

Systems Engineering Division

Bi-Monthly Meeting

17-Feb-2021

<http://www.ndia.org/divisions/systems-engineering>

Agenda

Time	Topic	Presenter(s)
1000	1. Opening Remarks / Division Election Results	Joe Elm
1005	2. New Leadership remarks	Holly Dunlap / Chris Schreiber / John Daly
1030	3. OSD(R&E) Systems Engineering Update	Nadine Geier Director, Systems Engineering OUSD(R&E)
1115	4. DMSMS/Parts Management Working Group	Ethan Plotkin NDIA Manufacturing Division
1155	5. Committee Reports <i>Due to time constraints, Committee reports will be discussed at a separate teleconference on 17-Mar</i>	
1155	6. Old Business, New Business, Next Meetings	All
1200	7. Adjourn main meeting	

Opening Remarks



Thank you all for participating in this meeting in today's challenging times.

Thanks to NDIA staff for facilitating and hosting this virtual meeting

Our intent is to continue meeting bi-monthly, either F2F or virtually, per our normal schedule.

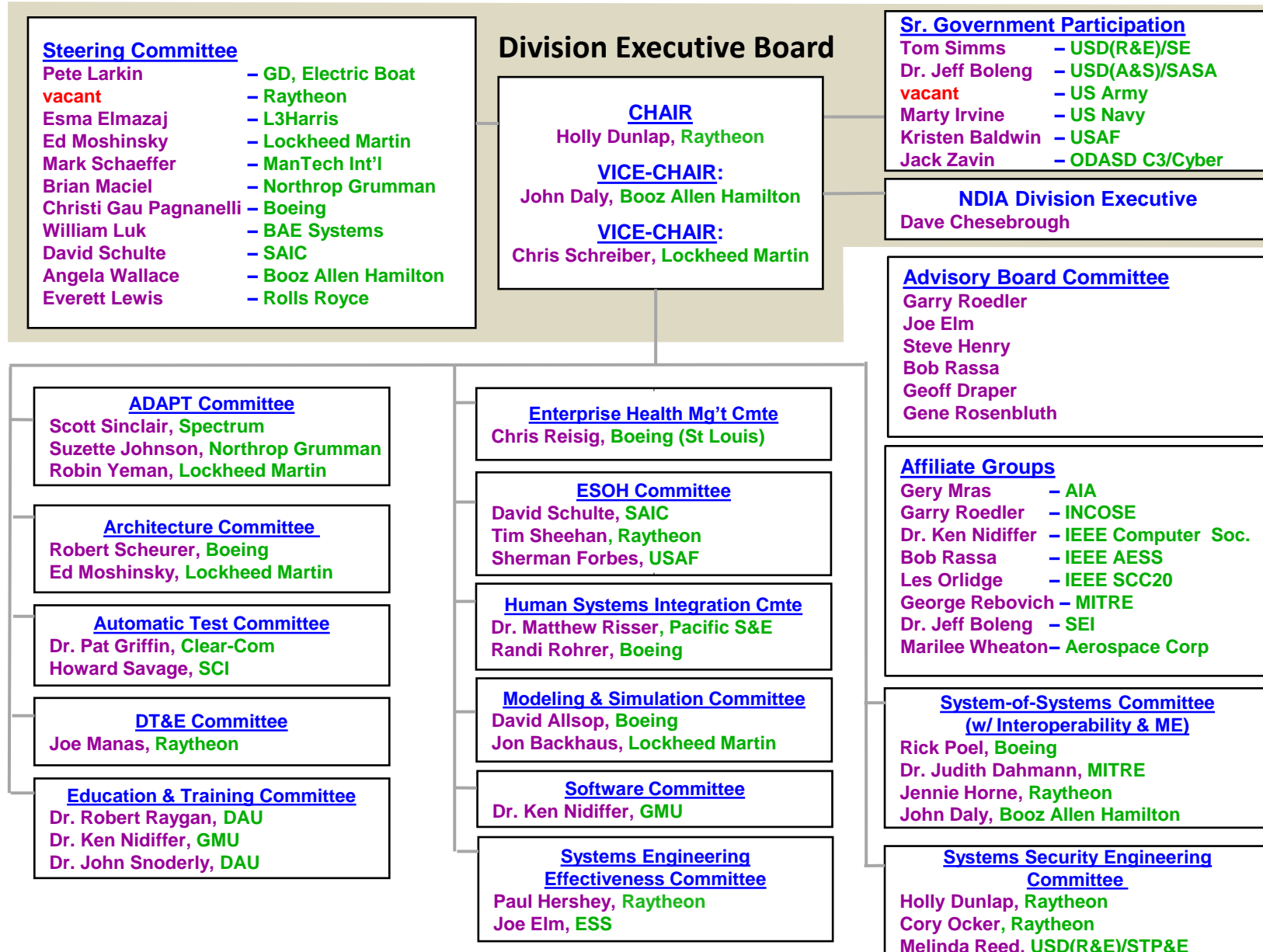
Committee Reports will be presented at a separate teleconference on the 'in-between' months

