



NATO Communications and Information Agency



The Association for Communications,
Electronics, Intelligence & Information Systems Professionals



“From Assets
to Services -
Capability Delivery
in the
21th Century”

25-27 March 2014

Bucharest, Romania

NATO C4ISR Industry Conference & TechNet International 2014

“on the occasion of the 10th anniversary of Romania’s accession to NATO”



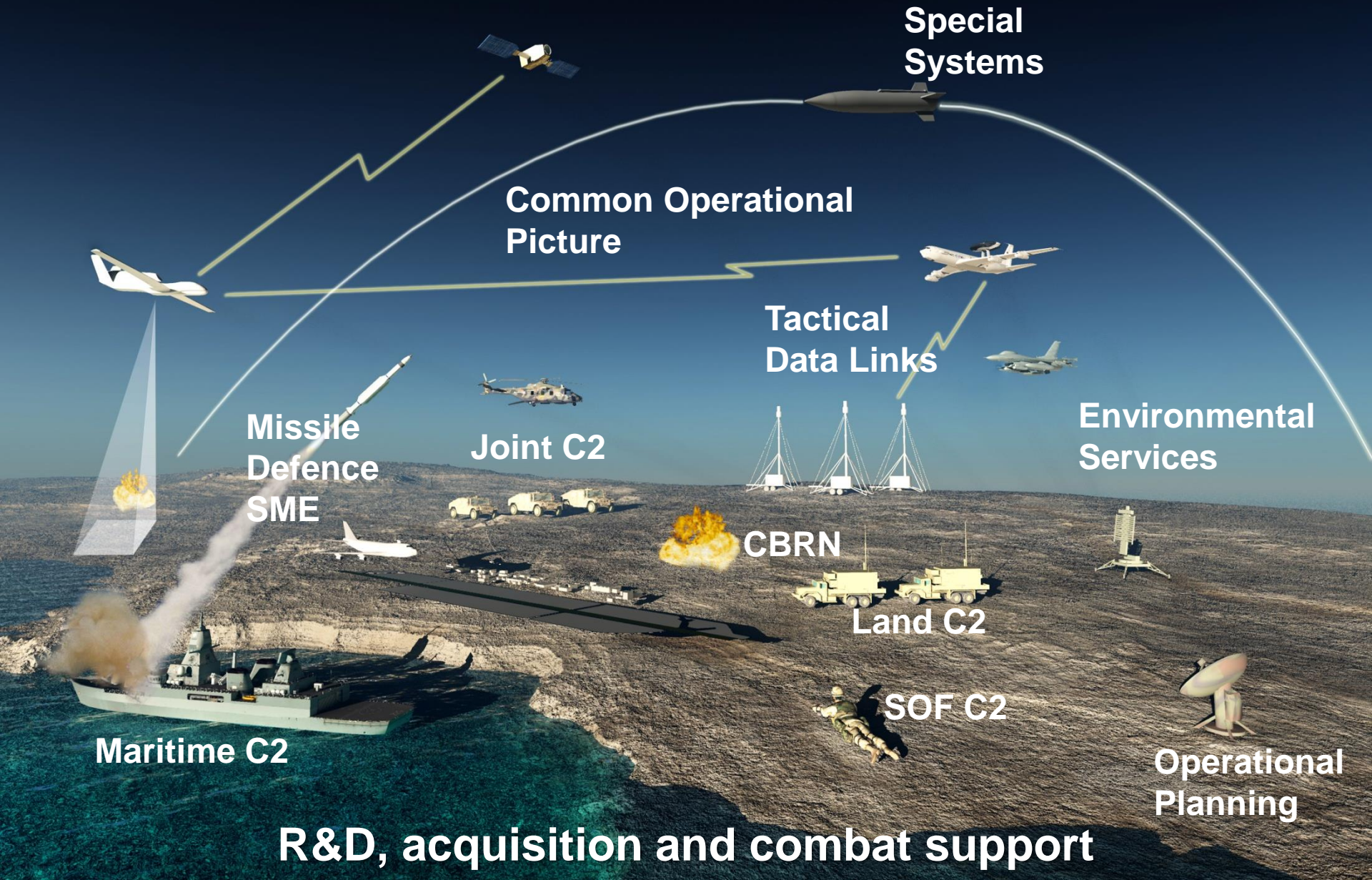
NATO Communications and Information Agency
Agence OTAN d'information et de communication

