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 Wipelot  WipelotIoT



Industrial IoT & RTLS Systems



## What We Do ?

We provide real time location-based solutions (RTLS) developed exclusively for high-traffic industrial and business environments. Our global partner network - spread across 30 countries - serves mines, manufacturing

- Smart Manufacturing - Industry 4.0 IoT & RTLS
- Smart Mines - IoT & RTLS
- Smart Airports - IoT & RTLS
- Smart Construction - IoT & RTLS
- Wide Area Wireless Measurement Systems
- Next Generation Occupational Safety Systems
- Semi Product – Product Tracking & Monitoring

## Boosting Resource Utilization, Safety & Efficiency with Wipelot

The fast-paced world of manufacturing and production requires ground-breaking technology for businesses to remain competitive. Wipelot IoT gives companies the extra edge needed to beat the competition by improving workflow, visibility, and ROI.



## Our Successes

- 2007 First indoor RTLS system of Turkey
- 2009 First smart occupational safety system of Turkey
- 2010 First IoT Aviation Application of Turkey
- 2014 First construction machine safezone solution of Turkey
- 2015 RFID Journal Best Industrial Aviation IoT Application Award
- 2015 First Smart Manufacturing Active RFID Application
- 2015 First RF IoT plant energy efficiency application of Turkey
- 2015 First underground high accuracy personnel and equipment tracking of Turkey
- 2016 IDC Best Industry 4.0 Application Award (Smart Mining)
- 2016 TOBB Fastest-growing 60. company in Turkey
- 2016 TIM Inovation Results 5. of Turkey Award
- 2017 IDC Best Inovative Project Award (Signalization)
- 2017 48. Design Center of Turkey
- 2017 TIM Inovation Results 8. of Turkey Award

