



RFID JOURNAL LIVE!

SEPTEMBER 26 - 28, 2021
PHOENIX CONVENTION CENTER | PHOENIX, AZ

Lockheed Martin and the Future Factory

Corey A. Cook

Chief of Advanced Technology Concepts for Logistics

Agenda

- LM Challenges and RFID IoT Applications
- Personnel Tracking for Operational Efficiency and COVID Containment
- Real Time Location Holographic Visualization
- Virtual Reality and Augmented Reality RFID Enabled Warehousing
- Factory Wall to Wall Inventory Using Autonomous System Robot Tracking
- Program Outcomes and Discriminators

LOCKHEED MARTIN



AERONAUTICS



MISSILES AND FIRE CONTROL



SPACE SYSTEMS

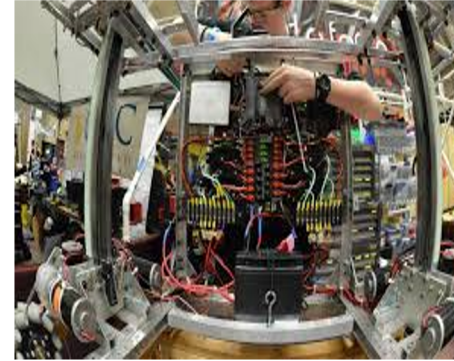


ROTARY AND MISSION SYSTEMS



Lockheed Martin Supply Chain Challenges

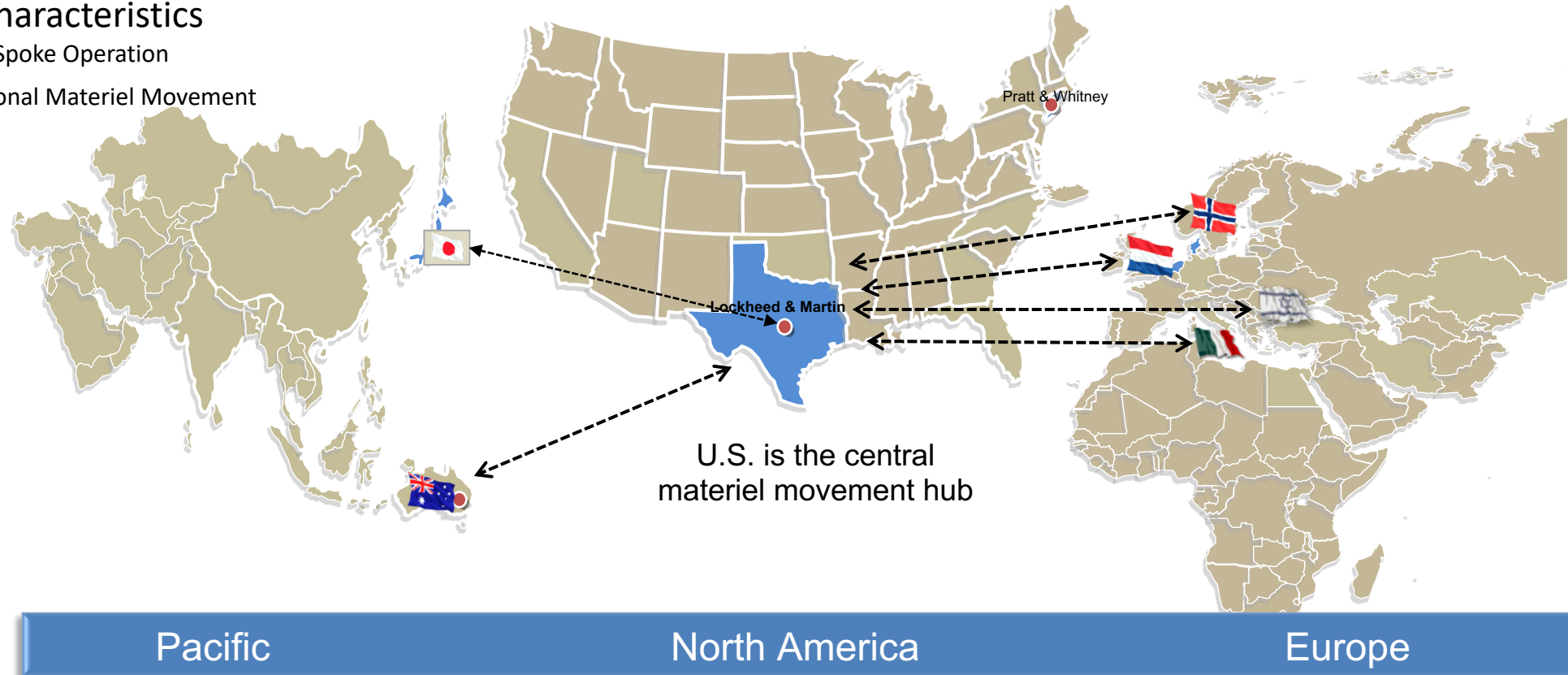
- Complex dynamic work environments
- Significant security requirements
- Workforce personnel issues
- Non-standardized processes
- Inventory validity issues
- Inconsistent productivity
- Poor metrics definition capability