C2 Services Business Opportunities

Dr Paul E Howland

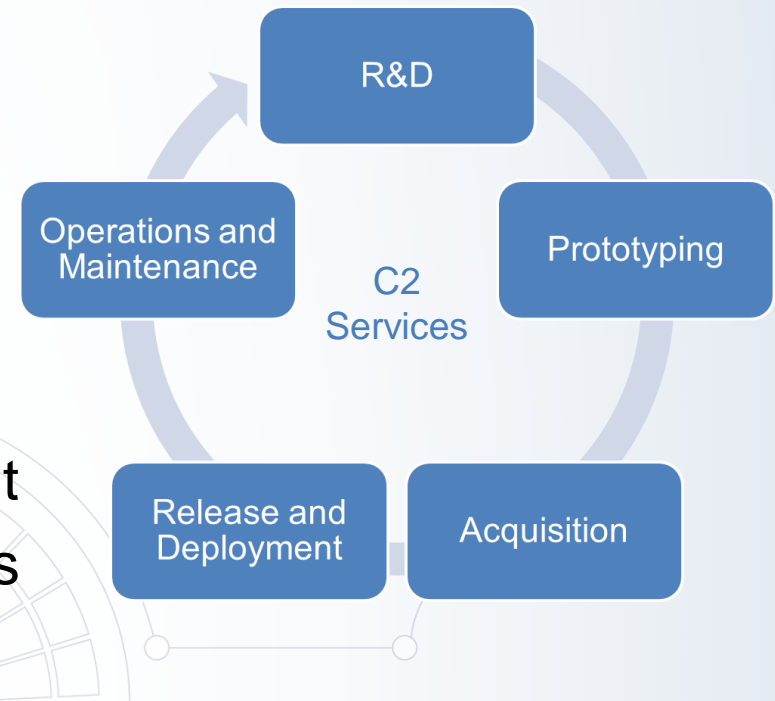
Chief Command and Control (C2) Service Line

C2 Service Line



C2 Service Line - Facts and Figures

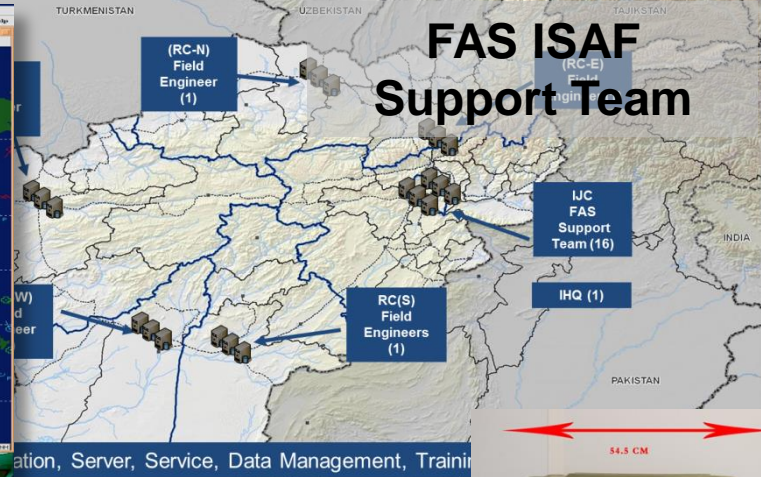
- Located in The Hague, Brussels, Mons and Glons
- Around 90 staff, of which 20% are military
- Main customers
 - ACO, ACT, NSIP, nations
- Key capabilities
 - Research & development
 - Software engineering
 - Acquisition services and project management
 - Software release & deployment
 - Deployed support to operations