# Industrial IoT & RTLS Systems



## Wipelot IoT

### RTLS, RFID, and M2M Solutions



Digitizes Processes



Creates a Safer Facility



Improves Workflow



Maximizes Asset ROI

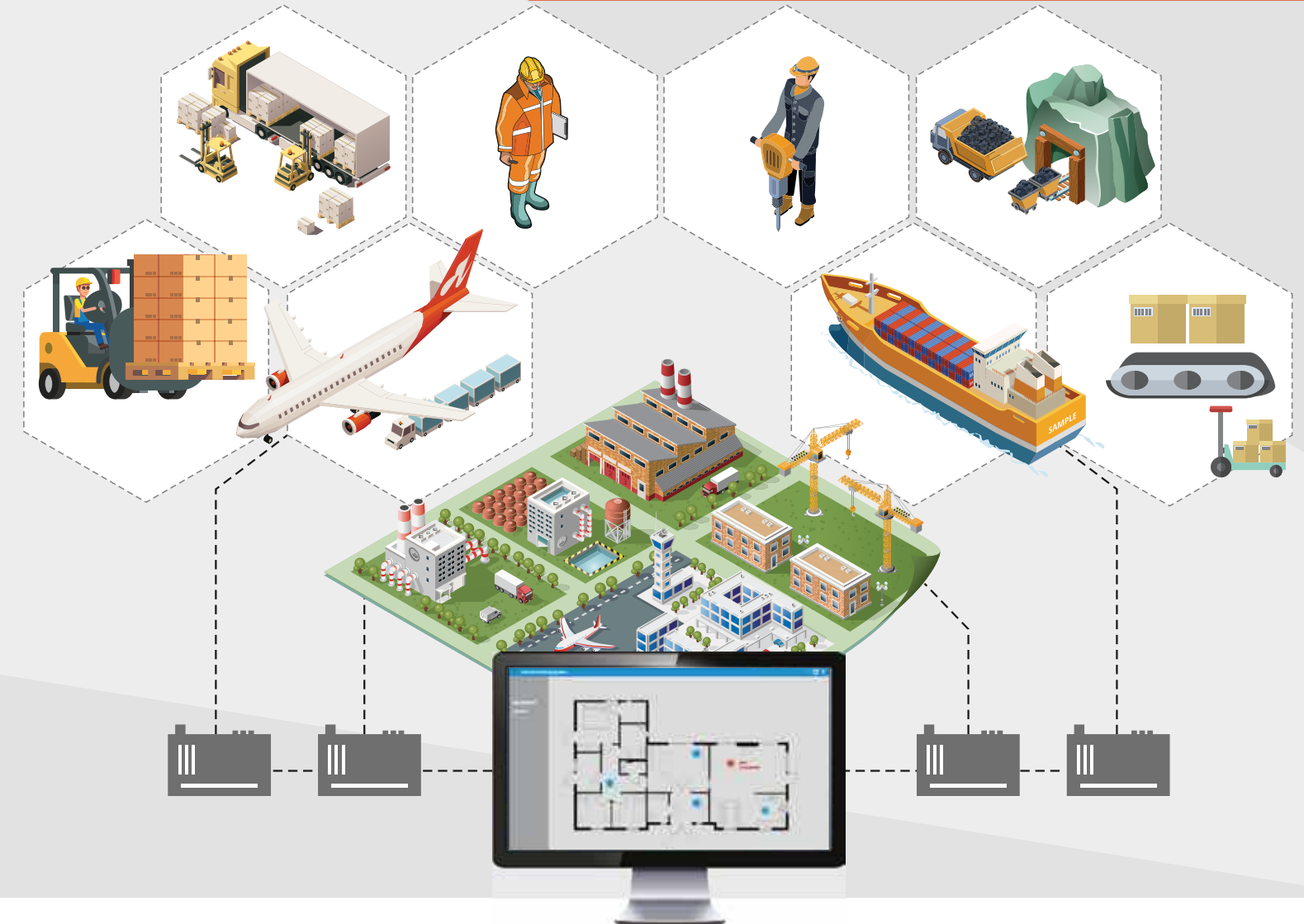


Improves Personnel and Equipment Management

## Why Wipelot IoT?

- With over 12 years of experience in RFID & RTLS, we handle large scale deployment of IoT systems for airports, mines, and industry
- We provide the highest levels of location accuracy for indoor, outdoor and underground.
- All our products and software are manufactured in our r&d, design and manufacturing centers.
- Our experts develop turnkey Wipelot systems by utilizing UWB, RFID, BLE, GSM, GPS and LoRa technologies to meet your requirements.
- We provide real data to your business processes integrated into your existing backoffice systems.
- We are always with you with after-sales maintenance and support services.

## How Wipelot Works?



Wipelot IoT; combines WB, RFID, BLE, GSM, GPS and LoRa technologies to create a wireless network that provides live tracking and monitoring throughout your facility.

Data of smart Wipelot tags suitable for staff, asset, equipment and vehicle monitoring, are processed by Wipelot mesh reader networks.

The location and status of each tag is determined and evaluated by Wipelot software. By management, follow-up, reporting, maps, alert applications and integrations, collected data is used.



## Be A Part of Industry 4.0 with Wipelot

### Develop a New Competitive Advantage!

The pressure to perform efficiently and under budget is higher than ever. Take advantage of RFID and RTLS to digitize processes for an improved workflow and cost savings.

#### Materials Tracking & Quality Check

- Track the movement of materials from assembly to finished goods.
- Create better estimates of time to finish and inventory quantity.
- Display digital manuals & documentation when staff approach workstations.

#### Asset and Equipment Tracking

- Instantly track location and state of any equipment, tool, asset
- Keep location, route and usage history
- Monitor maintenance status and condition
- Control asset movement through 'geofencing'
- Track returnable transport items
- Get rid of manual check-in/check out procedures
- Locate and route to the closest unused equipment to the workstation

#### Gate & Yard Management

- Direct truck traffic within the facility
- Observe dock loading/unloading activity
- Control & optimize traffic, signalization
- Automate weighing, scales, and loading stations
- Monitor delivery times

