



# Zebra MotionWorks Enterprise

Asset Management Connector  
for ServiceNow Hardware Asset  
Management

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# Asset Tracking With Zebra Technologies and Service Now

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# What Is RFID?

## Automatic identification technology using radio waves

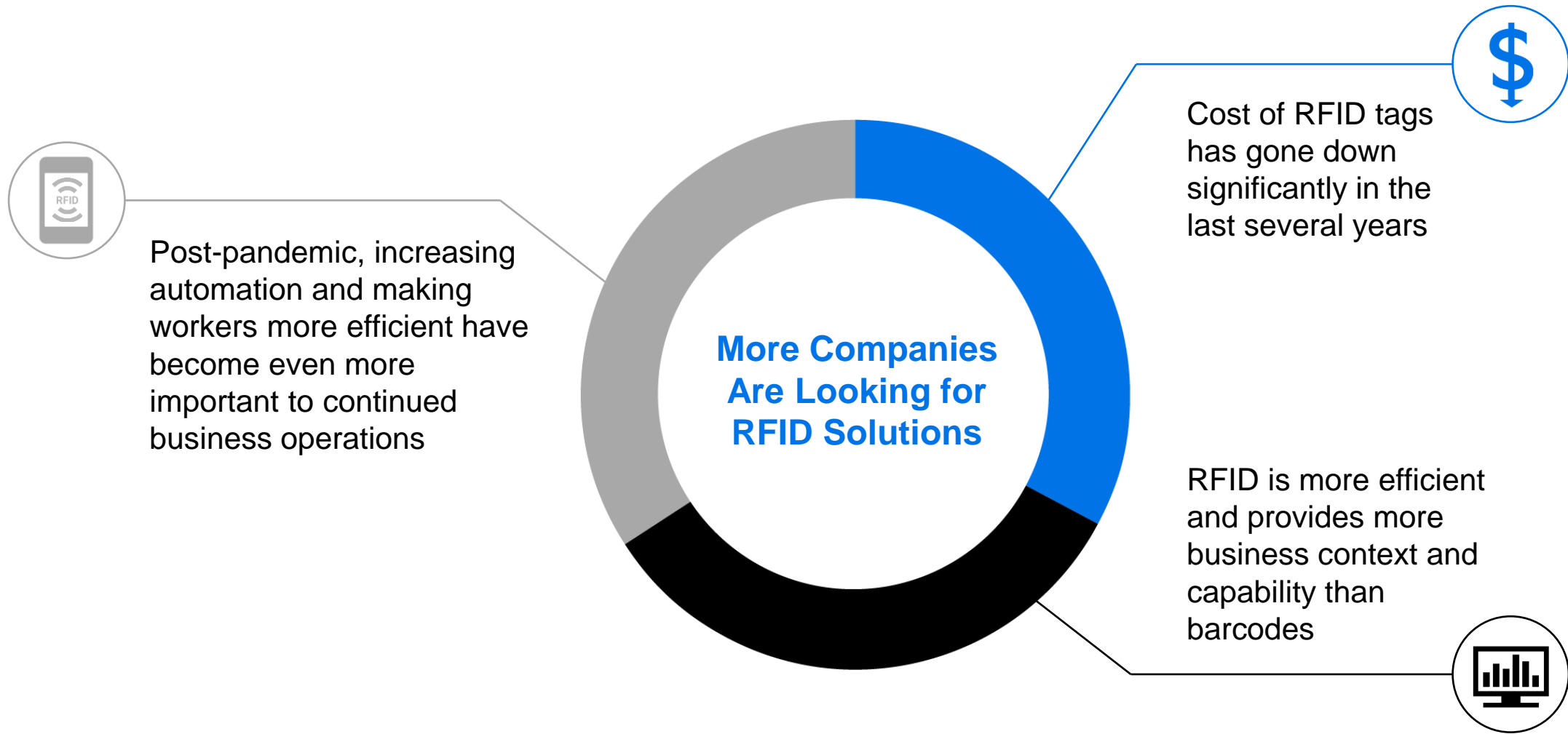
- Does **not** require line of sight to capture data
- Does **not** require manual scanning

## Common RFID standards

- UHF RFID
- EPC UHF Gen 2
- G2V2
- ISO 18000-63
- RAIN RFID



# Why Use RFID?





# Zebra RFID Product Portfolio

The industry's broadest portfolio of RAIN RFID technology – from ASIC to Devices to Enable and Enrich

