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TECHNOLOGY AND APPLICATIONS FORUM  
FOR THE ORACLE COMMUNITY

# Clif Bar Brings Manufacturing In-House and Wins Award with Innovative Use of Manufacturing Technology

**Session ID:**

112430

***Prepared by:***

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Scott McKenzie, RFgen Software

#RFgenSoftware

April 22-26, 2018

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# Agenda

- Clif Bar's Self-Manufacturing Journey
- About Clif Bar
- The Challenges
- Defining Requirements
- The Solutions
- Keys to Success
- About RFgen Software
- Q&A

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# Clif Bar's Self-Manufacturing Journey

David Bissonnette  
Business Applications Manager  
Clif Bar & Company



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# About Clif Bar



- Leading maker of organic energy bars, including the CLIF®, LUNA®, and CLIF Kid® product lines.
- Based in Emeryville, California.
- Privately held employee and family-owned.

# About Clif Bar

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## A DIFFERENT KIND OF COMPANY

*"We're working to run a different kind of company: The kind of place we'd want to work, that makes the kind of food we'd like to eat, and that strives for a healthier, more sustainable world – the kind of world we'd like to pass on to our children. And those aren't just words. They're our mission statement."*

– Kit Crawford

# The Decision

- Forecasted growth would soon exceed supply from co-manufacturers.
- More control over supply of product to ensure demand is met.
- Provide better benefits and living wages to employees producing products.
- Decrease environmental footprint by building a sustainable bakery.



## Clif Bar to Build Plant in Twin Falls

City, energy bar maker ink development deal to build \$90M local bakery, add 250 jobs.

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# Challenges Ahead

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## TWIN FALLS BAKERY

- Used co-manufacturers, no in-house production.
- No building or bakery staff hired.
- Continue to maintain high Clif Bar standards for product quality and traceability.
- Keep costs the same or less than current co-manufacturers.

# Defining Requirements

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## Current ERP Software

- JD Edwards EnterpriseOne
- Used for Purchasing, Accounts Payable, Accounts Receivable, General Accounting, Planning, Sales Order Management.

## Requirements for Bakery

- Real-time JDE integrated transactions.
- Integration capable with other systems.
- Paperless to support environmental sustainability goals.
- Lot-level traceability to support food safety standards.
- Barcoding capability and functionality.
- Licensing plating for ease of tracking and inventory transactions.
- Flexibility to easily create custom workflows for current and future needs.

# The Solutions

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## JD Edwards EnterpriseOne

- Existing ERP software
- Purchasing, AP, General Accounting, Manufacturing, Planning, Sales Order Mgmt.

## RFgen Software

- Mobile data collection software
- Real-time JDE transactions, flexible, integration capable

