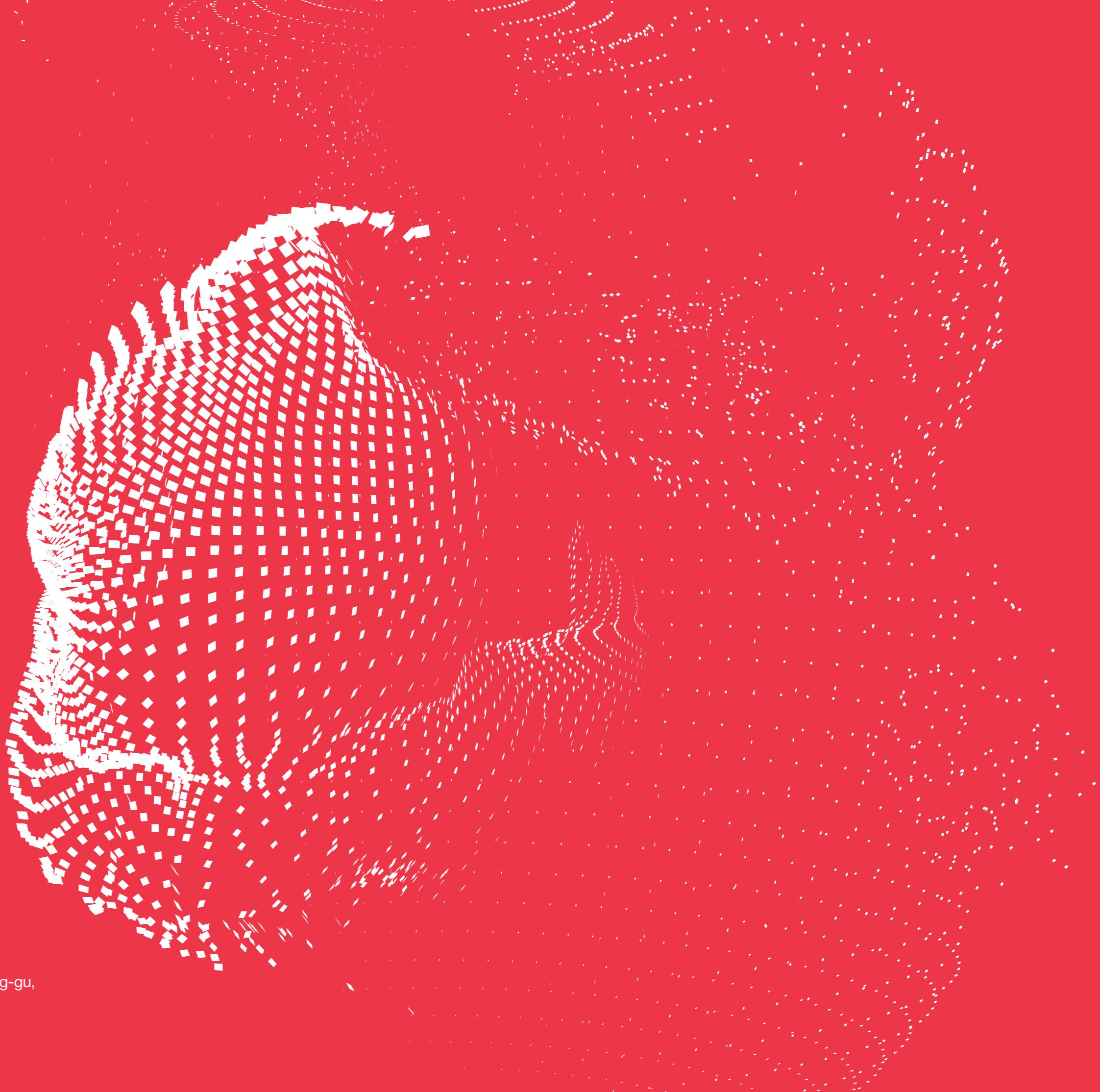


AI Cloud Spatial Awareness Platform

WATA //



W. watanow.com
E. info@watanow.com
T. +82 31 707 3717
A. S206, H Square, 231, Pangyoeko-ro, Bundang-gu,
Seongnam-si, Gyeonggi-do, Korea 13494



