

**Achieve the
Mission**

**Decrease
Inventory**

**Decrease
Cycle Time**

**Improve
Reliability**

**Decrease
Operating
Expenses**



Naval Aviation Enterprise AIR Speed

presented to

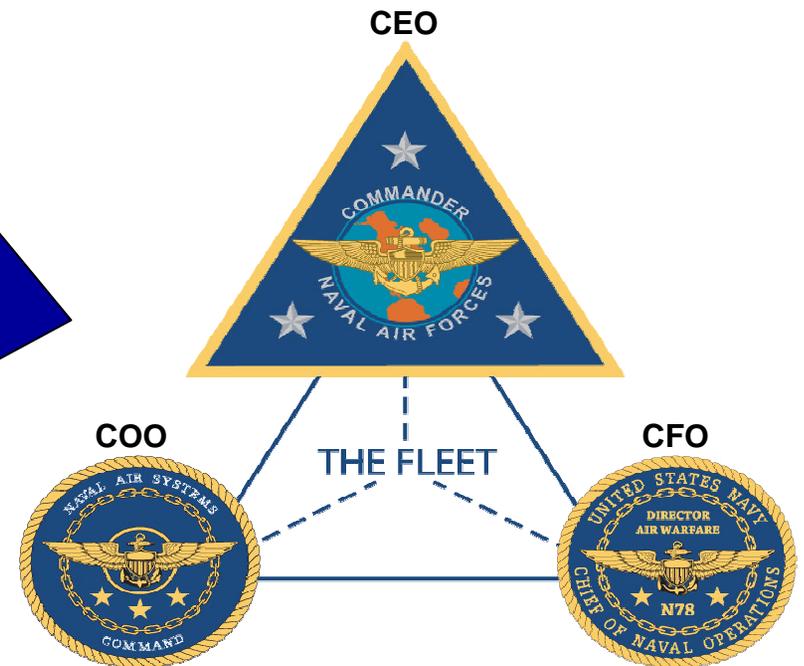
Small Business Conference

**Dale L. Moore
Deputy Corporate Deployment Champion
NAVAIR AIR Speed
29 November 2006**

Naval Aviation Enterprise LSS Journey

- *The Year is FY01....*
 - Current Readiness...\$1B Deficit
 - Future Readiness...Need More Aircraft
- *CNO Executive Board Direction....December 2000*
 - Single Process Owner for Naval Aviation
 - Fix Current Readiness
 - Afford Future Readiness

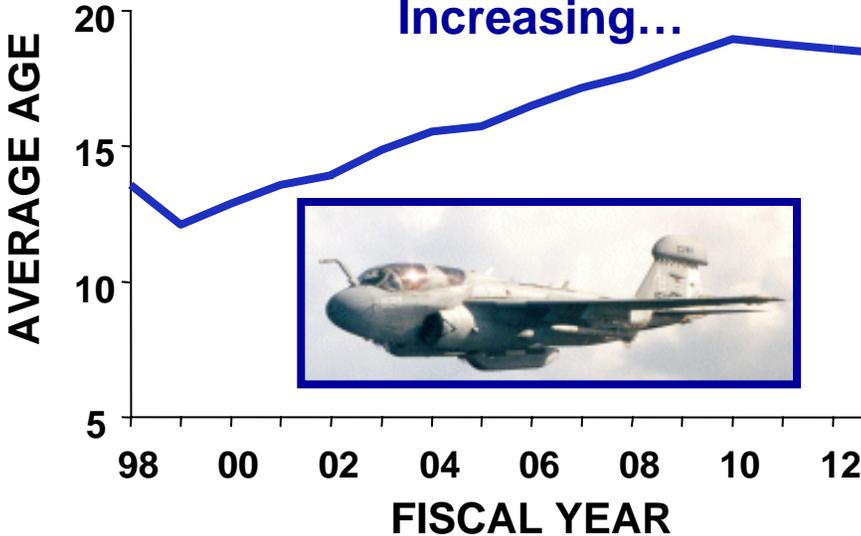
Conclusion
We Needed to Change our Behavior
to Achieve Different Outcomes.....



The Dilemma

20-year-old Aircraft Are Costly To Maintain...
Maintenance Man-hours Per Flight Hour

Increasing...