## Deploy, Configure, Manage, Enrich

Zebra MotionWorks Enterprise™



IoT Connector



Network Connect



123RFID

## Handheld & Handsfree Readers



RFD40 Sleds



RFD9030



RFD9090



MC3330xR



MC3390xR



RFD8500



DS9908R

## Fixed Readers & Antennas



Integrated  
Portals



FX9600 / 7500



ATR7000



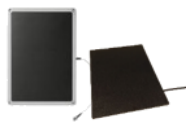
ST5500



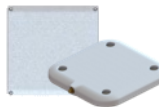
SP5500



ANXX



AN6XX



AN51X

## Printer Encoders, Inlays, Labels & Cards



ZQ52xR



ZQ630R



ZT600R Series



ZT4x1R Series



ZE5x1R



ZD621R



RFID Inlays and Labels



## Core Technology



RFID ASIC Radio

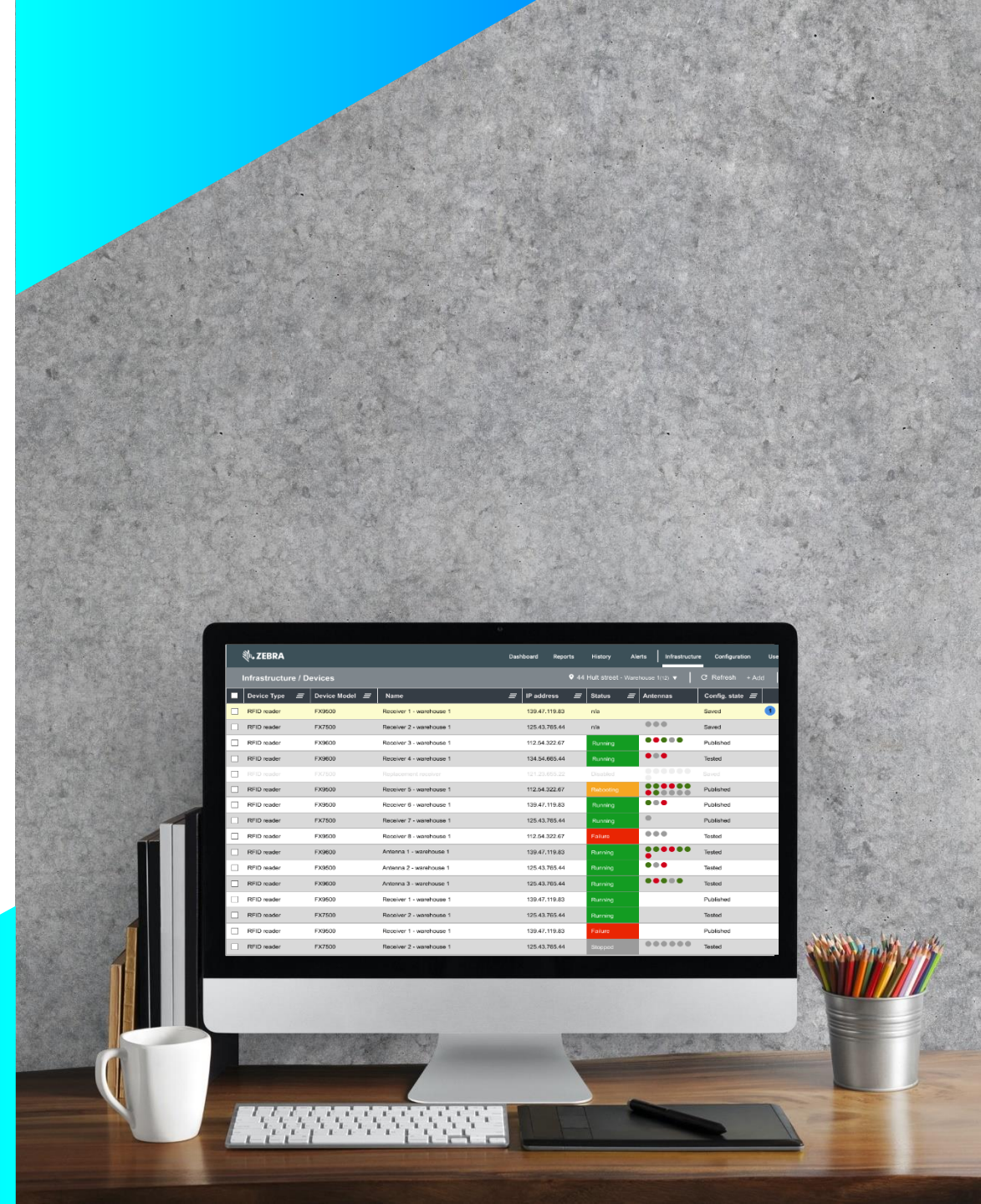


Integrated  
RFID Module

# MotionWorks Enterprise

## Product Overview

- Software to create Location & Tracking solutions & manage location sensors
  - Flexible configuration to support multiple use cases
  - Manages multiple sense technologies
  - UI to manage readers and to track resources (assets, goods, workers, etc)
  - Interfaces to hundreds of back-end systems
- MotionWorks Enterprise Server Software
  - Enterprise scale design
  - Designed for deployment for on premise or virtual private cloud
  - Works as data collection middleware *and* as a basic asset tracking application



# MotionWorks Enterprise

## Product Overview

- Realtime or near realtime location of assets
  - Mapping based on sites and zones
  - Filtering and reporting of multiple Resource types (Asset Classes)
  - API Interfaces available

The screenshot displays the ZEBRA MotionWorks Enterprise interface. The top navigation bar includes the ZEBRA logo and a 'Dashboard' link. Below the navigation bar, the 'Reports / Resources' section is active. On the left, a sidebar contains various filters: 'Resource ID' (with 2 filters), 'Resource Type' (set to 'All'), 'Site, Map, Zone Group, Zone' (with a 'Choose...' dropdown), 'Zone Dwell Min' (set to 'All'), 'Zone Dwell Max' (set to 'All'), 'Zone Group Dwell Min' (set to 'All'), 'Zone Group Dwell Max' (set to 'All'), 'Tag ID' (set to 'All'), 'Tag Source' (set to 'All'), 'IsParent' (set to 'All'), and 'IsChild'.

