

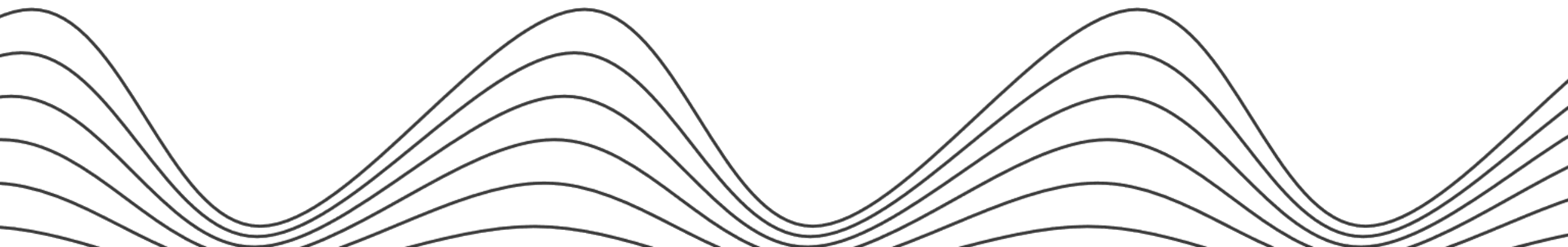


**engage
again**







A Virtual Conference presented by AIM & RAIN
8-9 September 2021

RFID for IT Asset tracking

September 2021



Agenda

01	Confidex Welcome		5'
02	Use cases		5'
03	Asset characteristics		5'
04	Tag selection		5'
05	Success stories		5'
06	Q&A		5'

15 years in enterprise IoT

Wireless technologies & solutions

- NFC, RFID & Bluetooth Low Energy
- In-house design & manufacturing
- Material know-how

Leading supplier in Enterprise IoT

- Manufacturing, Public Transport, Logistics & Automotive Industries
- Expertise & proven reliability

Offices

- Finland, USA, France, The Netherlands, Germany, Austria, Singapore, China
- Global Partner Network & Channel



Over **1.5 BILLION** RFID tags, labels, and tickets supplied worldwide!

SMART INDUSTRIES



AUTOMOTIVE

- Supply chain and container management
- Parts tracking
- Production control
- Distribution
- Lifecycle and mobility services



LOGISTICS







- Returnable Transit item pooling
- Post & parcel



MANUFACTURING

- Tool & Component tracking
- Product authentication
- Material flow management
- MRO and asset management

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Common IT asset tracking use cases for RFID



Data Centers

- Service & Maintenance
- Audits
 - Financial
 - Compliance
 - Security



Office items

- Inventory
- Check-in / Check-out
- Audits
 - Financial
- Loss prevention









IT asset manufacturers

- Production control
- Supply chain management



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Why materials matter with RFID?

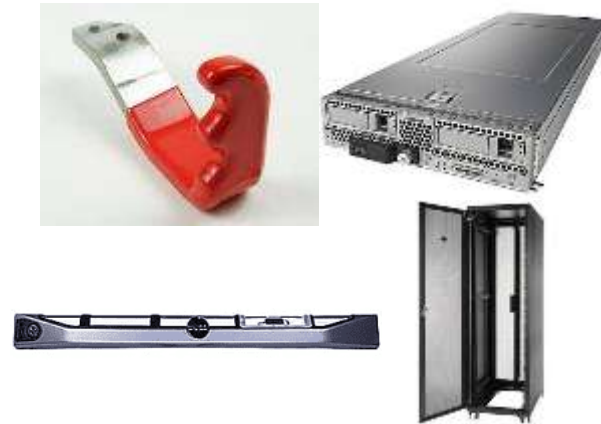
- RFID tag performance depends primarily on the material surrounding the tag
- Metal surfaces detune and reflect energy from RFID tags – requires a tag specifically tuned for metals.
- IT assets generally include several different type of materials and often have also metallic parts under the plastic enclosure
- Carbon Fiber, Rubber, Water, and ESD protective materials all present detuning challenges for RFID



IT assets that might require on metal tag



Laptops / Screens



Data Center Items



Wiring / Cabling



IT Office Equipment



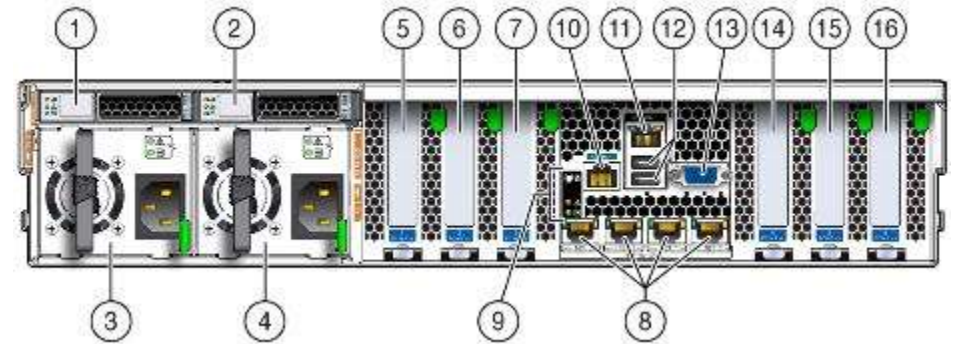
Handheld devices &
Mobile computers



Electronics

Challenges in tag placement







- General trend with IT assets is to make them smaller
- Smaller footprint for RFID tag means less read range
- Is there a room reserved for the tag in the design or will the asset be retrofit with RFID



