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# Empowering Intelligence Integration: The (Future) Role of Ground

L E A D I N G I N T E L L I G E N C E I N T E G R A T I O N

Dawn Meyerriecks  
dawnm@dni.gov

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# The Value of Integrated Intelligence

	<i>Knowledge</i>	<i>Speed</i>	<i>Precision</i>	<i>Lethality (Air 2 Gnd OPS)</i>
<b>ODS</b>	3200 ISR Sortie Hours	7 Mos Buildup	10 % PGMs ~ 30 SOF Teams	10 % Integ Ops 4 Acft/Tgt
<b>OIF</b>	1700 ISR Sortie Hours	< 3 Mos Buildup	70 % PGMs ~ 100 SOF Teams	90 % Integ Ops 1 Acft/4 Tgt
<b>RESULTS</b>	3X Info Half of the Hours ↓ Footprint	↓ Footprint # Ships Msn Achieve t ↑ Speed of Mnvr	↑ Precision Decisions ↓ Collat Dam RQD Ord	↑ Economy Of Force ↓ Heavy Ord Rqmts

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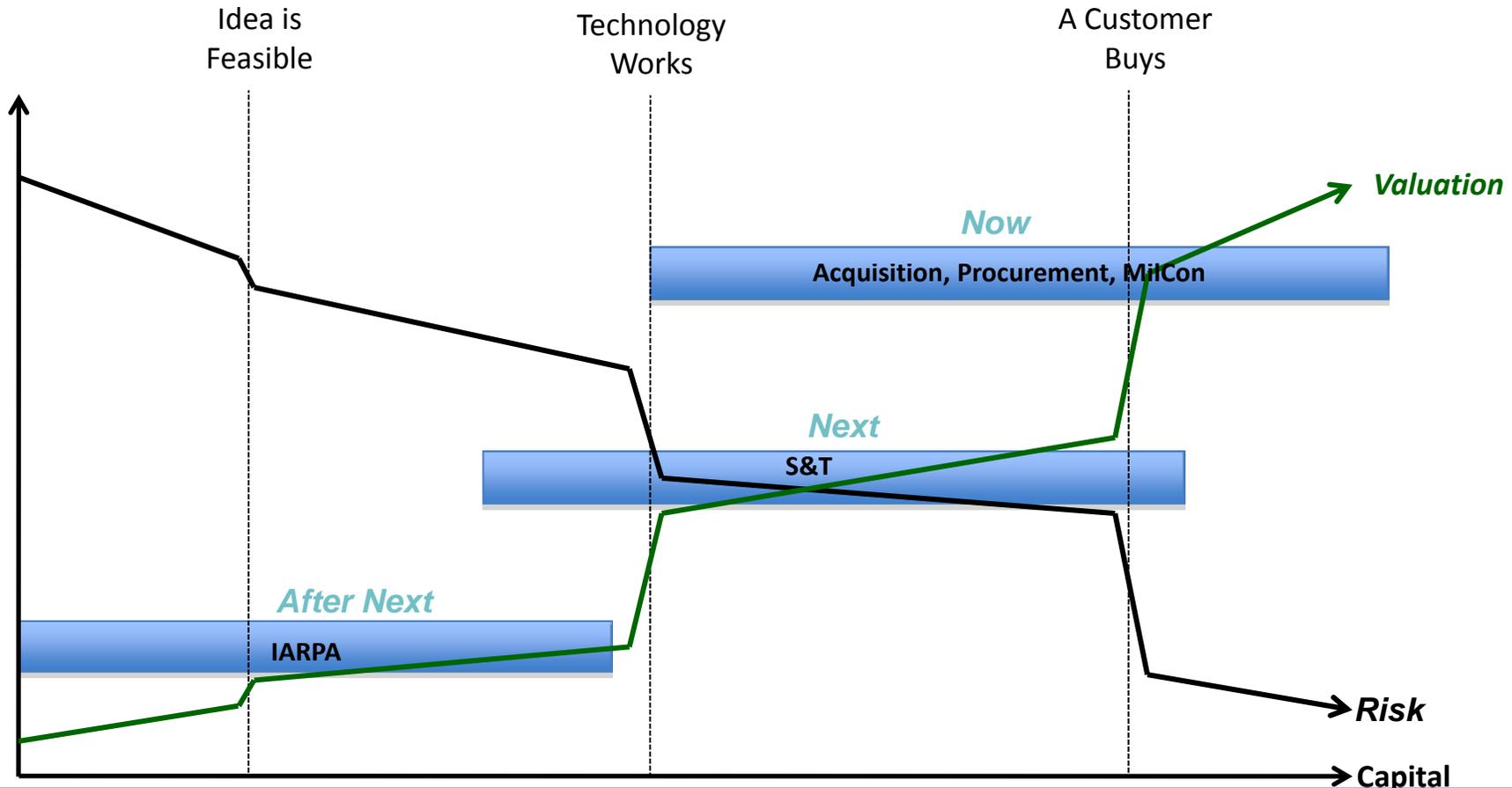


