

Integrate Your Manufacturing Data for Proactive Quality Management



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Frank Borovsky

Principal

B2BEYOND



Valerie Salera

Quality Leader, Supply

TRANE
TECHNOLOGIES



Bryan DeBois

Director of Industrial AI

ROVISYS

Where are you in your Quality Data Transformation Journey?

- A) Not started
- B) Discovery
- C) Mature
- D) Completed

Manufacturing Success



Frank Borovsky

*Vice President, Industry Advisor
Manufacturing, Auto, Energy*

salesforce



- B2B Marketing
- Strategic Planning
- New Product Development
- CRM



- eBusiness/IT
- Launched SAP
- Integrated Supply Chain
- Six Sigma
- 1300+ Apps Rationalization



- SAP
- Data Analytics
- Application Development
- PMO



- MSP/VAR Start-up at Ricoh
- Full P&L/Sales
- 32 Sales Offices
- Verticals



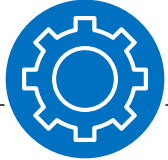
- CIO
- CXO
- Architecture
- Digital Transformation
- ERP



- Customer Experience
- eCommerce
- Data Analytics
- Digitization
- Operational Excellence

Common themes in manufacturing

Unified Digital Experiences Across Your Value Chain



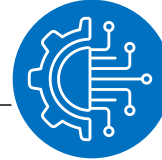
Modernize Commercial Operations

Manage your complete book of business from opportunity through order management; align sales and operations with accurate demand forecasting.



Simplify Partner Engagement

Drive greater channel partner visibility, engagement, and performance.



Transform the Service Experience

Enable faster and smarter service experiences optimized from the contact center through service operations to the field technician to the customer



Enable the Workforce of the Future

Enhance employee productivity, engagement, and agility with modern experiences for the work-from-anywhere world



Translate Data into Insights and Actions

Integrate legacy systems and enable better decision making and execution powered by AI, analytics, and the Salesforce platform.

Salesforce for manufacturing: ISVs

Unified digital experiences across your value chain



Modernize Commercial Operations



Simplify Partner Engagement



Transform the Service Experience



Enable the Workforce of the Future



ISVs make the platform more powerful, extending capabilities available to customers



Translate data into insights and action



Improving the Partner Experience

“Making It Easier To Do Business”