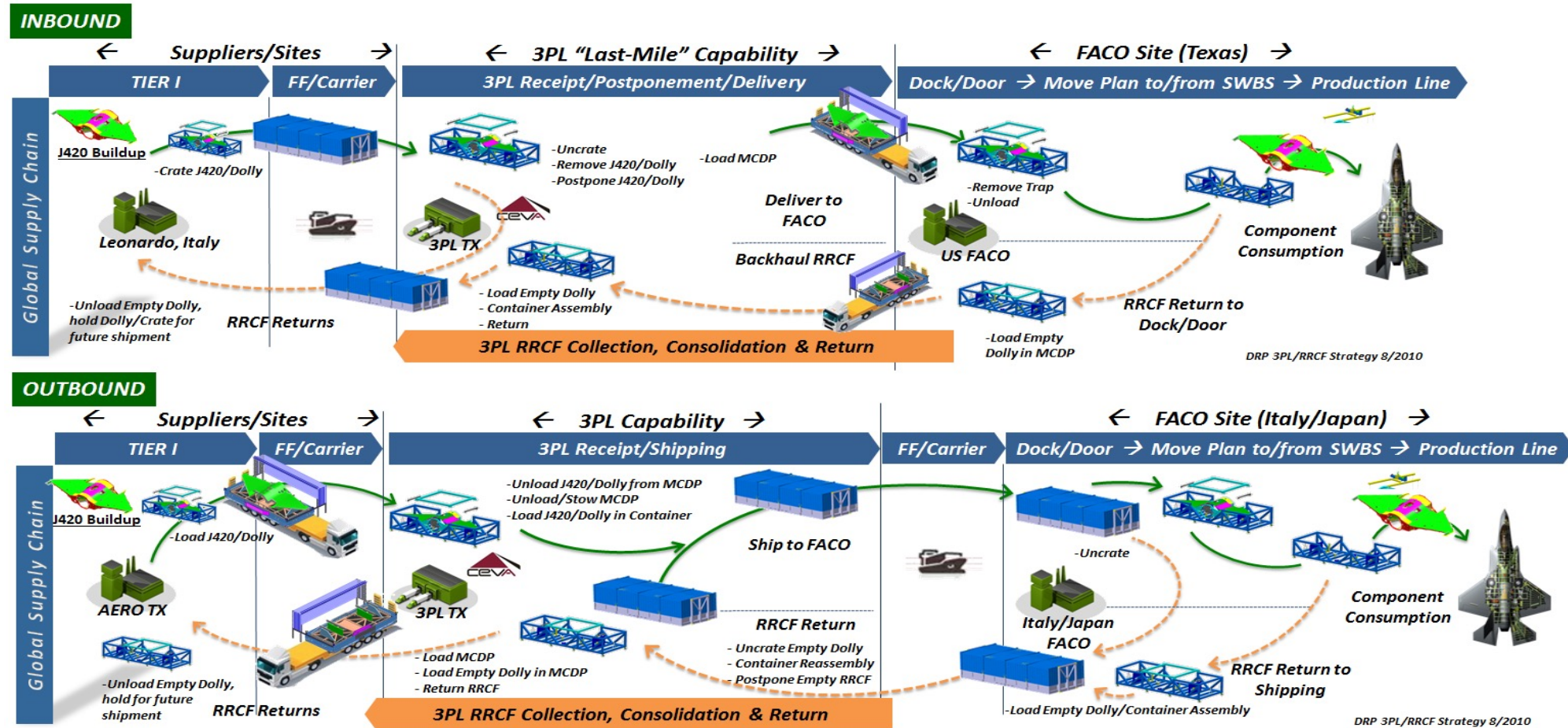
F-35 Global Asset Management

Central Characteristics

