Asset Control – The Art of the Possible

WE ARE PLEASED TO MEET WITH YOU.

Asset Leadership Network

Barcoding
BE EFFICIENT | ACCURATE | CONNECTED

Today’s presenters:

Jay Steinmetz
Chief Executive Officer

Noel McKeon
Business Development Manager

Meeting Agenda

Barcoding, Inc.
A brief introduction of our company.

Asset Control – The Art of the Possible
Overview of technology available today and discussion around what is possible when it comes to tracking assets.

Use Cases
We will review 2 different use cases to share real-world examples of what is possible.

Barcoding is a supply chain automation and innovation company that enables organizations to be more *efficient, accurate and connected.*

Industry Leader Since 1998

Barcoding
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- Trusted
- Financially strong
- Award-winning
- Experienced
- Collaborative
- Creative & innovative
- Growing & scaling
- Continually investing
- Deep, broad, diverse

We are an extension of our customers.


Vancouver
Lynnwood
Montreal
Toronto
Oak Brook
Baltimore
Houston
Barcoding
Locations

Our Approach

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1 PROCESS

Our customers trust us to listen and learn. We fully understand workflows before recommending technology.

2 PEOPLE

Cultural fit and user satisfaction are critical to long-term success. We focus on employees in order to maximize tech utilization.

3 TECHNOLOGY

We design, deploy, and manage solutions that positively impact operations & users. Our goal—help our customers' businesses thrive.

OUR CORE EXPERTISE AREAS

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Data Capture Solutions

Barcode
RFID
Manual Input
IoT *Bluetooth, sensors, etc.*

Labeling & Printing Solutions

Procurement & Ecommerce
Strategic Labeling Programs
Compliance Labeling
Design & Integration
Thermal Transfer & Direct Labels
Custom Labels
RFID Labels & Tags
Warehouse Labeling
Print & Apply

Mobile Computing Solutions

Hardware Recommendation
GoLive Services™
StayLive Services™
Modernization (Android)
Application Development
System Integration

RFID Customers

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Asset Control

Why?

- Mission Critical
- Improve Efficiencies
- Audit & Regulatory Compliance
- Ensure Accountability
- Chain of Custody
- Prevent Loss/Theft
- Traceability

What?

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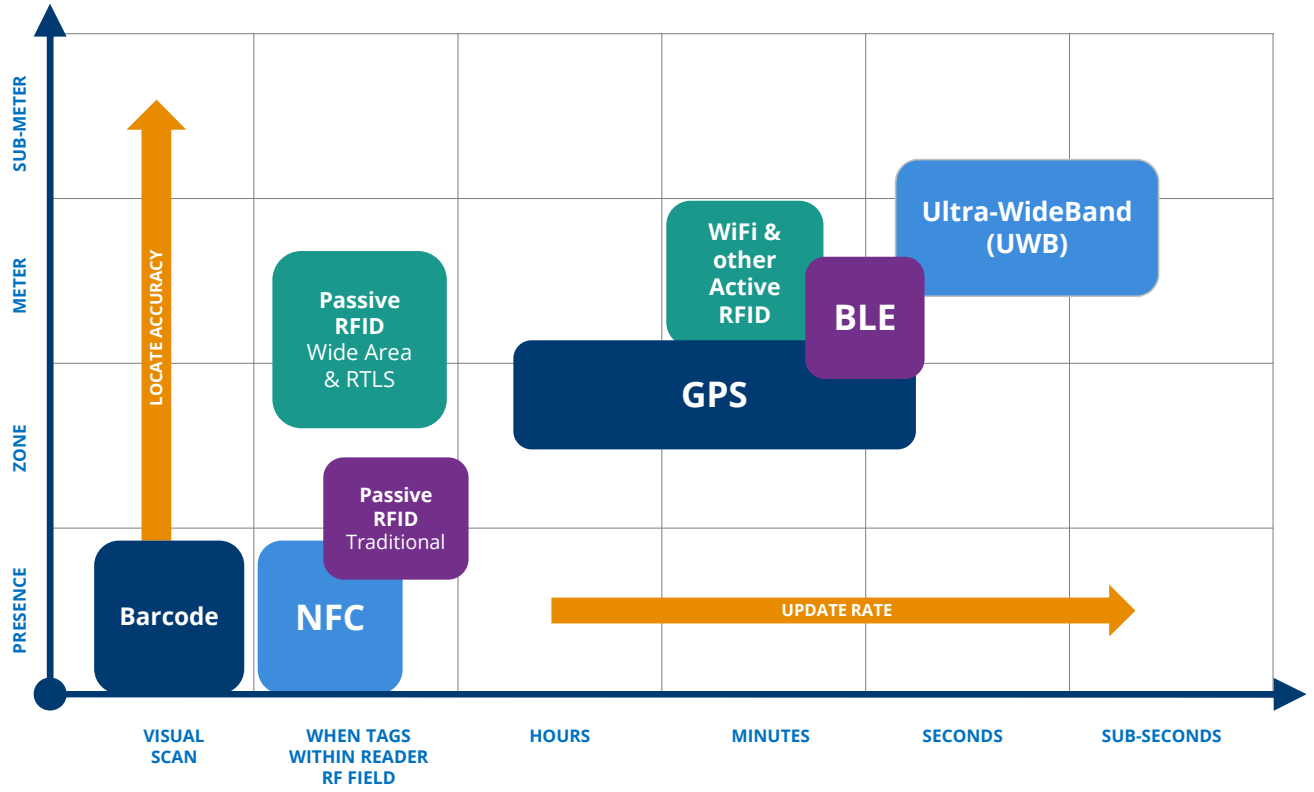
Anything that is unique and has value to the organization.