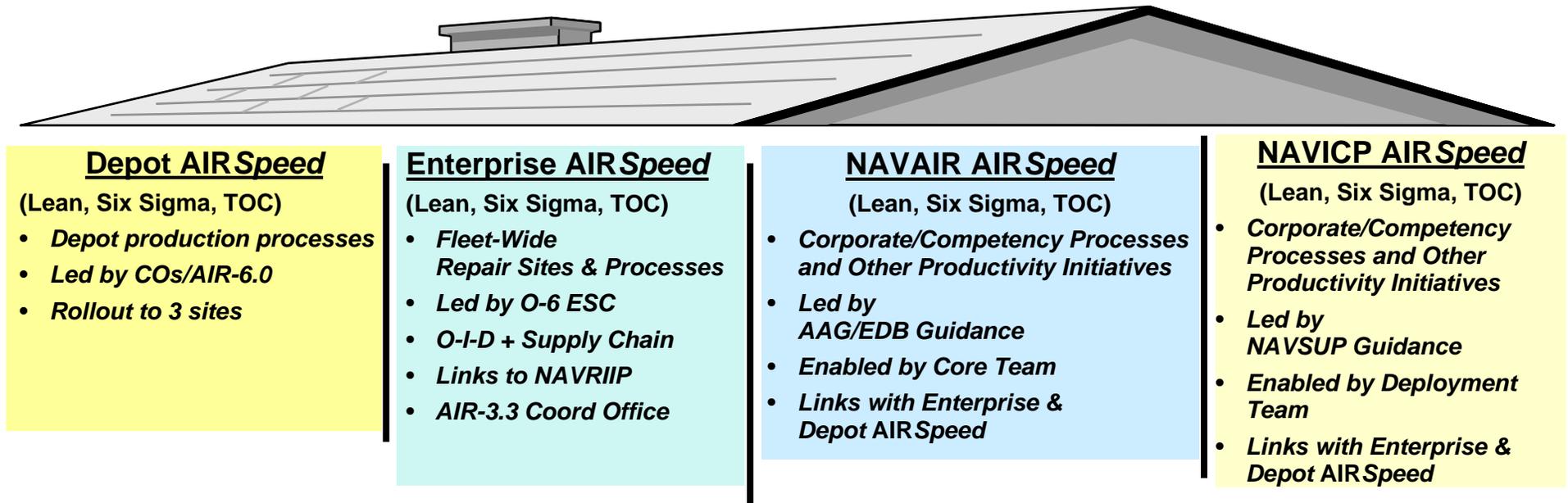
...And We Can't Afford To Buy
The Number Of New Aircraft We
Need

	FY99	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11
PB98	71	125	144	150	164								
PB99	71	119	143	154	164								
PB00		105	140	163	183	187	201						
PB01			128	130	173	177	187						
PB02				88	92	115	119	143	155				
PB03					90	85	105	147	193				
PB04						100	100	133	191	254	302		
PB05							111	134	183	238	283		
PB06								128	170	195	242	248	242

The Problem:

We Need To Buy An Average Of 200 New Aircraft Each Year To Maintain
Our Average Aircraft Age.

Naval Aviation Enterprise AIRSpeed



- There are FOUR AIRSPEED programs with One Goal and One Metric:
 - Depot AIRSPEED which began in 1999
 - Enterprise AIRSPEED which began in 2003
 - NAVAIR AIRSPEED which began in 2004
 - NAVICP AIRSPEED which began in 2005
- All four drive productivity through process improvement using industry-proven tools, and help establish a self-sustaining culture of continuous improvement.

WHERE WE HAVE BEEN

- **Industry Benchmarking completed in FY04**
 - LEI/TWI, Boeing, Lockheed Martin, GE, Raytheon
 - All Promoted Top Down Approach:
 - Champion Training for Senior Leaders
 - Blackbelt/Expert Program tied to Corporate Office
 - Pick the best & brightest for Blackbelt/Expert Training
 - Train the rest as they prepare to conduct projects
- **NAVAIR EDB approved establishment of NAVAIR AIRSpeed Core Team (May 2004)**
- **Wave's 1 - 6 Executive Champion Training Sessions Complete (Top 150+)**
 - LEI/TWI: Lean Value Stream Mapping & Transformation
 - GE: Six Sigma and Change Acceleration Process
- **The George Group competitively selected and under contract to provide comprehensive NAVAIR Lean Six Sigma Deployment & Training support (Sept 04)**
- **NAVAIR EDB approved est. of AIRSpeed Advisory Board on Oct 04**
- **NAE BOD est. Acquisition Cross Functional Team (w/ AIRSpeed)**
- **NAE BOD initiates NAE AIRSpeed "Merge" (Oct 05)**
- **NAVAIR AIRSpeed selects initial 16 in-house MBBs (Aug 06)**
- **NAVAIR AIRSpeed Launches High Impact Core Value Stream Events (Nov 06)**

