

ICEAA OEM COG

ORIGINAL EQUIPMENT MANUFACTURERS' COOPERATIVE OPPORTUNITIES GROUP

February 18, 2021

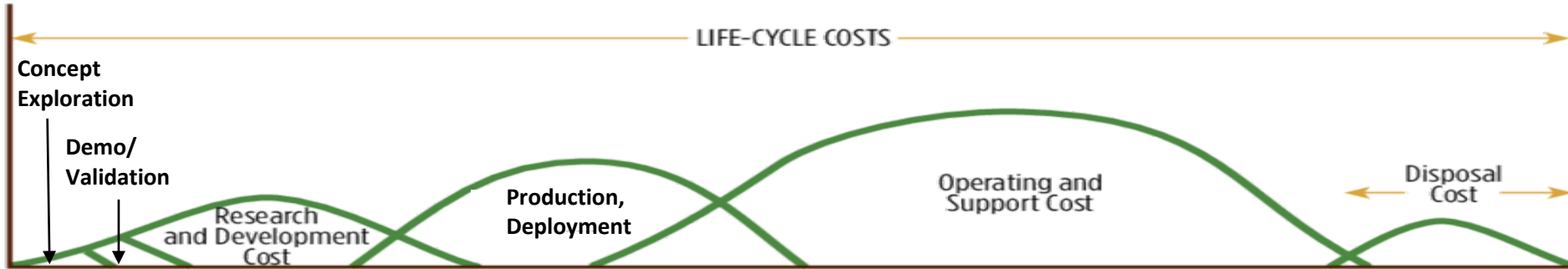
Agenda

1. **Opening remarks** – Bob Hunt
2. **Overview of Estimating Profession
Across System Life Cycles** – Steve Glogoza
3. **Results of Initial Conversations on OEM Interests** – Karen Mourikas
4. **Unique Perspectives from various OEMs**
 - Lockheed Martin
 - Northrop Grumman Corporation
 - The Boeing Company
 - BAE Systems
 - Raytheon Technologies
 - Huntington Ingalls Industries - Newport News Shipbuilding
5. **Discussion** – Bob Hunt, Moderator
6. **What happens next** – Bob Hunt

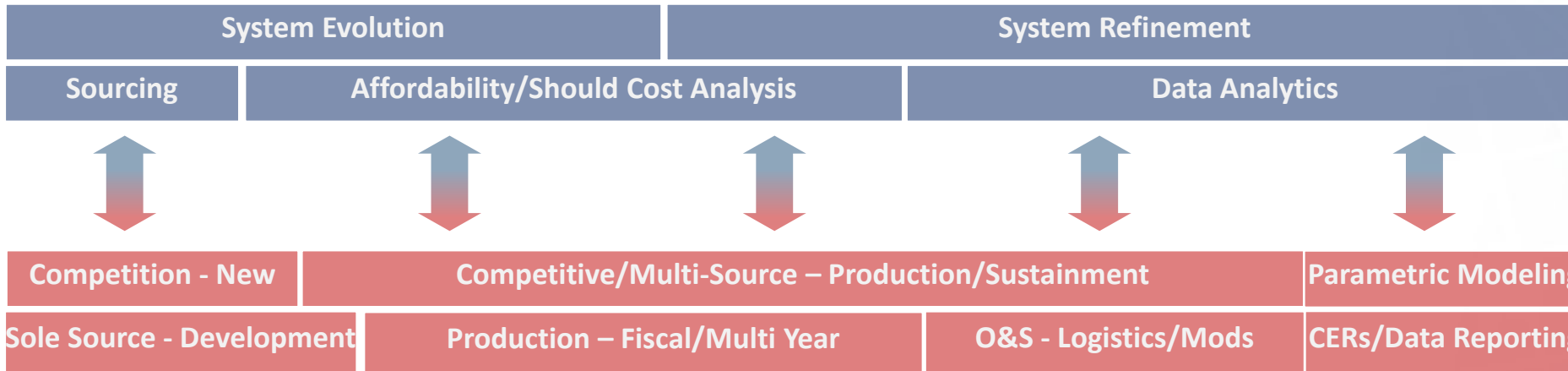
Objective of ICEAA's OEM Engagement

- Overall Objective
 - Make ICEAA more valuable and more relevant to OEMs
 - Develop a community of like-minded (OEMs) that is diverse in skills, experience, function, education, and demographics, yet committed to the profession
 - Support Cost Analysis as a profession and not just a job
- Initial Objectives to start us on that path
 - Come together as a community of OEMs to discuss, collaborate, and share via a series of webinars
 - Identify activities to undertake as a community that will deliver more value to OEMs
 - Identify participants and skills to broaden the technical and engineering focus of ICEAA
 - Organize a series of events (webinars) for community

