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Vocera: Communication Game Changer





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Vocera: Reach Who you need When you need Them

NO LICENSE REQUIRED

Time Critical Life Saving Decisions- ARE Facilitated

through Vocera Communications in over 1,500 hospitals

in the US. WHEN TIME MATTERS VOCERA MAKES A DIFFERENCE

REFUEL OUTAGE TIME MATTERS AND VOCERA MAKES A
DIFFERENCE

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HOW DOES IT WORK

Name Based Log-in

Phone numbers create inefficiency that we eliminate by calling people

Hands Free Communication

Free your hands improves speed of communication, and reduces chance of missed calls

Call by Role-

Intelligent workflow / call flow engine ensures users can always connect to the right resource at the right time

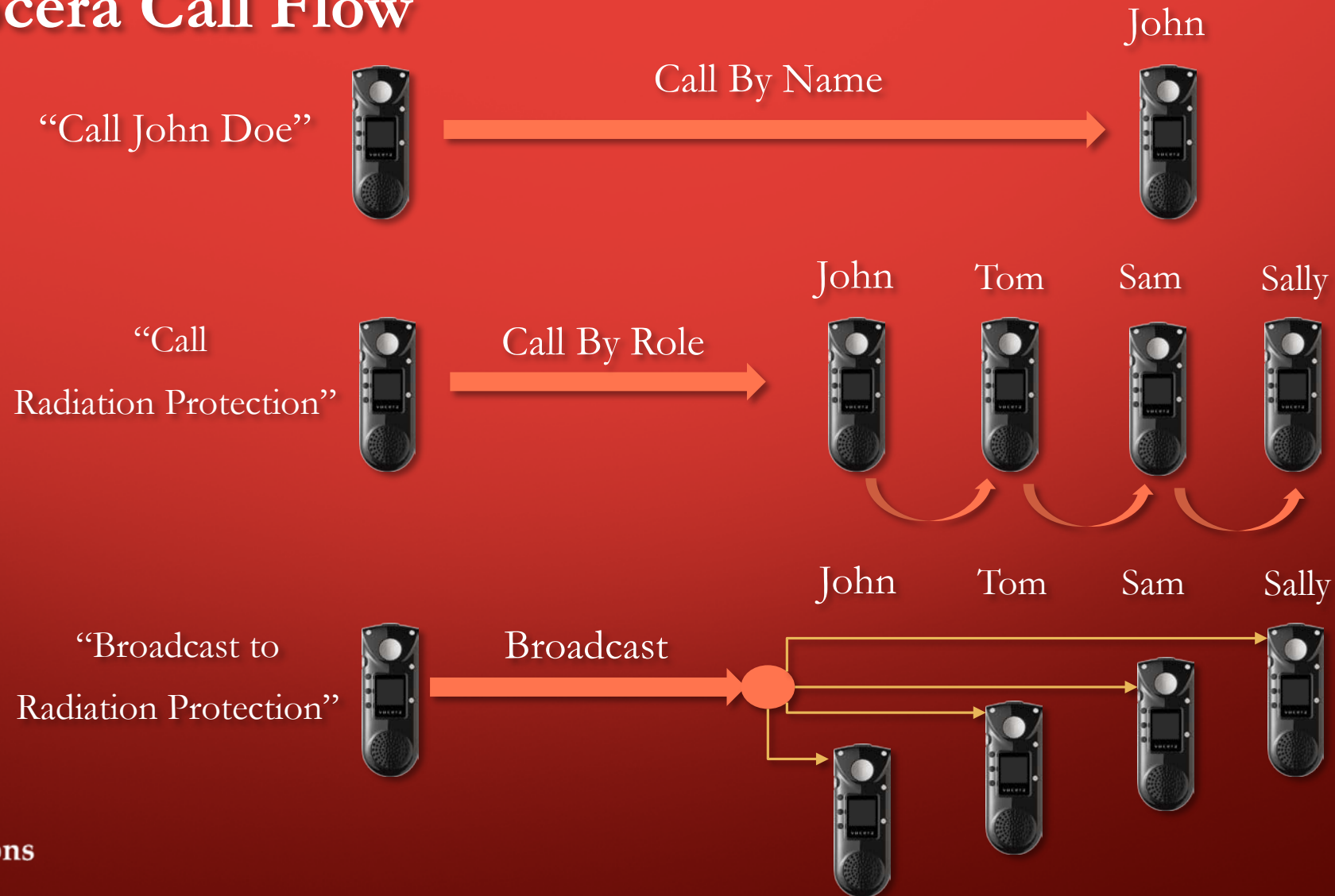
Call by Group- Radiation Protection AND Schedule reminders-
Every 15 MIN for next four hours check dosimeter



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Vocera Call Flow



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Vocera Call Flow

“Call John Doe”



Badge to Badge



John



“Call John Doe”



Phone to Badge



John



“Call John Doe”



Badge to Phone



John



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Vocera Call Flow Allows Integration to other Systems