SE Division Election Results

- **Elections were held for the positions of Chair and two Vice-chairs**
- **New officers are:**
 - Holly Dunlap Chair
 - John Daly Vice Chair
 - Chris Schreiber Vice Chair
- **Terms run through Dec-2023**
- **Congratulations to our new leadership**

Comments From New Leadership

SYSTEMS ENGINEERING DIVISION





NDIA Systems Engineering Division

February 2021

NDIA SED March 17th Workshop

10:00 AM EST – 1:00 PM EST

- **Committee Time Sensitive Announcements**

- Please communicate to John, Chris and I by COB March 8th to add to the agenda.

- **New Position(s)**

Define Role & Responsibility Exploration

- Transformation & Communications Lead
- Outreach Lead
- Digital Communications Lead
- Secretary

- **Value Proposition**

- 1 pg slick sheet
- Communications plan and how to use slick sheet

- **Division Publication & Governance**

- Division vs. Committee
- Formal vs. Informal
- Criteria & Process

- **Membership (John Daly)**

- Construct of the Division
- Process
- Definitions of Terms
 - Executive Committee
 - Steering Committee
 - Advisory Board Committee
 - Committee Chairs / Co-Chairs
 - Members At Large
 - Members (Observers)
- Update contact lists
 - Identify type of member & committee association

- **NDIA Connect (Chris Schreiber)**

- Core team to meet with NDIA Staff & Technical Lead
- Capability exploration
- Developing a Division Presence

- **External Website**

- **NDIA Magazine**

NDIA SED March 17th Workshop

10:00 AM EST – 1:00 PM EST



- **Conference**

- Propose a F35 JSF System Theme to align Key Note Speakers, Panelists, etc. Primarily for the Plenary Session
- Retain Systems & Mission Engineering And Committee Track Topics
- International Partners
- Explore Hybrid Model for Plenary Sessions and other options
 - NDIA Staff to run cost analysis
- Joint Conference with Other Divisions?
 - Test & Evaluation
- Confirmation – Rooms are at Per Diem.



PRESENTATIONS

**OSD(R&E) Systems
Engineering Update**

**Nadine Geier
Director, Systems Engineering
OUSD(R&E)**

**DMSMS/Parts Management
Working Group**

**Ethan Plotkin
NDIA Manufacturing Division**



Systems Engineering Modernization Initiative

Nadine Geier

Dir, Systems Engineering

OUSD(RE)

17 February 2021

<https://www.CTO.mil>



@DoDCTO



USD(R&E) Mission



■ Ensure Technological Superiority for the U.S. Military

- Set the technical direction for the Department of Defense
- Champion and pursue new capabilities, concepts, and prototyping activities throughout the DoD research and development enterprise



