



Seven Tips to Support Rapid Product Deployment: Lessons Learned

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The Sense of Urgency



“Months not Years” are the words heard from Navy leadership... “Aye, Aye” we say!

The simple reason:

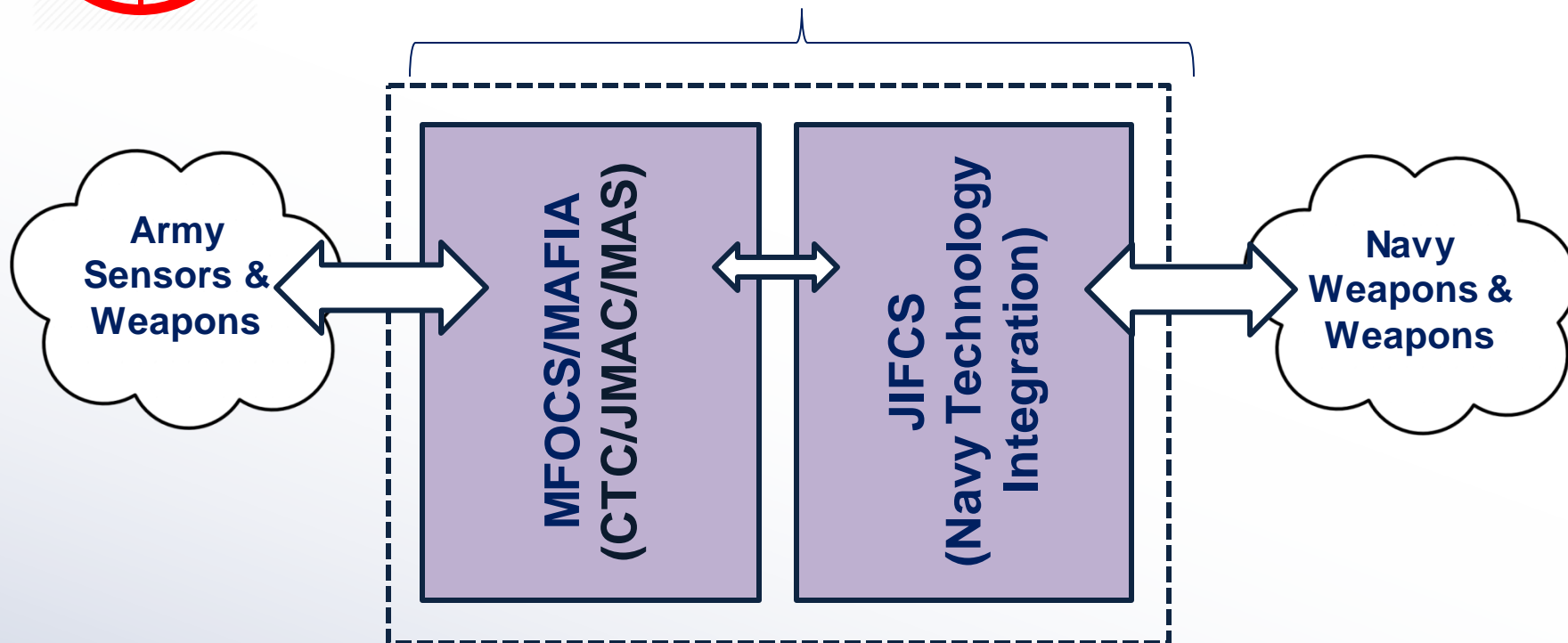
The Navy must maintain its technical advantage at sea, in the air and under the water! Technology is growing by leaps and bounds throughout the world and the Navy workforce must keep ahead of that very fast pace trend!

The following slides contain SEVEN tips to help the Navy workforce answer that call of urgency!

Origin of the Tips



Research focused on (1) integrating with AMRDEC technology, specifically MAFIA and (2) developing technology supporting decision process within Kill Chain Solution.