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# AT&F Technology Products



**Catalyze delivery of innovative technology-based capabilities solving intelligence challenges.**

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# Technology Lifecycle



## Heavy Metal



## Information Technology



## Low Production, Miniaturized

<p><b>Business Characteristics</b></p> <ul style="list-style-type: none"> <li>• Austere Deployment Environments</li> <li>• Fragile Industrial Base</li> <li>• Operational Failures Irrecoverable</li> <li>• High Systems Engineering Complexity</li> <li>• US IR&amp;D: 5%</li> </ul>	<ul style="list-style-type: none"> <li>• Forgiving Deployment Environments</li> <li>• Robust industrial base</li> <li>• Operational Failures Acceptable or Maskable</li> <li>• Medium Systems Engineering Complexity</li> <li>• US IR&amp;D: 6.6%</li> </ul>	<ul style="list-style-type: none"> <li>• Clandestine Deployment Environments</li> <li>• Boutique Industrial Base</li> <li>• Operational Failures Impact Reputation</li> <li>• Low Systems Engineering Complexity</li> <li>• US IR&amp;D: 2.2%</li> </ul>
<p><b>Lifecycle Characteristics</b></p> <ul style="list-style-type: none"> <li>• Multi-year Acquisition Cycles (~10+ yrs)</li> <li>• Multi-year Production Cycles</li> <li>• Rigorous Development</li> <li>• \$B</li> <li>• Long-lead R&amp;T (e.g., 1st 3 years of 10 year effort)</li> </ul>	<ul style="list-style-type: none"> <li>• 18 - 24 Month Production Cycles</li> <li>• Productivity “epochs” (Client/Server -&gt; Web -&gt; Collaboration -&gt; Services)</li> <li>• Agile development</li> <li>• \$M</li> <li>• Mid- &amp; Long-Lead R&amp;T Mix (e.g., min of 3-4 yrs in front of need)</li> </ul>	<ul style="list-style-type: none"> <li>• Custom Development</li> <li>• \$ M</li> <li>• Mid-lead R&amp;T Mix (e.g., min of 2-3 yrs in front of need)</li> </ul>