■ Bolster Modernization

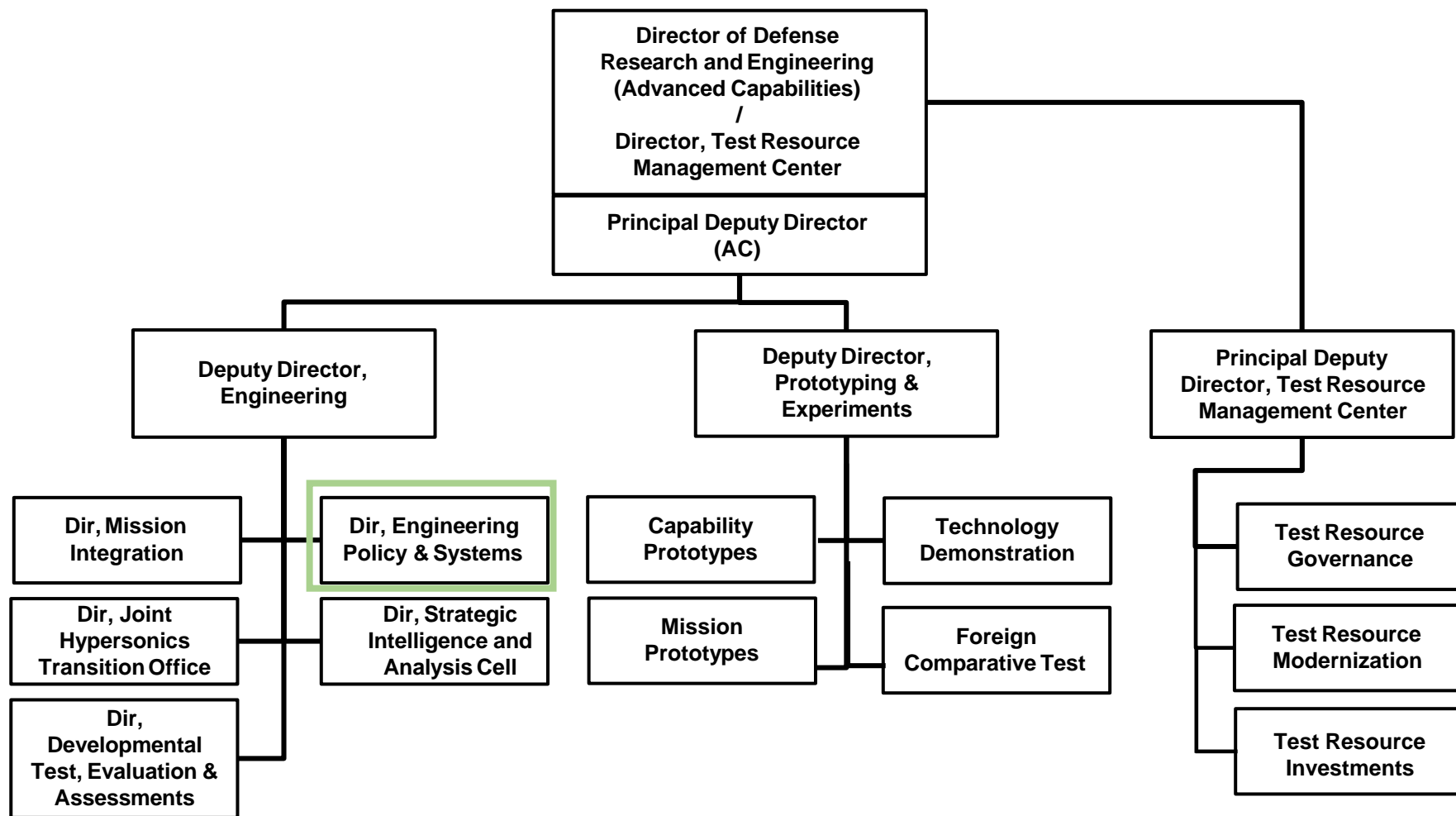
- Pilot new acquisition pathways and concepts of operation
- Accelerate capabilities to the warfighter



“Our mission is to ensure that we, if necessary, reestablish and then maintain our technical advantage.” – Under Secretary Griffin, April 2018



DDR&E(AC) Organization





Introduction



OBJECTIVE: Modernize Systems Engineering to support the delivery of capability to meet mission needs