## Wonderware

- Manufacturing execution software

## SafetyChain

- Food safety and quality software

## SOMAX

- Predictive maintenance software

# Building a Team

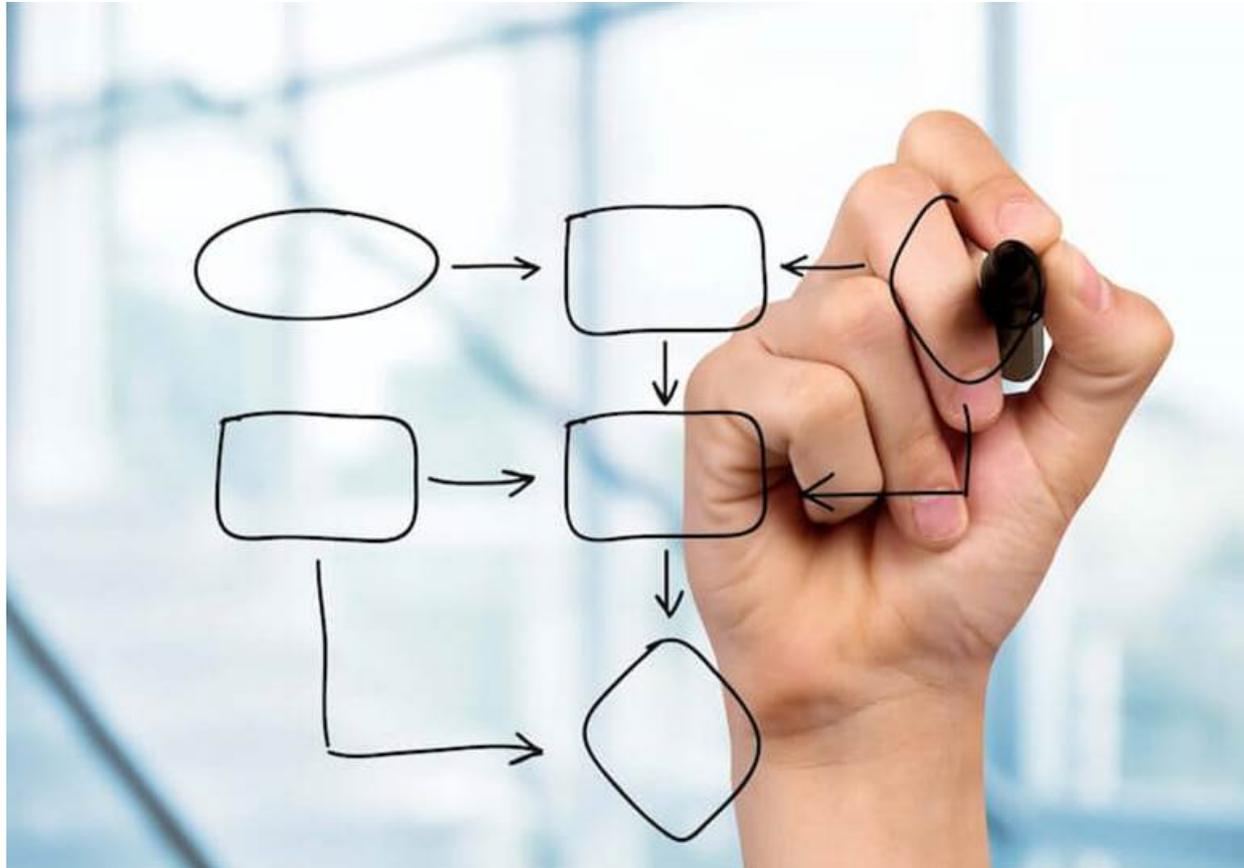
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- Clif Bar - Core project team with manufacturing experience.
- Denovo – JDE implementation partner (Project Manager, Solution Architect, Functional Consultants, Development Consultants)
- RFgen – Project Manager, Development Consultant
- Wonderware, SOMAX, SafetyChain, and Others

# Process Mapping

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## Resources

- Clif Bar Core Project Team
- Clif Bar Engineering Team
- Existing Clif Bar Processes
- Consultant Resources
- Bakery Floor Plans
- Bakery Leadership as Hired
- Co-manufacturers

# Development and Configuration

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## JD Edwards Processes

- Product Data Management
- Material Requirements Planning
- PO Management
- Work Order Management
- Transfer Order Management
- Lot Management
- Inventory Transactions
- Product Costing
- Manufacturing Accounting
- Day End Processes

# Development and Configuration

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## RFgen Processes

- Receiving
- Replenishment
- Work Order Issues
- Work Order Completions
- Load Building
- Picking
- Packing
- Shipping
- Inventory Transactions
- License Plate Labeling
- Integrations: MES, SafetyChain, and SOMAX