Body Armor	Vehicles
Cameras	IT Equipment
Weapons	Uniforms
Evidence	Radar Guns
Radiation Sensors	HAZMAT Suits

Types of Technology Used for Asset Control

Wireless Location Tracking Technologies



Barcode Based Asset Tracking

PRO's

- Lower deployment costs
- Proven technology
- Faster roll out
- Fast ROI

CON's

- Requires human, line-of-sight interaction
- Time-consuming

RFID Based Asset Tracking

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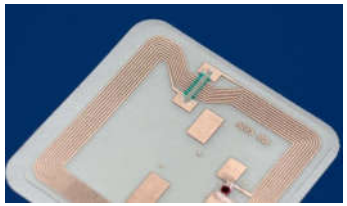
Use of Radio Frequency technology for automated inventory control eliminates costly user-initiated line of sight inventory activities that other technologies require.



PRO's

- Saves time
- Fast, en masse data collection
- Potential for greater security
- Improved accuracy
- Real-time tracking capabilities

CON's

- Larger capital investment
- System design analysis necessary to ensure successful deployment
- Longer ROI

RFID Technology Overview

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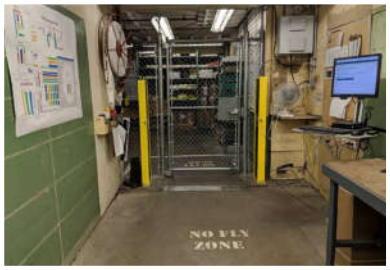
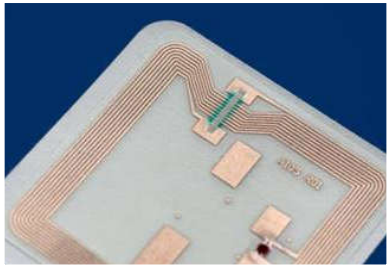
Long Range Passive
RAIN RFID



Choke Point

RTLS



Short Range Passive
HF Systems

BLE Active Systems

GPS Based Tags

Technology Partners

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Long range passive RAIN RFID
- Choke Point
- RTLS

Short range passive HF systems

BLE active systems

GPS based tags

AWS GovCloud (US)

