2016 Research Vision & Agenda

Quality Management

House Keeping Items

- Lines are Muted
- Recorded Line
- Chat Box
- Questions during the Presentation
- Questions after the Presentation

About LNS Research

Our Mission is Driving Industrial Transformation

We are thought leaders and trusted advisors for Business, IT, and Automation executives

Our differentiators:

- ❑ Experienced analysts
- ❑ Primary social research
- ❑ Deep industry contacts
- ❑ Interactive data visualizations

Analyst Team

Matthew Littlefield
IIoT

Dan Miklovic
APM

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APM

Dan Jacob
EQMS

TBA

Starting Jan 14, 2016
EHS

Digitalization and Industrial Transformation Framework

Digital Transformation

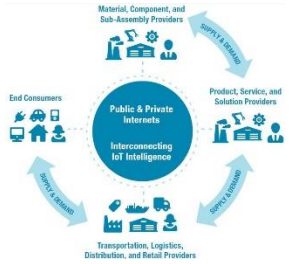
Operational Excellence

Enterprise Architecture

Business Case Development

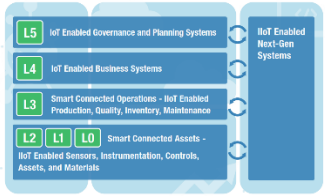
Solution Selection

Reimagining Business Process and Service Delivery

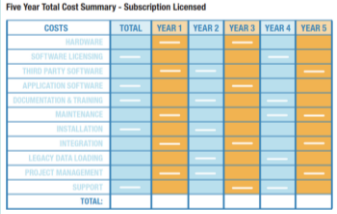


Realigning People, Process, and Technology

Managing IT-OT Convergence and Next-Gen IIoT Technology



Defining Immediate and Long Term ROI

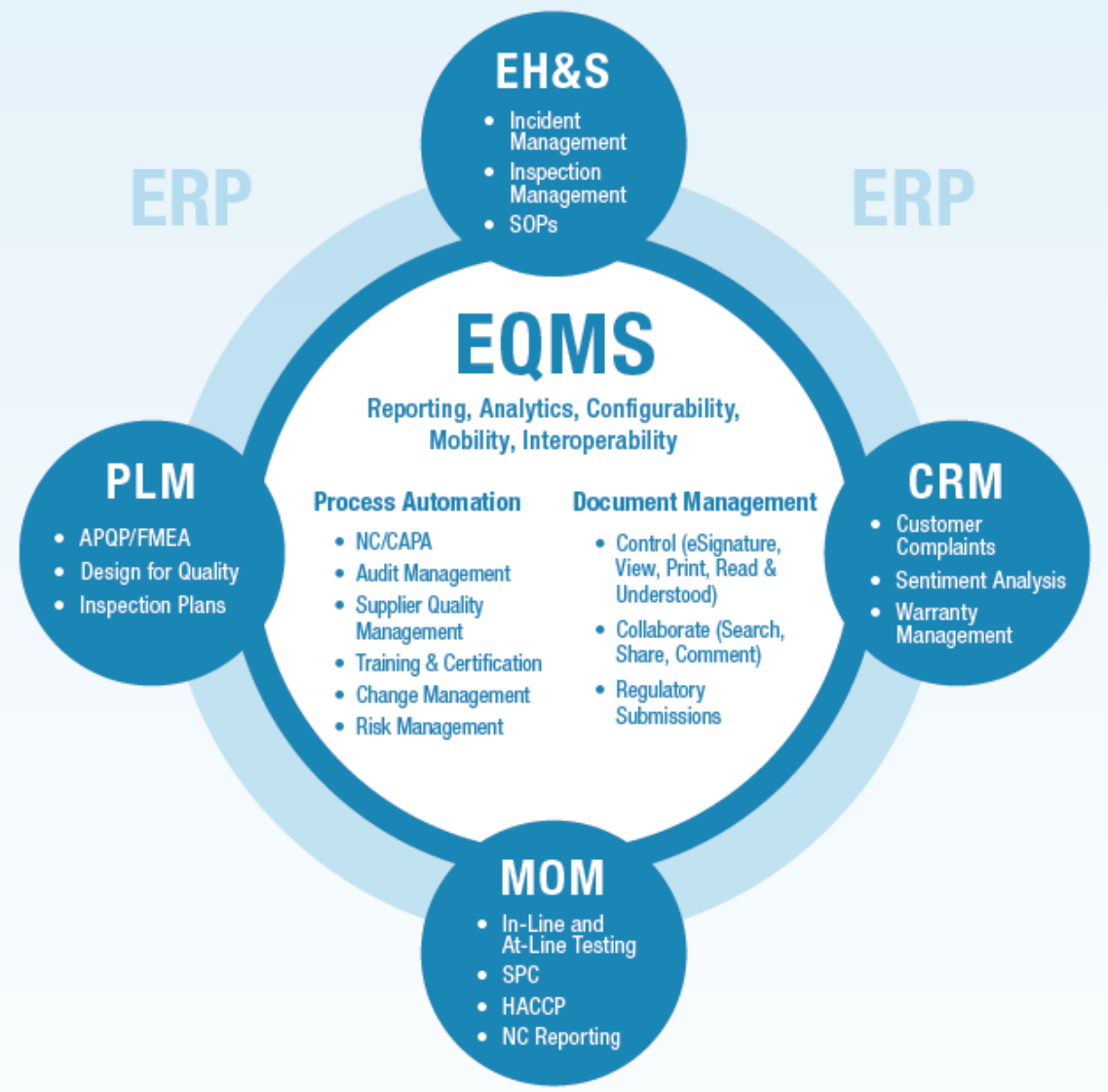


Eliminating Bias and Finding Long Term Partners

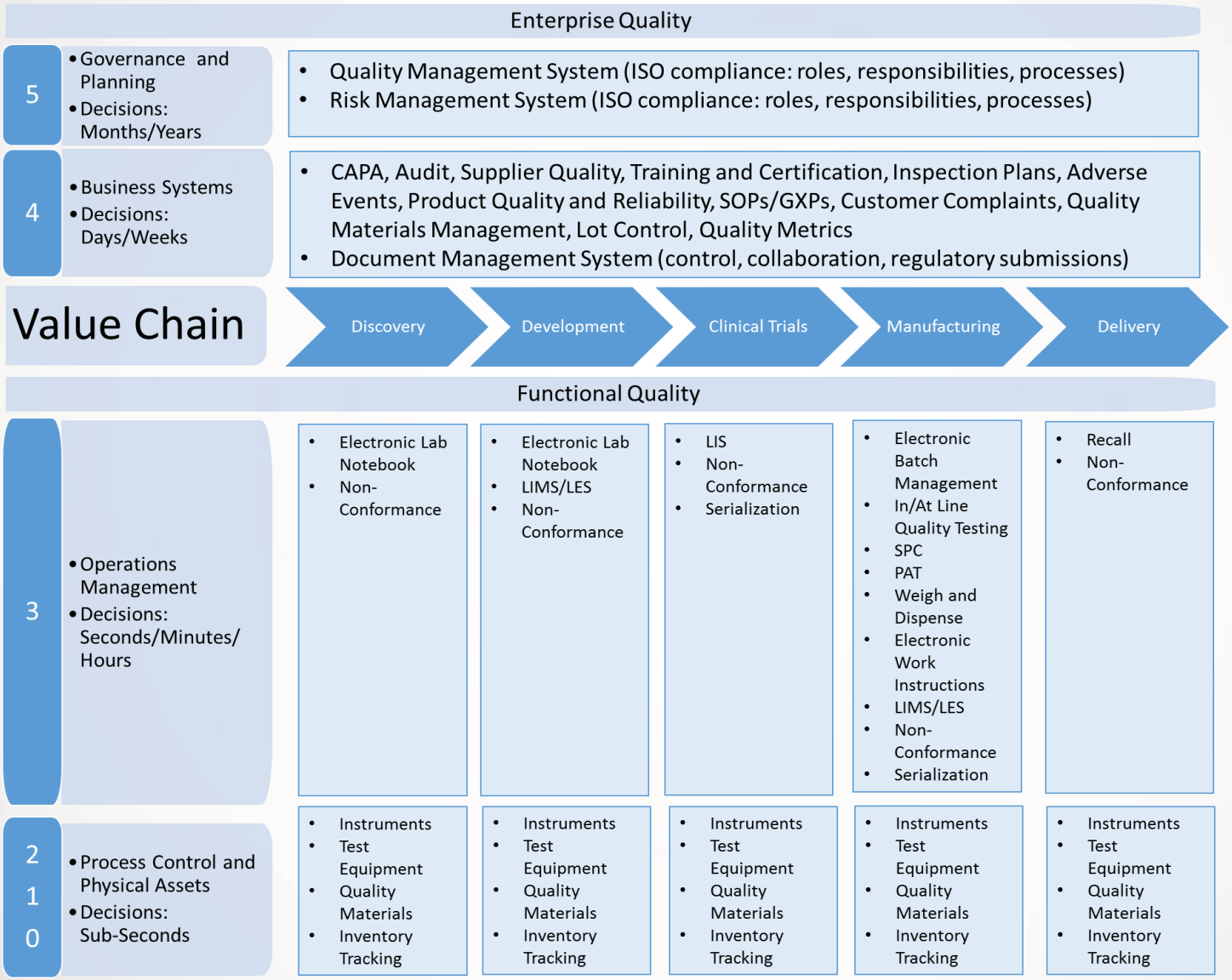