Dealers



Table of Contents

1. Introduction

1.1. Resolving Password and Logging into other Applications

1.2. Home Page

1.3. Alerts & Notification

1.4. The Navigation

1.5. My Club

1.5.1. My Team

1.5.2. My Profile

1.5.3. System Admin

1.5.4. Building

1.5.5. Club Car Contacts

1.5.6. Dealer Manual

1.5.7. Help

1.5.8. Log Out

1.6. Parts

1.6.1. Parts Orders

1.6.2. Parts Order History

1.6.3. Download Pricing

1.6.4. Aftermarket Catalog

1.6.5. Parts and Pricing Bulletin

1.6.6. Damage, Storage

2. Car Orders

2.1. Customer/Dealer Applications

2.2. Damage, Storage, Insurance (SGI)

2.3. Inventory

2.4. Serial Number Profiles

2.5. Transportation Request/MSA

2.6. Terms and Conditions

3. Marketing

3.1. Interimhanding

3.2. Sales Training

3.3. Club Car Connect

3.4. Events

3.5. Marketing Contacts

3.6. Resource Library

4. Credit Center

4.1. Account Information

4.2. Credit Application

4.3. Dealer Invoicing

4.4. Finance Programs

4.5. Terms and Conditions

5. Tech/Warranty

5.1. Technical Publications

5.2. Warranty/Warrant

5.3. Customer Complaint (SCC)

5.4. SGI Documents

5.5. Service and Warranty Bulletin

5.6. Serial Number Profiles

5.7. Training and Support

5.7.1. Reporting

5.7.2. Sales Training

5.7.3. Technical Training

5.7.4. Course Catalog

5.7.5. Technical Training Videos

Business Benefits Summary

Feature	Description	Impact
Subscription Platform	Club Car now better connected to Enterprise, Collaboration Cof., Best Practice Sharing, Sharing of improvements and opportunities, etc.	↑