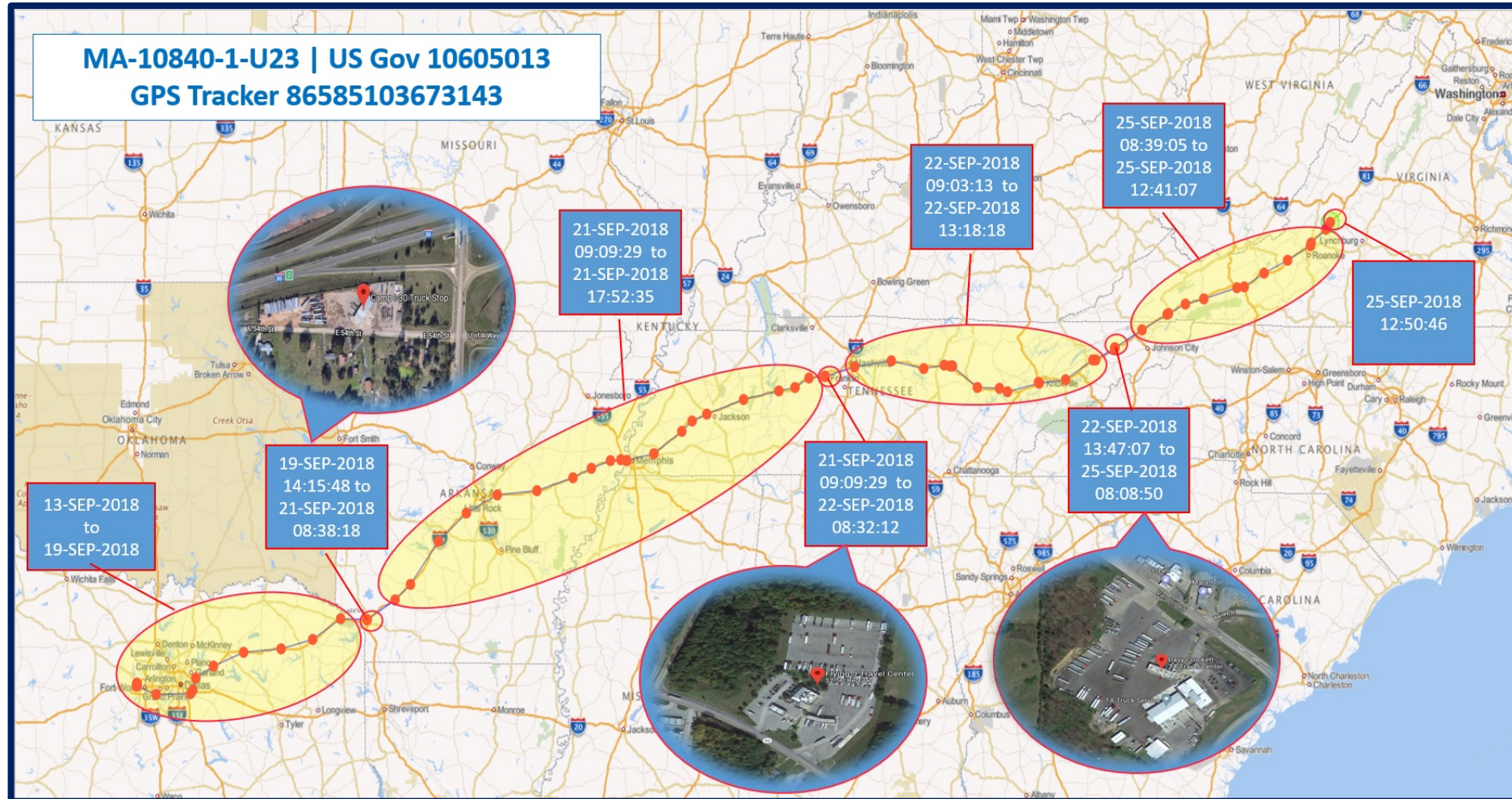
- Hub and Spoke Operation
- Bi-directional Materiel Movement