New Surveys Launched across OpEx

- IIoT
- Metrics that Matter
- EQMS
- EHS
- Energy Management
- APM
- MOM

Enterprise Quality Management System



Total Quality Management



Quality Analytics

Quality Analytics Framework

Descriptive

- Quality, EHS, Risk, Reliability Process Performance
- Document Management Performance
- Engineering Performance
- Supplier Performance
- Manufacturing Performance
- Product Performance
- Customer Complaints
- Financials - CoQ

Diagnostic

- On Board Diagnostics
- Root Cause Analysis
- FMEA
- Risk/Fault/Safety modeling
- Reliability Engineering (Diagnostic/Testability Analysis)
- Quality Engineering (SPC)
- Simulation
- Data Mining
- Correlation
- Machine Learning
- Regression analysis
- Social Network Analysis
- Sentiment Analysis

Predictive

- Trend Analysis
- Reliability Engineering (prediction, physics of failure, reliability growth)
- Actuarial Statistics
- Residual Life
- Simulation
- Machine Learning
- Regression analysis
- Social Network Analysis
- Sentiment Analysis

Prescriptive

- Mash-Up Analytics
  - Financial
  - Real-Time Visibility
  - Predictive
- Extended data model
  - Service Actions
  - Logistics
  - Suppliers

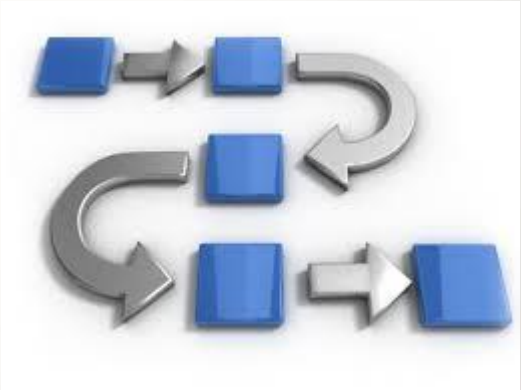
Quality Maturity

Quality Management Research Vision: Uncovering New Insights and Best Practices

- Leadership: How does quality feature in the boardroom today?
- The Business Case for Quality: the Value of Good Quality versus the Cost of Quality
- Leading Organizational Challenges that prevent Quality Management success
- Creating a Quality Culture: Successful approaches to moving from policing to a true culture of quality
- Breaking down traditional quality silos: How and why
- Is control a good enough reason to not de-centralize quality management responsibility?
- Key characteristics of the next generation Quality Manager

Quality Management Research Vision: Uncovering New Insights and Best Practices

- What are opportunities for Digital Transformation in Quality Management?
- Enabling excellent, secure supplier quality management partnerships
- NPI: Best practices in design for quality
- Is risk management the best approach to prioritize and prevent quality issues?
- Best practices in upgrading to ISO 9001: 2015
- How do organizations deploy risk-based thinking across functions?
- Embedding business /accounting into quality processes
- Why aren't all quality processes created equal?
- How do organizations change from audit for compliance to audit for opportunity?
- What leading indicators should result from process borne intelligence?



