Northrop Grumman Corporation

Overview Slides

Updated: 2/10/14

THE VALUE OF PERFORMANCE.

NORTHROP GRUMMAN

Northrop Grumman Today

- Leading global security company

- $24.7 billion sales in 2013

- $37 billion total backlog

- Leading capabilities in:

  - Unmanned Systems

  - Cyber

  - C4ISR

  - Logistics

Focus on Performance

Four Operating Sectors at a Glance

Aerospace Systems

Airborne Ground Surveillance / C2

C4ISR

Directed Energy Systems

Electronic Combat Operations

Environmental & Space Science Satellite Systems

Global / Theater Strike Systems

ISR Satellite Systems

Large Scale Systems Integration

MILSATCOM Systems

Missile Defense Satellite Systems

Naval BMC2

Strategic Space Systems

Unmanned Systems

Electronic Systems

Air Defense Systems

C4ISR Networked Systems

EO/IR Targeting & Surveillance

Marine & Undersea Systems

Navigation & Positioning Systems

Propulsion & Power Generation

Radar Sensors & Systems

RF/IR Countermeasures

Space Sensors

Information Systems

Command & Control Systems

Communications

Cyber

Enterprise Systems and Security
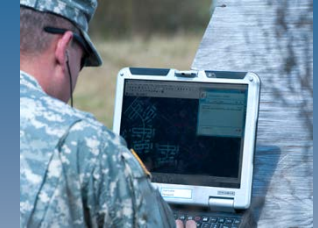
Federal, State/Local & Commercial

Health IT

Homeland Security

Intelligence

Intelligence, Surveillance & Reconnaissance Systems

IT/Network Outsourcing

Technical Services

Aircraft Subsystem/Component Sustainment & Modernization

Aircraft System/Platform Sustainment & Modernization

Defense and Government Services

Ground Vehicle Reconstitution

Integrated Logistics and Modernization

Irregular Warfare/Quick Reaction Capability

Live, Virtual and Constructive Domains

Nuclear Security Services

Technical and Operational Training Support

Training Solutions

Aerospace Systems

- Strong Focus On Values and Performance
  - Leadership And Ethics
  - Program Performance And Customer Satisfaction
  - Affordable Cost Structure And Innovation
  - Engaged Work Force
- $10 Billion Sales 2012
- Systems Prime
  - Unmanned Autonomous Systems
  - Manned Weapon Systems
  - Space (National, Military, and Civil)
  - Laser Systems
- 22,000 Employees

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18 Years of Knowledge Management Solutions

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| 1995 | 2000 | 2010 | 2014 |

People Solutions

- 1st Company Wide KM Summit
- Engineering Skills Mgmt
- Corp KM Council
- APQC Benchmark Studies
- 1st Division Level KM Team
- Manager CoP
- Program Learning Process
- Systems Thinking Integration

Tools Solutions

- Xref
- Livelink
- 1st Community of Practice
- PeopleNet
- How do I
- Share Center & Search Engine
- Lessons Management System
- Sentinel Alert System
- Knowledge and Talent Utilization

Change Leaders

Pockets of People Interested in KM → Formal KM Teams → Many Leading: In the Language and Thinking of Leadership

Change Drivers

- Consolidation
- Integration
- Workforce Demographics
- Technology
- Affordability

Approved for Public Release: NGAS Case 13-0507, 3/14/13

A High Performance Organization

Challenges

- Collaboration
  - Solving problems
  - Applying the knowledge of the company
  - Building people to people networks

- Affordability and Innovation
  - Doing more without more - game changing solutions
  - Lowest price, technically acceptable

- Performance
  - Deliver as promised on cost, schedule and quality
  - Don't be a lame duck in a declining defense budget environment

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Program Learning Process

- Process emphasizes **program events – big and small:**

  - Before: **working lessons review/application into formal processes** (example: FRR checklist)

