

Multi-Industry Collaboration in Research

CSIIS Example

Helen Langbridge – QinetiQ
Jonathan Cox - Antillion



Agenda

-
- 1 What is CSIIS?
 - 2 CSIIS Capability Areas
 - 3 Team Sirius
 - 4 Work Share
 - 5 How Does CSIIS Work?
 - 6 SME Member – Who are Antillion?
 - 7 Antillion Product Development
 - 8 Collaboration Opportunities
 - 9 How Could You Get Involved?
 - 10 Questions
-

What is CSIIS?

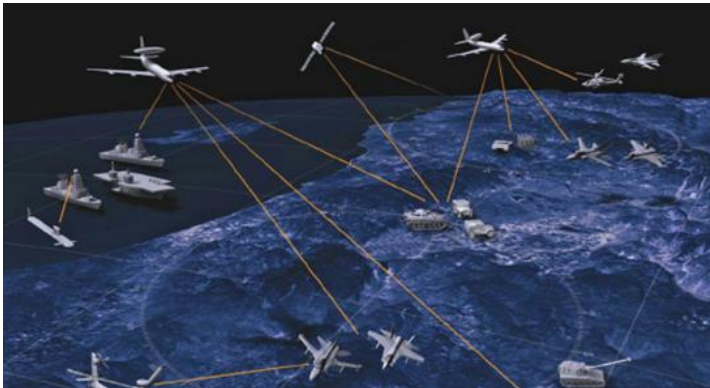
- CSIIS – Command, Control , Communications, Computing, Intelligence, Surveillance and Reconnaissance, Secure Information Infrastructure and services.
- Research contract managed by QinetiQ on behalf of the Defence Science and Technology Laboratories (Dstl)
- Research requirements set by Defence Science and Technology (DST) within MoD -Dstl responsible for delivering research outputs.
- Established December 2013 - currently on contract until December 2019 (to be replaced by the Serapis framework before December 19)
- Majority of tasks – collaborative i.e. multi-industry teams working together
- Facts and figures
 - Current contract value – just over £40m
 - Average duration of tasks is 4 months
 - Average task value is approaching £400k
 - Average number of organisations employed on a task is 5



CSIIIS Capability Areas

•Communications/Networks:

- To investigate and demonstrate options to support a continuously evolving single logical, reconfigurable, resilient information infrastructure (national and coalition) across deployed, fixed and mobile elements; enabling collaboration among Communities of Interest in executing Defence business processes.



•Information Assurance:

- To investigate and demonstrate policy and technology options for protecting information covering all levels of confidentiality, integrity and availability. This will enable secure information exchange and collaborative working within and between the differing security domains of the UK Government, MOD and coalition partners.