**JIFCS = Joint Integrated Fire Control System
(Joint System of Systems Approach to cUAS)**

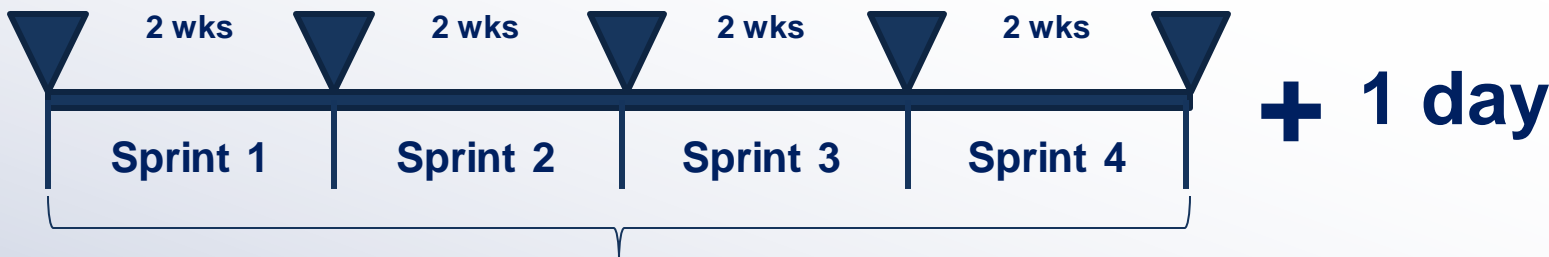


JIFCS: Integrating Navy Developed Technology



Demonstration is Implementing or
Simulating Part of All of this Technology

- ONR's Topside
- PMA 281's CCS
- WD's SPMS
- WD's KILSWITCH
- WD's Weapons Pairing Algorithm
- WD's Vector Intercept: Variation of Synthetic Guidance
- WD's Optical Seeker: Variation of Spike EO/IR
- GOTS' Image Recognition Algorithms
- WD's Machine Intelligence Kill Chain Strategy Algorithm



About 3 ½ People Over Sprint Period



Background



AIRTalks on 15 August 2017

- Leadership set a CLEAR and URGENT GOAL
- Focused on SCHEDULE and OUTCOMES; TAILORED IN only what was critical
- EMPOWERED the team to manage risk and make decisions; and
- ELIMINATED bureaucratic BARRIERS to speed

DoD's MD5 National Security Technology Accelerator focuses on

- Teaching employees how to deliver a well-crafted elevator pitch; and
- Interview stakeholders in support of future adaptation