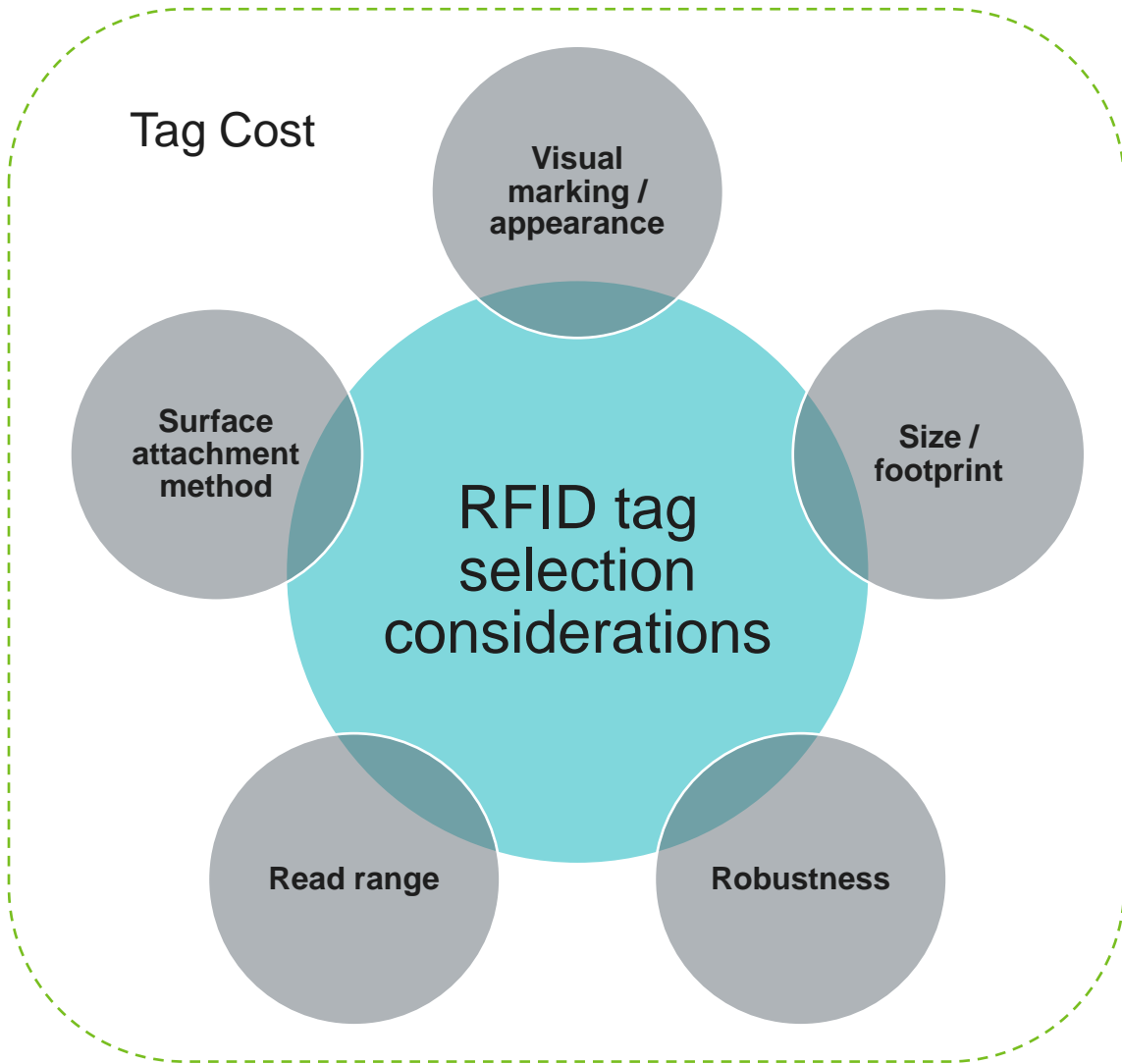
Photos:

- cisco.com
- oracle.com
- apple.com

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Selecting RFID Tags



- Price / Performance balance for each tag attribute
 - Costs associated with improvements
- Weight of attributes affect others
 - Ex: Size impacts read range and attachment method

What kind of tag form factor is needed?

Hard tag

- Better durability against mechanical stress
- Many attachment methods available: adhesives, riveting, zip-ties
- Excellent chemical and washing resistance
- Manual encoding process (1-by-1)
- Manual visual printing process (data labels or laser engraving)
- \$\$

VS.