#### Workplace Safety

- Track personnel, visitors, contractors from long range
- Manage evacuations and monitor assembly points
- Monitor security zones between forklifts & operators to prevent collisions
- Monitor workers via 'man-down' systems
- Provide workers with panic buttons to signal for help
- Set up automated alerts in case of prolonged inactivity
- Monitor lone workers and create automated alerts in case of emergency

#### Workforce Management

- Assign workers to specific machines and product lines
- Enforce skill requirements to operate certain machinery
- Manage perimeter access control
- Keep an eye on operator-based production levels and speed
- Allow employees to move freely with flexible work rosters

#### Forklift and Construction Machine Tracking

- Track location and movement of vehicles
- Limit use of forklifts to certified personnel
- Create usage history reports to optimize fleet operation
- Receive speed alerts
- Assign work orders to nearest available forklift operators
- Monitor and direct forklift traffic in a busy facility

**RTLS systems to help you beat the competition**



## Improve Efficiency of Mining, Oil & Gas

### Provide A Safer Work Environment

#### Track Staff & Assets On the Move!

Wipelot IoT helps clients improve their operations via increased visibility of workers and equipment, environmental monitoring, and aiding in regulatory compliance

##### Occupational Safety

Personnel in these high-risk environments frequently deal with hazardous conditions. Wipelot RTLS systems help keep workers safe on the job.

- Instantly identify which workers work in underground and open areas
- Track personnel, visitors, contractors from long range
- Avoid worker and vehicle collisions, reduce risk of accidents
- Provide workers with panic buttons
- Set up automatic alerts in case of prolonged inactivity
- Prevent unauthorized access to vehicles and equipment
- Maintain emergency equipment

##### Environment & Gas Monitoring

- Monitor temperature and humidity
- Monitor gas levels; CO, H<sub>2</sub>S, NO, O<sub>2</sub>, CO<sub>2</sub>, etc.
- Send out automatic alerts in dangerous conditions
- Automatically start auxiliary fans and ventilators

##### Vehicle Tracking & Signalization

With a comprehensive RTLS installed underground and above ground, companies can monitor and control the entirety of their traffic infrastructure. We'll help clients to:

- Monitor status, location, and use of vehicles
- Control inbound and outbound traffic
- Control access and signals

##### Equipment, Vehicle, Tool and Material Visibility

- Instantly locate any mobile asset
- Create boundaries on asset transport
- Monitor the maintenance status of assets
- Create utilization reports for each asset
- Historical asset data and analytics
- Track material flow in real-time; cycle times, trips, and filled buckets
- Monitor operating time and rate, kpis, and key statistics
- Automate scales, weighing, loading and unloading stations

**Get the Real-Time Picture View Of Your Entire Operation!**



## Improve Aircraft Turnaround Time

### Smart Airport Systems

## See All Ground Support & Maintenance Live

Wipelot IoT delivers comprehensive RTLS systems optimized for airports with the focus of helping them improve visibility of personnel, ground services, maintenance teams, and vehicles.

#### Tracking of Motorized - Non-Motorized Vehicles and Equipment

Track buses, loaders, push-backs, tractors and other vehicles in ground services 7x24 real time. You can monitor vehicle and equipments precisely in airport and chute areas without Internet or GSM dependency

- Monitor location and status of vehicles in airport, identify the most appropriate vehicle to assign
- Track vehicle engine, speed and mileage
- Track non-motorized vehicles and equipment like dolly, towbar in airport
- Use gate level real-time vehicle, equipment usage reports
- Monitor vehicle engines and fuel use
- Enforce entry and exit rules for secure areas with geofencing
- Instantly identify available vehicles for dispatch

**Collect Real-Time GSE Data To Solve Problems On the Ground**

#### Equipment, Tool and Toolkit Tracking

- Locate & monitor GSE ground service equipment
- Identify and track aircraft parts removed for maintenance
- Get alerts when assets leave geofenced areas
- Receive maintenance, repair, or calibration alerts
- Track aircraft maintenance kits

