Achieving Operational Excellence - SAP IAM, EAM & Incident Management Strategies Unveiled

Presenters

Manish Meshram
SAP Solution Architect
at Crave InfoTech

manish@craveinfotech.com

Jason Johnson
Director Sales & Digital Supply
Chain Expert at Crave InfoTech

jason.johnson@craveinfotech.com

Agenda

1. Introduction
2. Intelligent Asset Management
3. SAP Asset Manager Success Story
4. Incident Management
5. Hardware Integration
6. Success Stories
7. Q&A

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Why Crave InfoTech?

We Are In It For Joint Success!

We are an award-winning SAP PE-build, PE-Sell & PE-Services partner who can successfully implement complete enterprise solutions, minimizing total cost of ownership, with rapid deployment and a lasting impact for efficiency and total audit-ready compliance.

15+ Years of providing niche SAP consulting across industries

50+ Pre-packaged products for SAP EWM, IAM, AIN, PDMS & ASPM

50+ Enterprise customers served successfully

300+ Team size ensuring service delivery round the clock

Partners

Certifications

Awards

SAP Pinnacle Award Finalist

Winner SAP ACE 2018

SAP Business One Seed award finalist

App application valid on ZEBRA devices

Runner up in SAP And Google App Contest

Application Listed in top 5 globally

Crave is the Right Partner to Embark with You on Your Digital Journey

Crave InfoTech offers **50+ pre-packaged applications** focused on multiple industry use cases around SAP. Our applications are **80%-90% implementation ready** with the least deployment time or customizations required. Our pre-packaged apps compliment SAP's standard offerings, enabling 100% operational automation.

Our Core Competencies!

CRAVE BUSINESS TECHNOLOGY PLATFROM (BTP)

- Keep Core Clean
- Side by Side Extensions – CAPM and RAP
- Integration Suite
- The Build – App Dev, Process Automation, Workflow and WorkZone
- Analytics: SAC, HANA Database and Data Science, AI, ML, and Predictive Analytics
- Enterprise Mobility - SAP MDK, SDK, fiori & UI_UX
- CALM
- Design Thinking

CRAVE INTELLIGENT ASSET MANAGEMENT

- SAP EAM offerings – SAP PM/SM Implementation, Asset Manager, Work Manager, SAP IAM, & Predictive Maintenance
- SAP MRS
- SAP FSM
- Crave Field Workforce Management apps – Planner Workbench, Maintenance, Calibration & Approvals
- Barcode, QR Code and RFID enablement

CRAVE INTELLIGENT WAREHOUSE MANAGEMENT

- Barcode, QR Code and RFID enablement
- RF devices in Warehouse
- ITS Mobile
- BTP Powered Mobile App
- Voice enabled order picking
- Smart order picking using Augmented reality
- Streamlined picking using indoor forklift mapping and forklift integration

CRAVE INTELLIGENT SUPPLY CHAIN AUTOMATION

- Proof of Delivery
- Transport Management
- SAP Direct Delivery, Visit Management
- Picking & Truck Loading
- Last Mile Tracking
- Truck Latency Management
- Yard Management
- Venue mapping and inside plant routing
- Barcode & RFID enablement

CRAVE INTELLIGENT ENTERPRISE

- RISE with S/4 HANA Cloud
- Fiori and UI/UX
- Ariba
- Implementation
- AMS Support
- Resource augmentation

Let us guide you in the next 40 mins with this

Challenges

Challenges faced by leadership, managers, supervisors, technicians, IT, procurement, etc. May result in delays, cost escalations, downtime, etc.

Solution

Proven solutions with clear success metrics, lasting benefits, cost effectiveness, manageability, adaptability, scalability, responsiveness, security, and more.

Our work and vision

Our exciting use cases and successful solutions for some to the big names in the Life Science industry.
Also, have a look at our success over the year and our vision for the future.

Intelligent Asset Management

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Common Problems

Engineer

- I spend most of the time on data collection and data entry
- Most of my decisions are based on the experience and gut feeling
- I follow what my planner has asked me to do

Planner

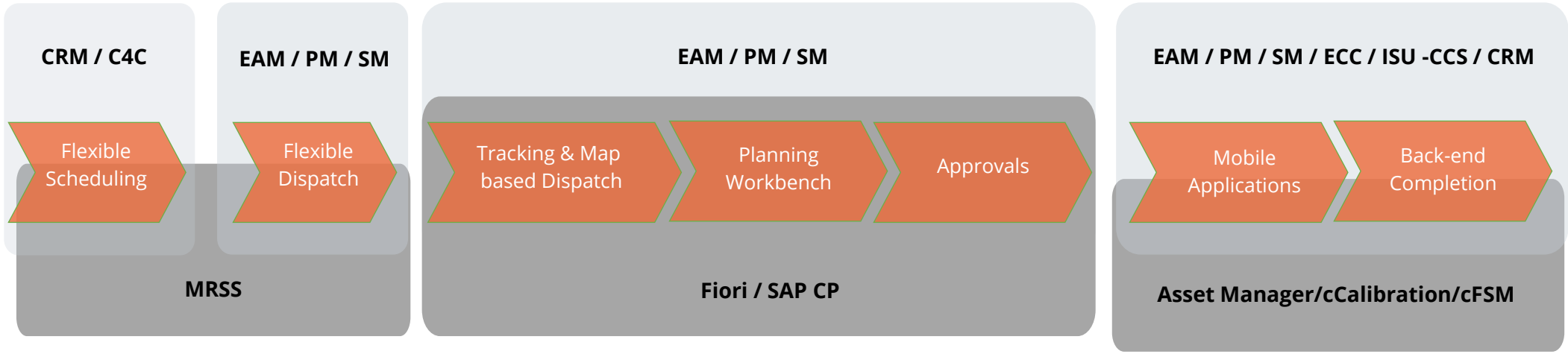
- I don’t know if all my asset data are complete
- My Equipment performance , risk and maintenance data are sitting in silos
- I still follow the traditional practice of Time-Based Maintenance Planning
- I use system to generate only MIS reports .
- I spend lot of time preparing them , so hardly get time to analyze them

Plant Head

- I want to make my production Scheduling decisions based on the equipment health and reliability data
- I want to optimize my cost of production
- Maintenance budget decisions are based on the non-scientific methods
- I want to adopt digital technologies like IoT and Machine learning to reduce maintenance cost and increase asset availability

Crave EAM Innovations

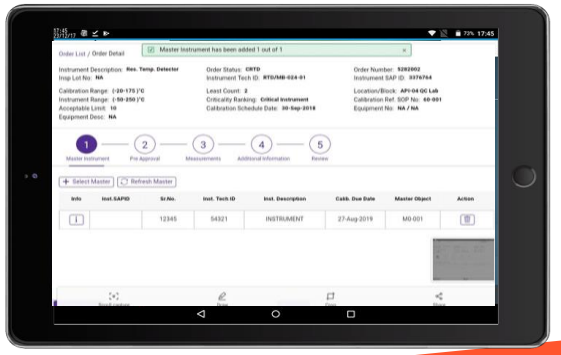
for your end-to-end Enterprise Asset Management



- SAP Plant Maintenance (PM), SAP Customer Service (CS),
- SAP Service Management (SM) module implementation
- SAP Work Management (WM) module for IS-U