**One stop solution for all
location-related services.**

**By finding out your
precise location,
we provide a more
valuable future.**

Table of contents

Introduction	06
One Stop Solution	08
Step 1 - 3D LiDAR Map Creation Solution	10
Step 2 - Spatial Data Collection - Without maps	12
Step 3 - Spatial Awareness Solution	14
Step 4 - Control & Monitoring + Data Platform	16



Introduction

**Find your location,
Provide future steps.**

**We connect people and space by
finding a precise location.**

WATA provides AI Cloud Spatial Awareness Platform, an indoor space data and hyper-proximity location information service platform, and various Smart Space Solutions connected to the Platform by utilizing indoor space data such as Wi-Fi, BLE, pressure, magnetic field and LTE & 5G cell patterns. As a one-stop solution, the Platform provides all location-related services from map creation to data collection without maps & DB creation, location information services and data analysis. With industry-specific data and service design provided through the Platform, WATA helps companies obtain future insights derived from location information of customers and assets.

WATA was established in 2019 with the objective of adding value to our daily lives by transforming a physical space into Smart Space where people and objects interact through WATA's spatial awareness technology. Through its services and solutions, WATA contributes to creating people-centric spaces and building Smart City. With its innovative technology, WATA has achieved meaningful results. WATA was selected as Official Provider of Indoor Location Information Guide Services for 2020 Tokyo Olympic Games after having demonstrated its precise positioning technology at Tokyo Government POC and the Demonstration Competition. In addition, WATA conducted Gartner Vendor Briefing and participated in CES 2021 in cooperation with Samsung C-Lab.

Mobile / Real-time ONE STOP Solution



Core technologies

WATA's Platform is supported by four core technologies, each related to map creation, data collection, spatial awareness and data platform. Enabled by these technologies,

WATA provides four Solutions, 3D LiDAR Map Creation Solution, Spatial Data Collection Solution, Spatial Awareness Solution and Data Platform.



3D LiDAR Map Creation Solution

The Solution creates a 2D/3D indoor spatial awareness map by combining 3D point cloud data and hybrid spatial data in real-time. Using a mobile 3D LiDAR, spatial data is collected fast in complex environments while creating a map. Time and cost are reduced by simplifying the existing processes into one step.



Spatial Data Collection Solution (without maps)

Just by walking along a collection path with a smartphone, hybrid spatial data including Wi-Fi, BLE, magnetic field, pressure, LTE & 5G cell patterns and GPS is collected automatically even without maps. The Solution allows for voice-enabled POI creation and provides path edit tools.



Spatial Awareness Solution

WATA provides accurate positioning by collecting all hybrid spatial data (Wi-Fi RSSI/RTT, BLE, pressure, magnetic field, cell patterns, GPS, etc.) with smartphone sensors and recognizing space and location with a combination of selected data that have the highest probability values. This enables precise positioning even in complex indoor environments.

