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A Guest Blog Post From

How Increasing Overhead is Now a Great Thing

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How Increasing Overhead is Now a Great Thing

By Adrian Turchet

Since the earliest days of business management and accounting guidance, managers have been told that "Overhead" is a bad thing and too much can reduce profit or even sink your business.

But today, when it comes to warehouses, distribution centers and crossdocks, there's a new kind of "Overhead" emerging that can actually improve your operations in several ways!

The "Overheads" we're talking about in this case are Smart RFID Antennas mounted in the ceilings of these facilities anywhere from 10 feet up to 50 foot ceiling heights. Also known as Battery-Free or Passive Real-Time Location Systems ("pRTLS"), this advanced technology can track in 2 or 3 dimensions up to 90 feet, all Radio Frequency Identification (RFID) marked products, cases, skids, forklifts, and tools utilizing applied battery-free low-cost RFID (Passive UHF) tags and labels. So enough about the technology, sure that you now want to understand why this new type of "overhead" is such a great thing for your business operations?

There are really four key ways you can benefit from introducing real-time tracking within your facilities and operating environments and these are; Labor & Equipment Productivity, Optimizing Facility Layout and Process Flow Improvements, Task/Movement Verification and last but not least Resource Efficiencies, Inventory Management & Loss Prevention.

To give you some insight into the potential benefits let's walk quickly through each of these:

Labor & Equipment Productivity
In addition to your warehouse space, people and equipment represent the highest costs within your logistics operations. Utilizing Overhead pRTLS allows you insight into how well these resources are being applied, potential for improving productivity of your people, as well as the most efficient application and operation of equipment within your facilities.
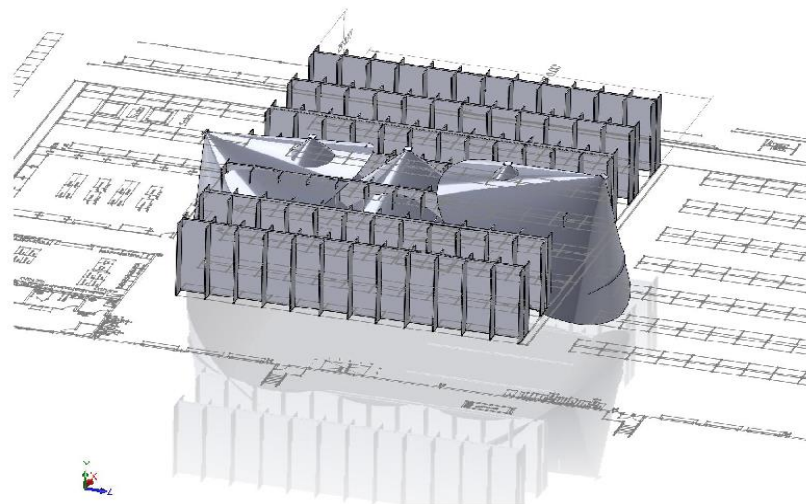
Inventory Management & Loss Prevention

Protecting and managing the value of products stored in your facility is key to the ongoing health and profitability of your business. pRTLS gives you Real-Time insight into which products are stored there and the actual dwell time aging of stock can be quickly visualized to action appropriately. Additionally, sensitive or high value products can also have an added layer of protection. Also, out of the norm product moves can also be highlighted to security and monitored for action by your Loss Prevention staff to reduce the potential for inventory shrink.

Optimize Facility Layout and Process Flow Improvement

Often, operational layouts, especially in older facilities, are typically based more on evolution and how things have always been done. And even if professional consultants were used for the original design, it's quite likely that over the years your business has changed and will continue to change. Monitoring the movement of products into, through and out of your facility can provide key data for redesign of areas and adjacencies for required departments as well as the required types of processing in these areas to ensure your business is as productive as possible.