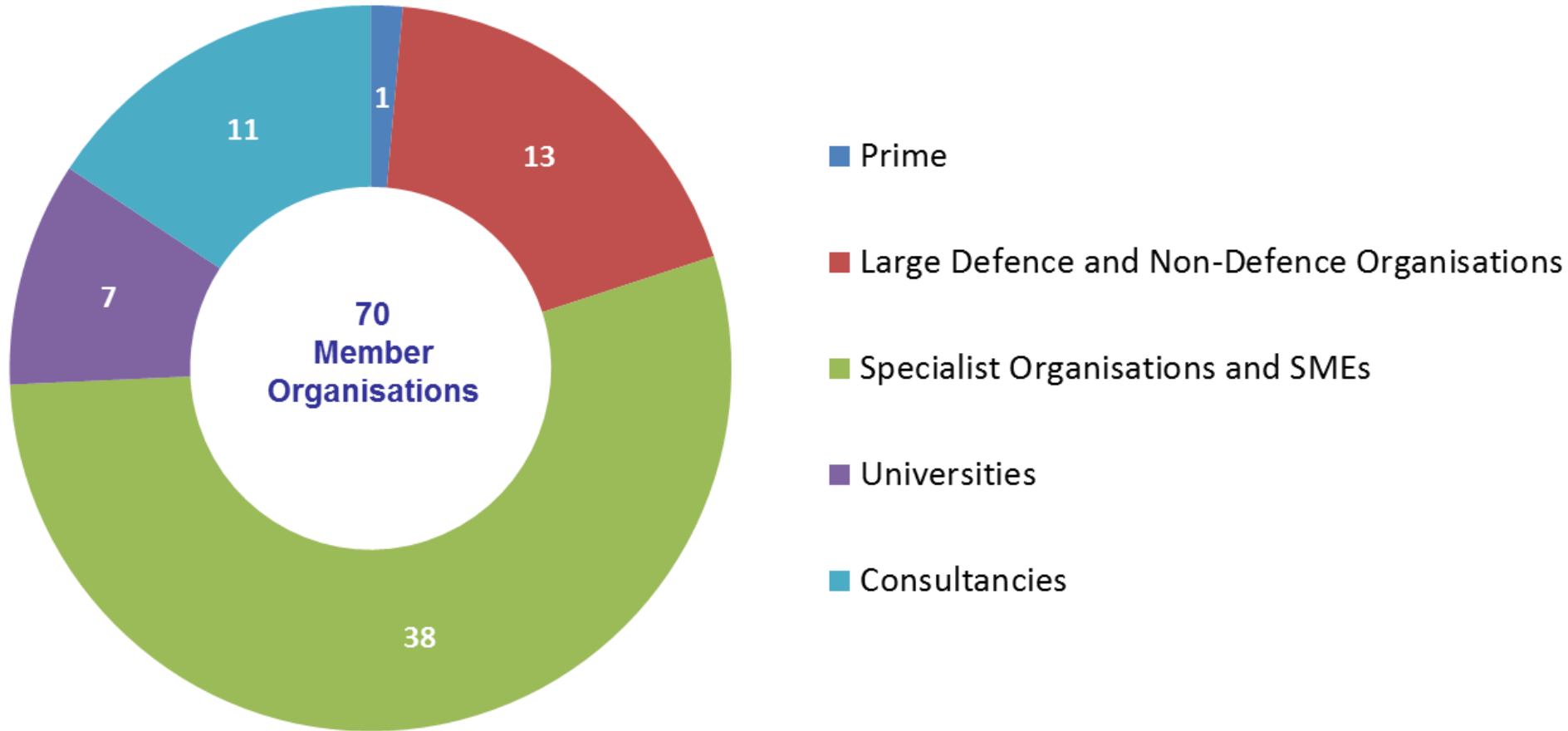


•Information Management:

- To investigate and demonstrate pan-Defence Lines of Development (DLOD) approaches to Information Management, with the intent to develop options and guidance that help to bridge the divide between policy and practice. The end-result should be flexible and sustainable improvements in Information Management activities, which are attained in order to improve both organisational effectiveness and decision-making.