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# Space Trends

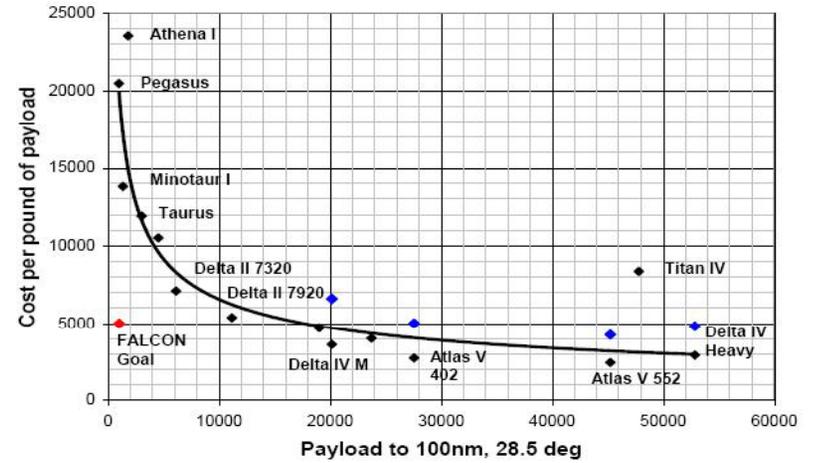
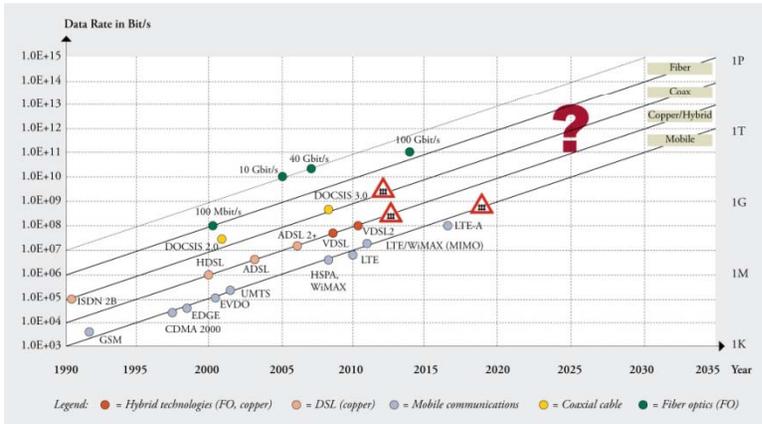
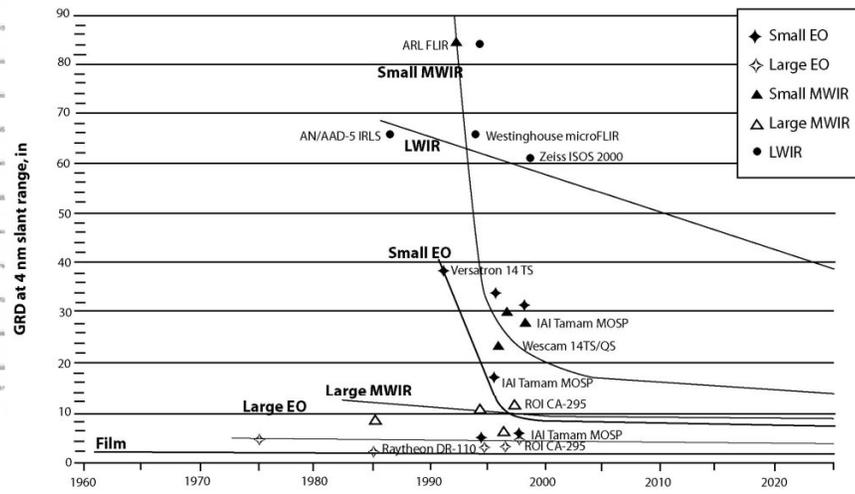
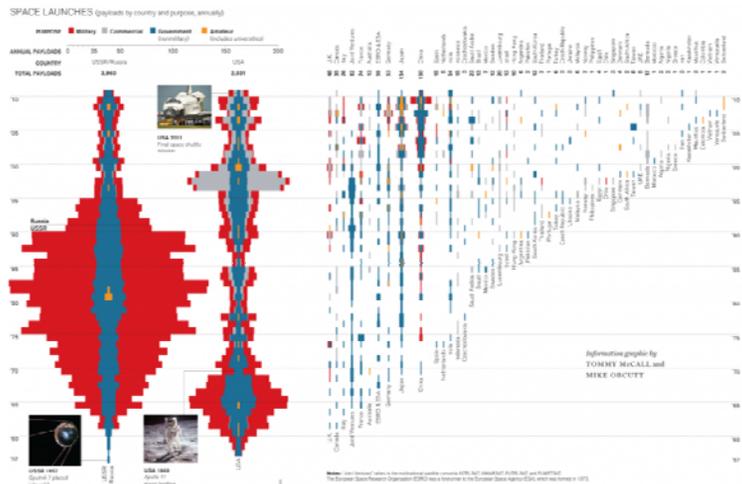