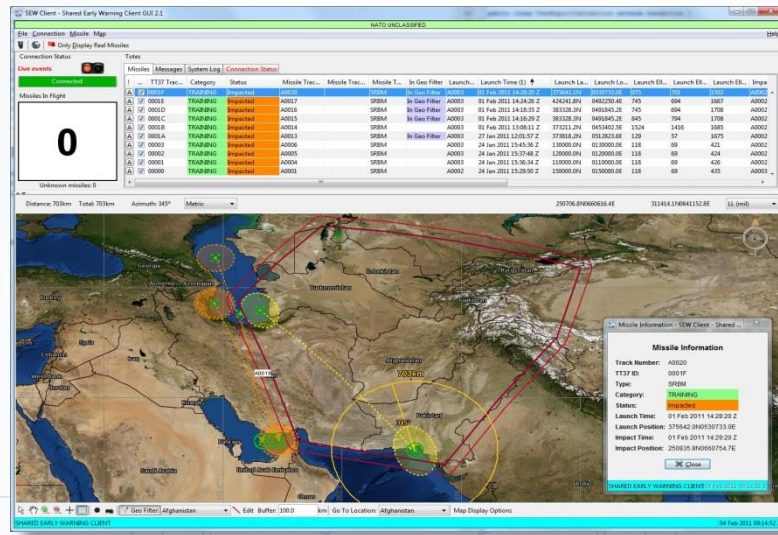
Supporting the C2 systems of today...



