April 22, 2021

Industry Perspectives on Affordability Analysis

Agenda

1. Opening remarks – Bob Hunt

2. PollEV Capability – Megan Jones

3. Overview of Affordability - Dr. Darin Hoffman

4. Affordability Perspectives from

   - Wendy Robello, Justin Knowles - Northrop Grumman Corporation

   - Kevin Hewitt - Huntington Ingalls Industries

   - Karen Mourikas - The Boeing Company

   - John Deem - Lockheed Martin

5. What happens next – Bob Hunt

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Objective of ICEAA's OEM Engagement

- OEM COG 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, and committed to the profession
  - Support cost analysis as a profession and not just a job
- How
  - 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
- Today
  - Discuss industry perspectives on affordability – what that means to me & how it differs from others

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PollEV Interactive Capability

- Link: PollEV.com/meganjones104

- First question

  - What does Affordability mean to you?

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Affordability Overview from the OEM Perspective

Dr. Darin Hoffman

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PollEV Interaction

- Link: PollEV.com/meganjones104

- Question

  2. How many years have you been working in the cost analysis profession?

     - Less than 5 years

     - Between 5 and 15

   - Between 15 and 25

     - More than 25

Affordability according to
Wendy Robello & Justin Knowles
from
Northrop Grumman Corporation

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A Perspective on Affordability

- In a perfect world, the PM's, SE's, Executive Approvers and Budgeteers, would ensure a Program is designed to minimize Lifecycle costs, achieving perfect affordability...*however*...**this never happens**

Affordability → Affordable: able to be Afforded → Afford: *to manage to bear without serious detriment*

~ Budget Constraint + Mission Needs

← Mission Cost-Effectiveness →

← Customer Purchase Price →

← Cost Containment →
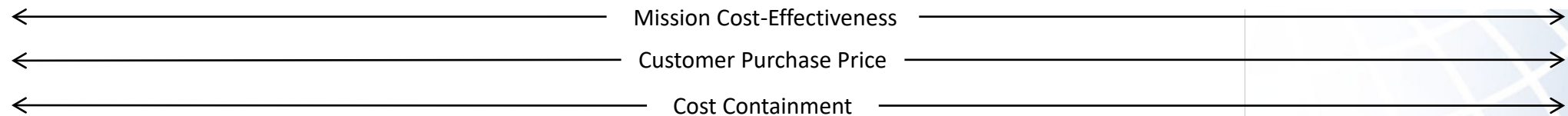
Expected Skills & Knowledge Base	LCC	Trade Studies	Cost Strategy	Price to Win (pTW)	DTC	BoE Support	EVM & Risk Analysis	Cost Reduction Initiatives
Systems Engineering	X	X		X	X	X		X
Software	X	X				X	X	
Production	X					X	X	X
Business Management			X		X	X	X	
Pricing & Estimating	X		X		X	X	X	
Strategy & BD	X	X	X	X	X		X	X

Affordability spans the entire life cycle and is an integrated responsibility across functions and teams

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- Link: PollEV.com/meganjones104

- Questions

    3. In what function do you work?

       Choices: Engineering, Finance, Supply Chain, Strategy, PM, other

    4. What phase of the Life Cycle do you work? (select up to 3)

       - Capture/Strategy/AoA
       - Conceptual design
       - Development
       - Production
   - Operations & Support

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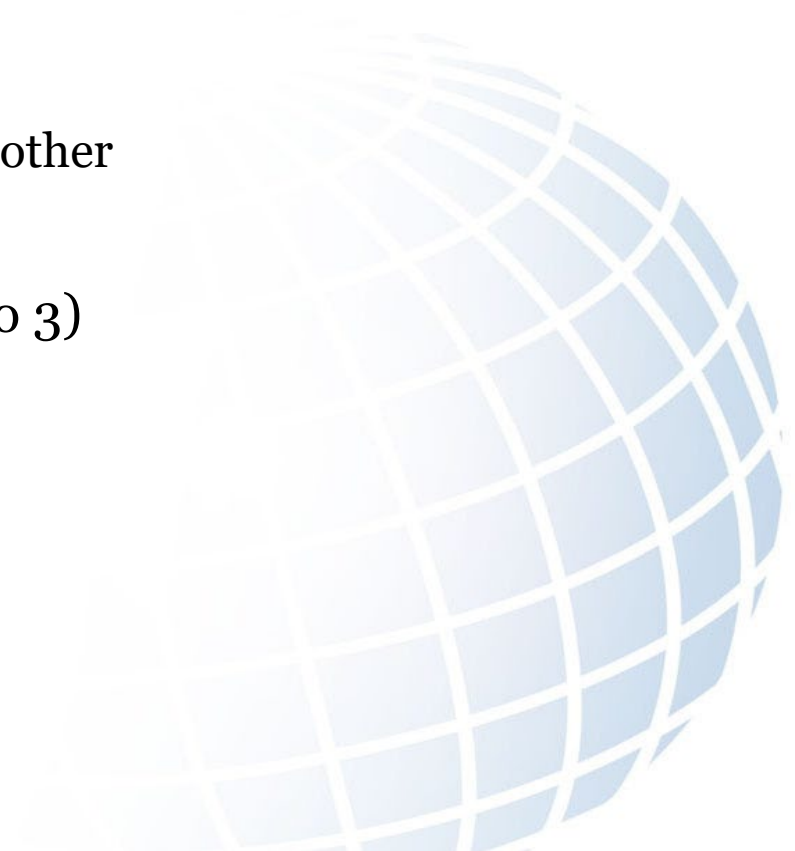
Affordability according to Kevin Hewitt from Huntington Ingalls Industries

