

# Smart Workforce & Productivity Management

Improve Agility, Throughput, Efficiency, Quality,  
Safety and Costs!















# Workforce Challenges

- Who is onsite or offsite (site map and geo-location)?
- Where is your workforce at any given time?
- How much time is your workforce spending in unproductive zones?
- What trade resources are available for job allocation?
- What resources have the subcontractors placed at the site?
- How much are your subcontractors costing you per shift?
- Who has not completed safety training?
- Is everyone accounted for in an emergency evacuation?  
If missing, where are they now?
- Who are high safety risk individuals in your operation?

# Productivity Challenges

-  What is the actual productivity vs. planned?
-  Is the project on schedule? If not, what is causing the delay?
-  Is the project on budget? If not, where has the cost overrun?
-  How much time is each foreman spending with his team?
-  Which foreman is the most productive?
-  What project is the crew working on? Who is currently idle?
-  How many man-hours have been spent on a task?
-  What are the actual labor hours/costs vs. planned?
-  Are the subcontractors billing correctly? Are they on schedule?
-  What are the cost accounts and deviations from planned?





# Solutions for Creating Productive, Profitable & Safe Working Environments

## Smart Workforce & Productivity Management

Improve agility, throughput, efficiency, safety and costs!

Attendance  
Management



Workforce & Sub.  
Performance Management



Productivity  
Management



Safety  
Management



Mustering & Evacuation  
Management



Visitor  
Management





# Safety First

## Workforce & Subcontractors Safety

Automated man-down (fall-detection) and Panic/SOS emergency alerts.

Expedite emergency response to the affected person.

Identify high safety risk individuals in your operation.

## Safety Training

Comprehensive safety and skills training with auto re-training reminders.

Alerts if un-authorized person is operating an equipment.

## Reduce Incidents

Reduce hazardous incidents or near misses as they happen. Helps in root-cause analysis of incidents to improve site's safety.

Status	Event Type	Event Time	Event Location	Current Location	GPS	Member ID	Name	Category	Title	Direct Manager	Image
Responded	SOS	8/26/2019 16:12:28	WorkShop Formwork	Basement-02	-	50018086	MOHAMAD LOKMAN ANOWAR HOSSAN	Admin/General Support	Site Store Helper	ABID HUSEIN MOHAMAD RIAZ	
Responded	SOS	8/26/2019 16:07:12	WorkShop Formwork	Basement-02	-	50018086	MOHAMAD LOKMAN ANOWAR HOSSAN	Admin/General Support	Site Store Helper	ABID HUSEIN MOHAMAD RIAZ	
Responded	SOS	8/26/2019 15:54:41	Offices	P03	-	50033351	AMIR HAMZA ABDUL SALAM	Labor support	Labor	MADHU MIAH LATE NABALOK MIAH	
Responded	SOS	8/26/2019 15:54:35	Offices	P03	-	50033351	AMIR HAMZA ABDUL SALAM	Labor support	Labor	MADHU MIAH LATE NABALOK MIAH	
Responded	SOS	8/26/2019 15:54:32	Offices			50033351	AMIR HAMZA ABDUL SALAM	Labor support	Labor	MADHU MIAH LATE NABALOK MIAH	



# Mustering & Emergency Evacuation System

## Improve Site's Evacuation Measures

Makes safe and timely evacuation the cornerstone of your emergency management plan.

- Wireless management of site emergency notifications.
- View people present at each assembly area (safe zones).
- Know precisely who is missing and their last reported location and time.
- Real-time mobile dashboards continuously update with the latest data.



# Wireless Attendance Management

Indoor or Outdoor, Anywhere, Anytime.

Real-time visibility of workforce, contractors and visitors.

- Quick Workforce Entry/Exit
- Time & Attendance Control
- Remote Clock-In/Out
- Proof of Presence
- Wireless Roll-Call



Before installing Dominate Smart Workforce & Productivity Management.  
Site's entry & exit time was reduced by 90 minutes per shift for a workforce of 1,500.