WHAT WE HAVE LEARNED

- **Naval Aviation Workforce is “Pressurized”**
 - Productivity tools essential to provide relief to meet Naval Aviation enterprise goals
- **Cultural Change is Required for Transformation**
 - Quality (or Goodness) X Acceptance = Effectiveness
- **Need to make “AIRSpeed” a Corporate Leadership Value**
 - Learning Organization, Problem Solving Culture
- **How do we institutionalize AIRSpeed?**
 - Systems & Structures Must Align to Support the Effort
 - **Award Systems**
 - **Communications**
 - **Training**
 - **IT**
- **Effective Roll-out Requires (Toffler):**
 - Clear Strategy
 - Engaged Leadership
 - Motivated Workforce
 - Effective Management Tools

TYPICAL PROCESS IMPROVEMENT EXPERIENCE W/O LSS

1. Problems are not well ***“defined,”*** scoped or bounded; typically a “boil-the-ocean” or “grand slam” approach & challenges are too big and take too long to effectively tackle
2. Data gathering or ***“measurement”*** is rarely or poorly conducted around root causes of specific problems
3. Limited ***“analysis”*** tools to available
4. Limited ***“improvement”*** tools available to develop and implement desired changes
5. Little or no follow-through for institutional lock-in and ***“control”*** of required changes

LSS “DMAIC” METHODOLOGY

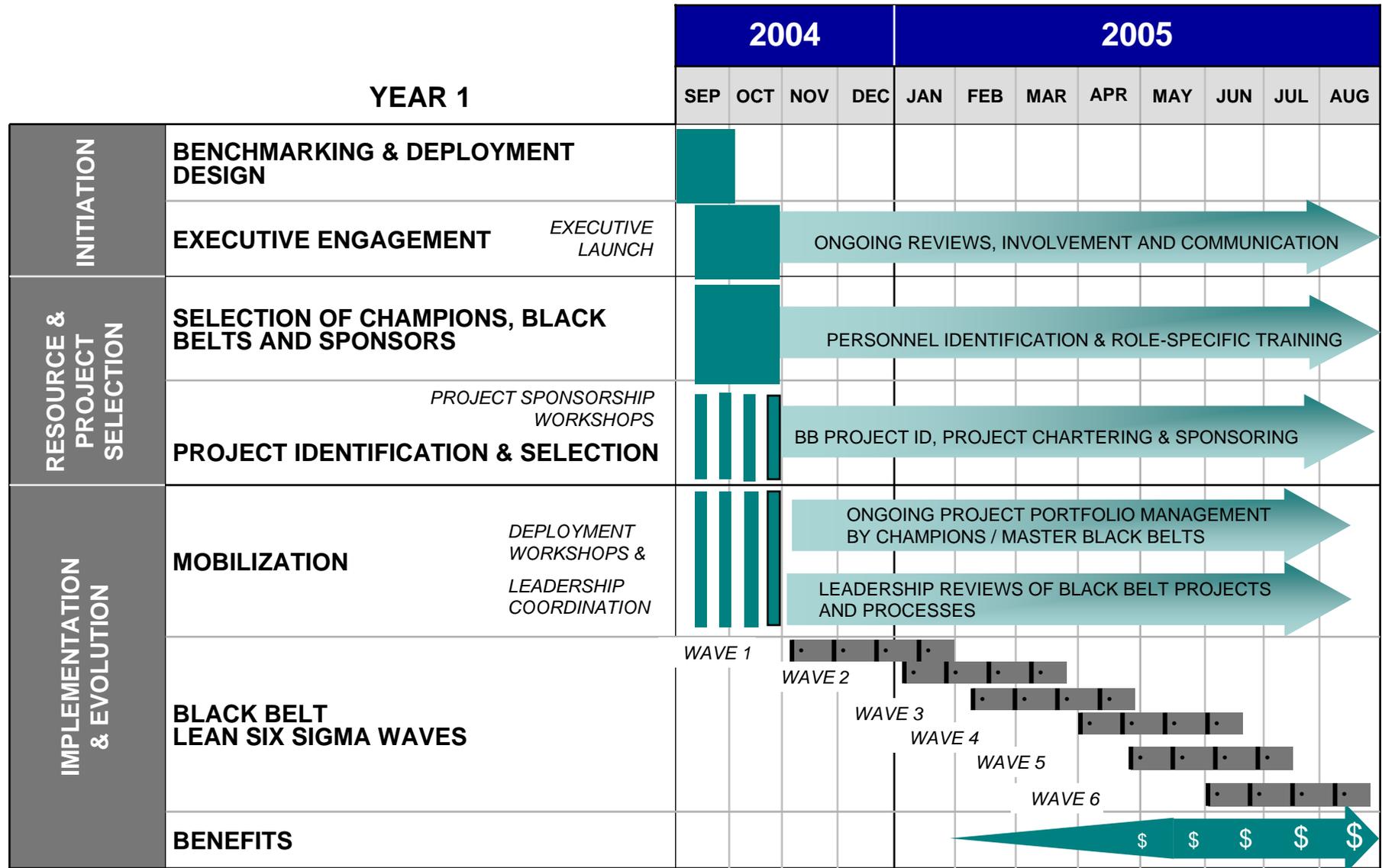
(the scientific “data driven” method to improve existing processes)