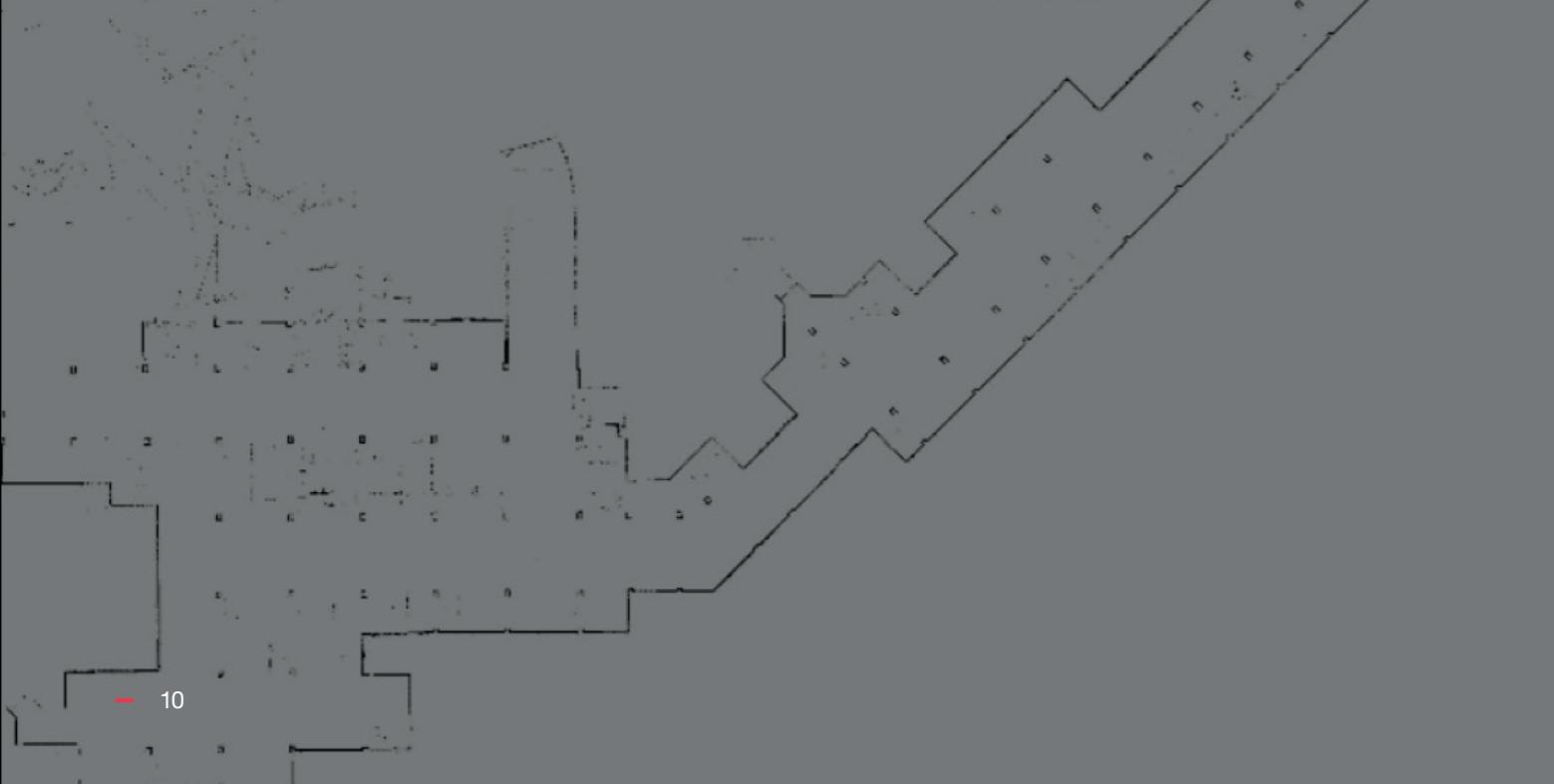
