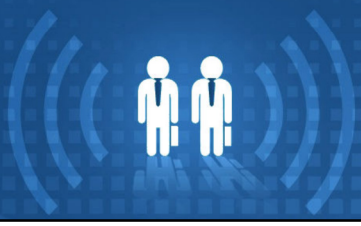
Nevada Communications Steering Commission

RFP #007-032

Asset Tracking and Inventory Management



Introduction

Agenda

- Introduction
- Project Review
- Results / Feedback
- The Opportunity

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Introduction

Who We Are....

Concept2 Solution is a software and solutions development company with a focus on creating solutions that deliver business efficiency and excellent ROI.

- Based in Pittsburgh, PA serving customers across the U.S. and International
- 6+ years Passive + Active RFID
- Enterprise development and integration
- Total Solution Provider

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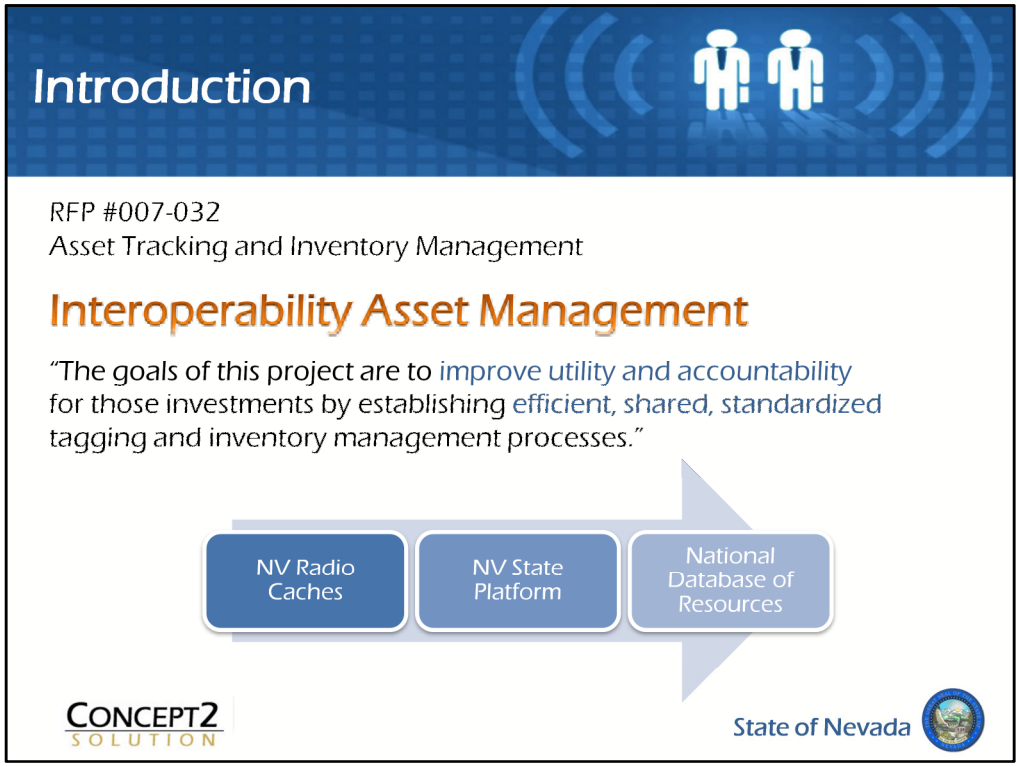
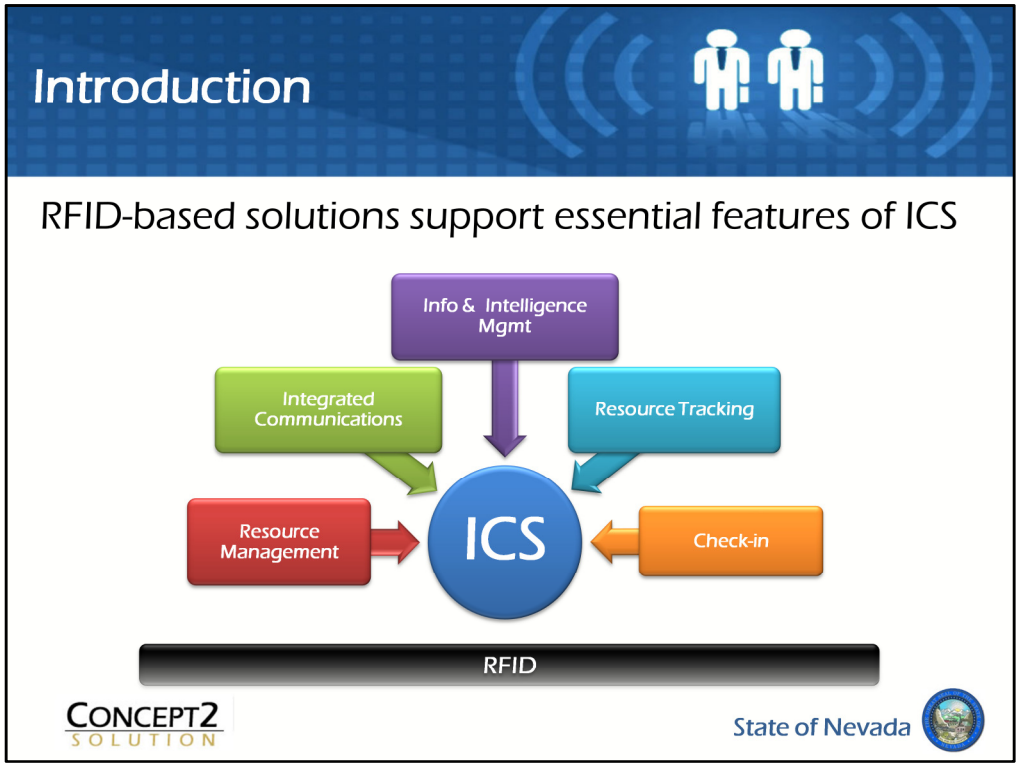
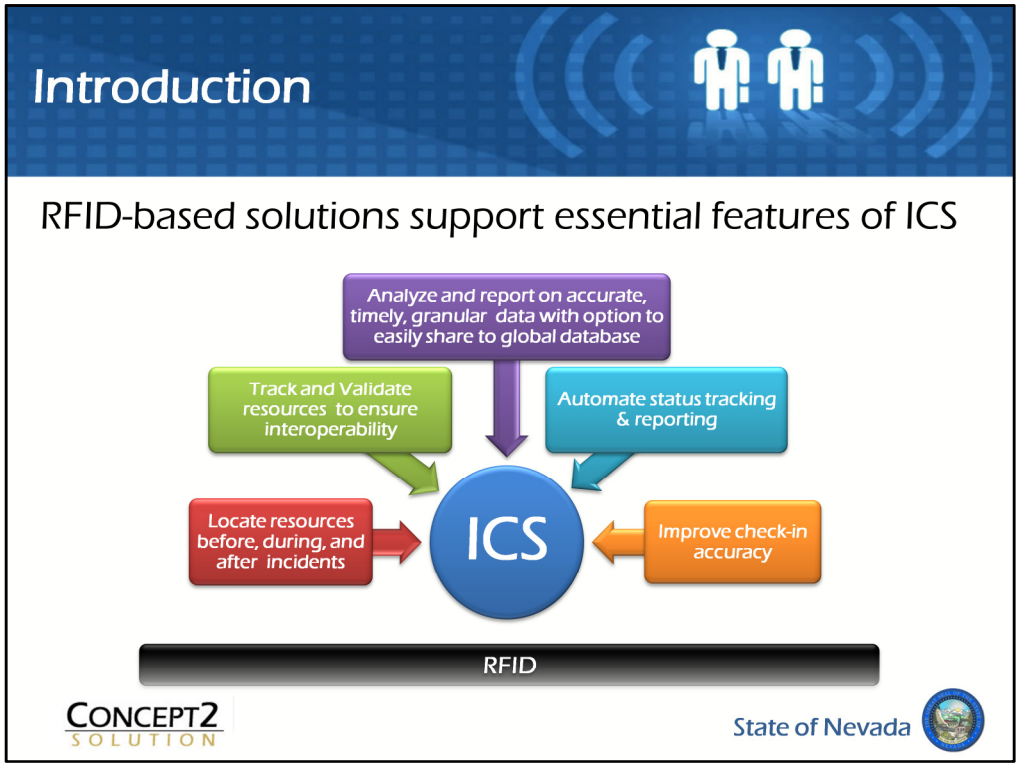