Telex
Equipment



Sipella: Network Video Intercom

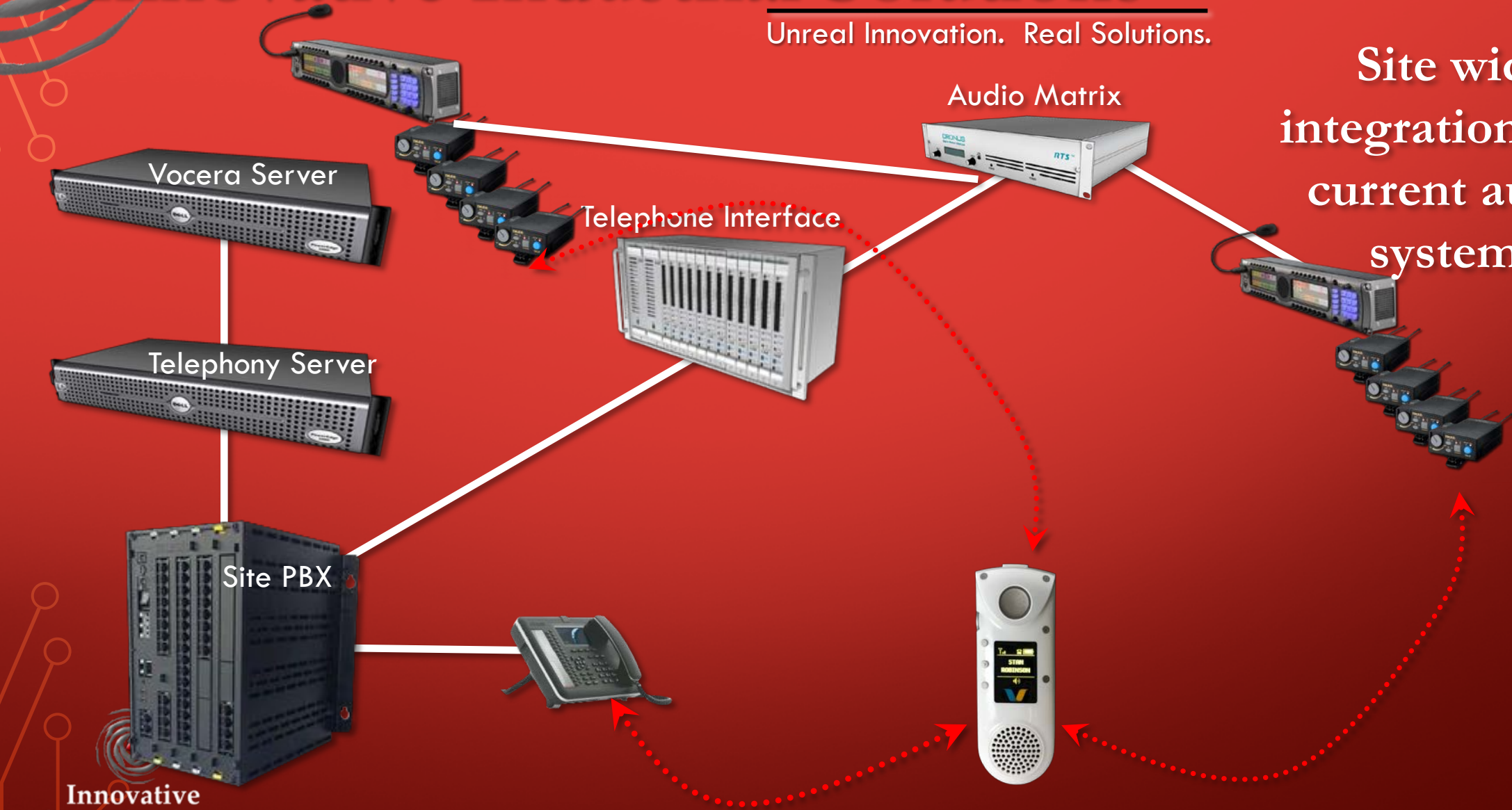


Motorola Radios

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Site wide
integration with
current audio
systems



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Vocera Architecture

802.11 a/b/g/n 2.4 or 5.0 GHz Audio Quality Wifi Network

B3000N Badge



B3000N Badge



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Recognition Statistics for Users by Highest Usage

Site: Global

Mechanical Maintenance

Total Users	Last Used	User Name	Attempts	Recognized	Rejected	NoSpeech	SpeechTooEarly
7	2/2/2012	Adams, Patrick	430	357 85.3%	48 11.2%	13 3.0%	2 0.5%
		Caulle, Trish	53	39 73.6%	7 13.2%	7 13.2%	0 0.0%
		Chandler, Keir	372	298 80.1%	49 13.2%	22 5.9%	3 0.8%
		Fuller, Donald	651	530 81.4%	90 13.8%	27 4.1%	2 0.3%
		Hall, Brian	1572	1317 83.8%	121 12.2%	59 3.8%	5 0.3%
		harris, kevin	62	47 75.8%	11 17.7%	4 6.5%	0 0.0%
		Wilson, Sam	10	8 80.0%	2 20.0%	0 0.0%	0 0.0%
Total			3150	2606 82.7%	398 12.6%	132 4.2%	12 0.4%

Active Users in Department: Mechanical Maintenance : 7

Engineering

Total Users	Last Used	User Name	Attempts	Recognized	Rejected	NoSpeech	SpeechTooEarly
8	2/2/2012	Bell, Philip	873	785 90.0%	57 6.5%	51 5.8%	0 0.0%
		Bigelow, Jimmy	250	204 81.6%	30 12.0%	15 6.0%	0 0.0%
		Brooks, Tracie	713	659 92.4%	48 6.7%	4 0.6%	2 0.3%
		Jackson, D J	904	488 54.0%	229 25.3%	186 20.6%	1 0.1%
		Ramcharitar, Kurt	643	518 80.6%	79 12.3%	44 6.8%	2 0.3%
		Todd, Mike	2075	1676 80.8%	285 13.7%	103 5.0%	11 0.5%

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LaSalle Vocera Success

In an effort to reduce exposure and improve time management efficiency LaSalle incorporated the use of the Vocera system, a hands-free communication device.

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LaSalle Vocera Success



Exelon's LaSalle Station

Exposure reduction through hands-free communication device (Vocera)

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Exerts from LaSalle's TIP AWARD Entry Criteria

- Dramatically reduced response times for outage and online activities over using two way pagers.
- Work flow has dramatically improved as one of the features of Vocera is a hierarchy in call structure. A worker in the field can ask to call a MMD FLS and it would call one and if unavailable automatically route to another MMD FLS.

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Exerts from LaSalle's TIP AWARD Entry Criteria

LaSalle is a high source term plant and there are actions in place to remove/reduce the source term, in parallel the use of the Vocera system:

Reduced RCA time for the workers

Reducing collective radiation exposure.

LaSalle has been challenged to reduce collective radiation exposure and the Vocera system has provided benefits.

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Time Savings Performance Metrics Estimates

Time Savings

LaSalle – 25,000 calls

30 day outage

30 minutes average time saved per person per shift

not having to hunt for people and resources

~6000 man hours saved

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LaSalle Survey Details 2014

Sample of the 390 users were surveyed after 18 days in outage.

84% - Improved efficiency during the outage

86% would like to see Vocera utilized during future outages

25 to 30 minutes saved per shift per person

Top Benefits

Hands free & wearable = fewer missed calls

Small lightweight device – Easier to use when working in tight spaces

Easier to reach people faster

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Seabrook 2015 Outage

Heaviest users of Vocera: 1500 to 2500 calls over 30 days

OCC Work Control

Project Managers

Maintenance Manager

Crafts Supervisors

Statistics:

70,000 calls made over 30 day outage with partial deployment

72 sec – Average call length

Westinghouse – Most called group

Most common usage:

Task status updates

Project coordination

Re-directing resources

Estimated time Savings:

30 minutes saved per person per shift

~2000 man hours saved

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RESULTS FROM SEABROOK

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- Project Managers
- Maintenance Manager
- Crafts Supervisors
- Statistics:

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RESULTS FROM SEABROOK

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Duane Arnold – Results

Where Did Vocera Make a Difference

Outage coordinator stayed out of the drywell the entire outage reducing exposure

RPM reduced number of times in drywell

Tech supervisors stayed in constant contact with technicians which resulted in critical jobs getting done faster

