

Software Intensive Systems - Strength for Defence?

Software Intensive Systems enabled Strengths (Alphabetically)

Cost effective – Original design and Cost of Ownership

- Estimation and Control of Large development programmes and Supply Chains
- Reliability of components, equipments, sub-systems and systems

Integrated, Modular Systems

- Enduring for long service life, minimising impact of obsolescence
- Integration of today's systems, proofing for future integration

Logistics Management

- Diagnostics, Prognostics, Spares Holding, Repair shop planning, Logistics
- Impact analysis, Minimum Equipment Needs, Contingency Planning

Management of Design Rigour

- Model Based Systems and Software Engineering
- Systems trades through virtual analyses and outcomes
- Optimal integrated system design
- Clear delivery of capability from Requirement to System Delivery

Management of Obsolescence

- Technology, Equipment, Tools, People

Roadmap

- "Brownfield" Systems Engineering, rather than "Greenfield"
- Replacing a System, within a System of Systems
- Increasing Scale and Complexity
- Resource neutral increases in performance

Survivability

- Safety of design, Mitigation of Failure, Continued Availability
- Routinely managing Harsh and Extreme environments

Safety

- High Assurance, Dependable solutions
- Fault Accommodation. Layered strategies – defence in depth

Security

- Advanced Monitoring , for Failure or Malicious threat
- Equipment capabilities – independence from singular threat model
- Easy scenario and threat changes

Simulation

- Battlefield planning to communications bandwidths and errors
- Overlays of real data with model scenarios for adaptive scenarios

Technology Insertion Capabilities

- Energy Harvesting
- Wireless systems
- Autonomous Systems
- Swarm systems

Tempo

- Advanced, low-cost prototyping
- Close integration with customer for Requirements definition, engineering, evolution and trade