

SMI 2nd Annual Military Flight Training Conference

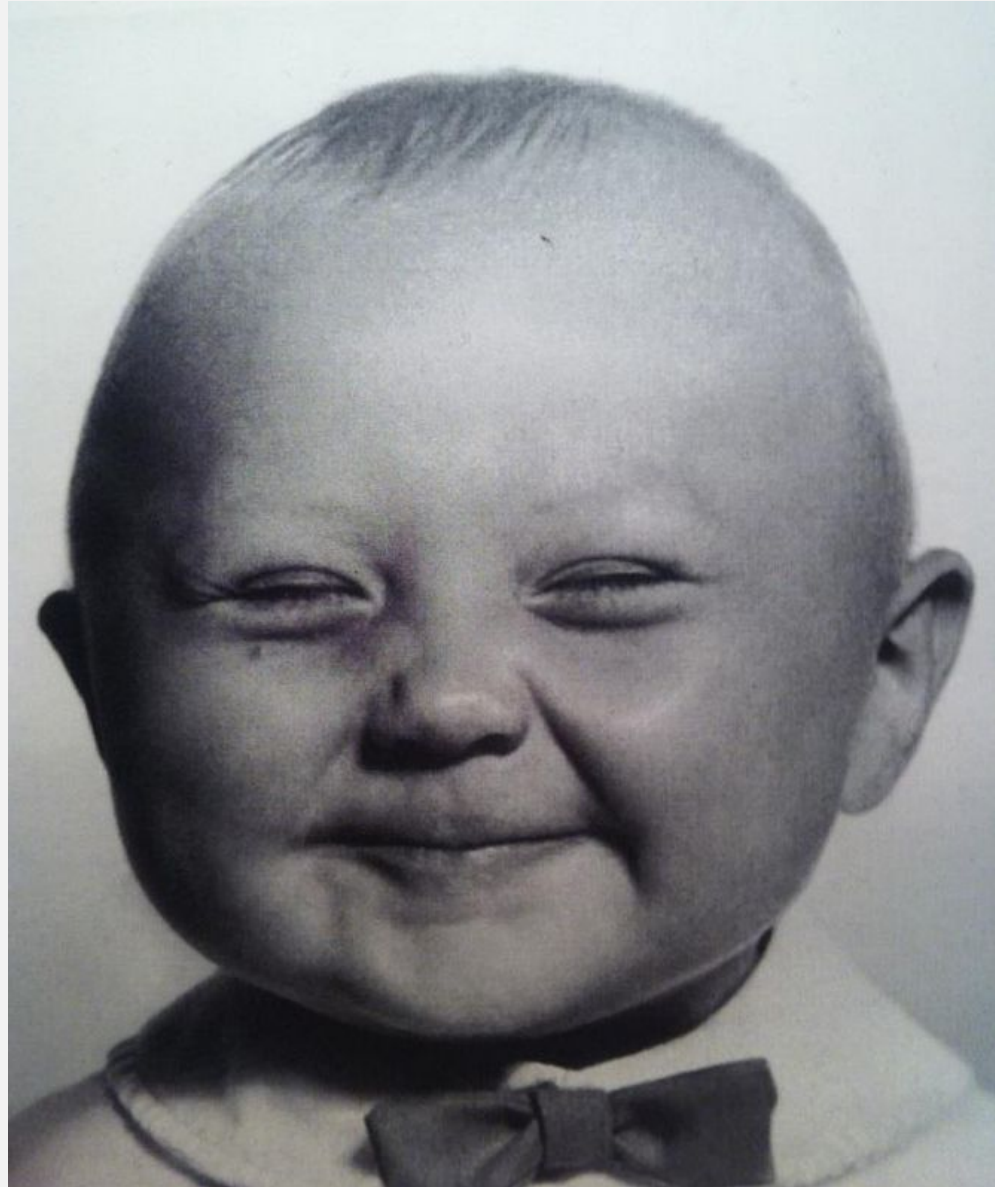
London – 18 September 2013



Simulation Strategy Another Perspective

Andy Fawkes

Simulation Strategy should be Easy



Why a Strategy?

strat•e•gy

(străt' ə-jē) *n.*

**1. Plan of action
designed to achieve
a particular goal.**

Simulation Strategy?

More

Cost Effective

Simulation



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Outline



- Simulation Benefits
- Challenges
 - Demand Side
 - Supply Side
- Towards a Strategy

My Background



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Benefits of Simulation



Improve Training



Reduce Time to Train



Reduce Costs

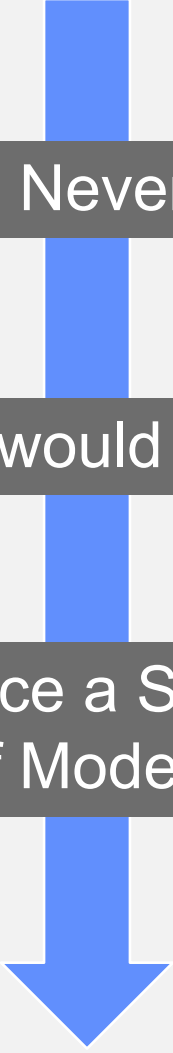


Reduce Environmental Impact



Improve Safety

Changing Attitudes



“Simulation will Never Replace Live”