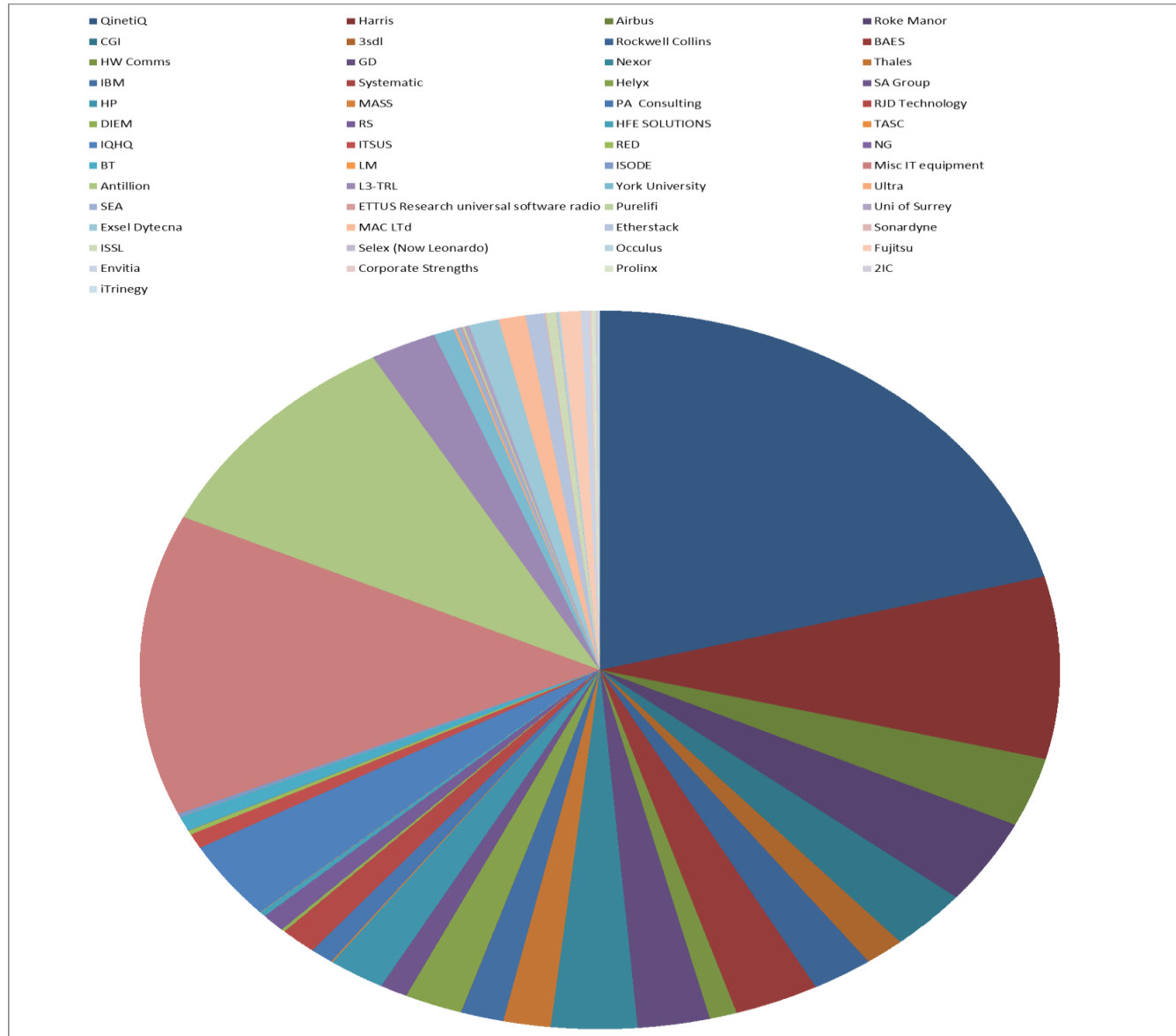
Team Sirius - An Established Team – Still growing



•54% of the team are SMEs (23% more than in 2016)

Team Make-Up

Large Defence and Non-Defence Organisations	Specialist Organisations and SMEs		Universities	Consultancies
Airbus Defence & Space	2iC	IPL	Aberystwyth	Actica
BAE Systems	3SDL	IQHQ	Birmingham	Complex Systems
BT	Abstract Solutions	Isode	Cranfield	Corporate Strengths
Fujitsu	Amiosec	Itrinegy	Imperial College	ITSUS
General Dynamics	Antillion	Leonardo	South Wales	Mass
Harris	Arke Ltd	Malvern Optical	Surrey	PA Consulting Group
DXC	Becrypt	Montvieux	York	Polaris
IBM	CGI	Multiple Access Communications Ltd		RED Scientific
L3	Cloudsoft	Nexor		RJD Technology
Leidos	DIEM Analytics	Plextek		SA Group
Microsoft	e2E	Rockwell Collins		SEA
Northrop Grumman	Envitia	Roke		
Thales	Etherstack	Steria		
	Exsel Dytechna	Systematic		
	Helyx	TASC		
	HFE Solutions	TTP		
	Horsebridge	Ultra Electronics		
	HW Communications	Voicekey		
	iOra	Xi Systems		



- 53 team members have contributed to at least one task since CSIS began in 2013 – plus other SMEs have been brought in where appropriate
- 34% of the work has been delivered by SMEs (increase of 6 % since 2016)

How Does CSIIS Work?