- 1. DEFINE:** Properly define, decompose and scope the problem to a manageable size for a small team to tackle
- 2. MEASURE:** Gather pertinent, useful, statistically significant data to address the specific problem
- 3. ANALYZE:** Conduct analysis on the data to understand the well-defined problem and gain insights into specific solution recommendations
- 4. IMPROVE:** Design and prototype improvements
- 5. CONTROL:** Lock-in improvements w/metrics, SOPs, Institutionalization and Change Management

WHAT WE EXPECT

- **Eliminate non-value added activities.**
- **Reduce cycle times.**
- **Improve quality and productivity.**
- **Develop a workforce with the right skills, focused on the right workload, at the right time, at the right cost, to deliver the right capability to the Warfighter.**
- ***A fundamental cultural transformation* that will help our workforce become more efficient and more productive, while facilitating the cost-wise decisions that will help us deliver Fleet aircraft ready for tasking at reduced cost.**

NAVAIR AIR Speed Implementation Process



REFERENCE: LEAN SIX SIGMA, BY MICHAEL L. GEORGE

NAVAIR AIRSpeed Roles

(Updated for FY07)

AIRSpeed Core Team

- Enables successful deployment / execution
- Develops and reports metrics
- Coordinates training
- Leads change management and internal / external cross-communication

Executive Leadership

- Owns vision, direction, integration, business results
- Leads change

Project Sponsors

- Project owner
- Implements solutions
- Owns financial results
- Part time as part of job
- Develops Project Charter

Value Stream Managers

- Manage Value Stream performance improvement
- Prioritize VS projects
- Full time assignment

Project Team Members

- Provide project-specific support
- Can be Yellow or Green Belt and includes Financial Representation
- Part time on projects

Deployment Champions

- Lead organizational performance improvement
- Prioritize projects
- Full time assignment

Green Belts

- Participate on Black Belt teams and/or lead projects
- Part time on projects

Black Belts

- Execute AIRSpeed projects
- Train and coach Project Teams
- Full-time assignment