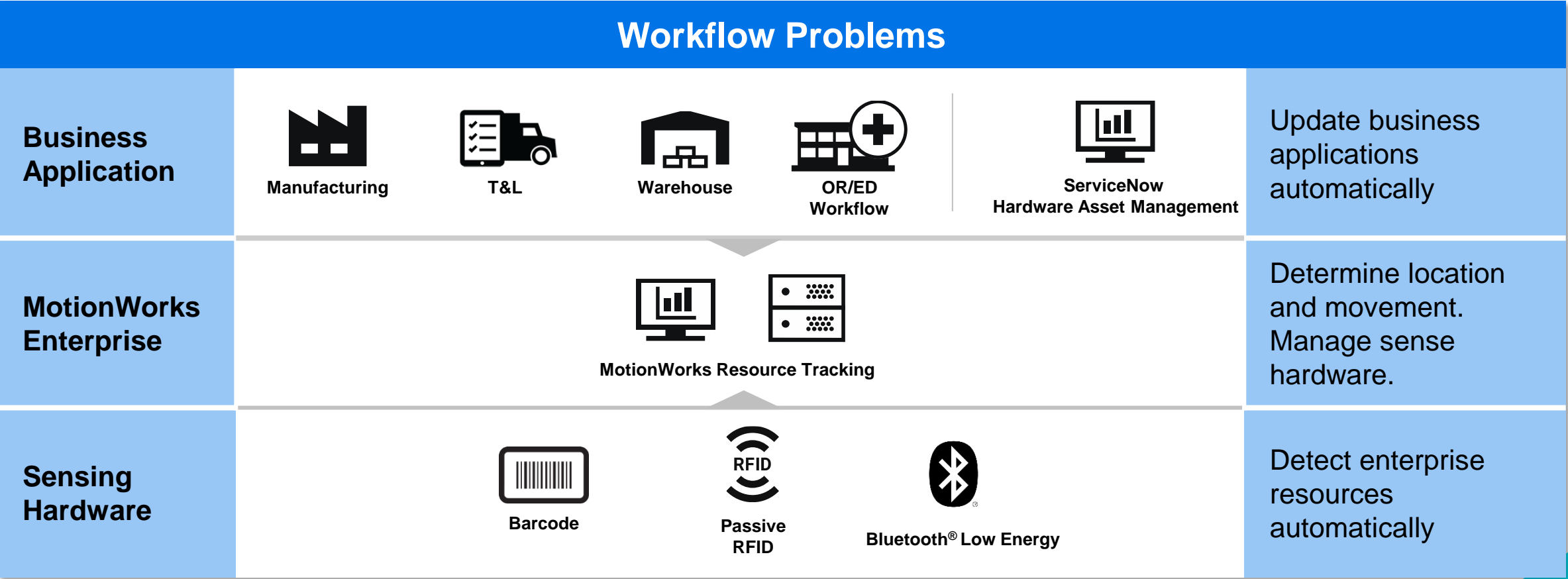
The main content area features a table with the following columns: 'Resource ID', 'Resource Type', 'Zone', 'Zone Dwell', 'Zone Group', 'Zone Group Dwell', and 'Site Name'. The table contains three rows of data:

Resource ID	Resource Type	Zone	Zone Dwell	Zone Group	Zone Group Dwell	Site Name
Hardware Asset 1	Demo Resource	Zone 3	046d 16h 24m 25s	Holtsville Default Group	069d 22h 27m 22s	Holtsville
Hardware Asset 4	Demo Resource	Zone 3	069d 22h 28m 19s	Holtsville Default Group	069d 22h 28m 19s	Holtsville
Hardware Asset 5	Demo Resource	Zone 3	069d 22h 59m 31s	Holtsville Default Group	069d 22h 59m 31s	Holtsville

On the right side of the interface, there is a site map showing a building layout with various rooms and a 'DEMO AREA' highlighted in green. A yellow dot indicates the location of a resource within the demo area.