Figure 2. Launch Costs of Common Space Launch Systems



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# What's the Deal??

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## Space Futures

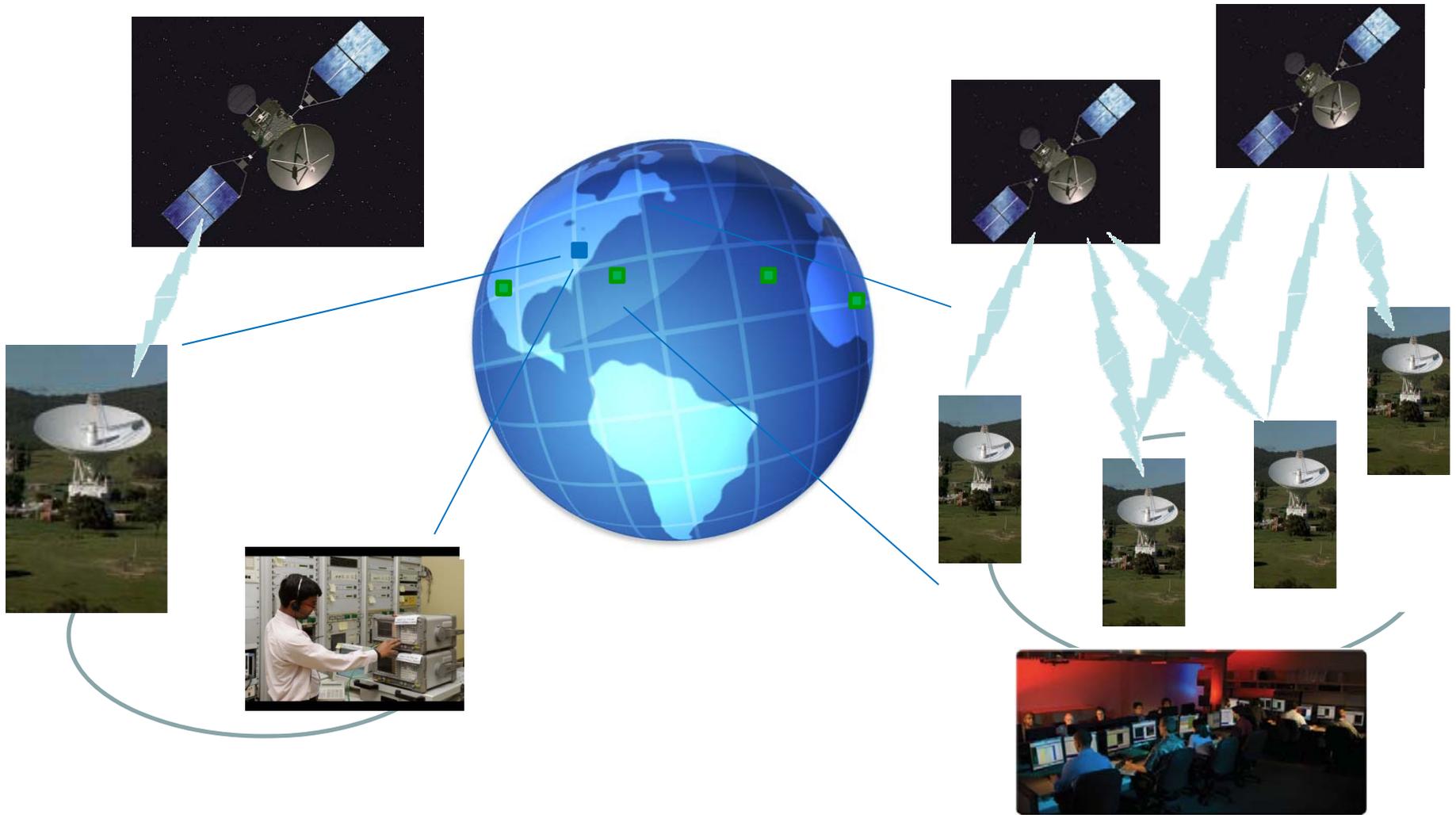
- Why not near-real-time cross-platform tipping, queueing, and tasking?
- Why not continuous near-real-time communications?
- Why not prove “smart analytics” on the ground, then migrate to space?