Label

- More sensitive for impacts.
- Low-profile
- “slap & go”
- Some chemical and washing resistance
- RFID-printer compatible
 - High-volume visual printing and encoding can be done on-site
- \$



Appearance & Ease of Attachment

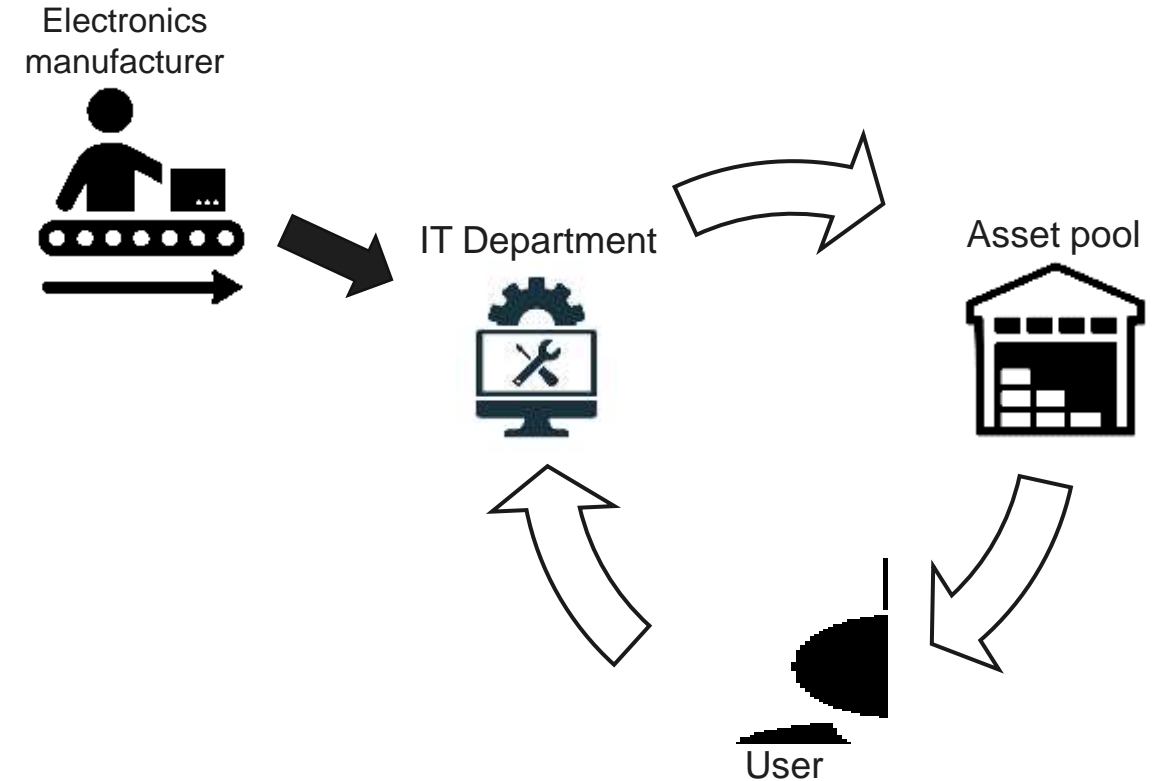


- Tag aesthetics are important in the IT industry.
- Attachment time can be more costly than the tag itself. Tags must be:
 - Easy to apply
 - Adhesive, cable tie, embedded, mechanical attachment, hanging
 - Applied at the right time
 - “Source tagging” done by the electronics provider vs end customer tagging



Tagging process

- Source Tagging
 - Install RFID at the manufacturer. Wait for complete lifecycle of assets.
- Aftermarket Tagging
 - Self apply RFID tags on both new assets and assets already in service.
- Hybrid Approach
 - Source tag new assets and self apply RFID tags on existing assets

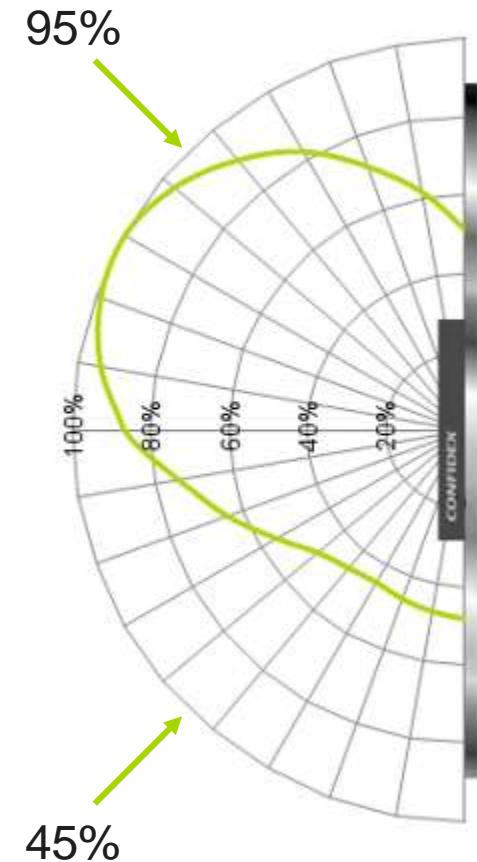


Upfront planning is essential to determine when install RFID tags

Radiation Pattern

- Tag orientation on the asset has an effect on read range.
- Test tags in different orientations.
- Take reader antenna locations into account during installation.

