NCI AGENCY

NATO Communications and Information Agency

AFCEA Europe

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

AFCEA

"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

IT Modernisation

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Chief IT Modernisation Task Force

Agenda

- IT Modernisation (ITM) Vision
- Implementation Details
- Status & Implementation Approach and Schedule
- Conclusions

VISION

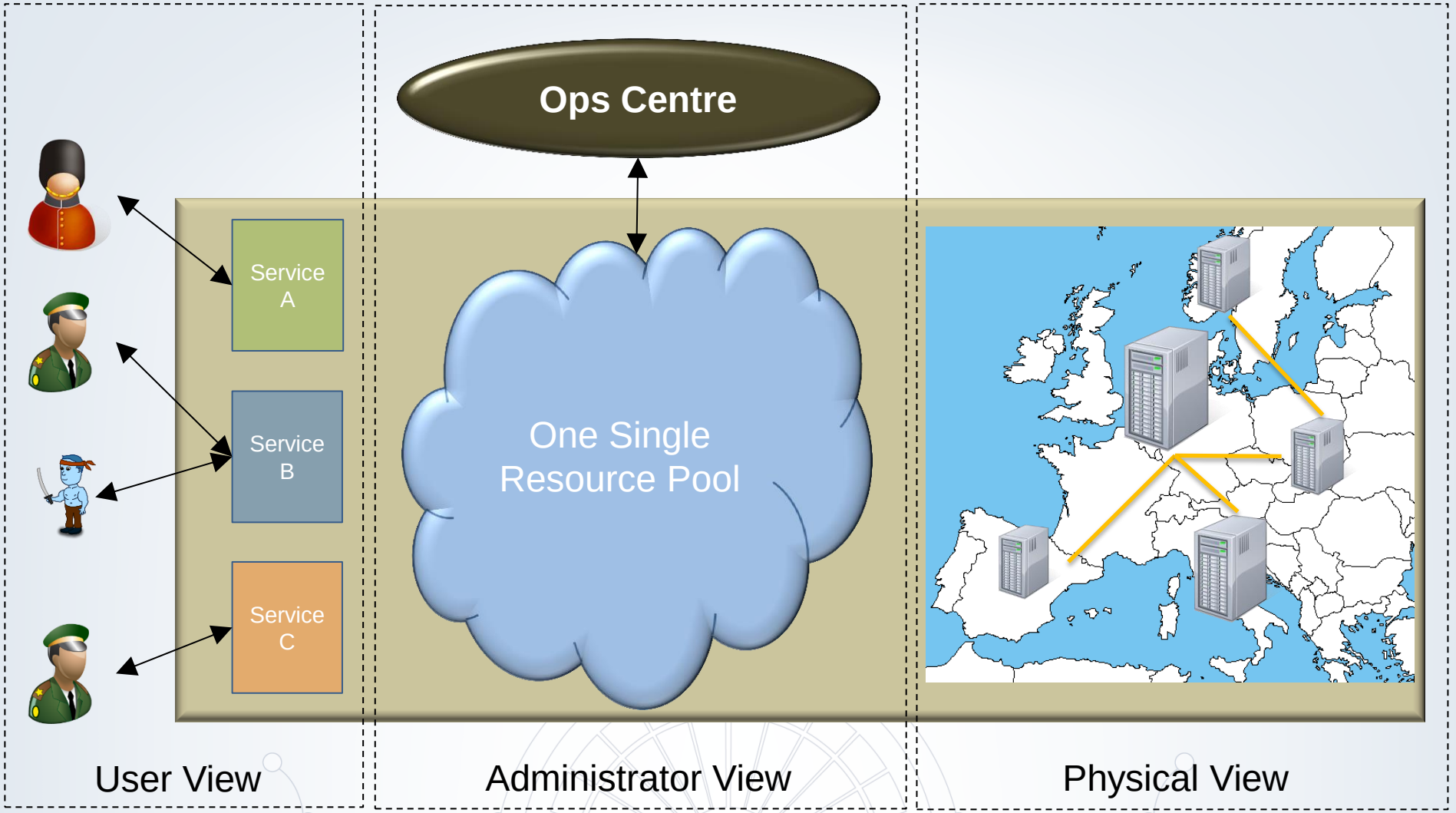
IT Modernisation Vision

IT Modernisation will fundamentally change the way the NCI Agency provides IT services:

- Centralisation of Management
- Centralisation of IT Infrastructure
- Provision of services IAW Standard SLAs
  - Defined quality levels
  - Measureable
  - Cost effective