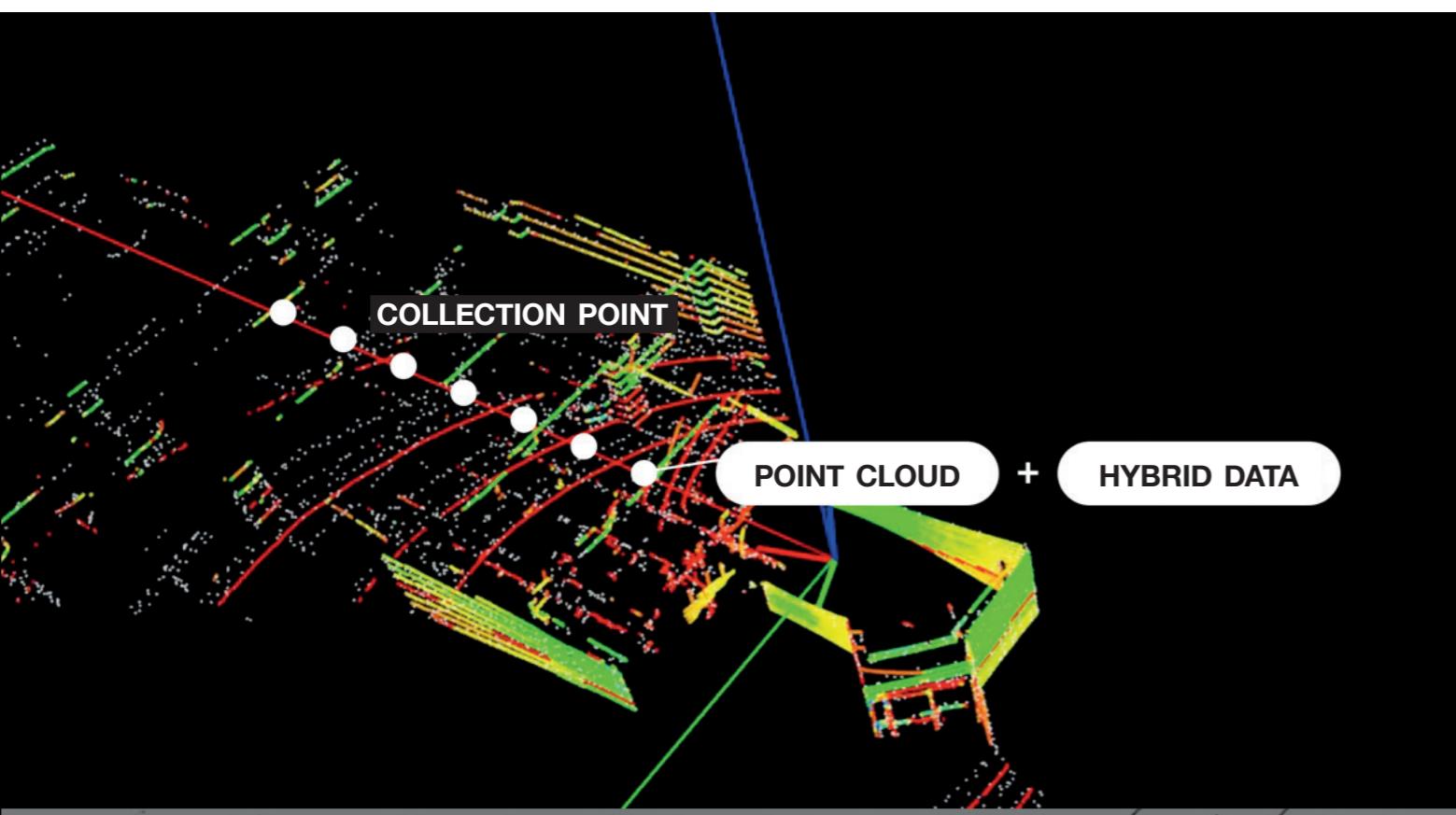