# Wireless Workforce & Sub. Tracking

Do more with fewer resources.

Identify idle workforce, and effortlessly allocate available resources to increase your operations velocity and reduce costs.

- Real-time Workforce Visibility
- Labor Cost Tracking
- Workzone Productivity Tracking
- Subcontractor Management
- Visitor Tracking





# Balance Workforce Capacity

## Real-time data for the decision makers

Balance your workforce workload to gain efficiency and minimize labor costs.

- Schedule workforce based on skill sets
- Real-time workforce update dashboard
- Labor forecasting and scheduling
- Track absence, leave and overtime hours

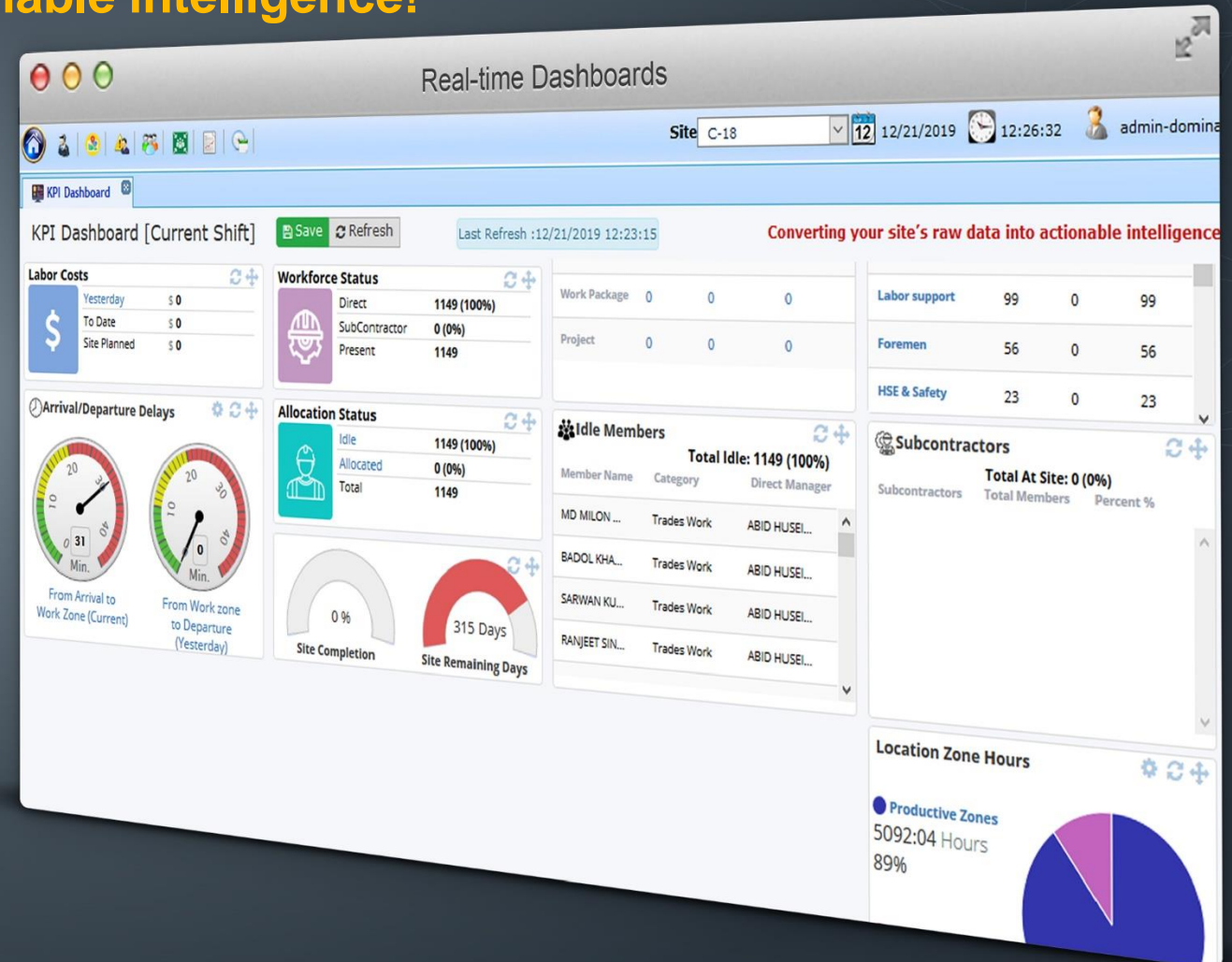


# Analytics

## Converting your site's raw data into actionable intelligence!

Analyzes data gathered from a wide variety of sources to uncover patterns and trends that will deliver actionable insight to your operation.

- KPI at Multiple Levels
- Workforce Analytics
- Who's In & Location Occupancy
- Member Visibility
- Location Activity





# Productivity Management

No more managing projects from rear-view mirror!

Real-time productivity tracking of planned vs. actual KPI, helps project managers to quickly identify the bottlenecks and deliver projects on time and on budget.

- Project Completion Tracking
- Work Package & Task Productivity Tracking
- Workforce Allocation Management
- Work Completion Capturing
- Planned Vs. Actual KPI