#### Staff Tracking

- Identify available personnel to dispatch for operations
- Monitor line maintenance teams and performance
- Assign work orders to individuals or teams
- Track work order fulfillment
- Receive alerts during periods of employee inactivity
- Monitor overall performance for hr analysis

#### Airport Ground Surveillance

Our RTLS also enables airlines to monitor and track aircraft on the ground. Wipelot readers are able to pick up signals sent out from pre-existing hardware on the plane, incorporating this data into the tracking software. Airlines will be able to:

- Locate aircrafts across the airport
- Track planes during take-off and landing; taxiing, waiting
- Create KPI's, analytics, and statistics



# Operations in Smart Construction Sites

## Faster and Safer

### Provide Efficiency and Safety with Wipelot IoT Solutions

With the Wipelot tags, which are resistant to difficult working conditions, the movement, status and location of the assets are provided in construction area, decreasing costs and increasing efficiency

#### Workforce & Timesheet Management

- Follow up the contractor and sub-contractors
- Assign workers to specific regions in construction area.
- Enforce skill requirements to operate certain machinery
- Manage perimeter access control
- Identify entry and exit times to the field, and performance tracking



#### Construction Machinery and Equipment Tracking

Wipelot IoT Smart Construction Site solutions, provide flexible and fast installation for mobile construction sides. The system is designed to collect data in harsh conditions of construction sites and in places without GSM connection.

- Follow location and usage periods of construction machines
- Locate and route the most closest unused equipment to the workstation
- Enforce skill requirements to operate certain machinery
- Follow battery status, speed and usage information of equipments.
- Monitor the maintenance status of assets, decreasing maintenance costs.

#### Occupational Safety

Wipelot IOT Smart Site Solutions enable real-time alerts in the construction site where there is a security risk, enabling large-scale monitoring and monitoring of employees' safety. Pressing a single key when workers are in an emergency or when a problem occurs is sufficient for help requests. The system automatically detects the inactivity of an employee and sends help request to the management center.

- Avoid worker and vehicle collisions, reduce risk of accidents
- Prevent unauthorized access to restricted or unauthorized areas,
- Provide safety for visitors by creating virtual boundaries
- Provide workers with panic buttons to signal for help
- Monitor workers via 'man-down' systems
- Set up automated alerts in case of prolonged inactivity
- Monitor lone workers and create automated alerts in case of emergency

## Occupational Safety in Construction Areas



Basic Wipelot Products



PERSONNEL TAG

MT02 - Standard  
MT02 DC – High Precision

- IP55 protection
- Tamper evident
- Rechargeable battery
- Up to 12 months battery life with single charge.
- Panic button
- Motion sensor
- Status LEDs



EQUIPMENT TAG

MT02 VDC  
FT05 VCU

- IP65 protection
- Rechargeable battery OR power connection to vehicle battery
- Monitors engine on/off-vehicle status
- Optional driver ID card reader
- Optional GSM module to eliminate reader installation (where reliable signal coverage exists)
- Status LEDs



INDUSTRIAL  
PERSONNEL TAG

MT02 IP - Standard  
MT02 DCIS - High Precision

- IP67 protection
- Tamper evident
- Rechargeable battery & charging deck
- Up to 3 years battery life with single charge.
- Panic button
- Motion sensor
- Water and dust resistant
- Wi-fi compatible (Optional)
- Status LEDs



MINI READER

FT05 R

- IP65 environmental protection
- Regional tracking
- Status LEDs
- Back-up battery: 30 hours without external power
- No network cabling required



BADGE CARD TAG

MT02 B - Standard  
MT02 BDC - High Precision

- Smart badge card
- Motion sensor
- 2 programmable buttons and status lights
- Rechargeable battery - micro USB
- Up to 6 months battery life
- Built in RFID inlay for access control system compatibility



MAXI READER

FT05 DCH

- Built in alarm siren, temperature, humidity and gas sensors
- Back-up battery for 12 hours
- No network cabling required
- Optional 2 weeks battery
- IP65 protection
- Water and dust resistant
- Sub-meter location accuracy: up to 30 cm
- Wide area coverage