Contactless. Effortless. For you and your customer

Creating an NFC-based ecosystem with CUONA

CONOL Inc.

Creating a new way of providing service,

with the single touch of a smartphone.

Simply by holding their own smartphone near the CUONA hardware, users can easily access various services themselves, thus entering a whole new generation of service infrastructure.

Services that formerly required the assistance of staff, can now easily be accessed by the customer themselves with a single touch.

Users can be office employees as well: office/floor access, meeting room reservation and recording attendance, can be provided with a single touch.

Placing and processing orders at a restaurant or bar, can now easily be performed with a single touch.

Implementation of CUONA

The versatility of NFC with CUONA allows for many implementation possibilities. These are just some of the ways CUONA can be implemented.

Customer Authentication

Authentication of customer to check in at e.g. hotel, sports club, shared office space, members lounge, etc. with limited to no help needed from staff, nor the need for any other equipment (e.g. tablet, QR code reader).

Order Placement & Management

Access, place and process food/drink orders, to reduce required personnel and improve speed of service, at e.g. restaurants and bars, but also company/university cafeteria, etc. Customer data can be used to personalize service.

Office management

Authentication of employees to allow building access, elevator access (e.g. to designated floors), meeting room reservation and monitoring of attendance.

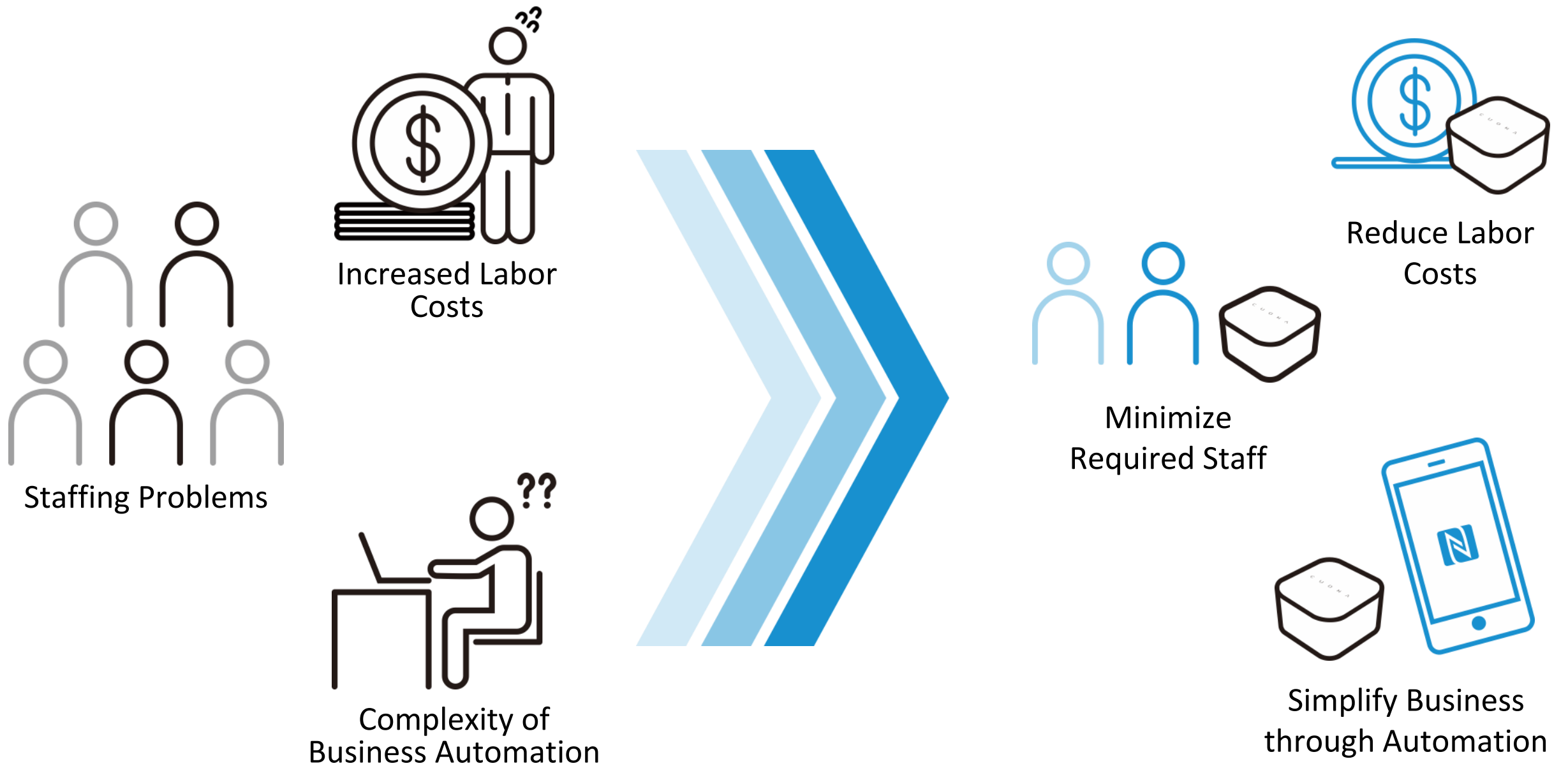## Track Usage/Contact Tracing