Content Delivery	Improved Business to update content and maintain its relevancy	↑
Training and Support	Learning Management System (LMS) content files learned and applied, Increased Training, User Guides, On Boarding training, Help Center, etc.	↑
Asset Management	Need an Inventory Access Management (IAM) solution to properly maintain assets and increase productivity.	↓
Mobile capability	Club Car Clio to deliver reports and better supports needs of mobile work force in sales, marketing, etc.	↑
Self Service	Improved content and functionality allows dealer partners to self serve reducing internal support requirements by functional areas.	↑

Distributors (and Contractors)



Dashboard Highlights

100% Achievement to Milestone

20%

20%

20%

20%

20%

20%

20%

20%

20%

20%

20%

PERFORMANCE REVIEW & GOAL SETTING

END OF YEAR

PERFORMANCE REVIEW & GOAL SETTING

CONGRATULATIONS! You've earned Gold status for the next year.

POST CONSTRUCTION

PRODUCTIVITY & GROWTH

STEPS



GOLF



UTILITY



PERSONAL



GENUINE PARTS
& ACCESSORIES

Streamline
Processes Through
Lean/Digitization



Making it Easier
to do Business



Product 360



Integrating
GPSI





Streamline
Processes Through
Lean/Digitization



OPERATIONAL
EXCELLENCE

Making it Easier
to do Business



CONNECTIONS
CREATING
VALUE

Product 360



PRODUCT
INNOVATIONS

Integrating
GPSI



STRATEGIC
ACQUISITIONS

Common Themes



Making it Easier
to do Business



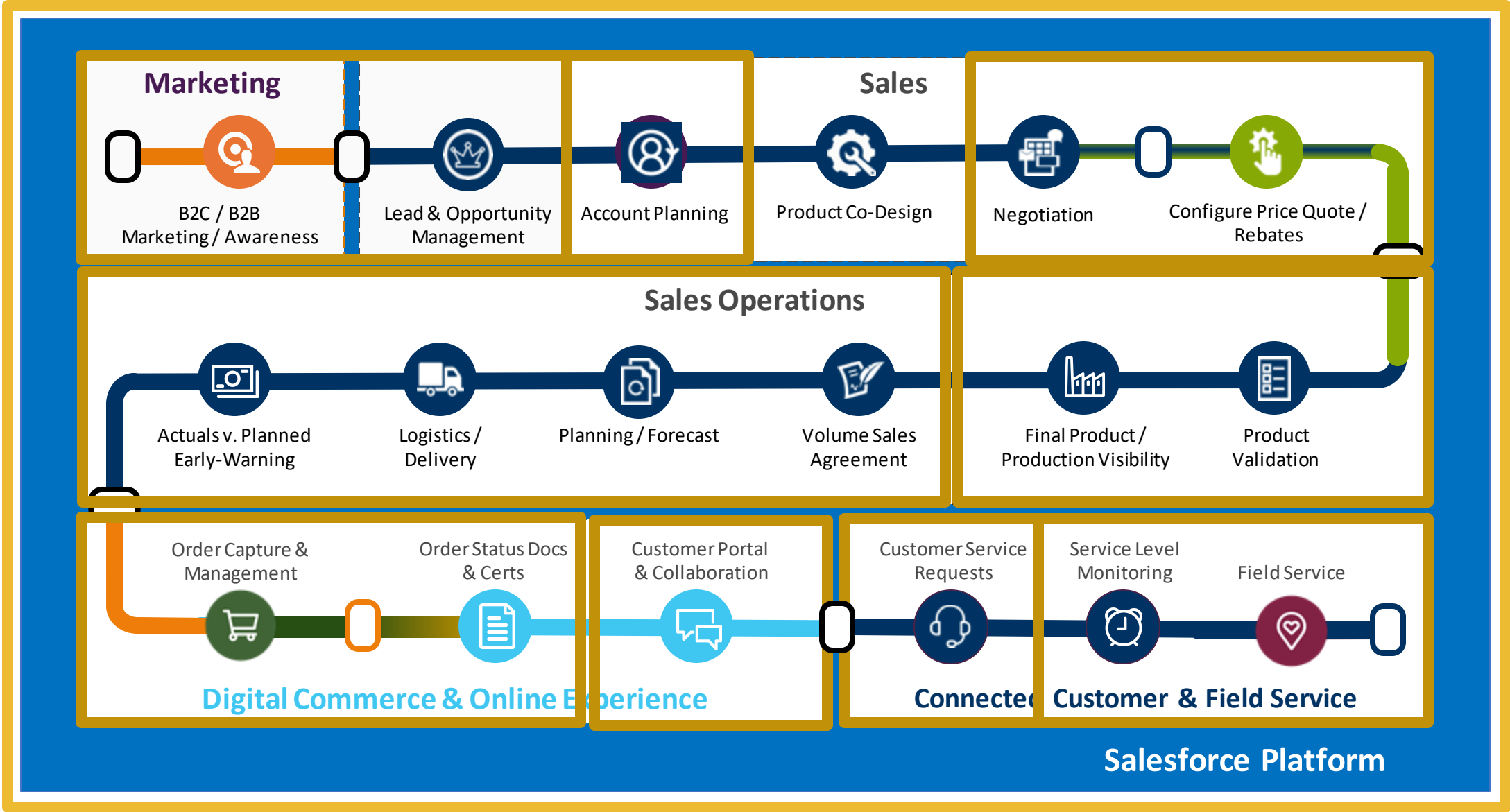
Translate Data
Into Insights
and Actions