**Ground CAN and SHOULD leverage IT trends.**





# Play-n-plug Ground Constellation





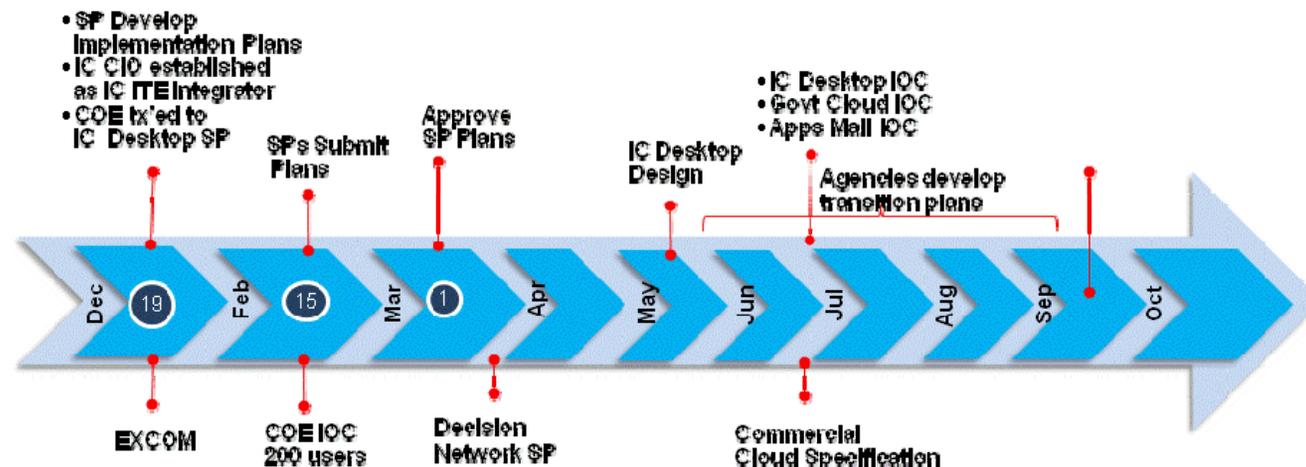
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# Play-n-Plug Enterprise Ground

- Leverage IC IT Enterprise Strategy
  - Desktop Environment: VDI-based: DIA/NGA
  - Cloud Hosting: Utility, Data, Analytics: CIA, NSA
  - Apps Mall: OWF: NSA
  - Apps Stores: CIA, DIA, NGA, NRO, NSA



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# Activity-Based Intelligence

- Multi-INT
  - Provide understanding of patterns of behavior
  - Enable development of plots rather than assessing characters
  - Tip & Cue Other Collection & Analysis
- Increase focus on mission utility
- $\Delta$  Intel Paradigm to include time dimension



## The Ground Community Must:

- *Demonstrably* **Focus** on Mission Outcomes
- **Solve** Problems *Collaboratively*
  - **Innovate** *Relentlessly*

Catalyze delivery of innovative technology-based capabilities solving intelligence challenges.