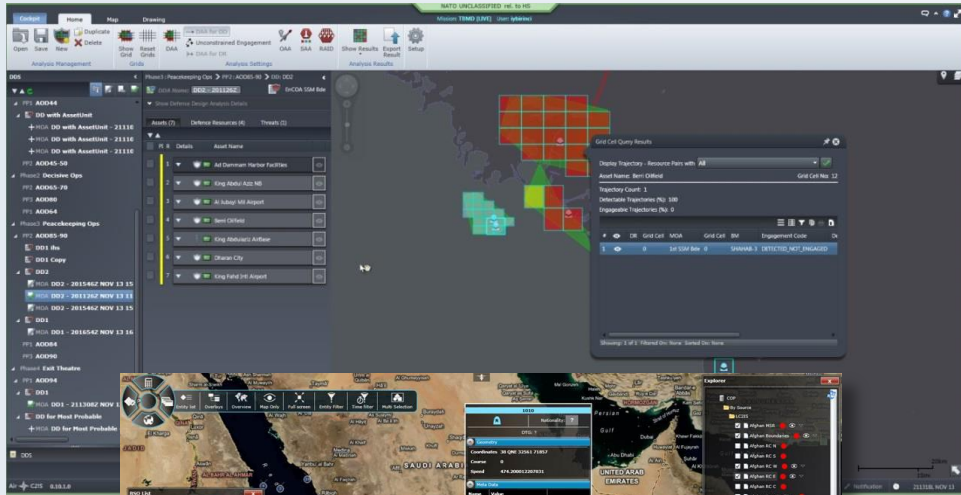
6 Locations; 22 Engineers; 24 NATO FAS



Information, Server, Service, Data Management, Training



... and delivering the C2 services of tomorrow

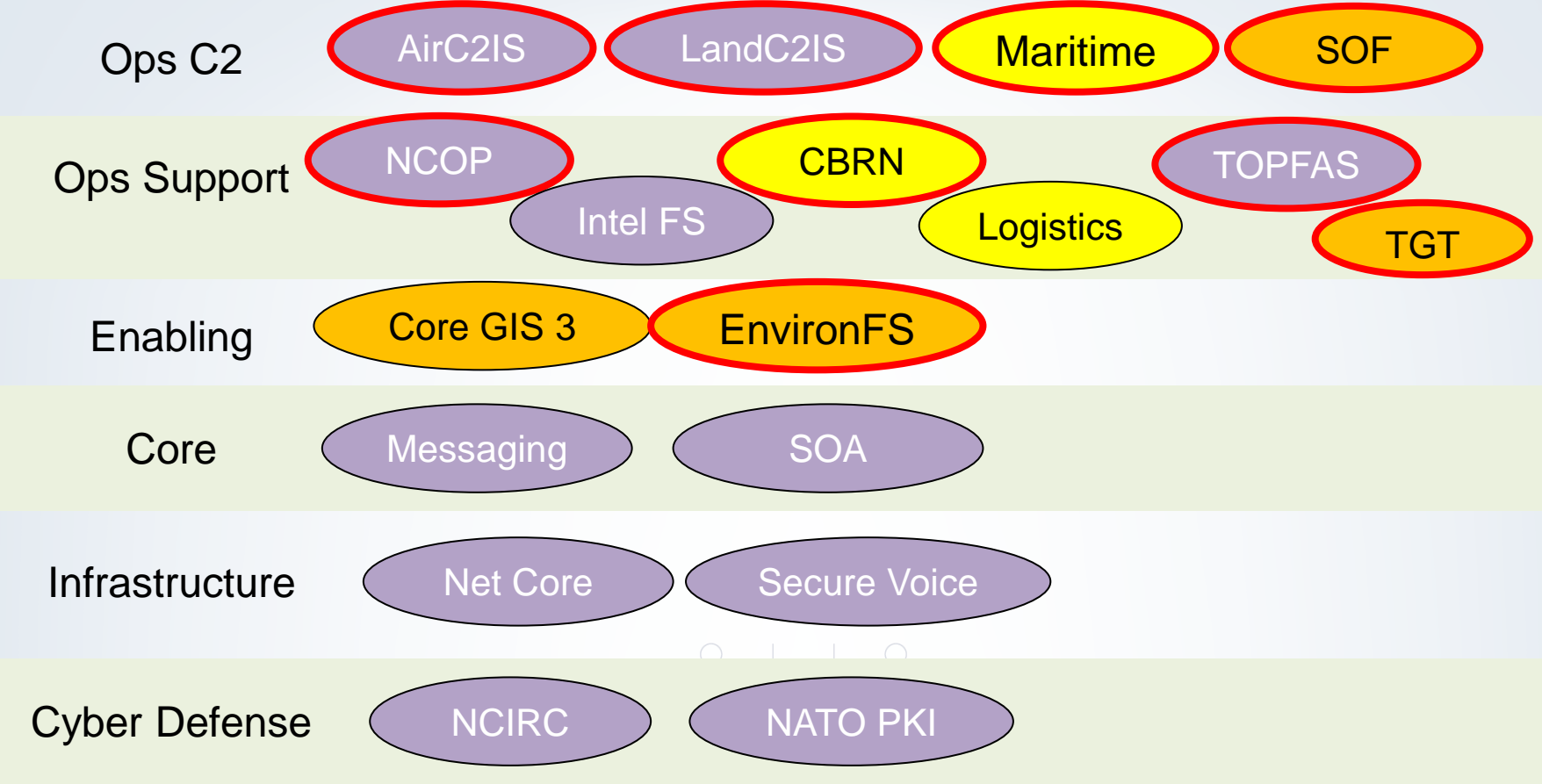



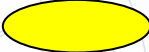

AirC2IS inc.1
CBRN FS
CJOPS FS
Environmental FS
LC2IS
NCOP
SOF FS
TOPFAS
Triton

Key Opportunities and Challenges



C2 Service Line Projects in Context



-  Projects ongoing
-  Projects starting 2014
-  Projects starting 2014-15

Running Acquisition Projects - 1

AirC2IS Increment 1

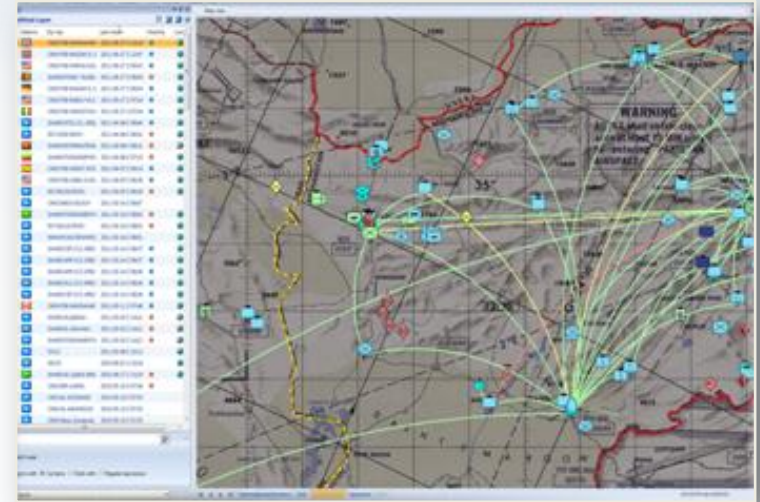
- Planning, analysis, coordination and C2 tools for Alliance air operations
- €22M investment / €7M Agency
- Delivers December 2015

LC2IS Increment 1.1

- LandC2 situational awareness, collaboration, OPLAND, OPORDER and interoperability with national systems
- €6M investment / €1M Agency
- Delivers March 2014

