



Zero Defect Mentality

Unlocking lasting value through
quality transformation

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LOCKHEED MARTIN

We never forget who we're working for®



ZERO DEFECT MENTALITY



Unlocking Lasting Value Through Quality Transformation



Presented by:
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LOCKHEED MARTIN AERONAUTICS



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



AERONAUTICS PORTFOLIO



Strike and ISR



U-2



P-3



UAS



Fighter/Trainer



F-35 CV



F-35 CTOL



F-35 STOVL



F-16



F-22



**T-50
Trainer**

Air Mobility



C-130J



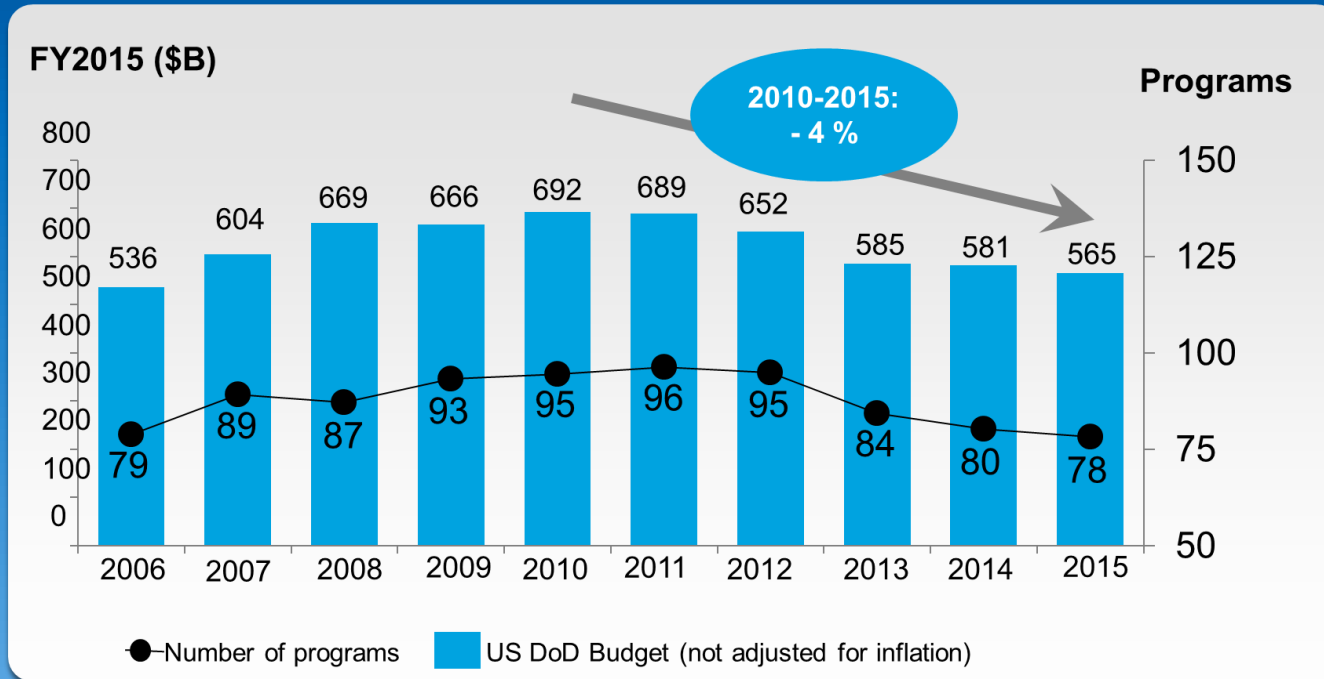
C-5

DISTRIBUTED SUPPLIER NETWORK

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



OUR DOD ENVIRONMENT



Government budgets are shrinking



Our customers' needs and expectations remain high



Number of US DOD programs are declining



Accelerating affordability and performing is critical to our customer

DELIVERING LASTING VALUE



Let's Think Analytically; How to Achieve Lasting Value?

Reliability (MTBF) = f (Technical Solution) x (Robust Process)

Zero Defect Results = f (Reliability) x (Personal Accountability)

Lasting Value = f (Zero Defect Results) x (Continuous Improvement)

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$Y = f(X)$ what factors enable us to achieve
lasting value?