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Duane Arnold – Results

5 – 6 REM reduction

All drywell entries required the use of Vocera

28,476 – Calls

743 – Calls made per day

2,500 Call by 3 tech supervisors that coordinated drywell activities

All drywell entries required the use of Vocera

Next Steps-Looking to expand to enterprise system

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INDIAN POINT OPERATIONS 2R20

“Without a doubt, vocera was a huge success. I had three big tests go off more efficiently, with faster real time communications (less confusion/ phone tag) and less dose. They were PT-R13 (SI), PT-R16 (recirc pumps), PT-R2A (VC SUMPS). I communicated with R. Caffo / D. Worrall on both sump tests for the ENTIRE duration of the test; I have never been able to do that with any other communication device the company has provided me with in the past. I was able to answer my team mates’ questions (those not wearing vosera) as they were asked, because I could hear them thru the microphone (vc sump). This system is an invaluable tool for the whole station and should be researched more with more locations being tested all the time. I have dozens of more examples of their usefulness if required. To all of the people that you worked with on this project I would like to say job well done.

Sr. Reactor Operator Quote•

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INDIAN POINT OUTAGE MANAGEMENT 2R20

The bottom line is that Vocera was a success. I received much positive feedback from the Test Group operators. From the OSS I could get direct job status, with minimal interruption – much better than paging. I also noticed that the Paging overall was the least for any outage. Vocera made our life easier – reduction of manpower, avoiding “runners” from 1 job location to another. All of this leads to reduced dose. Key examples were the VC sump test where operators clearly communicated with CCR, 46ft VC and 68FT VC. Another was the valve 731 work where we had clear communication with 46’ ICW, CCR and 68 Pipe Pen. The noise cancellation headphones also worked well. There were areas where Vocera dropped out, but we learned where to walk to be in range again”

Shift Outage Manager

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INDIAN POINT 2R20

“Vocera, is a very useful tool that greatly improved efficiency in communication with the entire site organization. This communication tool greatly improved our ability to remove barriers to get work done more efficiently. This tool also improved RP supervisions ability to communicate directly from the field essentially providing a virtual RP war room when resources did not support an actual war room. This tool is vital tool for improving communications for outages going forward.

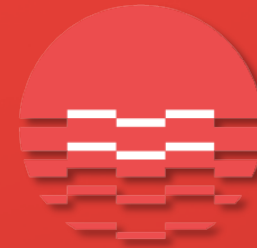
RPM Indian Point 2012

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Duane Arnold
Point Beach
Seabrook
St. Lucie
Turkey Point



Entergy

Waterford
River Bend
Indian Point

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Exelon

Fitzpatrick
Dresden
LaSalle



**DUKE
ENERGY®**

Oconee



Sequoyah



**ENERGY
NORTHWEST**

Columbia



aps

Palo Verde



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WHY VOCERA ?

- Clips to a lanyard weighs 2 oz
- Database operated so many features
- Integrates with all other Com systems
- TIP Award
- Uses existing infrastructure supporting digital plant environment
- Proven time saver, ROI is one Refuel
- More than audio communication capable text and email as well as PDF file to smart devices.
- No license required
- Hardy over 2000 badges sold and only 6 returned
- Once system in operation little to no support needed



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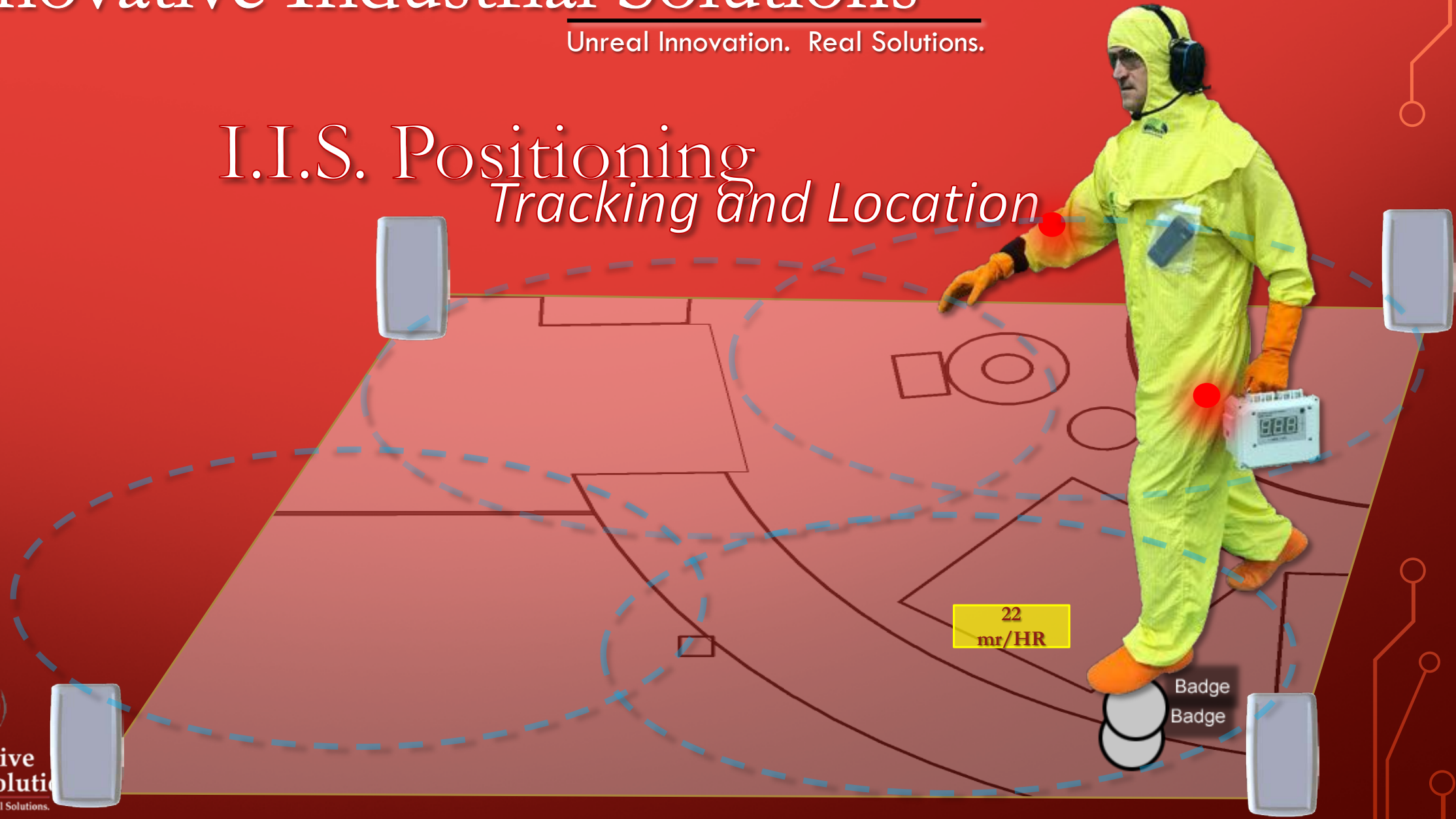
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Our next Nuclear Promise
GAME CHANGER!