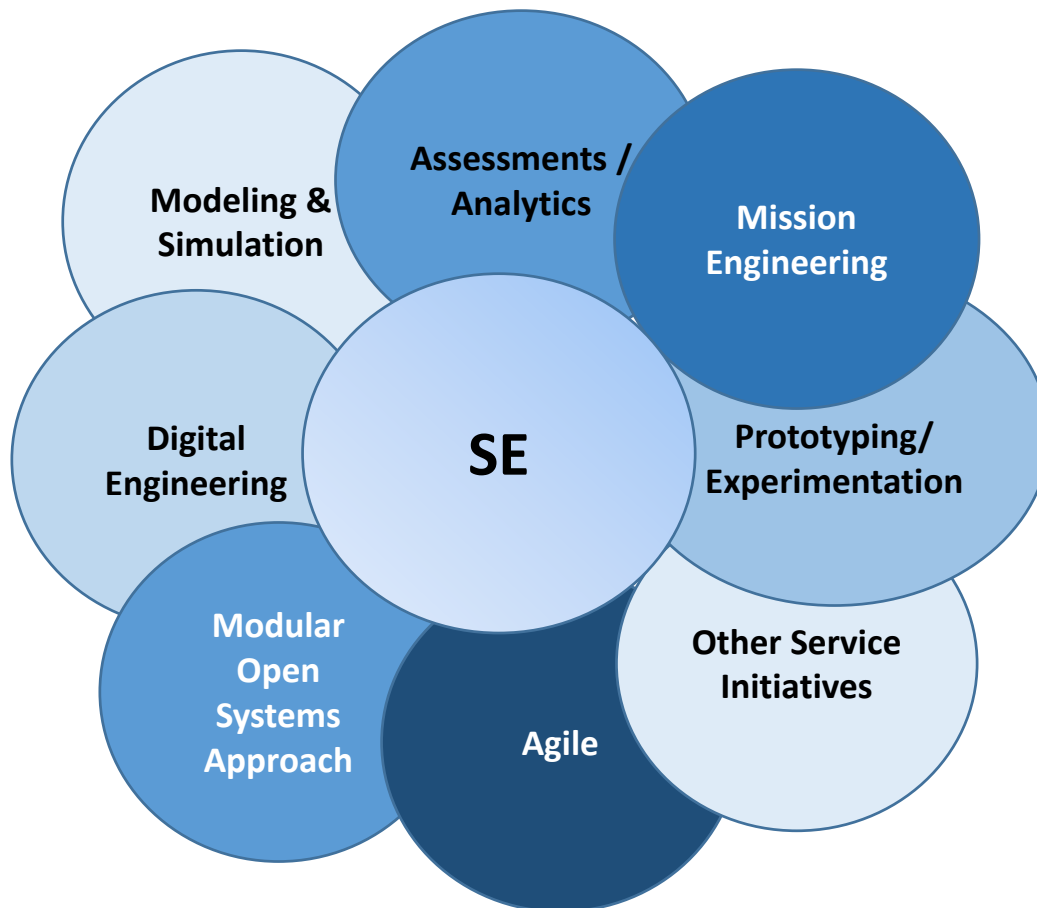
OUTCOME: Today's modern practices are outpacing current SE guidance. SE Modernization will establish, maintain, and propagate state-of-the-art System Engineering practice, policy/guidance, and workforce development for the DoD.

Well-crafted updates to SE will:

- Maintain and add the essential rigor that is a result of SE application
- Enable DoD to field the newest technology with more confidence and accuracy

