





AVA™ Asset Manager with RFID Integration



Home Demographics Reports Asset Management Templates Log Off

Menu

-  Facilities
-  Assets
-  Dashboard
-  Projects/Work Orders
-  Packages/Deliveries

ADVANTECH ASSET MANAGER

Facilities:

Facility Description	Address 1	Address 2	Total Floors	Total Sqr Feet	
Riva Memorial Medical Center	2661 Riva Road	Building 9900	5	88,375	
Building 1000	2661 Riva Road		3	47,415	

AVA™ Asset Manager with RFID Integration

Agenda

- Introduction
- AVA™ Asset Manager
- RFID (Passive / Low Energy Bluetooth)
- Questions / Next Steps

Background:

AdvanTech, Inc. is proud to unveil our **AVA™ Logistics Suite**. These applications are all based on three guiding principles of **A**ccuracy, **V**isibility and **A**ccountability.

These applications are browser-based, online, real-time using standard browsers and rely on a central encrypted relational database located in Annapolis. Our systems are in operation throughout the U.S in multiple industries. Our goal is to assist our clients achieve substantial savings through implementation of advanced technology and best practices.

AVA™ Asset Manager:

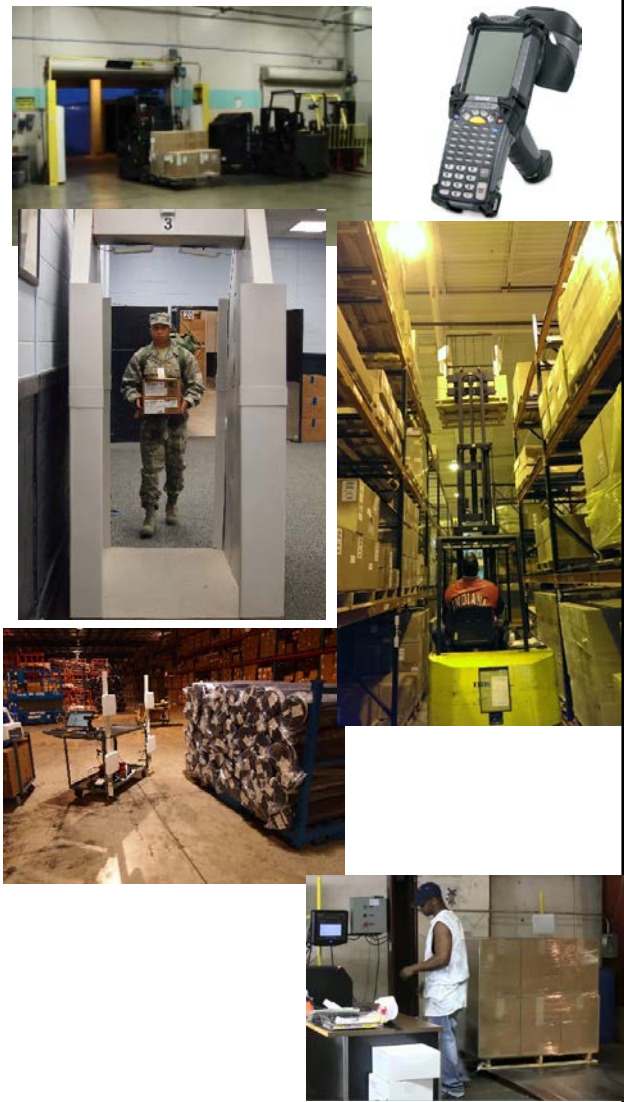
Defines facilities to the room level. Tracks assets (moveable and fixed) to the serial number level to individual rooms. Assigned ownership of each room within each facility. Establishes and tracks projects and work orders to document and monitor labor and non-labor costs. Automates the internal package delivery process by defining delivery routes and building manifests to deliver within the organization. Track employees, contractors and visitors who have access to assets. Performs physical inventory counting and reconciliation processes. Generates numerous operational and accounting reports.