  - **Relevant lessons are applied before/during event**

  - After: **new lessons are discussed** and drafted in the LMS, a sector tool

  - After: **program approves lessons** for technical accuracy & **publishes**

  - **Complete loop: lessons are shared within and between programs for review/application before next event**
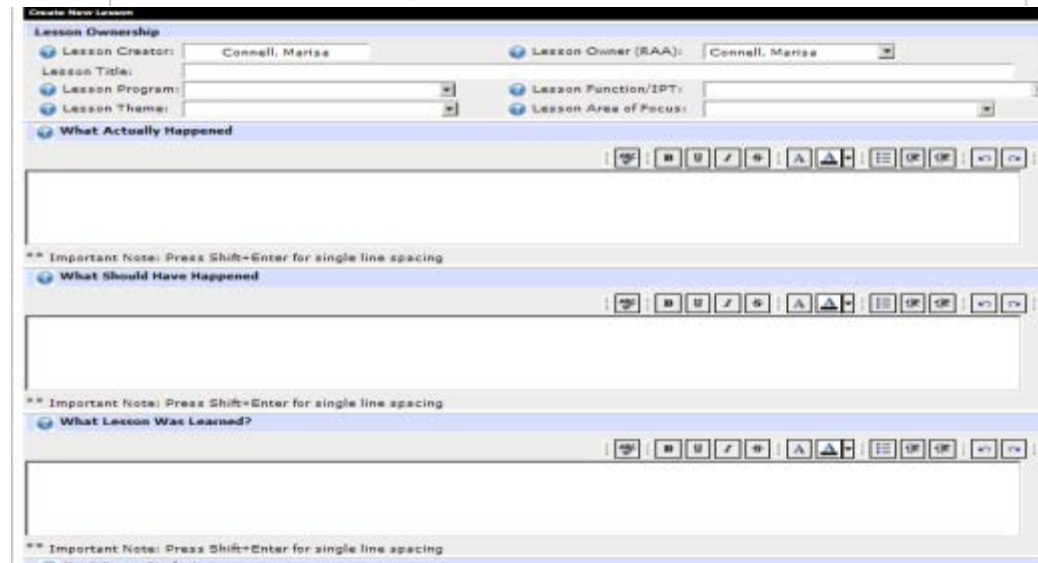

Formal & Informal Review
(SRR, PDR, CDR, FRR, TRR, etc.)
Team discusses applicable lessons
before next event (and documents any application in the LMS)

Round Table
Share lessons with other programs and customers

Lesson Application
(procedure updates, preventive actions, etc.)
Application documented in LMS

Review Board
Approval to publish

Lessons Entered Into the LMS

EVENT
- Milestones
- Flight Test
- Deployment
- RCCA
- Review or Audit
- Proposal
- What you do

Take 5
Quick (5 minute) lesson capture after a flight or small event (done at individual or team level)

Take 30, Take 60
Facilitated, extended (30, 60, 90 minute) lesson discussion after significant event or series of events
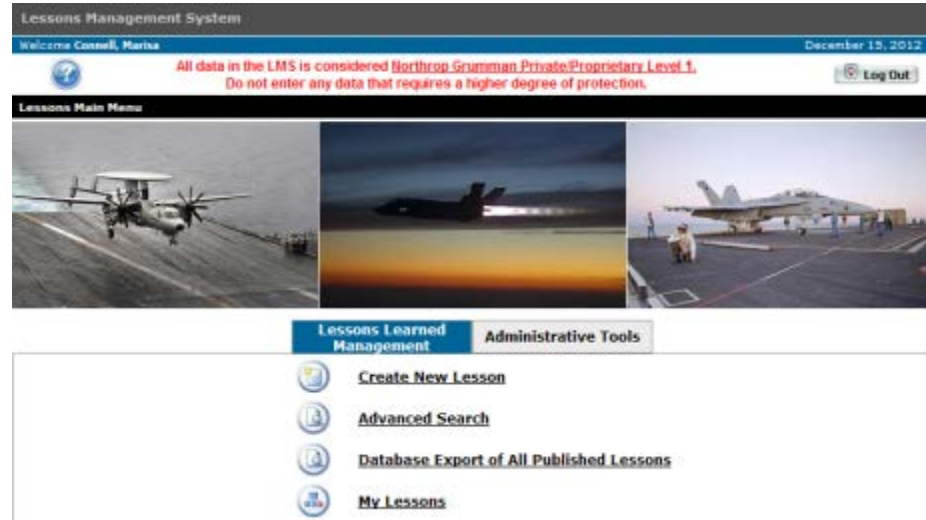
Continuous loop of learning from experience

Where We Are Headed

- Expanded implementation (moving from hundreds of users to thousands)