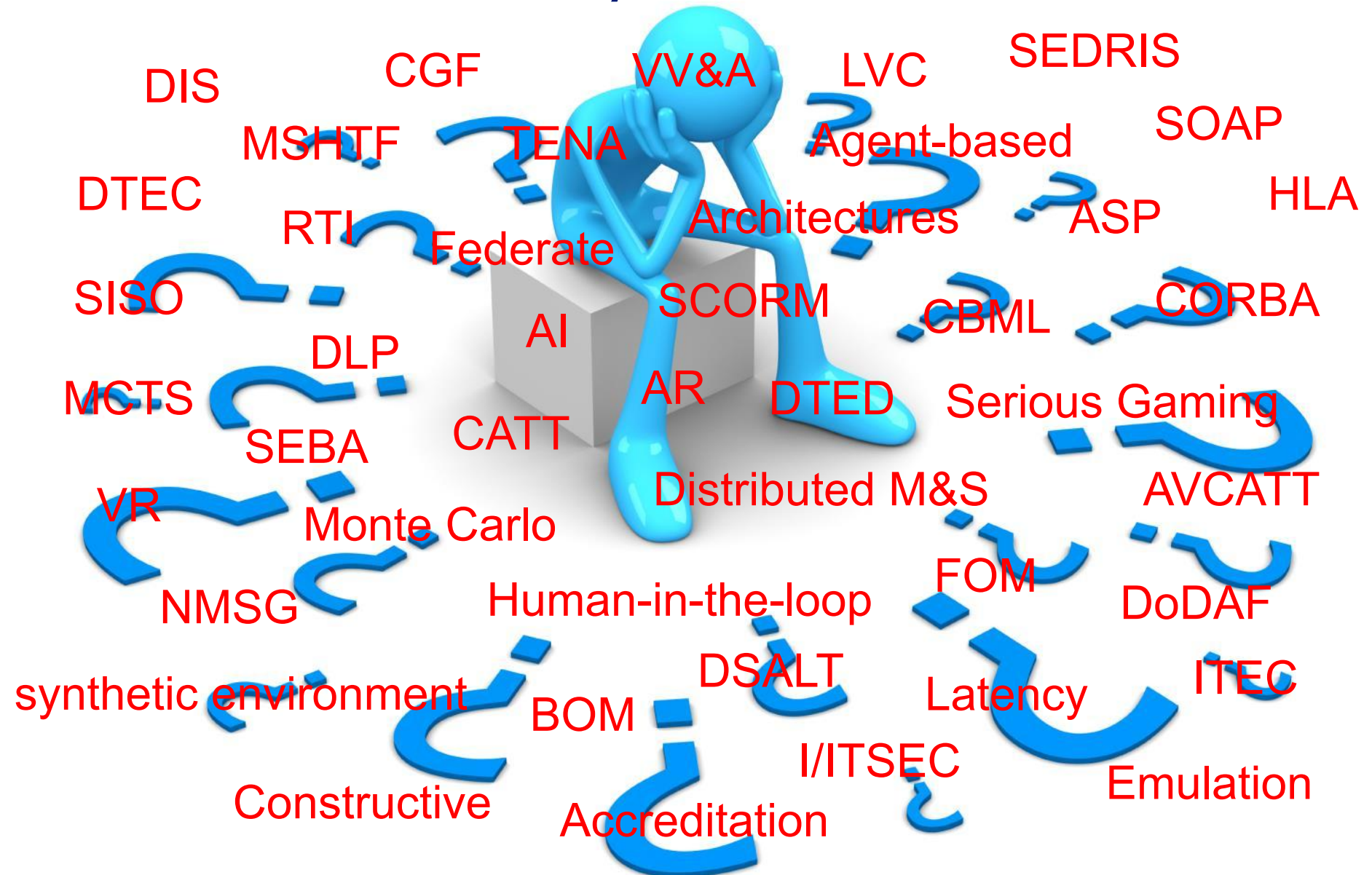
“if I had the Choice I would Jump in a Simulator”

“we should embrace a Step Change in the
Exploitation of Modern Simulation”