Besides tracking a customer's behavior to provide customized service, CUONA could also be used for contact tracing, tracing where the phone has been used, without disclosing private information.

CUONA maximizes optimization within the Service Industry or any Business with a Physical Workspace

Cost Reduction through Automation

One major benefit of implementing CUONA is how customers/users will be providing and using their own equipment (smartphone), resulting in reduced labor, dedicated in-store equipment and operating costs, without the requirement for much technical skills or knowledge.

Staffing Problems

Increased Labor Costs

Complexity of Business Automation

Minimize Required Staff

Reduce Labor Costs

Simplify Business through Automation

By providing their services through their customer's own smartphone, stores can accomplish cost reduction on human resources, equipment and more.

Minimization of NFC Infrastructure Development Costs

Creating an NFC infrastructure from scratch is very costly and time consuming. Companies can minimize these costs by implementing CUONA instead.
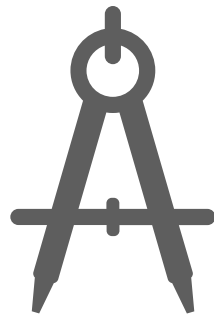
CUBE   TAG

Creating an NFC infrastructure in-house

- Hardware research, planning and testing costs
- Hardware management system costs
- Expenses to embed into existing services

etc...

| Initial Costs | USD 1 million〜 |

| Operational Costs | USD 1,000〜/ month |

NFC infrastructure using CUONA

- Dedicated hardware（USD 10〜）
- Cloud-based management system (USD 9 per month/unit)
- System integration SDK (USD 2,000〜) [1]

| Initial Costs | USD 10〜 |

| Operational Costs | USD 9〜/ month |

1) Optional depending on the service used.

CUONA makes it possible to implement an NCF infrastructure at a remarkably low price.

