



Some Points about MDO

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Liftoff of the Next Generation of Flight

Engineering, Operations & Technology



Liftoff of the New 747-8

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The DC-3 is Still Flying

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- **One of the most important transport aircraft in history – the mainstay of passenger and freight services for many years.**
- **“Overdesigned” and considered to be nearly indestructible.**

Some Advanced Systems for Meeting New Challenges

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Phantom Ray



X-48B Blended Wing- Body



Phantom Eye



X-51 WaveRider

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Vulture



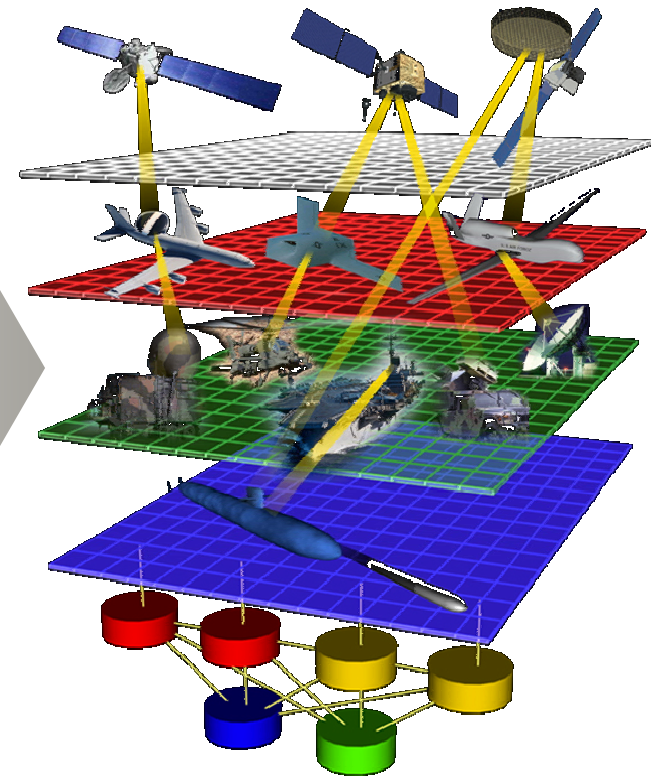
Defense Programs Are Changing

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Today



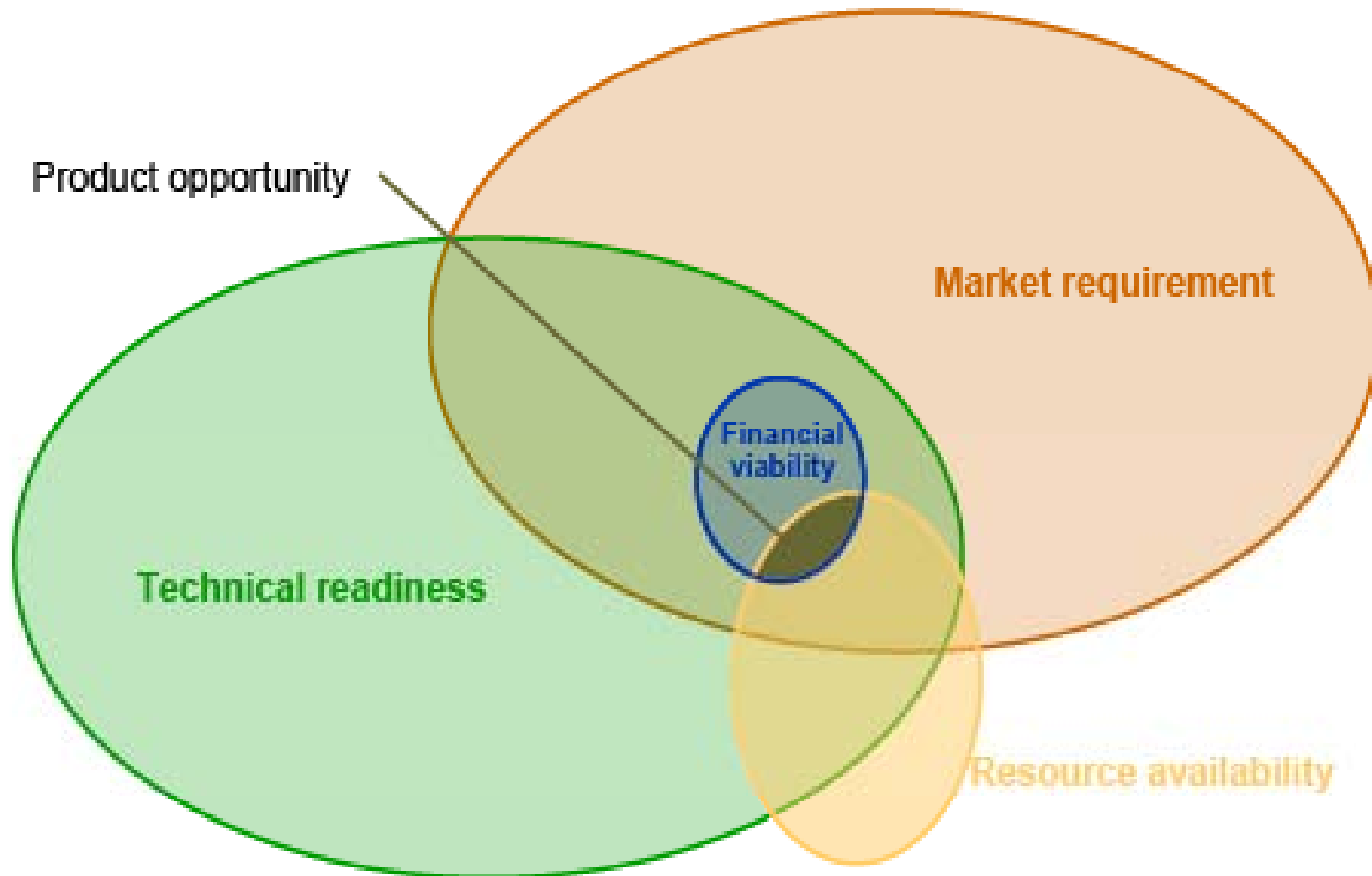
Tomorrow



Customers Demanding Integrated Systems

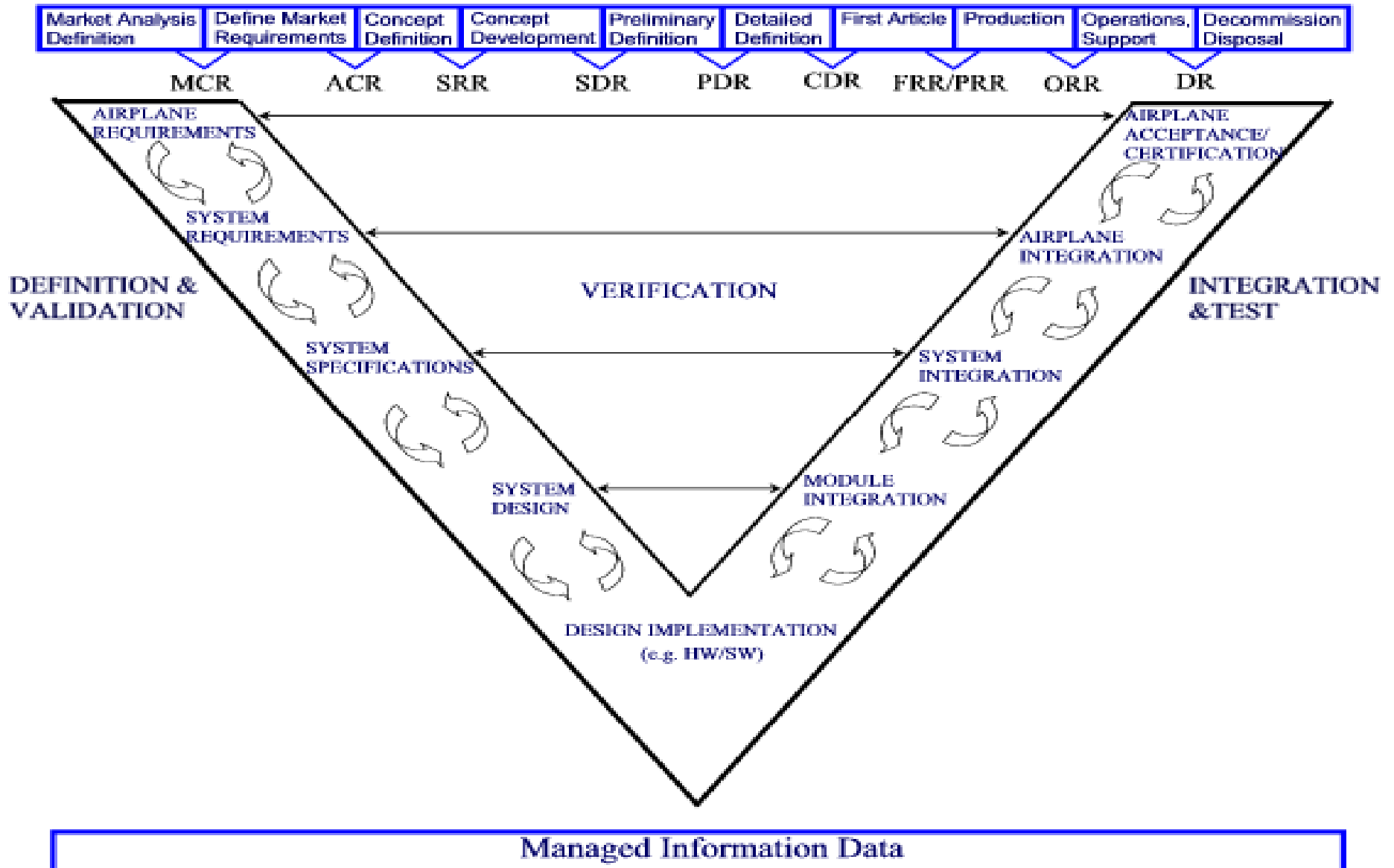
Product Opportunities Involve Multiple Criteria