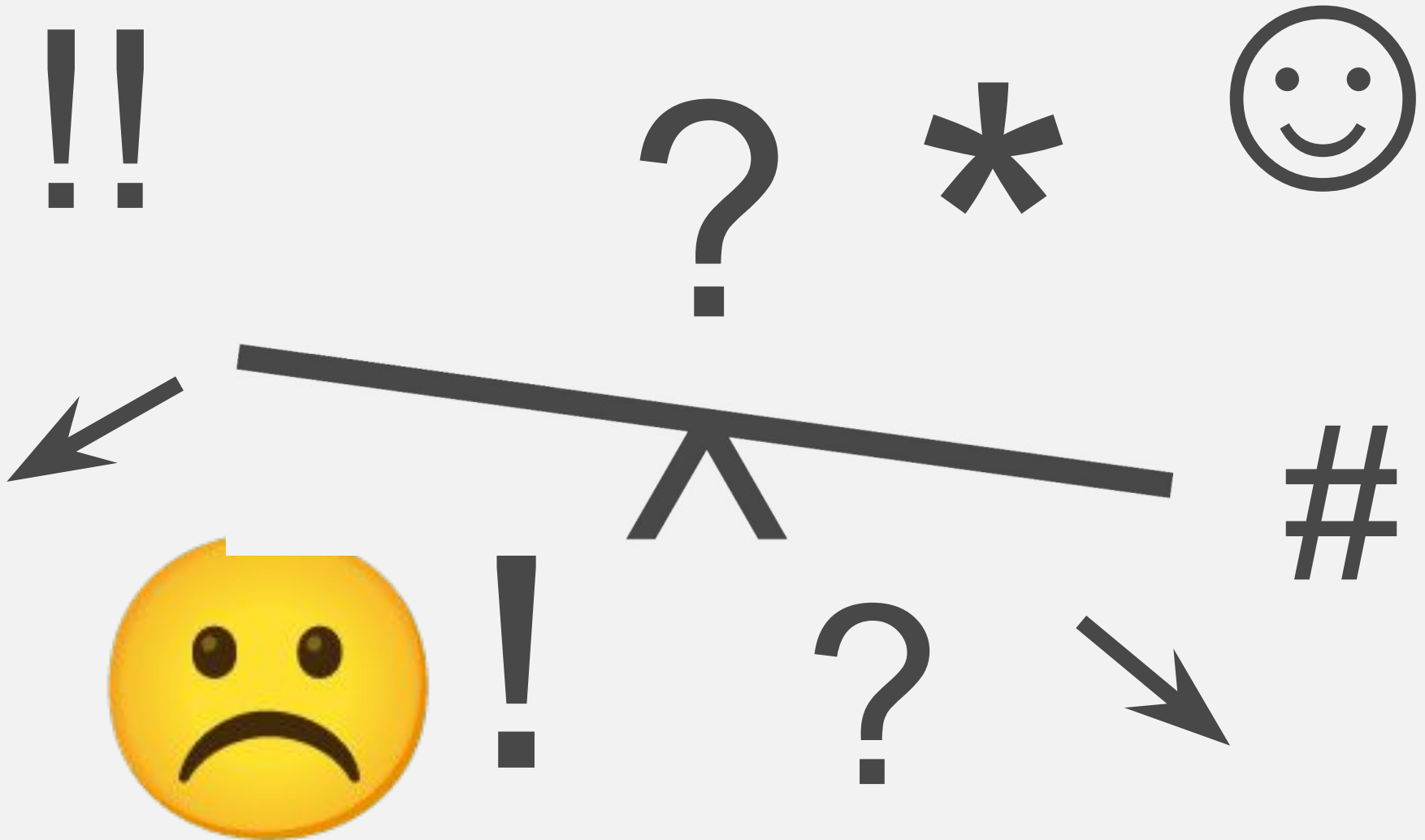
Discussion and Debate



Plenty to Discuss



Live-Synthetic Balance



How much?

?

- “Cost Simulation 20% of Live Training”

\$

£

- “Save £100m’s”

- “Cost Simulation 5% of Live Training”

- “Training 20% of Defence Budget”

€



Level Playing Field?

Live and Synthetic

Challenges

Demand Side



What Training? In the Air?

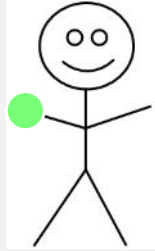


What Training? On the Ground?

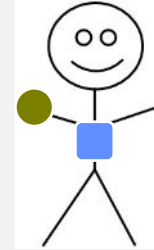
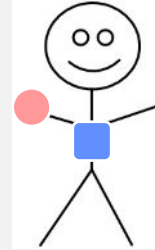
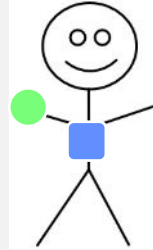


Levels of Training?

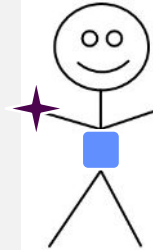
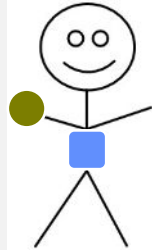
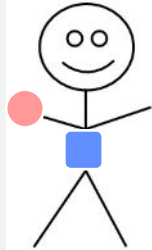
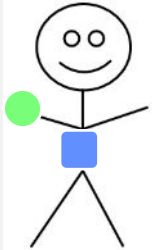
Individual



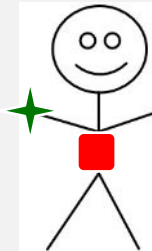
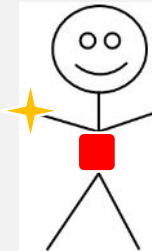
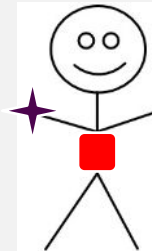
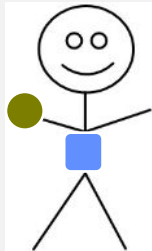
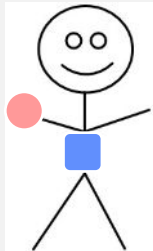
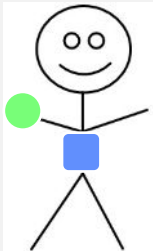
Team