Quality Management Research Vision: Uncovering New Insights and Best Practices

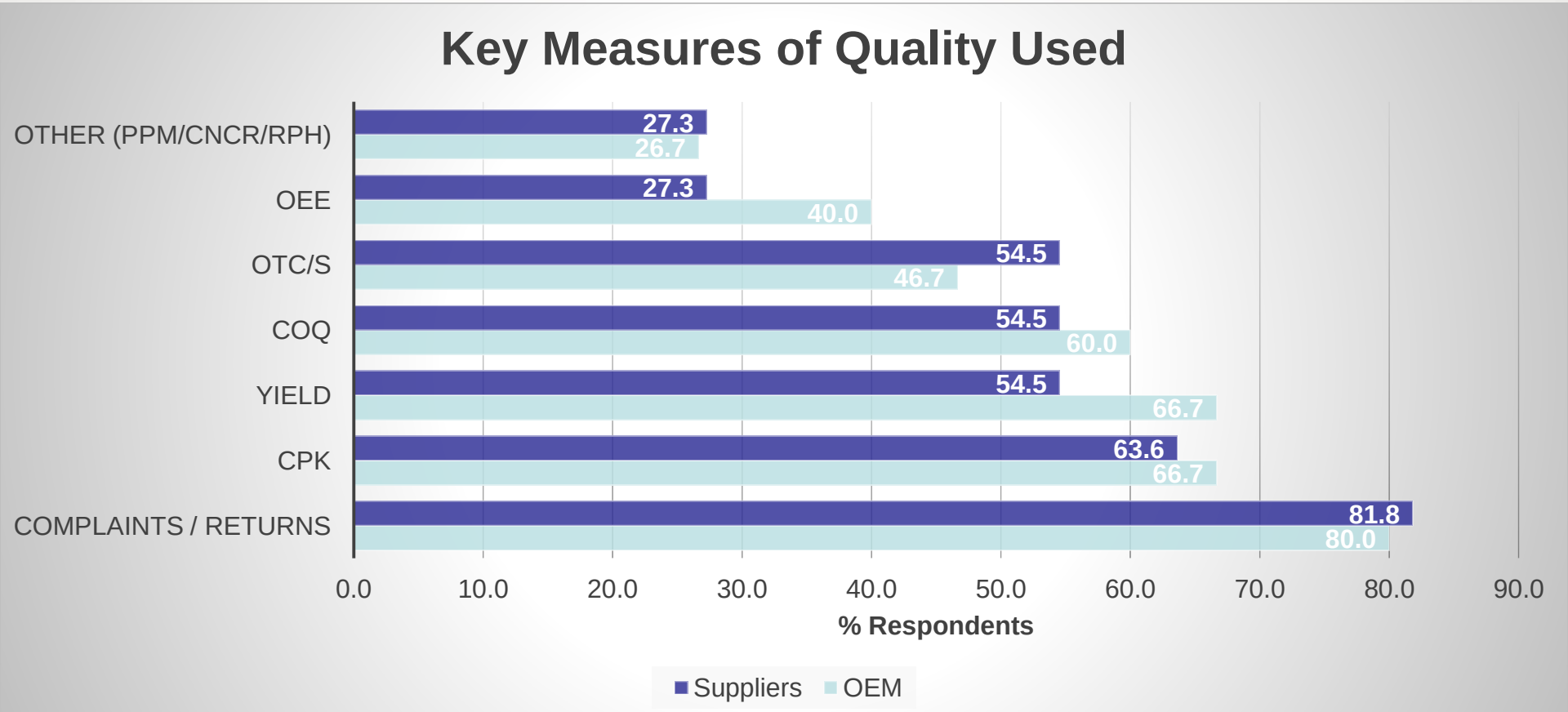
- How does IoT impact quality management?
- How to support cross-platform closed loop quality
- What technology should be deployed to provide organization wide risk management?
- What is EQMS' importance and role in the full technology stack from shop floor to enterprise risk?
- What opportunities does a Q, EHS&S integrated technology approach offer?
- What are critical elements and required integration for effective closed loop quality?
- Challenges and benefits to extending closed loop quality outside the organization to suppliers and customers
- Risk-based thinking demands a framework, can EQMS rise to the challenge?
- What is the importance and role of LIMS in quality management?