This project focuses on Radio Caches, however the same centralized and standardized solution can be extended to support other assets such as vehicles, as well as people.



Building upon existing ICS objectives and processes, RFID can support and enhance key objectives and functions *without changing existing best practices and processes.*

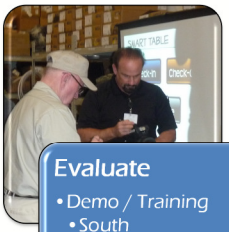


An RFID-based solution provides numerous benefits that can support ICS objectives while not interfering with or otherwise affecting existing processes and procedures.

Project Review

Prepare
- Kickoff/ Planning
- RFID tag selection
- Define radio attributes
- Collect cache data

Execute
- Import data
- Tag cache radios
- Provide demo equipment



Evaluate
- Demo / Training
  - South
  - Reno
  - Elko
- CASM Export
- 6-month access

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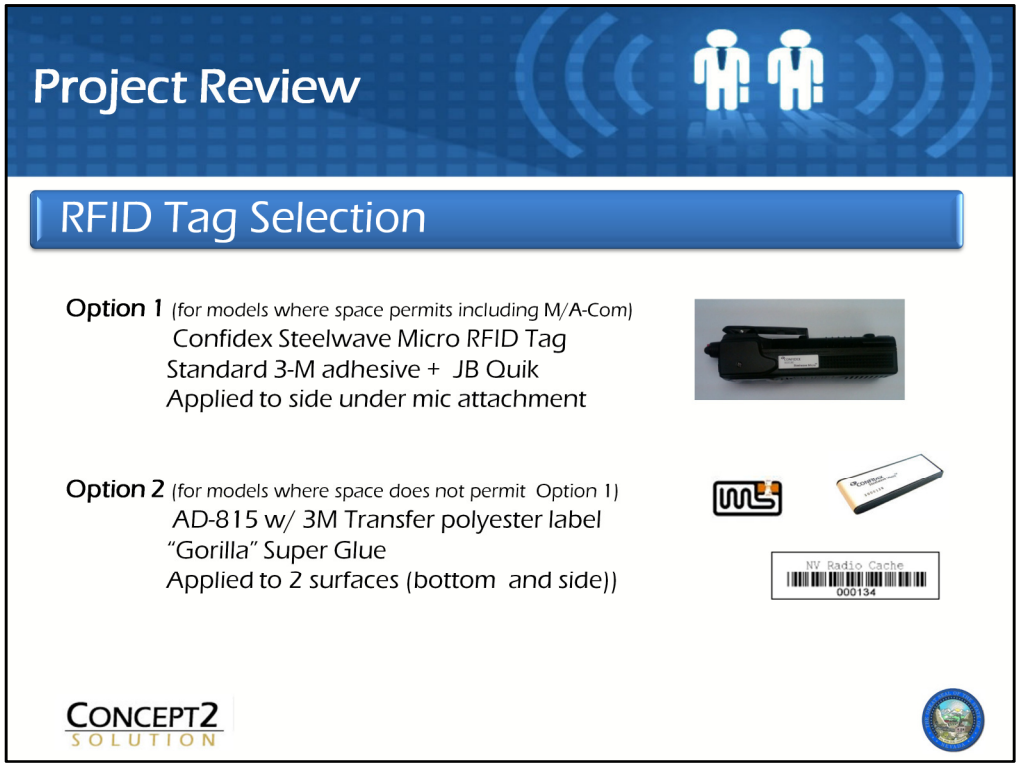


Functional Requirements

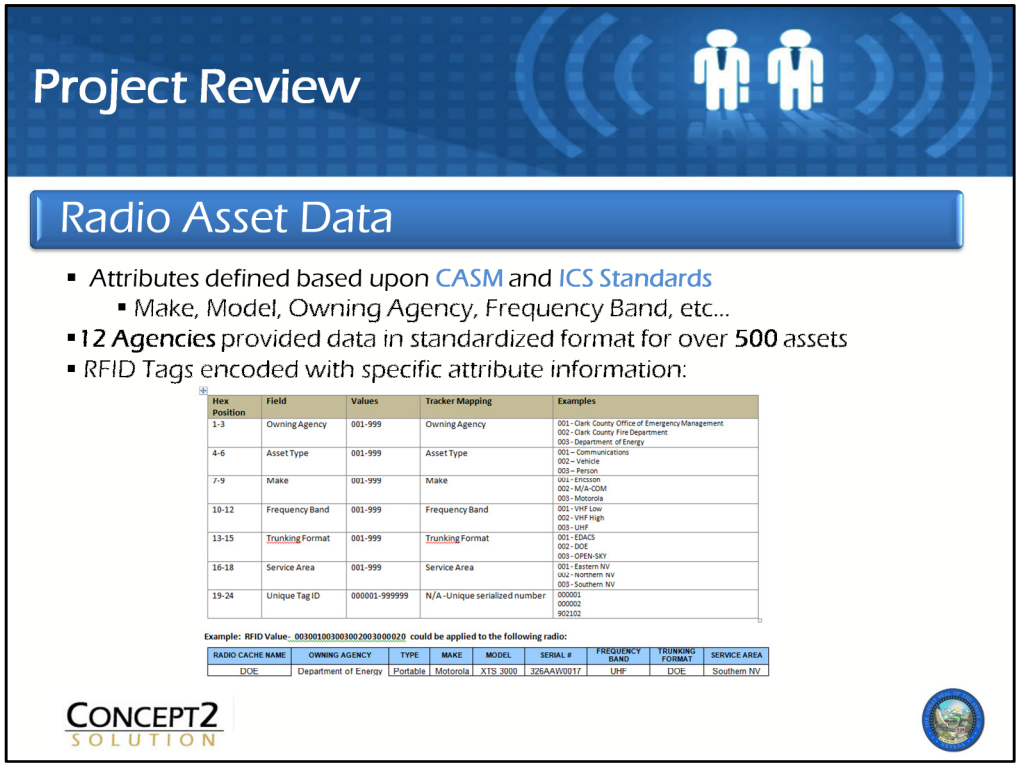
- *Tag must be a Gen2 Passive UHF (900-928Mhz) RFID tag*
- *Tag must be programmable*
- *Encoding of 96bits will represent data attributes of the radio including owning agency, make, frequency band, etc…*