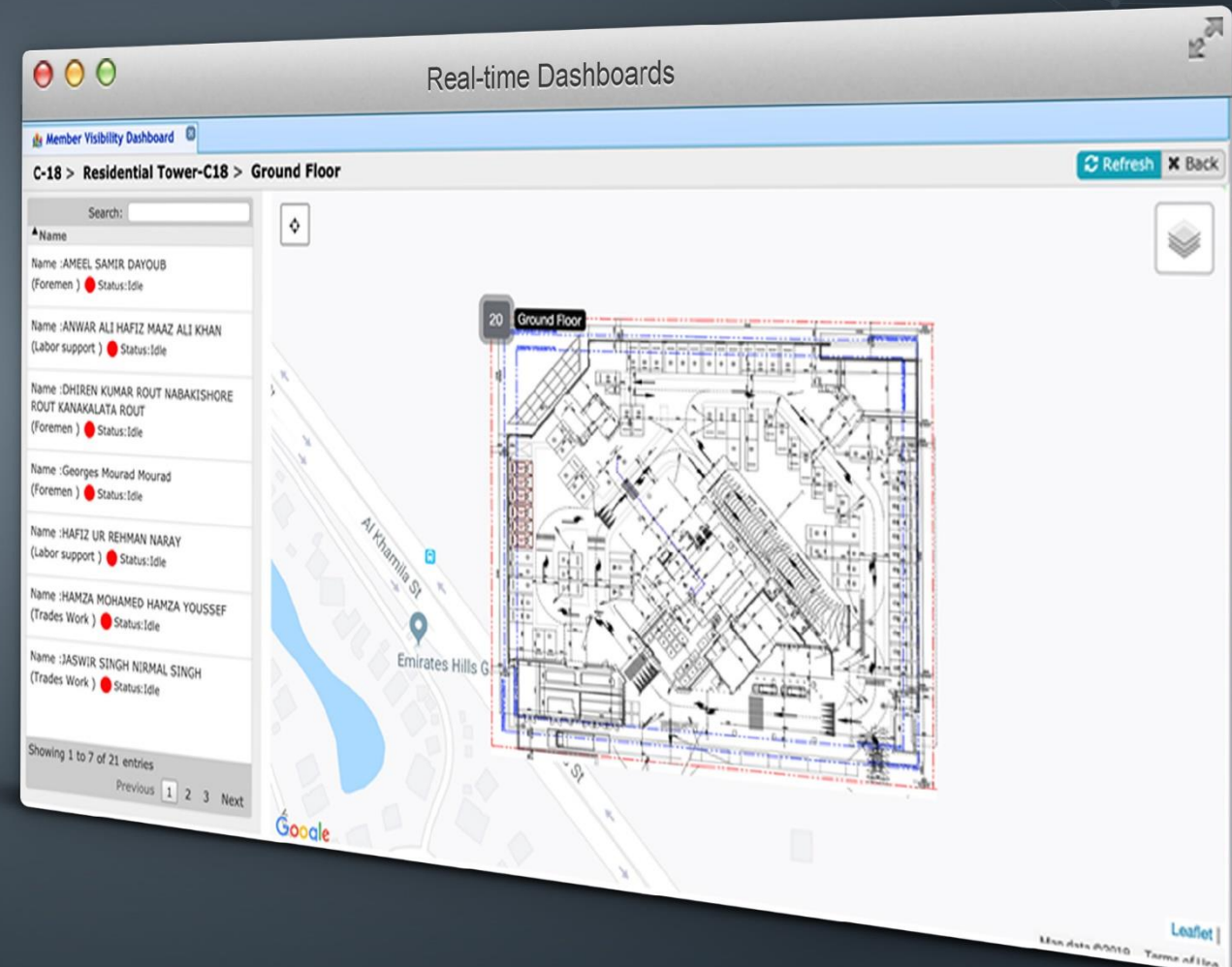
Name	ID	Ref.ID	Start Date	End Date	Duration	% Completed
One Central, Phase 1A7 - H2B Hotel (Clause 14.2 - Submission 04) Update 181129	P0002		15-Oct-17	10-Jun-20	970	20.45 %
Construction	P0220	BL14.2.04-2.Construction	01-Nov-17	10-Jun-20	953	20.48 %
Substructure	P0221	BL14.2.04-2.Construction.21	01-Nov-17	18-Mar-20	869	55.76 %
Foundation Enabling & RCC Works	P0222	BL14.2.04-2.Construction.21.3	25-Nov-17	13-Aug-18	262	100 %
Zone 01	P0223	BL14.2.04-2.Construction.21.3.2	25-Nov-17	30-Apr-18	157	100 %
Zone 01A	WP0566	BL14.2.04-2.Construction.21.3.2.3	29-Nov-17	22-Jan-18	55	100 %
Zone 01B	WP0567	BL14.2.04-2.Construction.21.3.2.12	05-Dec-17	28-Feb-18	86	100 %
Zone 01C	WP0568	BL14.2.04-2.Construction.21.3.2.1	25-Nov-17	30-Apr-18	157	100 %
Zone 02	P0224	BL14.2.04-2.Construction.21.3.4	03-Dec-17	13-Aug-18	254	100 %
Zone 03	P0225	BL14.2.04-2.Construction.21.3.6	05-Dec-17	22-May-18	169	100 %