# RFgen Basic Application Flow

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Inventory Adjustments

Plant 3010

Item#

Locn

MaxQty

Qty UOM

Rsn

Inventory Adjustments

Plant 3010

Item# PM000001  
Pallet, Wooden, 48 X 40

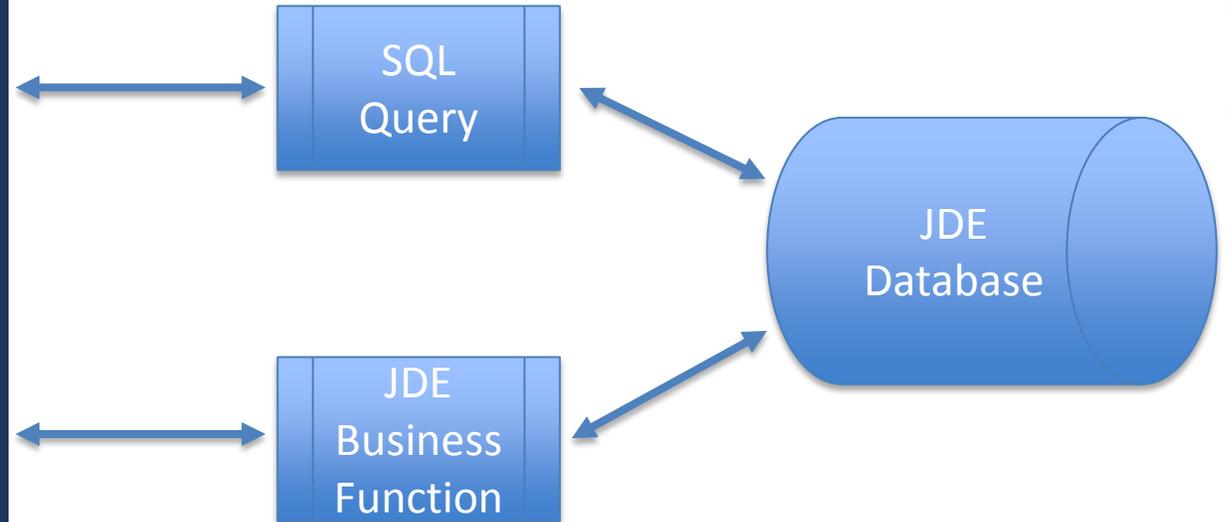
Locn . .

MaxQty 1036 EA

Qty 10 UOM EA

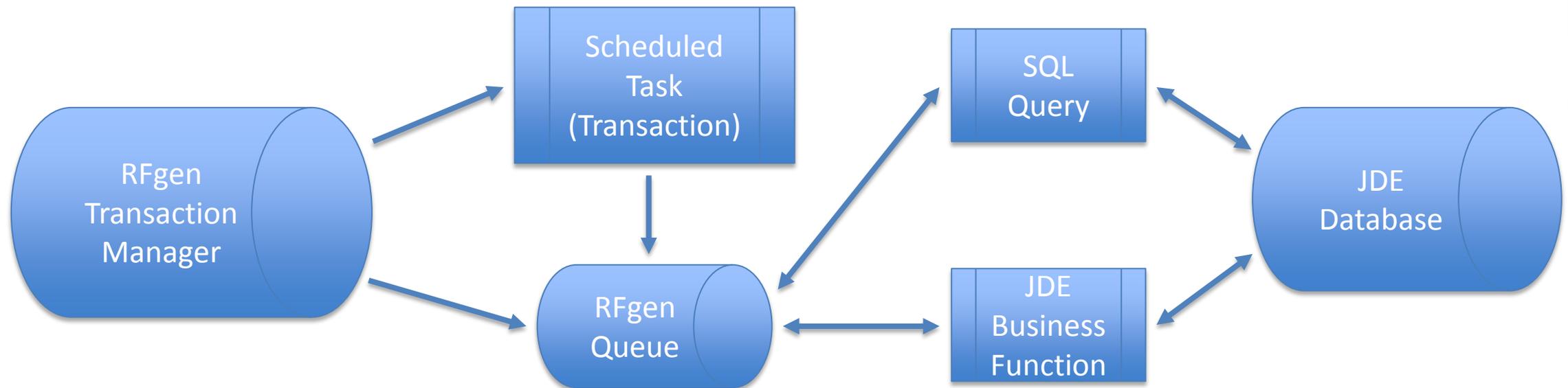
Rsn TF  
Adjustment - Twin Falls

Enter to Accept



# RFgen Transaction Queue Flow

- Transaction Manager runs every x seconds
- Scheduled Tasks process data every x minutes depending on need
- Call JDE Business Function, Web Service, Push/Pull Data from DB, etc.