Task/Movement Verification

Within facilities, there are many tasks performed both by people as well as automation like conveyors and sorters with the assumption that the task has been performed correctly and entered into systems properly. Use of pRTLS Overhead systems can provide an extra layer of accuracy and verification to these product movements in your facility to quickly identify errors and exceptions when they happen, and not days or weeks later which typically requires a very manual and lengthy audit process to determine and then correct these errors.

If you're interested in further investigating the beneficial application of Overhead RTLS in your operations, please reach out to RF Controls and our software partners for a free ROI assessment.

And always a fan of full disclosure, I do work for RF Controls, but would suggest to you that there are significant functionality, pinpoint location and range/accuracy benefits not provided by all players at all ceiling heights. Feel free to reach out through my contact details below and I'd be happy to describe and share with you specific details of these key differences.

Our discussion today has been focused on the logistics related facilities in your network, but there's also significant potential for "Overhead" applications within retail stores which support many of the above benefits as well as improving Customer Experience relative to locating specific items and even Sales Associates when help is needed.

Based on the above, hope you'll agree it's now time to bring your IT, Operations and Finance teams together and tell them it's time for us to figure out how to add some "Overhead" to the business!

Impressive Performance

CS Smart Antennas

Passive RTLS Reader + Phased Array

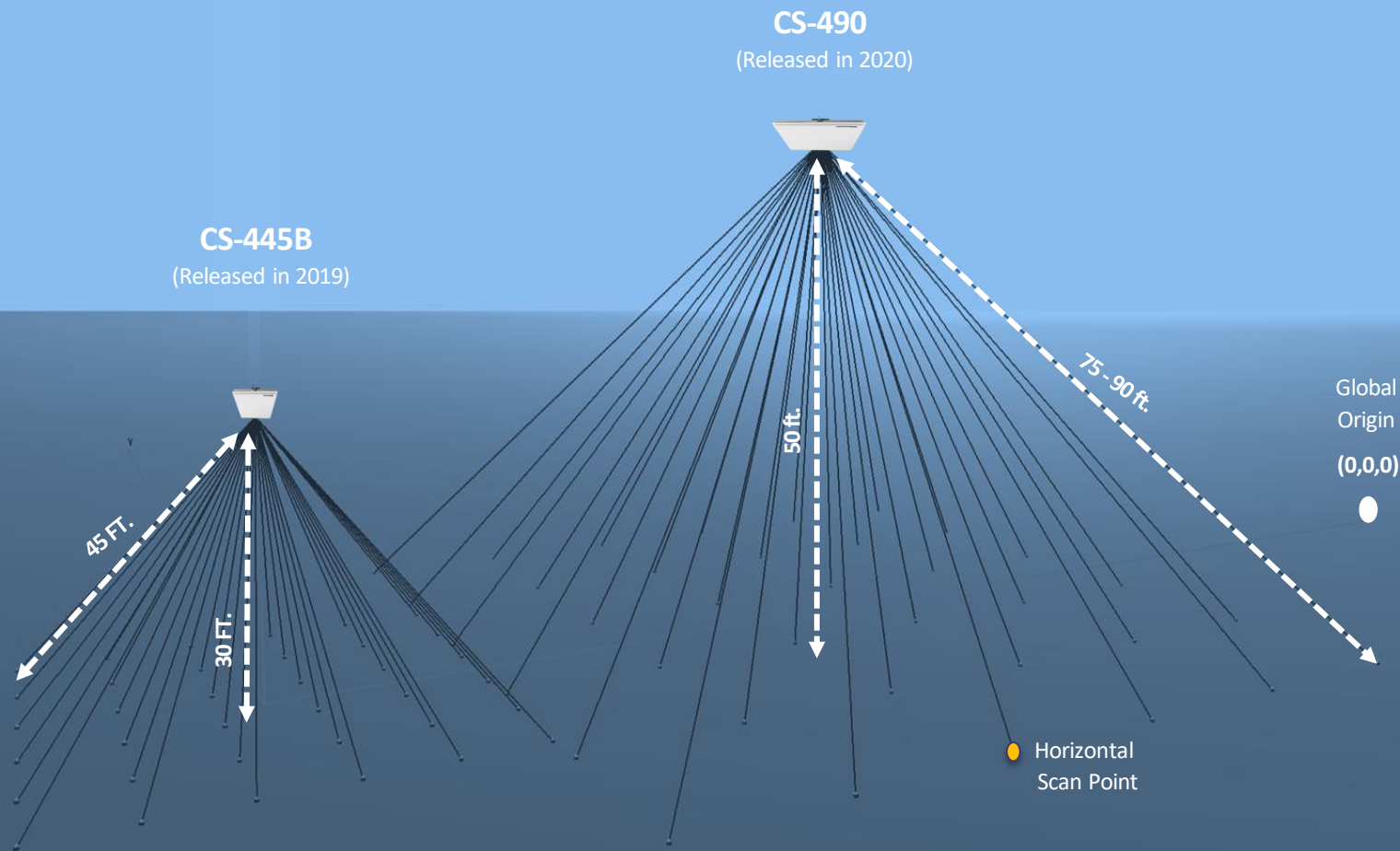|	
Read Distance (ft)	Up to 90
Install Height (ft)	10 – 30
Location 2D/3D (ft)	1 – 3
Data & Power	PoE / PoE+