Collective



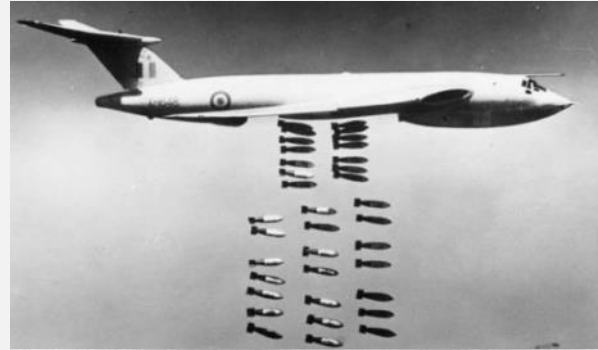
Joint



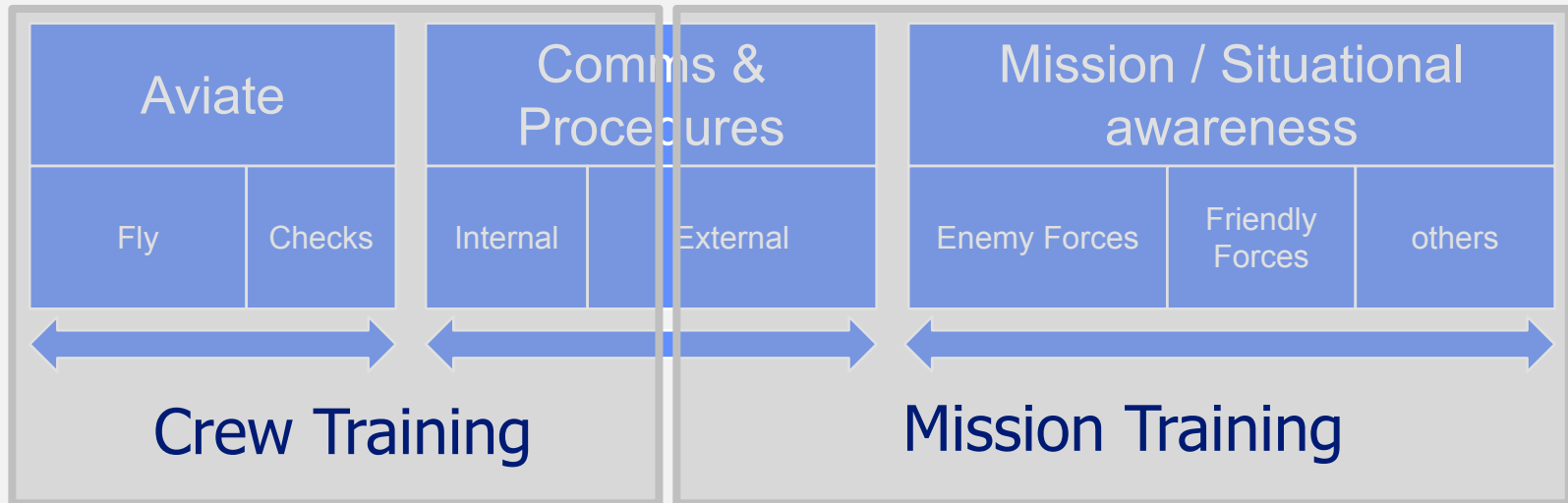
Multi-National



Changing Needs



Mission Training



Pilot screening and pre-selection

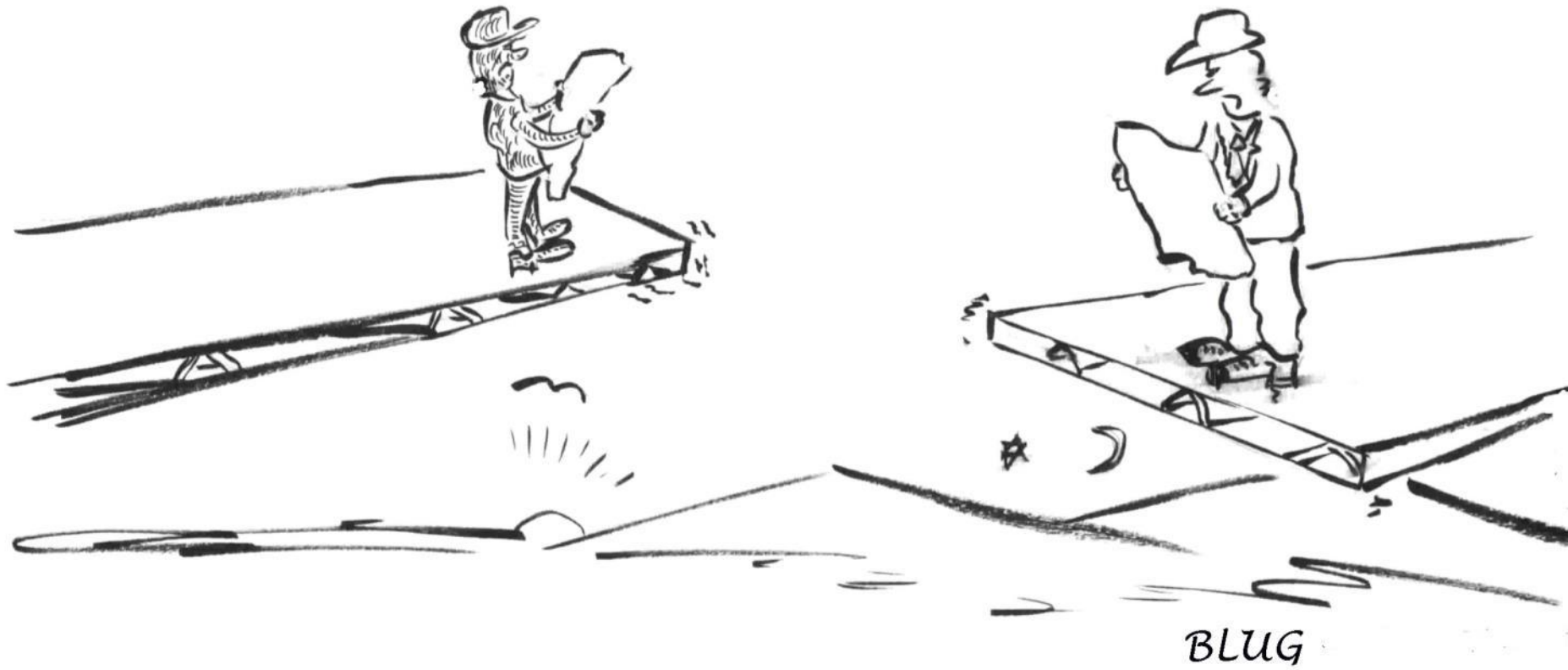


Measuring Training

- Number Trainees?
- Number Qualifications?
- Feedback?
- Continuous Evaluation?



Meeting the Requirement?



Who/What is the Technology Benefitting?

- The Organisation
 - eg. improved cost effectiveness
- The Trainee
 - eg. 24/7 access to knowledge
- The Trainer
 - eg. audio/visual aids
- All of the Above

Other Factors



Other Factors



Never Replace Live?

theguardian

News | Sport | Comment | Culture | Business | Money | Life & style

News > World news > US military

US grounds F-35 fighter jets over cracked engine blade

Problem discovered at Edwards Air Force Base prompts critics to slam 'gigantically disappointing performance' of new plane

Associated Press in Washington
guardian.co.uk, Saturday 23 February 2013 14.00 GMT

 [Jump to comments \(182\)](#)



The US has grounded its fleet of F-35 fighter jets. Photograph: Handout/Reuters

The Pentagon has grounded its fleet of F-35 fighter jets, after discovering a cracked engine blade in one plane.