- Statement of Requirement (SOR) issued by Dstl – made available to all CSIIS Consortium Members if collaborative task.
- Expressions of Interest requested – Task Lead, Independent Technical Review and Contributor
- Down-select and proposal workshop (agree workshare and approach)
- Collaborative proposal development – QinetiQ co-ordinate response and costings etc and provide governance.
- Contract award– Dstl to QinetiQ and QinetiQ to all Suppliers (common terms and conditions – Enabling Sub-Contract)
- QinetiQ provide all Project Managers
- Deliver as a team in close collaboration with the Dstl Technical Partners and Project Managers

Who are Antillion?

- SME member of the CSIS Consortium, based in Bristol
- Founded 2012. Not ex-forces but many years working alongside and on deployment
- We are an IT engineering and consultancy company, specialising in defence and other dispersed environments
 - Hardware Engineering:
 - **CDISC** (Compact Deployable Information Services Capability)
 - A family of modular, scalable, low SWaP CIS capabilities
 - Developed and now in service through ISS
 - Design and build in the UK
 - Software Engineering:
 - **LOEN**(Lightweight Orchestration ENvironment)
 - Flexible, open systems automation and orchestration platform
 - Consultancy
 - Systems and capabilities design
- Not just a hardware company, but with a unique understanding of how systems are created and used.

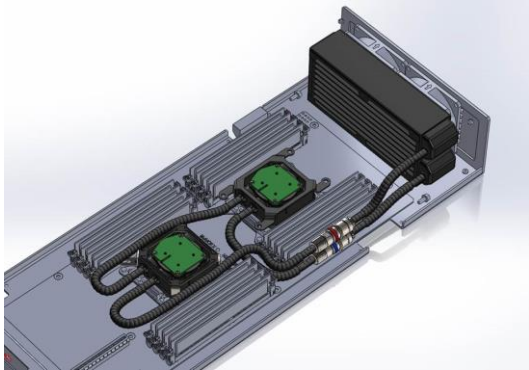
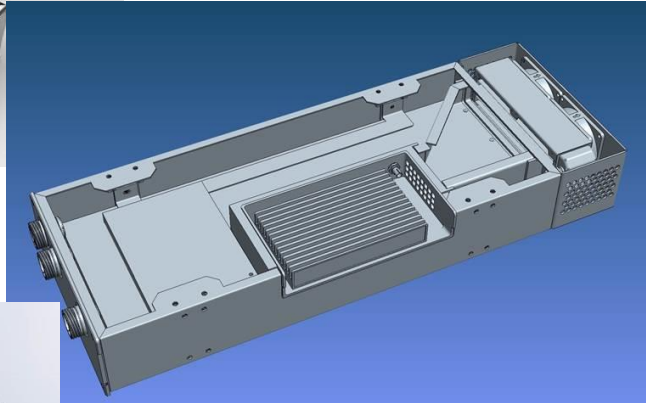