F-35 Supply Chain Distribution System



Delays Cost Time & Money

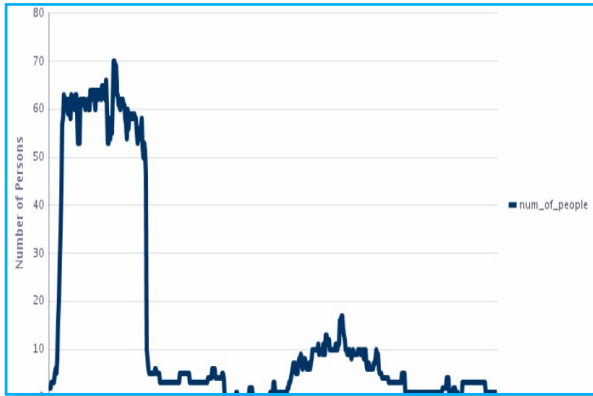


Continue the iTrakG Innovation

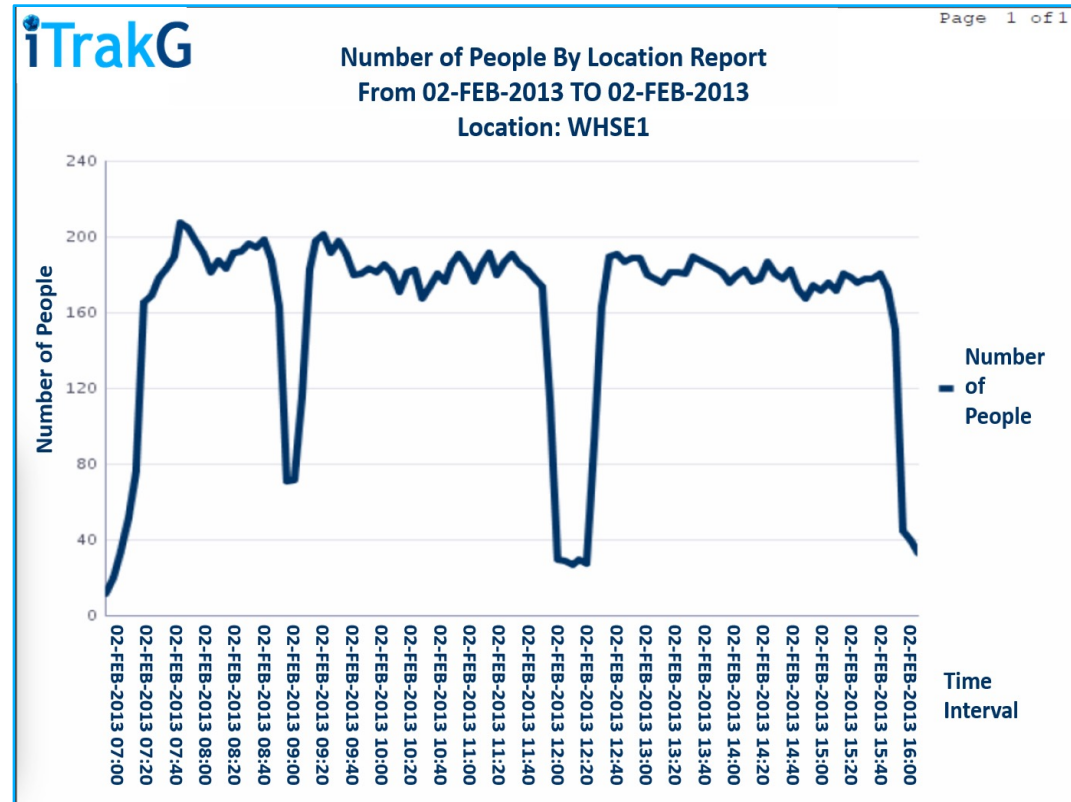
- Personnel Tracking for Operational Efficiency and COVID Containment
- Real Time Location Holographic Visualization
- Virtual Reality and Augmented Reality RFID Enabled Warehousing
- Wall to Wall Inventory Using Autonomous System Robot Tracking
- Program Discriminators and Outcomes

Personnel Tracking Production M-Curve Reporting

Before RFID



After RFID



Results

- Just one area added \$38K to the bottom line every half hour immediately after install
- Security responds instantly when emergencies happen
- Mustering is guaranteed for success
- Personnel are only in areas where permitted
- And more...