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Challenges

Supply Side



Fidelity

- Physical – Spatial, tactile, and appearance



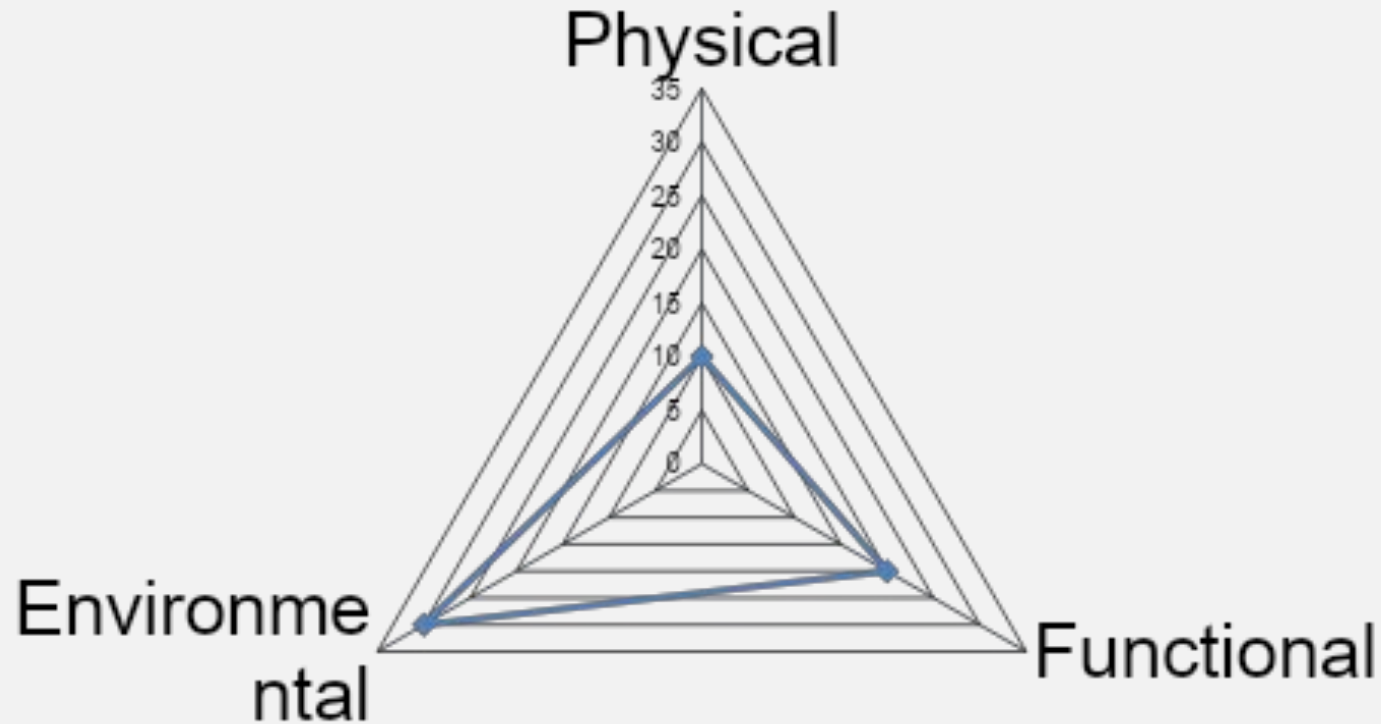
- Functional – Format, content, and response



- Environmental – Visual, sound, motion, and ambience



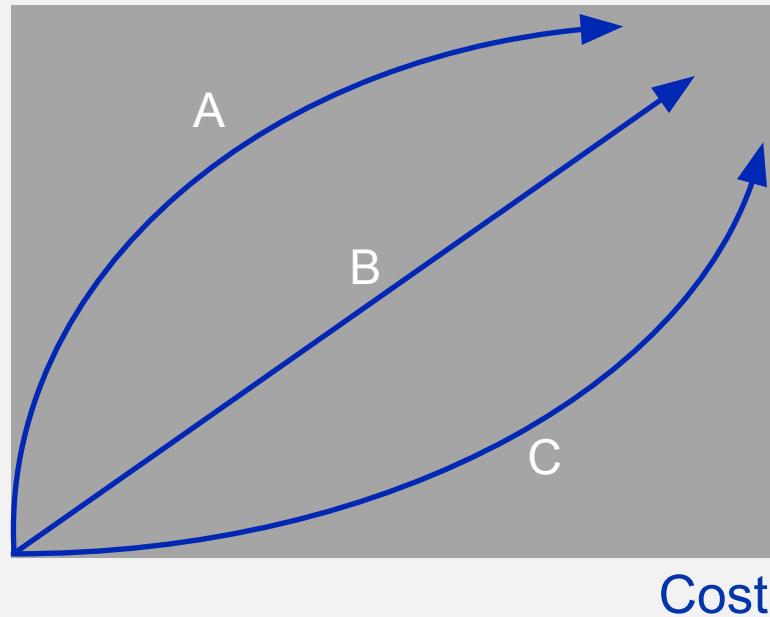
What is Important?



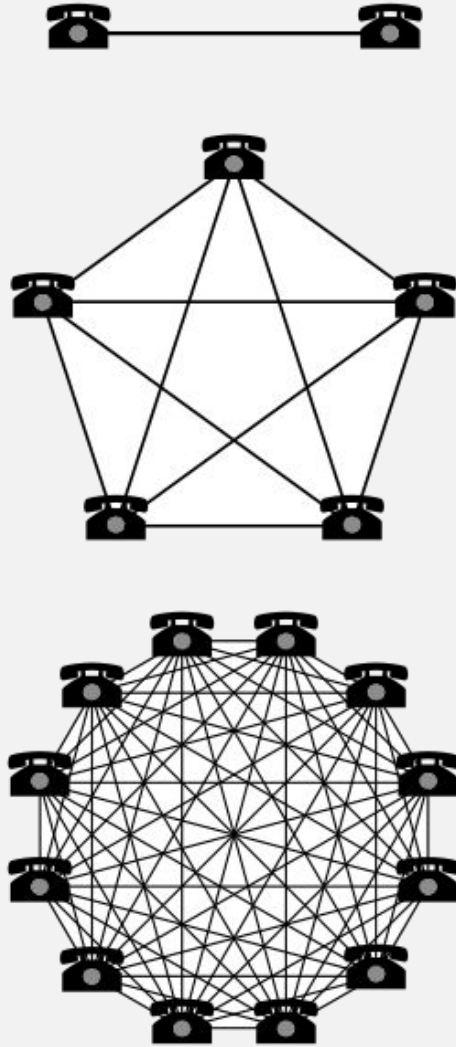
Understanding your Fidelity Requirements



Training
Effectiveness



Network



- Why Travel?
- Why not Make it Easier for Others?
- Why get Content in the Post?