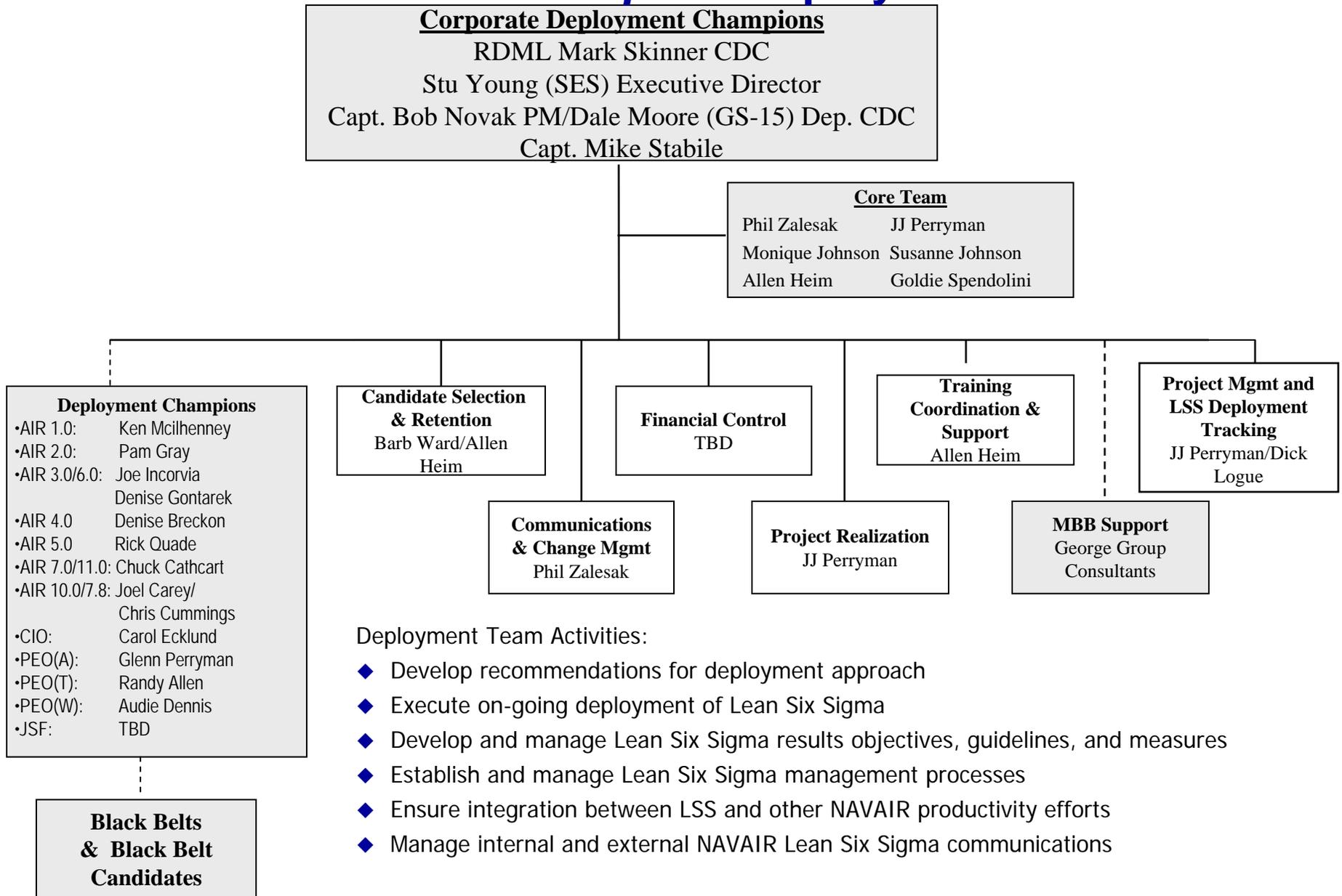
Master Black Belts

- Train Black Belts/Green Belts
- Coach Black Belts/Green Belts
- Lead Complex/Large projects
- Full-time position