Physical Characteristics

- Tag must have a minimum read range of 3ft
- Tag must be of size not to affect usage of the radios
- Tag must not affect the ability of the radio to fit appropriately in chargers, holsters, clips or cases.
- Tag must withstand normal day to day usage of the radio, including usage in harsh/inclement weather, movement in and out of chargers, holsters, clips and cases, as well as general radio handling.

Attachment Method

- Tag must be able to be affixed to a radio using a method that does not damage or interfere with the operation of the radio.
- Tag must be able to be affixed to a radio in an area that does not affect operation of the Tag
- Tag must be affixed with mount/adhesive that will meet the above requirements and not interfere with the function of the radio OR tag.



The team worked to define a standard set of data fields based upon both CASM as well as critical information needed for decision support. Each of the 12 agencies provided data that was imported into Tracker and used to generate the specially encoded tags. For instances where data was not available for a radio, Tracker Mobile and/or Tracker Enterprise were used to quickly enter the appropriate data.

Project Review

Tag Cache Radios

Owning Agency	Make	Model	Qty
05.24.2010 - 05.27.2010			
CCFD	Motorola	MTS2000	125
	Motorola	XTS3000	7
CCOEM	Motorola	HT1000	43
DOE	Motorola	XTS3000	9
NLVFD	Motorola	XTS5000	16
NLVPD	Motorola	XTS5000	48
UNLV	Ericsson	LPE200	12
06.14.2010			
Washoe County	M/A-Com	7270	49
Fallon	Motorola	XTS2500	6
06.16.2010			
Elko County Sheriff	Ericsson	Sat Phone	2
	Motorola	HT1000	29
	Motorola	MTS2000	28
	Motorola	XTS1500	2
Elko NDOT	Ericsson	LPE200	10
	Motorola	MT1000	6
Elko NHP	Motorola	MTS2000	23
06.21.2010			
LVMPD	M/A-Com	7270	127
		Total	542

542 Radios Tagged!

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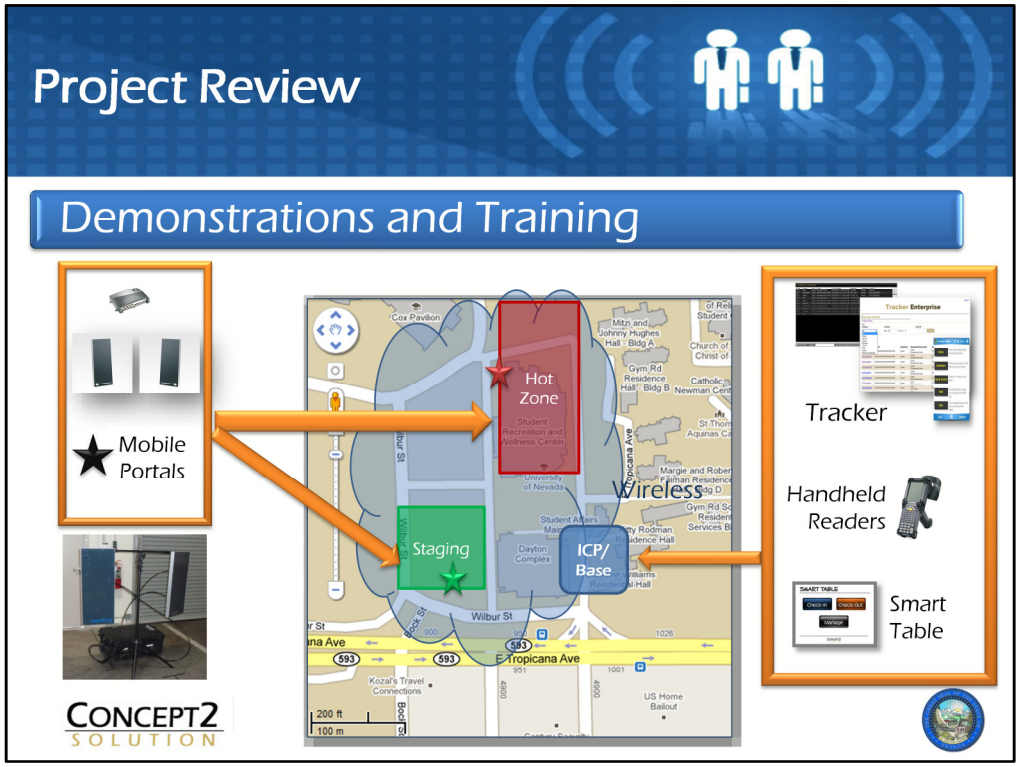
Over the course of 4 visits, 542 radios were tagged and validated against data imported or entered into the system. RFID Tags were applied to radios using the recommended adhesive.