US Pilot and UK FAC Training (2008)



Technology and Societal Change





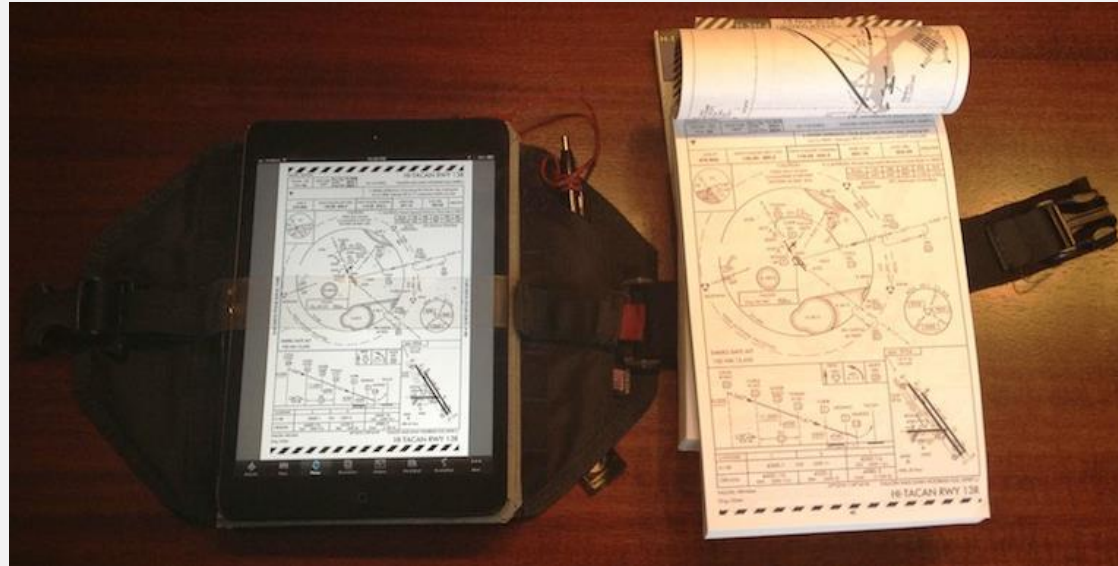
VOGUE

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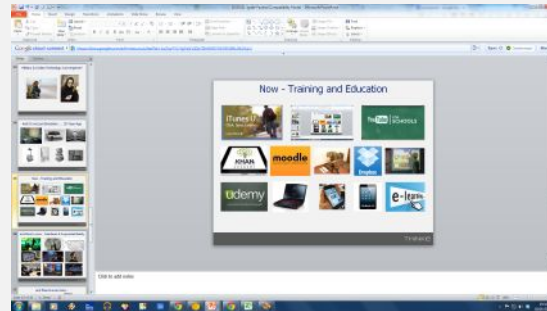


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It's not just Simulation



Training and Education Technology



Digital Convergence

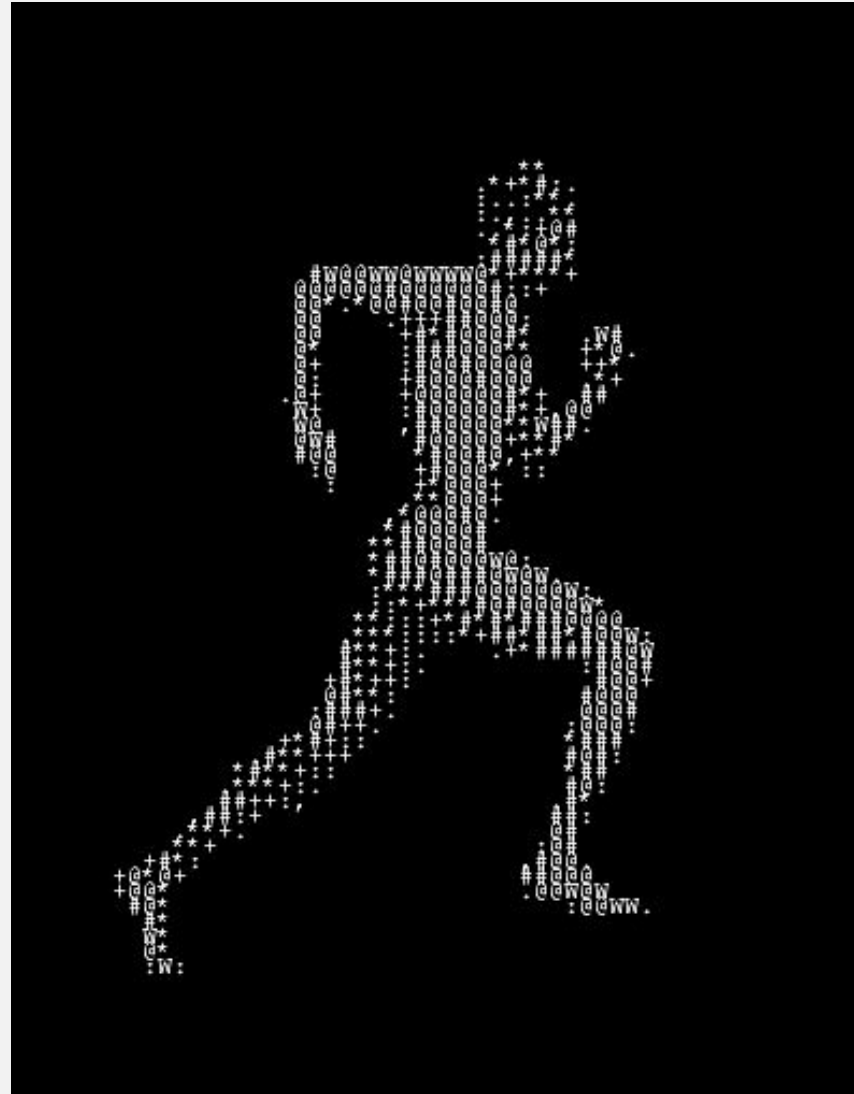
- Digital technology advances and convergence offer the prospect of changing the way we create simulations, learn, deliver training content and interact with each other
- We may need to train less