Y = Lasting Value

X1 = People: Domain and Behavioral Competencies

X2 = Organizational Systems and Structure

X3 = Customer Intimacy

X4 = Innovative Solution

INVESTING FOR SUSTAINED QUALITY IMPROVEMENT



BUILDING BLOCKS

THAT DELIVER ZERO-DEFECT
PRODUCTS & SERVICES

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

People

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

Organizational
Systems &
Structure

ZERO
DEFECT
PERFORMANCE

Customer
Intimacy

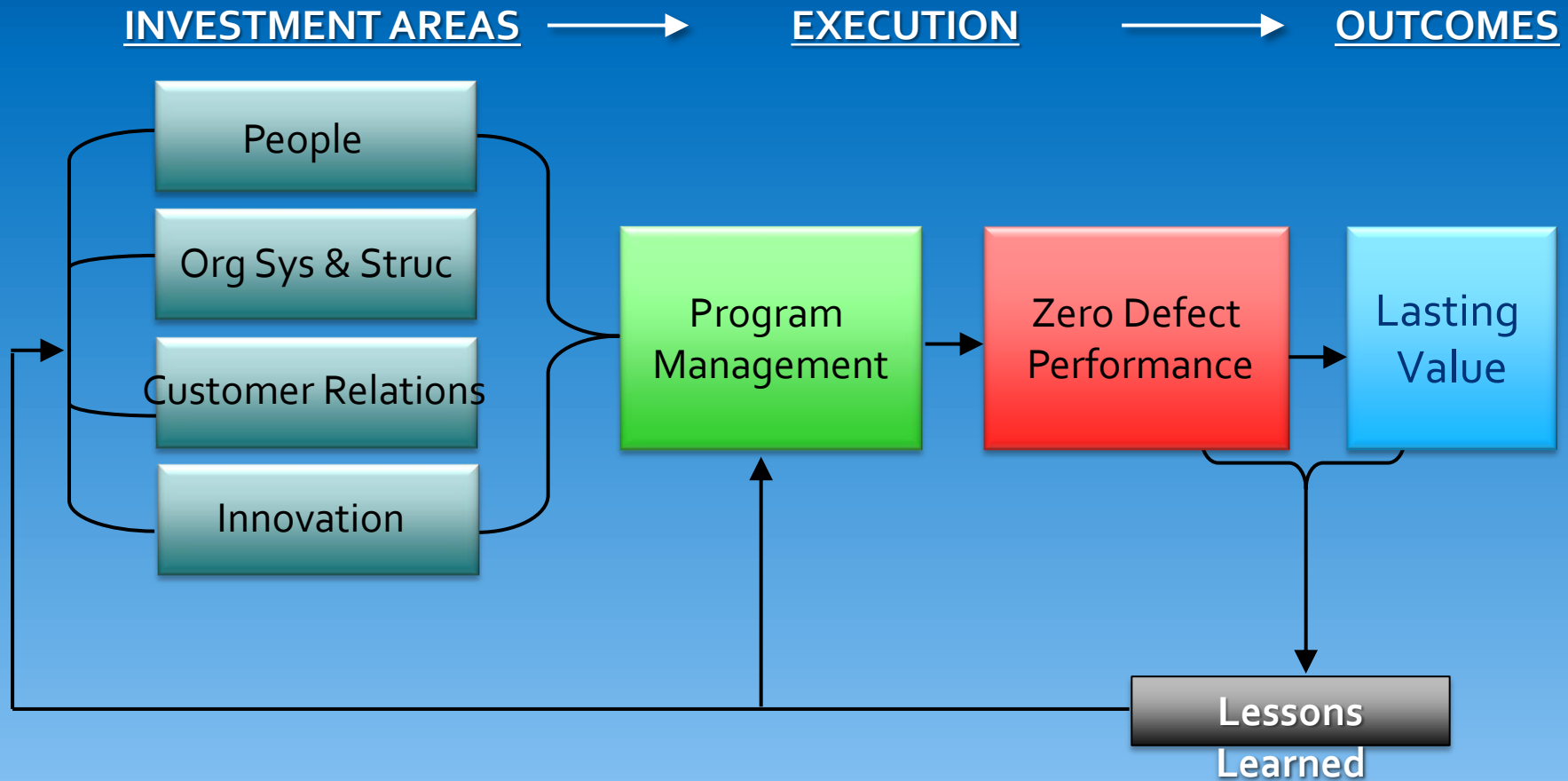
Customer Needs
End-Users
Partners
Align Suppliers
Community