SLS RFID Solutions

AVERY DENNISON RFID

Microsoft Azure

IMPINJ

CONFIDEX Capturing IDeas

ALIEN

ZEBRA

TIMES-7

METALCRAFT ID MADE BETTER

SMARTRAC

LinkLabs

FEIG ELECTRONIC

CalAmp

RFID – Tag Types

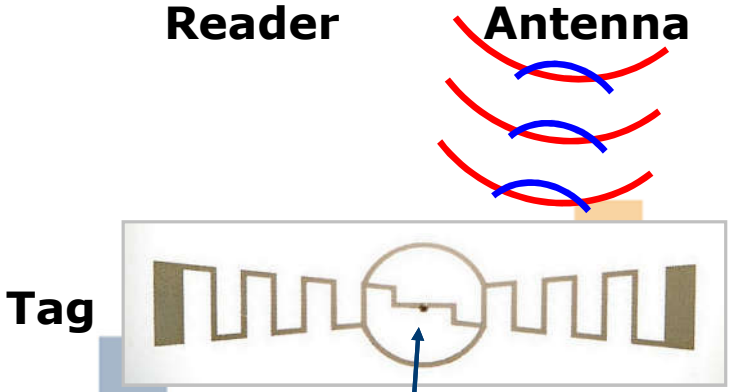
RFID Tag Types

Passive – Tags “reflect” energy

Active – Tags are transmitters of data

Passive RFID Tags

- Reader sends signal to tag
- Tag uses incoming signal as power source
- No battery required
- Tag talks back to reader by *reflecting* the signal
  - Much like a moving mirror reflecting back light – "Backscatter"



Passive RFID Tags

Frequencies

- LF 125 – 136 KHz
  - Short range
  - Building Access
- HF 13.56 MHz
  - Short Range
  - Payment System
- UHF “RAIN” 915 MHz
  - Long range
  - Supply Chain