# MotionWorks Enterprise

Automates Asset Tracking Data Collection

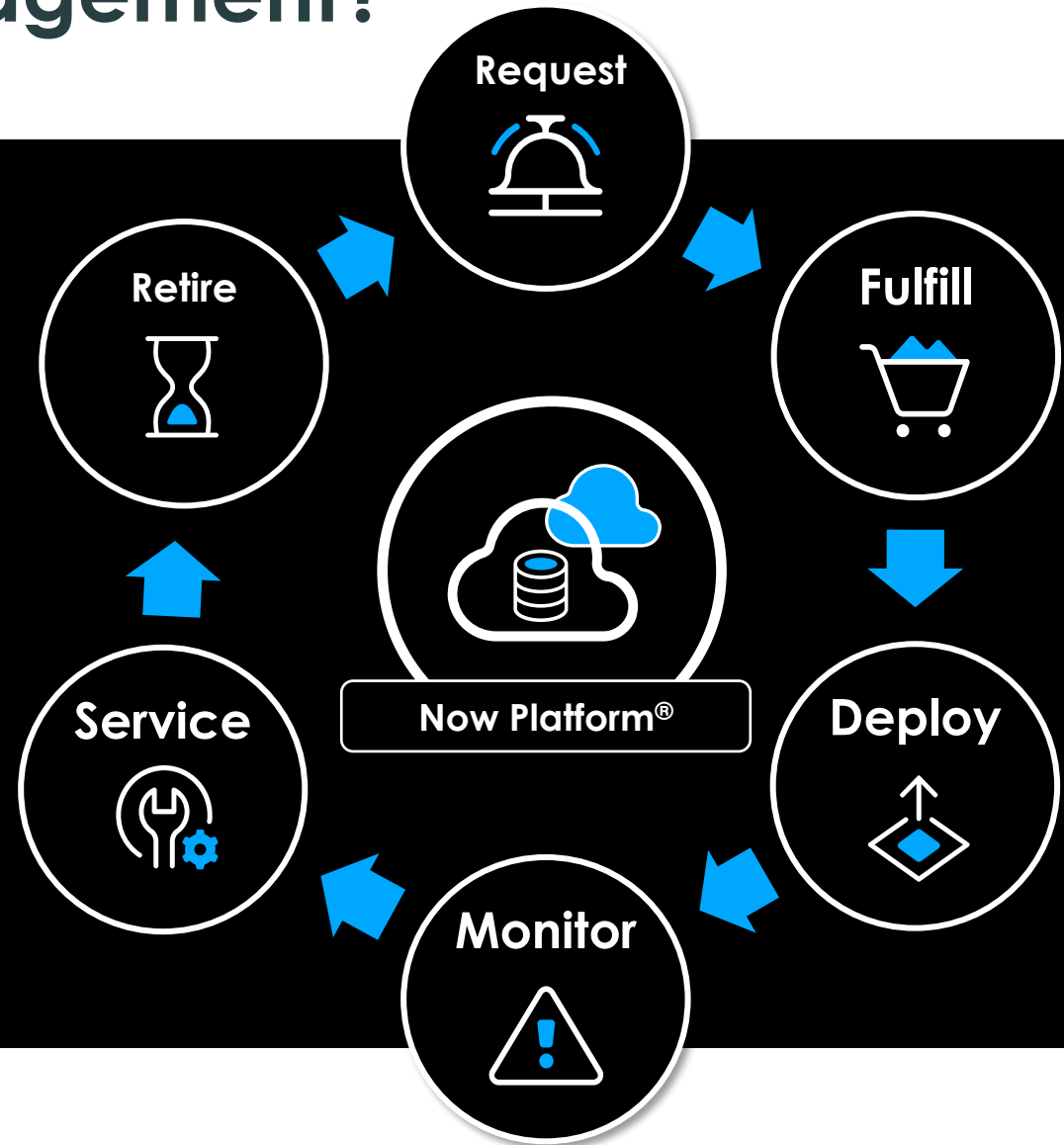




# What is Hardware Asset Management?

Hardware Asset Management (HAM) is a set of business practices that join financial, contractual and inventory functions to support the **lifecycle management and strategic decision making** for an IT environment.

- What hardware do you own?
- Do your financial records match your asset register?
- Are you using what you have?
- Can you prove it?



# The difference between “Base Asset” & HAM product

Asset is very manual, no flows, & error-prone. HAM is automated, normalized, & accurate.

Hardware Asset Manager Workspace

Hardware Normalization

Asset Lifecycle Automation

- Hardware Asset Order
- Hardware Bulk Stock Order
- Hardware Disposal
- Asset Onboarding/Offboarding
- Asset Tasks—Deploy, Swap, Retire, Refresh, Loaner, Leased Asset Return
- Reservations for temp assets
- Advanced Shipment Notifications
- Return Merchandize Authorization (RMA)

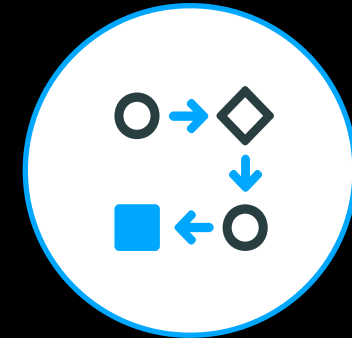
Mobile

- Asset Inventory Audit
- Asset Bundles, Bulk Transfer
- Remote Asset Receiving, Asset Disposal
- My Locker – Hardware Assets

## Hardware Asset Management

### Asset Management

Static record storage-based solution. Like spread sheet tracking with little automation.