Quality Management Research Vision: Pillars of Operational Excellence & Vision – Integration Reports

- Quality Management and Operational Excellence
- Sound Business = Quality & Industry Disruption
- EQMS Platforms and EHS&S
- Integration state of the nation – roadmap to EQMS maturity (from ad-hoc to proactive)
- Age of Analytics – data & tools, now what?

Quality Research Vision: Leading Indicators

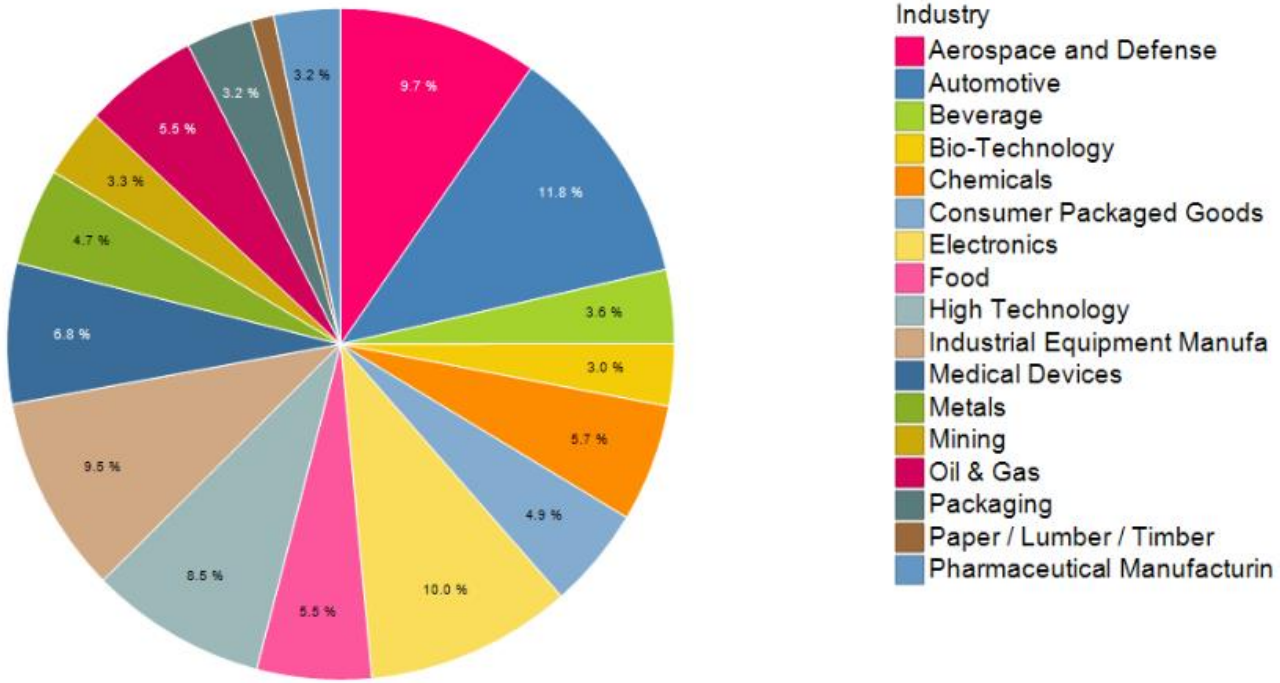
Reports and blogs concerning: Risk driven analytics, Ad-hoc monitoring of quality metrics to proactive indicators, What constitutes good leading indicators, and Interesting Survey Results