The demonstrations and training focused on a use case to respond to an incident including:

- Planning
- Inventory/Staging
- Radio Distribution
- Tracking
- Reporting
- Security/Access Control

To support these uses cases, the following options were available:

Mobile Portals – Concept2 designed and constructed prototype field deployable RFID units to be used to read and track radio cache from to and from "Staging and Hot Zones". Portals require no user interaction.

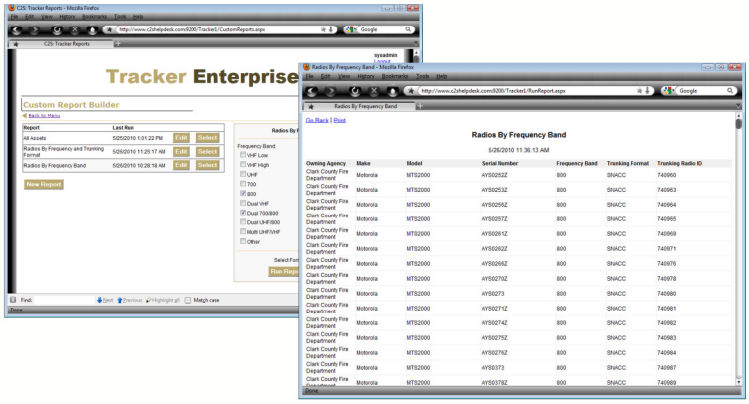
SmartTable – An RFID SmartTable is used to facilitate distribution processes.

Handheld Readers – RFID Handheld devices are used for commissioning, inventory and distribution.

Tracker Enterprise – provides a central repository for asset data management, reporting and administration.