To-Be Architecture

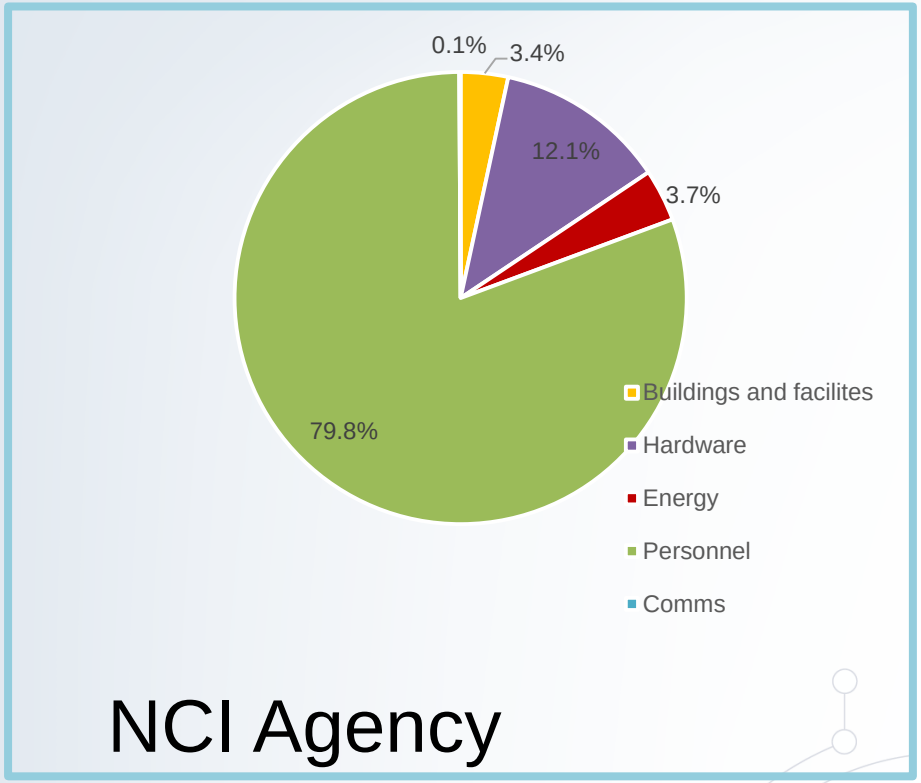
Vision: The End State
Three Views



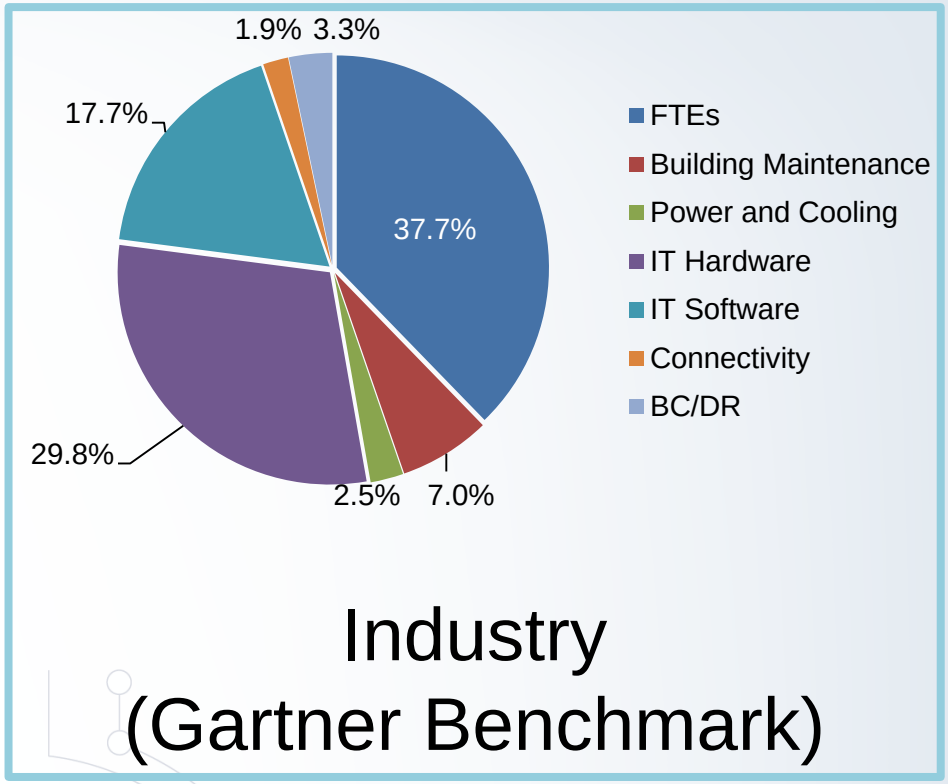
Operational Benefits

- Operational effectiveness gains:
  - Increase the availability of IT services
  - Enhance the Business Continuity (BC)
  - Enhance Disaster Recovery (DR) posture
  - Enhance the Information Security posture
  - Increase operational agility & flexibility
  - Universal access to services and data
    - Increase mobility and flexible working
  - Metered usage - transparency of costs
  - Standardisation
    - Levels of performance
    - Training
- Efficiency gains:
  - Reduce the manpower required to provide & maintain services
  - Better sustainability
  - Reduce life-cycle costs

NCI Agency *versus* Industry Benchmark (2012)



NCI Agency

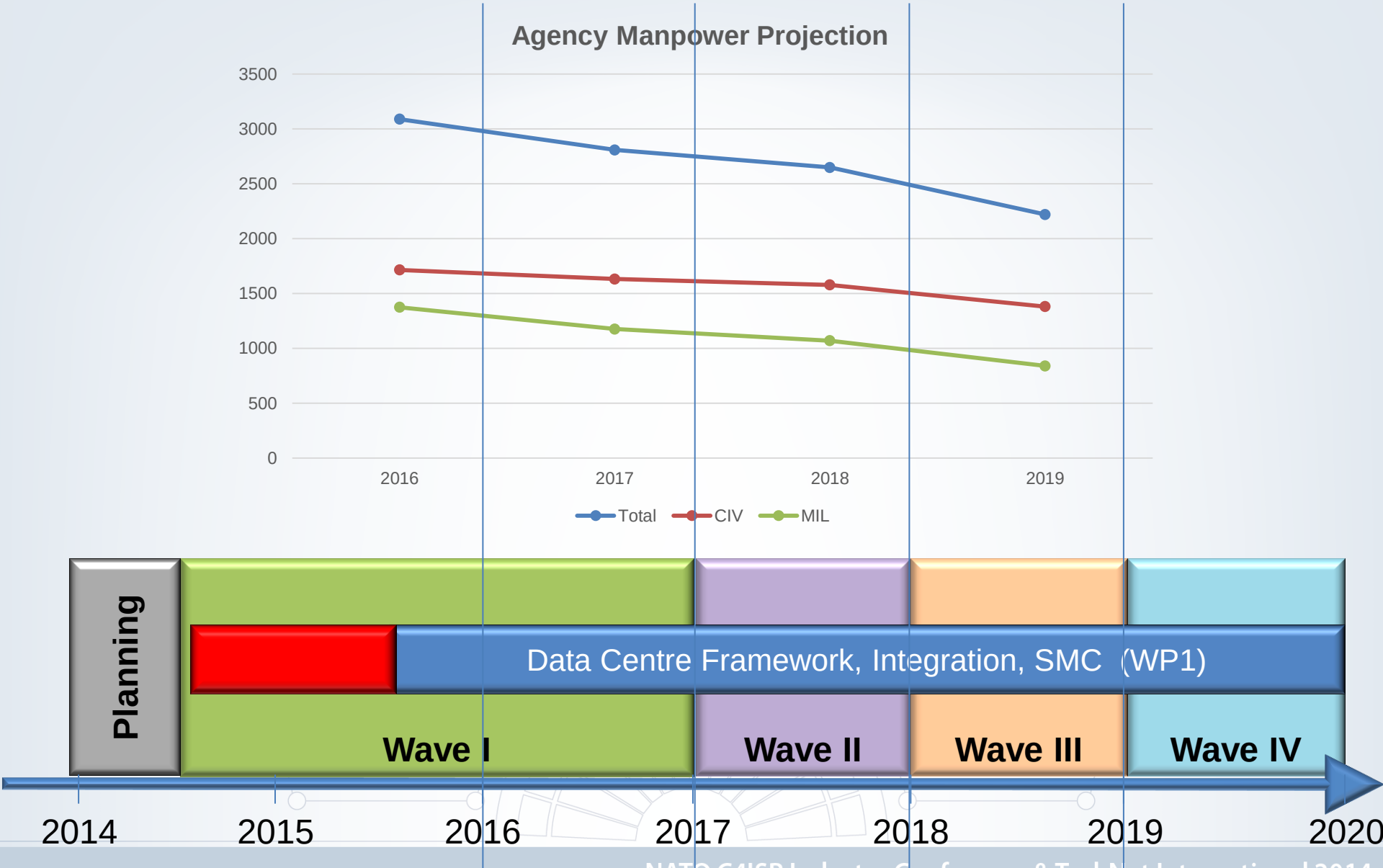


Industry (Gartner Benchmark)

Assuming 10,000 sq.ft. US data centre

O&M costs are dominated by manpower

Linkage to Manpower Savings



Implementation Depends on Three Pillars

PEOPLE

ICT is a people intensive business. Finding, attracting, developing and growing the right talent pool within an effective organizational structure is key