AVA™ RFID Tag Manager:

Upgrades Asset and Item Manager Applications to utilize RFID tags. Various RFID tag standards are supported including EPC Gen2 and Low-Energy Bluetooth. Tags are used for access control, in supply chain management to track inventory movement, to track files, laundry, garments, equipment assets such as wheelchairs, and high-cost or high-loss items such as electronics or tools.

Automated Data Capture Technologies

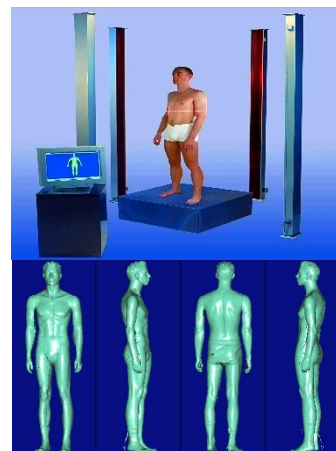
RFID



LEB / RTLS



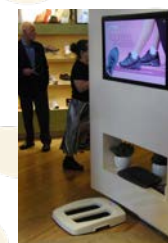
Measuring Devices



Whole Body Scanning



Kinect



Foot Scanning



Hand Measuring

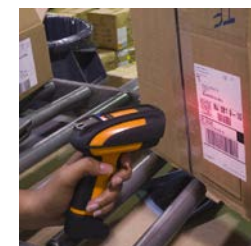
Others



OCR



Voice Recognition



Bar Code

AVA™ Asset Manager

Home Demographics Reports Asset Management Templates Log Off

Search.. 

Menu



Facilities



Assets



Dashboard





Projects/Work Orders



Packages/Deliveries

ADVANTECH ASSET MANAGER

Facilities:

Facility Description	Address 1	Address 2	Total Floors	Total Sqr Feet	
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AVA™ Asset Manager

Home Demographics Reports Asset Management Templates Log Off

Search..

Menu



Facilities



Assets



Dashboard



Projects/Work Orders




Packages/Deliveries

ADVANTECH ASSET MANAGER

Facilities:

Facility Description	Address 1	Address 2	Total Floors	Total Sqr Feet
Riva Memorial Medical Center	2661 Riva Road	Building 9900	5	88,375
Building 1000	City	"Annapolis"		
	State	"MD"		
	Zip Code	"21401"		
	Hosp Id	""		
	Year Build	"2012"		
	Orig Cost	"120000000.0000"		
	Current Value	"100000000.0000"		
	Floor Count	"5"		
	Last Survey	"12/21/2017 12:45:03 PM"		
	Next Scheduled Survey	"4/1/2019 12:45:03 PM"		
	Campus Id	"0"		
	Total Sqr Feet	"88375"		



AVA™ Asset Manager

Home Demographics Reports Asset Management Templates Log Off

Search.. 

Menu



Facilities



Assets



Dashboard








Projects/Work Orders



Packages/Deliveries

ADVANTECH ASSET MANAGER

Facilities: [Riva Memorial Medical Center](#)

Floor Name	Floor Sqft	Floor Seq	
Central Service / Clinical Engineering	17,675	Basement	
Entrance / Emergency Room	17,675	1	
Radiology / Pathology / OB/GYN	17,675	2	
Inpatient Floor	17,675	3	
Operating Rooms / ICU	17,675	4	

AVA™ Asset Manager

Home Demographics Reports Asset Management Templates Log Off

Search.. 

Menu



Facilities



Assets



Dashboard















Projects/Work Orders



Packages/Deliveries

ADVANTECH ASSET MANAGER

Assets:

Manufacturer Name	Model Number	Item Name	Purchase Cost	Piece Count	
Abbott	"1971-04"	Infusion System, Plum A+™ 11.6	\$495.00	60	
Alaris	8000	Infusion System, Alaris Medley 8000 PCU	\$500.00	59	
Alaris	"8120"	Pump, Syringe - Alaris 8120 syringe module for Medley series	\$1,650.00	81	
Baxter	"300XL"	Pump, Syringe - Baxter 300XL Mini Infuser	\$1,650.00	61	
Baxter	"OR1"	Baxter Infus OR syringe Pump	\$2,495.00	58	
Baxter	"TT1001"	Hypothermia Unit, BAXTER Mini K - Thermia Pharmaseal	\$850.00	20	
Cincinnati	"222R"	Hypothermia Unit, CINCINNATI SUB-ZERO Blanketrol II 222R	\$359.00	50	
GE	"1200"	EKG Machine, GE Medical MAC 1200	\$1,295.00	49	
GE	B40	Patient Monitor, GE B40 with GE TruSignal Pulse Ox	\$1,195.00	51	
Kendall	"7325"	Sequential Compression Device, Kendall Response	\$1,295.00	81	
Nelcor	"N560"	Pulse Oximeter, Nellcor™ N-560 Monitor with OxiMax™ Technology	\$5,625.00	38	
Vizion	"SR130"	Portable XRAY - ViZion™ + DR mobile	\$749.00	51	

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




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Home Demographics Reports Asset Management Templates Log Off
















Search.. 

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ADVANTECH ASSET MANAGER

Equipment: [Pump, Syringe - Baxter 300XL Mini Infuser Baxter 300XL](#)

Serial number	Acquire Date	PO Number	RFID TagString	Facility Description	Room Number	Room Description	
300-10001	15-10-2016	A-0533B	FABA00100000000426561282	Riva Memorial Medical Center	330	Patient Room 330	
300-10002	15-10-2016	A-0533B	FABA00100000000426561283	Riva Memorial Medical Center	111	Emergency Department Office	
300-10003	15-10-2016	A-0533B	FABA00100000000426561284	Riva Memorial Medical Center	406	Soiled Utility Room	
300-10004	15-10-2016	A-0533B	FABA00100000000426561285	Riva Memorial Medical Center	B-102	Biomedical Lab	
300-10005	15-10-2016	A-0533B	FABA00100000000426561286	Riva Memorial Medical Center	322	Patient Room 322	
300-10006	15-10-2016	A-0533B	FABA00100000000426561287	Riva Memorial Medical Center	406	Soiled Utility Room	
300-10007	15-10-2016	A-0533B	FABA00100000000426561288	Riva Memorial Medical Center	440	OR Stockroom	
300-10008	15-10-2016	A-0533B	FABA00100000000426561289	Riva Memorial Medical Center	406	Soiled Utility Room	
300-10009	15-10-2016	A-0533B	FABA00100000000426561290	Riva Memorial Medical Center	440	OR Stockroom	
300-10010	15-10-2016	A-0533B	FABA00100000000426561291	Riva Memorial Medical Center	434	OR Room 5	
300-10011	15-10-2016	A-0533B	FABA00100000000426561292	Riva Memorial Medical Center	306	Soiled Utility Room	
300-10012	15-10-2016	A-0533B	FABA00100000000426561293	Riva Memorial Medical Center	112	Emergency Department Clean Utility	
300-10013	15-10-2016	A-0533B	FABA00100000000426561294	Riva Memorial Medical Center	B-102	Biomedical Lab	
300-10014	15-10-2016	A-0533B	FABA00100000000426561295	Riva Memorial Medical Center	112	Emergency Department Clean Utility	
300-10015	15-10-2016	A-0533B	FABA00100000000426561296	Riva Memorial Medical Center	328	Patient Room 328	

AVA™ Asset Manager

Facilities:

- What Facilities are included in my Organization?
- Who occupies my Facilities?
- What are the areas in Facilities used for?
- Blueprints and other document stored online linked to facility, floor and room.
- Fire Escape documentation.

Assets / Equipment:

- What assets are in my Organization?
- Where are these assets within my Facilities?
- Who owns these assets?
- What assets are out of service and for how long?
- What assets have just arrived into my Organization?
- What assets have excessive repair and maintenance costs?
- When were the assets last counted and reconciled?
- Which assets are owned versus leased or on consignment?
- How do I dispose of obsolete and unusable assets?
- What are my current depreciation amounts?
- Replace vs Repair decisions

Projects / Work Orders:

- What Projects and Work Orders are still open?
- What Projects and Work Order are being planned and/or approved?
- What are the budgets for these Project and Work Orders?
- Who is performing the work?
- Where is the work being performed (on/off site)?