Personnel Tracking for Operational Efficiency and COVID Containment

In Contact

Report Name: Possible Contact Report							
Report No: 135B - Contact							
Run Date: 23-FEB-2021 09:58:48							
User Name: Denzel Isaac							
Start Date: 21-FEB-2021 09:58:00							
End Date: 23-FEB-2021 10:58:40							
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TRACKING	0F:03400	Denzel	Isaac	02/22/2021 07:28:11	Assembly Hall	190	O
CONTACT	0F:04694	Joel	Cottreau	02/22/2021 07:29:08	Muster Station B	235	I
TRACKING	0F:03400	Denzel	Isaac	02/22/2021 07:29:09	Muster Station B	235	I
TRACKING	0F:03400	Denzel	Isaac	02/22/2021 07:29:35	North Gate	173	I
TRACKING	0F:03400	Denzel	Isaac	02/22/2021 07:29:39	North Gate	177	I
TRACKING	0F:03400	Denzel	Isaac	02/22/2021 07:31:10	Pier 8	244	O
TRACKING	0F:03400	Denzel	Isaac	02/22/2021 07:32:56	Pier 8	245	I
CONTACT	0F:04314	Rodrigo	Ruiz	02/22/2021 08:07:10	Pier 8	244	O
CONTACT	0F:03255	Jordan	Brown	02/22/2021 08:07:17	Pier 8	245	I
TRACKING	0F:03400	Denzel	Isaac	02/22/2021 08:07:22	Pier 8	247	I
TRACKING	0F:03400	Denzel	Isaac	02/22/2021 08:07:25	Pier 8	245	I
TRACKING	0F:03400	Denzel	Isaac	02/22/2021 08:07:42	Pier 8	244	O
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CONTACT	0F:03579	Jordan	Leblanc	02/22/2021 08:09:14	Assembly Hall	160	O
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CONTACT	0F:04476	John	Cameron	02/22/2021 08:09:38	Assembly Hall	160	O
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TRACKING	0F:03400	Denzel	Isaac	02/22/2021 08:09:42	Assembly Hall	160	O
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TRACKING	0F:03400	Denzel	Isaac	02/22/2021 08:10:14	Assembly Hall	137	I
CONTACT	0F:03216	Richard	Smithson	02/22/2021 08:10:37	Assembly Hall	137	I
TRACKING	0F:03400	Denzel	Isaac	02/22/2021 08:13:28	Assembly Hall	133	I
CONTACT	0F:01436	Cristian	Tules	02/22/2021 08:14:17	Assembly Hall	137	I
TRACKING	0F:03400	Denzel	Isaac	02/22/2021 08:14:54	Assembly Hall	137	I
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TRACKING	0F:03400	Denzel	Isaac	02/22/2021 08:15:24	Assembly Hall	137	I
CONTACT	0F:03216	Richard	Smithson	02/22/2021 08:15:26	Assembly Hall	137	I
CONTACT	0F:03216	Richard	Smithson	02/22/2021 08:27:02	Assembly Hall	133	I
CONTACT	0F:03216	Richard	Smithson	02/22/2021 08:27:11	Assembly Hall	133	I
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TRACKING	0F:03400	Denzel	Isaac	02/22/2021 08:51:52	Assembly Hall	135	I
CONTACT	0F:04679	Richard	Cross	02/22/2021 08:51:54	Assembly Hall	135	I