As per April 2020 there exist no other companies that offer the same mechanism.
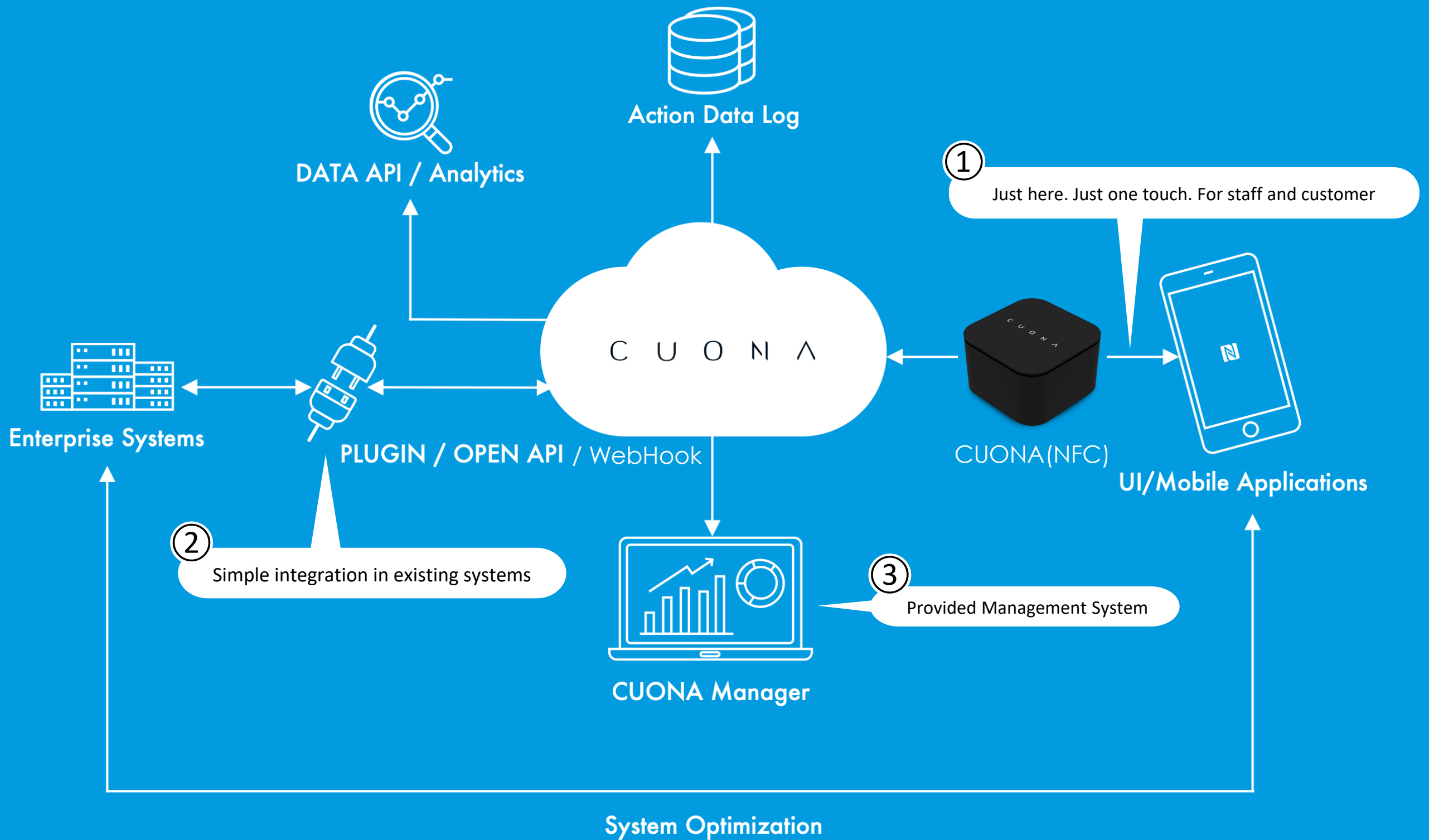
NFC based smartphone functionalities can easily be incorporated and linked to existing systems,

and can be built in a short period of time, at a low cost.

CUONA in Practice: KIBACO, a cafe in Tokyo

Actual use case where CUONA will be installed on tables and walls (implementation August 2020) using our plugin FAVOR. By touching CUONA with their phone, customers can access and place orders from the menu, which are then received and processed by the kitchen staff.

Benefits for Customer and Store:
- Pre-Order from the menu using the café's Official App
- Place table order in-store (with or without app) without the assistance of floor staff
- Market to non-customers through PUSH notifications
- Create customers retention with app features
etc.

With CUONA various services can be added/modified to suit the store's and customers' needs.

Media coverage has greatly increased inquiries from potential clients

The Future of NFC with CUONA

As the market of NFC enabled devices grows, so will CUONA. The future is just around the corner.

