Zero Defect Mentality
Unlocking lasting value through quality transformation

Alex Eksir, VP, Q&MS
Amy Gowder, VP, Supply Chain Management

LOCKHEED MARTIN
We never forget who we’re working for®
LOCKHEED MARTIN AERONAUTICS

• 25,000+ employees
• Nine locations
• Global partnerships

Co-Production

Italy
Greece
Turkey
S Korea
Japan
India
Australia
DISTRIBUTED SUPPLIER NETWORK

- 1,800+ Suppliers
- 24 Countries
- 70% of COGS is sourced material
OUR DOD ENVIRONMENT

Government budgets are shrinking

Number of US DOD programs are declining

Our customers' needs and expectations remain high

Accelerating affordability and performing is critical to our customer
Let’s Think Analytically; How to Achieve Lasting Value?

Reliability (MTBF) = \( f \) (Technical Solution) \( \times \) (Robust Process)

Zero Defect Results = \( f \) (Reliability) \( \times \) (Personal Accountability)

Lasting Value = \( f \) (Zero Defect Results) \( \times \) (Continuous Improvement)
Let’s Think Analytically; How to Achieve Lasting Value?

Reliability (MTBF) = \( f \) (Technical Solution) \( \times \) (Robust Process)

Zero Defect Results = \( f \) (Reliability) \( \times \) (Personal Accountability)

Lasting Value = \( f \) (Zero Defect Results) \( \times \) (Continuous Improvement)

\( Y = f(X) \) ….what factors enable us to achieve lasting value?

\( Y = \text{Lasting Value} \)

\( X1 = \text{People: Domain and Behavioral Competencies} \)
\( X2 = \text{Organizational Systems and Structure} \)
\( X3 = \text{Customer Intimacy} \)
\( X4 = \text{Innovative Solution} \)
INVESTING FOR SUSTAINED QUALITY IMPROVEMENT

People

Organizational Systems & Structure

Customer Intimacy

Innovation

Investments are critical to achieve Zero Defect performance

BUILDING BLOCKS THAT DELIVER ZERO-DEFECT PRODUCTS & SERVICES

Talent Acquisition
Talent Development
Knowledge Retention
Results Based Reward
Empowerment
Ownership
Connection

Vision, Values,
Mission & Goals
QMS / CMMi
Lean / Six Sigma
PM Process
Regulations
Security / EH&S

Customer Needs
End-Users
Partners
Align Suppliers
Community

Error Proofing
Technology Roadmap
Sustainability
Modeling & Simulation
Product Dev Model
Ideas Program
Supplier Innovations

Copyright 2016, Lockheed Martin Corporation. All rights reserved.
DELCERRING QUALITY TO DEFENSE INDUSTRY CUSTOMERS

INVESTMENT AREAS  EXECUTION  OUTCOMES

People
Org Sys & Struc
Customer Relations
Innovation

Program Management
Zero Defect Performance
Lasting Value

Lessons Learned

Results Are Measured at Business, Programs, and Individual Levels
ACHIEVE ZERO DEFECT RESULTS

1. Start with defining customer value
2. Identify the right investments
3. Align structures, processes, organizations
4. Innovate relentlessly
5. Measure results and insist on continuous improvement

F-35 IS WINNING THE WAR ON DEFECTS

• 2009-2011 internal defect rates were high, trending flat
• 2011-2015 implementation of “War on Defects” strategy and focused continuous improvement
• 2016 continued momentum yielding high return on investments in people, innovation

96% Reduction of Defects Delivered Over 5 Years (OPQL)
SUPPLIERS ARE OWNING ZERO DEFECT RESULTS

• 2015: Lockheed Martin identified a major supplier with unacceptable, systemic defects
  – Collaboration with supplier led to development of a zero defect strategy
  – Investments made in customer intimacy, org structure, and innovative process control

• 2016: culture of ownership and lasting value evidenced by measured results
Thank You!

Your opinion is important to us! Please take a moment to complete the survey using the conference mobile app.

Session: TP/10
Zero Defect Mentality
Alex Eksir / Amy Gowder