Quality Research: 2016 Vertical Industry Focus

Will take a closer look at specific Quality strategies and case studies in the following industries:

- Food & Beverage
- Medical Devices/ Pharmaceuticals
- Consumer Goods
- Automotive
- Aerospace & Defense
- Service Industries



Quality: 2016 Integrated Campaign 1

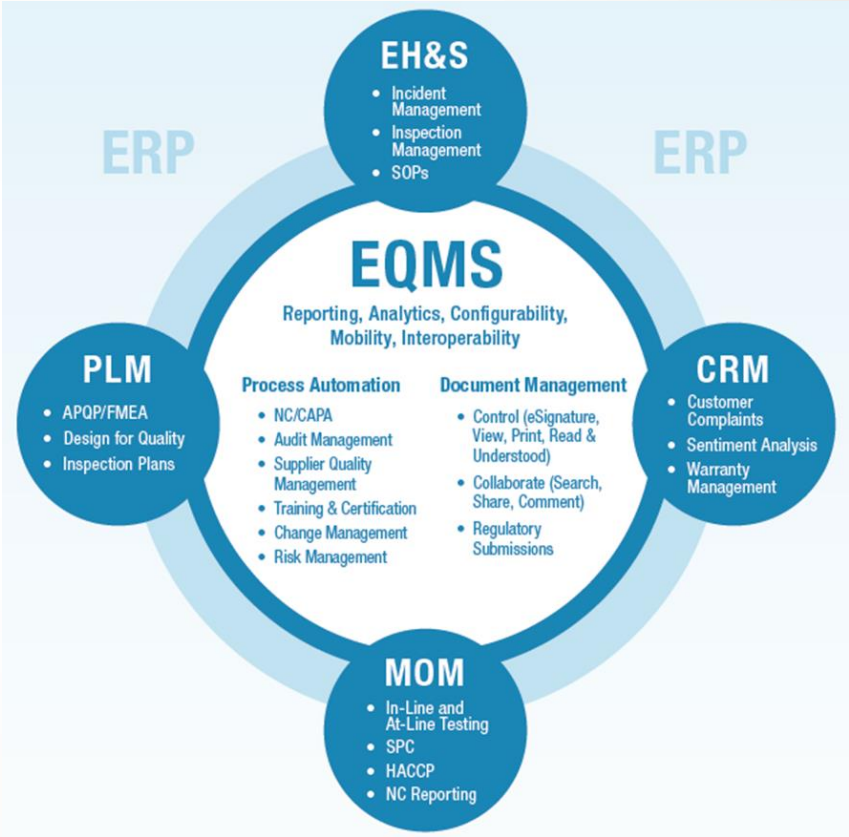
Achieving Boardroom Priority: The Business Case for Quality and Risk

- The business case for quality:
  - Quantifying the Value of Good Quality.
  - Going beyond the Cost of Quality to determine the impact of proactively managing quality and risk on business success.
  - What language, best practices, indicators and technology make it viable for quality to be identified as a core contributor to business value
- Leadership in Quality.
  - The role that active board-level Quality leadership has on brand value and business success
  - Best uses of technology to both elevate quality leadership and broaden quality participants