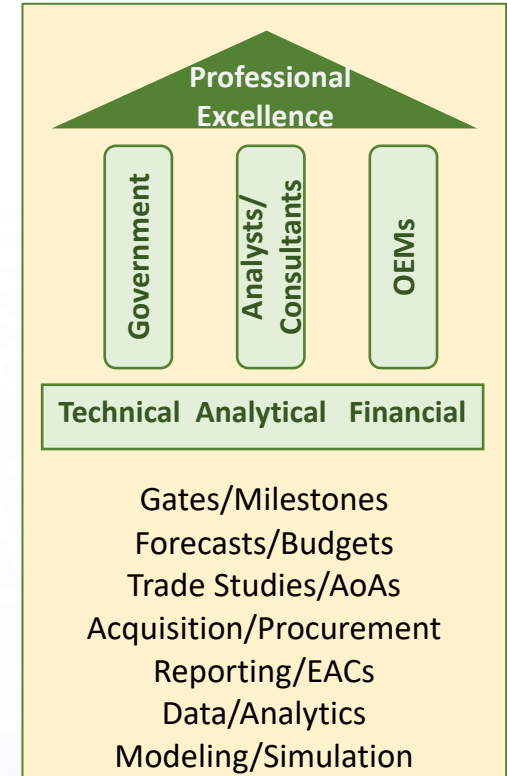
Estimating Profession Across System Life Cycles



System Analysis, Planning, & "Should Cost"



Acquisition Planning, Contracting, & Execution



The Estimating Profession Is Integral in the Cost Analysis and Acquisition Efforts Throughout a System Life Cycle

Initial Conversations on OEM Interests

Existing ICEAA benefits for OEMs

- Personal and professional development opportunities
- Provides a broader understanding of the entire industry, offers different perspectives
- Promotes a standard set of terminologies, methods, and practices for all to share

Benefits to consider

- Increase focus beyond finance and/or US Government
- Allowing al-la-carte training for specific functions and roles
- Encourage more OEM participation at Workshops
- Promote new innovations
- Provide additional opportunities for communication and sharing among members

***We have heard many different perspectives from the OEM Community –
Now we want to hear from YOU!!!***

But first ... let's hear from the following OEMs

- Lockheed Martin – John Deem, Greg Kiviat
- Northrop Grumman Corporation – Wendy Robello, Sandy Burney
- Boeing – Steve Glogoza, Karen Mourikas, Barbara Wilson
- BAE Systems – Chuck Kurtz
- Raytheon Technologies – John Madden, Rich Hoy
- Huntington Ingalls Industries/Newport News Shipbuilding – Kevin Hewitt

Each Company Provides Unique Perspectives

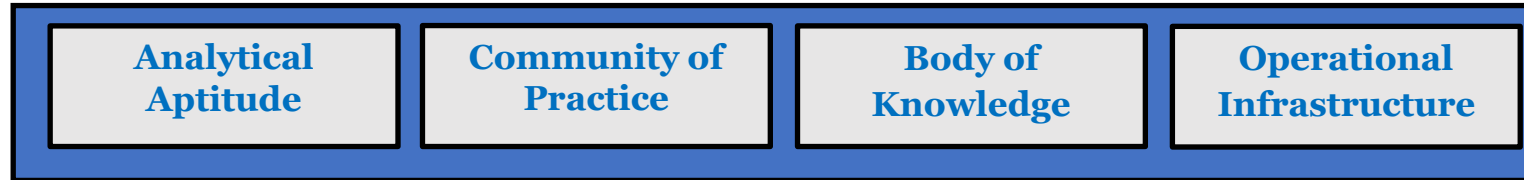
Professional Development Value for OEM Cost Analysts