Project Review

Planning



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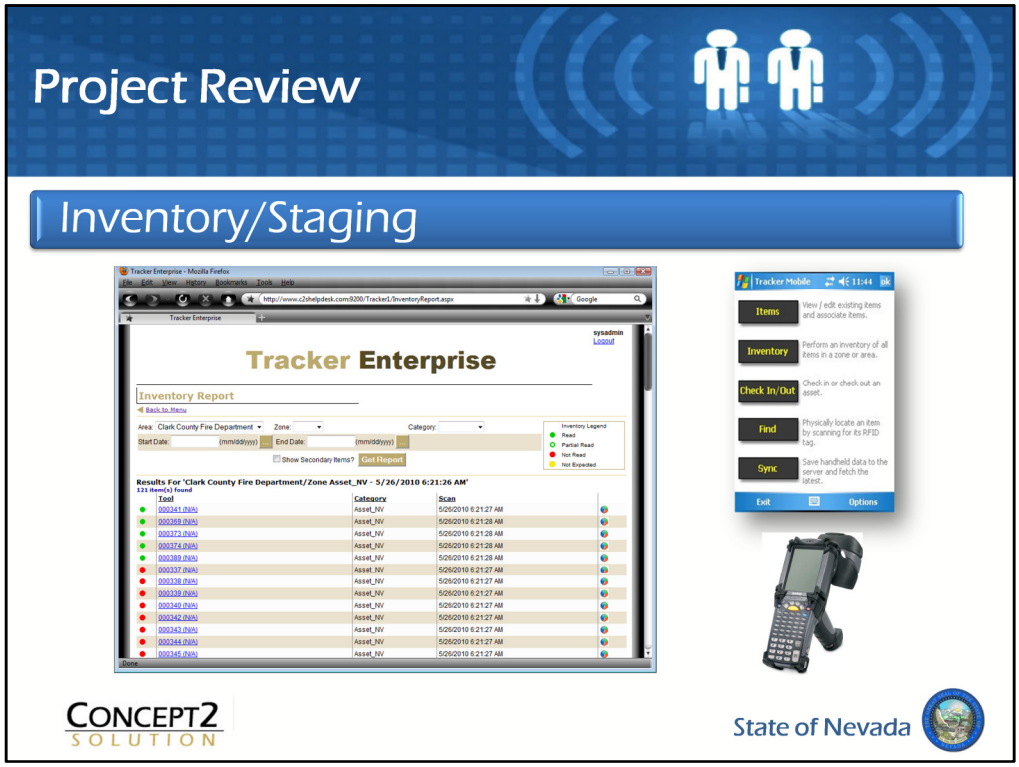
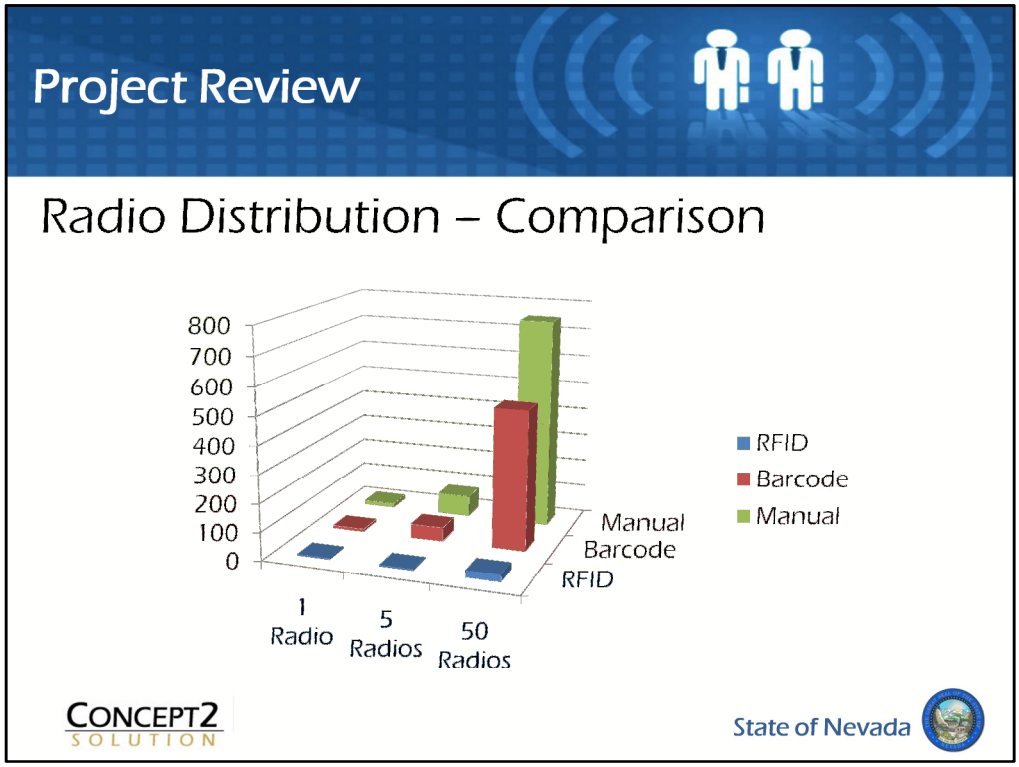
When preparing for an event/incident, Tracker provides quick and easy access to accurate Radio Cache information. Integrating with CASM, Tracker provides a completely configurable database to support not only management and tracking of radios, but of vehicles, people, etc…



When preparing for (or during) an event/incident, Tracker Mobile can inventory or check-in radios in seconds, providing up to date information on available radios. Radios can be inventoried during and after the event to quickly and accurately identify missing/misplaced radios.

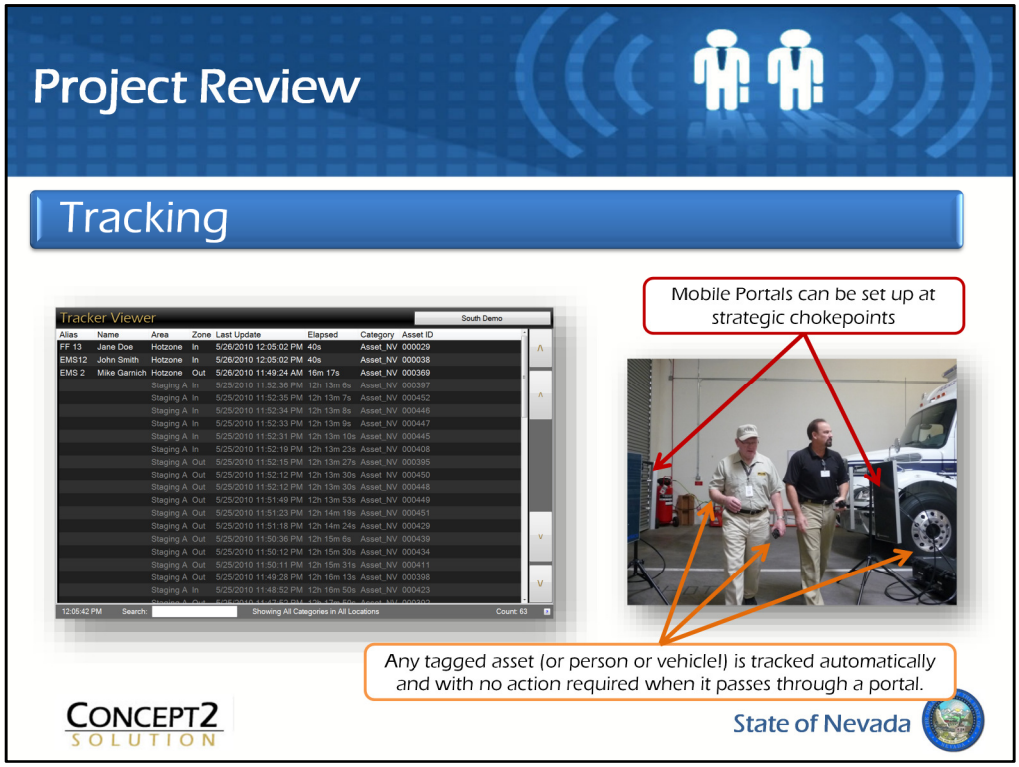
Radios are quickly assigned and tracked with no manual effort. For example: A check-in transaction can be completed in less than 5 seconds with automatic data collection that eliminates data entry errors. Barcode and/or RFID personnel badges may facilitate the process as well. Both handheld, SmartTable, and PC-based solutions support this function.