From an iPad to a Flight Simulator



Technology Change

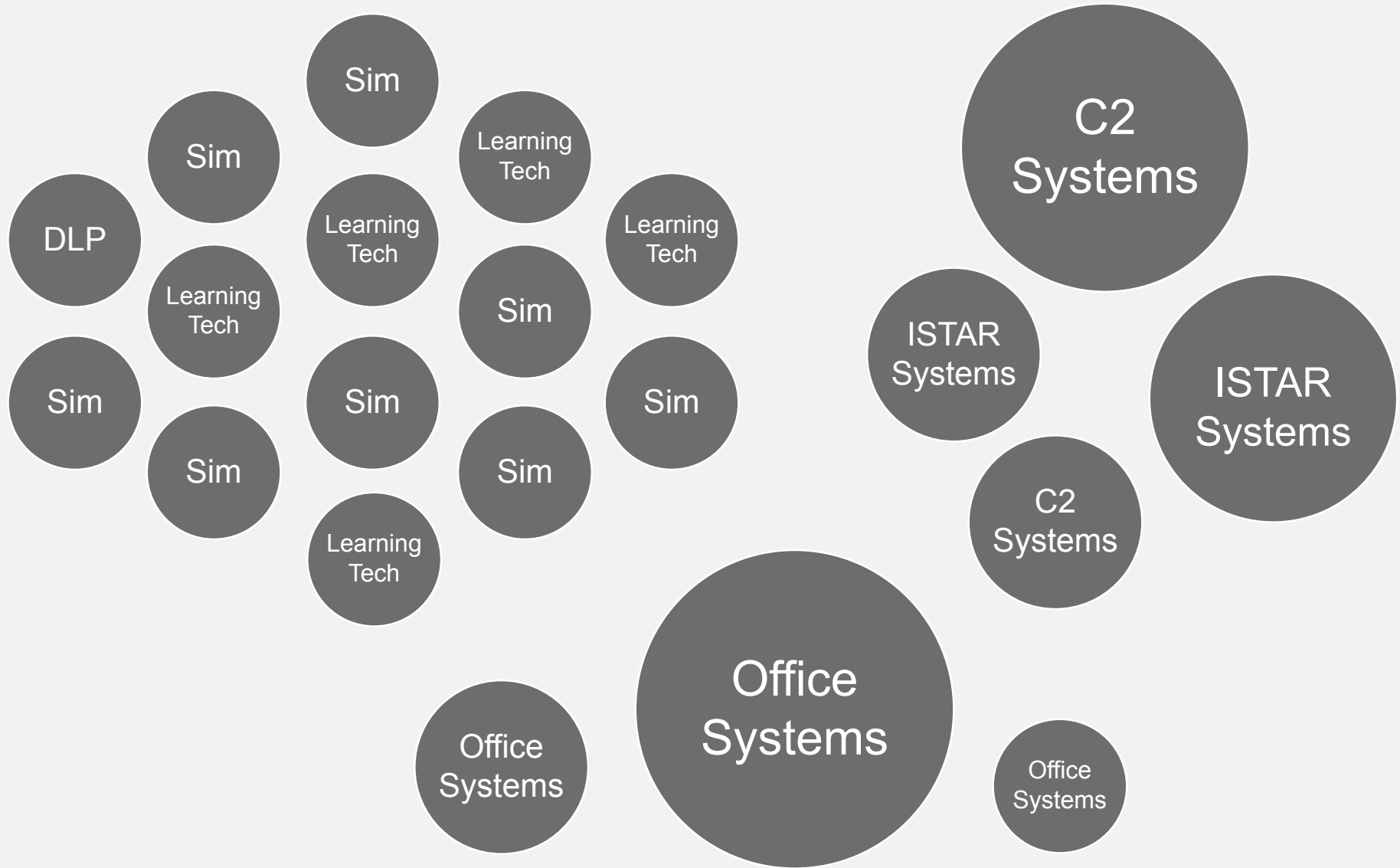


Organisational Realities





Organisational Boundaries



Operating Models for your Training Capability

Hi

Networking Capability

- Networked
- Non-Standardised Components
- No Data Sharing

- Networked
- Standardised Components
- Data Sharing

- Not Networked
- Non-Standardised Components
- No Data Sharing

- Not Networked
- Standardised Components
- Data Sharing

Lo

Degree of Standardisation

Hi

Your Simulation Strategy?

- Agree Strategic Drivers
- Match Fidelity with Needs
- Balance of Investment across all Training Technologies
- Decide Enterprise Strategy
- Evaluate and Manage Change

Your Simulation Strategy?