- **Intelligent Asset Management (IAM):**
  - Asset Intelligence Network (AIN),
  - Asset Strategy and Performance Management
  - Predictive Maintenance (PdM) solution implementation
  - Barcode and RFID enablement

- Planning Workbench
- WCM
- Flexible scheduling and dispatch
- Asset inventory and inspection



Crave Value Proposition for Life Science Industry

Crave offers multiple Digital Applications powered by SAP BTP in Life Science Space. Our Applications provide following major Value propositions to Life Science Industry -

Addressing the compliance requirements

Our Solutions address the following requirements of 21 CFR PART 11 & PART 2 11 Compliance

1. Electronic Records
2. Electronic Approvals and Signatures
3. Validations
4. Date & Time Stamps
5. Electronic Copies of Electronic Records
6. Execution Summary reports
7. All Validation documents related to Quality Processes

Innovation in Digital Operations

1. Offline Capabilities
2. Highly user-friendly UI/UX experience
3. Barcode/QR Code/RFID enabled Automation
4. Remote Monitoring (Team Viewer Integration)
5. Smart Glass Integration
6. Real time integration with SAP system
7. Completely paperless Solutions
8. Operational on Desktop as well as Handheld devices
9. Management Dashboard with system intelligence

Intelligent Asset Management Maturity Model

Where are your operations heading?

Crave InfoTech enables organizations to kick-start their 4-step journey from being **REACTIVE** to becoming **PREDICTIVE**

Crave's
Asset Management Maturity Curve

We equip you with custom solutions empowering every stage of your journey

1

Reactive

Wait until a machine fails & then undertake maintenance

2

Preventative

Perform maintenance at regular intervals, based on observations of abnormalities

3

Condition-Based

Continuously observe the status of assets and react to predefined conditions & events

4

Predictive

Apply advanced analytics of operational & business data to help determine the condition of specific equipment & predict when to perform maintenance.

SAP Intelligent Asset Management Business Capabilities

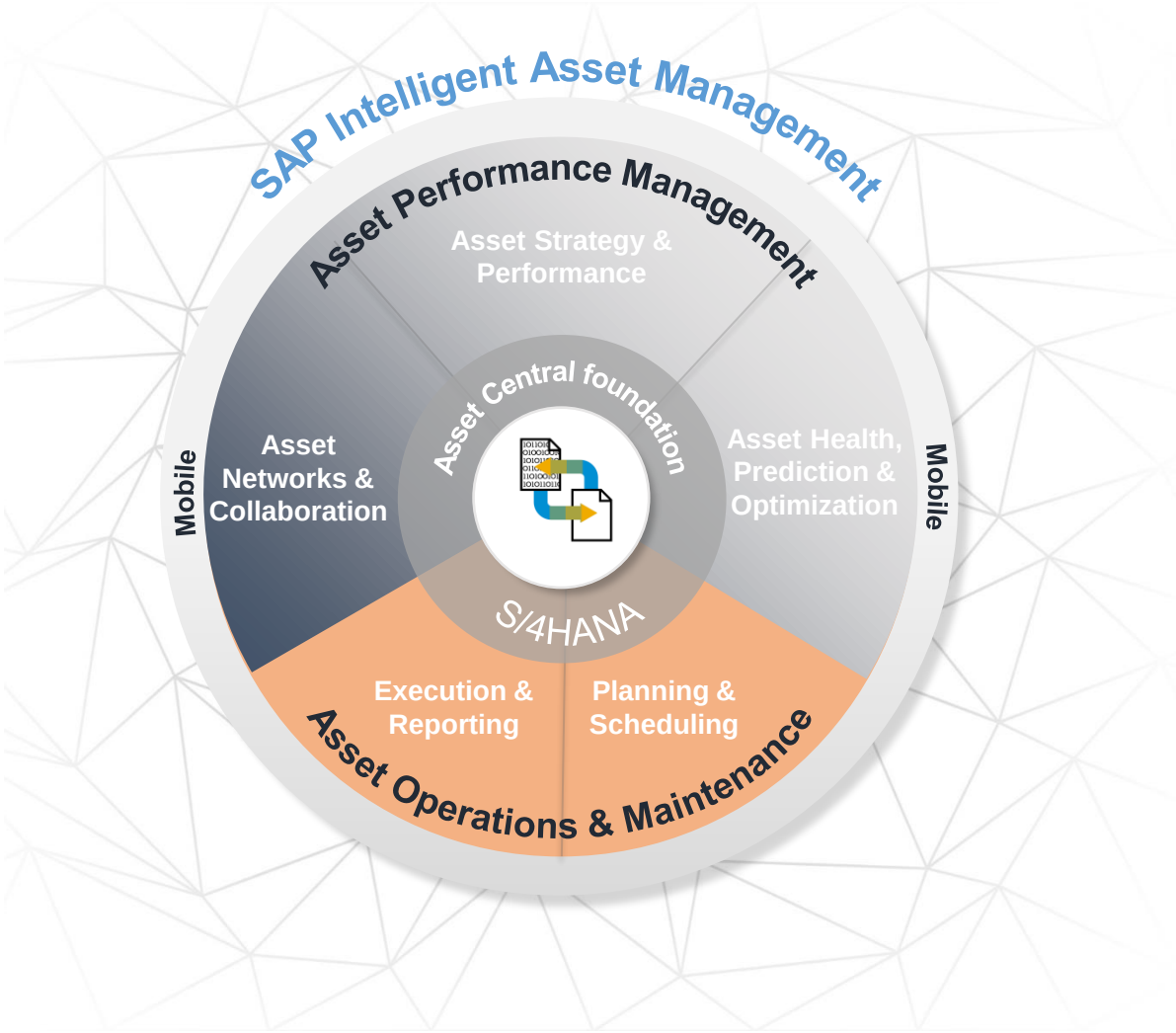
- **State-of-the-art business processes**
- Leverage new technologies to enable new asset management business processes anywhere and anytime.

- **Real-time insights**
- Bring together information from operational and business systems using IoT for scalable transparency

- **Risk-based asset strategies**
- Adopt risk-based approach to determine critical assets driving optimal asset strategies

- **The power of prediction, optimization and simulation**
- Drive smarter decisions, improve reliability, and reduce outages