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I.I.S. Positioning *Tracking and Location*



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I.I.S. Positioning *Tracking and Location* Architecture

Tags/Wrist Display



Anchor Point



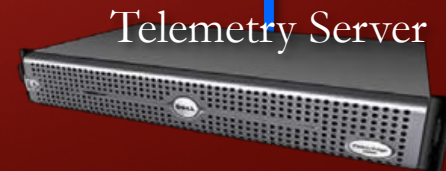
Network Switch



PTL Server



Telemetry Server



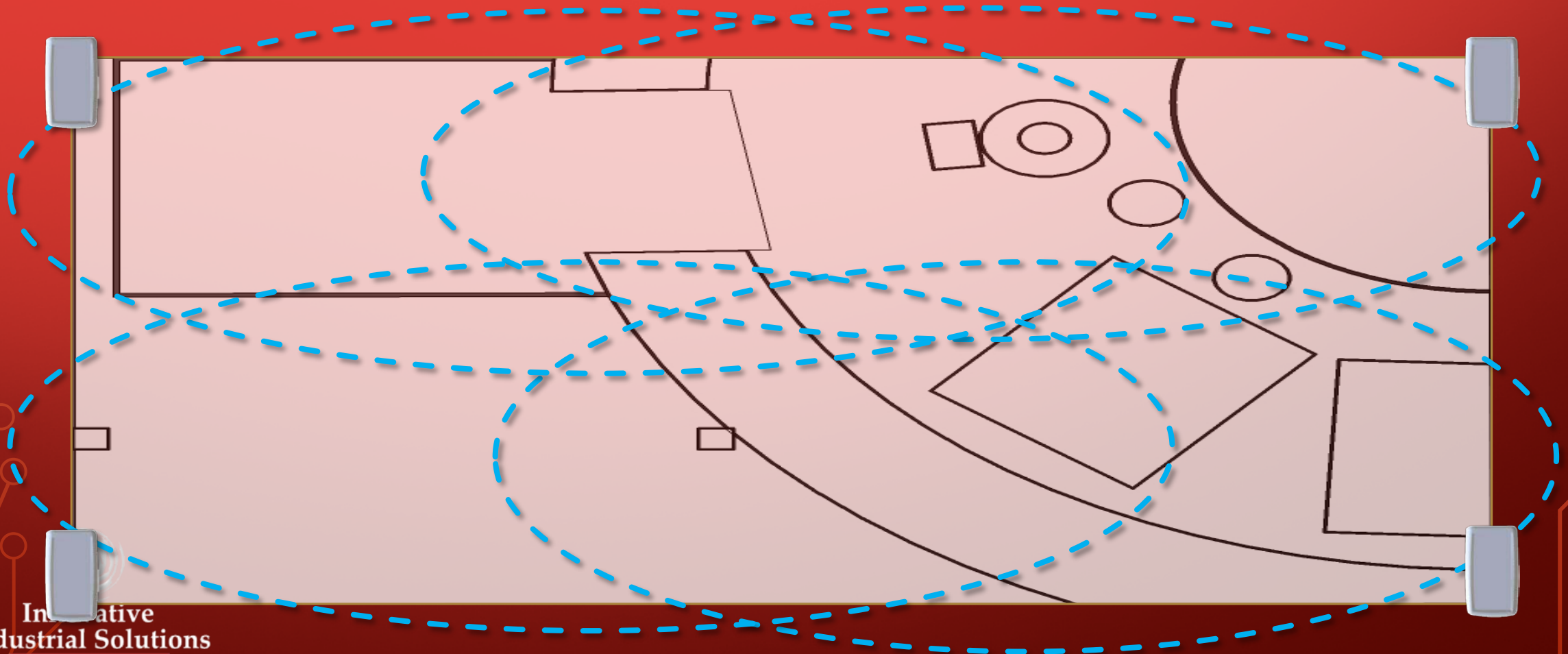
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Deploy Anchor Points that create a wireless mesh network over Ultra Wide Band (UWB) 500MHz wide) Wi-Fi



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Anchor Points



- Anchor points form a dynamic mesh network that communicate with other anchors as well as tracking tags.
- Anchors may be connected directly to a Power-over-Ethernet (PoE) switch or may be used stand-alone as part of a larger mesh network.
- PoE, Battery or AC powered
- UWB coverage over a maximum radius of 164 ft
- 12 inch accuracy in two dimensions over its full coverage area.

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Asset Tag/Badge Tag/ Wrist Display(Q4)

The Asset Tag is designed for simple attachment to equipment, tools and pallets, and can even be worn by people with a lanyard or clip.

The Badge Tag is designed for simple attachment to personnel. Receive alerts, Display shows your dose, dose rate, tracks your location within 12" and receives safety alerts and messages.



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- Capture accurate, live view of operational activities, personnel and tools.

Know where your M&TE is 100% of the time.

Maintain inventory of all refueling equipment with each BX 25 box being labeled and tracked.

Track your air samplers and ventilation units.

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- Improve employee safety with zone alerts.