Operational Users

PROCESS

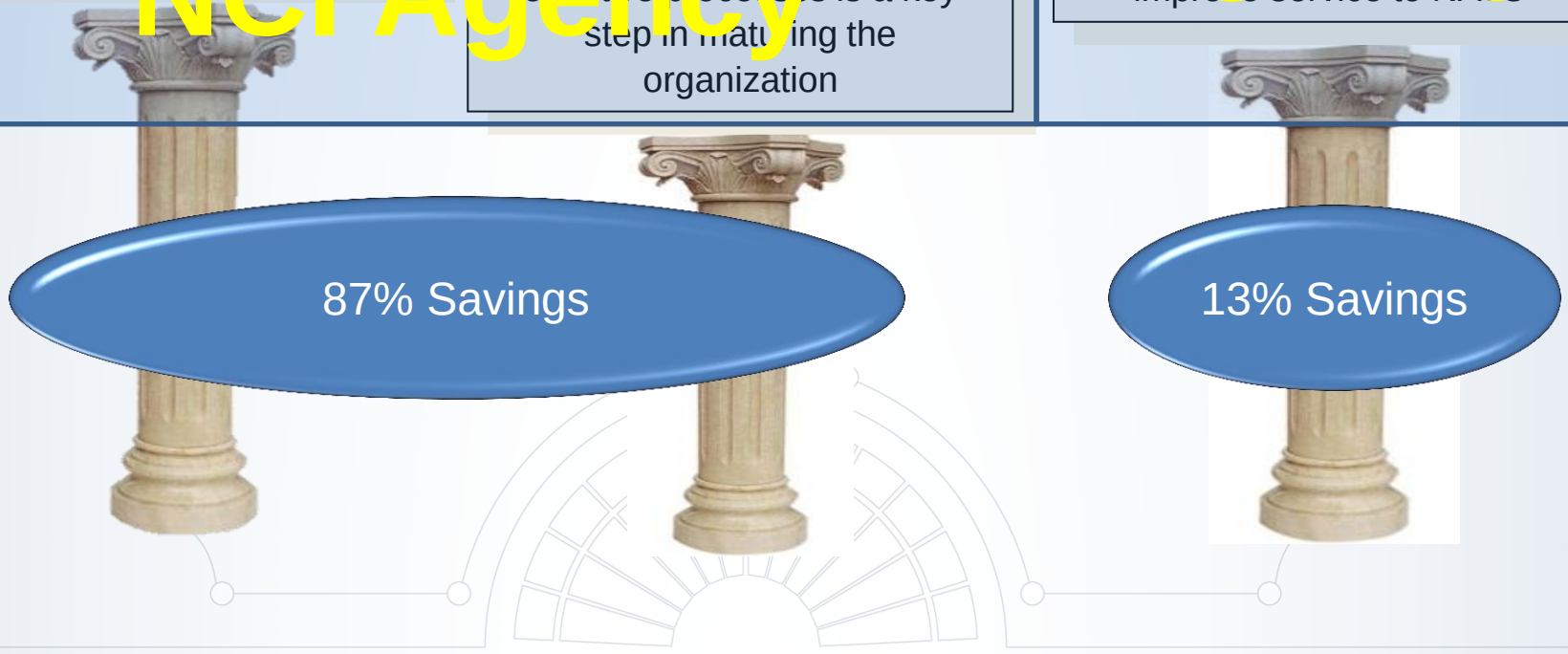
Effective organizations implement and refine business process to ensure repeatable operational behaviors. The development, documentation, training and implementation of effective processes is a key step in maturing the organization

NCI Agency

TECHNOLOGY

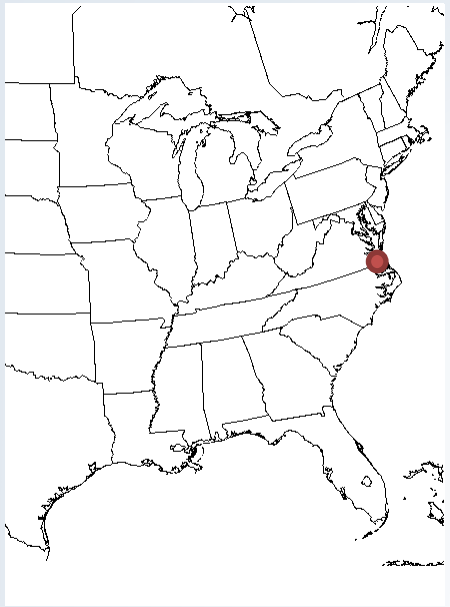
Technology continually offers new opportunities to improve the quality of service and support we deliver to our clients. It is our responsibility as the "innovator" to bring new technology to improve service to NATO