- Continued support for embedded, effective program (product line) learning

- Adopting the Program Learning Process as the organization's standard for learning
  - Goal: provide practical guidelines as well as underlying philosophy for the Program Learning Process
  - Concise, user-friendly
  - Steps to embed the process in any program
  - Define roles and responsibilities
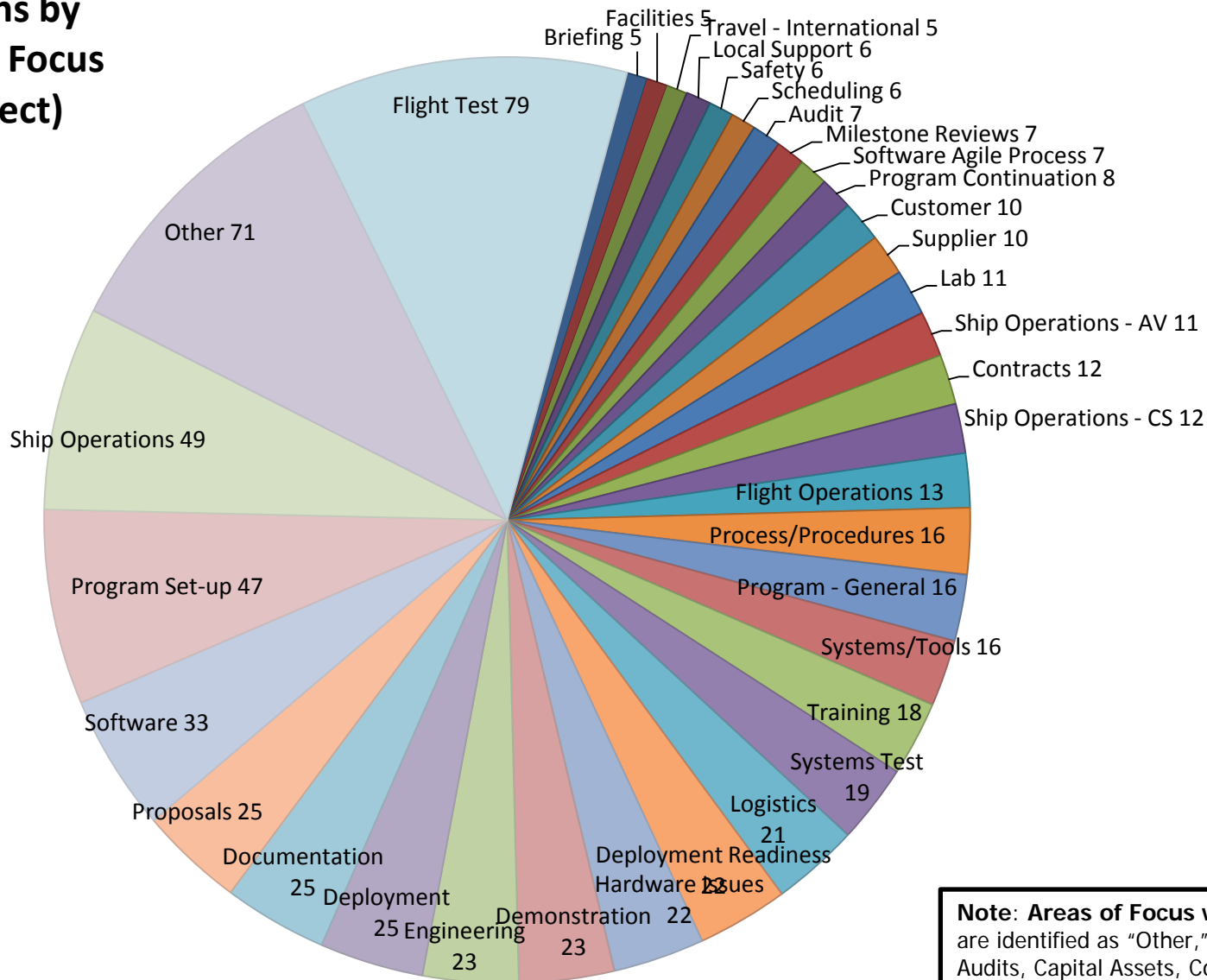 - ***Provide definitive guide for how NGAS learns***

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The LMS Resource:
Sharing lessons and best practices

- The Intranet-based Lessons Management System (LMS) is a sector standard tool that allows users from any program to **search, review & add lessons independently** in addition to in formal reviews

- Since 2010, over **700 lessons** have been published

- All lessons are searchable by **Program**, global **Theme**, more specific **Area of Focus**, **Keyword**, and more

- Anyone can draft a lesson

  – Lessons are reviewed for accuracy by program-specific Lesson Review Boards (LRBs) and then published

Who would find the LMS useful?

Lessons by Area of Focus (subject)

Pie chart — Lessons by Area of Focus (subject):

- Flight Test 79
- Other 71
- Ship Operations 49
- Program Set-up 47
- Software 33
- Proposals 25
- Documentation 25
- Deployment 25
- Engineering 23
- Demonstration 23
- Hardware Issues 22
- Deployment Readiness 22
- Logistics 21
- Systems Test 19
- Training 18
- Systems/Tools 16
- Program - General 16
- Process/Procedures 16
- Flight Operations 13
- Ship Operations - CS 12
- Contracts 12
- Ship Operations - AV 11
- Lab 11
- Supplier 10
- Customer 10
- Program Continuation 8
- Software Agile Process 7
- Milestone Reviews 7
- Audit 7
- Scheduling 6
- Safety 6
- Local Support 6
- Travel - International 5
- Facilities 5
- Briefing 5

Note: **Areas of Focus with fewer than 5 lessons** are identified as "Other," including: Affordability, Audits, Capital Assets, Cost Management, COMSEC, Program Planning, Pricing, Risk Management, Safety, Scheduling, and Systems Test.

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Getting started:
Implementing Program Learning

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1. Assign a point person: someone with a program-wide perspective and an ability to facilitate.

2. Discuss the process with your team & identify opportunities for Take 60s.

3. Facilitate Take 60s. (Use your point person as a facilitator.) Most learning occurs there but also document lessons in a user-friendly, easily accessible database.

4. Use the lessons database a resource when initiating a new project or event. Provide database exports to team leads for application before review. What have other people learned that would help you?

5. Continue to identify upcoming opportunities for Take 60s and lesson review/application.

6. Learn!

Help your team perform:
Pause to think, discuss, learn & apply