# Mobile Hardware

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## Handheld

- Intermec CK3X



## Forklift

- Honeywell Thor VM1



## Printer

- Intermec PM43

# Cutover and Go-Live



- Testing
- Training
- Commissioning and Soft Go-Live
- Go-Live

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# New Clif Bar Bakery

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# Co-packer Bakery Takeover

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## INDIANAPOLIS BAKERY

- Co-packer decided to leave co-manufacturing business.
- Left no time to completely stabilize new Bakery.
- Over 400 employees and multiple languages.
- 6 months to convert all ERP, warehouse, manufacturing, and other business systems.
- Used framework from new Bakery.
- Some differences in process and equipment.

# Stabilization and Refinements

- Resolve Outstanding Issues
- Refine Process Flows
- Key Bakery Initiatives
- Continued User Training
- Stayed Connected to Users

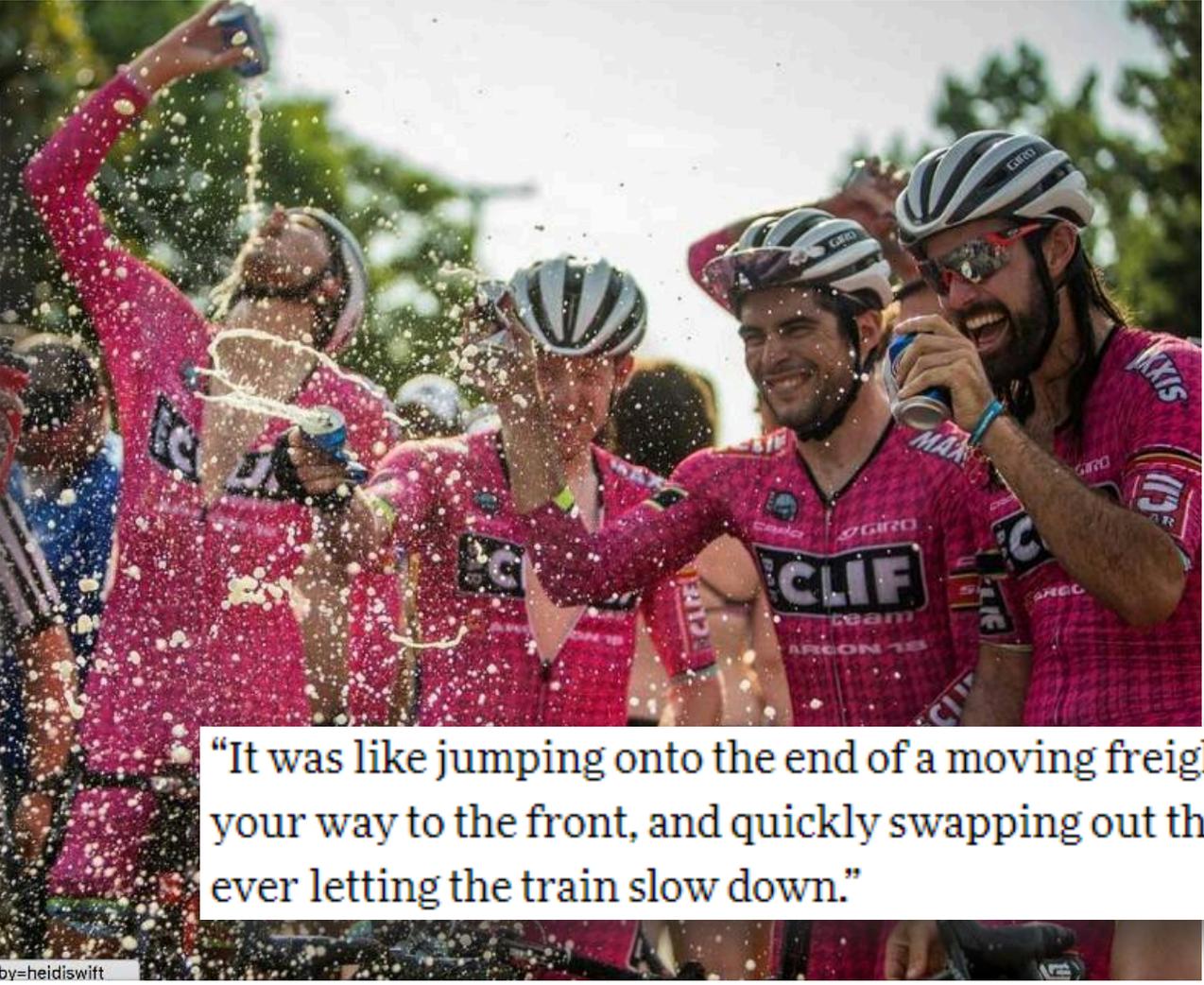


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# Clif Bar is on A Wild Ride

A look into the two-year race that expanded organic food company Clif Bar—and how Todd Wilson's IT team accelerated the transformation

BY ZACH BALIVA



“It was like jumping onto the end of a moving freight train, making your way to the front, and quickly swapping out the engine without ever letting the train slow down.”

[v.instagram.com/p/BGmmUQTkeG8/?taken-by=heidiswift](https://www.instagram.com/p/BGmmUQTkeG8/?taken-by=heidiswift)

# Keys to Success

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- Testing and More Testing
- User Training
- Communication
- Tracking Issues and Tasks Efficiently
- Executive Support
- Finding the Right Partners

**RFgen**

# About RFgen Software

**Scott McKenzie**  
**Regional Sales Manager**  
**RFgen Software**



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# Who is RFgen Software?

## Established in 1983

- Leader in Mobile Data Collection

## Oracle-Validated Integration

- JD Edwards EnterpriseOne XE to 9.2