MCCIS Stabilization and enhancements

- Allows baseline to be transitioned from ACT to ACO and NCI Agency
- €7.4M investment / €1.1M Agency
- Delivers December 2014



Points of Contact

POC: Mr Bruce MacLennan

Phone: +31 70 374 3593

Email: Bruce.MacLennan@ncia.nato.int

Running Acquisition Projects - 2

NATO Common Operation Picture (NCOP) Inc 1

- Enhanced situational awareness
- €12M investment / €2M Agency
- Delivers June 2015

Ops FS Baseline

- Supports service reused and rationalisation of data across COI
- €2.7M investment / €1.4M Agency
- Delivers January 2016

TOPFAS Increment 1.1

- Operational Planning – AirC2IS and NCOP interoperability and TMD planning
- €6.4M investment / €2.8M Agency
- Delivers May 2014

TMD Capability 1

- Coordinates ALTBMD change requests with other scope of other BiSC AIS FSs
- €0.8M investment / €0.9M Agency
- Delivers December 2016



Points of Contact

NCOP and Ops FS Baseline

POC: Mr Joel Varanda

Phone: +31 70 374 3272

Email: Joel.Varanda@ncia.nato.int

TOPFAS and TMD

POC: Mr David Sparks

Phone: +31 70 374 3771

Email: David.Sparks@ncia.nato.int

Opportunity – LC2IS Inc.2 and Inc.3

LC2IS Increment 2

- Operational planning services including Fragmentary and Warning Order Planning, Land Contribution to Joint Operation Planning; provide interoperability with National Planning Systems (MIP 3.1);
- Operation execution services including Recognized Ground Picture, Land Battle Space Management and Land Track Information Services;
- Operational assessment services interoperable with the TOPFAS Campaign Assessment Tool.

LC2IS Increment 3

- Enhance capabilities of Increment 2;
- Effects based operations;
- Support to military general engineering, mobility, counter-mobility and survivability support.



Background Information

LC2IS Inc.2

Investment: ~€4.2M

Invitation to Bid: March 2015

LC2IS Inc.3

Investment: ~€4M

Invitation to Bid: March 2017

POC: Mr Bruce MacLennan

Phone: +31 70 374 3593

Email: Bruce.MacLennan@ncia.nato.int

Opportunity – Project Triton (Maritime C2)

Project Triton - Spiral 1

- Replacement of MCCIS functionality
 - Operational-level maritime C2
- Maritime situational awareness
 - Replacement of MSA prototype (BRITE)
- Recognised maritime picture (RMP)
- Water space management and prevention of mutual interference
- Interoperability with national systems
- Static and deployable hardware (10 sites plus standing naval maritime groups)

Project Triton - Spiral 2

- Mine warfare services

Project Triton – further increments

- To be defined



Background Information

Project Triton Spiral 1

Investment: ~€15.5M

Business Case (TBCE): August 2013

Invitation to Bid: December 2014

POC: Mr Bruce MacLennan

Phone: +31 70 374 3593

Email: Bruce.MacLennan@ncia.nato.int

Opportunity – CBRN FS

CBRN FS

- Replaces legacy disconnected nuclear, biological, chemical analysis and hazard prediction and assessment tools
- Includes:
 - Collating information and assessing threats and risks
 - Planning and managing of the DIM systems and PP, MS and MS
 - Reporting incidents
 - Predicting and managing hazards
 - Identifying and warning forces at risk
 - Providing CBRN contribution to COP
 - Providing C2 of CBRN units and assets