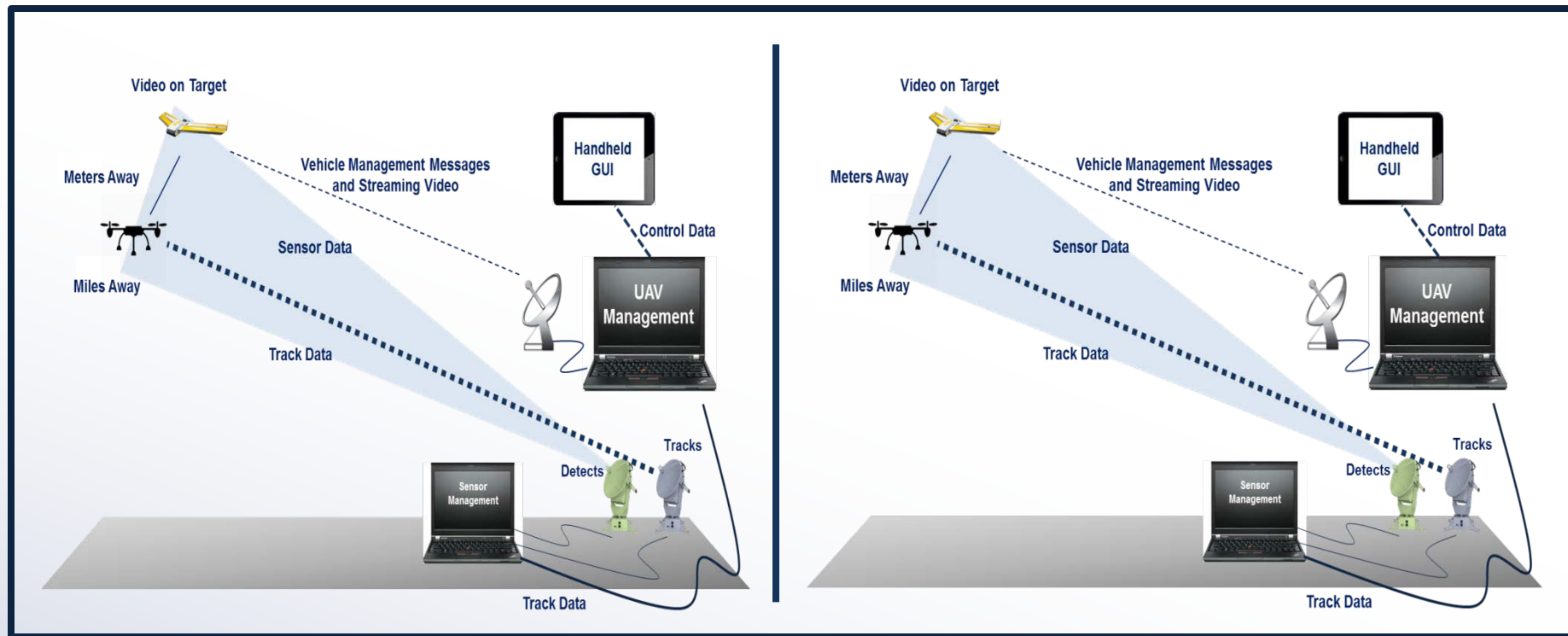


Seven Tips



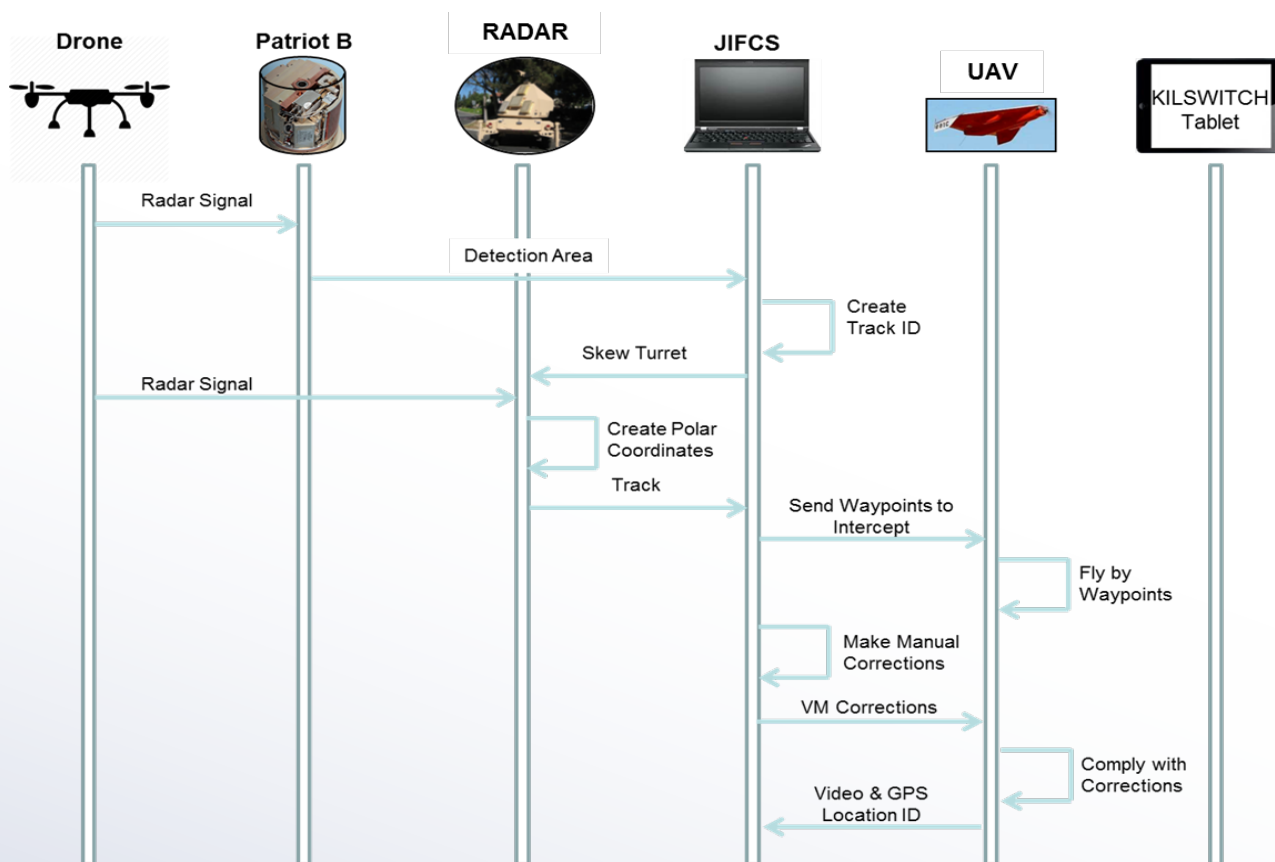
- 1. “A Picture is Worth a Thousand Words!” – Use a Storyboard to Clarify the Problem and Solution**
- 2. Apply Assembly Line Thinking to Make “Months not Years” a Possibility**
- 3. “To Be or Not to Be?” – Analyze the Layers of Interfaces to Determine What Should or Should Not be Used**
- 4. Focus More on Integration, Less on New Development, to Create a “Months Not Years” Project Plan**
- 5. Constantly Remember -- It Takes a Village to Raise a... Product**
- 6. Consider the 80/20 Rule to Support New Talent Growth and Challenging Schedule Goals**
- 7. Share Lessons Learned – Know that Sharing Experience Creates a Village of “Smart People**

“A Picture is Worth a Thousand Words!” – Use a Storyboard to Clarify the Problem and Solution



What Worked : Creatively using OV-1s as a storyboard to graphically describe the problem and solution with greater clarity.