- JD Edwards World A7.3 to A9.4

## Global Reach

- 2,800 worldwide installations
- 140 partners worldwide
- Regional support in 35+ countries

## Total Solution Provider

- Software, hardware and professional services

## Certified Partner

- Oracle Platinum Partner Cloud Standard, SAP Partner, Deltek Select Partner

ORACLE

Platinum  
Partner  
Cloud Standard

ORACLE

Validated Integration

JD Edwards  
EnterpriseOne

ORACLE

Validated Integration

JD Edwards World

# Where RFgen is Used

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## Inside the Four Walls



Inventory Management



Warehouse Automation



Field Service



Freight Yard Operations



Remote Inventory Management



Voice-Directed Operations



Manufacturing Operations



Direct Store Deliver



Transportation and Logistics



Track and Trace

# 2,800+ Sites | 25+ Industries | 35+ Countries

**Aerospace & Defense**

**Automotive**

**Consumer Packaged Goods**

**Electronics**

**Engineering & Construction**

**Feed, Food & Beverage**

**High Technology**

**Industrial Machine & Equipment**

**Life Sciences**

**Manufacturing**

**Oil & Gas**

**Pharmaceutical**

**Retail**

**Transportation & Logistics**

**Utilities & Energy**

# RFgen Mobile Foundations for Oracle's JD Edwards

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Mobile  
Application  
Development  
Platform

Certified  
Connectivity  
with Oracle's  
JD Edwards  
EnterpriseOne  
and World

Out-of-the-Box  
Pre-Written  
Pre-Tested  
Mobile Apps

Open Source  
Architecture  
Facilitates  
Rapid  
Modification  
and  
Configuration

Supports  
Multiple Data  
Capture  
Scenarios for  
Real-time,  
Mobile and  
Batch  
Workflows

# Zero Footprint Means Hassle-Free JDE Upgrades



- Nothing to Reinstall
  - RFgen version is the same regardless of JDE version.
  - Simply redirect RFgen to the new environment and begin UAT.
- RFgen is Non-Invasive
  - No custom objects within JDE to upgrade or retrofit.
- RFgen Can Reduce Custom Modifications
  - Move custom modifications from JDE to RFgen.
  - Eliminates the need to retrofit.