Gain prescriptive workflows OOTB to automate tasks and simplify work

**Automation**

**Manual**

Asset & Model Records  
Stockrooms  
Transfer Orders  
Purchase Orders  
Contracts  
Mobile Asset Receiving  
Mobile My Assets

Start with HAM if you know you will be investing in asset to save time and resources.

# RFID/Zebra Integration

## Radio frequency Identification

servicenow All Favorites History Workspaces Admin Hardware Asset Workspace ☆

Hardware assets P1000429 - Leno... x

Details

P1000429 - Lenovo ThinkStation C20

State Assigned to  
In use Reva Lecates

Details Contracts (1) RMA Fixed Assets Device Allocations Assets (3) Expense Lines (1)

RFID

RFID tag  
RF00030

Type  
Laptop

Serial number  
QXN-744-B67838-LL

Tag source  
-

Last blink time  
2022-03-23 00:10:00

Last blink elapsed time  
Days Hours Minutes Seconds  
0 1 35 46

Site name  
Lesser Town

Zone group  
Czech Republic

Zone group dwell  
Days Hours Minutes Seconds  
0 2 31 18

Zone  
H1

Zone dwell  
Days Hours Minutes Seconds  
0 1 38 43

Grid-x

Compose

Type your Work notes (Private) here

Post Work notes (Private)

Activity

System Administrator  
Field Changes • 2022-06-23 05:31:51  
RFID tag RF00030 was Empty

System Administrator  
Field Changes • 2021-08-19 01:12:30  
Assigned to Reva Lecates  
State In use

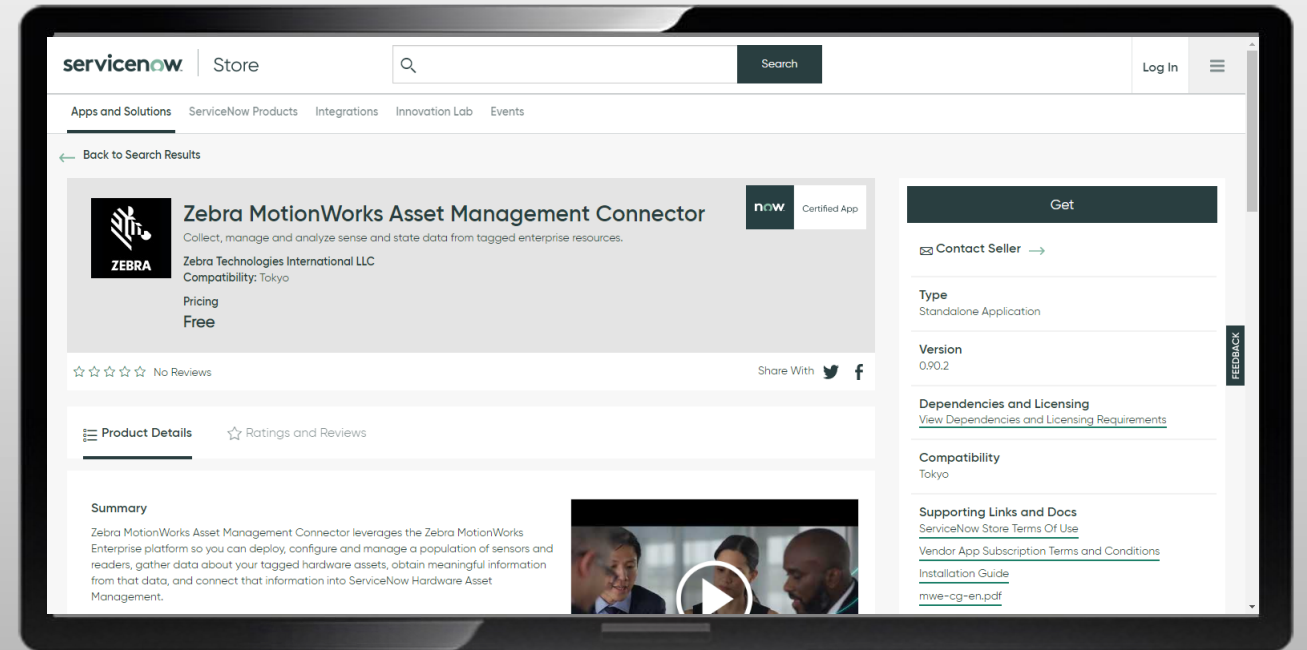
## Integration to bring in RFID location data from Zebra MotionWorks

- 1 Created new tables to store the RFID location data
- 2 Ability to track asset location when assets are offline and on the move
- 3 Made updates to the asset form to capture RFID Tag, location Info, and RFID Activity updates

Integration to bring in RFID location data from Zebra MotionWorks

# Zebra MotionWorks Asset Management Connector

- Leveraging the Zebra MotionWorks Enterprise platform, Asset Management Connector lets you deploy, configure and manage a population of sensors and readers, gather data about your tagged hardware assets, obtain meaningful information from that data, and connect that information into **ServiceNow Hardware Asset Management**.
- Available from the Service Now store for Tokyo release and later.