People:

- Roles of Staff within organization.
- Visitor and Contractors allowed into the Facilities.
- Certifications of Staff using or repairing Facilities or Assets.
- How can I limit access to specific areas by Staff and Visitors?

AVA™ Asset Manager – Equipment Tracking

Facilities / Building

Facility Type

Floors

Rooms

Room Usage

Square Footage

RFID / Barcode Assigned

Systems

Asset / Item Master

Manufacturer

Model Number

Purchased From

Purchase Cost

Serial Number

RFID / Barcode Assigned

PO Number

Date Acquired

Data into Service

- Room Inventory
- Transaction History
- Utilization History

AVA™ Asset Manager – Project Tracking

Facilities / Building

Facility Type

Floors

Rooms

Room Usage

Square Footage

RFID / Barcode Assigned

Systems

Asset / Item Master

Manufacturer

Model Number

Purchased From

Purchase Cost

Serial Number

RFID / Barcode Assigned

PO Number

Date Acquired

Data into Service

Projects

Classification

Priority

Description

Status

Work Orders

Category

Priority

Description

Status

AVA™ Asset Manager – People Tracking

Facilities / Building

Facility Type

Floors

Rooms

Room Usage

Square Footage

RFID / Barcode Assigned

Systems



People

Staff / Employees

Contractors

Visitors / Patients / Students

Department

RFID Tag ID



Facility Location (Building / Room)

Work Order Costing

Location Validation

AVA™ Asset Manager – Delivery Tracking

Facilities / Building

Facility Type

Floors

Rooms

Room Usage

Square Footage

RFID / Barcode Assigned

Systems

Asset / Item Master

Manufacturer

Model Number

Purchased From

Purchase Cost

Serial Number

RFID / Barcode Assigned

PO Number

Date Acquired

Data into Service

- **Generate Delivery Bar Code Label**
- **Stage deliveries by Delivery Zone**
- **Generate Delivery Manifest for Delivery Zone**
- **Electronic Signature with time and date stamp**

RFID Overview – Technologies Available

Category

Specifications

Reading Range

GPS

- Transmitter
- Satellite Reader
- Satellite Receiver



Active RFID

- Reusable Transmitter with internal power source
- Multiple Fixed Readers
- Extension of LAN / WAN



Low Energy Bluetooth

- Reusable Transmitter with internal power source
- Smaller Form Factor than Active RFID
- Smartphone Compatible

Passive RFID

- Disposable Transmitter with external power source
- Fixed Reader with Multiple Antennas and/or Handheld Readers



RFID Overview – Technologies Available

GPS



Tractor Trailer



Shipping Container



ForkLifts

Active RFID



Toll Pass



Metal Containers



Refrigeration Units



Moveable Assets

Low Energy Bluetooth



Pallets w/ Boxes



Cartons / Boxes



Apparel



Staff/
Visitors



Document / Records /
Books

RFID Overview – pRFID Components



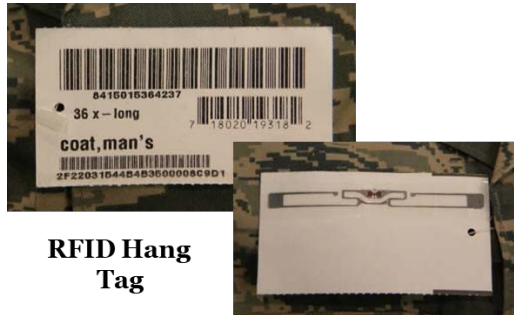
RFID Printer / Encoder



Receiving/Shipping Door Portal



Fixed Reader and Antennas



RFID Hang Tag



Permanent Tags



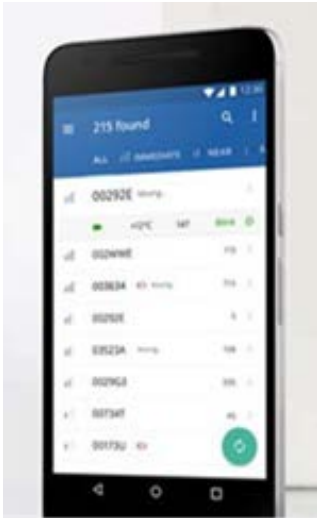
RFID Handheld Reader

Low Energy Bluetooth Solutions

AdvanTech, Inc.