# RFgen Implements in Weeks, Not Months



- Open Source Code Samples
- Rapid Application Development Platform
- No Cryptic Scripting Language
- Uses Data Dictionary Aliases
- Reusable Objects
- Interactive Debugger
- Built-in SQL Testing
- Deploys Instantly to All Devices

# 100+ Pre-Built JD Edwards Mobile Apps

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## Distribution Suite - Inventory Management

- Inventory Transfer (P4113)
- Inventory Transfer Multi-line (P4113)
- Inventory BIN Transfer (P4113)
- Inventory Issue (P4112)
- Inventory Issue to GL Account (P4112)
- Inventory Issue Multi-line (P4112)
- Inventory Adjustment (P4114)
- Inventory Reclassification (P4116)
- Cycle Count (P41240)
- Inventory Labels
- UCC Inventory Labels
- Item Inquiry by Location
- Location Inquiry by Item
- Supply and Demand Inquiry

## Distribution Suite - Outbound

- Standard Pick Confirm (P4205)
- Standard Pack Confirm (P4205)
- Standard Ship Confirm (P4205)
- Guided Pick Confirm (P4205)
- Advanced Pick Confirm (P4201/P4205)
- Pick Confirm Multi-line (P4205)
- Guided Ship Confirm (P4205)
- Advanced Ship Confirm (P4205)
- Add Freight Line (P4210)
- Back Order Release (P4205)
- Sales Order Entry (P4205)
- Speed Status Update (P4205)
- Open Sales Orders Inquiry (P4205)
- Sales Order Inquiry by Item (P4205)
- Sales Order Inquiry by Line (P4205)
- Proof of Delivery (P4205)
- Shipping Label Generation (P4205)
- UCC Shipping Label Generation (P4205)

## Distribution Suite - License Plating

- LP Basics - Add, Delete, Transfer (Various)
- LP Cycle Count (P41240)
- LP Reset Cycle Count (P41240)
- LP Pick Confirm (P4205)
- LP Pack Confirm (P2405)
- LP Receipts by Purchase Order/Line (P4312)
- LP Reclassification (P4312)
- LP Transfer Confirm (P4205)
- LP Transfer (P4210)
- LP Super Backflush (P31123)
- LP Completion (P31114)

## Manufacturing Suite - Work Orders

- WO Completions – Discrete (P31114)
- WO Partial Completions (P331114)
- WO Full Completions (P31114)
- WO Component Issue (P31113)
- WO Component Scrap (P31116)
- WO Time Entry (P311221)
- WO Time Entry Start/Stop - Multi WO (P311221)
- WO Time Entry Start/Stop (P311221)
- WO Rate Based Completion (P31123)
- WO Super Backflush (P31123)
- WO Inquiry by Item
- Open Work Orders Inquiry by Item
- Label Generation
- UCC Label Generation

## Distribution Suite - Inbound

- Receipts by PO/Line (P4312)
- Receipts by Item (P4312)
- Receipt Routing (P43250)
- Purchase Order Inquiry by Item
- Purchase Order Inquiry by Line
- Open Purchase Orders by Item
- Label Generation
- UCC Label Generation

## Equipment and Plant Maintenance Suite

- Information Entry (P1702)
- Location Transfer (P12215)
- Equipment Time Entry (P12110)
- Work Order Entry (P4801)
- Tool Crib Check In/Out (P12115)
- Equipment Inquiry
- Tool Transfer History
- Work Order Inquiry

## Manufacturing Suite - Kanban

- Kanban Check Out (P3157)
- Kanban Check In (P3157)

## Human Resources Suite

- Employee Time Entry (P051121)
- Supervisor Batch Entry (P051121)

**CUSTOMIZE  
AND CREATE  
YOUR OWN  
MOBILE APPS!**

Note: Codes in parentheses () denote the related JD Edwards program, where applicable.

# Two Deployment Options

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## SaaS

- Onsite use license
- Eliminates privacy and security concerns
- No capital expenditure
- Annual payments
- Minimizes internal IT requirements to deploy and manage



## On-Premise

- Run RFgen in your IT infrastructure
- Maintain complete control of your entire RFgen platform
- Manage complex data, analytics, or big data sets including networks, analysis, image services, or real-time sensor streams



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# Q&A

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