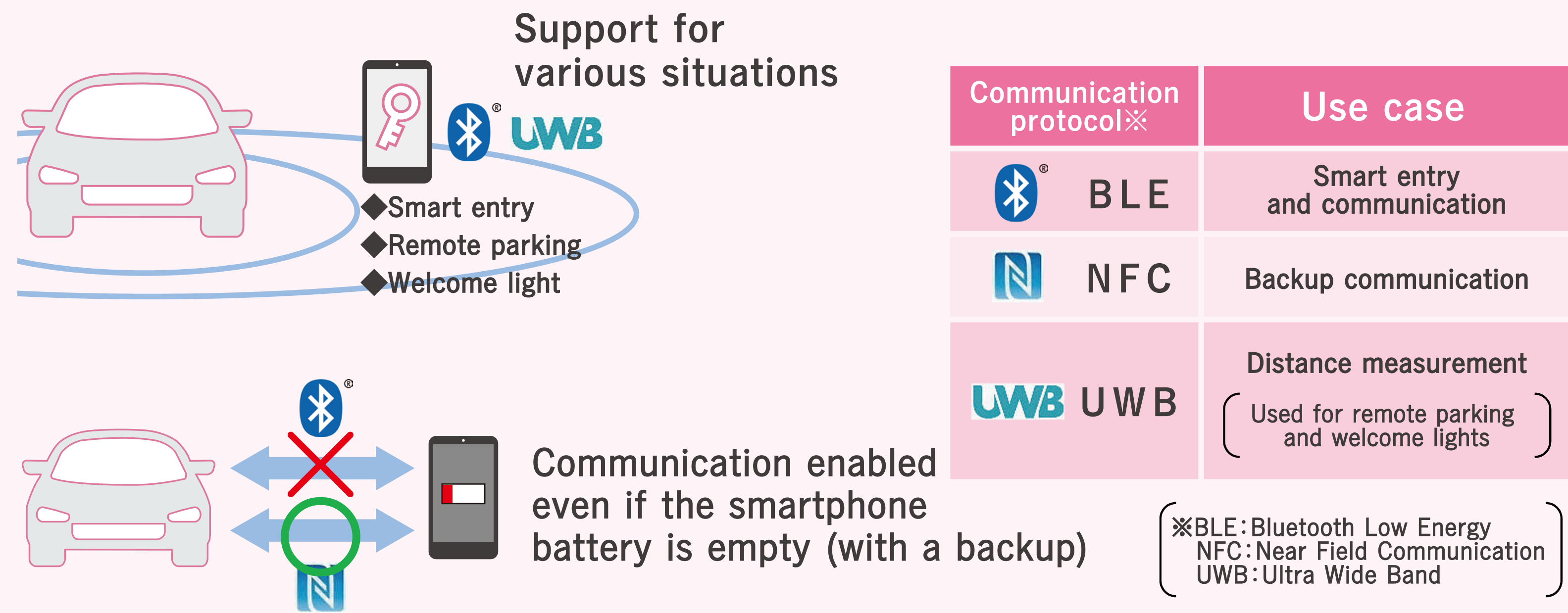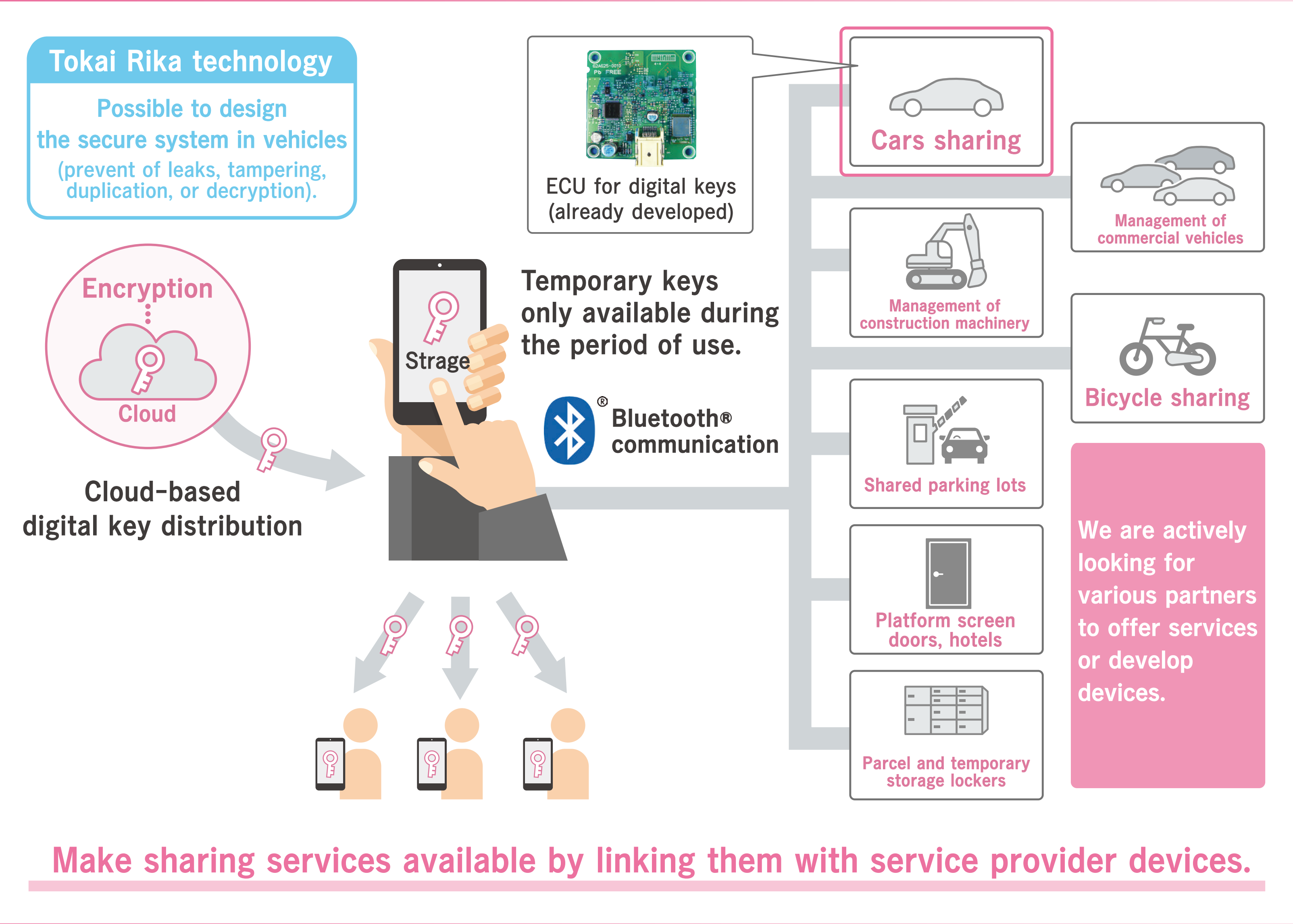# Digital Key System