John Deem

Lockheed Martin Cost Analyst Perspectives
February 18, 2021

Cost Analyst Professional Development Lockheed Martin OEM Perspectives

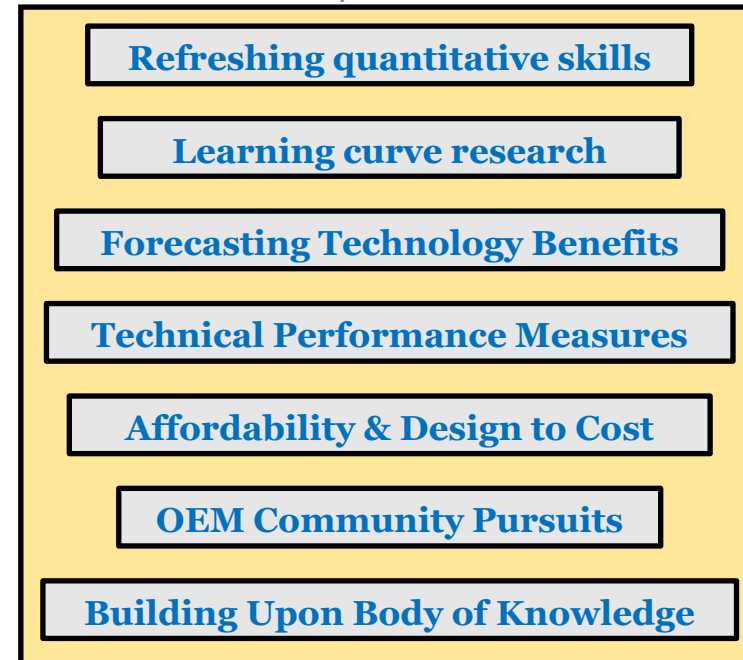
Elements of ICEAA



Value of ICEAA



My Pursuits



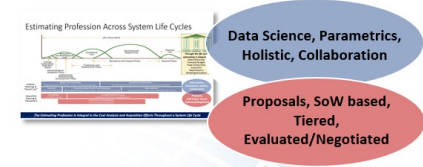
Northrop Grumman Corporation OEM Perspective

Wendy Robello
Sandy Burney



Northrop Grumman Cost Estimating

- NG is mostly aligned functionally with cost estimators needing focused skills across the entire life cycle
- Predominately matrix organizations assigned to programs as needed



NG Participation

● Strong ● Medium ● Low

● Focus Areas Beneficial to NG ICEAA Participation

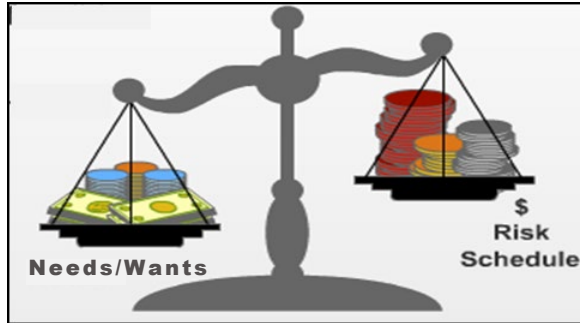
Expected Skills & Knowledge Base	LCC	DTC	Trade Studies	BoE Support	Affordability Analysis (CRI)	Data Science & Analytics	EVM & Risk Analysis	Learning Curve	Business Case Analysis	Contract Structure	Contract Type Mgmt	Cost Strategy	Price to Win (pTW)
● Systems Engineering	X	X	X	X	X	X		X	X				X
● Software	X		X	X		X	X						
● Production	X			X	X		X	X	X				
● Business Management		X		X			X		X	X	X	X	
● Pricing & Estimating	X	X		X			X	X		X	X	X	
● Strategy & BD	X	X	X		X	X	X	X	X			X	X