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PRODUCTS AND SERVICES

Device Introduction

CUONA hardware comes in two types to accommodate to different circumstances with the most suitable device

**International Patents Applied**

CUBE

TAG

Hardware required to use CUONA. The TAG (sticker) type is easy to attach anywhere, while the CUBE type is equipped with additional functionalities.

| CUBE	TAG
NFC	
App Integration（SDK）	
Bluetooth	-
Wi-Fi	-
Touch Sound Settings	-
OTA Firmware Update	-
Environmental Data Collection	-
Update Settings Remotely	※1
Automatic Log Transmission	※2

※1 In case of the TAG type, settings can be changed using the administrator smartphone app.
※2 In case of the TAG type, logs can be sent via SDK (app). Depending on the smartphone used, the log may not be saved.

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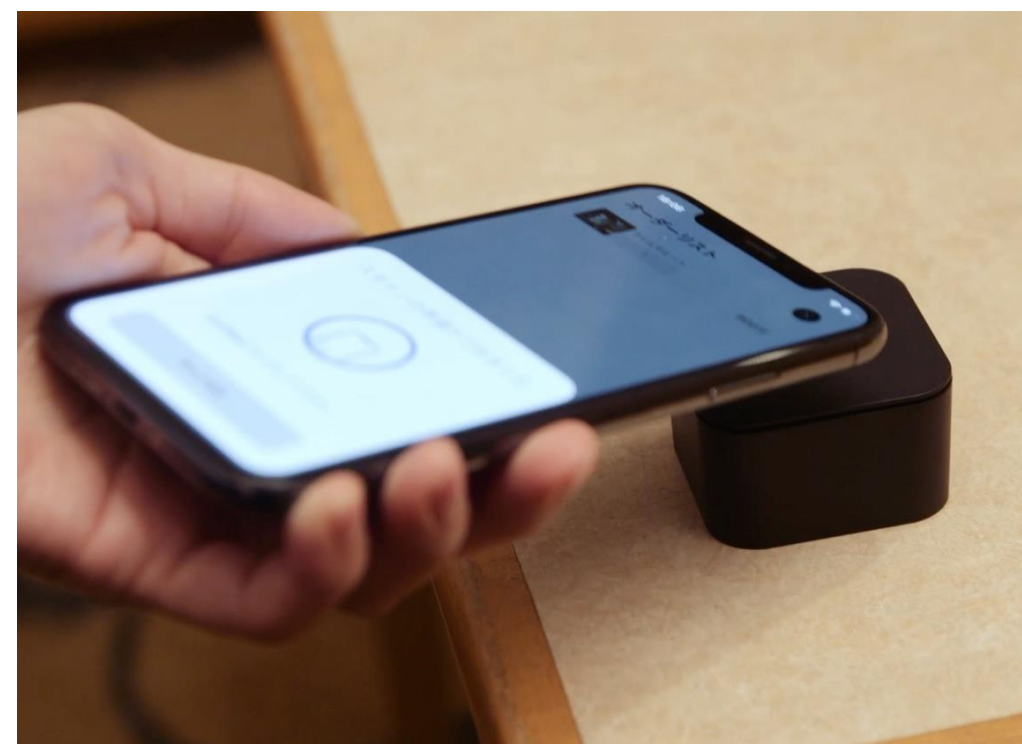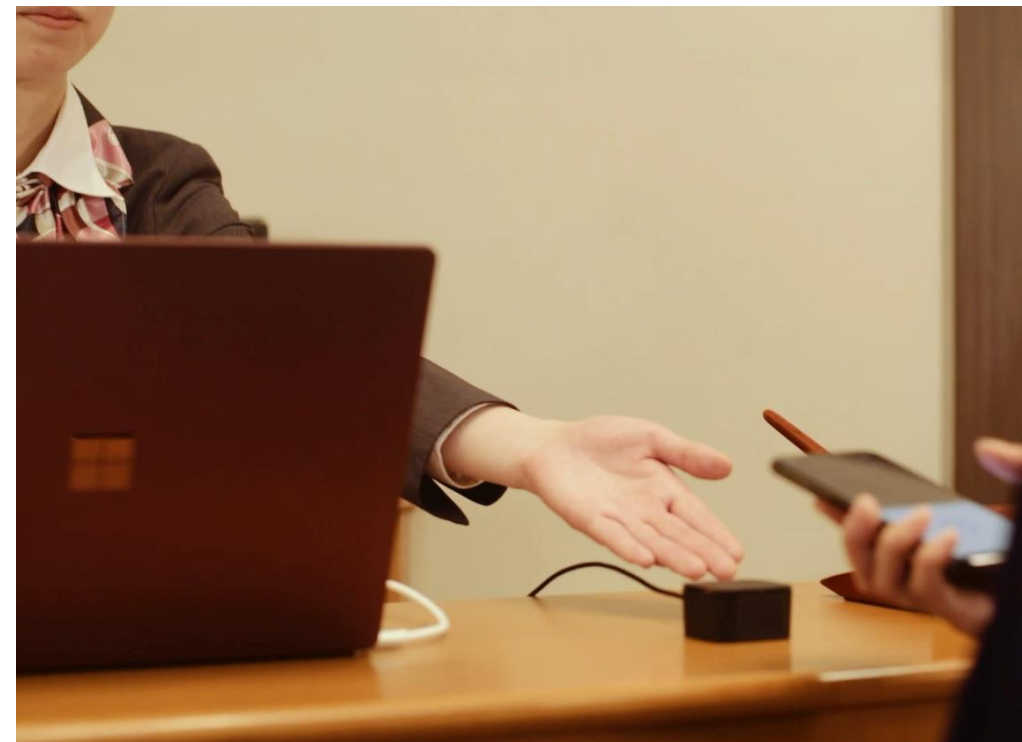
Basic Service ——— CUONA MANAGER