Control & Monitoring + Data Platform

The Platform provides industry-specific data and spatial awareness services through Smart space solutions for smart factory, smart building, smart store/retail, smart hotel, etc. A variety of features (e.g. entry/exit management, people tracking and asset management) are provided for effective monitoring.

Step 1 3D LiDAR Map Creation Solution

Employing mobile 3D LiDAR SLAM technology, WATA creates a 2D/3D indoor spatial awareness map by combining space data and 3D point cloud data in real-time.



By simplifying the existing complicated processes of map creation, data collection and map matching into one step, WATA reduces time and cost significantly for the introduction of location information services.

Process

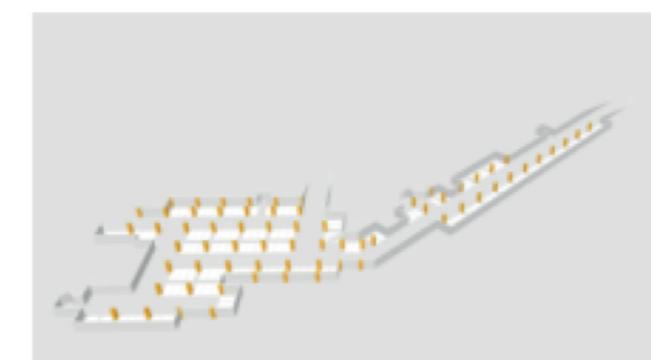
2D Grid Map Extraction



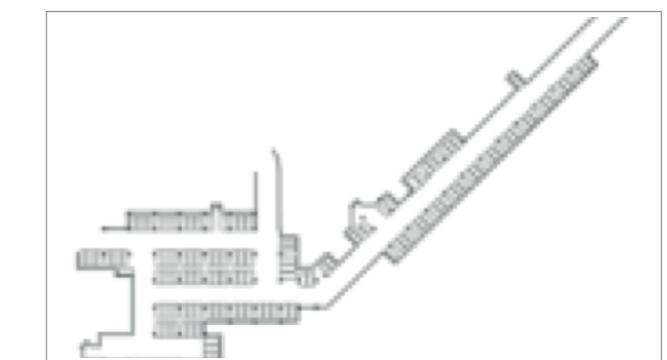
2D Overlay Drawing Object



OBJ Vector Format
(3D Virtual View)



2D SVG Vector Format
(2D Floor-plan)