The Boeing Perspective

Boeing Perspective: Collaborative Advancement of Profession

Estimating in the Engineering Community

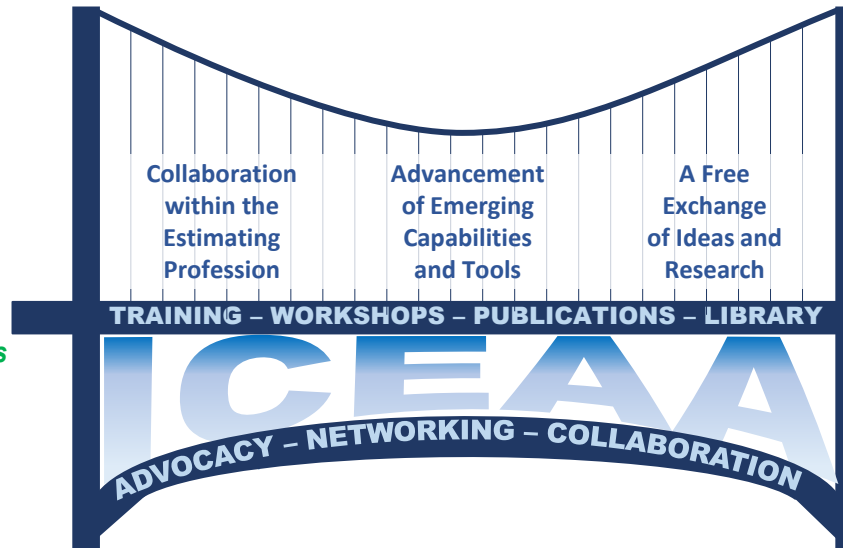
Affordability Trade Studies



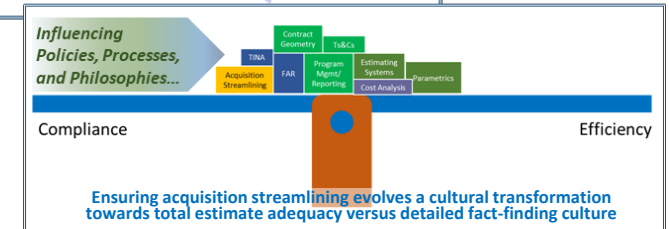
Affordability Insight throughout System Evolution

Cost Analysis Integrated with the Design Process

Recognize & Realize Actual Value of Innovation and Efficiencies



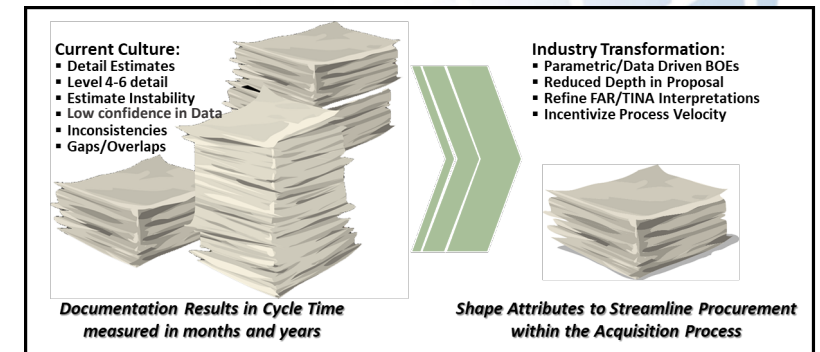
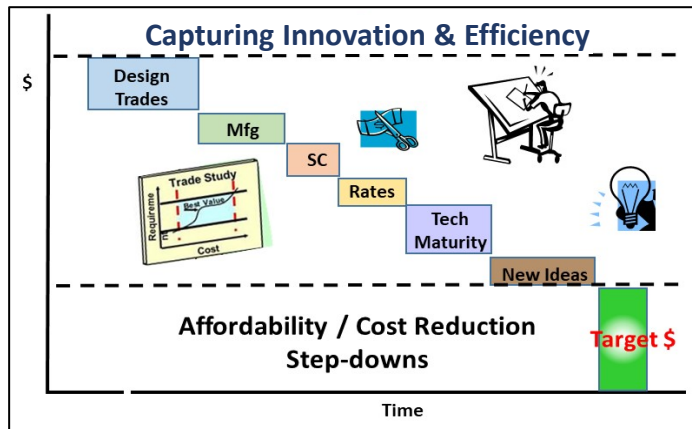
Estimating in the Acquisition/Procurement Community