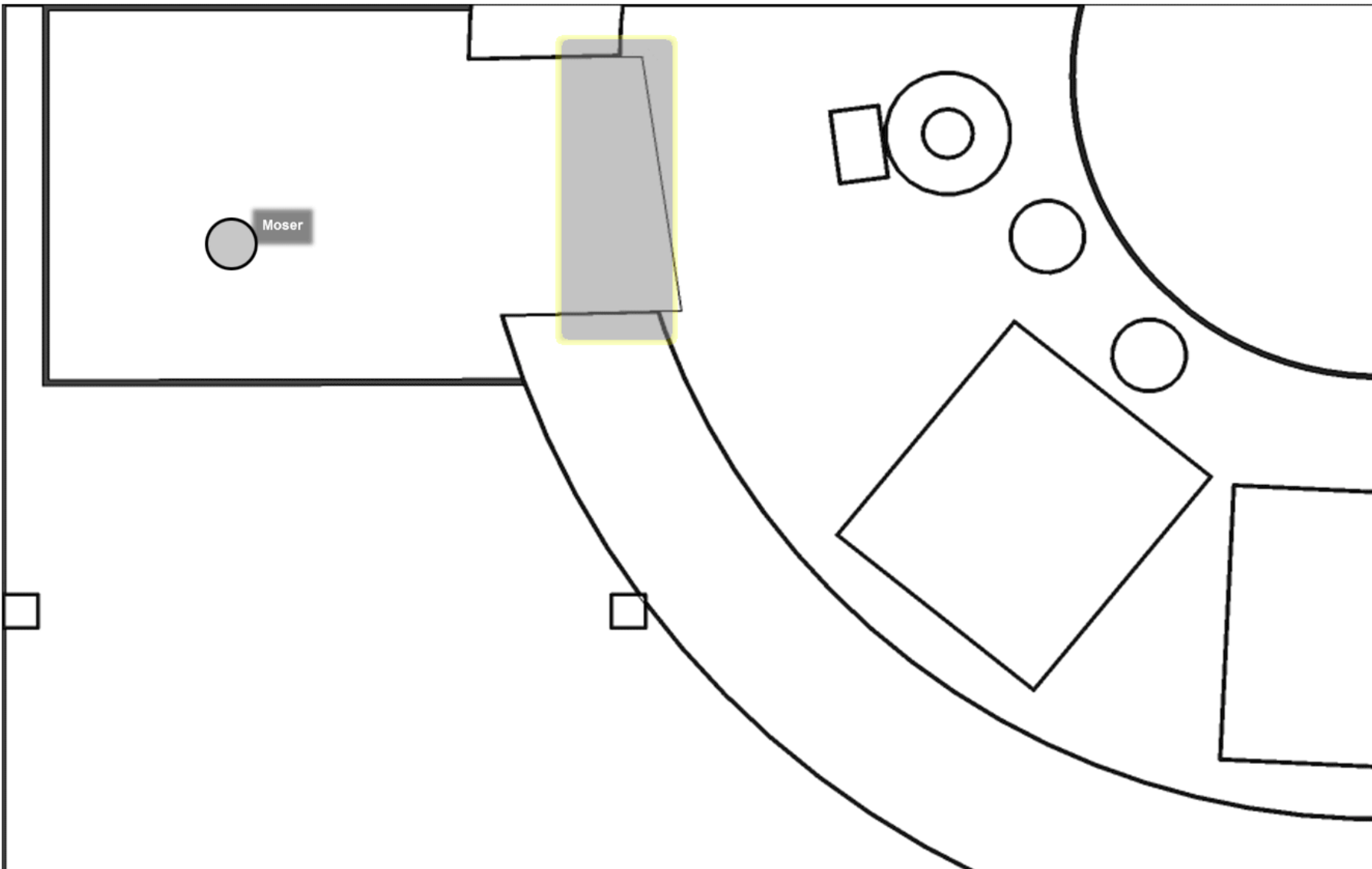
Meeting ▾

Exhibit ▾

I.I.S. Positioning Map. ▾

Heatmap

Playback



Hello

All ▾



ALARMS

ZONES

TRACKABLES



Search



Name ▾



Your are Now entering a High Radiation Area



Type Keep Out

Severity 4

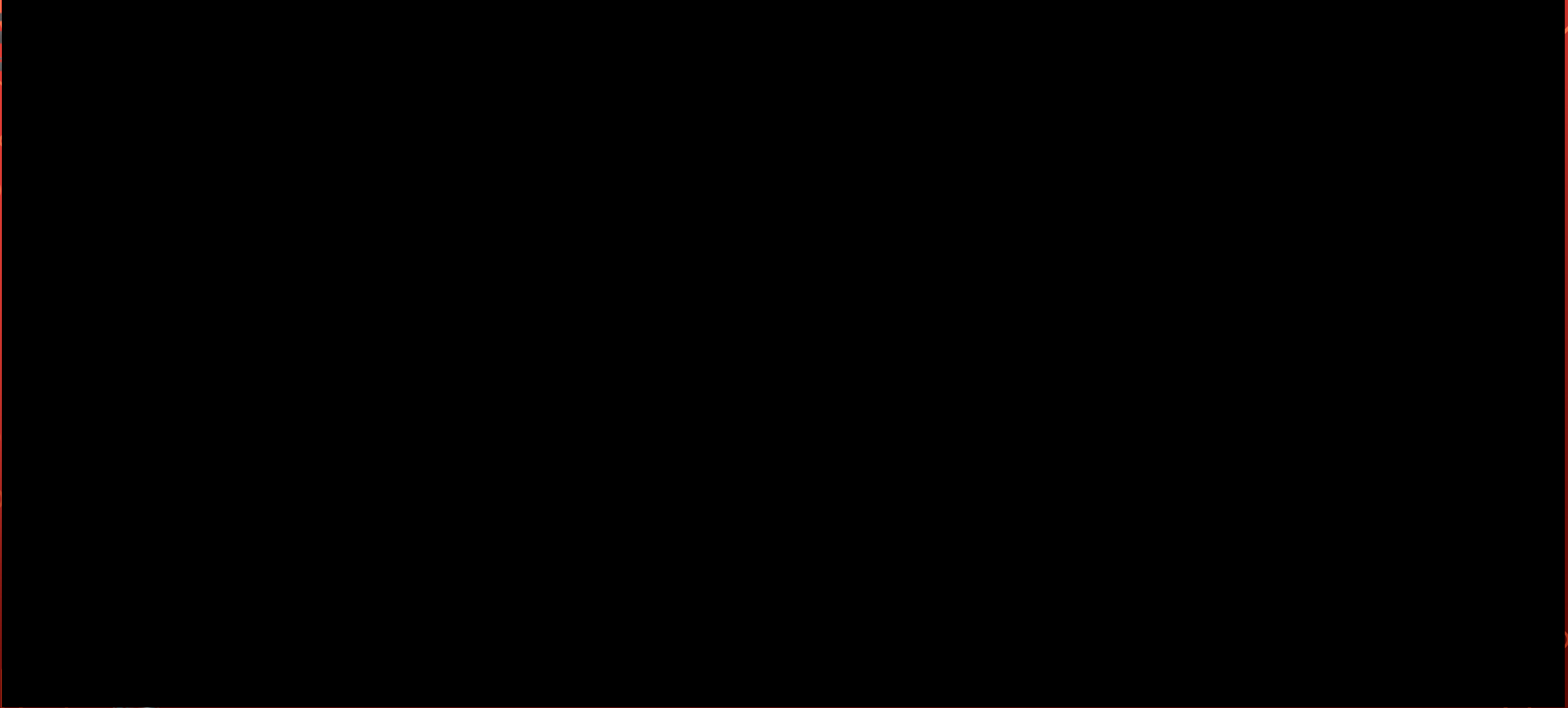
Status Active

Trackable regular behavior Allowed in

Trackable special case behavior Keep out



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- Optimize workforce efficiency with operational activity analytics on incidents, and workflows.