CUONA Manager is a cloud-type management screen for managing CUONA and setting events remotely, and is required to use CUONA. The management screen makes it possible to visualize and view customer behavior as well as environmental information (temperature/humidity/etc).
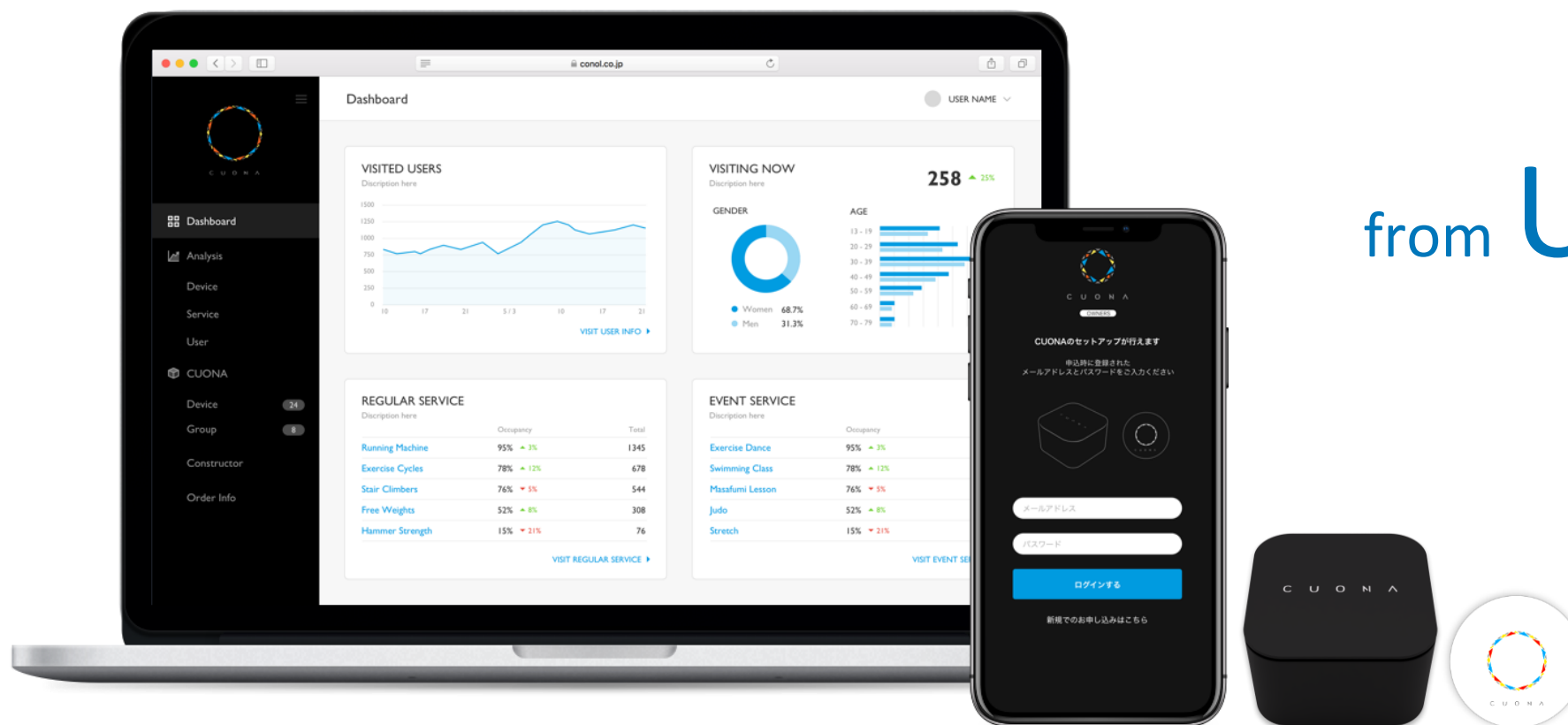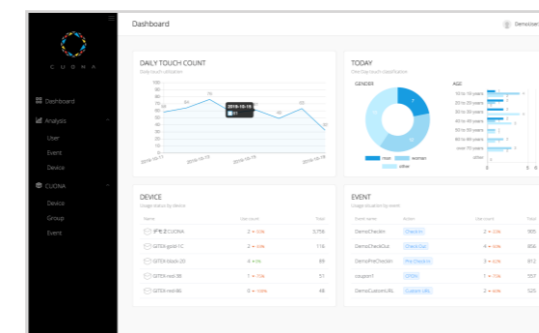