Embrace, Accept, and Rely on Data Driven Methodologies

Estimate Adjustments via Objective Approaches and Philosophies

Understand & Communicate Estimate Credibility - "WHY" versus "HOW"



Collaboration with the Technical Community Essential to Improve Estimates & Designs

Professional Development Value for OEM Cost Analysts

Chuck Kurtz

BAE Systems Estimating Perspectives

February 18, 2021

Estimating Professional Development BAE Systems OEM Perspectives

Desire

- **Share** techniques with peers and learn practical solutions to real issues around estimating
- Use elements of CEBOOK for a la carte **training** for Estimators and Cost Analysts
- Material estimating and Consolidated BOMs – new strategies for **COPD**
- **Defending** estimates with auditors and providing better BOEs

Value

- **Connect** with mentors, peers and mentees
- **Learn** new techniques and methods, deepen expertise or refresh
- Stay abreast of industry trends and new developments in software tools and services
- Challenge yourself mentally, prepare to take on new challenges, assignments, jobs or careers
- Increased **inspiration**, enthusiasm and passion for your work

*Every workshop has re-invigorated me and provided real
\$M savings to my company*

Raytheon Technologies

Collins Aerospace

Pratt & Whitney

Raytheon Intelligence & Space

Raytheon Missiles & Defense

Raytheon Technologies

Professional/Career Development

- Redo of CEBoK for the OEM estimating process to include OEM and correlate to Government processes

Training Topics

- Set industry standard for best practices/metrics/processes and differentiate between functions and departments
- How to use the existing tools and processes in government proposals
- Expand bottom up estimating tactics
- Understand cost nuances of other countries. Tax, salary, cost of living.

Exposure

- Facilitate OEM/Government resolution process for big picture problems.
- Get the various perspectives of cost estimating functions: Finance, Engineering, Supply Chain, Manufacturing, DCMA/DCAA
- Networking. Create a mentoring or knowledge base approach that removes the competitive portion and focus on the knowledge. Junior members could seek the "experts" in the field for questions.
- Opportunity to reach early career / university talent
- Workshop forum to present papers and help careers to grow technical SME credentials

Huntington Ingalls Industries Newport News Shipbuilding

Huntington Ingalls - Newport News Shipbuilding

Participation in and continued growth of a diverse community of professionals with the goal of sharing common estimating practices and ideas to promote the continued development of skills across all experience levels.

Understand the Past

Data Analysis Techniques

- Analysis Best Practices
- Advanced Excel Operations
- CER Development
- Tools and Applications