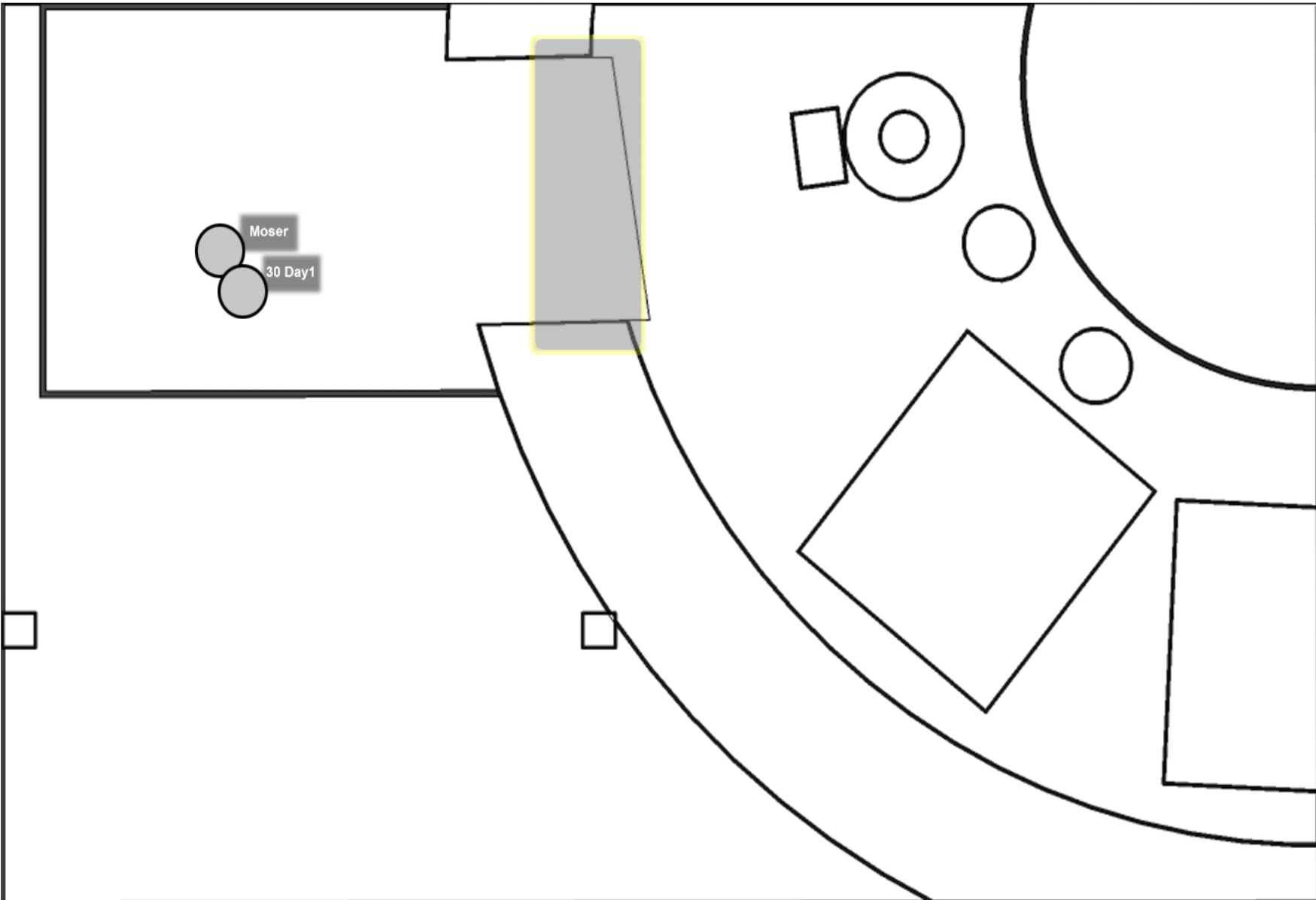
Meeting ▾

Exhibit ▾

I.I.S. Positioning Map. ▾

Heatmap

Playback








Hello

All ▾



ALARMS ZONES TRACKABLES

		<input type="text" value="Search"/>
<input checked="" type="checkbox"/>	Name ▾	
<input checked="" type="checkbox"/>	Your are Now entering a High Radiation Area	  
Type	Keep Out	
Severity	4	
Status	Active	
Trackable regular behavior	Allowed in	
Trackable special case behavior	Keep out	