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Focusing on Systems Engineering

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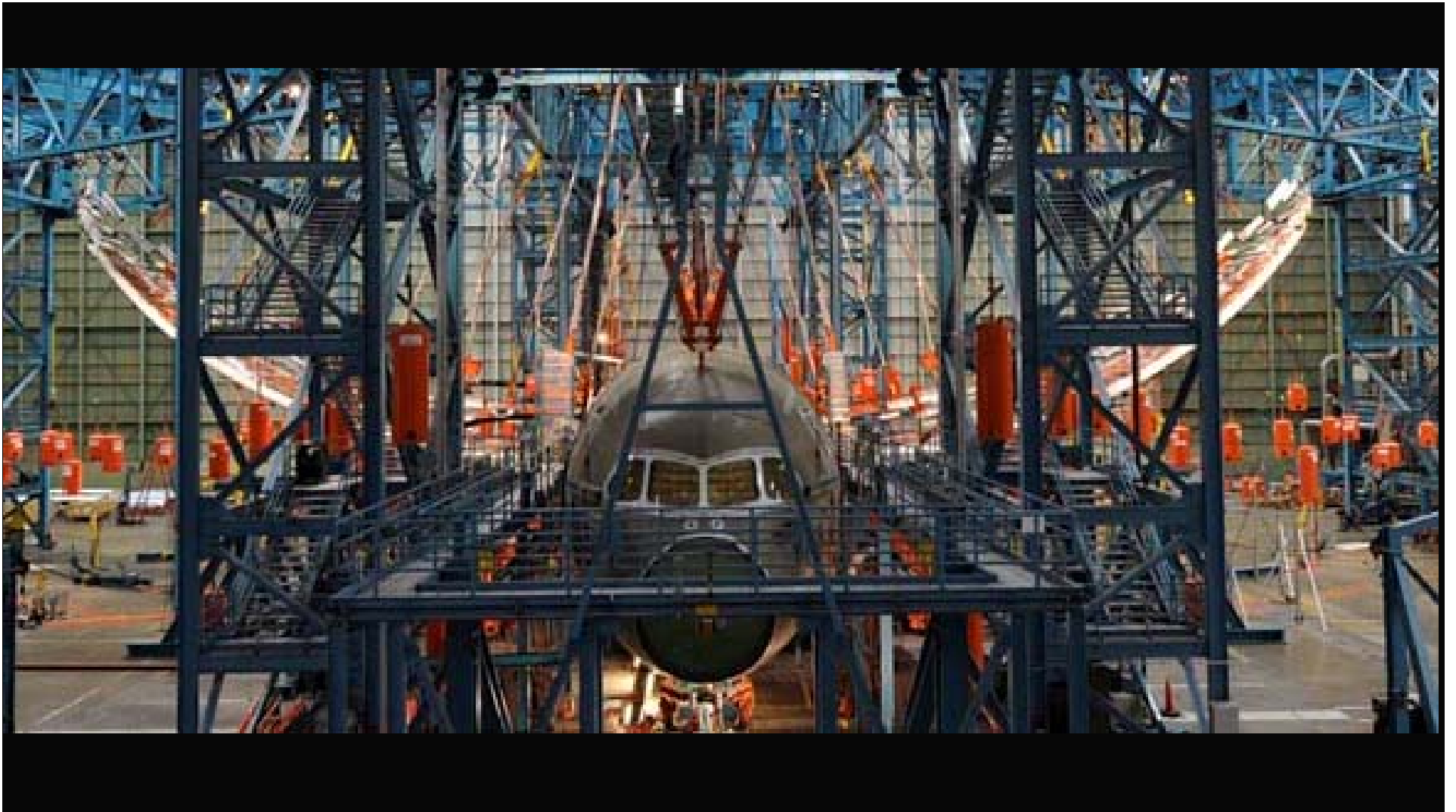
Some MDO Challenges

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- **Creating a truly collaborative environment**
- **Capturing knowledge and establishing a robust knowledge environment**
- **Conducting analysis with consistent fidelity**
- **Emphasizing cycle time**
- **Validating results**
- **Reporting and documenting data**
- **Driving and guiding the system**

Testing the Technology

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Building a Diverse, World Class Work Force

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