Apply Assembly Line Thinking to Make “Months not Years” a Possibility



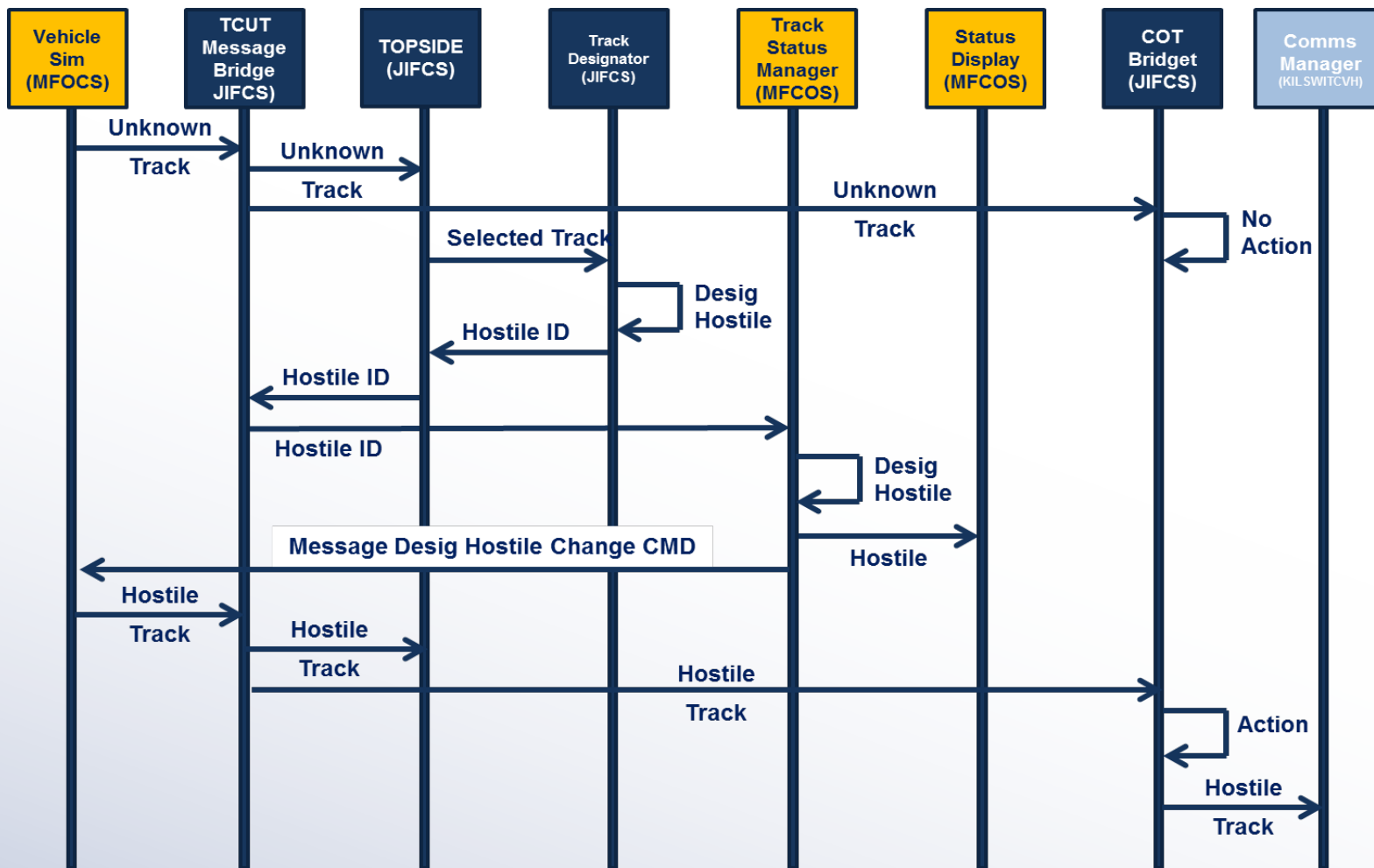
What Worked : Using OV-6c and SV-10c views to describe an assembly line approach that connects existing technology.