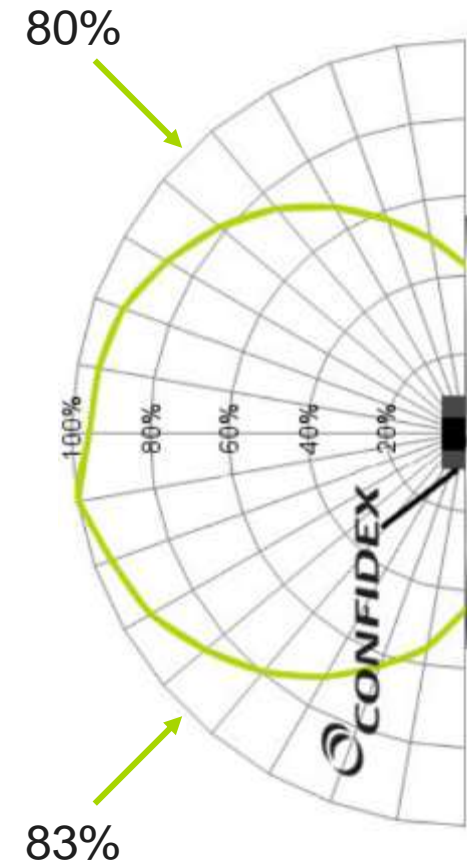
Read range from 45° angle









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Success Story: Bezel label designed to match the server appearance

Product description

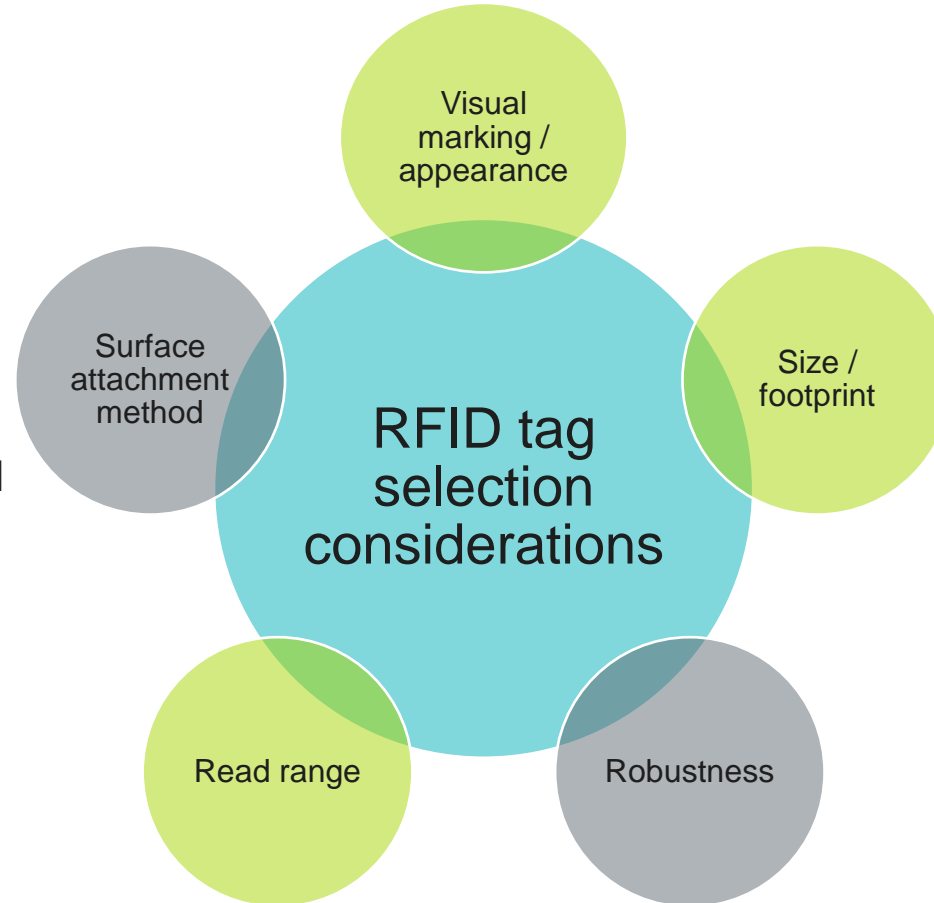
- Integrated into router or switch bezel design
- Aesthetically pleasing and color-matched to the asset to maximize visual integration
- Tuned for optimal performance on the asset
- Readable when assets are stacked on a rack

Reference project

- Fortune500 company manufacturing servers and other electronic equipment for use in IT

Product

- Confidex DesignStudio™



Success Story: Overmoldable tag suite for plastic injection molding

Product description

- Designed for parts undergoing the overmolding process
- Optimized for mounting directly on metal.
- Available with adhesive backing
- Small footprint enable attachment on small server components