All Employees

- Understand vision
- Apply concepts to their job and work area

NAVAIR AIRSpeed Deployment Team

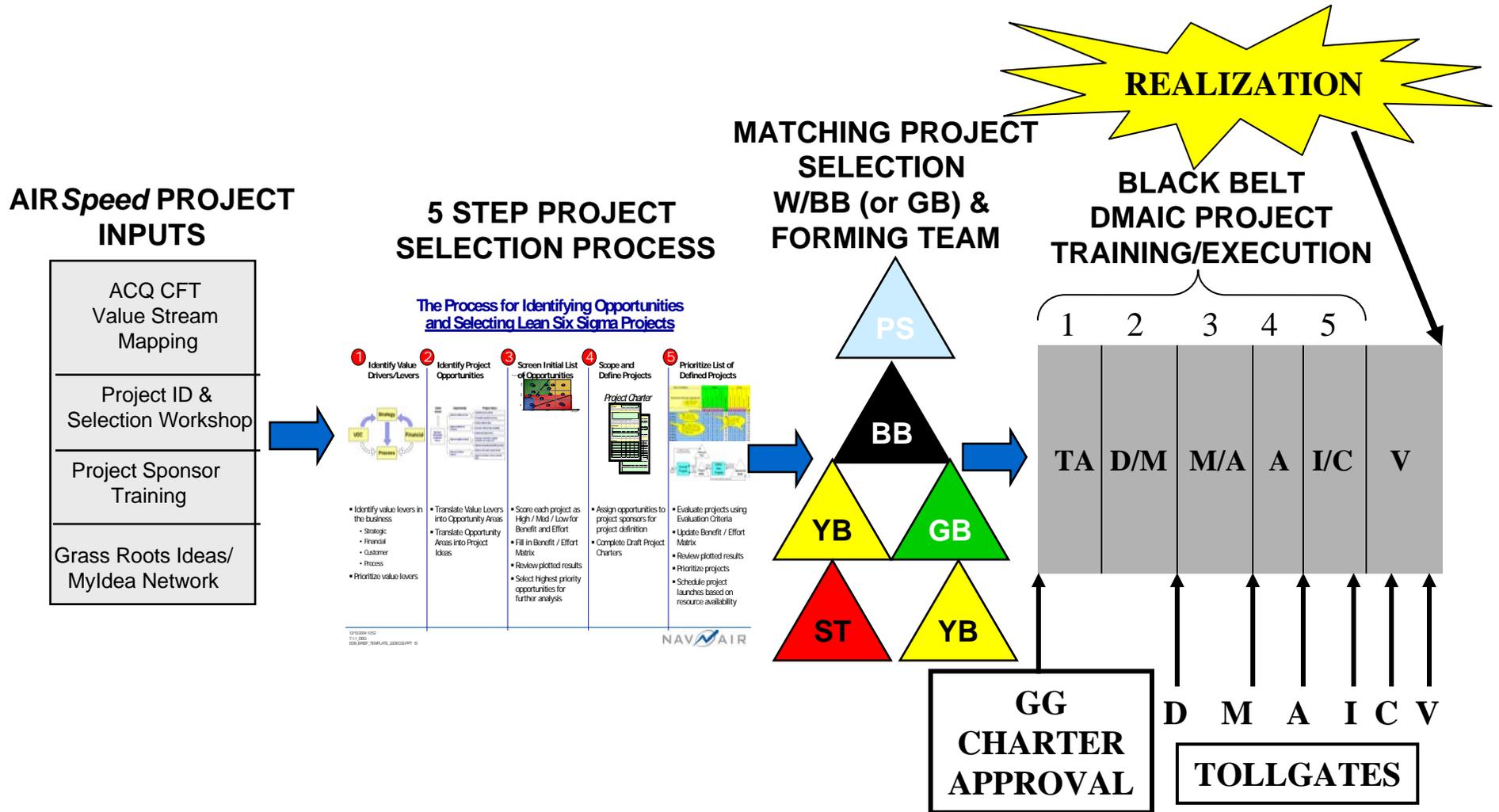


Deployment Team Activities:

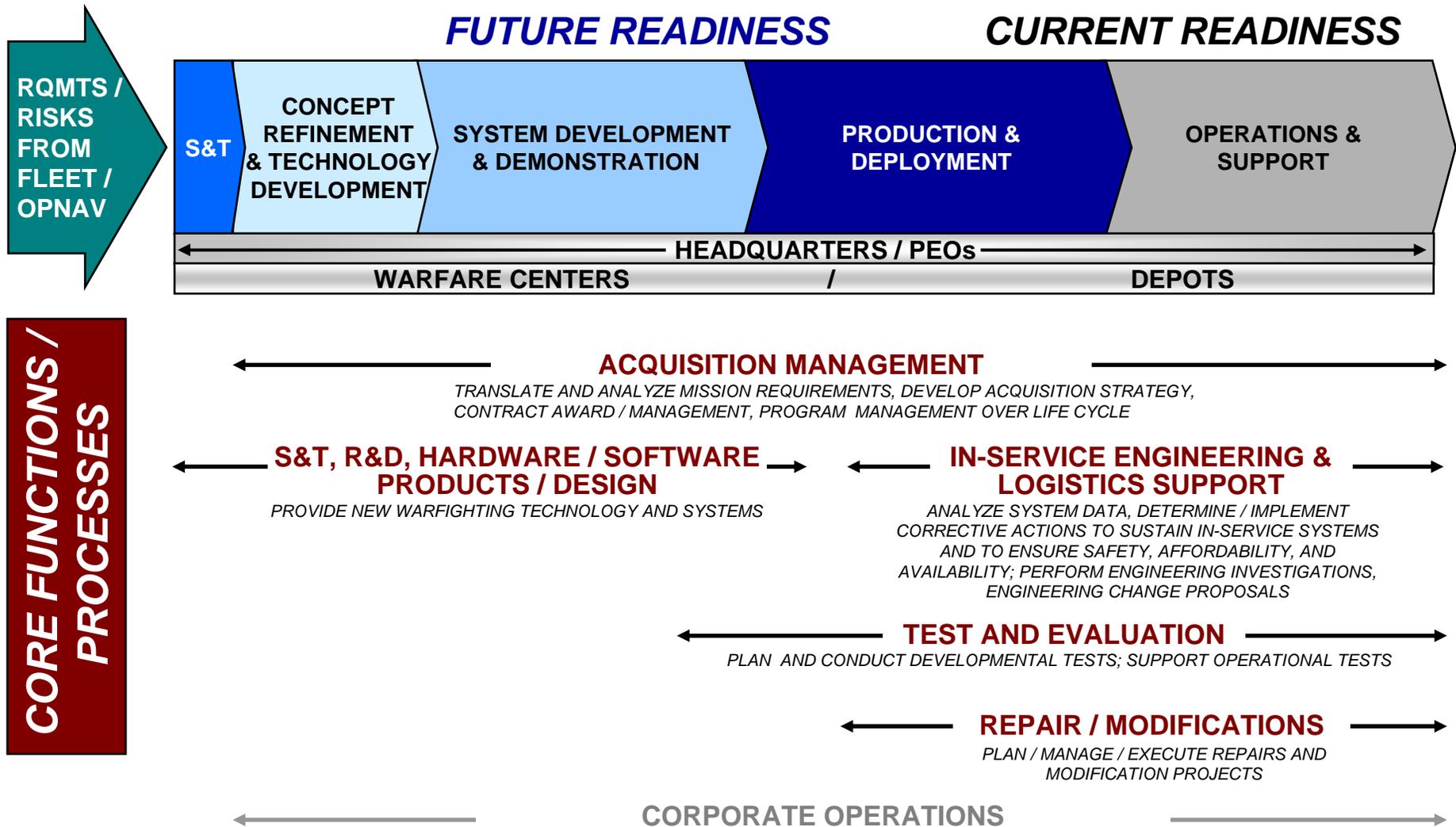
- ◆ Develop recommendations for deployment approach
- ◆ Execute on-going deployment of Lean Six Sigma
- ◆ Develop and manage Lean Six Sigma results objectives, guidelines, and measures
- ◆ Establish and manage Lean Six Sigma management processes
- ◆ Ensure integration between LSS and other NAVAIR productivity efforts
- ◆ Manage internal and external NAVAIR Lean Six Sigma communications