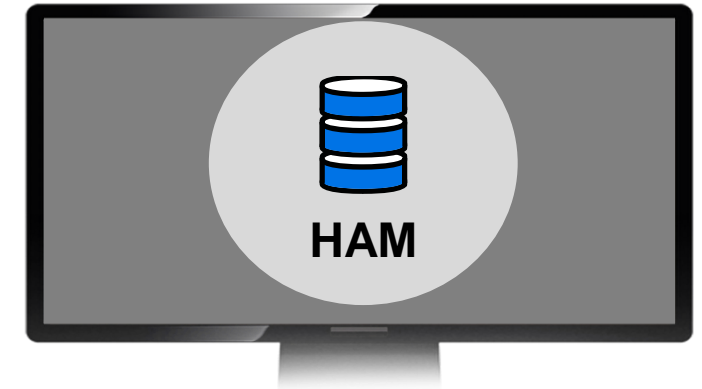
# Bringing it all together

## Manual asset tracking

Manual data entry  
into ServiceNow HAM



ServiceNow Hardware  
Asset Management



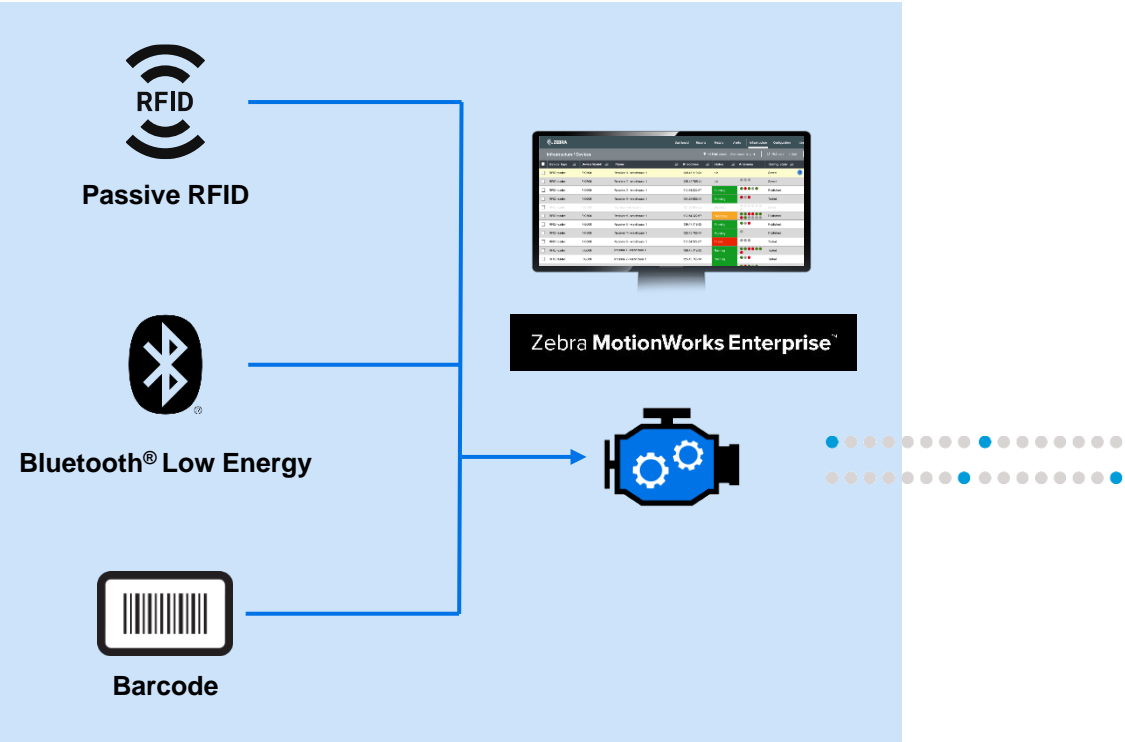
IT Asset Manager



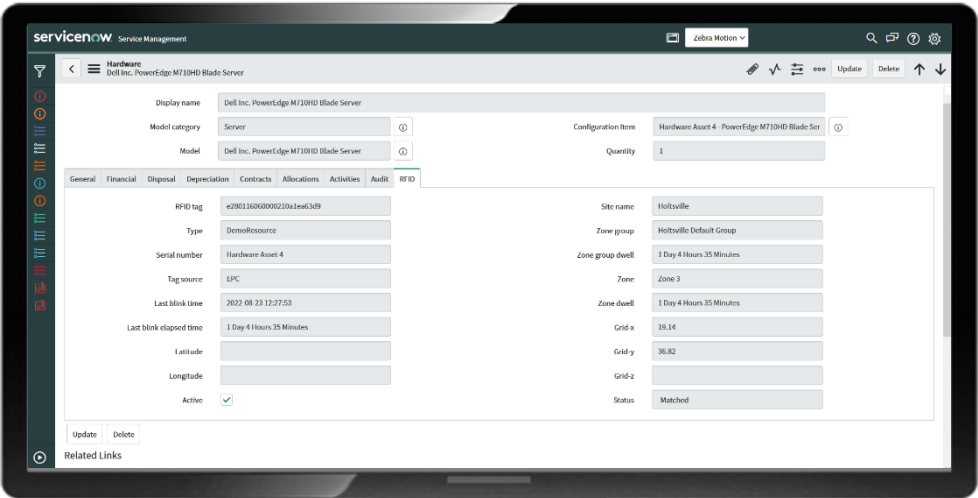
# Bringing it all together

## Automated asset tracking using MotionWorks

Automated Asset Tracking



ServiceNow Hardware Asset  
Management  
+  
MotionWorks  
Asset Management Connector



