimize cost and produce value added crops.

Farmer
Manufacturer can provide after-service by M2M
Agricultural machine manufacturer

Remote machine monitoring
Status of work
Self-input crops data
Estimate best timing to fertilize and pick crops

Arcstar Universal One

Global Mobile

Remote machine monitoring
Location information
Quick action for maintenance
Location service when stolen

Data Server

Agricultural machines

Customer's Site

M2M enables machines to send it's status such as outage.
Each farm stores the data of crops and utilize it for analysis.

Arcstar Universal One Mobile Global M2M Solution

By connecting people, information and things,
our Global M2M solution can create a smart connected world.

Our M2M
Brings you to the world

⟨ Solution ⟩

- One stop service for worldwide M2M connectivity, device and secured Arcstar Universal One.
- Customer can keep using the local existing M2M servers by connecting it to Arcstar Universal One. The local server can be reached from anywhere globally.
- NTT Com can provide the information of the availability of mobile network at exact location.

⟨ Benefits ⟩

- Analyze previous year's data of crops and provide the estimation of the best timing to fertilize and pick crops.
- Upgrade quality of crops and minimize risk of pests by monitoring the activity of devices to complete whole process cycle.
- In case of theft, device owner can report location information to the police.

Case | Machine tool manufacturer

High functional machine tools used in end-users require higher operation rate and more prompt maintenance support.

User
Manufacturer can provide after-service by M2M
Machine tool manufacturer

Remote machine monitoring
Status of work
Appropriate planning of production

with API
M2M Platform
Big data analysis
NTT Com Cloud

Arcstar Universal One

Global Mobile

Remote machine monitoring
Location information
Quick action for maintenance

Machine tool manufacture

Transmit M2M data of operation rate, logs, and status of outage.

⟨ Solution ⟩

- One stop service for worldwide M2M connectivity, device and secured Arcstar Universal One.
- Single point of contact including devices.
- Build big data analysis servers with API and platform of managing SIMs and data, both at the same time on NTT Com Cloud.

⟨ Benefits ⟩

- Estimate the right time to refill consumable supplies and replace worn out parts by checking the status of devices.
- Monitor customer's activities by visualizing the number of devices and their locations.
- Online support service for quick action. Minimize down time.
- Enable efficient planning of production by analyzing the operation rate and status of devices. Efficient operation brings financial benefits for your business.

NTT Communications Corporation

Website http://www.ntt.com/

NTT Communications
Global ICT Partner
Innovative. Reliable. Seamless.

Secured M2M network connects the world
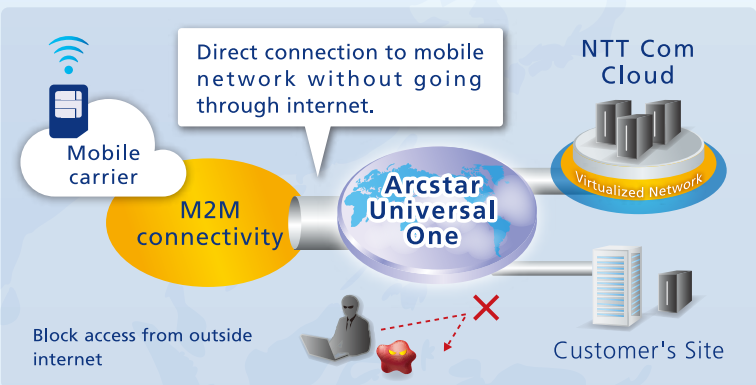
Global Coverage

Global M2M footprint is vital for global/cross-border M2M business. Our data and SMS services are available in about 200 countries/regions through our partners' networks.

*The type of wireless technology and speed depend on the condition of partners' network.

Secured Communication

Arcstar Universal One connects directly to the partners' mobile networks. Data from terminal devices are securely transmitted without going through internet.

Mobile carrier

Direct connection to mobile network without going through internet.