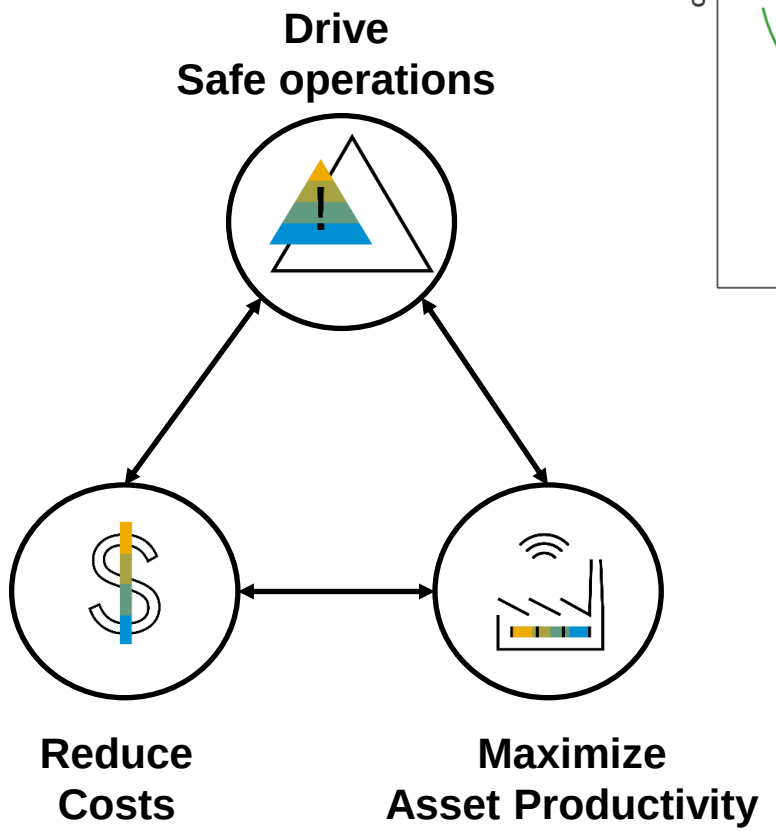
- **Collaboration throughout the asset lifecycle**
- Share asset information, access one version of the truth, and collaborate on a cloud-based business network with integrated processes

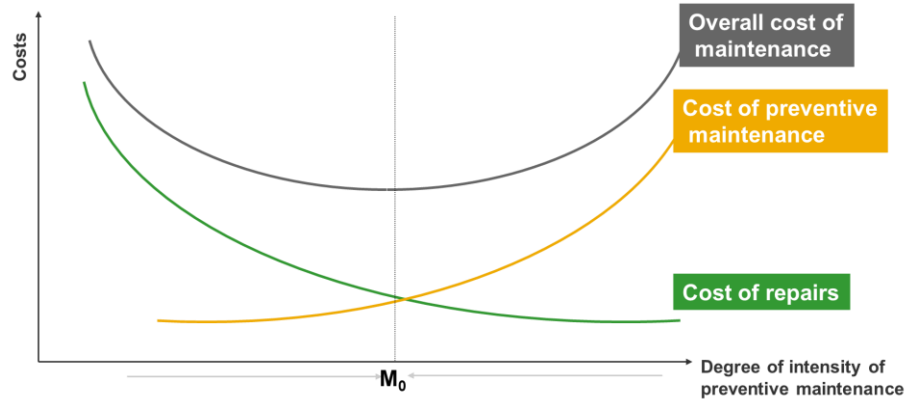


Good Asset Management

Leads to Improved Business Outcomes

- Reduction in safety incidents
- Reduction in Environmental Incidents
- Adherence to Statutory Regulations





- Reduced Annual service and maintenance cost
- Adherence to Planned maintenance budget vs. actual cost
- Reduced energy and input costs

- Increased Overall Equipment Effectiveness
- Increased Return on assets
- Reduction in Unplanned outages

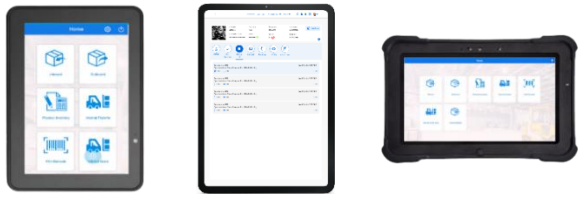
Crave EAM – Solution at a Glance

Intelligent Asset Management using SAP, Crave Pre-Packaged Solution, Services and Mobility

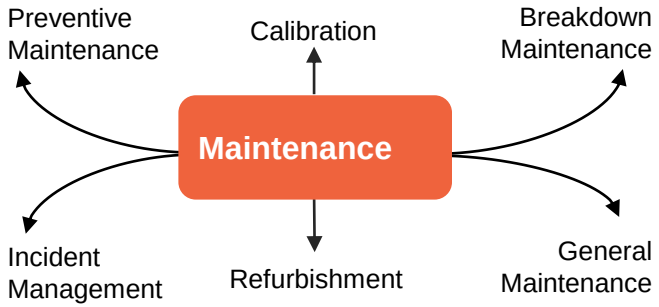
Mobile Application

Powered By

SAP Partner · ZEBRA · here



Select right hardware solution for right process & location along with simplified UI/UX.



Mobile Application development, testing, validation & packaging

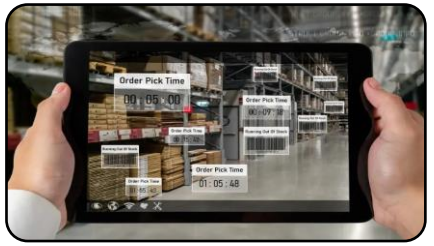
End-to-End Maintenance Automation

With SAP

- **SAP ECC**: cCalibration
- **SAP S/4 HANA On-premise**: SAM, cCalibration
- **SAP IAM**: AIN, PAI, ASPM

Barcode, QR code, RFID enablement

Vision/smart glasses features using TeamViewer



- Data capture
- Approval Workflow
- Take image
- Capture geo location
- Printing
- Offline

- Asset intelligence network using IAM
- Asset risk assessment using IAM
- Predictive analytics using IAM
- Asset Manager
- RFID
- Hardware - mobile devices/laptop etc.

Crave Digital Solutions for Life Science

cCalibration

- cCalibration digitize the calibration process of the instrument.
- It allows technician to capture the required master instrument details along with the readings.
- System automatically define the usage decision for the instrument based on the enter reading.

Water Sampling Mgt

- cWater Sampling allows user to check the quality of water based on certain parameters.
- It ensures that the chemist physically visited and capture the details of the sampling point.
- This is complete Paperless activity with features like Assignment functionality along with LOT Number validation, Barcode/ QR code-based verification of sampling points, Check list/Task list confirmation based on variable time/fixed time, etc.

cAHU

- Filter cleaning Email notification to users
- Barcode scanning to check the history
- Display no of cycles performed for cleaning filters(Hepa Filters H13, H14)
- Details for other filters can be displayed on scan (G type, R type)
- No of cycles performed for cleaning filters(Hepa Filters H13, H14)

E-Logbook

- Digitization of the physical logbook to better manage information.
- Automatic Mail triggering of shift wise report on submit of every shift.
- Logbook data to store in the electronic format to be used effectively for better decision making
- Generate reports such as shift report, Phase wise consolidated reports etc.