NCI Agency



IMPLEMENTATION DETAILS

Scope : Geographic



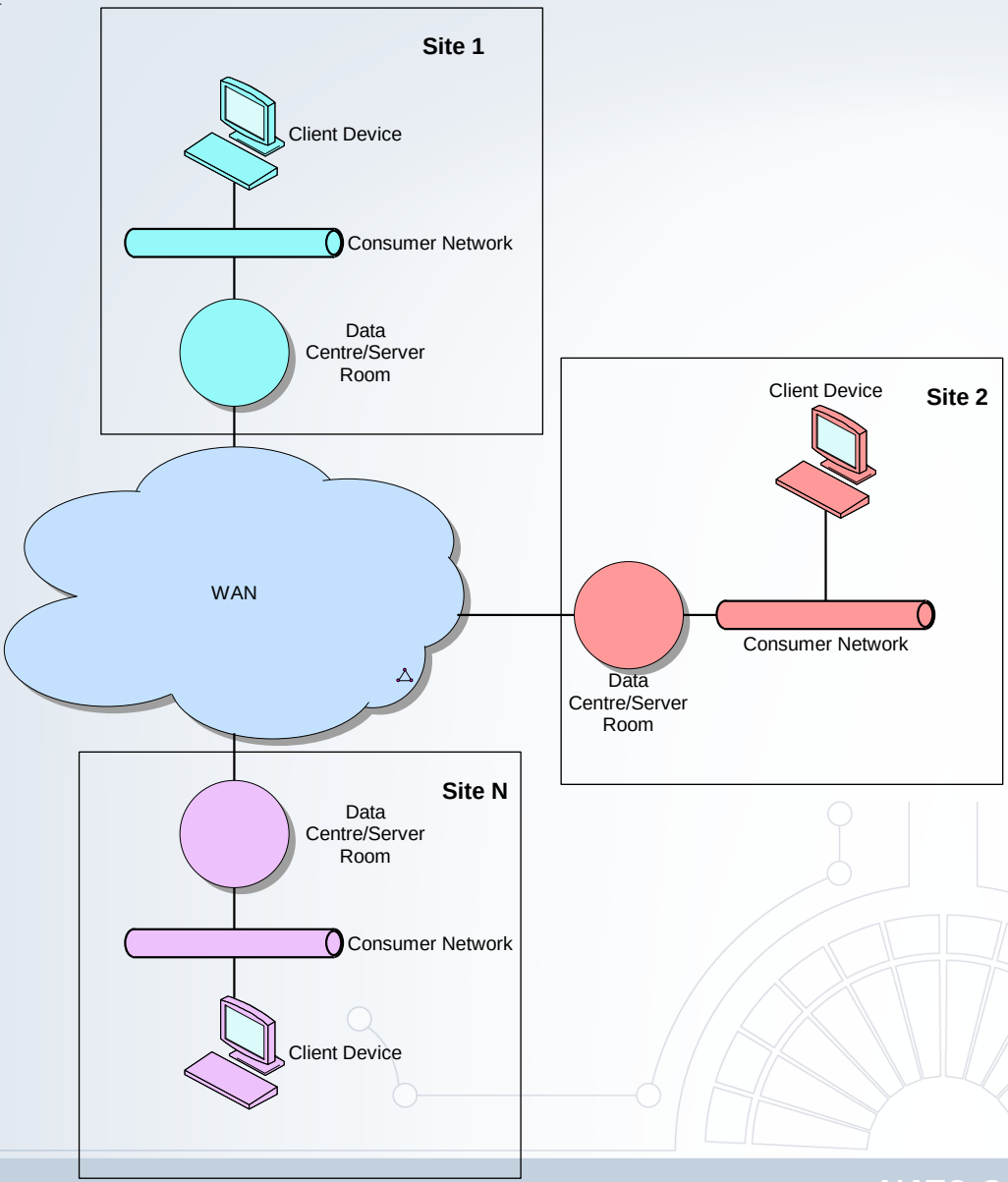
44 Locations

- > 1000 users
- 1000 <> 500 users
- 500 <> 200 users
- < 200 users

10 GbE
Internet GW

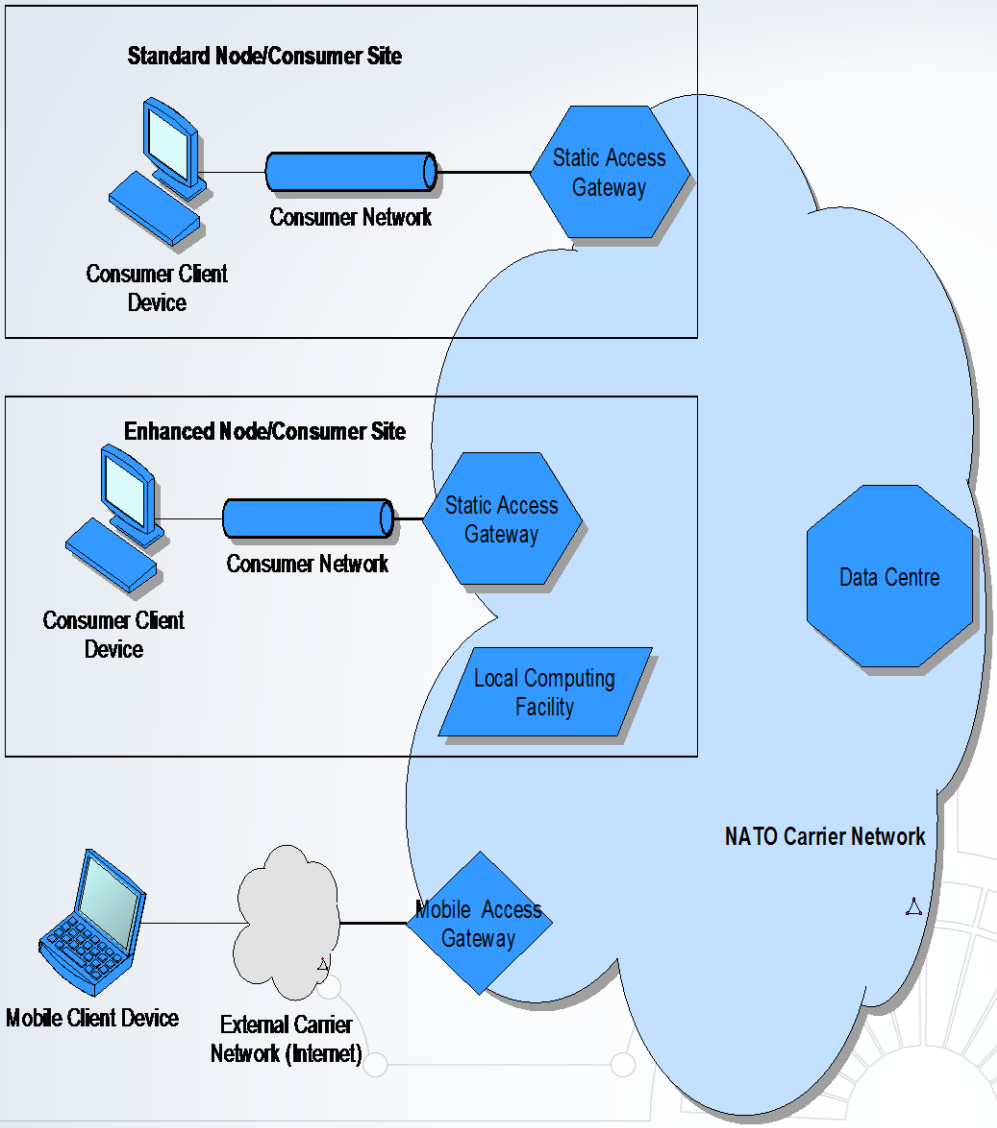
> 1000 users
1000 <> 500 users
500 <> 200 users
< 200 users

As-Is (Conceptual)



- 30+ data centres/server rooms
- 2500+ servers of over 100 different types, and becoming obsolete
- Multiple operating systems and multiple versions of each
- Application/project specific resources
  - server utilization rates between 9% and 30 %
- Locally managed
- Three supported domains
  - NU
  - NR
  - NS

To-Be (Conceptual)



- Standardised resources
  - Data Centres
  - Local Computing Facilities
  - Access Gateways
  - Consumer Networks
  - Client Devices
- Resource pooling
- Centrally managed
- Two supported domains
  - NU/NR
  - NS

Supported domains

IT modernisation will make provisions for two networks on different security levels as indicated below

Protected Business Network	NATO Secret Operational Network