Lessons Learned

- Common Misconceptions
- Avoidable Mistakes

Application to the Present

Normalization of Input/Output

- Industry/Regulatory Changes
- Accounting for Learning

Data Visualization Skills

- Organizing Supporting Data
- Presenting Conclusions/Results

BOE Development

- Communicating Methodologies
- Establishing Reasonableness

Prepare for the Future

Risk Analysis

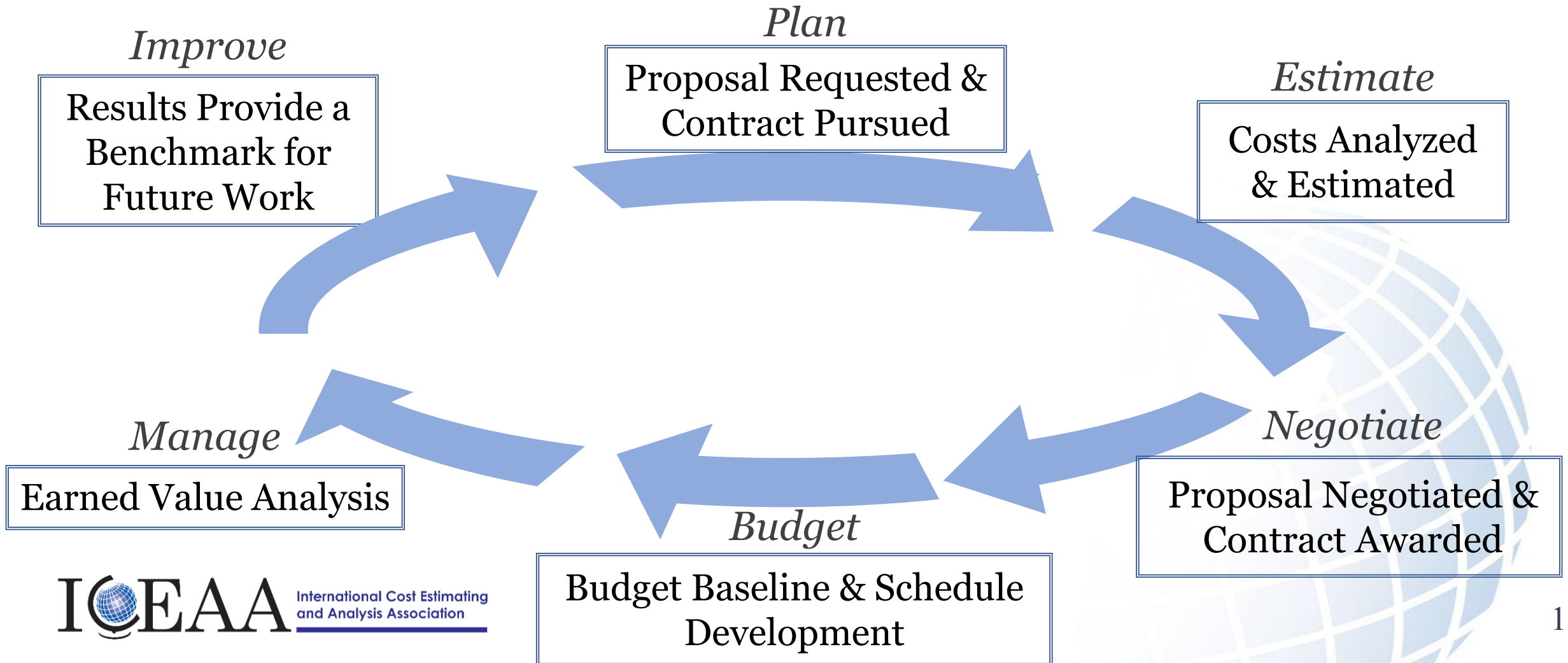
- Identifying Risks/Opportunities
- Avoiding Bias
- Monte Carlo
- Advanced Techniques/Software

Future Innovation

- Industry 4.0 (i.e. Additive Manufacturing)
- Machine Learning

The purpose is not to establish a job or role, but to empower experienced estimators to continue to learn/develop skills and to share experiences that inspire junior estimators to seek further development in the profession. An engaged and active professional will adopt an attitude that not only promotes personal growth but strengthens the community as a whole.

Cost Estimating & Analysis Cycle





Upcoming Cost Integrated Process Team (CIPT)

- The CIPT is a forum sponsored by Office of the Secretary of Defense (OSD) Cost Assessment and Program Evaluation (CAPE) on behalf of the DoD Cost Community
- The goal is to enable communication *between* Government and Industry, both one-on-one and in plenary
 - By contrast, OEM COG is a collaborative group *by* Industry and *for* Industry
- The next general session, Tuesday, February 23rd, 2021, at 1200 EST / 1100 CST / 0900 PST, will cover:
 - COVID-19 Cost Reporting Discussion
 - Resources for Navigating FlexFile/Quantity Data Reports
 - Data Tools Tiger Team Update
 - OSD CAPE Policy Updates and 2021 NDAA Overview
 - OSD CAPE Study: Ground and Surface vs. Tactical Airborne Radar Cost Trends
 - DoD's Software Acquisition Pathway – Digital Delivery at the Speed of Relevance
- To register, visit <https://cade.osd.mil/support/> and click "Register for Upcoming CADE Training Events" (blue button)
 - *Be sure to specify CIPT!*
- Questions: If you have questions on the above topics you'd like to send in advance, you may include them when you register or email them to Richard.B.Coots.CIV@mail.mil.



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- Survey coming soon to collect your thoughts and opinions
- Survey responses will shape the agenda
- Next meeting will be announced by email and on social media