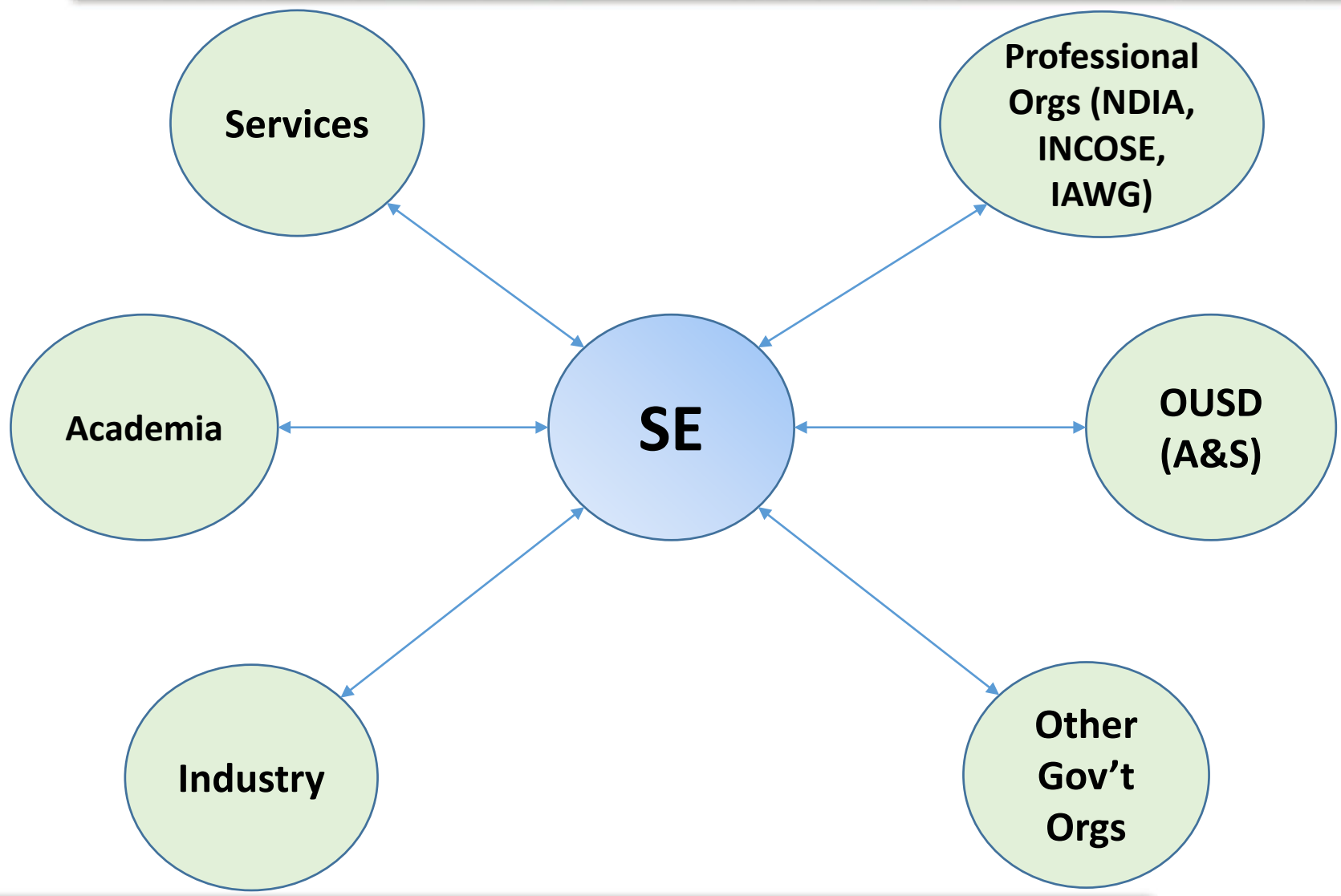


Integrating Modern Practices





Stakeholders





Approach

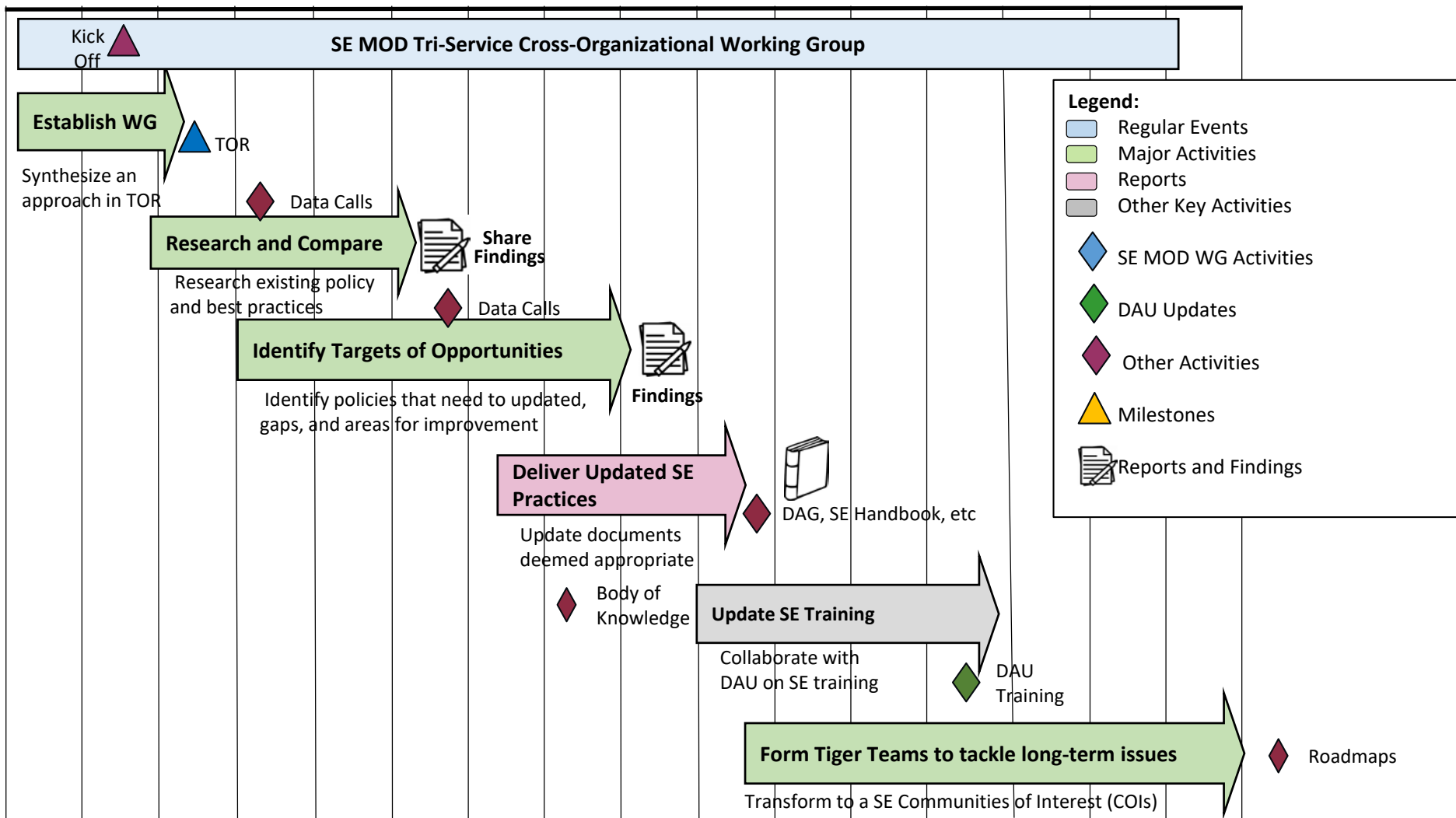


- **Update policy and guidance** by capturing industry and government best SE practices associated with digital engineering, modern software development processes, modular open systems approach (MOSA), mission integration, and other on-going DoD initiatives
- **Evolve DoD engineering culture** to emphasize critical thinking and embrace flexible processes while maintaining technical rigor



Systems Engineering Modernization POAM

FY21 Q2 FY21 Q3 FY21 Q4 FY22 Q1 FY22 Q2 FY22 Q3 FY22 Q4 FY23 Q1 FY23 Q2 FY23 Q3 FY23 Q4 FY24 Q1





Important Considerations

- Leverage existing OSD initiatives (ex: DE, MOSA, Agile SW, etc.) and other initiatives (Army, Navy, Air Force, NASA, etc.) for information and best practices
- Collaborate with industry associations (NDIA, INCOSE, IAWG, etc)
- Define the problems into manageable chunks and set external boundaries
- Update training/documentation updates and new training/documentation as a result of this effort
- Establish and maintain communities of practice that connect the engineering community to solve cross-cutting engineering challenges
- Address social challenges as well as the technical challenge
- Prepare to support this long term effort

Modernizing SE is a journey of evolving mindsets & integrating initiatives – not a sprint to a destination



For Additional Information

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OUSD(R&E) MOSA Information

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Subject: Attn OUSD(R&E) Systems Engineering



The DoD needs our help: New DMSMS Resolution Option

**In collaboration with OSD's Parts & Materials
Management Working Group (PMM WG)**

FEB-2021

Ethan Plotkin | CEO GDCA, Inc.