Possible Contact

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Start Date: 21-FEB-2021 09:58:00							
End Date: 23-FEB-2021 10:58:40							
Type	Badge ID	First Name	Last Name	Scan Time	Location	Reader	IN/OUT
CONTACT	0F:00528	Cory	Hyslop	02/22/2021 07:31:08	Pier 8	246	O
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CONTACT	0F:00875	Tony	Stone	02/22/2021 07:32:04	Pier 8	247	I
CONTACT	0F:03511	Peter St	George	02/22/2021 07:32:15	Pier 8	244	O
TRACKING	0F:03400	Denzel	Isaac	02/22/2021 07:32:56	Pier 8	245	I
CONTACT	0F:04314	Rodrigo	Ruiz	02/22/2021 08:07:10	Pier 8	244	O
CONTACT	0F:03255	Jordan	Brown	02/22/2021 08:07:17	Pier 8	245	I
TRACKING	0F:03400	Denzel	Isaac	02/22/2021 08:07:22	Pier 8	247	I
TRACKING	0F:03400	Denzel	Isaac	02/22/2021 08:07:25	Pier 8	245	I
CONTACT	0F:03833	Everett	Hagen	02/22/2021 08:07:30	Pier 8	246	O
CONTACT	0F:03660	Steven	Gillis	02/22/2021 08:07:31	Pier 8	246	O
TRACKING	0F:03400	Denzel	Isaac	02/22/2021 08:07:42	Pier 8	244	O
CONTACT	0F:01839	Scott F	Bannister	02/22/2021 10:24:03	OST #3	130	O
TRACKING	0F:03400	Denzel	Isaac	02/22/2021 10:24:51	OST #3	243	I
CONTACT	0F:01189	Michael Van der	Wijst	02/22/2021 10:24:53	OST #3	153	I
CONTACT	0F:04040	Amirnader	Boostani	02/22/2021 10:27:04	Pier 8	245	I
CONTACT	0F:03216	Richard	Smithson	02/22/2021 10:27:22	Pier 8	244	O
CONTACT	0F:04553	Reginald	Allen	02/22/2021 10:27:22	Pier 8	244	O
TRACKING	0F:03400	Denzel	Isaac	02/22/2021 10:27:24	Pier 8	244	O
CONTACT	0F:03342	William	Beaman	02/22/2021 10:27:27	Pier 8	245	I
CONTACT	0F:03943	Brian D	Govang	02/22/2021 10:27:27	Pier 8	247	I
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CONTACT	0F:01369	Christopher	White	02/22/2021 10:28:21	Pier 8	244	O
CONTACT	0F:03299	Tyson	Hughes	02/22/2021 10:28:27	Pier 8	245	I
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CONTACT	0F:03645	Jenell	Ahenakew	02/22/2021 10:31:08	Pier 8	247	I
CONTACT	0F:04178	Jorge	Fidalgo	02/22/2021 10:31:10	Pier 8	245	I

Real Time Location Holographic Visualization

Real-Time

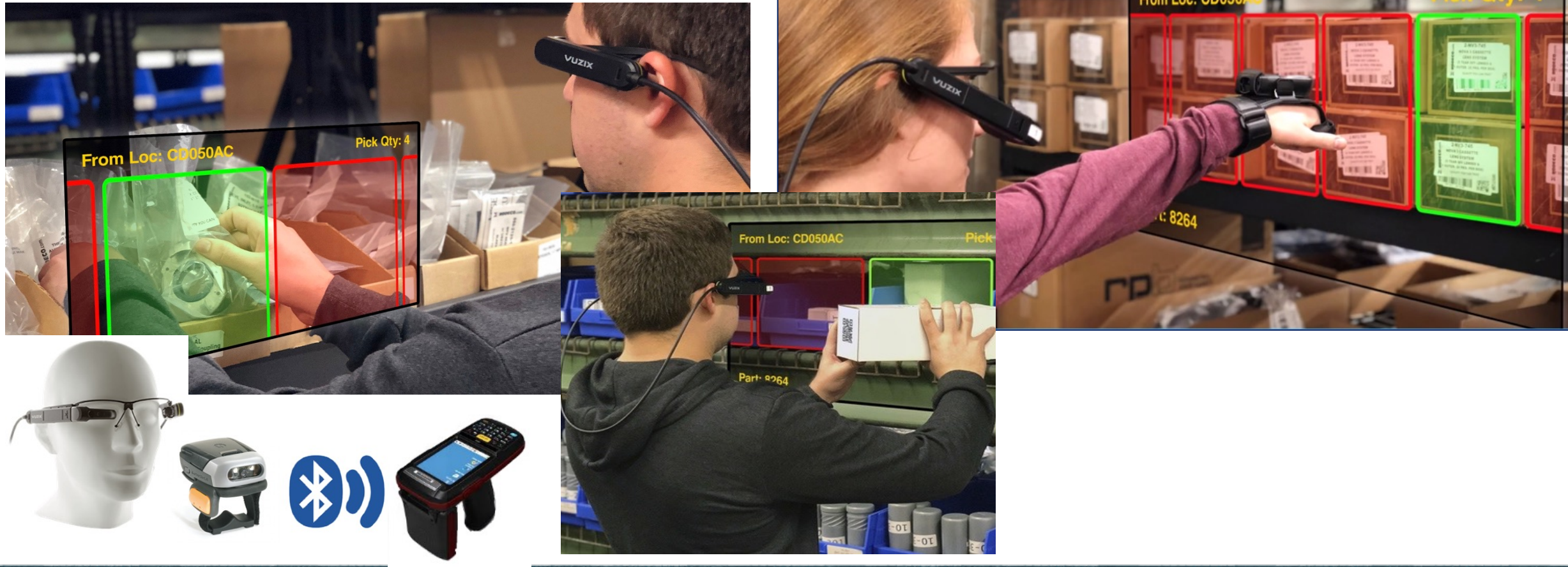
- Data Visualization
- Planning
- Forecasting
- Location
- What moves where?
- What If?