This chart illustrates average times (in seconds) to perform Check-In/Check-Out transactions that capture the following information:

- Asset ID (What)
- Owner/Assignee (Who)
- Transaction Time (When)
- Location (Where)

Using RFID, a simple check-out transaction can occur ***2x faster*** than barcode and ***3x faster*** than manual data entry for a single radio. When checking out multiple items, the time savings increases significantly using RFID, with transactions occurring ***20x faster*** than barcode and ***30x faster*** than manual methods.

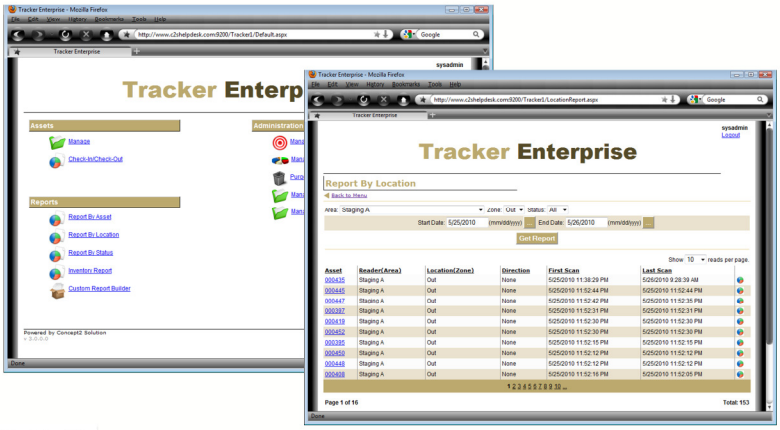


Tracking using Mobile Portals provides visibility while requiring *no change to current processes.* As radios (as well as people, vehicles, and other tagged assets) move through the portals, they are automatically tracked with location information reported back to a central database.

Tracker Viewer provides the most up to date tracking and assignment information with one touch sorting and multiple filtering capabilities.