Possible additional scope from BMD Spiral 1



Background Information

CBRN FS

Investment: ~€6.5M

Business Case (TBCE): August 2013

Invitation to Bid: September 2014

POC: Mr David Sparks

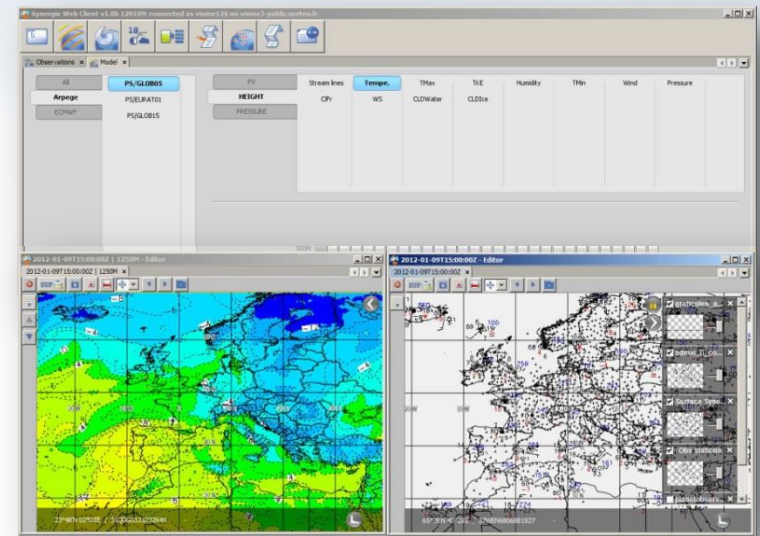
Phone: +31 70 374 3711

Email: David.Sparks@ncia.nato.int

Opportunity – Environmental FS

Environmental FS

- System will distribute meteorological and oceanographic products verified by NATO experts to NATO systems and operational users.
- Extends or replaces the existing meteorological distribution, analysis and production services.
- New capability for oceanographic support
- Provides environmental products for other functional services, including CBRN and Triton.
- Web-based
- 21 users in 10 sites



Background Information

CBRN FS

Investment: ~€5.4M

Business Case (TBCE): March 2014

Invitation to Bid: January 2015

POC: Mr Bruce MacLennan

Phone: +31 70 374 3593

Email: Bruce.MacLennan@ncia.nato.int

Opportunity – CJOPS FS

Combined Joint Operations FS Inc.1

- Provide Joint Targeting capabilities to replace the existing JTS and FAST capabilities.
- Integrate with existing core and functional services.

Combined Joint Operations FS Inc.2

- Industrialisation of NIRIS (near real-time data distribution)
- Civil-military Cooperation functionality
- Operations planning
- Psychological operations



Background Information

CJOPS FS Inc.1

Investment: ~€5.1M

Business Case (TBCE): April 2014

Invitation to Bid: February 2017

CJOPS FS Inc.2

TBD

POC: Mr Dario Cadamuro

Phone: +31 70 374 3755

Email: Dario.Cadmuro@ncia.nato.int

Emerging Opportunities

NATO Common Operational Picture Increment.2

- User requirements currently under development by ACT
- Extends and develops COP functionality provided under Increment 1

Special Operation Forces FS

- User requirements currently under development by ACT
- Timelines and budgets remain unclear