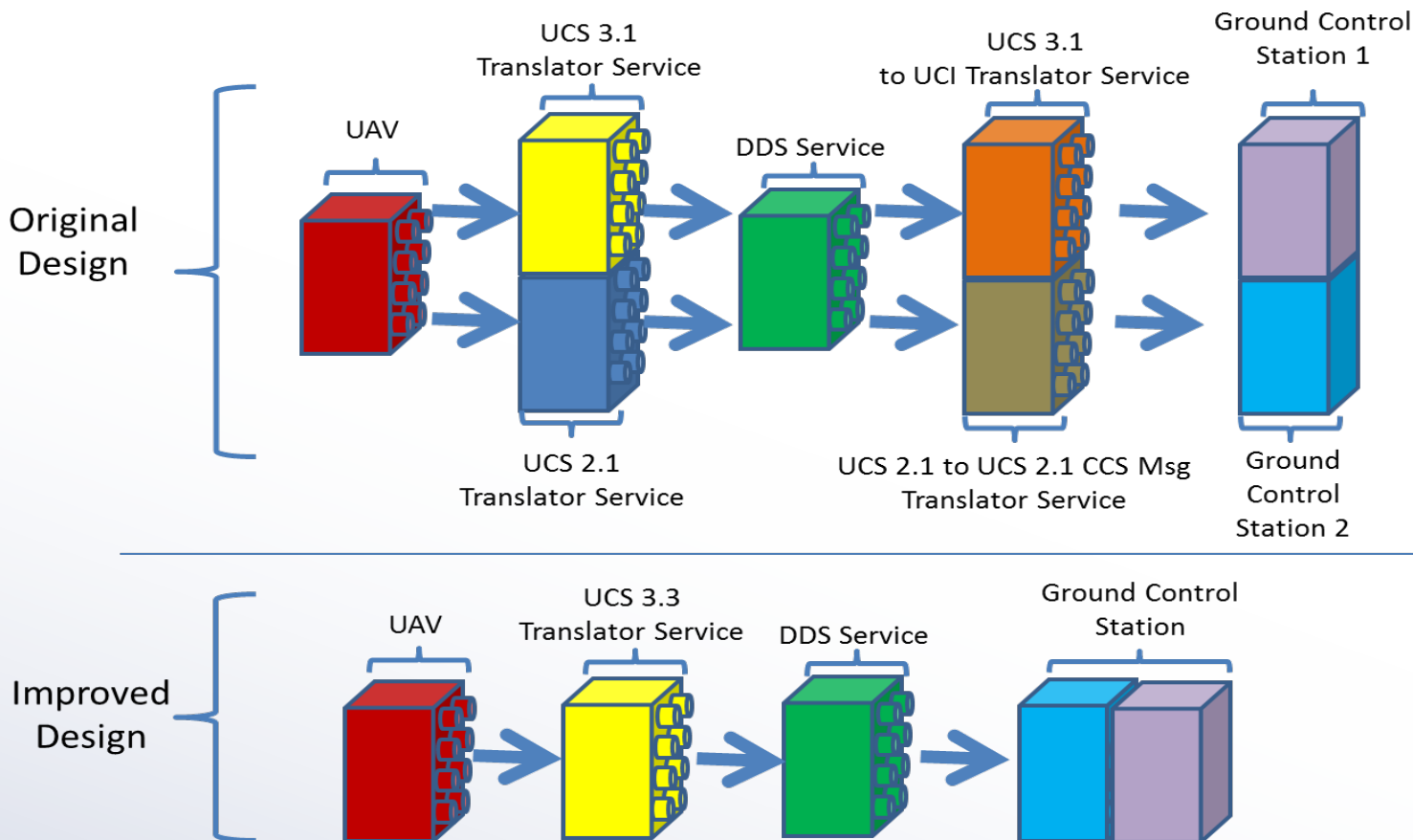
Tip 2 (cont.)



Apply Assembly Line Thinking to Make “Months not Years” a Possibility



“To Be or Not to Be?” – Analyze the Layers of Interfaces to Determine What Should or Should Not be Used



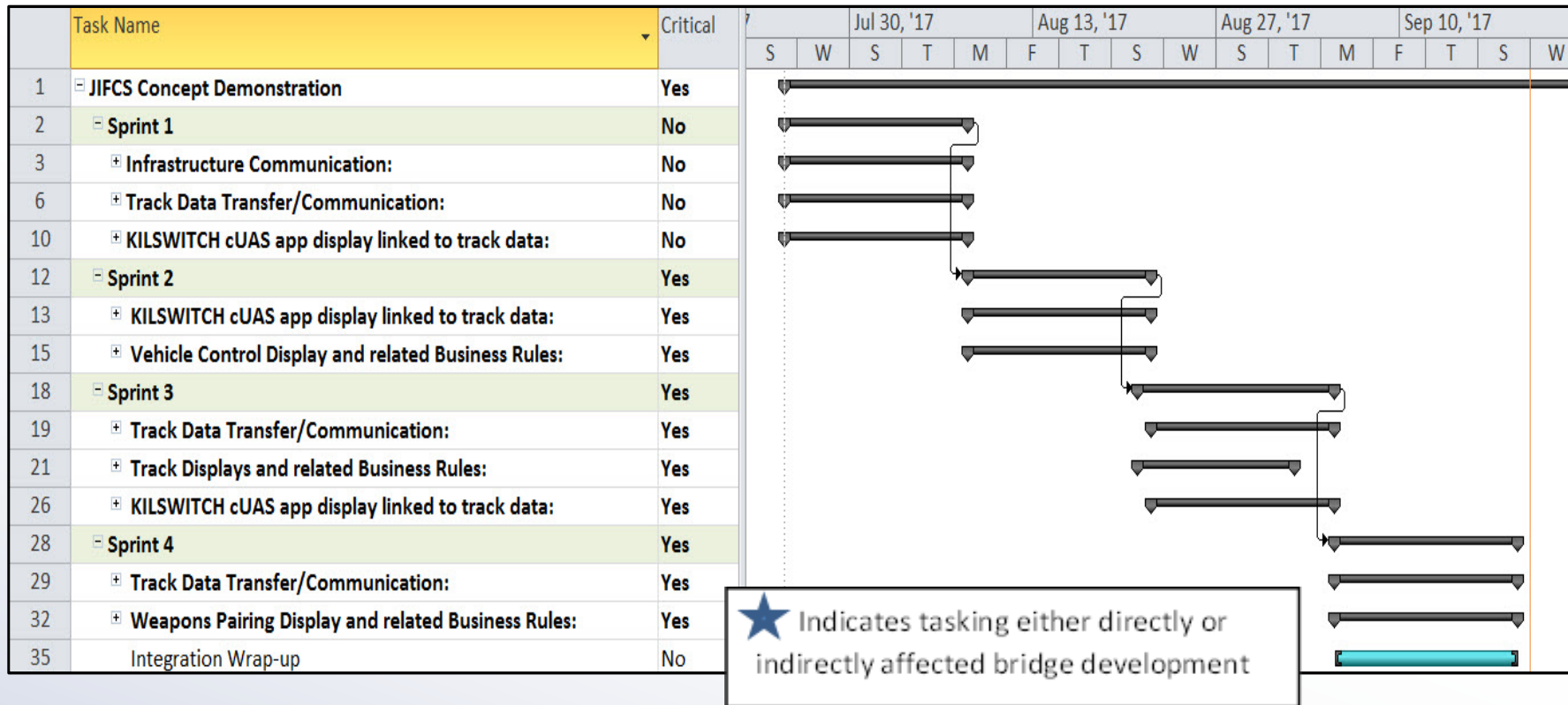
Didn't Work: Forcing standards to work together by needing to use an excessive amount of bridges in order to subsystems and platforms communicate with each other.