Project Review

Reporting



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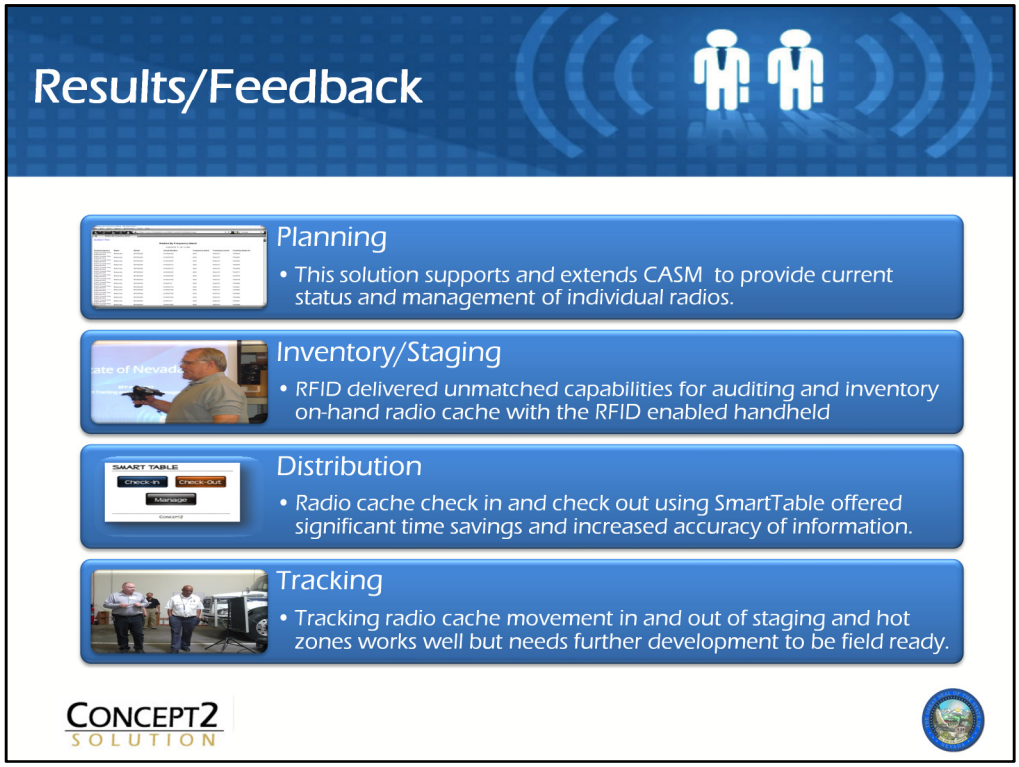
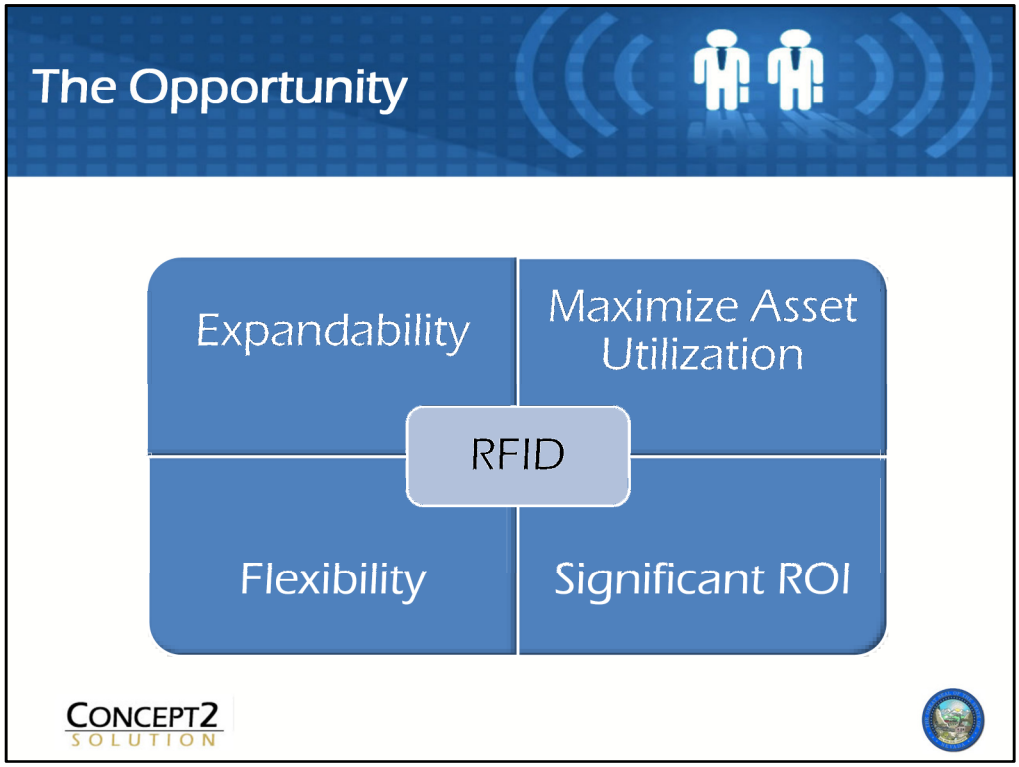
Many reporting options are available to plan, support and analyze data from the event or incident.

Tracker supports customizable roles, allowing for granular access by user, role and location. Tracker is easily configured to allow sharing of information while ensuring only the owning agencies can update their asset information. Additionally, multiple options exist to share event data to the central database.



Over 30 people attended the demonstrations and training. The participants were involved in using the technology to perform the activities outlined for the use cases. The feedback was genuine excitement, with participants indicating positive response to utilizing this both for planned events, incidents as well as for routine/day-to-day tasks as well as for items beyond radios including people, vehicles, supplies, tools, and other communication devices.

The ability to deliver an automated tracking capability to the field is a great opportunity for streamlining operations . During an event focus is on the work at hand, eliminating or reducing the time spent on manually tracking assets and people is a major advantage.



The opportunity is to implement a technology that can reduce overall human resource effort, increase asset accountability and accuracy, and is easily expandable based upon the emergency event is a great advantage. Today, RFID has already proven its value to our military and other emergency response services.