The Club Car Digital Transformation Journey



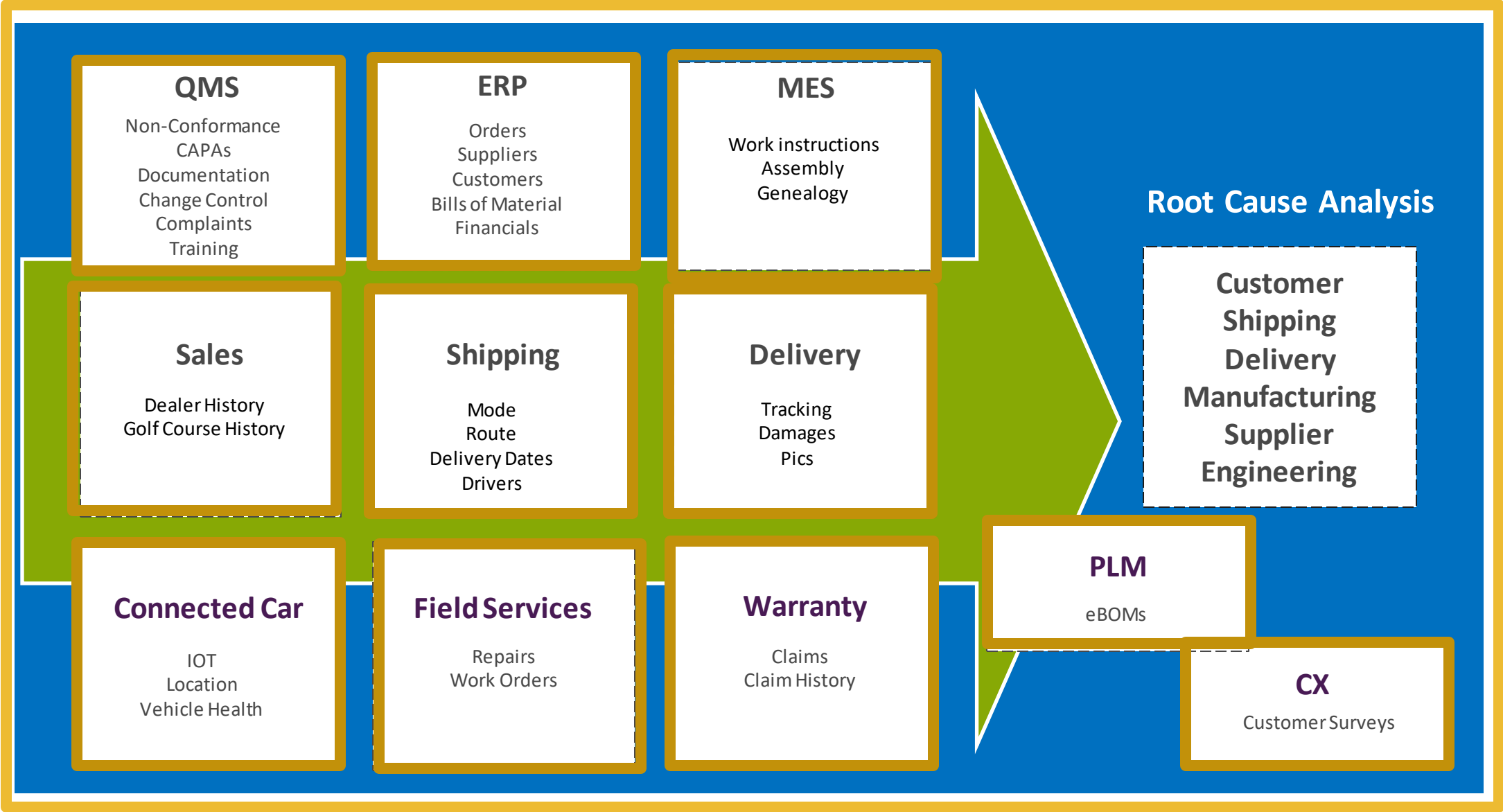
Data Analytics



The Club Car Quality Journey



Data Analytics



Salesforce for manufacturing: ISVs

Helping Manufacturers enhance their Product Experience



Design / Sell

Product Lifecycle Mgmt (PLM & PIM)



Complex Configurator & 3D/2D



B2B Price Optimization & Mgmt



Build / Distribute

SAP ERP Integration



Salesforce Native ERP



Supply Chain Planning (S&OP)