AIR Speed Project Development Process

Success Recipe: Right Project, Right Leader, Right Support and Right Resources

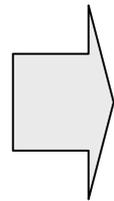
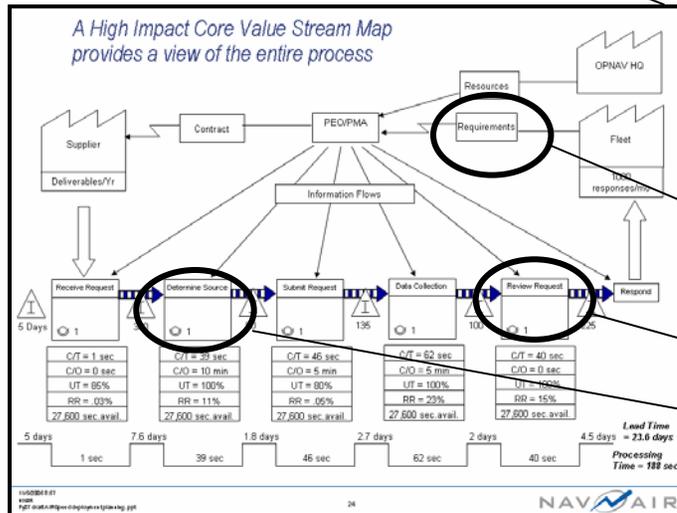


VALUE STREAM LIFE CYCLE MANAGEMENT



Leveraging High Impact Core Value Streams

- INPUTS**
- RQMTS
 - VOC
 - VOS
 - VOP
 - VOB



PID&SW & Project Cluster Target Areas

NAE Top Level Value Streams
Value Stream "X"