• Up to NR • In support of – majority of administrative business processes; – appropriate operational processes; and – processes requiring interaction over the Internet.	• Up to NS • In support of – war fighting processes; – processes requiring higher level assurance; and – military and political communications.

Transition from NATO Secret ON to the Protected Business Network (PBN)

- Shift of applications from the NATO Secret Network to the PBN.
- 3 scenarios
  - Application remain on NS
  - Application moves to PBN
  - Application on both networks (different instances)
- Contractor will be required to migrate both the application and the data (data will be identified by the purchaser).

Design

Design Objectives

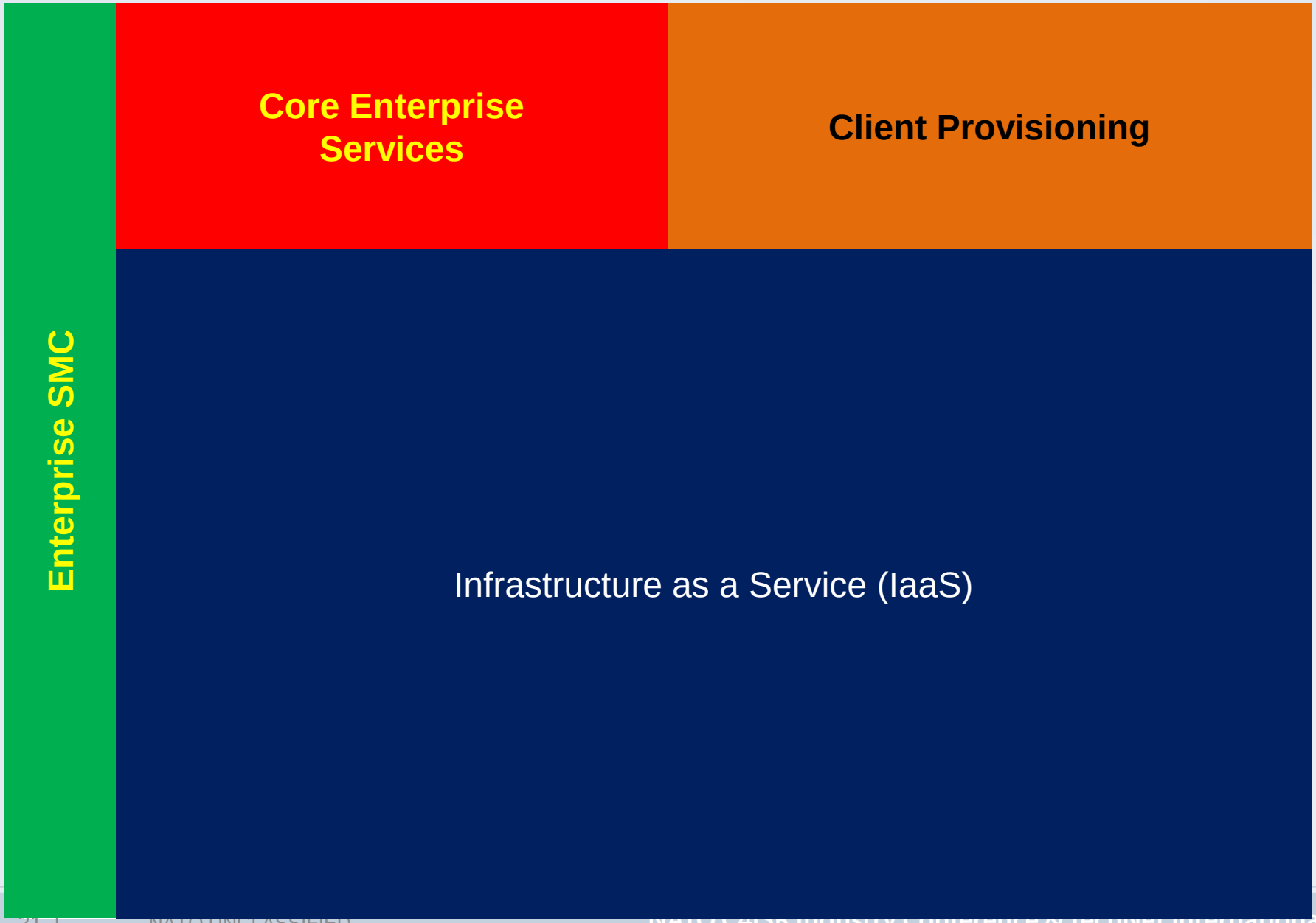
- **Follows a services based approach**
- **Traceable requirements implementation**
  - Agency provides requirements, constraints
  - Contractor proves through the design:
    - how the ITM services are implemented and
    - how the Purchaser requirements (section 14, SRS) are met
    - In a top-down way (architecture design to detailed implementation design level)
- **Support for ITM project life-cycle**