Service

Quality, Compliance, & Safety



Asset 360 - Field Service



Warranty & Claims Mgmt



Customer 360 Platform

Built on trust



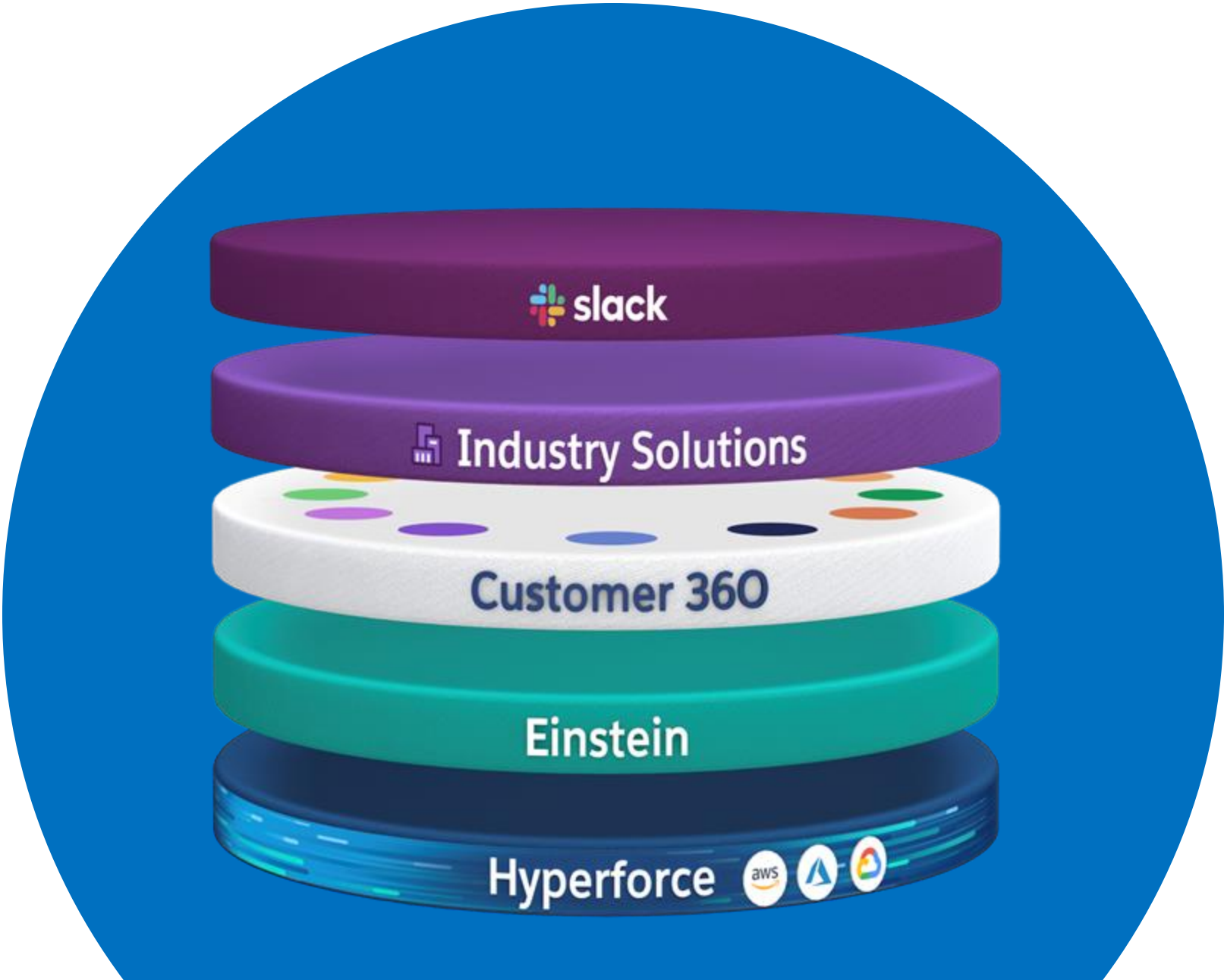
Employees



Customers



Partners



Integrate Your Manufacturing Data for Proactive Quality Management



Valerie Salera

Quality Leader, Supply



DAIMLERCHRYSLER



- Supply Operations Management Program
- Production Control
- Supplier Development
- Material Handling Engineering

ThermoFisher
SCIENTIFIC

- Supplier Quality
- APQP
- NPD
- Lean Transformation



- Supplier Quality
- Quality Management Systems
- Digital Transformation
- Operational Excellence

TRANE
TECHNOLOGIES

- Aftermarket Engineering
- Operational Excellence
- Supply Business Quality

Managing Variation

- Quality improvement decisions were lacking data therefore improvement actions were proving ineffective
- Reactive, based on intuition and emotion
- Establishing the foundational data that allows analysis to direct efforts on the right problems
- Having the **right** data **when** and **where** you need it
- Prioritize issues and establish the level quality/value needed
- How big can you go?
- Customer complaints have already happened
- Having data in real time is POWERFUL



- Focused data efforts in the Supply Business
- Defects in transactional processes as well as product quality
- Driving to root cause promotes better understanding of how systems are working together
- Predictive quality driving insights on where to focus
- Not just improving quality, we are improving the customer experience
- Bottom line:
 - Data is the foundational element of quality management and drives improvement in the right places
 - The power of data allows you to be nimble and gives you a view into tomorrow
 - So you can be better prepared than your competitors



Integrate Your Manufacturing Data for Proactive Quality Management



Bryan DeBois

Director of Industrial AI



- 24 years working in Manufacturing and Industrial for RoviSys, a Global System Integrator
- Implemented projects across all aspects of Information from the plant floor
- Implemented MES, Historian, Custom Software, and many other Level 3 systems
- Currently delivering AI, Machine Learning (ML), and advanced analytics solutions to customers
- Autonomous AI Expert
- B.S. in Computer Science from the University of Akron

Who is RoviSys?