Monthly Fee

from USD 9.00 / unit

Device Details

Event analysis

Usage analysis by device

Dashboard

Main unit status check	User behavior analysis	Remote update of NFC data

OTA update	Dedicated SDK (iOS/Android)	Change touch sound	Management by user/group

Additional Plugins

The basic CUONA functionalities can be further expanded through various plugins

Plugin Name	**WiFi Helper**	International Patent Pending **Favor**
Availability	Available Now	Available Now
Description	By touching CUONA, users can obtain instant access to the location's secure Wi-Fi connection, without the need for a password, and limiting the use to those who are authorized (e.g. guests only)	A complete set of functions for restaurants and bars. Allows for accessing and ordering from the menu, order processing in real-time, a hassle free way to update menu items, and collecting information on customer preferences.
Main Functionalities	• Usage Counter • Set Usage Period • Functionality to share ID/ password • Dedicated SDK (iOS/Android)	• Order Placement Functionality • Store Information Management • Product Information Management • Total Sales Calculation • Dedicated SDK (iOS/Android) • Link to (existing/external) POS
Dedicated Management Screen	No	Yes
Practical Examples	• Access hotel Wi-Fi with a single touch • Access café/restaurant Wi-Fi with a single touch	• Hotel: real time room service • Food court, etc.: place order from one's seat and be notified when order can be picked up • Understand individual customers' personal preferences and provide hospitality tailored to their needs.
Monthly Fee	USD 7.80 / unit	USD 11.80 / unit