Affordability Perspective

Defining the nature of affordability is like grasping mist, it's relative meaning and importance are solely dependent on the context within which it is discussed.

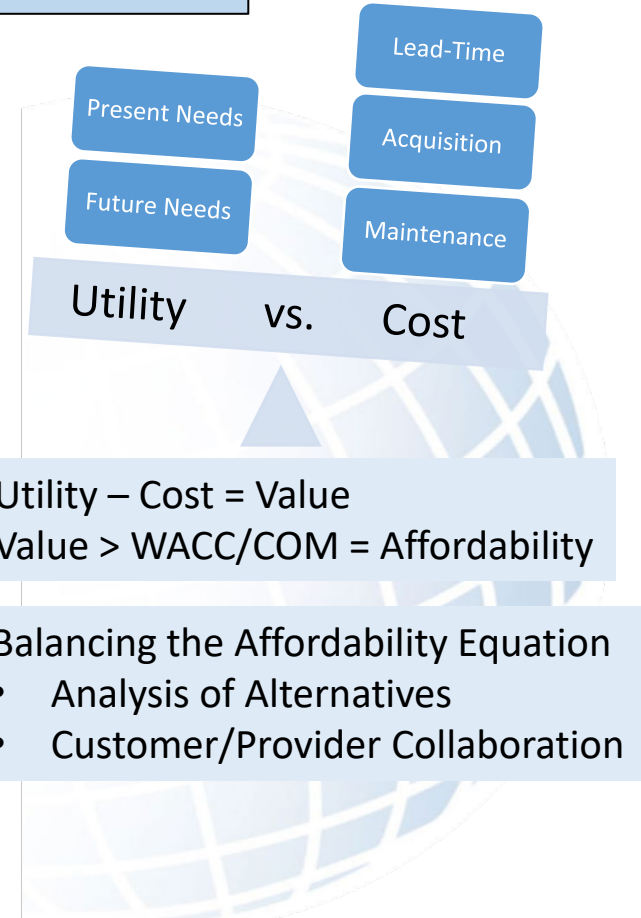Affordability is closely related to the evaluation of risk and future value.

Risk

Obstacles to growth

Near Term Value
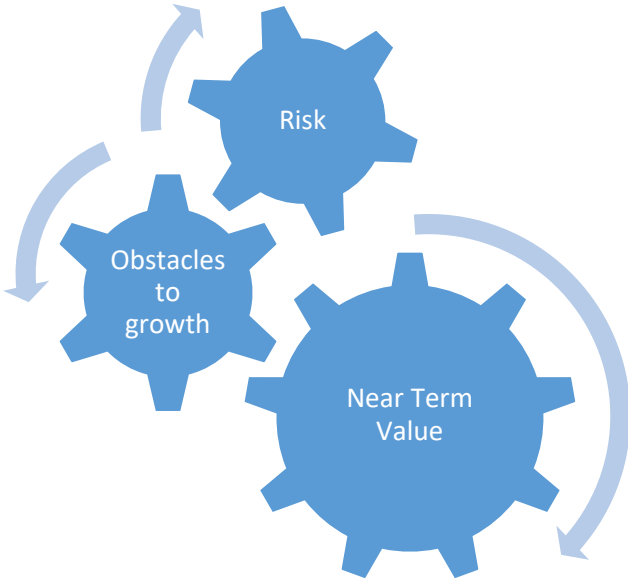
Investment
- Development
- Rate of Return
Schedule Constraints
Resource Demand

Cost
- Acquisition
- Life Cycle
Scheduled Need
Estimated Lifetime

Tangible Cost/Benefits

Provider — Affordability — Customer

Reputation
- Market Share
- Customer Confidence
Opportunity Cost
Inherent Risk

Intangible Cost/Benefits

Best Value
- Quality
- Obsolescence
Mission Requirements
- Functionality/Efficiency
- Future Needs

Present Needs

Future Needs

Lead-Time

Acquisition

Maintenance

Utility   vs.   Cost

Utility – Cost = Value
Value > WACC/COM = Affordability

Balancing the Affordability Equation
- Analysis of Alternatives
- Customer/Provider Collaboration

In proposal development, affordability can be described as the balance of relative value between the customer and provider with respect to the tangible and intangible costs and benefits all through the lens of capability/capacity.