NDIA MFG Division's Supply Chain Network Committee Chair

eplotkin@gdca.com | 650-303-5292

The Opportunity

- **Contribute to the direction OSD gives to Product Support Managers about how to deal with parts obsolescence.**

SD-22

Diminishing Manufacturing Sources and Material Shortages

A Guidebook of Best Practices for Implementing a Robust DMSMS Management Program

6. Analyze: DMSMS Resolution Determination	131
6.1 Identify Resolution Cost Elements	131
6.2 Identify and Define DMSMS Resolution Options	133
6.3 Determine the Preferred DMSMS Resolution	138

https://www.dau.edu/cop/dmsms/DAU%20Sponsored%20Documents/SD%2022_2021-01282021.pdf

Background

- **The Sponsor:**
 - **Parts & Materials Management (PMM) Working Group (previously known as DMSMS Working Group)**
 - **Robin Brown, OSD DMSMS/Parts Management Program Manager**
- **The Players:**
 - **Parts & Materials Management (PMM) Working Group (previously known as DMSMS Working Group)**
 - **Manufacturing Division's Supply Chain Network**
 - **Systems Engineering Division**
 - **Small Business Division**
 - **Integrated Program Management Division**

Project Scope

- **Refresh the definitions for 4 common DMSMS Resolutions:**
 - **Develop a New Source**
 - **Develop a New Item**
 - **Redesign – NHA (next higher assembly)**
 - **Redesign - Complex System Replacement**
- **Develop Cost Metrics of the above DMSMS resolutions for 3 types of Parts:**
 - **Electrical**
 - **Electronics**
 - **Mechanical**

Project Plan

Working with 2 OSD Staffers to:

- 1. NDIA mobilizes Industry working group (~6 folks)**
- 2. Jointly Develop an Industry Survey/Questionnaire**
- 3. OSD interviews a small group (~12 folks)**
- 4. NDIA circulates a wider survey for broader input**
- 5. Jointly consolidate the information**
- 6. OSD Review and Publish results**

Alright, WHO'S INTERESTED?

Candidates might be anyone:

- **who's impacted by parts obsolescence?**
- **who has ideas on the DoD could better deal with obsolescence.**

Ethan Plotkin | CEO GDCA, Inc.

NDIA MFG Division's Supply Chain Network Committee Chair

eplotkin@gdca.com | 650-303-5292

Steering Committee

Pete Larkin – GD, Electric Boat
vacant – Raytheon
 Esma Elmazaj – L3Harris
 Ed Moshinsky – Lockheed Martin
 Mark Schaeffer – ManTech Int'l
 Brian Maciel – Northrop Grumman
 Christi Gau Pagnanelli – Boeing
 William Luk – BAE Systems
 David Schulte – SAIC
 Angela Wallace – Booz Allen Hamilton
 Everett Lewis – Rolls Royce

Division Executive Board

CHAIR

Holly Dunlap, Raytheon

VICE-CHAIR:

John Daly, Booz Allen Hamilton

VICE-CHAIR:

Chris Schreiber, Lockheed Martin

Sr. Government Participation

Tom Simms – USD(R&E)/SE
 Dr. Jeff Boleng – USD(A&S)/SASA
vacant – US Army
 Marty Irvine – US Navy
 Kristen Baldwin – USAF
 Jack Zavlin – ODASD C3/Cyber

NDIA Division Executive

Dave Chesebrough

Advisory Board Committee

Garry Roedler
 Joe Elm
 Steve Henry
 Bob Rassa
 Geoff Draper
 Gene Rosenbluth

Affiliate Groups

Gery Mras – AIA
 Garry Roedler – INCOSE
 Dr. Ken Nidiffer – IEEE Computer Soc.
 Bob Rassa – IEEE AESS
 Les Orlidge – IEEE SCC20
 George Rebovich – MITRE
 Dr. Jeff Boleng – SEI
 Marilee Wheaton – Aerospace Corp