Reference project

- Multiple IT Equipment Manufacturers

Product

- Confidex DesignStudio™

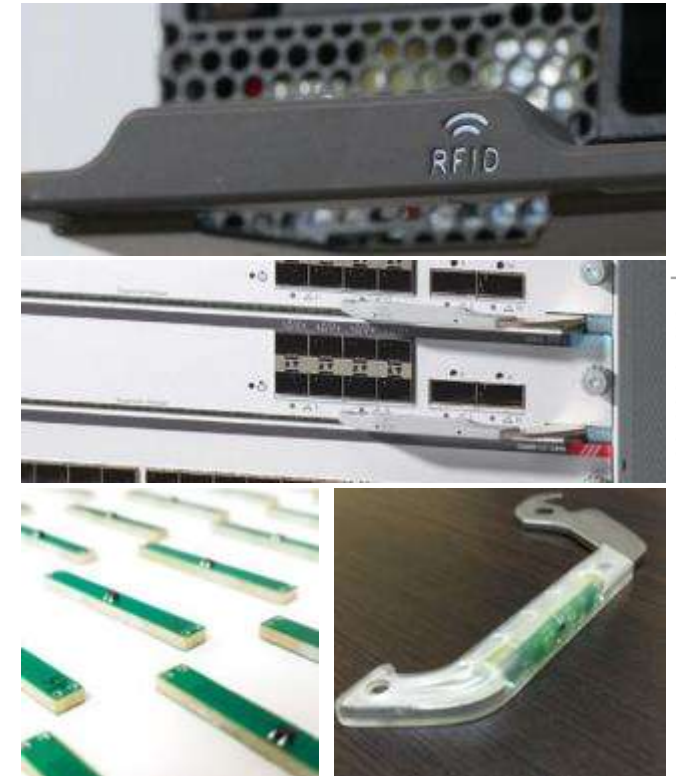
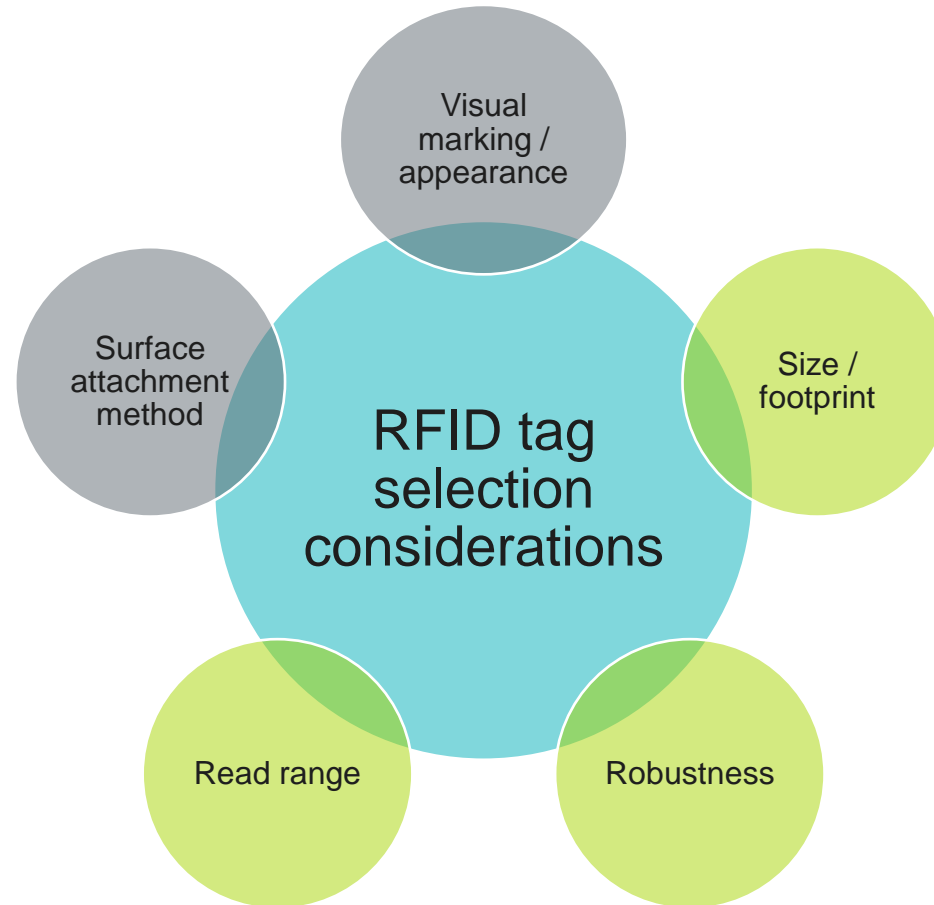