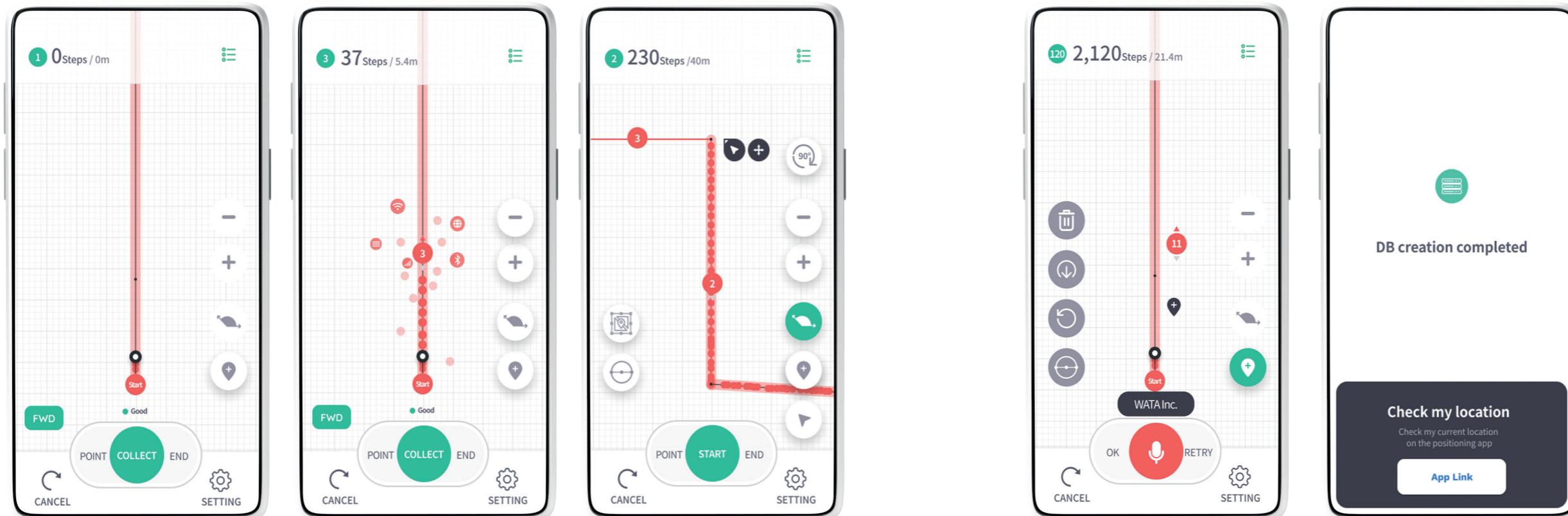
Step 2

Spatial Data Collection Solution - Without maps

No need to have a map in advance to collect spatial data.

One of the challenges to introducing location information services is the availability of up-to-date indoor maps. It is often the case that small business owners do not have a map for their service area and producing a map is expensive and time-consuming. WATA addresses this challenge

by providing a solution that allows for spatial data collection without maps. All hybrid spatial data including Wi-Fi, BLE, magnetic field, pressure, LTE & 5G cell patterns and GPS is collected automatically by simply walking along a collection path with a smartphone.



01
Set my location
on a grid map

02
Collect spatial data by
walking along the path

03
Modify a collection
path and spatial data

04
Create POI with voice

05
Send collected data
and Create a cloud
database

Step 3 Spatial Awareness Solution

More accurate and precise positioning with WATA's algorithms.

Ensuring positioning accuracy is fundamental to providing services in a reliable way. Location information services provided in the wrong place at the wrong time may be considered a hassle to visitors. WATA provides precise positioning even in complex environments by collecting all hybrid

spatial data (Wi-Fi RSSI/RTT, BLE, pressure, magnetic field, cell patterns, GPS, etc.) with smartphone sensors and recognizing space and location with a combination of data selected through algorithms.



01
Sign in to Positioning App

02
Load my spatial database

03
Positioning

04
Check my current location

Step 4 Control & Monitoring + Data Platform

Monitoring needs have increased since the outbreak of COVID-19 and the adoption of smart technologies will not replace the need for monitoring people and assets for enhanced security reasons. For effective monitoring as well

as better operational efficiency, WATA provides an integrated monitoring platform with industry-specific data and service design for diverse industries such as smart factory and smart building.