Change Control Mgt

- Provision to raise the change control notification
- Multi-level approval
- Paperless solution
- Task Assignment to users
- Manager Dashboard to track and approve the Tasks
- Date & Time stamp document for each step

cWMS

- cWMS is designed to meet digitization of Inbound, outbound and internal process
- cWMS can be used in Engineering, SFG and FG warehouse to perform the process
- cWMS can provide online and offline functionality to perform day to day operation
- Application can digitize the label printing for the receipt material

cEWM

- Application is designed to meet digitization of Inbound, outbound and internal process
- Application can be used in Engineering, SFG and FG warehouse to perform the process
- Application can incorporate the existing backend configuration
- In addition, user can do additional functionality as scrapping and issue to cost center

SAP Asset Manager Success Story for Food &

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BUSINESS TRANSFORMATION CHALLANGES

CHALLENGES

Technicians need Offline Work Order Maintenance

Mobile app with real time integration with Maintenance, Inventory, Financials

Move away from paper and spreadsheets to fully digitized

Ability to scale globally

SOLUTION

Implement SAP Asset Manager Mobile Application with customizations powered by BTP

Scope includes entire Work Order Maintenance Process including - Preventive, Corrective, Breakdown Maintenance and Notifications

SAP BTP Build Extensibility & Digital Technology Tools

SAP Mobile Development Kit (MDK)

- SAP MDK is a cross platform mobile application framework
- MDK is part of BTP Build, Extensibility and Digital Technology tools
- SAP Asset Manager mobile app is based on SAP MDK

When to use MDK

- Implement SAP Asset Manager Mobile Application with customizations
- Cross platform mobile app requirements that are completely based on SAP
- Require Offline

SAP BTP ASSET MANAGER ACCOMPLISHMENTS

Technicians able to perform offline work order maintenance 24x7 offline or online on mobile device

End to end integrated solution with SAP in real time

Fully digitized preventive, corrective, breakdown maintenance and notifications

Implemented as part of a global template that is scaled across multiple divisions and geographic regions

Core solution extended to meet client's specific requirements

Incident Management

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Some Common Challenges in Incident Management

DELAYED REPORTING AND LACK OF REAL-TIME TRACKING

Even with advancements in incident management systems, delayed reporting and lack of real-time tracking lead to bottlenecks in operational efficiency and compliance risks.

DATA INACCURACY AND INCONSISTENCY

Manual, paper-based processes leads to inaccurate or poor data quality. This makes it difficult to conduct meaningful analyses, affecting preventive measures and long-term improvements.

OVER-DEPENDENCY ON AUTHORIZED PERSONNEL

Relying on a select group of authorized users for reporting and validating incidents creates bureaucratic bottlenecks, hindering the incident resolution process.

ABSENCE OF VALIDATION AND INEFFECTIVE EMPLOYEE ENGAGEMENT

Without a mechanism to validate resolved incidents and lack of platforms for employee reporting, enterprises face risks of recurring issues and lower collective responsibility toward safety.

ECONOMIC LOSSES DUE TO COMPLIANCE RISKS AND DOWNTIME

Inefficient incident management can lead to compliance issues, resulting in penalties, as well as unplanned downtimes, contributing to economic losses and impacting reliability.

Crave Incident Management Solution at a Glance

Situation

Most incidents in the field or shop floor are not being reported and tracked real time, which makes it difficult to address the incident in time efficiently. This results considerable compliance issues, potential economic losses.

Challenges

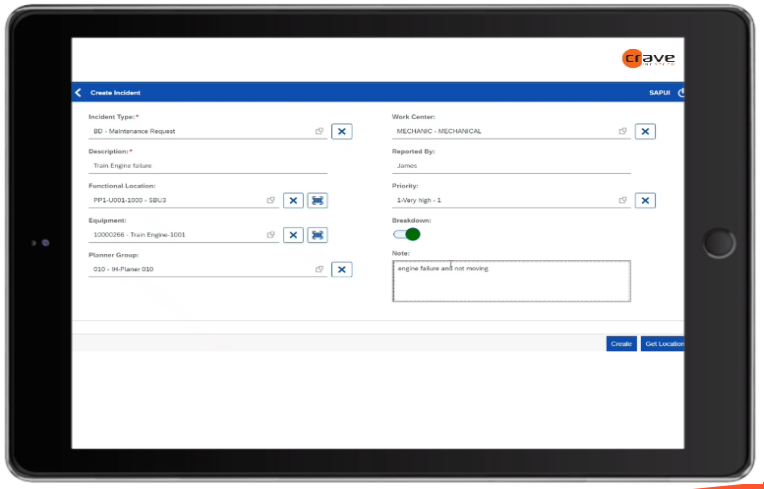
- Reporting incidents, and Safety observations real time is a challenge.
- Paper based process is error prone and authorized user dependent.
- They are not tracked throughout the life cycle.
- Data in-accuracy and inconsistency.
- No validation process for addressed incidents.

Solution Innovations

- Report details such as a description, the injured person, the location of the issue, and the damaged equipment.
- Provide photos as additional information.
- Capture geo location of the incident
- Track the sending and processing status of your all incidents, near misses, or safety observations and contact the responsible processors.
- Incident completion approval process.
- Pre-defined list of Incident causes to select from.
- You can access this app without a network connection. The app then stores all recorded data of incidents, near misses, and safety observations on your device

Value Drivers

- Reduce penalties and fines by accelerating the processing of daily incident management data for detailed analysis of incident, injury, and illness data
- Increase employee engagement by encouraging employee participation so that they can have a voice and help create a culture of safety
- Reduce lost time accidents by offering a comprehensive incident management process that enables subject-matter experts to thoroughly respond to, investigate, analyze, correct, prevent, and report incidents
- Reduce un-planned downtime or outages by proactively addressing safety issues to help ensure that production processes run more smoothly, and equipment is more reliable
- 100% paperless processes.



Industry

- Regulated Industry
- Rail & Transportation
- Mining
- Oil and Gas
- Manufacturing
- Chemical

Solution Environment

- SAP BTP
- SAP ECC
- S/4 HANA

References

- Success Story
- App Walkthrough Video
- Brochure

Check local availability and get app via **SAP App Center**

Key Features & Functionalities

Key Features

- Offline capabilities
- Integration with Microsoft Teams
- Integration with SAP EHS module
- Integration with SAP Plant Maintenance Module
- Smart Glass and Remote Assistant
- Integration with Success Factor
- QR Code and RFID Enabled solution

Standard Reports

- Incident by status, Priority and Type.
- List of Open Incidents within specified duration.
- List of Incidents reported by specific person.
- List of Incidents attended by specific Engineer.
- List of Incidents raised for same equipment within specific duration.
- List of Incidents with execution time
- Planned Cost Vs Actual Cost.

Key Functionalities

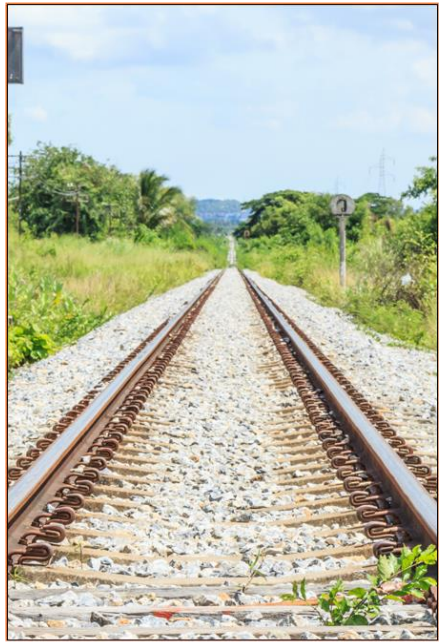
- Capture Picture
- Capture Location
- Capture Incident Details
- Incident Review
- Incident Scheduling and Planning
- Capture incident reason
- Create Work Order
- Incident Closure
- Regulatory Reporting
- Remote Assistant