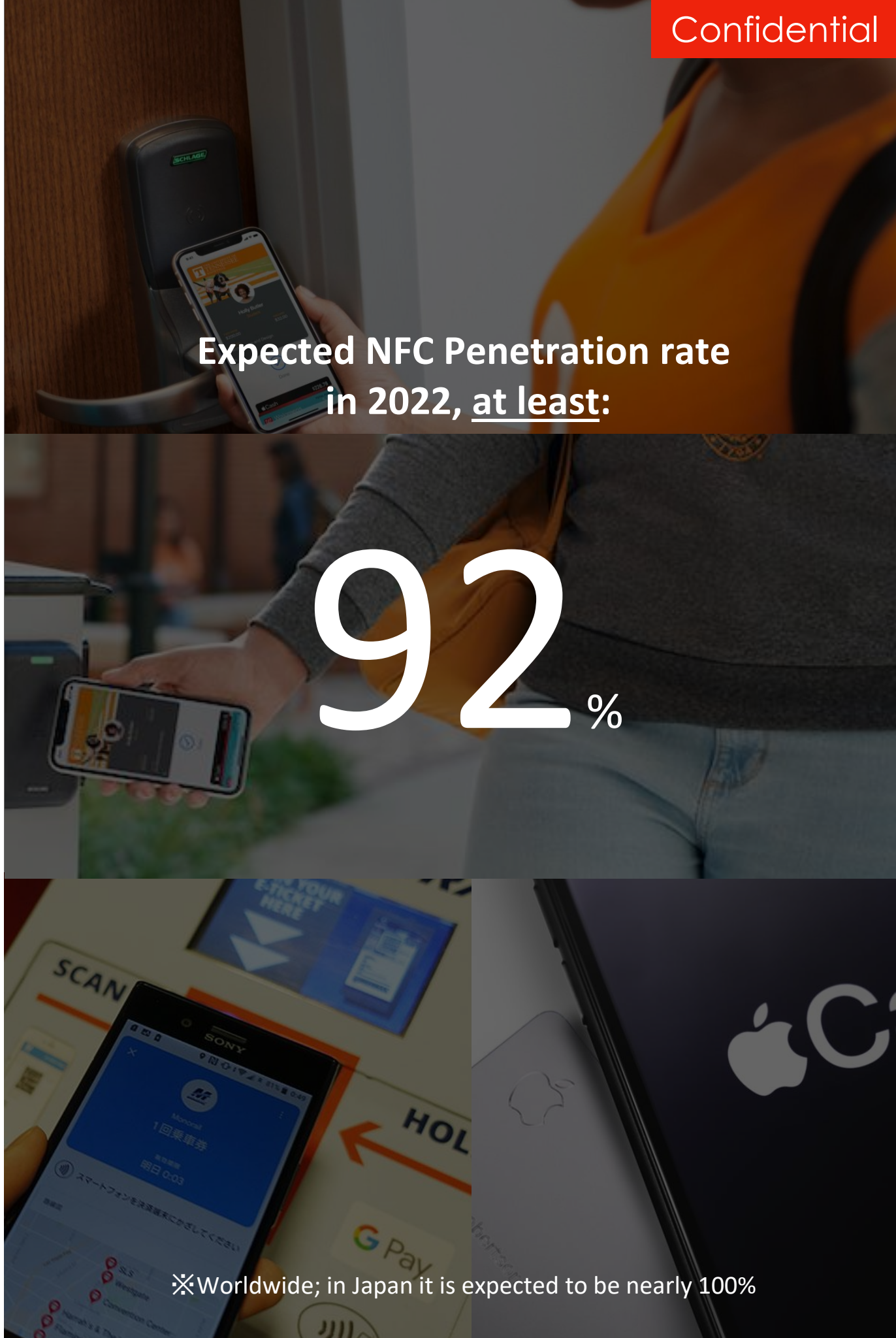**Additional useful plugins will be added in the future.**

SUPPLEMENTAL INFORMATION

【Utilizing NFC on Smartphones】

The Big Wave Is Just Around The Corner

Devices equipped with NFC: 80%!

1. Apple already started construction of an NFC based student ID system, used e.g. at the cafeteria and to monitor class attendance at US universities.