Tip 4

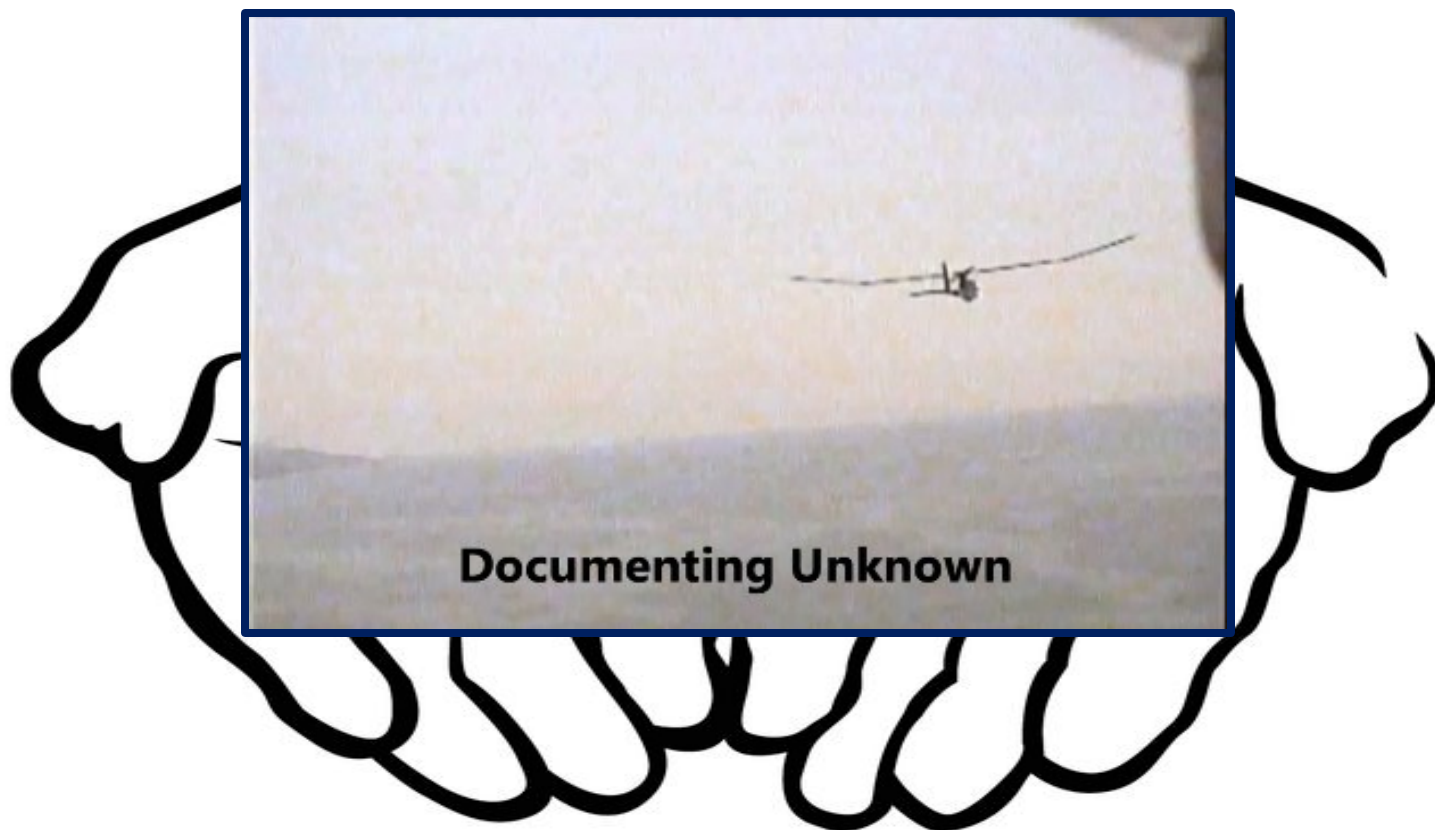


Focus More on Integration, Less on New Development, to Create a “Months Not Years” Project Plan