NTT Com Cloud

M2M connectivity

Arcstar Universal One

Virtualized Network

Block access from outside internet

Customer's Site

Global SIM

One SIM to all networks simplifies the deployment and management of global M2M business. To address specific industries' needs, NTT Com offers two types of SIM cards: Plastic SIM and Chip SIM, which are designed for all M2M applications including harsh environmental conditions.
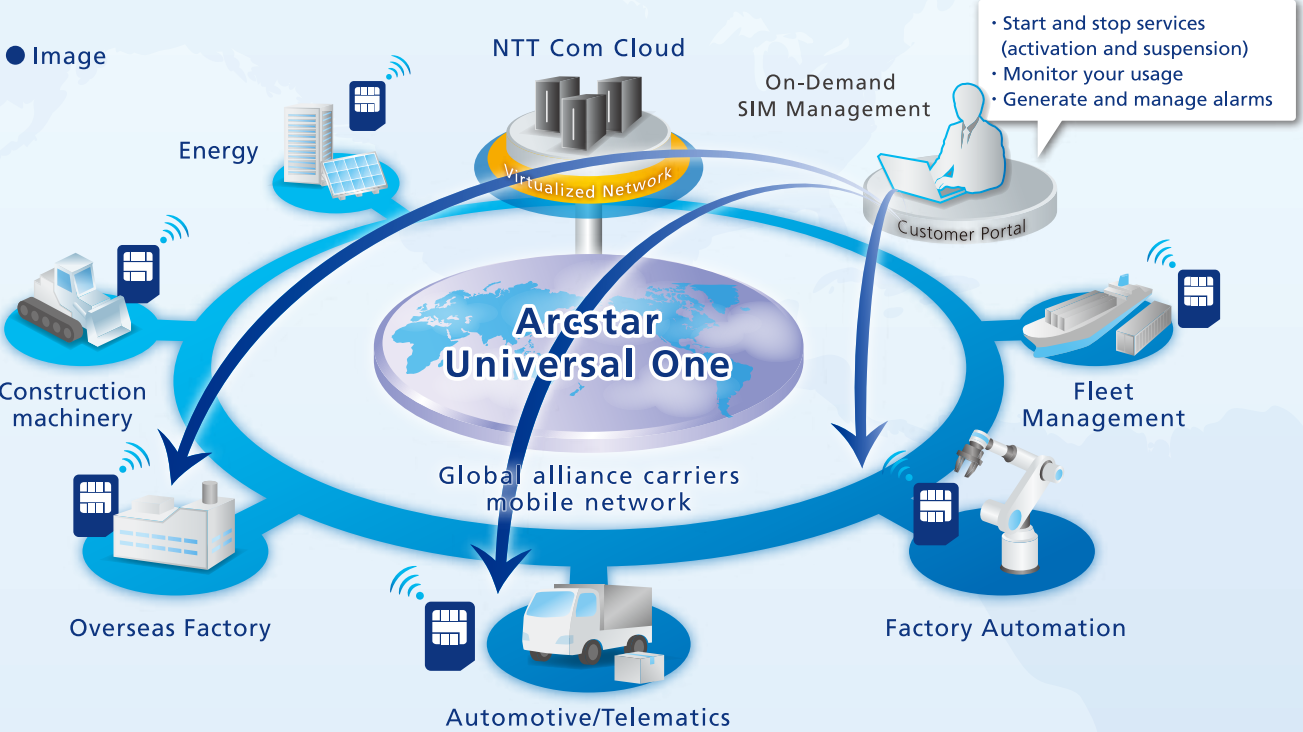
● SIM

In case end-customers contract local carrier in each country

Carrier/Country
A carrier
VPN
B carrier
VPN
VPN
C carrier
VPN
D carrier

A lot of work of contract and complicated management of SIM

NTT Com

Carrier/Country
A carrier
B carrier
One SIM One VPN
C carrier
D carrier

One stop contract and simple management

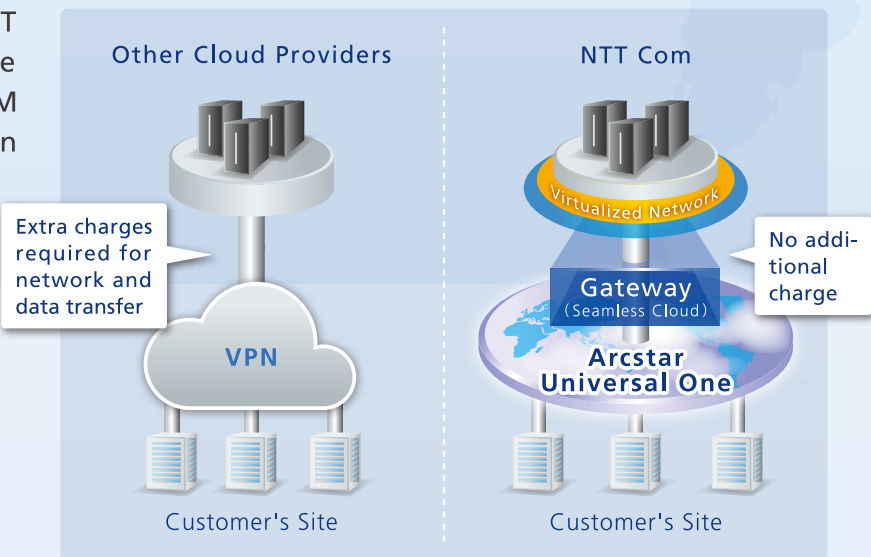| Type	Image	Descriptions
Reinforced Plastic SIM		● Size : 15mm x 25mm ● Temperature : −40°C/+105°C ● Benefits : Plug-in SIM, easy to replace
Industrial Chip SIM		● Size : 5mm x 6mm ● Temperature : −40°C/+125°C ● Benefits : Smaller footprint, Secured through physical integration (i.e., soldered on) with the devices

Customer Portal

Customer Portal shows SIM status such as activated date, suspension, and traffic logs. It enables customer's efficient management of M2M and contributes to smooth operation. Not only SIM status of M2M, but also ICT resource of NTT Com Cloud and Arcstar Universal One operational information can be seen on the Customer Portal.

● Image

NTT Com Cloud

Virtualized Network

On-Demand SIM Management

· Start and stop services (activation and suspension)
· Monitor your usage
· Generate and manage alarms

Customer Portal

Energy

Construction machinery

Arcstar Universal One

Global alliance carriers mobile network

Fleet Management

Overseas Factory

Automotive/Telematics

Factory Automation

Seamless Cloud

Seamless connection to NTT Com's public cloud service makes it easy to prepare M2M data storage and application development.

• Seamless connection to Enterprise Cloud

• Secure and redundant connection by gateway

• No additional cost for the connection

Other Cloud Providers

Extra charges required for network and data transfer

VPN

Customer's Site

NTT Com

Virtualized Network

Gateway (Seamless Cloud)

No additional charge

Arcstar Universal One

Customer's Site

*Arcstar Universal One : IP-VPN service provided by NTT Communications.