photo: cisco.com

Success Story: ESD on-metal label for logistics of electronics

Product description

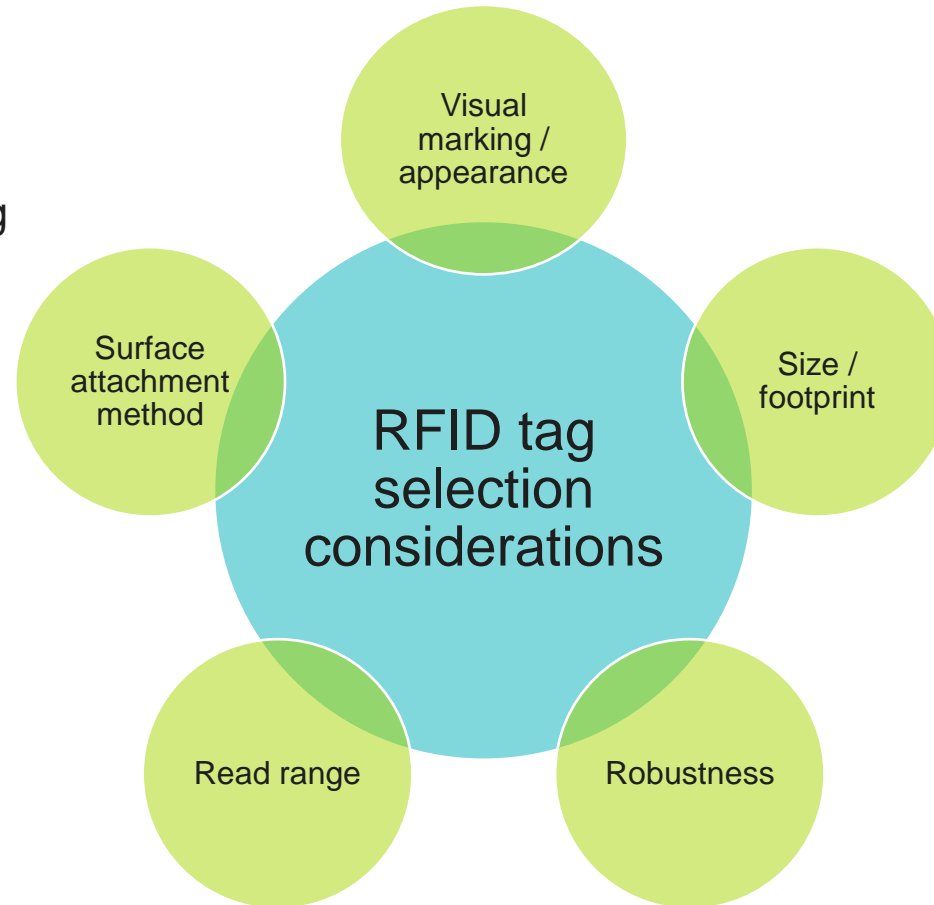
- Optimized for challenging ESD protective plastics that are often used during IT asset manufacturing
- Compliant with major RFID printer suppliers
- Available also with protective film applied on top of printing
- Read range on metal up to 9m and on ESD plastic up to 7m

Reference project

- Large German automotive OEM

Product

- Confidex ESD On Metal Label™



Success Story: Optic cables tagged for quick access of ID and service records on-site

Challenge

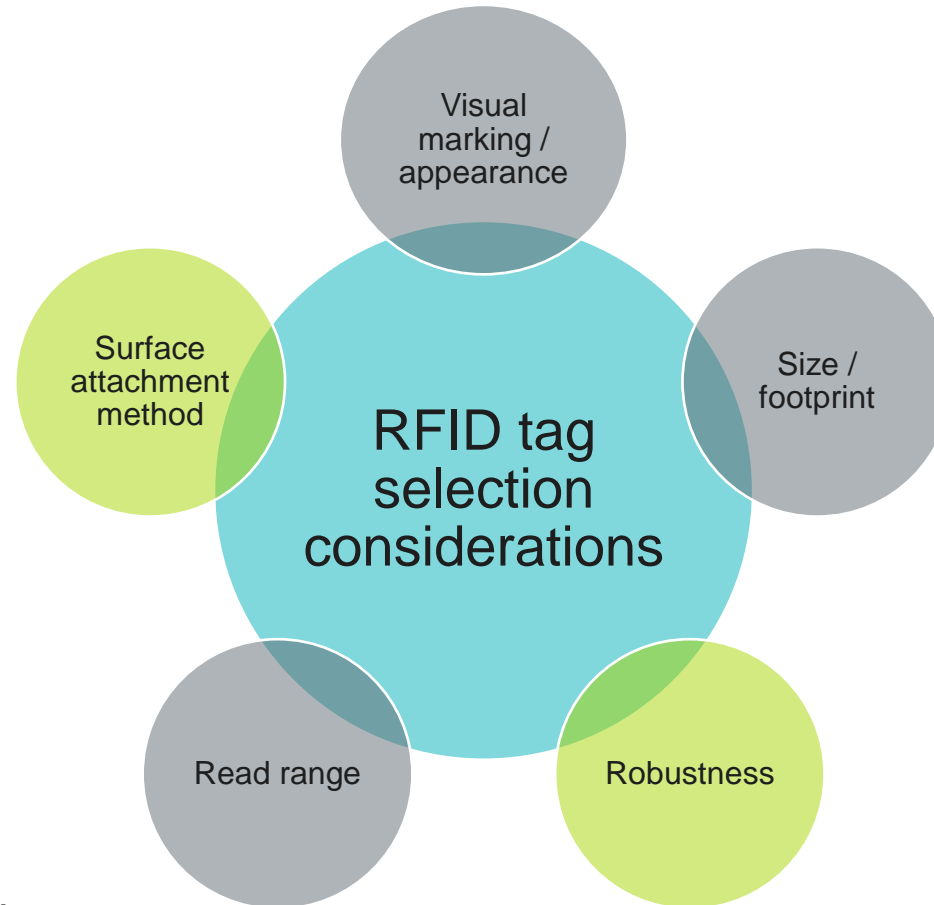
- Tracking and managing millions of fiber optic cables from substations to the end users. Manual or barcode-based tracking resulted in lack of legibility, errors, and high resource consumption.