Low Energy Bluetooth Solutions

Our product is a solution that includes beacons, readers, apps, and software to track assets in warehouses, yards, offices, hospitals, etc.



Readers



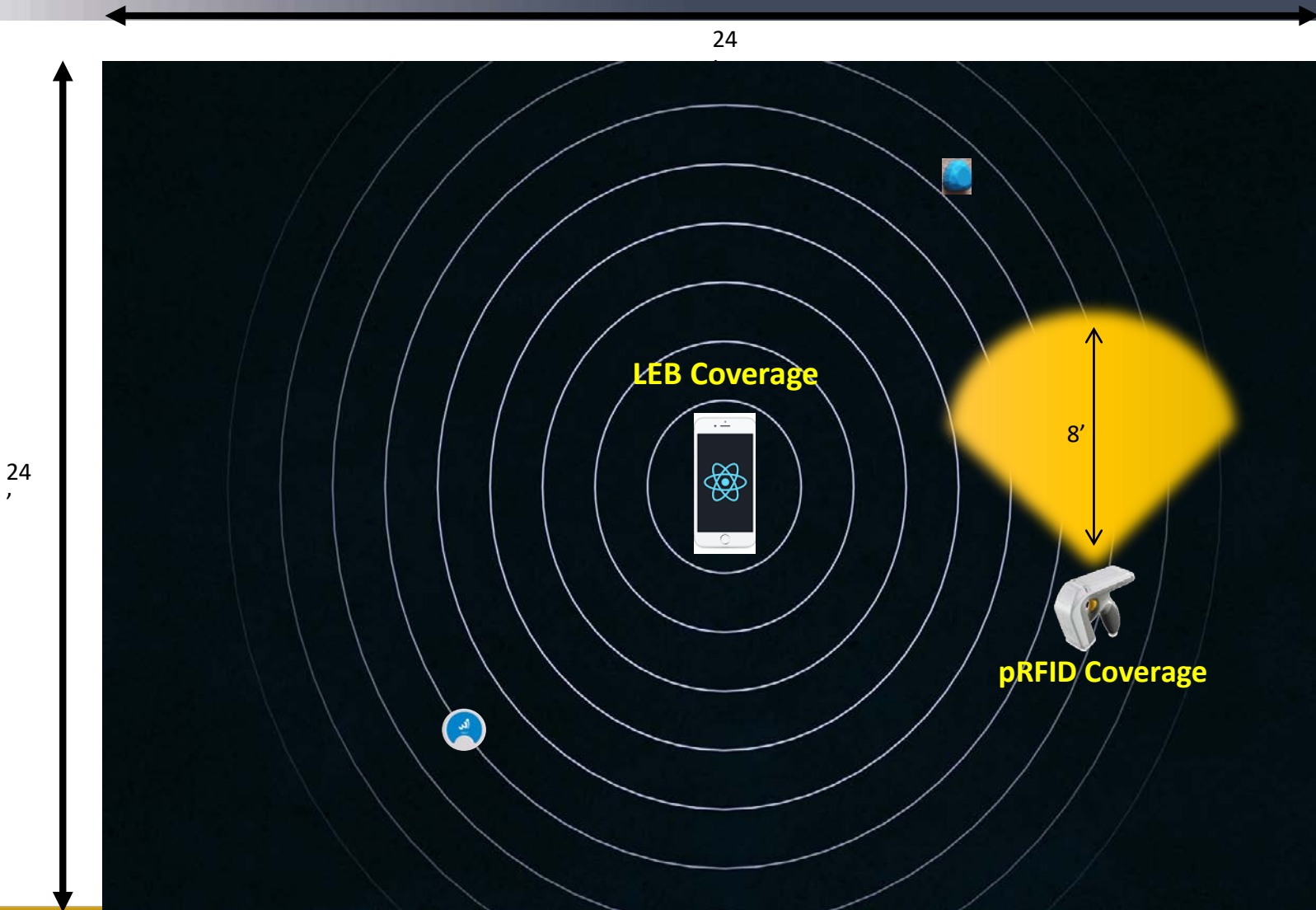
Beacons / Tags

Deploys rapidly

• Analyzes data

• Smart notifications

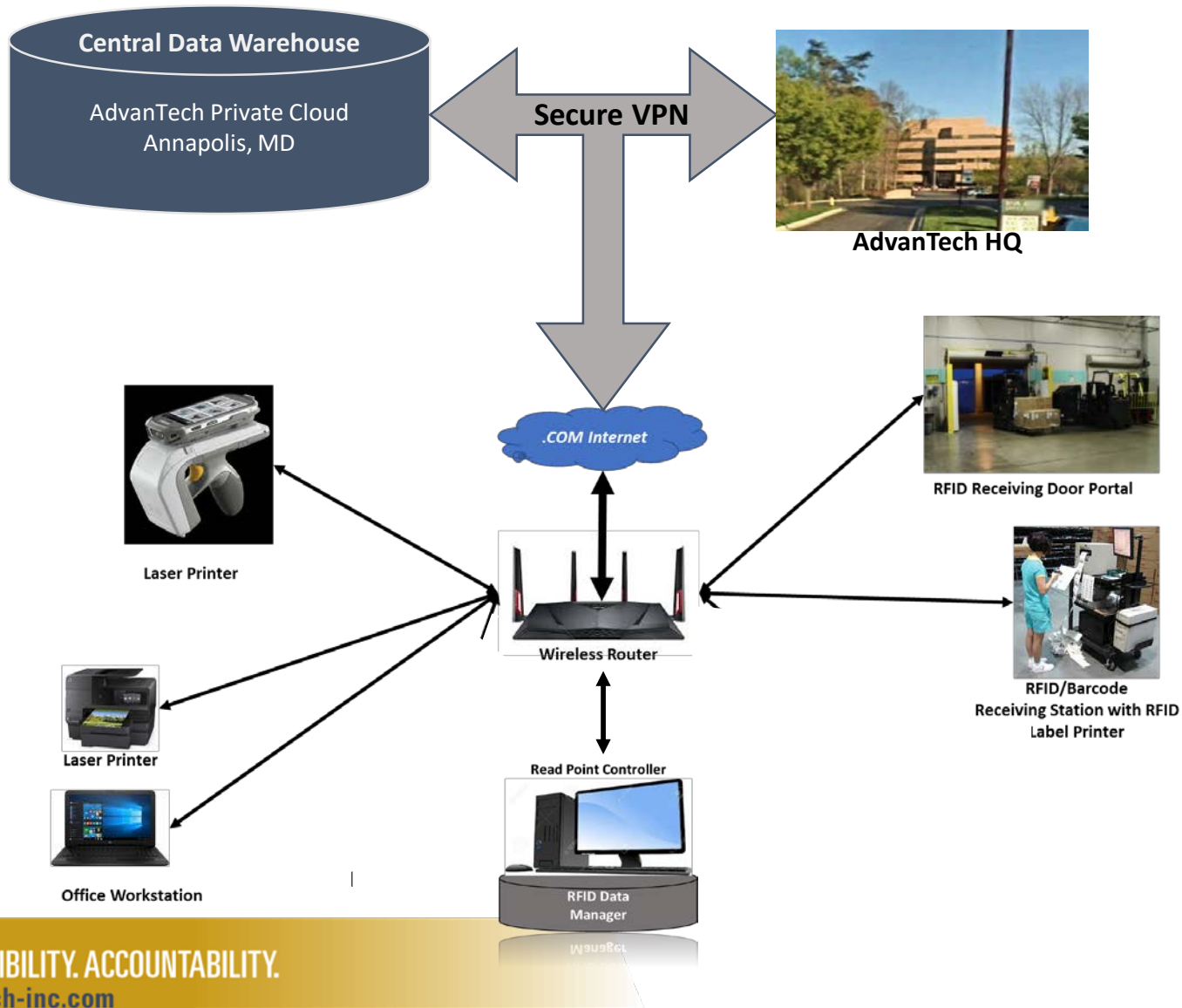
RFID Tag Location (pRFID vs LEB)