Passive RFID Tags

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Passive Tag Types

- Labels
- Hard Tags
- Metal vs. non-Metal
- Flag Tags
- New Tags Coming







Active RFID Tags

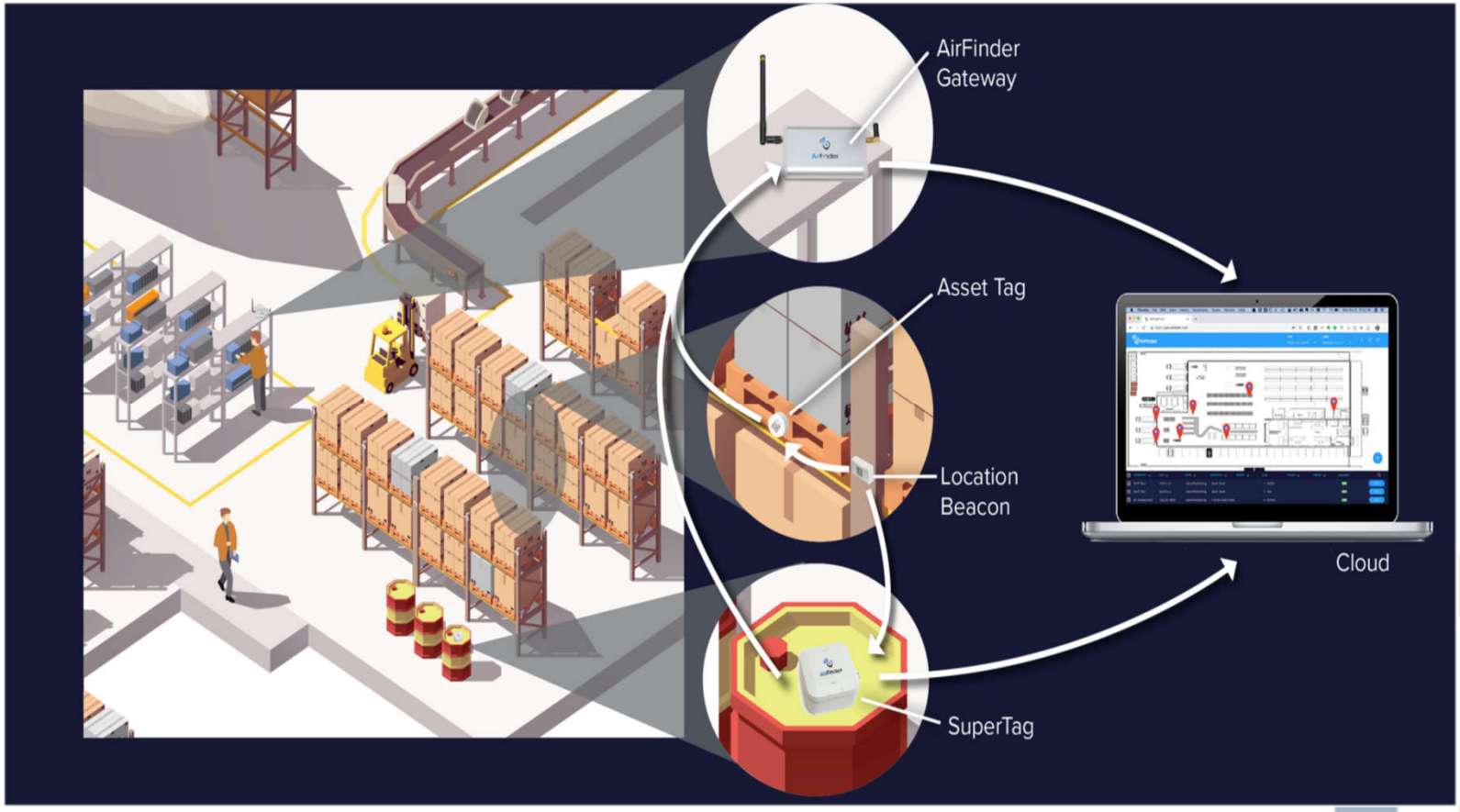
Most Common Active RFID Technologies

- BLE (Low Energy Bluetooth)
  - Low Cost, Slow “blink” rates
- UWB (Ultra Wide Band)
  - X,Y, Z coordinates, Less than1 Foot accuracy, Fast “blink” rates, used to track critical items
- Wi-Fi / ISO 24730 Based Tags
  - X,Y location coordinates, Long range, 5’ accuracy

BLE – Low Energy Bluetooth

- Low cost hardware.
- Can live “outside” of your network, removing any security issues.
- Slow blink rates, can be an issue as it could be 2+ minutes before a transaction is determined.
- Battery life, approximately 2 years.

BLE – Low Energy Bluetooth



BLE – Low Energy Bluetooth

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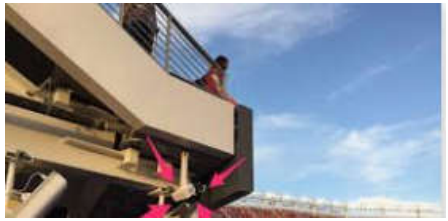
IntelliSeal™ - Reusable Bluetooth Seal

- Real-time notifications on high value asset access
- Transmits status changes (Open, Closed, Tampered with), in real-time
- Supports real-time data transfer or store and forward mode
- Ideal for securing important assets
- Allows access control to key assets

UWB – Ultra Wide Band

- X, Y, Z coordinates, less than 1 Foot accuracy
- Fast “blink” rate
- Ideal for track critical items
- Used when inches matter!
- Battery life, approximately 5 years