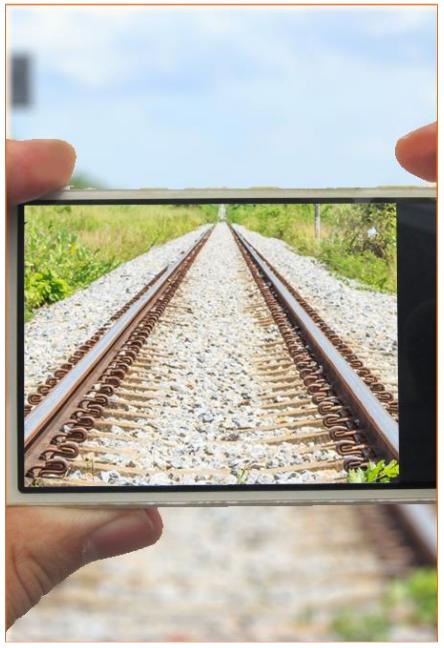
BOM

- SAP BTP Mobile Services
- SAP BTP WorkZone Standard Edition
- SAP Build Process Automation (Workflow)
- SAP Hana Cloud
- SAP Identity Authentication

Key Functionalities

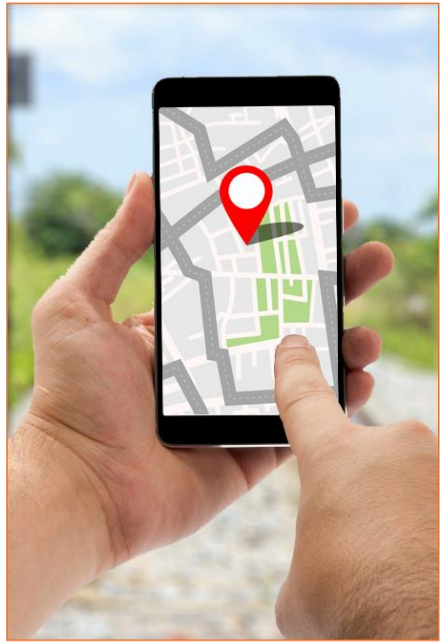
IDENTIFY

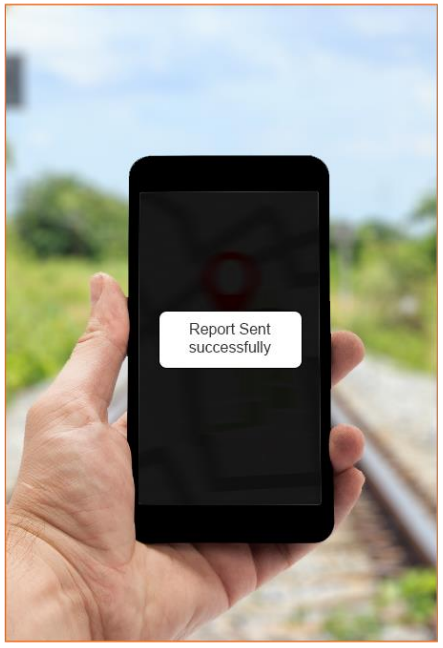




CAPTURE

RECORD



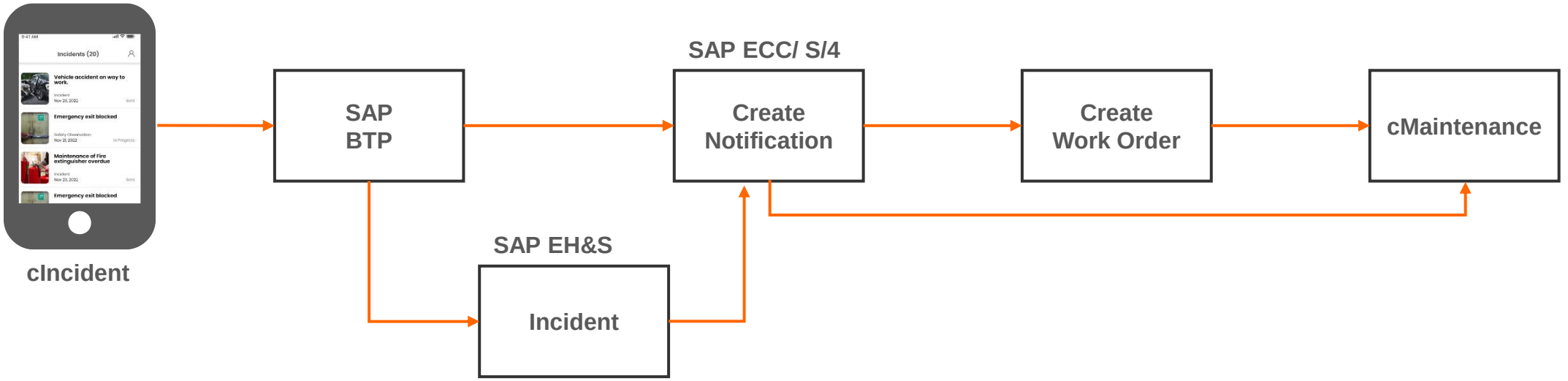


SEND

STANDARD REPORTS

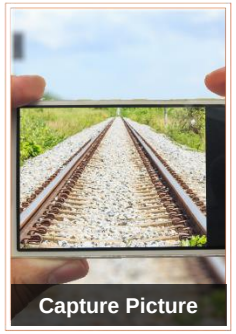
- Incident by status, Priority and Type.
- List of Open Incidents within specified duration.
- List of Incidents reported by specific person.
- List of Incidents attended by specific Engineer.
- List of Incidents raised for same equipment within specific duration.
- List of Incidents with execution time.
- Planned Cost Vs Actual Cost.