Zone 04	P0226	BL14.2.04-2.Construction.21.3.17	20-Feb-18	05-Jul-18	136	100 %
Zone 05	P0227	BL14.2.04-2.Construction.21.3.7	29-Nov-17	28-Feb-18	92	100 %
Zone 06	P0228	BL14.2.04-2.Construction.21.3.8	26-Nov-17	15-Mar-18	110	100 %
Basement 04	P0229	BL14.2.04-2.Construction.21.8	09-Jan-18	18-Mar-20	800	55.72 %
Basement 03	P0240	BL14.2.04-2.Construction.21.9	11-Feb-18	29-Aug-19	565	61 %
Basement 02	P0251	BL14.2.04-2.Construction.21.10	01-Mar-18	21-Oct-19	600	66.2 %
Basement 01	P0262	BL14.2.04-2.Construction.21.11	24-Mar-18	03-Mar-20	711	29.31 %
Site Survey and Preparation	WP0565	BL14.2.04-2.Construction.21.22	01-Nov-17	15-Feb-18	107	100 %
Superstructure	P0276	BL14.2.04-2.Construction.22	22-Jul-18	10-Jun-20	690	13.95 %

# Real-time Alerts & Integrations

**Watches your operation without you watching it!**

Real-time alerts & notifications bring accountability, validation and security at every level.