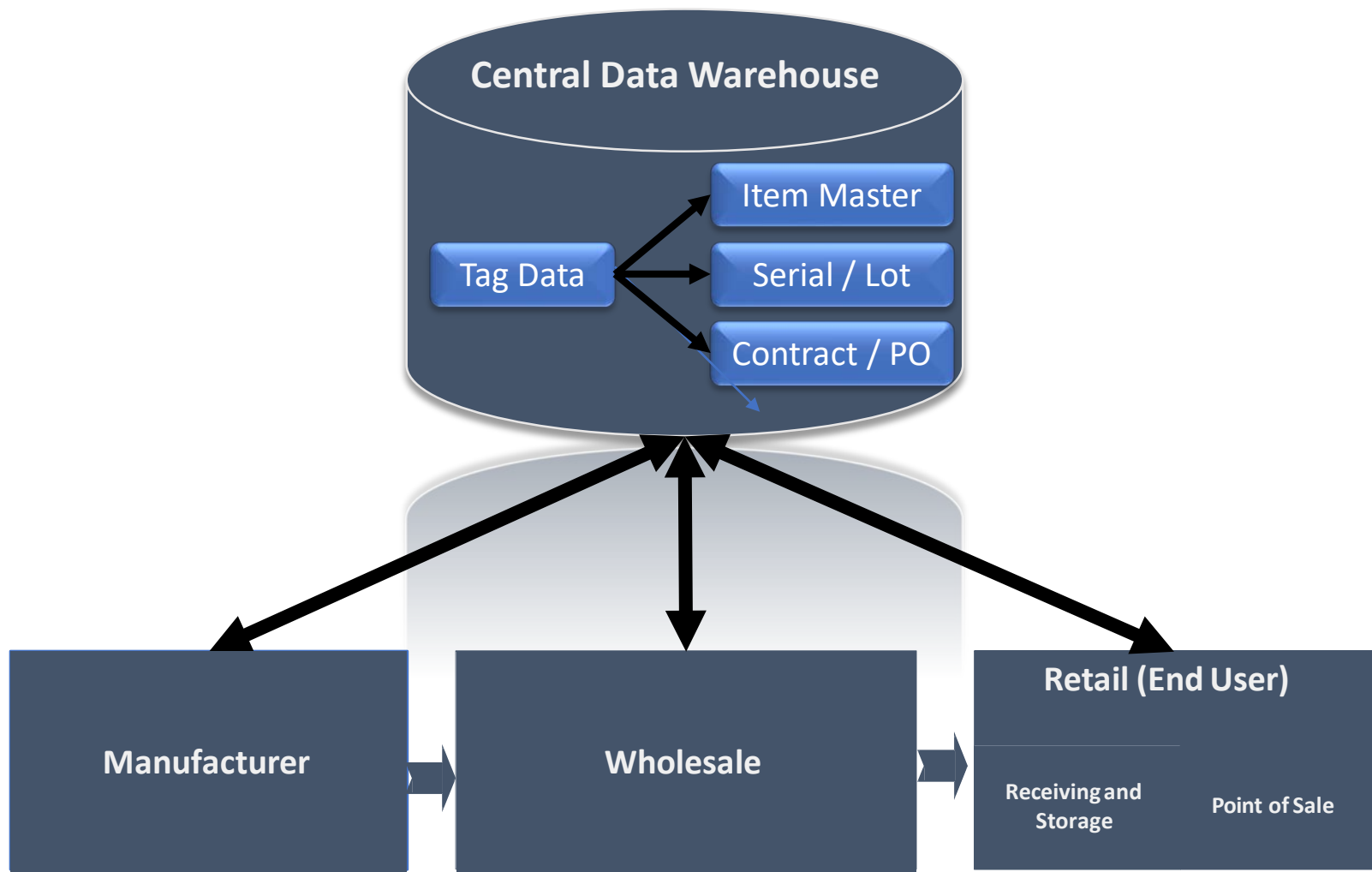
Hardware Cost Comparison (pRFID vs LEB)