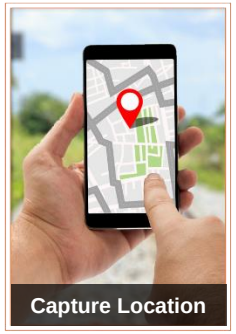
Incident Management - Data Flow

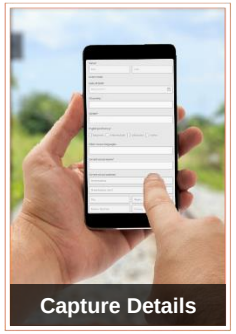


Crave Incident Management - Process Flow

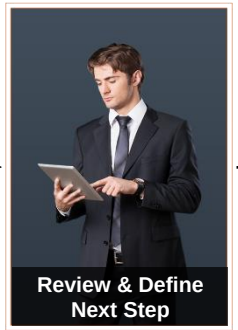
CREATE INCIDENT



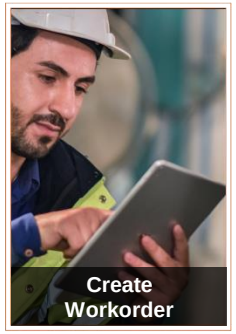


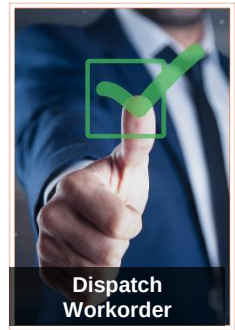


REVIEW INCIDENT

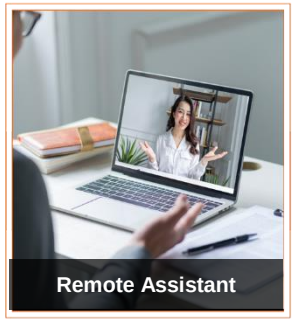


SCHEDULE / PLAN

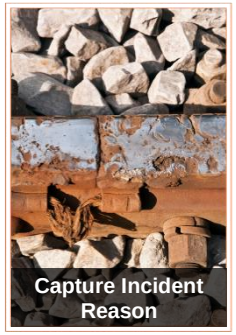


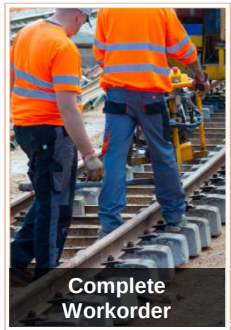


Remote Assistant



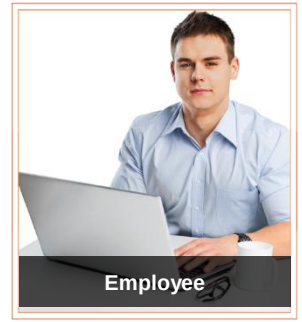
FIELD MOBILITY





FIELD GLASS

SUCCESSFACTOR



REPORTING

Hardware Integration

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Crave Apps are validated with Zebra Hardware's

Crave is a **Zebra Premium ISV and Reseller** and has all **mobile based application** for mobile computing pre-integrated with **Zebra smart device** eco-system.

FEATURES

- **Hands-Free picking**
- **Smart Glasses**
- **Location Service – Motion-ware**
- **RFID**
- **Mobile Devices**

One Stop Shop for Hardware, Software and ERP Integration/ Mobile Integration

Crave developed plugins for **Cross Platform Scanners, RFID, Printers and Mobile Devices**

ZEBRA

MDM, OVS, Site Survey,

Staging and Kitting

cRFID For Effortless Asset Tracking

The cRFID mobile app seamlessly integrates with SAP, empowering organizations to optimize inbound, outbound, and internal processes. Organizations can boost their operational efficiency with easy asset tracking and location identification. It supports lean processes by reducing maintenance, warehouse operating costs, and labor expenses.

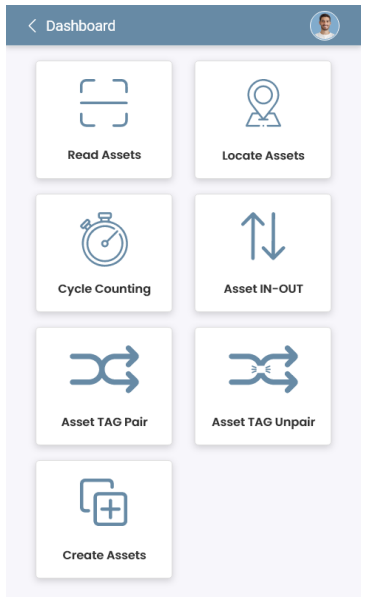
Benefits

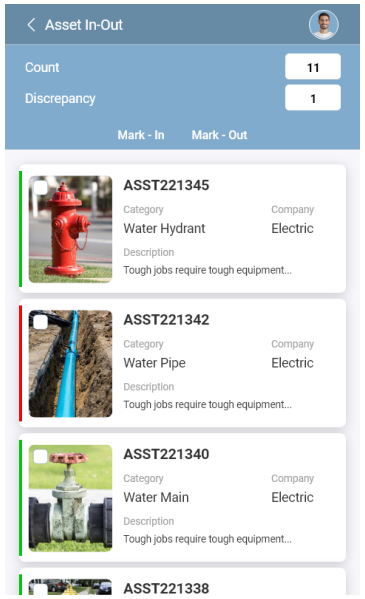
- Increase user efficiency and scanning functions, ensuring reliability productivity boost.
- Substantial reduction in maintenance and warehouse operational costs with a decrease in labor costs per unit handled.
- Streamline cycle counting with rapid bulk scanning.
- Easy to locate and track the asset in the system throughout the journey

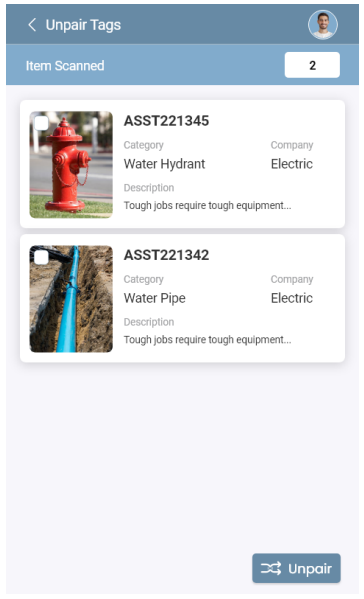
Key capabilities

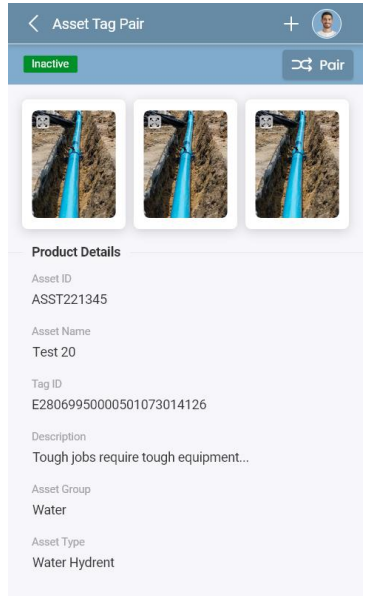
- Automate extended warehouse operator functions on handheld devices.
- Uploads scanned information to SAP. Features provides integration with Inbound , Outbound and Internal processes
- Optimize operations, reducing overhead with lean processes.