Benefits

- Automatic tracking reduces errors and brings accurate data of the assets on demand
- No issues with legibility of tag due to dirt or surface level damage
- Increased management efficiency, time better spent, and resources saved

Product

- Confidex Steelwave Micro II NFC™



Success Story: Denso relying on Silverline Blade for accurate identifying of office electronics



Challenge

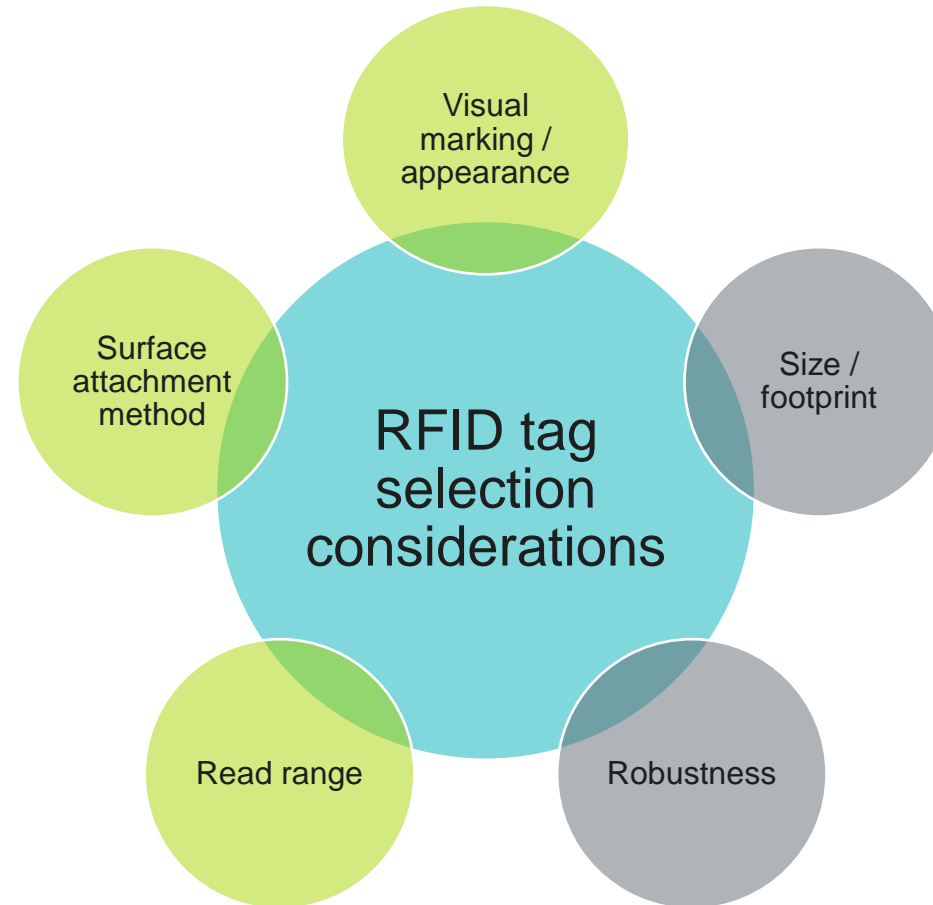
- Tracking and managing thousands of laptops, monitors, conference systems, and other IT assets across multiple sites around the world.
- Barcode scanning is time consuming and requires more handling of assets.

Benefits

- Efficient inventory
- Compliance for accounting to monitor depreciated assets

Product

- Confidex Silverline Blade™
- Denso SP1 scanner



DENSO
Crafting the Core

Success Story: Telkomsel gains single view of office assets across more than 100 sites