- Founded in 1989
- 1,300+ Engineers globally
- System Integrator specializing in Manufacturing and Industrial customers
- All aspects of plant floor automation, networking, data infrastructure, and information solutions
- Deliver turn-key solutions that frequently integrate multiple systems
- Provide complete projects from concept, through design, implementation and long-term support

Drywall Predictive Quality



Challenge

- Drywall manufacturer had to wait hours for quality test results
- Could make hours of scrap while waiting for results



Solution

- Extracted data from their quality system, as well as their production historian
- Created a Computer Vision ML model used to observe the drywall as it is drying
- Correlated the visual indicators of the drywall to the data from the quality system
- Was able to predict with over 95% accuracy the final quality of the drywall before it even went to the quality lab



Benefits

- Drywall core can be analyzed in seconds to give operators fast feedback on production
- Quality measurements now are fed back to the operators instantaneously, rather than hours later
- Solution scaled to 5+ sites and 10k+ images in under a month

Meat Snack Moisture Quality



Challenge

- Variable moisture in raw material can make it difficult to hit moisture targets to meet product dry weight targets after smoking
- Underweight packages required hours-long manual process of unpacking boxes and weighing each package
- Client would simply overstuff sausages instead—giving away product



Solution

- Extracted data from their Quality system, ERP system, MES system, and Production Historian
- Correlated data to find trends in moisture content and product cooking times
- Built a “Montecarlo” simulation to model process randomness into simulation. Designed an AI agent to control the amount of moisture added to the product.
- Integration into control system to make “closed loop” decisions on moisture addition setpoint