Innovation

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

Investments are critical to achieve Zero Defect
performance

DELIVERING QUALITY TO DEFENSE INDUSTRY CUSTOMERS



Results Are Measured at Business, Programs, and Individual
Levels

ACHIEVE ZERO DEFECT RESULTS



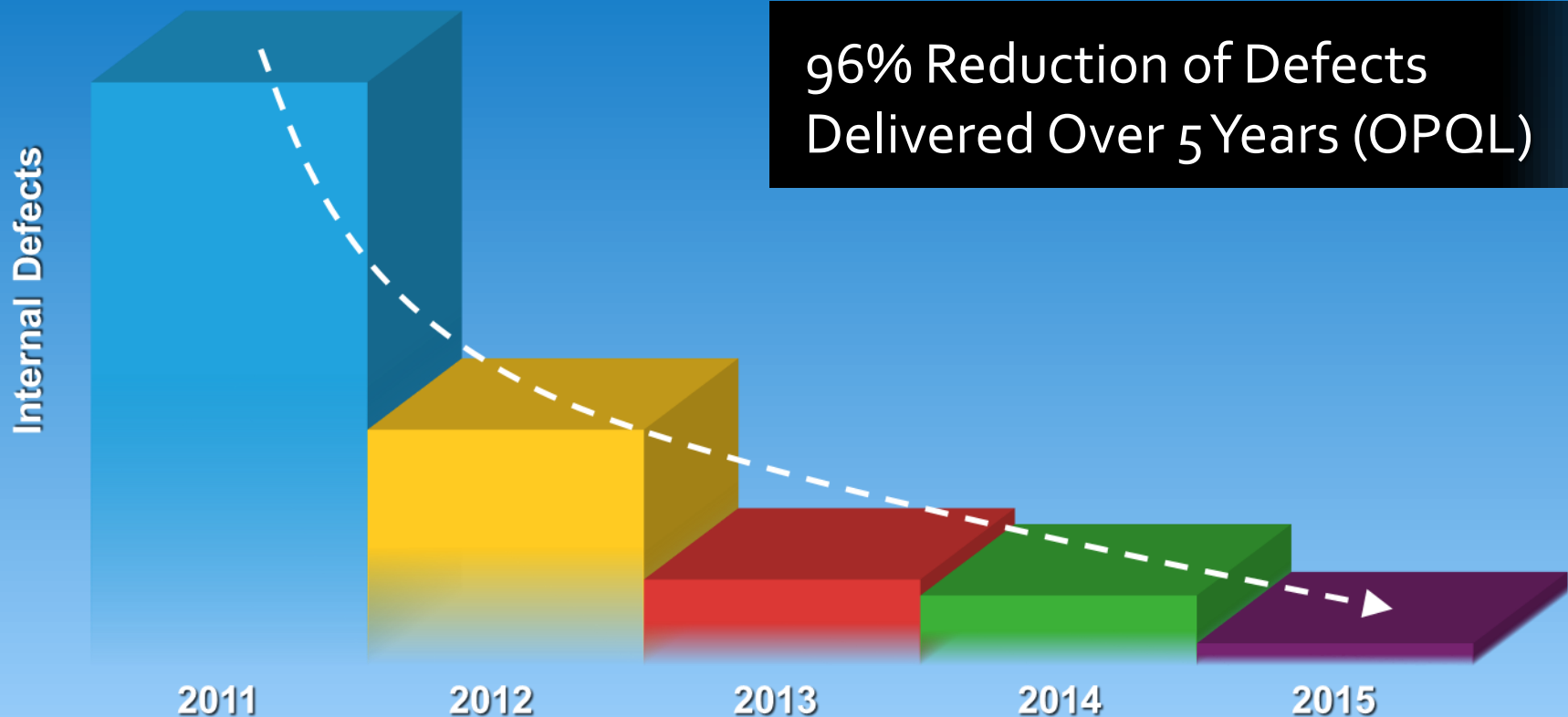
1. Start with defining customer value
2. Identify the right investments
3. Align structures, processes, organizations
4. Innovate relentlessly
5. Measure results and insist on continuous improvement

Model published in the Juran Quality Handbook 6th ed.
Chapter 25

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



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

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Alex Eksir / Amy Gowder