- Rule-based Alerts
- Site Messaging Notifications
- Site Mass Alerts
- Manage Restricted Location Access
- Actions (Pop-up message, SMS, email, siren, light strobe)



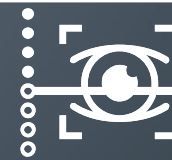


# Integrations

## Energize your Existing Applications with the power of IoT!

Built-in integrations with Primavera P6, MS Project, Ayap, access control, IRIS devices and extensibility features enable you to extend your business applications with real-time insights from streaming IoT data to improve efficiency and derive more value from your existing business applications.

- Primavera P6
- Microsoft Project
- Extensive APIs
- Import/Export Wizard
- Power BI
- IRIS & Access Control

The Oracle logo, featuring the word "ORACLE" in white capital letters on a red rectangular background.The Microsoft logo, featuring the four-colored square icon followed by the word "Microsoft" in a sans-serif font.

# End-to-End Security

## We Take Security Seriously!

Through unique device identification, system provides secure environment of trusted devices and communications. Authentication is enforced prior to communication for proof-of-origin of data. Transport-level security helps prevent corruption. Role-based and user-based access control manages cloud and mobile access.

- Role and user-based access control
- HTTPS point-to-point connection
- Message integrity, confidentiality and replay protection
- Node authenticity
- AES 128 counter mode
- OMAC1 message integrity
- Transport-level security



# Technology Agnostic Industrial IoT Devices

**RFID**



**GPS Devices**



**BLE**



**Barcode**



**Sensors**





# Plug & Play Industrial IoT Hardware

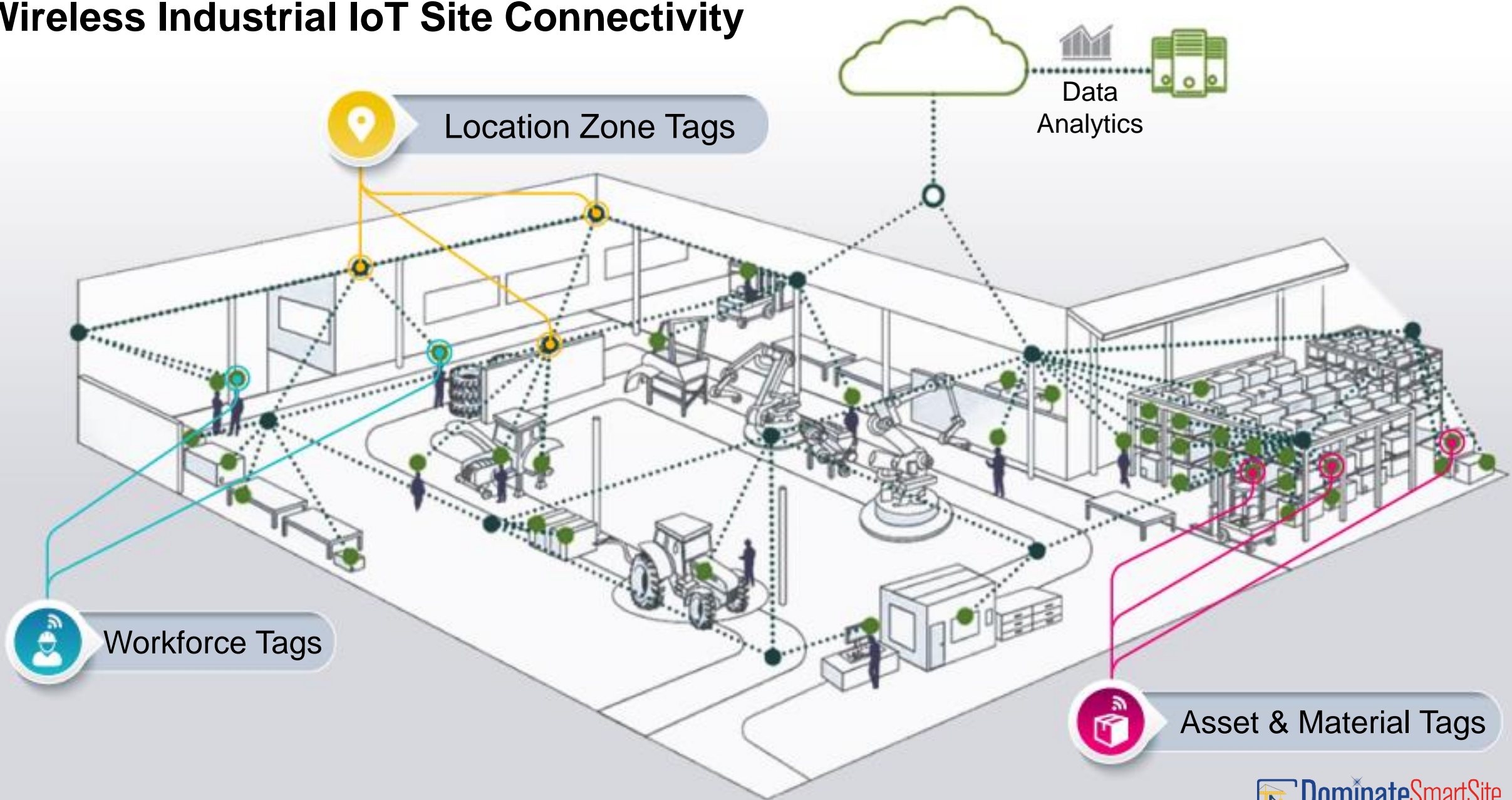
**IoT That's Ready to Use.  
Ready to Build.  
Ready to Scale.**