Wi-Fi/ISO 24730 Technology

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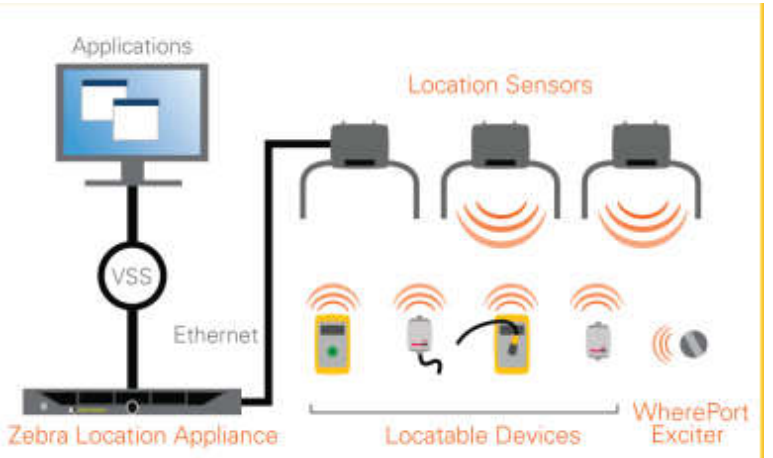
- Long range triangulation
- Accuracy within 5 feet
- Great for large assets, outdoor yards
- Battery life, approximately 7 years



RFID Technology Recap

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	Active RFID	Passive RFID
Best Features	•Real-time location •Needs Designed Sensor Network •Reusable tags w/replaceable batteries •Site-wide visibility	•Low Tag Cost •Small tag sizes and formats •Writeable memory •No batteries required
Limiting Features	•Tag cost and Size •Sensor/Reader Infrastructure •Battery Life Management	•Read range •Last Seen Knowledge •Choke Point location limitations
Best Use Cases	•Large, Wide area coverage •High value or high impact assets •Highly variable movement patterns •Instantly Alerted	•High volume of assets •Handheld Counts •Lower costs assets •Locator Functions

Additional RFID Considerations

- Data in RFID Tags is a LICENSE PLATE ONLY.
  - Must have access to database to know “what” tag is related to which assets.
  - No writing tag data is allowed in the field
    - Tags can be locked with a passcode
    - Tags can be “killed” with commands and passcodes.
- Use appropriate technology that fits the use case.
  - Not one-size fits all
  - A hybrid of both barcodes and/or passive/active tags may be ideal fit.

Asset Control Software Platforms

- Cloud based offerings
  - Evaluate security requirements for approval
    - FEDRAMP, ITAR, etc.
    - Microsoft Azure, Amazon AWS, Google

- Locally installed platforms
  - Vendors still offer on-premise installation options.

RFID System Components

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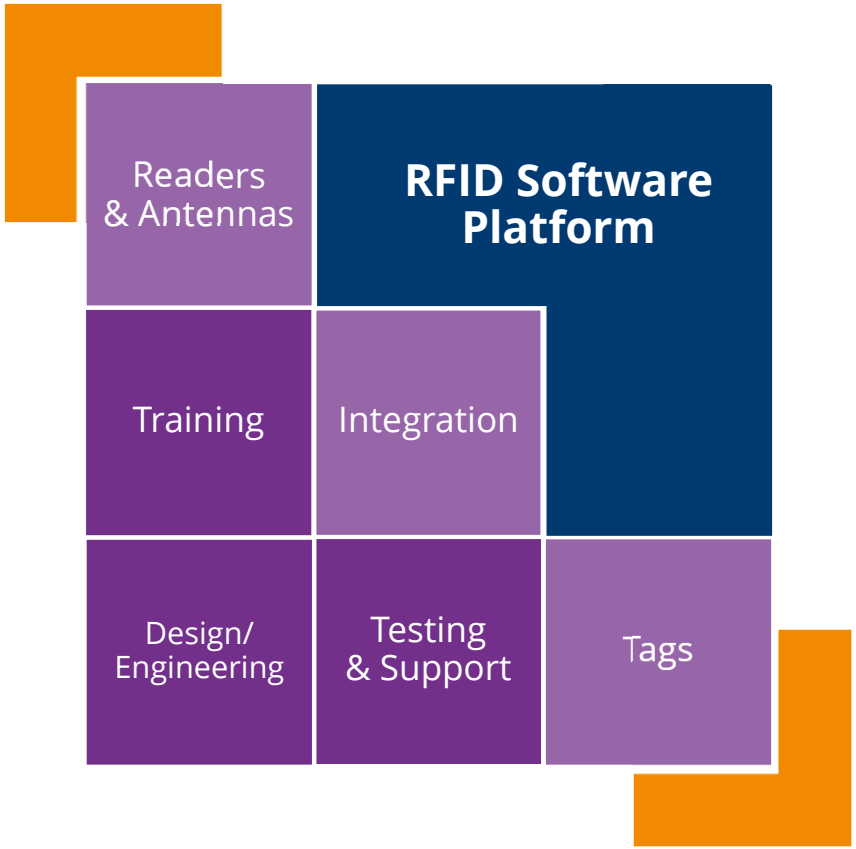