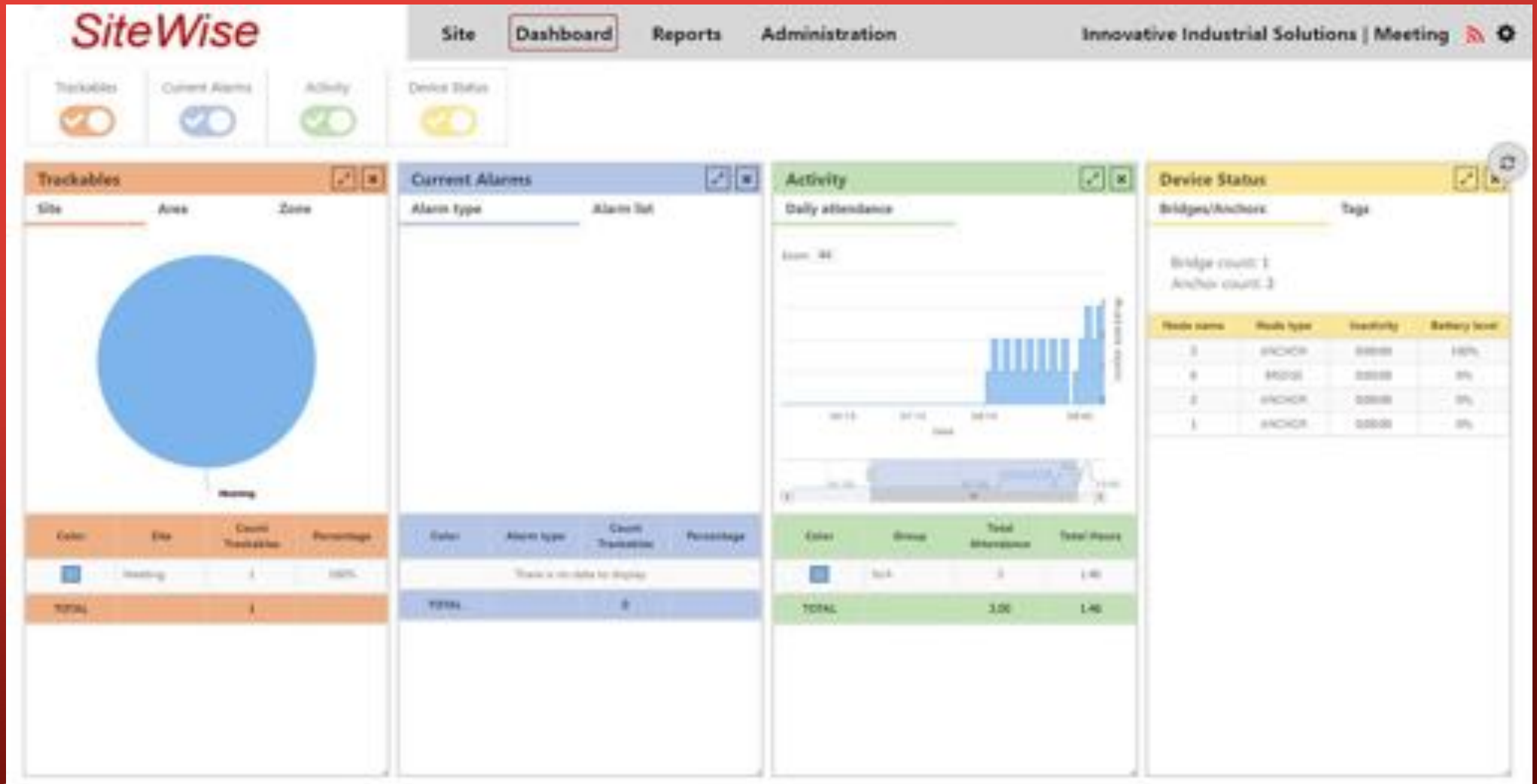
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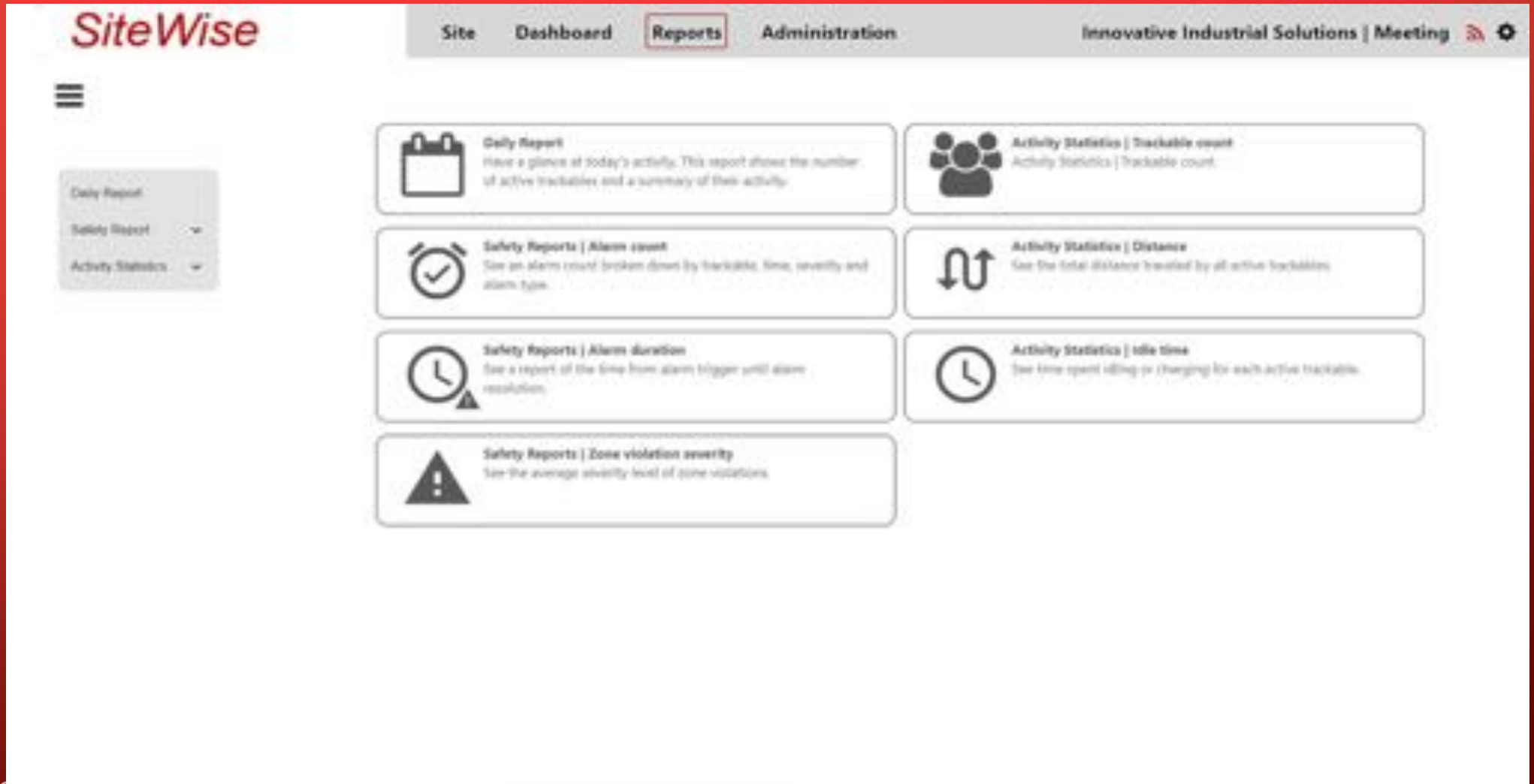
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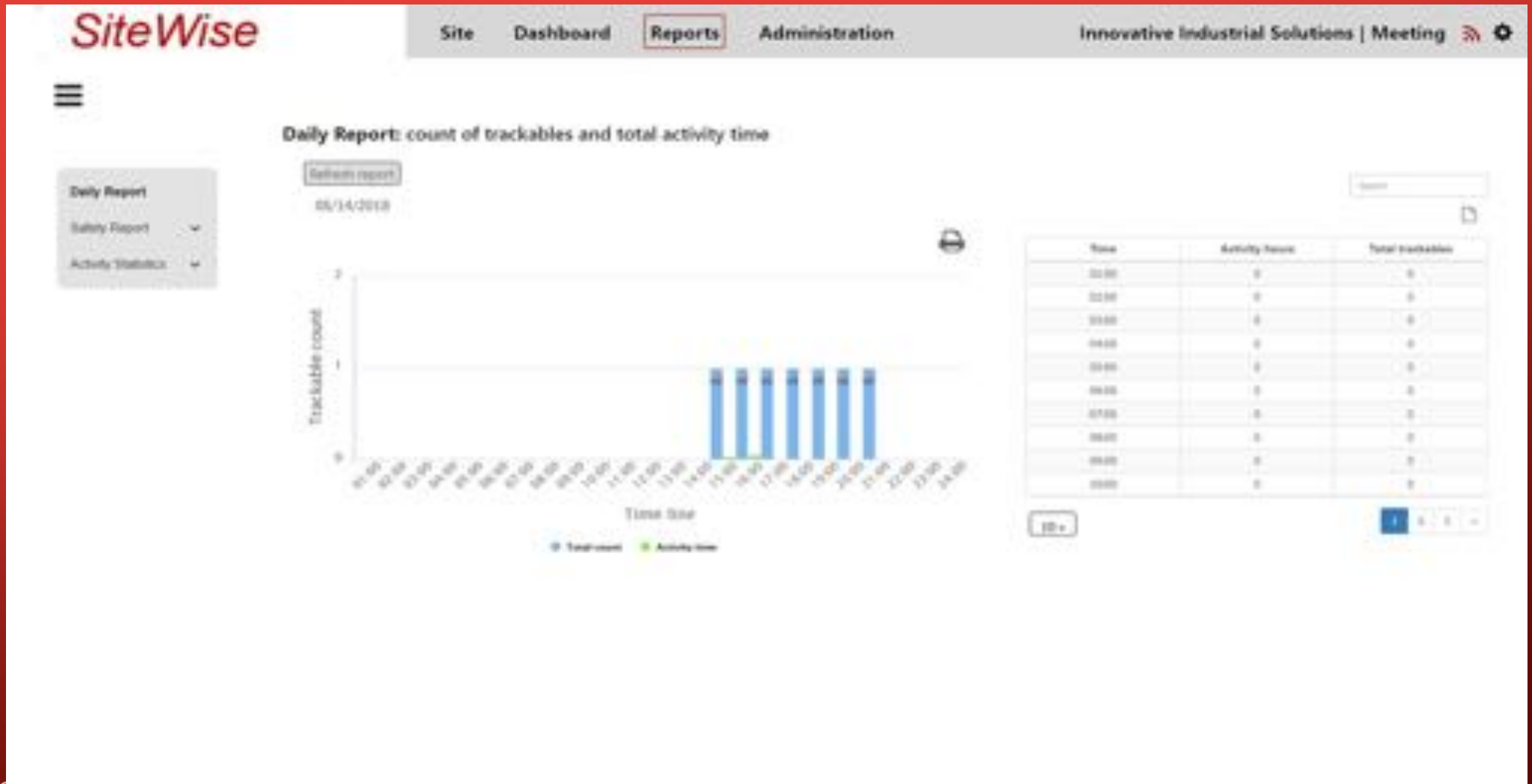
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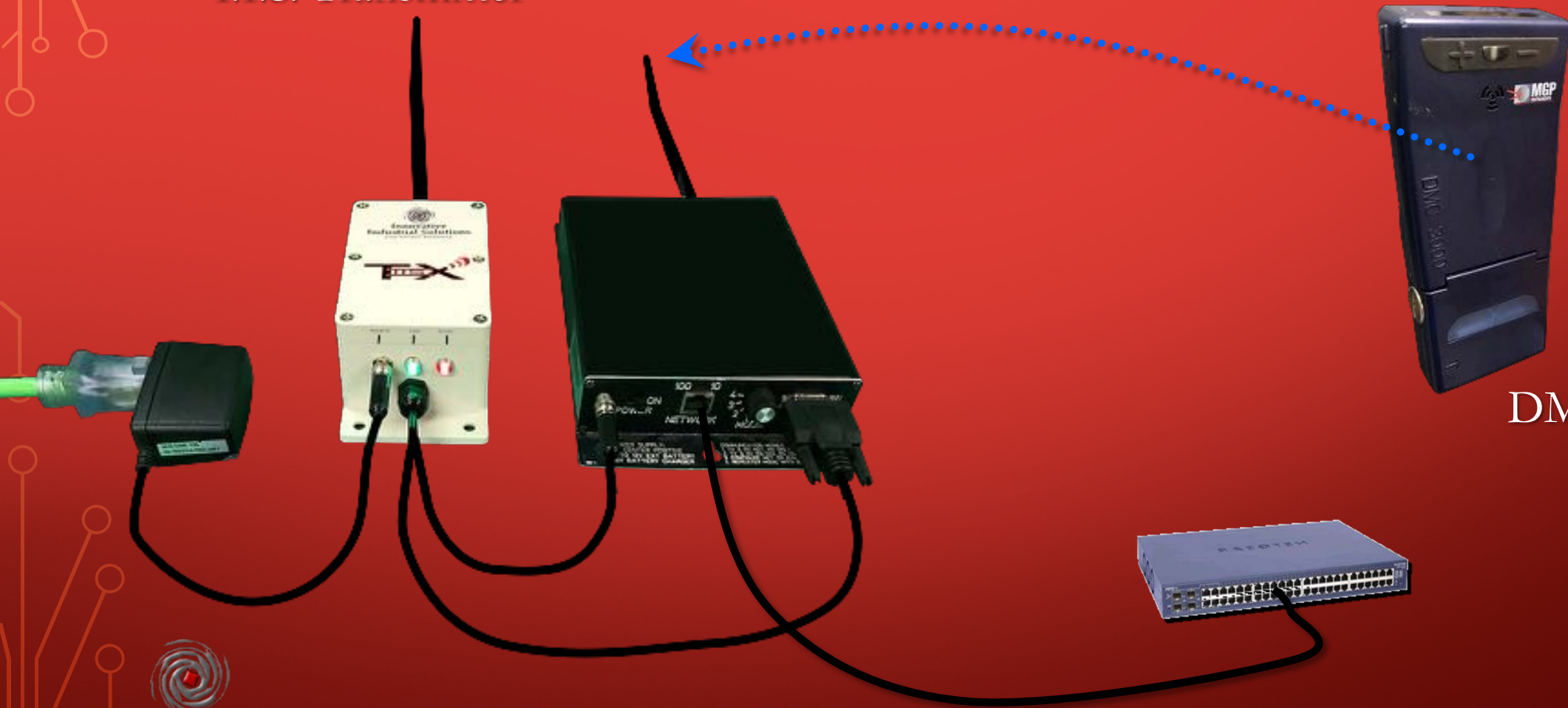
New Technology from I.I.S.

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I.I.S. Transmitter

DMC 3000



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I.I.S. Transmitter

DMC 3000

I.I.S. Wrist Display 3000

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I.I.S. Transmitter

DMC 3000

I.I.S. D.R.A.D. 3000

I.I.S. Wrist Display 3000



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Questions