Pre-configured IoT hardware designed for harsh industrial environment without a need for AC power or network connection enables your operation to be IoT ready within days.

- No AC Power Required. Runs on long-lasting Battery (12 months).
- No Internet Connection Required (Creates its Own BLE Mesh Network).
- Quick Installation and Expansion (less than 2 minutes per device).
- Read Range of Up to 100 Meters (329 ft)
- IP67 Ratings (water & dust proof)
- Man-down (fall detection)
- SOS button for emergency alert notification
- High Availability with No Single Point of Failure



# Wireless Industrial IoT Site Connectivity



# Examples of our IoT Personnel Hardware

For full list, please visit <http://dominatesmartsite.com/iot-hardware>

## Personnel Tags BLE-based



**Helmet Tag**



**Belt Tag**



**ISO Card Tag**



**Wearable Tag**

## Personnel Tags BLE-based



**Pendant Tag**



**Visitor/Staff Tag**



**Keychain Tag**



**GPS Tag**

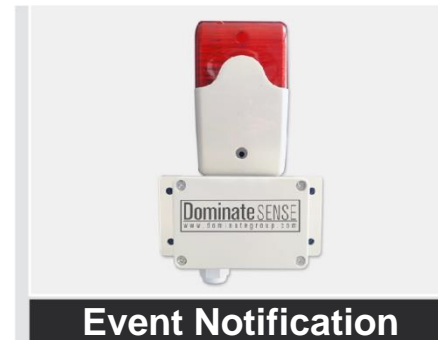
## BLE Mesh Network



**Location Anchor**



**Location Router**



**Event Notification**



**IoT Gateway**





## Real-Time Visibility

1

### Example

#### Time & Attendance

Presently, there are 1,347 workers on site. 34% are direct & 66% are subs. There were 49 late arrivals & 70 are absent. There were 20 early departures from yesterday.

#### Idle Workforce

Currently, there are 10 idle workers at the site.

#### Subcontractor Management

There were 18 ghost workers detected among Subcontractor009's list during the last 4 weeks.

#### Arrival & Departure

Trade B's workers take their lunch break 25 minutes early everyday.