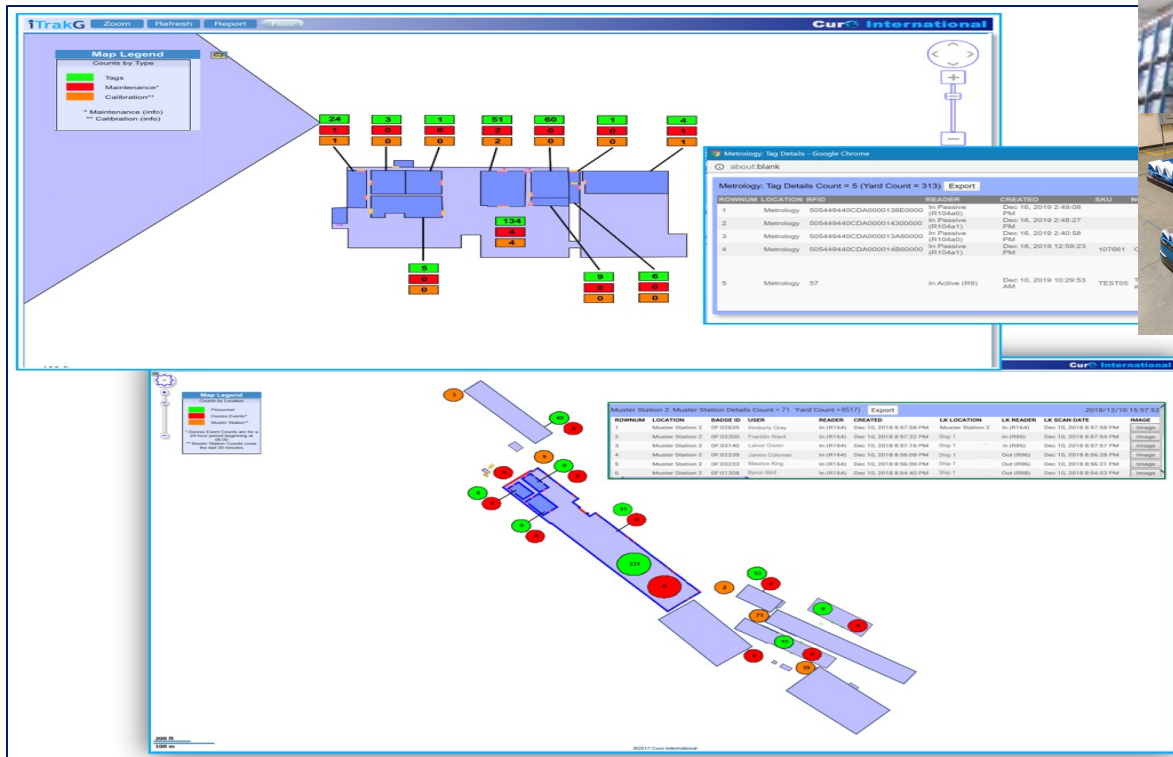
iTrakG integrates into Euclidean to reflect assets in a holographic model of RMS Orlando.