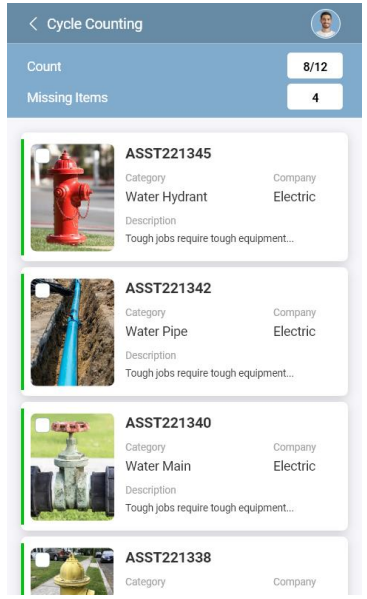
cRFID Preview

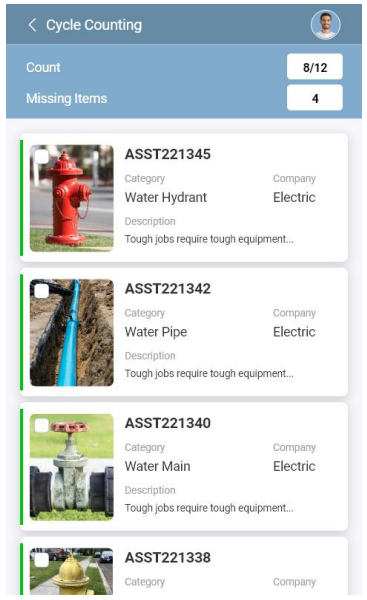


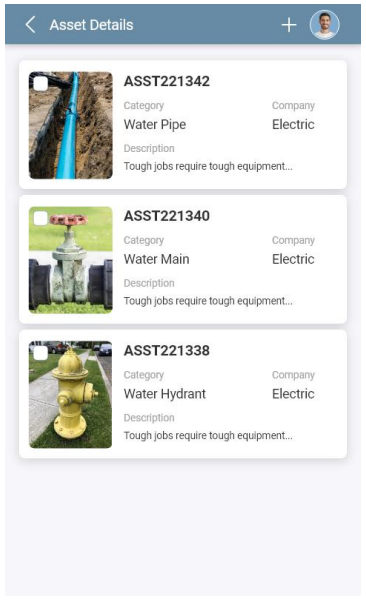


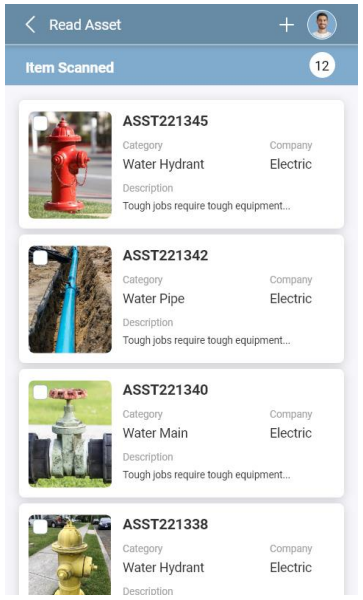


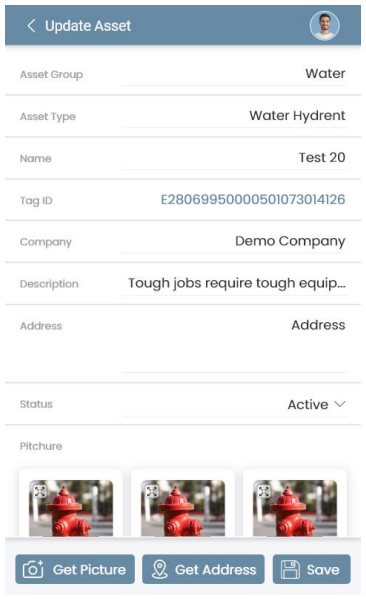


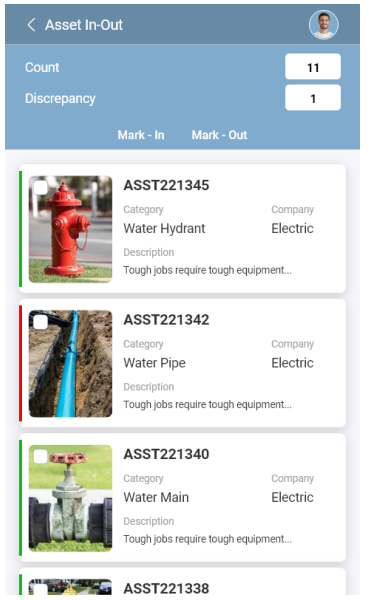












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Success Stories

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CUSTOMER SUCCES

Dr.Reddy's

SIZE OF OPERATION

2020 Global Revenue: $2.4 Billion
Employee Count: 21,650
Presence: 90+ Countries

Dr. Reddy's manufactures and markets a wide range of pharmaceuticals in global market. The company has over 190 medications, 60 active pharmaceutical ingredients (APIs) for drug manufacture, diagnostic kits, critical care, and biotechnology products.

INDSTRY:
Life Sciences

FEATURED SOLUTION:
SAP Business Technology Platform

Completely automated and enhanced Calibration processes for Dr. Reddy's Laboratories

crave INFOTECH | SAP Partner

CHALLENGES FOR DR. REDDY's

- Regulatory compliance issues, documentation gaps with legacy SAP Plant Maintenance Process due to manual errors
- Business user acceptability to using legacy system was not good due to lack of User-Friendly user interface
- Legacy system customization against the changing business flows was a nightmare
- Vendor acceptability to legacy vendor applications was not good and not bringing in the required benefits
- Business was demanding technological innovations that provides ease of use and help user convenience

ACCOMPLISHMENT

- Assignment of a work order, capture timestamps, capture results, validation of results and capture necessary approvals for usage decision, capture failure details, materials consumed, Equipment release and label printing.
- Master Instrument assignment and validation of readings with Master calibration for planned and unplanned characteristics as per defined SOP.
- Integration with SAP Plant Maintenance and SAP Quality Management modules removed data entry pain.
- Defect creation and managing replacement of instrument in case of calibration failure.

TESTIMONIAL

Crave is an Agile and Mod II partner who specializes in niche areas of SAP. Crave's pre-packaged solutions helped us to completely automate and enhance the maintenance processes for Calibration, Breakdown , Facility and Preventive Maintenance. In addition to Maintenance Crave has delivered other 5+ applications in other business areas.

- ***Sojan Varghese, Digital & Process Excellence Team, Dr. Reddy***

OUR OFFERINGS AROUND BTP

- Enterprise Mobility
- Process Automation,
- iRPA, Workflow
- Integration
- Analytics (SAC/Predictive)
- AI & ML API's
- SAP UI5/ Fiori Enablement
- Business Technology Platform (BTP) Enablement
- SMP to SCPMS
- Pre-packaged Applications