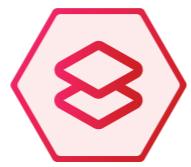
ACCURACY

Hybrid Space Data & Spatial Awareness using AI Algorithms



USABILITY

Integrated ONE-STOP Solution



FLEXIBILITY

Expansion of Smart Solution into diverse industries



CLOUD

Integrated Space Data Cloud Environment



NO-CODE

No-code Platform without having to code



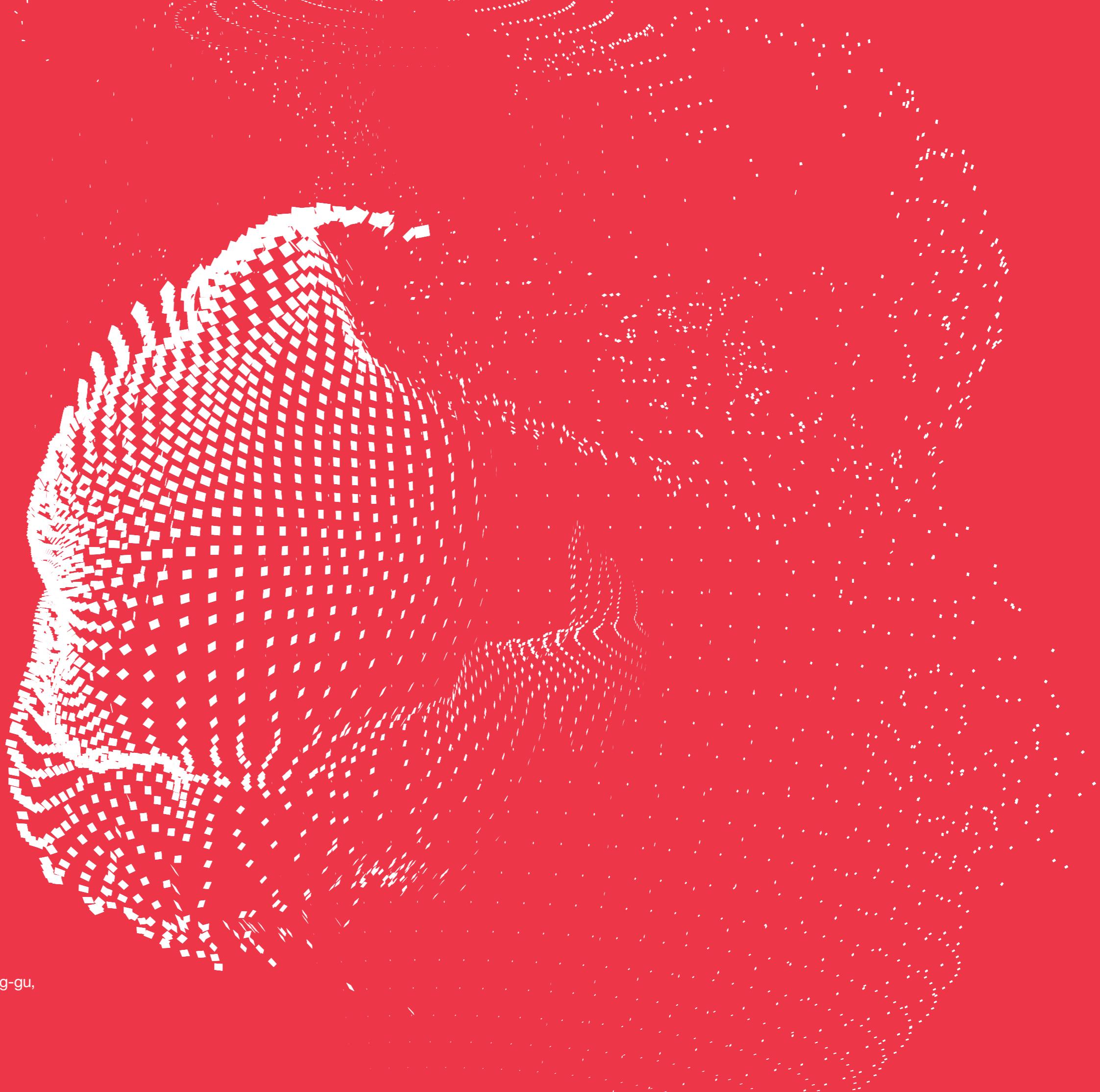
IoT & DATA PLATFORM

User, sensor, environment monitoring

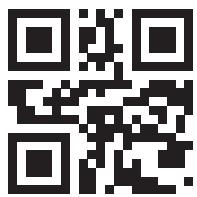
With location intelligence, monitoring becomes easier and more effective.

KEY FEATURES

Platform	Real-time location	Visitor tracking	Control & Monitoring	Real-time messaging
-	Geofence	Access control & Alert	Indoor Navigation	Statistics
<hr/>				
Application	Automatic entry/exit management	Accident Detection	Incident Management	Location-based Authentication
-	Asset registration and real-time location	Real-time status of AP, BLE & sensors	Environment sensor monitoring	Work process optimization
<hr/>				
Target Markets	Smart City	Smart Building & Office	Smart Factory	Smart Store & Retail
-	Smart Hospital	Smart Mobility	Smart Home & Energy-saving	



W. watanow.com
E. info@watanow.com
T. +82 31 707 3717
A. S206, H Square, 231, Pangyoeko-ro, Bundang-gu,
Seongnam-si, Gyeonggi-do, Korea 13494



WATA // watanow.com

E. info@watanow.com T. +82 31 707 3717