PollEV Interaction

- Link: PollEV.com/meganjones104

- Question

    5. What are the most important skills required for affordability analysis?
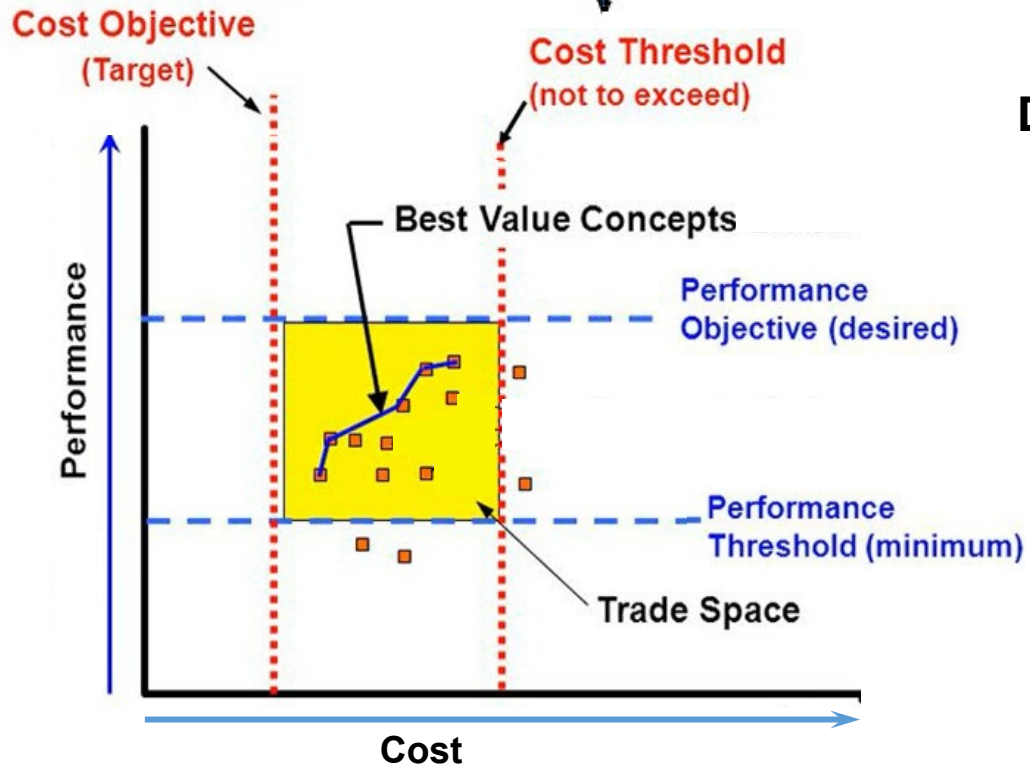
International Cost Estimating
and Analysis Association

Affordability according to Karen Mourikas from The Boeing Company

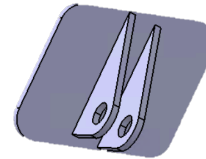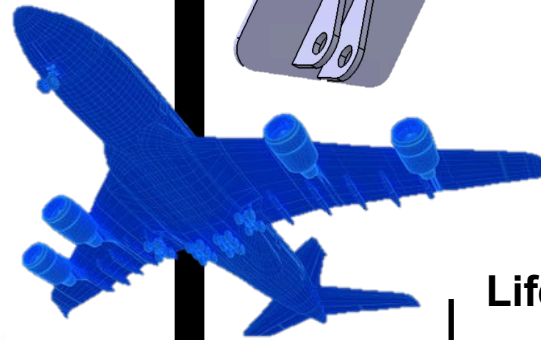**ICEAA** International Cost Estimating and Analysis Association

STRATEGY

A F F O R D A B I L I T Y *

* = from the **Systems Engineering** Perspective

Cost Objective (Target)

Cost Threshold (not to exceed)

Best Value Concepts

Performance

Performance Objective (desired)

Performance Threshold (minimum)