Background Information

NCOP Inc.2

Investment: ~€6.5M

Business Case (TBCE): January 2015

Invitation to Bid: February 2016

POC: Mr David Dufour

Phone: +31 70 374 3980

Email: David.Dufour@ncia.nato.int

EMERGING THEMES



Programme Evolution

Moving from Stovepipes to Services

Service Orientation

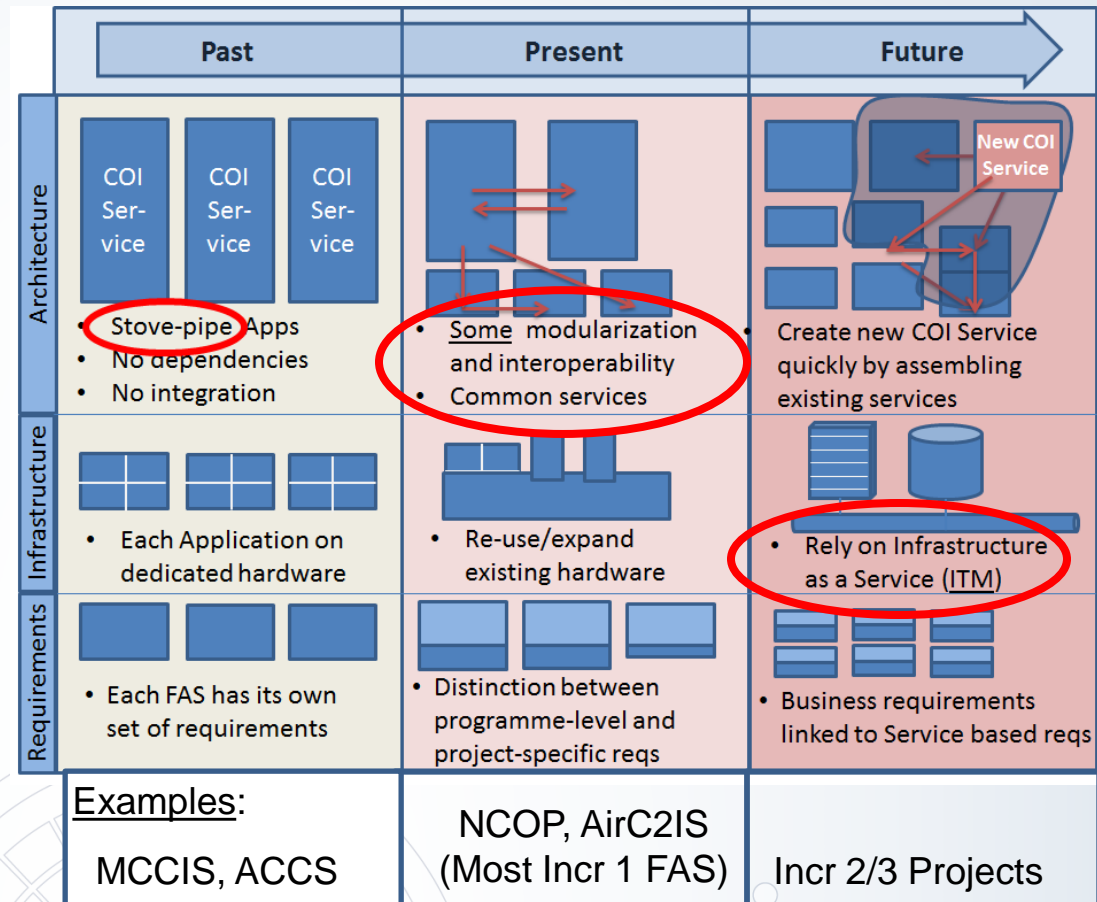
- Reusable components
- Service interfaces

Common Infrastructure

- Reusable components
- IT modernisation

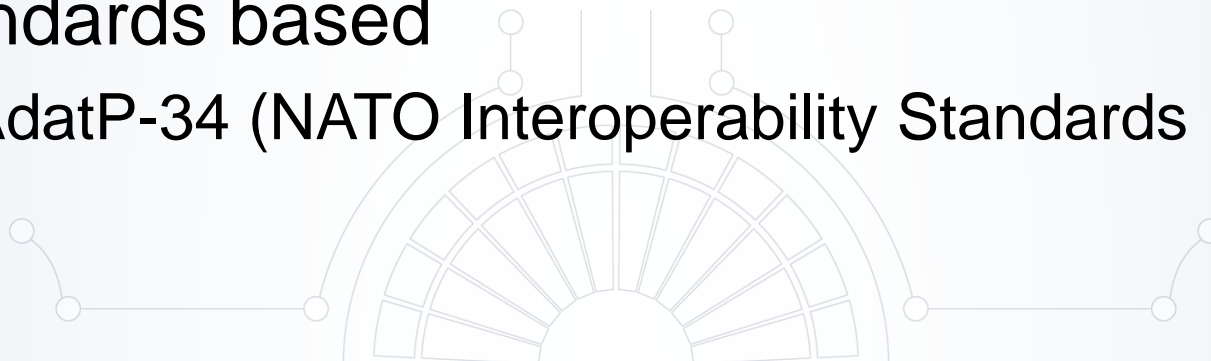
Requirements harmonisation

- Align to services not systems




Architectural Trends

- Move to browser-based interfaces
- Component-based approach
 - SOA web services
- Support for IT modernisation
 - Centralisation, Virtualisation
- State-of-the-art visualisation expected
 - OGC compliance, use of Core GIS server
- Standards based
 - AdatP-34 (NATO Interoperability Standards Profile)



Other Important Issues

- Increased opportunities for industry role in software maintenance
 - Improvements in delivery of software intensive projects
 - Improving requirements
 - Manageable scope
 - Smaller spirals, etc.
 - Management of sub-contractors or consortia
 - Risk management
 - IPR issues
- 

QUESTIONS?