Design - Service Based Approach

- 4 Service Design Packages:
  - Enterprise SMC
  - IaaS
  - Client Provisioning
  - Core Enterprise Services (i.e. Exchange/Sharepoint)

- Service Design Package addresses:
  - Technical (related to section 14 requirements)
  - Process and Organisation (related to section 10 requirements)

Design – Service Based Approach



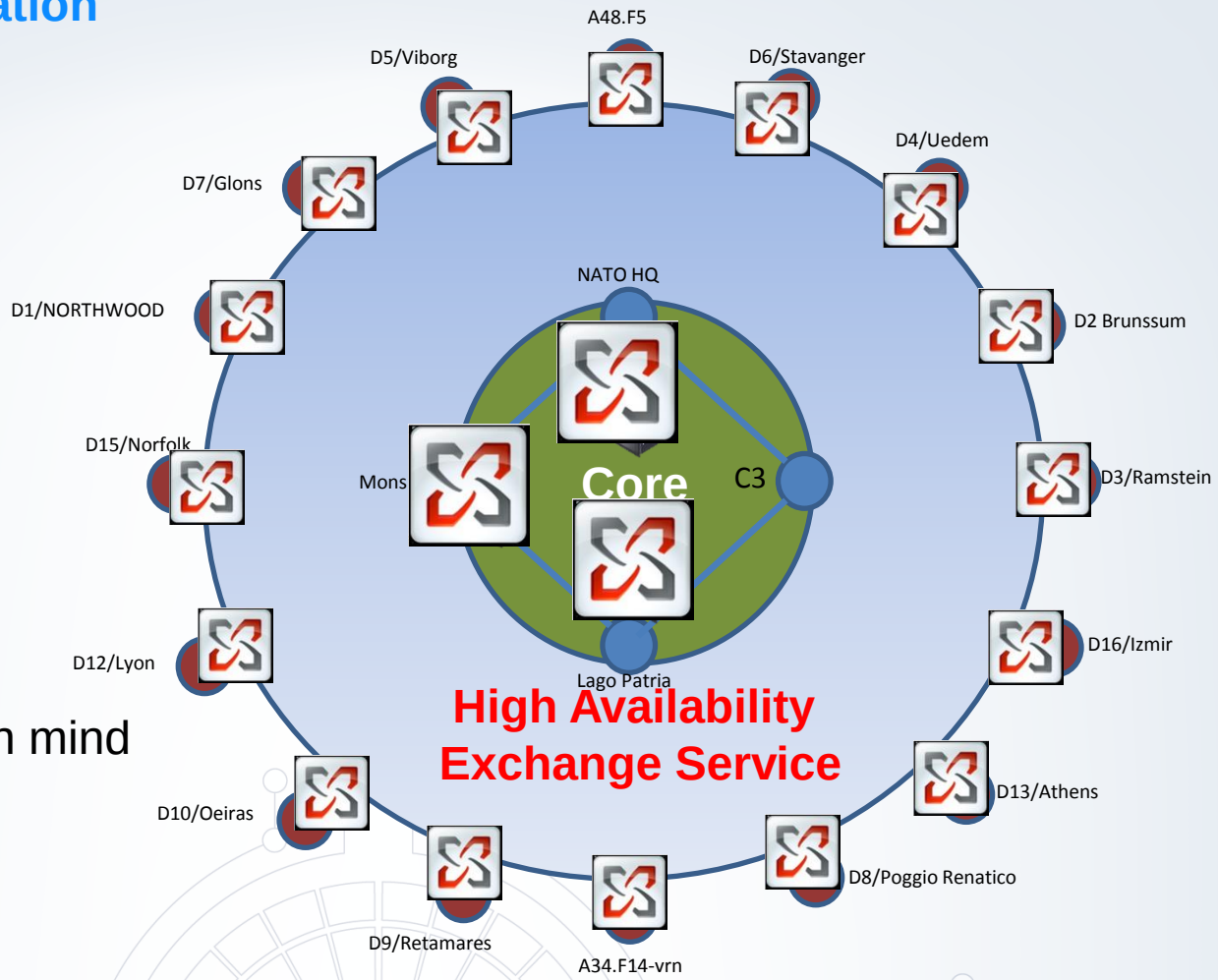
IaaS – Centralization/Consolidation

Exchange Centralization

Consolidate

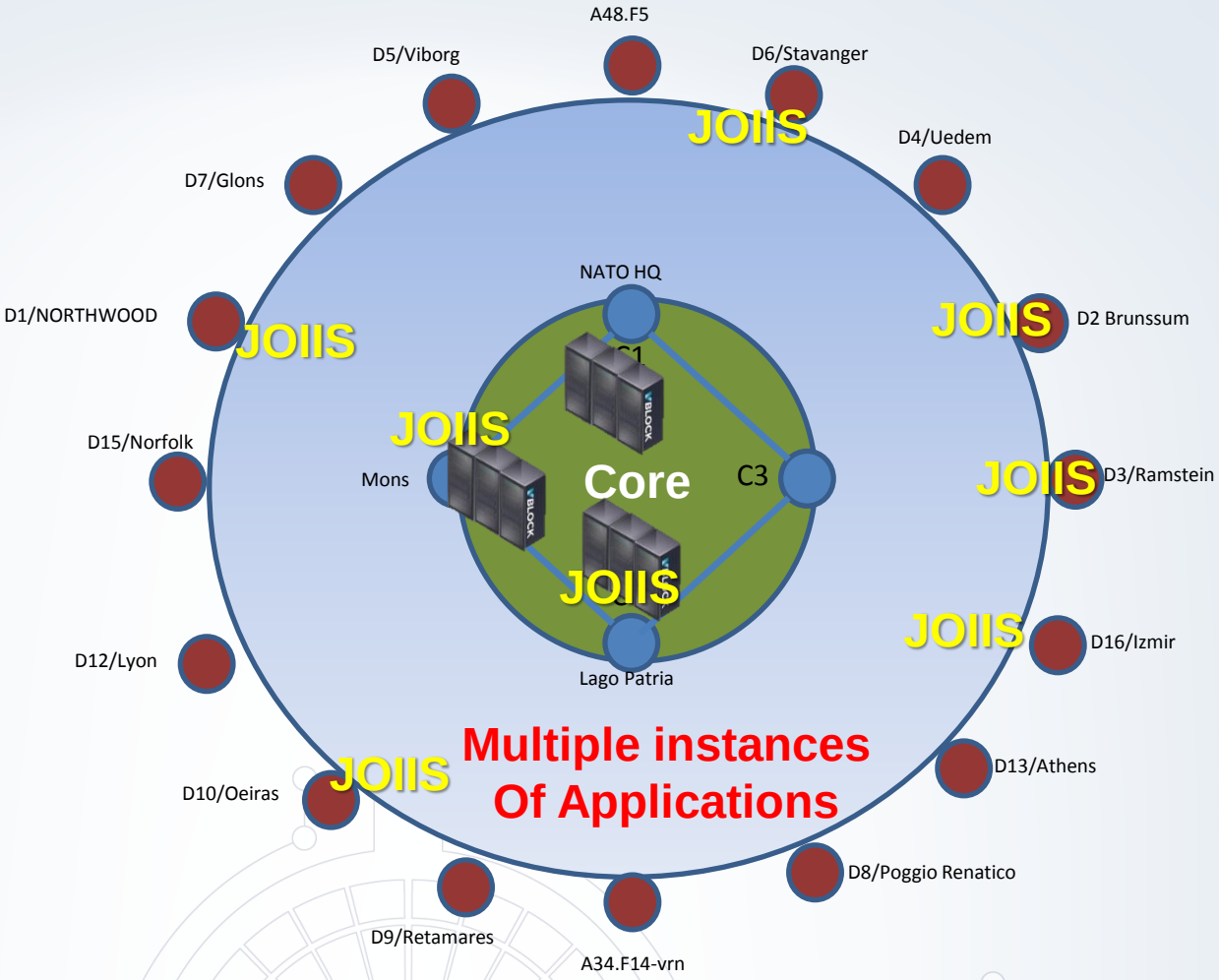
Other applicable Applications:

- Sharepoint, etc.
- Others should be developed with this in mind



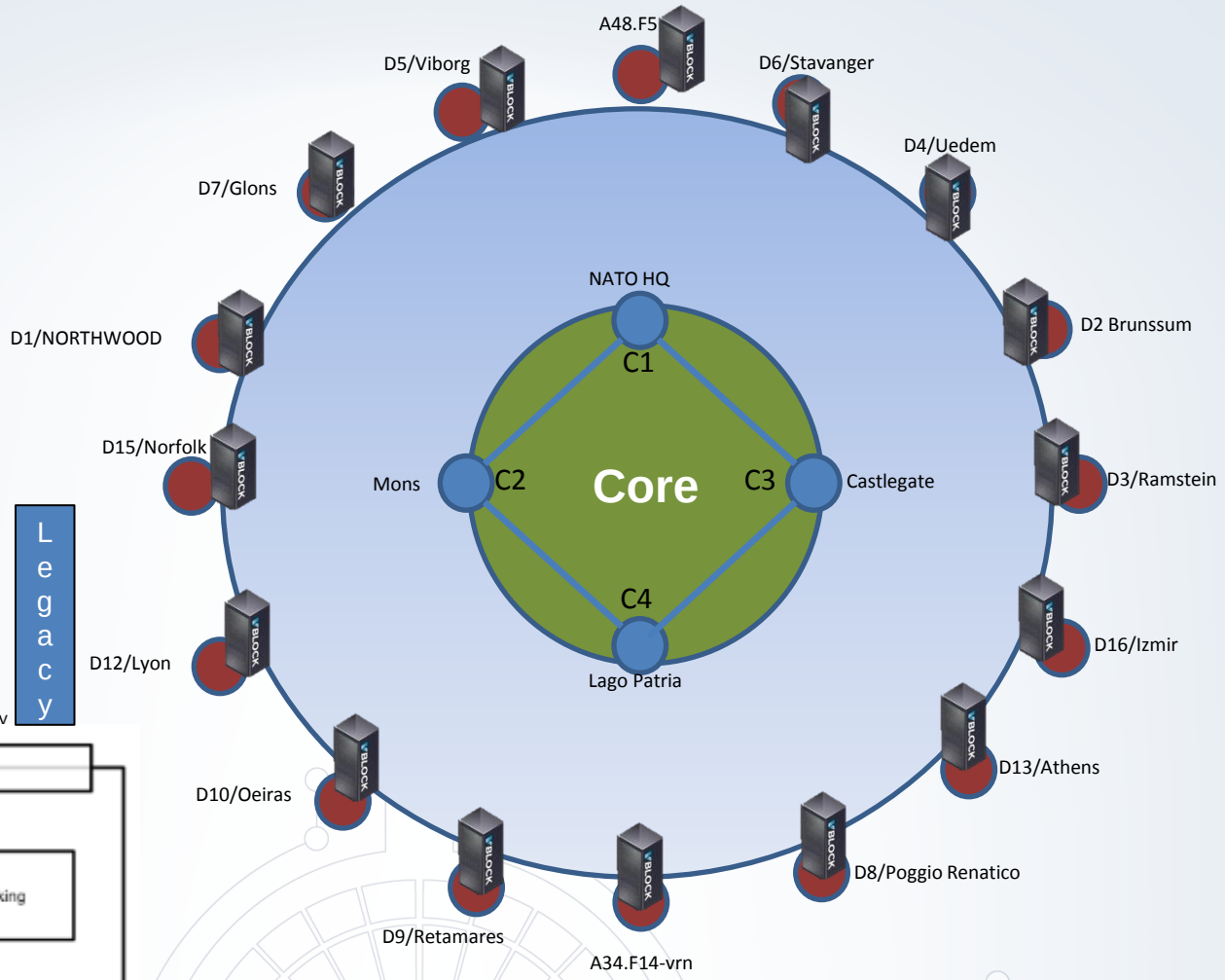
IaaS – Centralization – non-Consolidation