2. The release of iOS11 kickstarted the birth of non payment related NFC services, which was further accelerated with the added NFC functionalities available for iOS13 in 2019.

3. NFC's simple interface makes it ideal for providing and using various services, regardless of IT literacy. Will be further enhanced in combination with the upcoming 5G network.

4. Background NFC will be available on nearly every iPhone within 2-3 years. Almost all Android smartphones have already been equipped with background NFC for the past 5 years.

Expected Penetration Rate

Penetration	OS	2019	2021〜
NFC equipped smartphones	iOS	98%	100%
	Android	70%	85%〜
Background NFC compatible	iOS	30%	90%〜
	Android	100%	100%

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Internal Research Aug 2019

Expected NFC Penetration rate in 2022, at least:

92 %

※Worldwide; in Japan it is expected to be nearly 100%

【Comparison: QR】 Advantages over QR based system

QR Code is a well known alternative mechanism which can also automate many processes

	QR Code (in-store location)		QR Code (on smartphone)		NFC (CUONA)	
Description	A QR Code is printed and pasted on a location in the store. Customers can use a QR reader on their phone to be redirected to a designated website.		Customers receive a QR code e.g. when they make a reservation. When they check into a hotel they hold the code against the scanner at the hotel to check in.		An NFC tag (or CUBE) is placed in-store. Customers hover their phone over the tag to e.g. check in, be redirected to a site or in-app page, access certain services, etc.	
Ease of use	★★☆	For user: No store app needed, but requires opening app to scan which is a slow process. For Store: Changing data usually requires creating new codes and replacing the old.	★★☆	For user: Usually requires app, scanning somewhat slow. For Store: easy to change data.	★★★	For user: Often no app needed at all; instant access, in some cases without unlocking phone. For Store: reuse and change the data on the same tag endlessly (for CUBE even remotely).
Price	★★★	While printing and replacing QR codes is not time efficient, it is cost efficient.	★☆☆	QR code readers are very expensive.	★★☆	Pricier than printing stickers, but this is made up for with longer lifespan and greater versatility.
Versatility	★★☆	Primarily used for redirection to websites (e.g. access information or menu). One code can only perform one action.	★☆☆	Limited to authentication purposes (e.g. check-in); price restricts widespread deployment.	★★★	One tag can perform multiple actions, e.g. redirection to site or app; authentication (allow/restrict access), use phone as room key; access WiFi, etc..
Compatibility/ ease of adoption	★★★	Almost any phone can read QR codes; most people are familiar with QR and what to do.	★★★	Almost any phone can display QR codes; most people are familiar with QR and what to do.	★★★	Most phones are equipped with NFC functionalities; some may not know the name NFC, most people are familiar with using NFC for e.g. payments.
Security	★☆☆	Code can easily be copied and shared.	★★☆	Unique code in possession of user only, but possible to share.	★★★	Unique data on smartphone in possession of user only.
Integration into other systems	★★☆	Limited integration possible.	★★☆	Integration in e.g. reservation system required.	★★★	APIs allow for linkage to existing 3rd party systems, including POS/payment systems.

Compared to QR, NFC with CUONA provides greater versatility, ease of use and security, as well as better integration.

【Virus Countermeasures】 Smartphone-Based Mechanism

Competitive advantage: how, unlike other solutions, CUONA can help reduce the spread of viruses like COVID-19.

Advantage ①

Access and operation of services with one's own smartphone

Instead of using the store's equipment (devices, pen, etc.), users can access the store's services using only their own smartphone, thus greatly reducing the chance of touching anything unhygienic/infected.

Advantage ②

With our table ordering system, reduce unneeded contact

With one of CUONA's plugins called Favor, customers can place food/drink orders themselves, reducing unnecessary contact, which is safer for both customer and staff. Using smartphone NFC for table orders is patented, and can only be provided by us.

CUONA provides a mechanism that allows customers to utilize services using their own smartphone. Ideal for customers who prefer not to touch the store's equipment.