What Worked: Identifying primary and non-primary elements and focusing the schedule on integrating primary elements.

Constantly Remember -- It Takes a Village to Raise a... Product



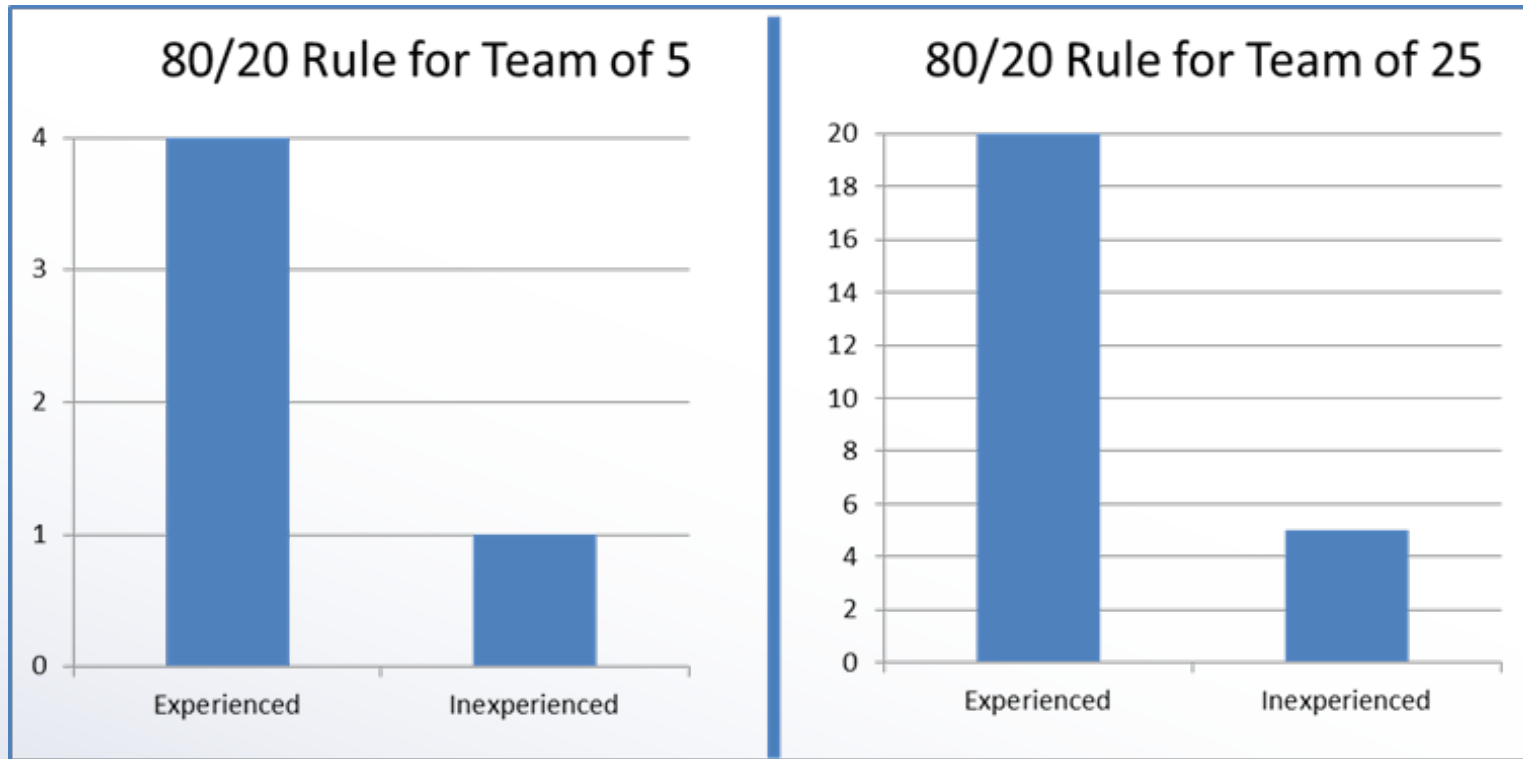
What Worked: Supporting other people and their projects unconditionally to create an environment of mutual support, independent of available charge objects.