System-of-Systems Committee (w/ Interoperability & ME)

Rick Poel, Boeing
 Dr. Judith Dahmann, MITRE
 Jennie Horne, Raytheon
 John Daly, Booz Allen Hamilton

Systems Security Engineering Committee

Holly Dunlap, Raytheon
 Cory Ocker, Raytheon
 Melinda Reed, USD(R&E)/STP&E

ADAPT Committee

Scott Sinclair, Spectrum
 Suzette Johnson, Northrop Grumman
 Robin Yeman, Lockheed Martin

Architecture Committee

Robert Scheurer, Boeing
 Ed Moshinsky, Lockheed Martin

Automatic Test Committee

Dr. Pat Griffin, Clear-Com
 Howard Savage, SCI

DT&E Committee

Joe Manas, Raytheon

Education & Training Committee

Dr. Robert Raygan, DAU
 Dr. Ken Nidiffer, GMU
 Dr. John Snoderly, DAU

Enterprise Health Mgt Cmte

Chris Reisig, Boeing (St Louis)

ESOH Committee

David Schulte, SAIC
 Tim Sheehan, Raytheon
 Sherman Forbes, USAF

Human Systems Integration Cmte

Dr. Matthew Risser, Pacific S&E
 Randi Rohrer, Boeing

Modeling & Simulation Committee

David Allsop, Boeing
 Jon Backhaus, Lockheed Martin

Software Committee

Dr. Ken Nidiffer, GMU

Systems Engineering Effectiveness Committee

Paul Hershey, Raytheon
 Joe Elm, ESS

SCOPE: Cost Elements

Table 13. Cost Elements as Applied to DMSMS Resolution Options

Cost Element	Existing Material (Logistics)				Substitute (Engineering)		Redesign (Engineering)		
	Approved Item	LON Buy	Repair, Refurbishment, Reclamation	Extension of Production or Support	Simple Substitute	Complex Substitute	Development of a New Item or Source	Redesign – Complex/ System Replacement	Redesign – NHA
Non-recurring engineering			X			X	X	X	X
Engineering, engineering data revision					X	X	X	X	X
Purchase of engineering, design, or technical data			X			X	X	X	X
Qualification of new items					X	X	X	X	X
Revision of test procedures			X			X	X	X	X
Software changes						X	X	X	X
Start-up costs (after-market, and so forth)			X	X			X	X	X
Testing			X		X	X	X	X	X
Tooling, equipment, test equipment, or software			X			X	X	X	X
Computer programs/documentation			X		X	X	X	X	X
Interim support							X	X	X
Supply/provisioning data					X	X	X	X	X
Support/test equipment			X			X	X	X	X
Technical manuals			X		X	X	X	X	X
Training/trainers			X			X	X	X	X
Item cost (optional)		X	X				X	X	X
Manpower (optional)			X						
Spares (optional)			X				X	X	X
Other (as required)	X	X	X	X	X	X			

COMMITTEE REPORTS

Committee reports will not be discussed at this meeting due to time constraints.

Committee reports will be presented at a separate virtual Division meeting on 17-Mar.

SE Division Bi-monthly Meeting

OLD AND NEW BUSINESS

2021 Meeting Dates



NDIA SE Division Meeting	Location
Wed. 17-Feb: Bi-monthly SE Division Meeting	Virtual
Wed. 17-Mar: SE Division Committee Reports	Virtual
Wed. 21-Apr: Bi-monthly SE Division Meeting	Virtual
Wed. 19-May: SE Division Committee Reports	Virtual
Wed. 16-Jun: Bi-monthly SE Division Meeting	Virtual
Wed. 14-Jul: SE Division Committee Reports	Virtual
Wed. 18-Aug: Bi-monthly SE Division Meeting	Virtual
Wed. 15-Sep: SE Division Committee Reports	Virtual
Wed. 13-Oct: Bi-monthly SE Division Meeting	Virtual
??-Nov - ??-Nov: Systems & Mission Eng'g Conference	TBD
Wed. 15-Dec: Annual SE Division Planning Meeting	TBD



SE Division Bi-Monthly Meeting

ADJOURN