Project Methodology

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RFI/RFP → Kickoff Events → Design → Deliver → Launch Support → StayLive Support

RESOURCES

Tools
Statement of Work
Project Plan Template
Checklists
Technology Templates

Techniques
System Requirements Definitions (SRD)
Change Control
StayLive Documentation

Assets
Resource Skill set
Industry Knowledge
Technical Knowledge
Environmental Awareness

PROJECT MANAGEMENT

CLIENT PARTNERSHIP

PROJECT TEAM

Operations
Info. System
Change Mgt.
Training
Sponsor

RFID Use Case

- Defense Contractor Electronic Equipment Asset Tracking
  - Tracks movement in/out of labs
  - Cycle Counts of rooms periodically
  - Locate feature helps find asset in labs/rooms
  - 300+ read locations
  - 29,000+ Assets

RFID Use Case 2

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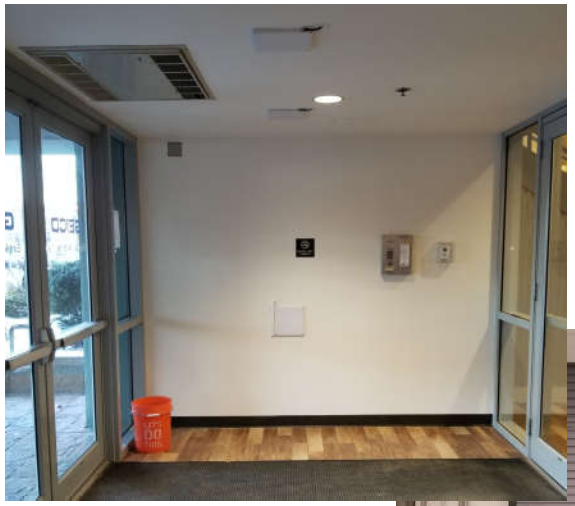
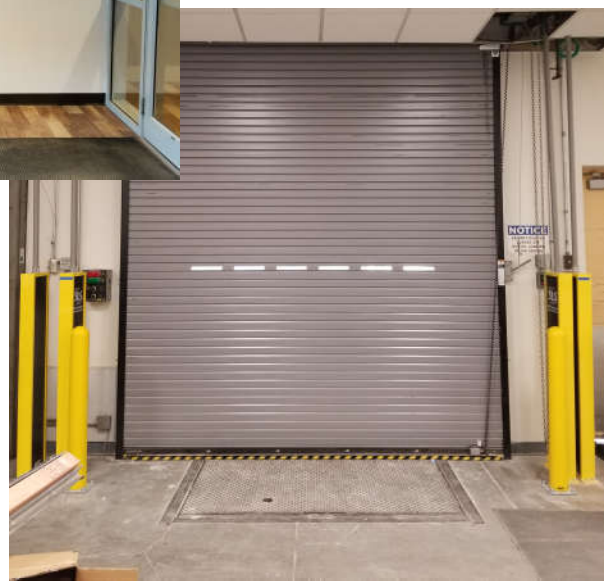
- IT Asset Tracking
- 17 Geico Sites across the country
- Chokepoints located at Data Center entry/exit and at every non-alarmed exterior door.
- Handheld App





GEICO®

RFID SERVICES

“We are recording our most accurate inventory levels to date.”

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William Codo
Owner, Accord Carton

Summary

- Asset Control is critical for organizations.
- Multiple technologies are available to advance and improve asset control.
- Understanding which technology fits your project requirements is critical for success.

QUESTIONS?

THANK YOU!

The Barcoding Team

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