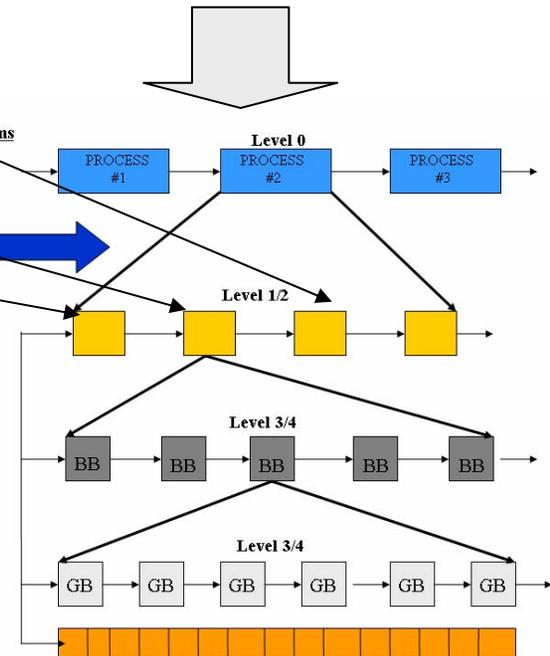
Value Streams Belong to NAE CFTs

Project Identification & Selection Workshops

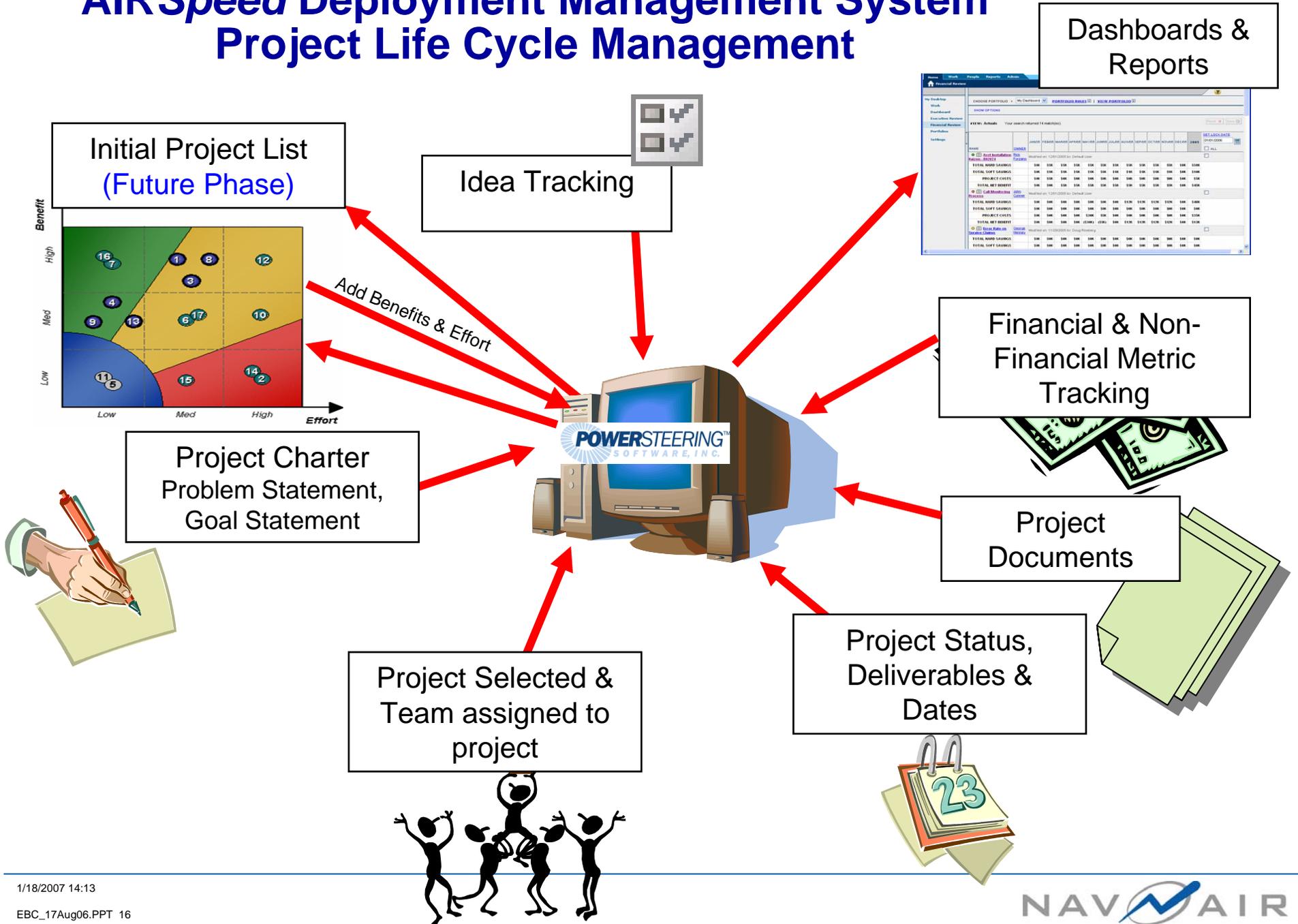
Black Belt Projects

Green Belt Projects

Kaizen Events



AIR Speed Deployment Management System Project Life Cycle Management



AIRSpeed: Where We Are Going in the Future

- **NAE AIRSpeed “Merge” – RDML Mark Skinner, Lead**
- **Permanent NAVAIR AIRSpeed Core Team to be est. 1st Qtr FY07**
- **Industry One-On-One “Top 11” Collaborative BB Projects growing**
- **Leveraging MIT Lean Aerospace Initiative (LAI): <http://lean.mit.edu>**
 - Executive Board/Research Council Forum w/ Industry & Government
- **NAE BOD Chartered A&LCS and M&SCM CFT’s to Define Strategic AIRSpeed Opportunities**
- **NAVAIR BB Certification Process 3rd QTR FY06 (Done)**
- **iGrafx Process Mapping Tool 3rd QTR FY06 (Done)**
 - Evaluating Enterprise Process Mapping, Simulation & Repository Rqmts
 - Assess iGrafx process mapping compatibility with NAVY ERP ARIS TOOL
- **Pursuing Crystal Ball Predictive Modeling Capability**
- **Developing Robust Change Mgmt Train-the-Trainer Capability**
- **MBB Selection, Development & Deployment Processes Defined 4th QTR FY06 (Done)**
 - NAVAIR MBB selections made w/training underway
 - MBB infrastructure planned to drive self-sufficiency
- **PowerSteering COTS Deployment Management System for Project Tracking 4th QTR FY06 (Initial NAE AIRSpeed Deployment Phase complete)**
 - Evaluating additional applications of PowerSteering Capabilities within NAVAIR
- **Design for Lean Six Sigma Deployment 2nd QTR FY07**

Contact Information

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