	Tags for Pieces of Equipment (300)	RFID Printer / Encoder (1)	Fixed RFID Readers for 10 areas (20)	Handheld RFID Readers (2)
Passive RFID \$46,880	\$500	\$2,780	\$40,000	\$3,600
Low Energy Bluetooth \$17,000 (\$29,880)	\$5,000 Higher Tag Cost Larger Read Range	\$0.00 Printer not Required	\$12,000 Lower Reader Cost No visible Antennas	\$0.00 Smart Phone Application

RFID Overview – RFID Architecture

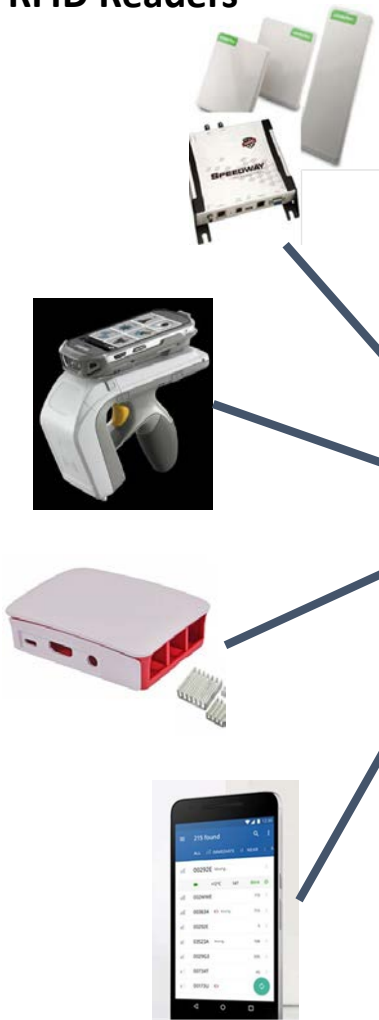


RFID Overview – RFID Architecture



RFID Overview – RFID Architecture

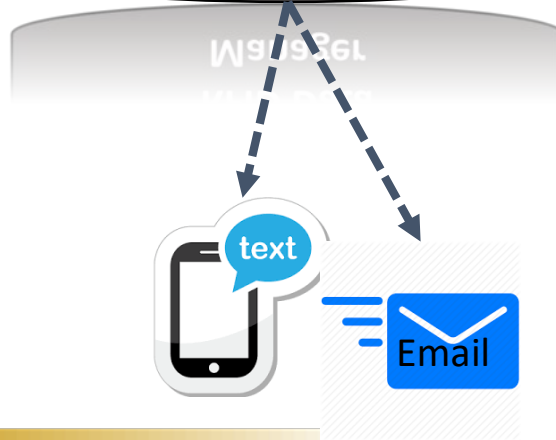
RFID Readers



Read Point Controller



RFID Data Manager



Asset Manager

Central Data Warehouse

Legacy Systems



Where can RFID be Incorporated?

	Manufacturing	Wholesale	Retail
Demand Planning	Yes	Yes	Yes
Contract Management	Yes	Yes	
Production Management	Yes		
Shipping / Invoicing	Yes	Yes	
Receiving		Yes	Yes
Location Management	Yes	Yes	Yes
Order Picking and Staging	Yes	Yes	Yes
Physical Inventories and Cycle Counts	Yes	Yes	Yes
Shelf Space Allocation			Yes
Point of Sale			Yes
Turn-ins and Exchanges			Yes
Anti-Counterfeiting	Yes	Yes	Yes
Product Recalls	Yes	Yes	Yes
Expiration Date Tracking	Yes	Yes	Yes
Stop Loss (Theft Prevention)	Yes	Yes	Yes

Documented Operational Improvements

Operational Activity	Documented Results
Production Control	Reduced Quality Checks by 20 hours per week
Receiving	Reduced Receiving Time to 20 Minutes from 3 hours
Point of Sale	Processed Platoon of 50 Recruits in 1 hour down from 2.5 hours
Physical Inventory Counting	Reduced Counting Time to 6 hours from 2 days
Physical Inventory Variance	Variances reduced to 0.18% from 5%-8%

????? Questions ?????



Next Steps