Standard Low-Cost Battery-Free

RFID (Passive UHF)

20 Billion Produced Globally 2019

RAIN
RFID

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By using vertical scan points instead of horizontal to electronically steer the beam, RF Controls has changed the game for warehouse track & trace. The CS Smart Antenna beam s programmed to capture the location of each bin or pallet at the rack kevel to determine its precise 'put back' locations. By using proprietary adapt power algorithms to dynamically change the antenna power output based on read-range the team has reduced the reflections from metal racking, particularly from its high ceiling installations. Adjusting power settings, for each vertical scan points decreases "tag jitter" and increase location accuracy enabling precise 3D data capture.

Adaptive Power Scanning (%)

Vertically Layered Scan Point

Ceiling Height (Up to 50 ft)

25 %

50 %

75 %

100 %

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CS-490
(Released in 2020)

CS-445B
(Released in 2019)

75 - 90 ft.

Global
Origin

(0,0,0)

50 ft.
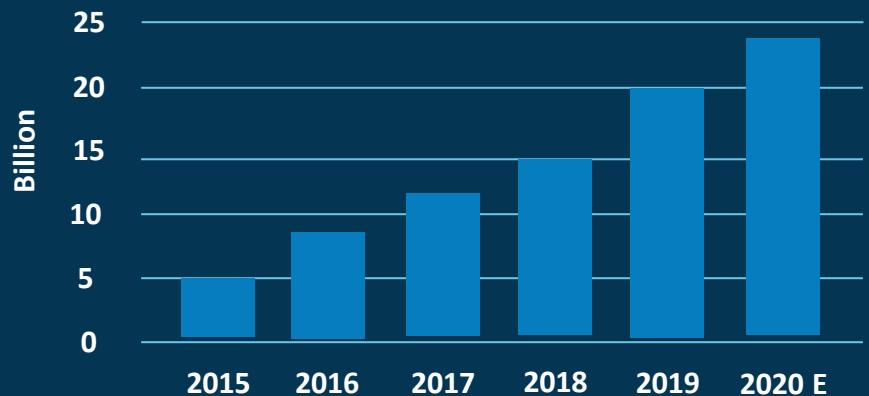
45 FT.