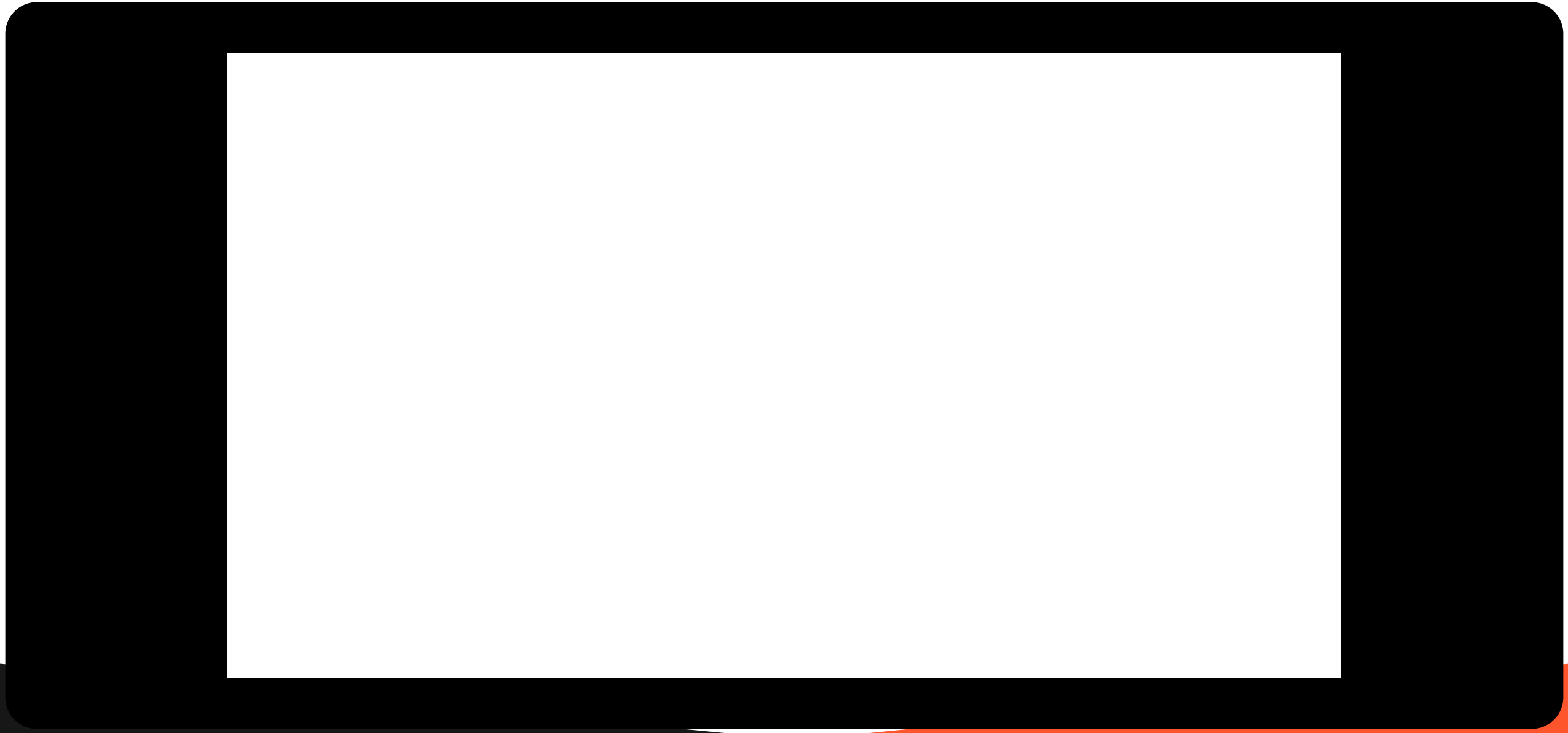
Agile

Setup of target process landscape while still respecting regulatory boundaries

70%

Re-use of existing data (from Common device data model) to maintain data for a product submission to regulatory authorities

Calibration - Demo



CLIENT

Large Energy Company

SIZE OF OPERATION

One of the largest city gas distribution (CGD) companies, with its expanding network of CGD infrastructure promises to fuel the growing aspirations of the nation.

Incident Management & CRAVE INFOTECH

CHALLENGES FOR Client

- In the existing application, it was not possible for any end user, including customer care representatives, to report an incident. For Customer/ end user Login is not required to raise the incident.
- In the existing application, users were not permitted to interact with Dashboards, drill down for more detailed information, or apply filters or parameters.
- The manual execution of this task takes a lot of time and is highly prone to errors.

SOLUTION

- Track any emergency incidence end to end (in case of gas leakage/ fire/ Vehicle Accident/ Property Damage or any other hi pot near misses) using the proposed solution on mobile and Web application.
- The manual incident creation time reduced to 2 - 3 hours per day once an incident management system has been implemented.
- In just a 5 seconds, they can download the incident report.

ACCOMPLISHMENT

- Incident creation less that 1 min
- An increase of 70% in productivity due to the automation of the process
- An increase of 80% in the savings for incident management.

AWARDS: SAP Pinnacle Award Finalist; Winner SAP ACE 2018; SAP Business One Seed award finalist; Runner up in SAP And Google App Contest; Application Listed in top 5 globally; App application valid on ZEBRA devices

CERTIFICATION: WOMEN OWNED; NMSDC MBE Certified; ISO 9001; ISO 27001

contact@craveinfotech.com 1-844-272-8348

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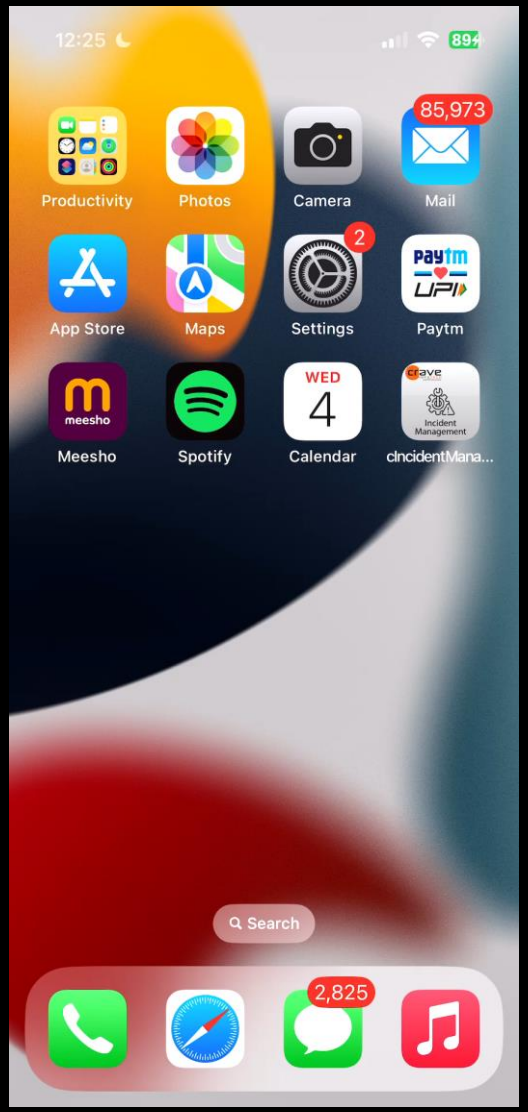
Incident Management - Demo



Water Utility Company uses Crave InfoTech Asset Tracking and Mobile Workforce Management Solutions to Manage Growth, Regulatory Requirements and Aging Workforce

Industry
Water Utility

Products and Services
Asset Tracking & Inspection
Flexible Scheduling (Customer Service)
SAP & Mobile Implementation

Employees
305

Revenue or Budget
$300 M

The company's top objectives

- The company is a public water supply company for approximately 192,300 customer accounts or more than 625,000 people in 49 cities and towns throughout Connecticut.
- The client's top objective was to increase customer base and provide highest customer satisfaction.

The resolution

- The company's mission is to be the service provider, employer and investment of choice through a relentless commitment to excellence.
- Preserve number one customer service ranking.

The key benefits

- Crave InfoTech's Mobile work force management solution helped the client to improve field workforce productivity.
- Improved vehicle performance.
- Making dispatch operations more efficient, saving wear and tear on vehicles, and reducing fuel costs.
- Flexible scheduling to meet regulatory mandate.

50%

Improved efficiency of field worker, dispatcher and supervisor.

30%

Fuel saving by improving vehicle and driver performance.

20%

Customers satisfaction using flexible scheduling to address each customer need.

"Asset Tracking solution have saved money by making dispatch operations more efficient, saving wear and tear on vehicles, and reducing fuel costs. Our ability to quickly address customer demands will help preserve its number one customer service ranking, a top priority for company management."

Director of Utility Operations

Asset Tracking - Demo

crave INFOTECH
Leads With Strong Desire

LOCATION

USA:
15 Corporate Pl S #104, Piscataway, NJ 08854
contact@craveinfotech.com

India:
Software Technology Parks of India, Unit 2-A,
MIDC, Hinjewadi Rajiv Gandhi Infotech Park,
Phase 1, Pune, Maharashtra 411057

SEND US AN EMAIL

contact@craveinfotech.com

VISIT OUR WEBSITE

www.craveinfotech.com

CALL US

1-844-CRAVEIT(272-8348)