IT Asset Manager



# Setup

# Assets need to be set up in Zebra MotionWorks

## Assets can be added in multiple ways

- Manual input
- Mobile application (barcode and/or RFID scan)
- Data import from .csv file
- Via API

Add Resource

Identity

Tags

Zone

Attributes

Identity

Resource ID \*

Resource Type \*  

Select a Resource Type

Comment

Tags

Tag ID

Tag Source  

Select Tag Sourc

SAVE

CANCEL

Attach Tag

Zone  
Office 1

Tag source  
WHERE NET

Resource Type  
Demo

Resource Id  
PAXLBRKT

Tag Id  
33812701

CANCEL

ATTACH

Dashboard

Reports

History

Alerts

Saved

Infrastructure

Configuration

Users

Fullon

Reports / Import

Report

All

Action

All

Imported by

All

Imported Date

Today

Report

Resources

Add Resource

Sample File

Add\_Resource.csv

IMPORT

Progress

Import Results

No Results

Add\_Resource.csv X

	0	1	2	3	4	5	6	7
	Resource ID	Resource Type Name	Map Id	Site Id	Zone Name	Zone Group	Source	Tag
1	Hardware Asset 1	Demo Resource	1	6196a8a483b9424182eae095	Zone 3	Holsville Default Group	EPC	e28011660000210a1ea3a9
2	Hardware Asset 2	Demo Resource	1	6196a8a483b9424182eae095	Zone 3	Holsville Default Group	EPC	e28011660000210a1ea3a10
3	Hardware Asset 3	Demo Resource	1	6196a8a483b9424182eae095	Zone 3	Holsville Default Group	EPC	e28011660000210a1ea3a11
4	Hardware Asset 4	Demo Resource	1	6196a8a483b9424182eae095	Zone 3	Holsville Default Group	EPC	e28011660000210a1ea3a12
5	Hardware Asset 5	Demo Resource	1	6196a8a483b9424182eae095	Zone 3	Holsville Default Group	EPC	e28011660000210a1ea3a13
6	Hardware Asset 6	Demo Resource	1	6196a8a483b9424182eae095	Zone 3	Holsville Default Group	EPC	e28011660000210a1ea3a14
7	Hardware Asset 7	Demo Resource	1	6196a8a483b9424182eae095	Zone 3	Holsville Default Group	EPC	e28011660000210a1ea3a15
8	Hardware Asset 8	Demo Resource	1	6196a8a483b9424182eae095	Zone 3	Holsville Default Group	EPC	e28011660000210a1ea3a16
9	Hardware Asset 9	Demo Resource	1	6196a8a483b9424182eae095	Zone 3	Holsville Default Group	EPC	e28011660000210a1ea3a17
10	Hardware Asset 10	Demo Resource	1	6196a8a483b9424182eae095	Zone 3	Holsville Default Group	EPC	e28011660000210a1ea3a18



# Assets need to be set up in ServiceNow HAM

HAM Serial number must match Resource ID from MotionWorks Enterprise

The screenshot displays the ServiceNow Service Management interface for creating a new Hardware Asset (HAM). The main form is titled 'Hardware New record' and includes fields for 'Display name', 'Model category' (set to 'Computer'), 'Model' (set to 'Apple MacBook Air 13"'), 'Configuration Item', and 'Quantity' (set to '1'). Below these fields are tabs for 'General', 'Financial', 'Disposal', 'Depreciation', 'Contracts', 'Allocations', 'Activities', and 'Audit'. The 'General' tab is active, showing fields for 'Asset tag', 'State' (set to 'In use'), 'Assigned to', 'Managed by', 'Owned by', 'Parent', 'Class' (set to 'Hardware'), 'RFID tag', and 'Comments'. A red box highlights the 'Serial number' field, which is set to 'Hardware Asset 1'. An 'Add Resource' modal is open in the foreground, showing the 'Identity' section with a red box around the 'Resource ID \*' field, which is set to 'Hardware Asset 1'. The modal also includes a 'Resource Type \*' dropdown set to 'Demo Resource' and a 'Comment' field.

servicenow Service Management

hardware asset

Hardware New record

Display name

\* Model category Computer

\* Model Apple MacBook Air 13"