But NO consolidation

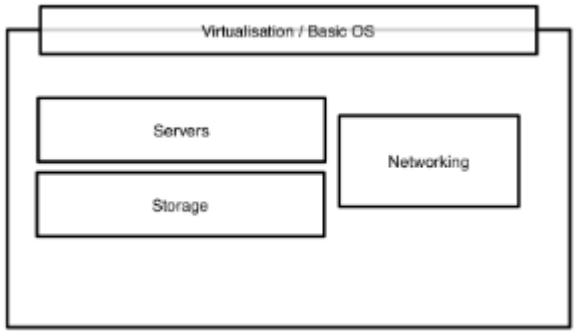


IaaS – Non Centralization – Consolidation

Local Applications



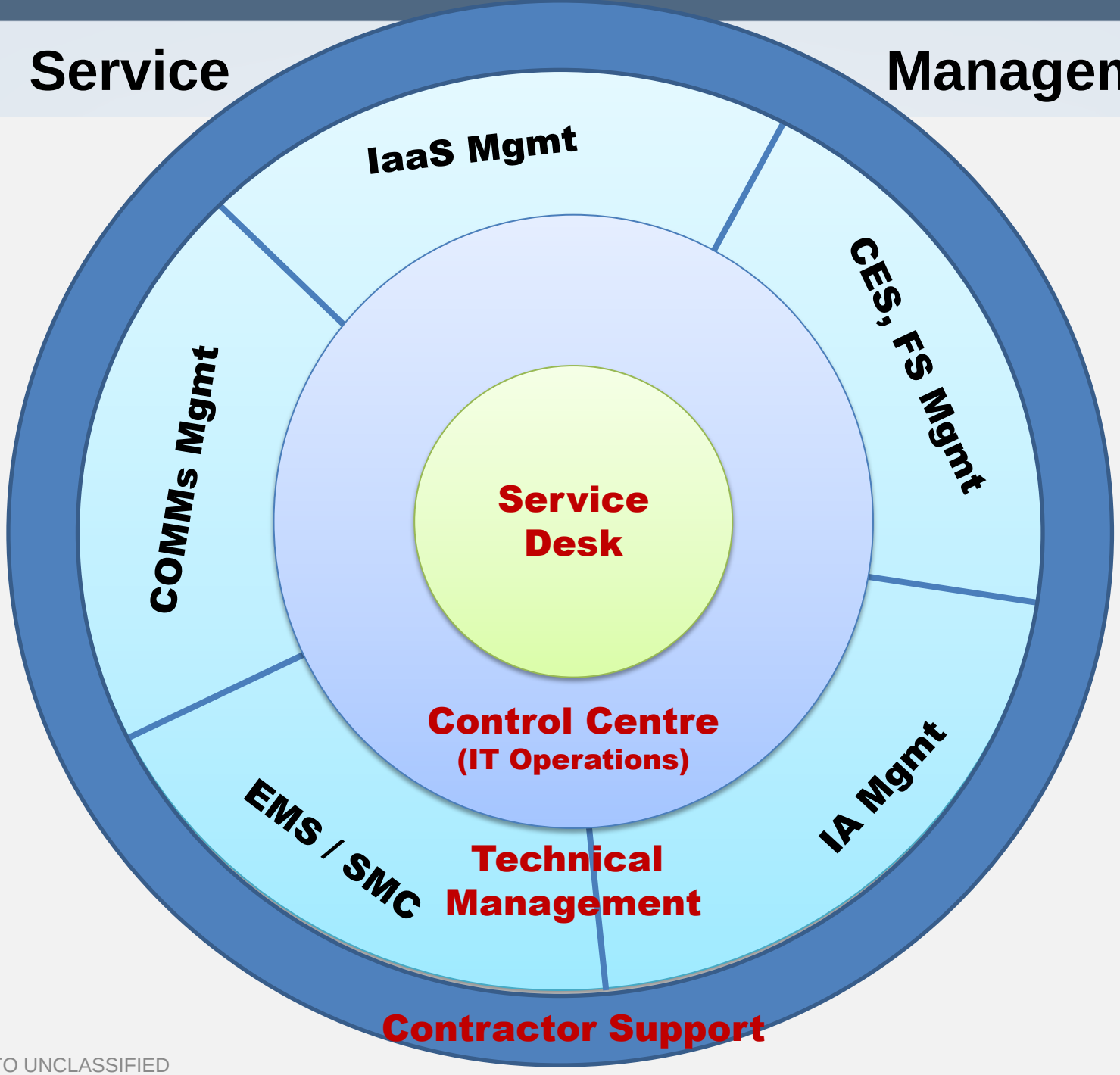
Legacy



Security Aspects

- The implementation will require security accreditation at enterprise and local site level.
- Security Accreditation efforts are lead by the purchaser supported by the contractor.
- Security measures are based on the purchaser's risk assessment
- Security products need to on the approved Product list (http://www.ia.nato.int/niapc)

Service Management



Contractor support for Life-Cycle Management

- Proposed Service provisioning model is NATO Owned – NATO Operated (NONO) with the exception of outsourced print and scan services (COCO)
- However the contractor will have life-cycle support responsibility for the O&M elements (by site for 5 years):
  - 4th level support (HW/SW)
  - Service Charges
  - Sustainment training

Life-Cycle Management

- Based on Total Cost of Ownership (Living document – updated during the life-cycle)

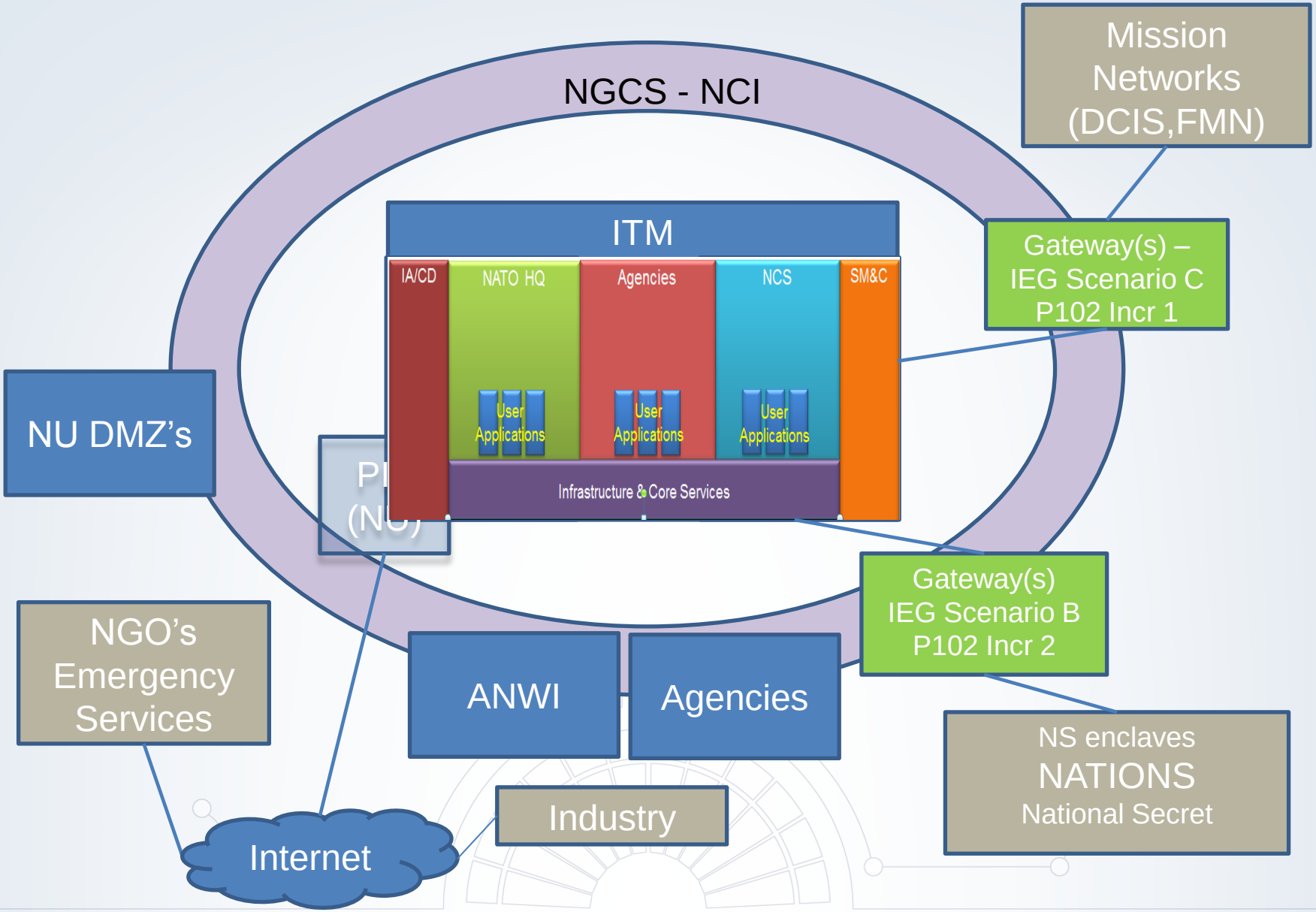
- Breaks down into
  - Cost of Procurement
  - Cost of Implementation
  - Cost of Support