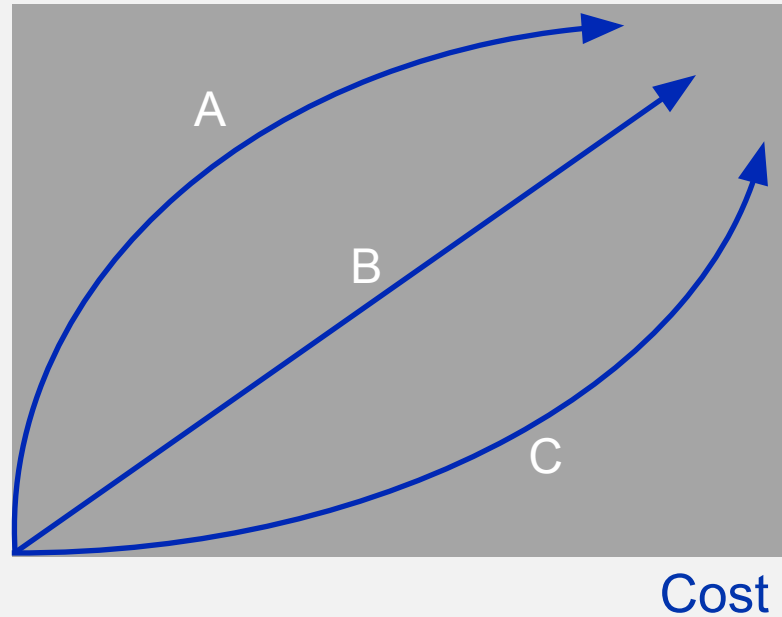
- Agree Strategic Drivers



Your Simulation Strategy?

- Match Fidelity with Needs
 - Understand Fidelity and Cost

Training
Effectiveness



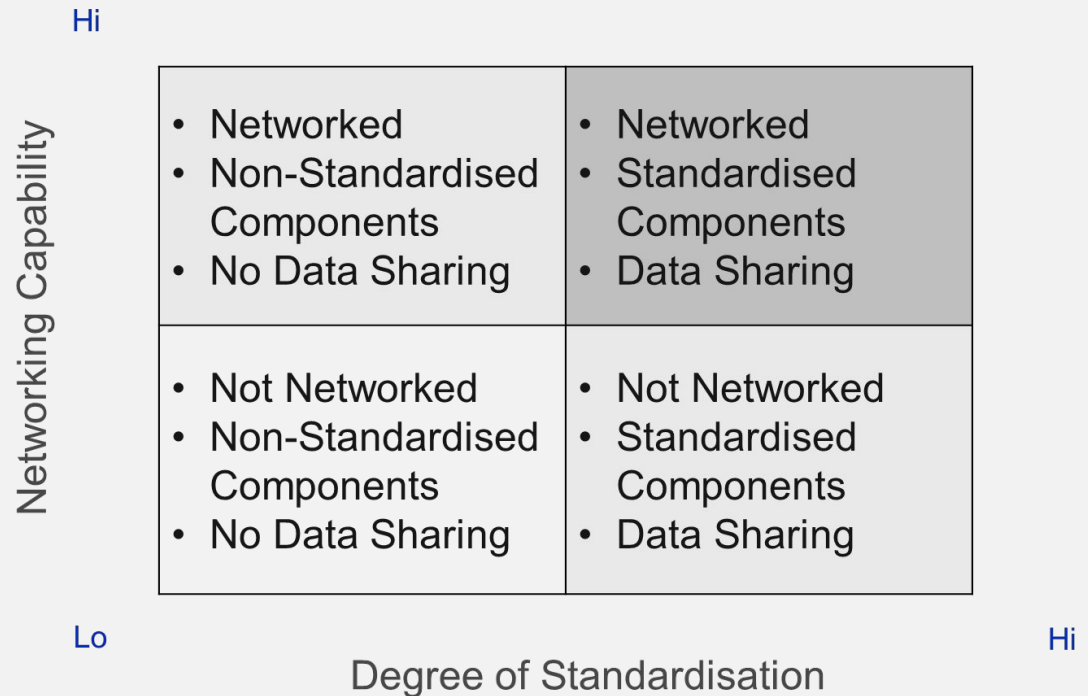
Your Simulation Strategy?

- Balance of Investment across all Training Technologies
 - from an iPad to a Flight Simulator



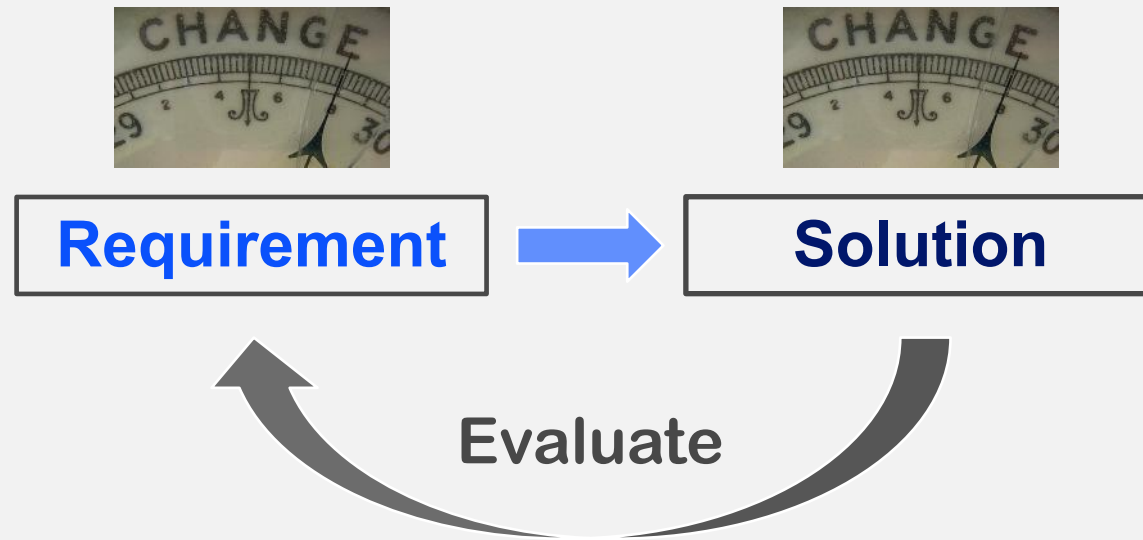
Your Simulation Strategy?

- Decide Enterprise Strategy
 - Network? Standardise Components? Share Data?



Your Simulation Strategy?

- Evaluate and Manage Change



Your Simulation Strategy?

- Agree Strategic Drivers
- Match Fidelity with Needs
- Balance of Investment across all Training Technologies
- Decide Enterprise Strategy
- Evaluate and Manage Change



Questions