30 FT.

● Horizontal
Scan Point
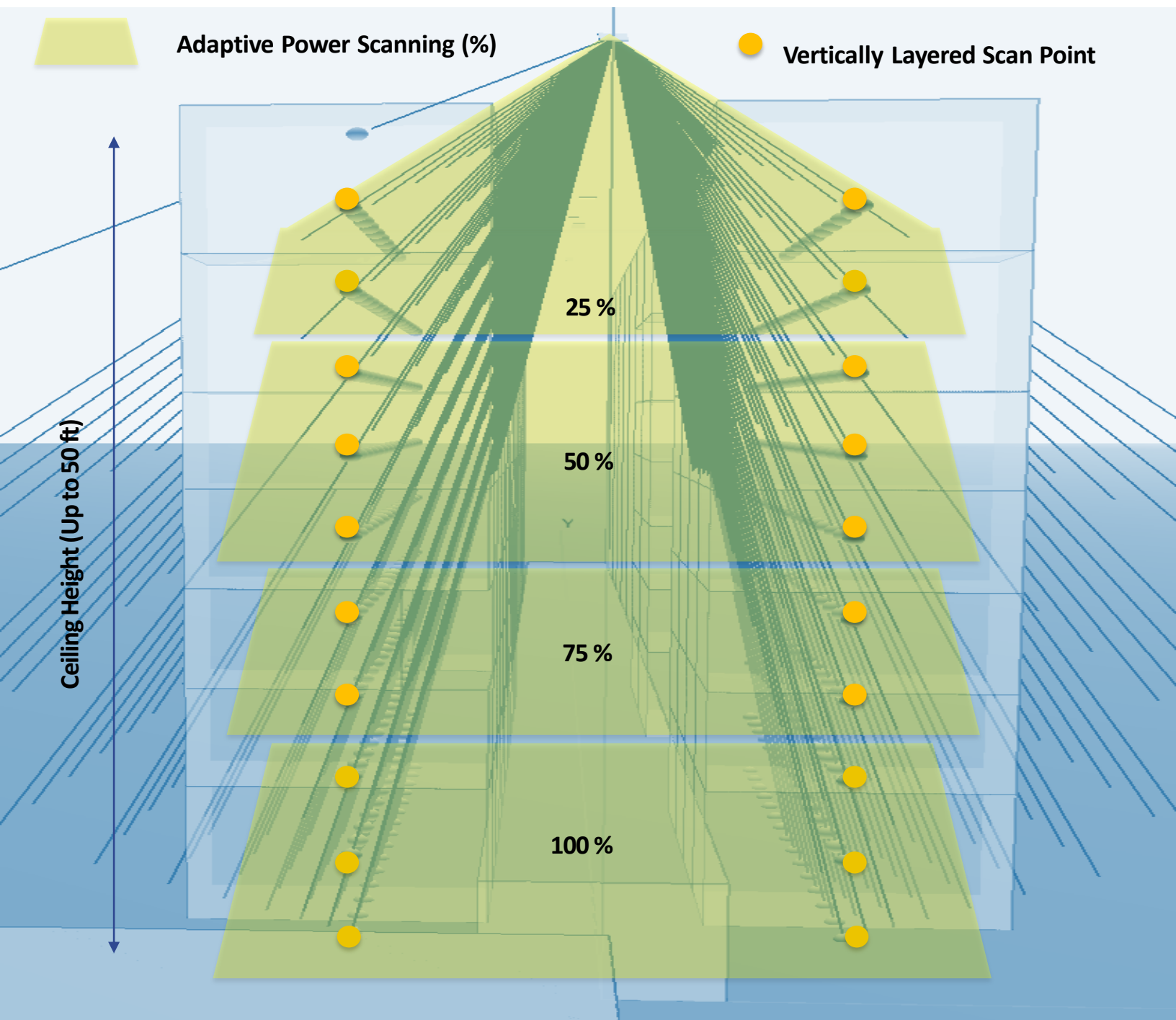
As tag growth increases, so does the demand for fixed overhead passive RTLS infrastructure. RF Controls delivers significant value add ROIs from the same tags already across the supply chain.

RFID Tag Consumption Growth

Leading Indicator of Market Adoption

Billion

25					
20					
15					
10					
5					
0					
2015	2016	2017	2018	2019	2020 E

Source: RAIN RFID Alliance (Member Data)

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