Configuration Item

\* Quantity 1

General Financial Disposal Depreciation Contracts Allocations Activities Audit

Asset tag

State In use

Assigned to

Managed by

Owned by

Parent

Class Hardware

RFID tag

Comments

\* Serial number Hardware Asset 1

Substate -- None --

Location

Submit

Add Resource

Identity

Resource ID \* Hardware Asset 1

Resource Type \* Demo Resource

Comment

Comment

Submit

# Automated asset tracking using MotionWorks

## Set time to retrieve data

<

☰

Scheduled Script Execution

Zebra - Download MotionWorks RFID Data

📎

⌵

⋮

Name

Zebra - Download MotionWorks RFID Data

Active

☑

Application

Zebra MotionWorks - RFID

Conditional

☐

For scheduled job types that require an entered time, you have the option to enter an associated time zone. If no time zone is selected, the job will run at the entered time in time zone of the user who entered the time. If 'Use System Time' is selected, the job will run in the time zone of the instance running the job.

Run

Daily

Time zone

GMT

Time

Hours

00

00

00

Run this script

?

🔍

💬

📄

🔄

🔄

🔍

❤

🌐

📄

🔍

🔄

🔄

```

1 * if (!sn_itam_common.RFIDIntegrationUtil.isJobRunning("bcb0bbe887ca41102e1f1f873cbb35cc")) {
2   var tableName = sn_itam_common.RFIDIntegrationUtil.ASSET_IMPORT_SET_TABLE;
3   if (gs.tableExists(tableName)) {
4     new x_zti_zebramw_rfid.ZebraMWDataImportJob().process();
5   } else {
6     gs.info("Table " + tableName + " does not exist. Cancelling Scheduled job 'Zebra - Download MotionWorks RFID Data'");
7   }
8 } else {
9   gs.info("Scheduled job 'Zebra - Download MotionWorks RFID Data' is already running.");
10 }

```

Update

Execute Now

Delete

## Related Links

### Run Point Scan

ZEBRA TECHNOLOGIES

## Or Run Manually at any time

### Set time to populate retrieved data

<

Scheduled Script ExecutionRFID Asset Mapping Job

This record is in the **Asset Management Common** application, but **Zebra MotionWorks - RFID** is the current application. To edit this record click here.

NameRFID Asset Mapping Job

Active☒

ApplicationAsset Management Common

Conditional☐

For scheduled job types that require an entered time, you have the option to enter an associated time zone. If no time zone is selected, the job will run at the entered time in time run in the time zone of the instance running the job.

RunDaily

Time ZoneGMT

Time03:00:00

Run this script

```
1 if (RFIDIntegrationUtil.isJobRunning('8d2c0fa53b50110f263ddeeff7b1287')) {  
    gs.info("RFID Asset Mapping Job is already running.");  
2 } else {  
3     try {  
4         var currentDate = new GlideDateTime();  
5         new sn_itam_common.RFIDAssetMappingJob().process();  
6         new sn_itam_common.RFIDCommonUtil().updateMapJobTime(currentDate);  
7     } catch (e) {  
8         gs.error("RFID Asset Job failed");  
9     }  
10  
11 }
```

**Execute Now**

# HAM Asset tag and location data updated automatically

General Tab shows Standard info plus RFID Tag ID

RFID tab displays last seen time and location data

Hardware

Apple MacBook Air 13"

UpdateDelete

Display name

Apple MacBook Air 13"

Model category

Computer

Configuration Item

Hardware

Model

Apple MacBook Air 13"

Quantity

1

General

Financial

Disposal

Depreciation

Contracts

Allocations

Activities

Audit

RFID

Asset tag

State

In use

Assigned to

Managed by

Owned by

Parent

Class

Hardware

RFID tag

e28011606000210a1ea63a9

Comments

Serial number

Hardware

Substate

-- None --

Location

Department

Company

Asset function

-- None --

Assigned

Installed

Update

Delete

Hardware

Apple MacBook Air 13"

UpdateDelete

Display name

Apple MacBook Air 13"

Model category

Computer

Configuration Item

Hardware Asset 1 - MacBook Air 13"

Model

Apple MacBook Air 13"

Quantity

1

General

Financial

Disposal

Depreciation

Contracts

Allocations

Activities

Audit

RFID

RFID tag

e28011606000210a1ea63a9

Type

DemoResource

Serial number

Hardware Asset 1

Tag source

EPC

Last blink time

2022-09-15 18:31:47

Last blink elapsed time

1 Hour 28 Minutes

Latitude

Longitude

Active

☒

Site name

Holtsville

Zone group

Holtsville Default Group

Zone group dwell

23 Days 7 Hours 31 Minutes

Zone

Zone 3

Zone dwell

1 Hour 28 Minutes

Grid-x

19.14

Grid-y

36.82

Grid-z

Status

Matched

Update

Delete

Related Links

# QUESTIONS





# Thank You



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Want more?

Additional details about the solution will be presented in **RFID in Action! – A Livestream Technology Demonstration** on Dec. 13. Sponsored by Lowry Solutions the free webinar features a demonstration and review of **Zebra's MotionWorks Enterprise platform**. Full details and registration on the RFID Journal home page [rfidjournal.com](http://rfidjournal.com) under Online Events.