Virtual Reality and Augmented Reality RFID Enabled Warehousing



Wall to Wall Inventory Using Autonomous System Robot Tracking

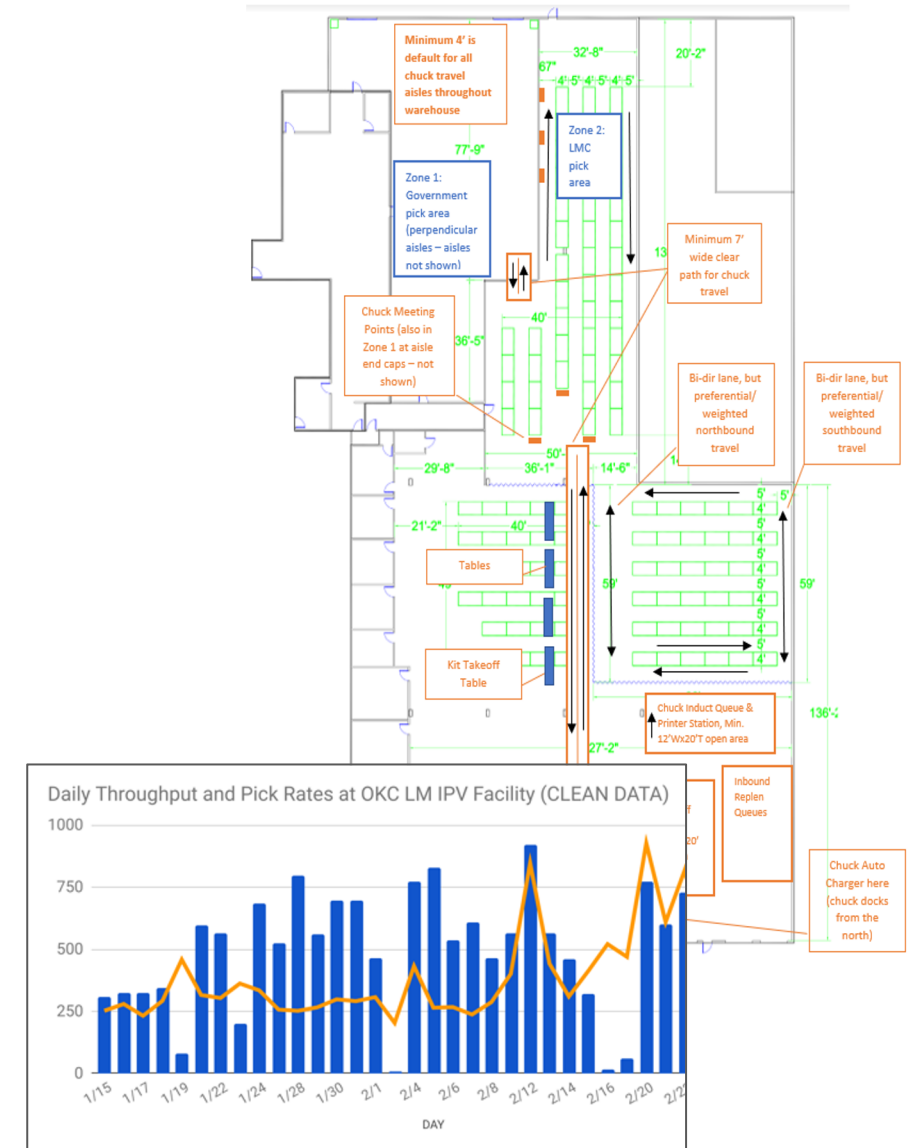


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Program Outcomes

- Ease of autonomous IoT platform installation
- Defined & standardized the supply chain process
- Rapid training and worker acceptance
- 381% LPH rate increase (16 to 77) in 6 weeks
- Inventory validity from 66% to 99.98%.
- ROI in 9 months with estimated savings of \$1.5M
- Developed a “Warehouse of the Future” for collaborative robotic supply chain R&D.



iTrakG Program Discriminators

- Real Time In-Transit Visibility and Improved Asset Management that agnostically integrates with various vendor technologies under one platform
- User friendly, simple to maintain & sustain across the enterprise
- Highly advanced with autonomous system and VR integration
- 5G Compliant and operationally tested
- Demonstratable lower cost than our competitors
- Manufactured in the U.S. and approved member nations (Australia, UK, etc.)
- ITAR, NATO, TAA, and BAA Compliant. Air – Flight and Cargo Lux Approval
- Allows single channel tracking from LM to DoD customers
- SAP/CEVA/iTrakG Systems and Process Integration
- Meets Federal Acquisition Supply Chain Security Act of 2018
- Security (Behind the Lockheed Martin Firewall)
- Encompasses a mobile iPhone app available to LM users

Questions?

For more information:

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Website: www.lockheedmartin.com

THANK YOU

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