Tip 6



Consider the 80/20 Rule to Support New Talent Growth and Challenging Schedule Goals



What Worked : Growing talent without risking schedule by keeping less experienced implementers off of the project plan's critical path and giving them time to learn.



Tip 7



Share Lessons Learned – Know that Sharing Experience Creates a Village of “Smart People

What Worked	What Didn't Work
<p>“A Picture is Worth a Thousand Words!” – Use a Storyboard to Clarify the Problem and Solution. (Related Tip 1: “A Picture is Worth a Thousand Words!” – Use a Storyboard to Clarify the Problem and Solution)</p>	<p>Forcing standards to work together by needed to use an excessive amount of bridges in order to subsystems and platforms communicate with each other. (Related Tip 3: “To Be or Not to Be?” – Analyze the Layers of Interfaces to Determine What Should or Should Not be Used)</p>
<p>Using OV-6c and SV-10c views to describe an assembly line approach that connects existing technology. (Related Tip 2: Apply Assembly Line Thinking to Make “Months not Years” a Possibility)</p>	
<p>Identifying primary and non-primary elements and focusing the schedule on integrating primary elements. (Related Tip 4: Focus More on Integration, Less on New Development, to Create a “Months Not Years” Project Plan)</p>	



Tip 7 (cont.)



Share Lessons Learned – Know that Sharing Experience Creates a Village of “Smart People

What Worked	What Didn't Work
<p>Supporting other people and their projects unconditionally to create an environment of mutual support, independent of available charge objects. (Related Tip 5: Constantly Remember -- It Takes a Village to Raise a... Product)</p>	
<p>Growing talent without risking schedule by keeping less experienced implementers off of the project plan's critical path and giving them time to learn. (Related Tip 6: Consider the 80/20 Rule to Support New Talent Growth and Challenging Schedule Goals)</p>	
<p>Sharing what worked and didn't work with others – and making it as easy as possible for people to understand and be interested. (Related Tip 7: Share Lessons Learned – Know that Sharing Experience Creates a Village of “Smart People”)</p>	



Conclusions



Tip 1: “A Picture is Worth a Thousand Words!” – Use a Storyboard to Clarify the Problem and Solution

1.1	Was a specific problem defined that the Navy needs to have solved? (Ref: DoDAF Views, OV-1s to start in storyboard fashion)	Yes/No
1.2	Were assumptions made about the problem domain and did those assumptions still support Navy needs? (Ref: DoDAF Views, OV-1s to start in storyboard fashion)	Yes/No
1.3	Is someone already solving this problem using the same assumptions? If so, was this group contacted and solutions compared? (Ref: DoDAF Views, OV-1s to start in storyboard fashion)	Yes/No
1.4	With regard to the solution, is a complete Kill Chain scenario described? (Ref: DoDAF Views, OV-1 to start in storyboard fashion)	Yes/No

Tip 2: Apply Assembly Line Thinking to Make “Months not Years” a Possibility

2.1	Have the platforms been selected and their timing relationships been defined? (Ref: DoDAF Views, OV-6c and SV-10c in assembly line fashion)	Yes/No
2.2	Have the subsystem elements regarding the platforms been selected and their timing relationships been defined? (Ref: DoDAF Views, OV-6c and SV-10c in assembly line fashion)	Yes/No

Tip 3: “To Be or Not to Be?” – Analyze the Layers of Interfaces to Determine What Should or Should Not be Used

3.1	Are there straight-forward bridge/interface connections between standards of different subsystem elements?	Yes/No
3.2	Is there one common communication standard used to connect the different subsystems elements and platforms?	Yes/No



Conclusions (cont.)



Tip 4: Focus More on Integration, Less on New Development, to Create a “Months Not Years” Project Plan

4.1	Is developing bridge work/interfaces between elements the main driver to the length of schedule?	Yes/No
4.2	Is the development of the bridge work/interfaces between elements most times on the critical path?	Yes/No

Tip 5: Constantly Remember -- It Takes a Village to Raise a... Product

5.1	Is a formal (being paid) support network, including experts in various fields related to the proposed solution, available to help?	Yes/No
5.2	Is an informal (no needing to be paid) support network, including experts in various fields related to the proposed solution, available to help?	Yes/No

Tip 6: Consider the 80/20 Rule to Support New Talent Growth and Challenging Schedule Goals

6.1	Is around 80% of the development team experienced regarding the work that needs to be performed?	Yes/No
6.2	Are the experienced developers assigned work on the critical path?	Yes/No
6.3	Are the inexperienced developers not assigned work on the critical path?	Yes/No
6.4	Are the inexperienced developers highly motivated?	Yes/No
6.5	Are the inexperienced developers provided more time to complete tasks to account for their learning process?	Yes/No

Tip 7: Share Lessons Learned – Know that Sharing Experience Creates a Village of “Smart People

7.1	Are you identifying what worked and why?	Yes/No
7.2	Are you identifying what didn't work and why?	Yes/No
7.3	Are you making suggestions to improve the process?	Yes/No