Product Development Supported by Complementary Research

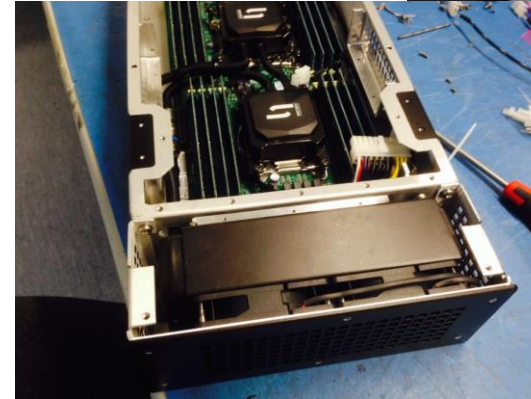
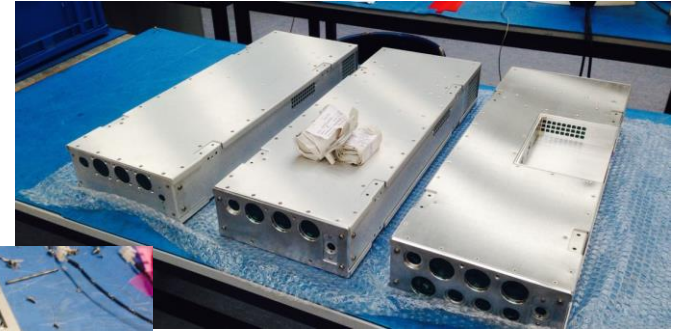
- Invitation to join CSIIS early 2013 following pre-cursor of CDISC shown to ARRC and others
- Exposure to a wide range of customer/partner/research groups, all trying to solve capability gaps:
 - Bringing extant solutions to bear in new ways
 - Creating new solutions where none exist
 - Relatively small, discrete tasks addressed in a collaborative manner
 - Innovation and Research not always the best of friends though
- CSIIS allowed us to explore and develop ideas and capabilities in an ideal environment, bringing in new technology and ideas:
 - Verified and (mostly) well understood gaps in capability
 - Regular access to the end users and those commissioning the work
 - Relatively short project cycles, giving us quick feedback on where we were going and new avenues to explore
 - Exposure to other programmes and complimentary research



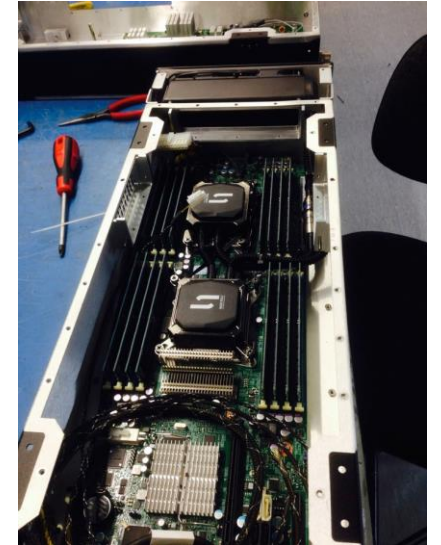
Product Development Timeline 1



- 2013 CDISC design
- Weeks 1-3 from initial ideas



- 2013 CDISC install and integrate
- Weeks 6 from initial ideas



Product Development Timeline 2



- 2014 CDISC evolution (materials, construction, connections, adaptability)
- Capability used on Ex Combined Endeavour
- Invaluable field trials experience

Product Development Timeline 3



- 2018 iteration
 - Interchangeable interfaces
 - Removable modules
 - In-service version



- 2018 iteration (small form)
 - Compact variant
 - Hotel deployment in Poland

Collaboration Opportunities

- Some of the opportunities for collaboration enabled by CSIS
- Helyx:
 - Professional services company focussing on Information Management
 - Worked together on using LOEN to reduce time for a GIS software installation from a day, to 30 minutes
 - Explored CDISC external GPU to enhance 3D visualisation from drone shot imagery
- Nexor:
 - Secure information exchange specialists
 - Exploring hardware adaptations to reduce SWaP of some of their offerings
- General Dynamics:
 - Indirect link , but connections now to support some of their programmes with our hardware



NEXOR®

GENERAL DYNAMICS
United Kingdom Limited

How Could You Get Involved?

- Do you have a capability to offer which matches the capability areas covered by CSIIS?
 - Communications and Networks
 - Information Assurance
 - Information Management and Knowledge Management
- Get in touch with Helen
 - hllangbridge@qinetiq.com
 - 01684 894294
- Submit a Capability Statement
- Vote by CSIIS Steering Group
- Sign Enabling Sub-Contract
- Join the Team!





QINETIQ