Trade Space

Cost

Trade Studies

Design

Production

SUPPLY CHAIN
OFFER
RETAIL
STOCK LEVEL
ERP SYSTEM
LOGISTIC

Life Cycle Cost Modeling

$

Operations & Support

Production

Research & Development

Disposal
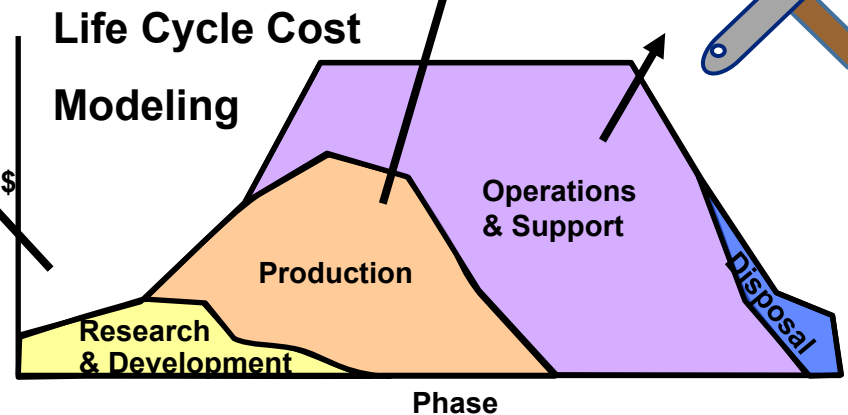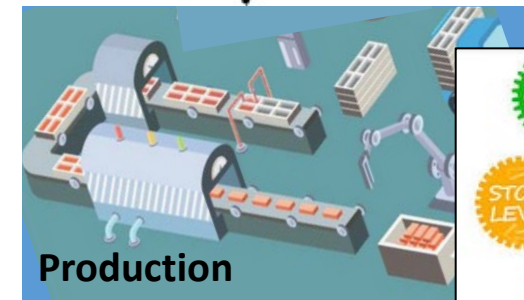
Phase

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- Question

    6. What training related to Affordability could ICEAA provide that you don't have access to?

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Affordability according to
John Deem
from
Lockheed Martin

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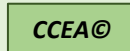and Analysis Association

Affordability Perspectives

Customer Perspective

Affordability = Value ◈

DEGREE *benefits* are worth the cost and support strategic goals

CONDITIONS when costs are in consonance with *requirements*

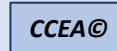**RESULTS** from analysis of costs versus *resources available*

CCEA©

Contractor Perspective

Affordability = Value ◈

PROPOSAL PHASE objective is to offer customer value to secure *contract award*

PROGRAM EXECUTION objective is to deliver customer value per *contract commitment*

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Systems Engineer Perspective

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Affordability = Value ◈

Value Engineering = Affordability

Value Engineering Skills = Technical Skills x Cost Skills

Body of Knowledge

Competition Guidelines
Best Value Continuum
Value Adjusted Total Evaluated Price
GAO Best Practices

Target Costing and Design to Cost
Cost as an Independent Variable
Quality Function Deployment
Design for Manufacturing
Activity Based Costing
Lean Initiatives and Cost Benefit Analyses

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Reduction of Total Ownership Costs
Trade Space and Strict Dominance

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Affordability from a Lockheed Martin Value Engineer Perspective by John Deem, CCEA©

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- Now that you've heard what we've had to say … has your opinion changed?

- Question

    7.   What does Affordability mean to you?

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ICEAA Online Workshop
May 17-20, 2021

www.iceaaonline.com/online2021

• We have altered the overall schedule to better fit the online venue and our increasingly online lives: ICEAA's 2021 Workshop will run for **four half-days**, leaving attendees time to address the demands of work and life for the other half of the day.

• Breakout sessions will be **recorded and available** to registrants on the Online Workshop website and app for **six months after the event**. If two sessions you want to see are scheduled concurrently, or some other conflict arises, you will have six months to catch up on the ones you missed!

• ICEAA has reduced our usual registration rates by **$700** to reflect the savings we will see from the online format. But attendees' costs are reduced even further by eliminating travel, lodging, and incidental expenses

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Final Poll Question

- Link: PollEV.com/meganjones104

- Question

  8. What topics would you like to explore in future OEM COG webinars and/or activities?

Next Steps and Call to Action

- Build upon our Body of Knowledge: Deep dive into Affordability

  - Expand to include related topics such as value engineering, design to cost, economic analysis

  - Review relevant CEBoK materials (module 15 and 16) and/or update / add content

  - Research affordability topics and share with the community

- Partner with our customers to drive efficiency into the proposal process

- Collaborate with government and SETA contractors to share knowledge in order to promote more holistic views and better understanding of issues that face OEMs

- Let us know what other topics you'd like to explore with the OEM COG

- Volunteer to get more involved with the COG and/or share your perspectives

- Spread the word: Next meeting: July 15, 2021 – Topic TBD

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