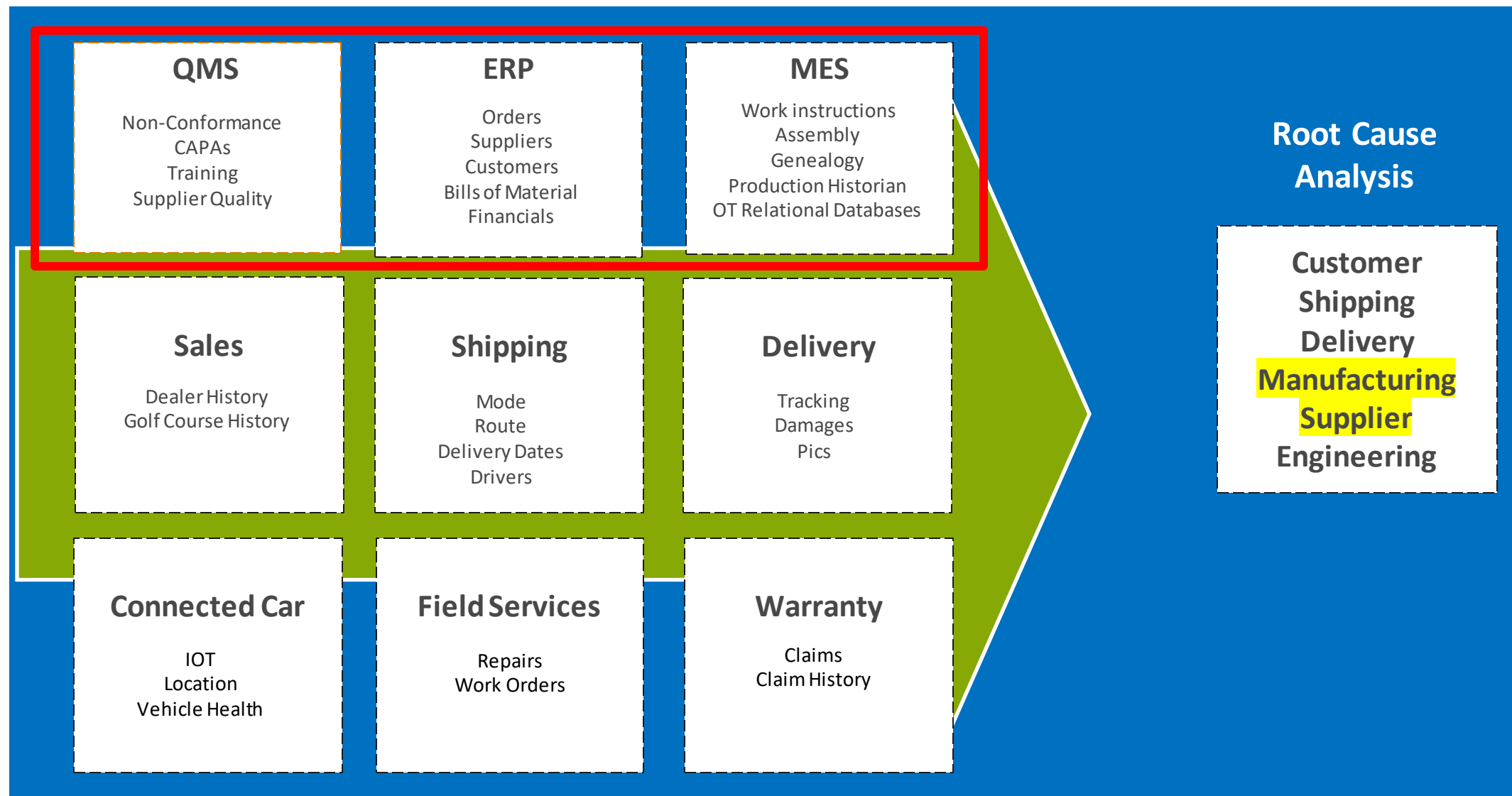


Benefits

- Reduce overstuffed product to increase yield and prevention of loss or rework
- Million+ dollars of annual savings

Operational Technology (OT) Sources of Data for Analytics

Data Analytics



Discrete Industries vs Process Industries

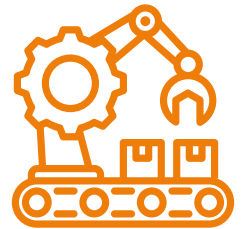
Discrete Industry

- Lower level of connectivity on the plant floor
 - Disconnected work cells
- Pockets of disconnected data, typically in relational databases
 - Common to see weeks or months of data
- High traceability of individual parts upstream to supplier and downstream to customers



Process Industry

- Higher level of connectivity on the plant floor
- Large volumes of historical data on every part of the process
 - Common to see 5-10 years of data
- Poor traceability of product upstream to supplier and downstream to customers



*These are high-level trends, and may not be indicative of any one company or sector

Integrate Your Manufacturing Data for Proactive Quality Management

Lessons Learned

- 1 • Start! Stop the bleeding!
- 2 • Focus on what matters most to the business first
- 3 • Have a grand plan/architecture in mind: Importance of trusted data
- 4 • Learn/improve/iterate
- 5 • Be willing to “unlearn”
- 6 • Involve your entire value chain:
customers, internal, supply chain
- 7 • Your quality initiatives should be **INTEGRAL** to your digital transformation, **NOT** a separate initiative



About ComplianceQuest

Transform to a fully connected business with a next-generation AI-Powered Product Lifecycle, Quality and Safety management platform, built on Salesforce.

300,000+
Users

1000+
Customer Sites

125M+
Active Records being
Managed

1000+
Man years
Domain Expertise

Award
Winning
Solution

Frost & Sullivan

Worldwide
Direct and Partner
locations

INSIGHT
PARTNERS

\$36M in 2019

ISO 9001:2015
AICPA SOC 2
ISO 27001
FedRAMP
Salesforce / Trust

Gartner
2023 QMS Market
Guide

ComplianceQuest Named a Leader
on Frost & Sullivan's Frost Radar™
for its EQMS Platform

FROST RADAR™
Quality Management Systems, 2022

salesforce appexchange
★★★★★

Capterra
★★★★★
5 STAR USER REVIEWS

featured
customers

2022
TOP PERFORMER
Quality Management Software

2022
TOP PERFORMER
EHS Management Software

2020
Inc. 5000
LIST
2019-2022

Janssen
Pfizer
Lifescan
Canon
CANON MEDICAL
YKK
Dr.Reddy's
TILRAY
CDC
Walmart
Continental
CONTITECH
flex
NAMSA
john crane
a smiths company
Advanced Energy
TELADOC
3M
QORVO

Financially Strong

Compliant

Recognized

Time Tested and Proven

THANK YOU



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