Propose a secure and convenient system that relies on smartphone digital key distribution capabilities to digitize vehicle keys and enable their use in various sharing services.

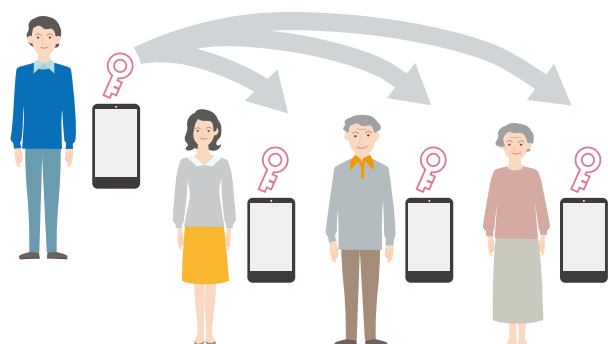## Applying digital keys to the vehicle key system

Support for various situations

🔑 ❋ UWB

◆ Smart entry
◆ Remote parking
◆ Welcome light

Communication enabled even if the smartphone battery is empty (with a backup)

Communication protocol※	Use case
❋ BLE	Smart entry and communication
N NFC	Backup communication
UWB UWB	Distance measurement (Used for remote parking and welcome lights)

※BLE：Bluetooth Low Energy
NFC：Near Field Communication
UWB：Ultra Wide Band

Make various services available through a secure digital key distribution system

Tokai Rika technology

Possible to design the secure system in vehicles (prevent of leaks, tampering, duplication, or decryption).

ECU for digital keys (already developed)

Encryption

Cloud

Cloud-based digital key distribution

Strage

Temporary keys only available during the period of use.