Challenge

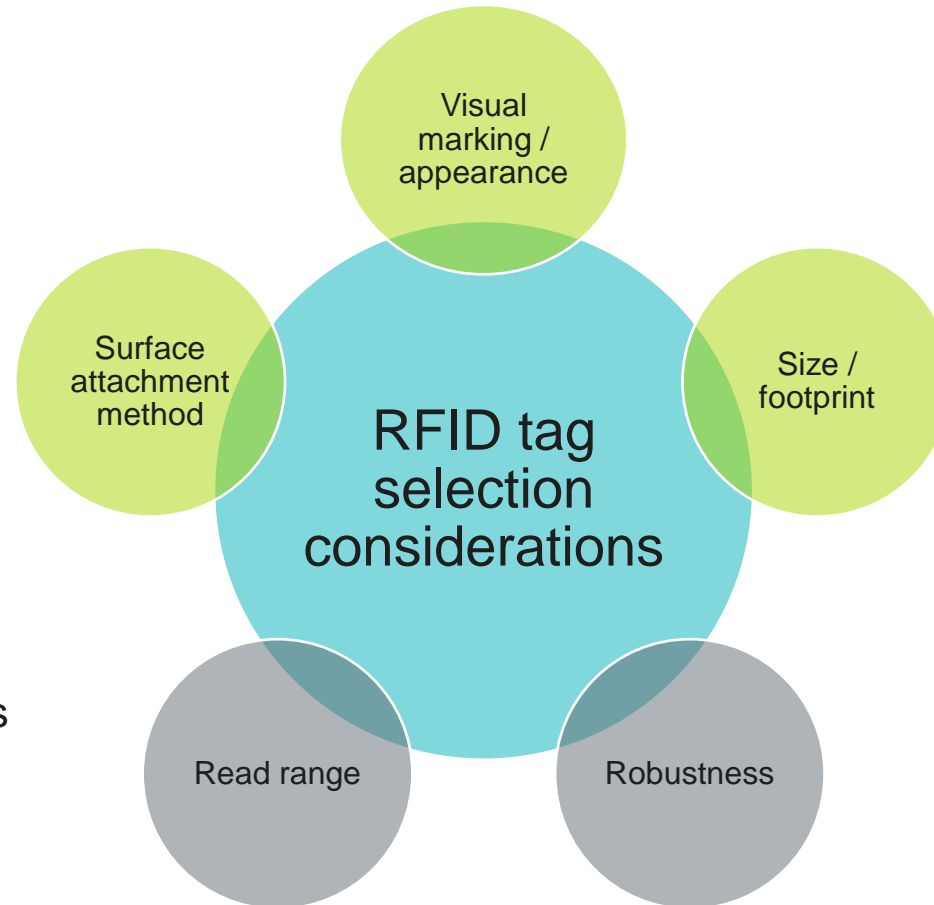
- Telkomsel needed a single solution across more than 100 facilities to automate management of tens of thousands of assets.
- It needed to provide fast, reliable, and room-level data capture for conducting inventory audits
- Single tag model with versatility to be attached on many materials

Benefits

- Faster audits saving valuable man hours and sparing Telkomsel the high cost of periodic, manual audits
- Identifying misplaced assets ensures they don't go

Product

- Confidex FerroWave Classic™



Success Story: California Department of State Hospitals using RFID for asset management



Challenge

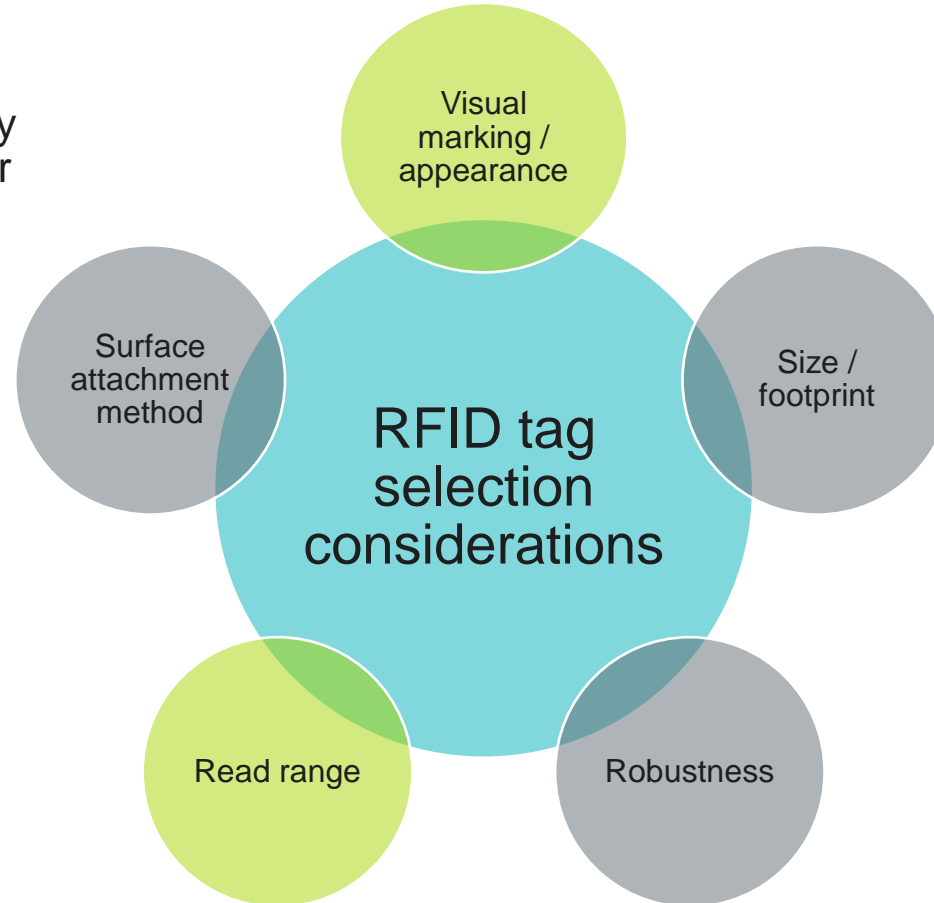
- Cal-DSH needed more efficient way to manage their assets (data center equipment with limited space & laptops/desktops/monitors etc.)

Benefits







- RAIN RFID tag and CG4's asset tracking solution helped Cal-DSH manage a separate asset management database that allows Cal-DSH to track additional asset information that is not included in the fields configured for FI\$Cal.
- Reduced manual labor hours

Product

- Confidex Steelwave Micro II™
- Confidex Silverline Blade™
- Zebra TC52 with RFD8500 sled



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Thank You / Kudos

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