#### Worker Health & Safety

16 workers from Group A have worked more than 5 hours overtime everyday last week, which can be harmful to their health.



## Real-time Insights

2

### Example

#### Workforce Productivity

1000 cubic meters of excavation is taking up to 110 man hours in zone B1-C3, while with the same equipment, it took 50 hours in zone B1-A2.

#### Workforce Management

Group C is 35% less productive than expected. Perhaps they are working under improper conditions, or they lack proper equipment or materials.

#### Subcontractor Performance

subcontractor011 has been the least productive last month, with 25% of productivity lower than expected.

#### Schedule Issues

Electrical wiring in location A was planned to be done in 140 hours. The group has been working for almost 200 hours now, and it will apparently take another 50 hours. At this rate, it is reasonable to expect one week of delay.



## Advanced Analytics

3

### Example

#### Workforce Arrangement

Which team members are more skillful, have training certificate and have performed best in previous tasks? We can assign them to the high priority task at hand.

#### Risk Mitigation Plans

It is necessary to finish the plumbing work before winter begins. Therefore, it is necessary to hire more plumbers.

#### Financial Decisions

It will be rainy for 3 days. This means labor cost and little productivity, plus risks for workforce and equipment. Should we put the project on hold?

#### Tactical Advices

Company's profit margins are being gobbled up by overtime due to poor productivity during those hours. Perhaps we need to cancel overtime shifts & increase the number of workers during regular hours instead.

# Data



Real-time dashboards providing information about **time & attendance, worker safety, costs, delays**, etc.

## Example

### Time & Attendance

- 578 workers on site
- 120 late arrivals
- 15 no-shows
- 10 idle workers
- 100 in zone A  
225 in zone B



# Insight



Up-to-date reports providing insights into **project performance & risks**.

## Example

### Project Performance

Excavation work in zone B1-C2 was planned for 580 hours, but after 700 hours of work, it is only 78% completed. \$12,080 of cost overrun is expected for this task. This is mainly due to Trade D's poor performance...

# Action



Advanced analytics providing recommendations for better **management of resources**

## Example

### Recommendations for Workforce Management

Task B is of high priority. Needs to get done by the end of the week before task C is started. With 350 hours of overtime, the task will be completed only if it is carried out by groups E or L who have demonstrated the best skill & performance in similar situations...



# Why Dominate Industrial IoT?

## Key System Features


- End-to-end IoT Solutions or enable your existing applications with IoT.
- SaaS or on-premise installations.
- Quick learning curve with minimal operation disruptions.
- Plug & play, pre-configured and ready to go IoT hardware.
- Technology agnostic with quick DIY hardware installation.
- Mobile-enabled (iOS & Android).
- End-to-end security.

## Zero Investment & Risks

- Low-cost bundled hardware & software monthly subscriptions.
- Accelerate time to value with no upfront costs or CAPEX.
- No long-term contract (maximum 6 months).

## Worry-free Support

- Online knowledge base access.
- Remote dedicated consultants.
- On-site full-time dedicated consultants.
- Free data migration.



# Collaborate with **multiple teams** across **multiple sites** to better manage projects, resources, time & attendance, costs, etc.

## **Benefits:**

- Build accurate models of time and resources required to perform tasks.
- Mitigate risks.
- Gain full visibility into all activity across your site.
- Analyze data in real-time to assess productivity and detect vulnerabilities.
- Proactively prevent schedule delays and cost overruns.
- Encourage performance driven working environment.
- Enable workers on different parts of the chain to be more efficient.
- Enhance discipline and accountability.
- Improve sit's evacuation measures.
- Achieve improved productivity and profitability.
- Identify high safety risk individuals in your operation.





# Our Goal

Partner with our clients to transform their organizations in the ways that matter most to them.

This means embedding digital, analytics and design into core processes and mind-sets; building capabilities that help organizations and people to thrive in an ever-changing context; and developing excellence in execution to ensure that actions translate into outcomes, quickly and sustainably.



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