Quality: 2016 Integrated Campaign 2

Global State of EQMS

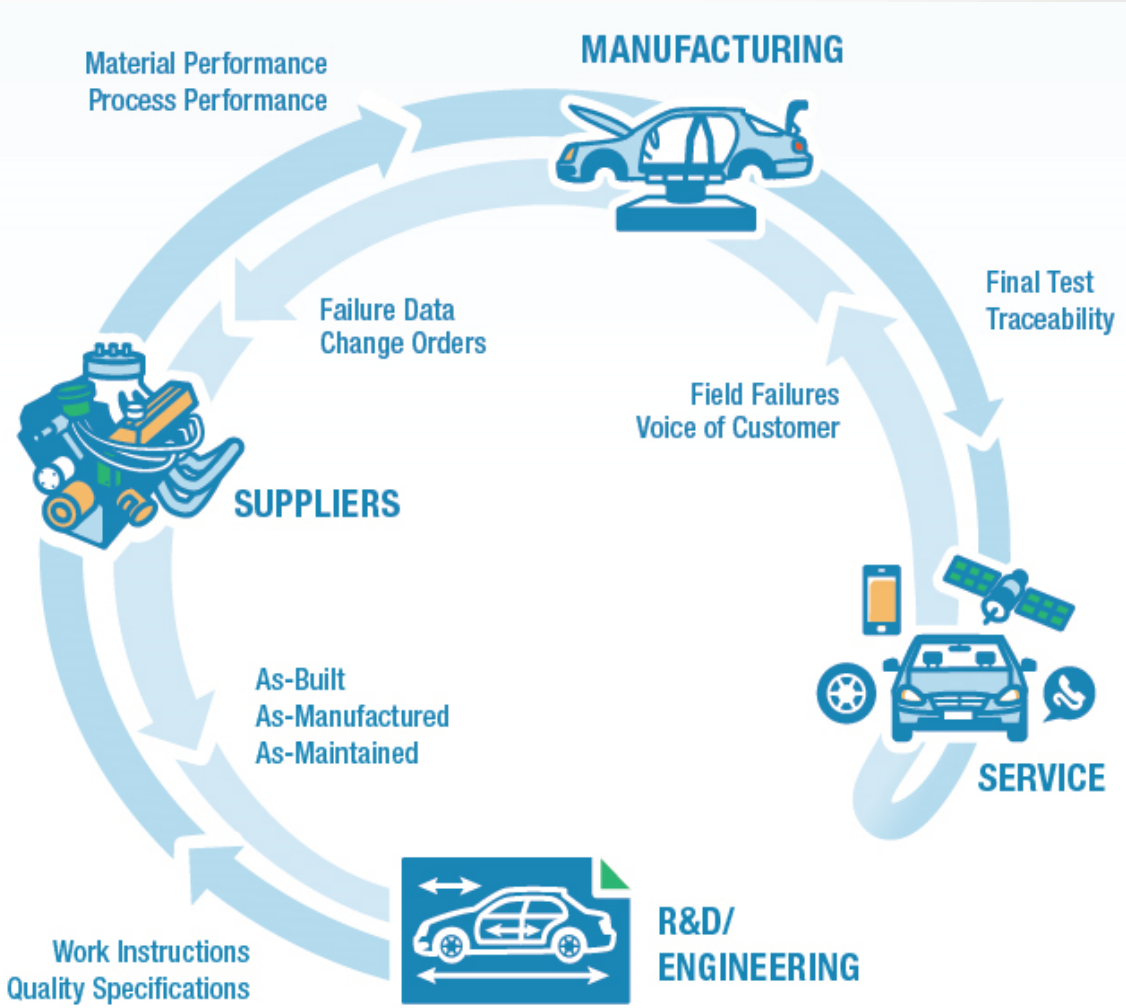
- Current state of EQMS across batch manufacturing, discrete manufacturing and life sciences industries.
- Provides a historical perspective and trend analysis based on data gathered from 2012-2016, used to identify shifts in quality best practices and adoption of specific EQMS functionality
- Identifies impact of adoption to tangible improvements, as well as selecting the appropriate KPIs for measuring quality



Quality: 2016 Integrated Campaign 3

Supplier Quality Management (SQM)

- Differentiating end product quality through supplier quality management
- How does a supplier go beyond compliance and excel in the customer's (OEM's) eyes
- Technology and the supplier quality management partnership
- What are vendors doing to ensure SQM security for both parties.
- Impact of participating in many and disparate supplier quality management portals and tools.



Quality: 2016 Integrated Campaign 4

Quality Management and IIoT

- The IoT offers the potential for a vast array of sensor and other in-field data as intelligence for engineering, reliability and performance purposes. How does a quality leader prepare for this in their organizations.
- More data should mean better evidence-based decision making how does this impact risk management and help drive proactive quality behavior?

Thank You!