❋ Bluetooth® communication

Cars sharing

Management of commercial vehicles

Management of construction machinery

Bicycle sharing

Shared parking lots

We are actively looking for various partners to offer services or develop devices.

Platform screen doors, hotels

Parcel and temporary storage lockers

Make sharing services available by linking them with service provider devices.

Example of the service using digital key system

Sharing in the family

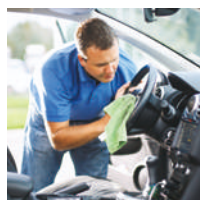Send keys only for the number of family members or friends who use the car.
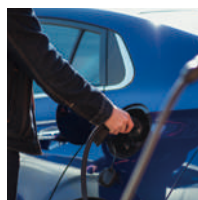
Trunk delivery service

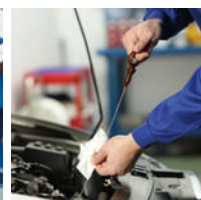Have packages delivered to the trunk of your car.

Car maintenance services

Cleaning   Refueling   Vehicle inspections
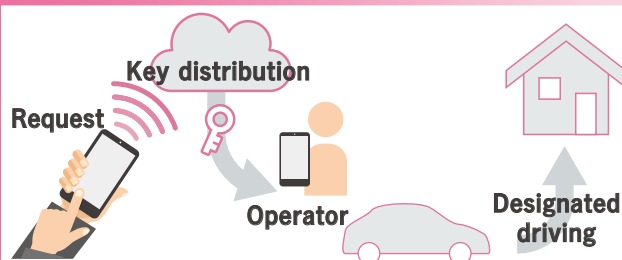
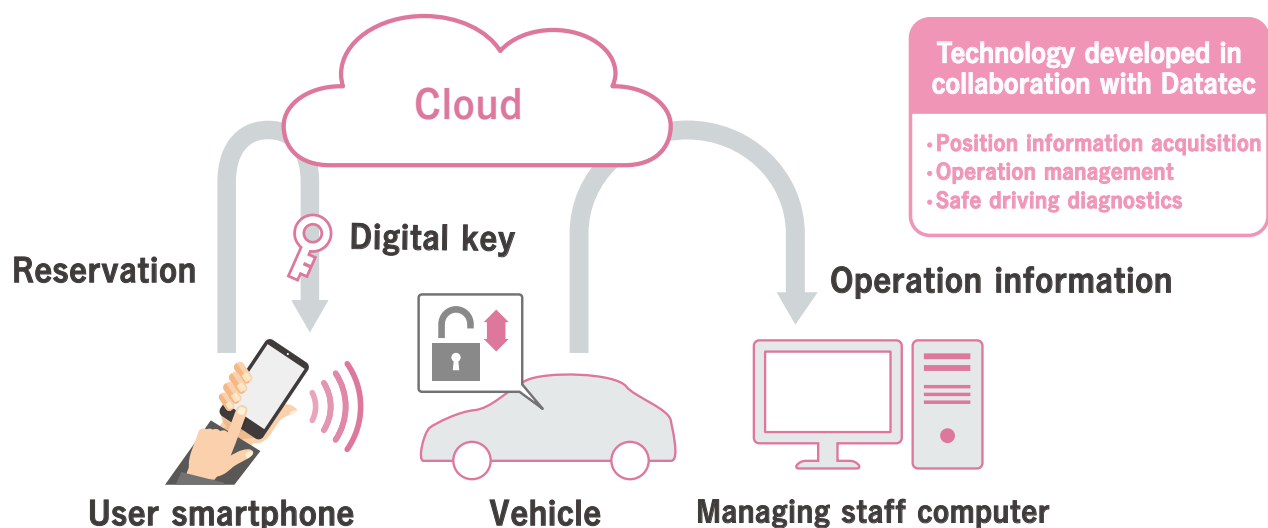## Car sharing service

Car keys can be easily sent via the Web. Convenient offering of car rental services to third parties.

Designated driver service

Request   Key distribution

Operator   Designated driving

Digital key distribution system linked to operation management

Cloud

Reservation

Digital key

Operation information

User smartphone   Vehicle   Managing staff computer

Technology developed in collaboration with Datatec

- Position information acquisition
- Operation management
- Safe driving diagnostics

Developing a complete solution from vehicle reservation to operation management.