  Contractor

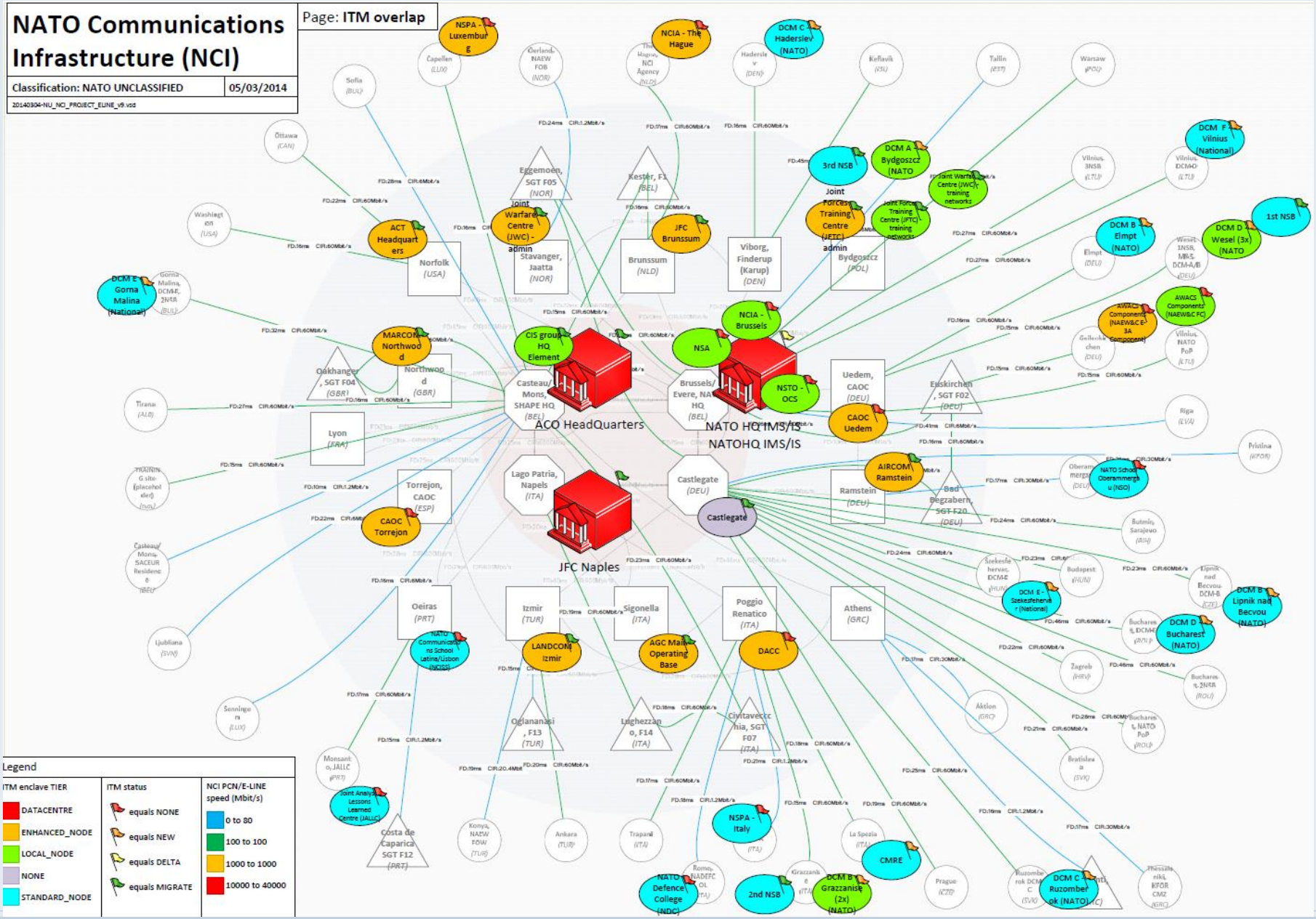
  - Cost of Operation (Manpower)
    - Ceiling of 465 FTE's

  NCI Agency

ITM Topology



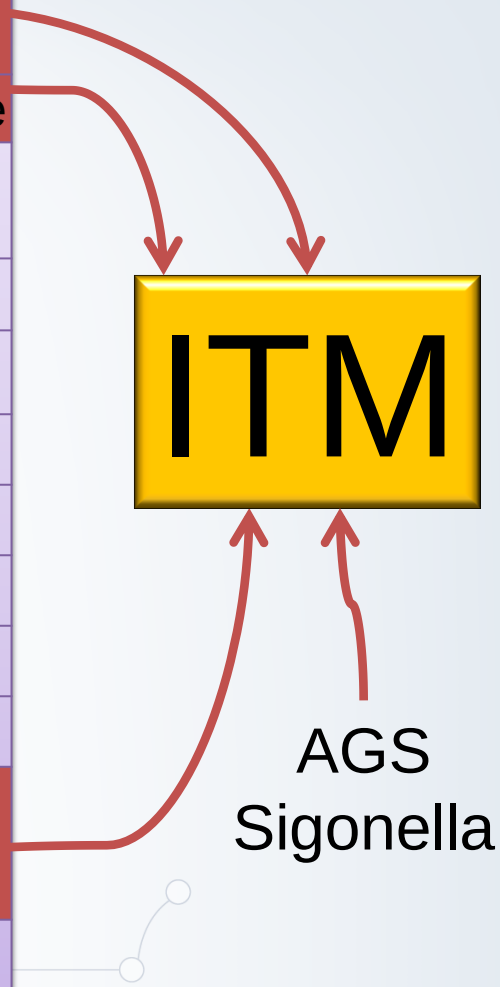
NCI / ITM Overlap (draft)



STATUS & IMPLEMENTATION APPROACH & SCHEDULE

CP 9C0150 Projects

Serial	Title
0IS03090	Provide NATO Messaging Service
0IS03091	Infrastructure as a Service and IT Consolidation
0IS03092	Extend, Upgrade and Adapt Fielded Baseline
0IS03093	Provide Unified Communication and Collaboration Services
0IS03094	Provide Web Enabling Services
0IS03095	Provide Information Administration Services
0IS03096	PMIC
0IS03097	BiSC PMO
0IS03098	Geographical Information Services
0IS03099	Upgrade Enterprise Directory Service
0IS03100	Upgrade Information Portal Services
0IS03101	Upgrade Bi-SC AIS Service Management and Control (SM&C) Capability
0IS03102	Information Exchange Services



CP 9C0150 Authorisation

- CP 9C0150:
  - Submitted by ACT — August 2011
  - Endorsed by Military Committee — January 2014
  - Endorsed by RPPB — 14 February 2014
  - Authorised by the NAC — 21 March 2014

We are nearing the end of the beginning

Project Authorisation

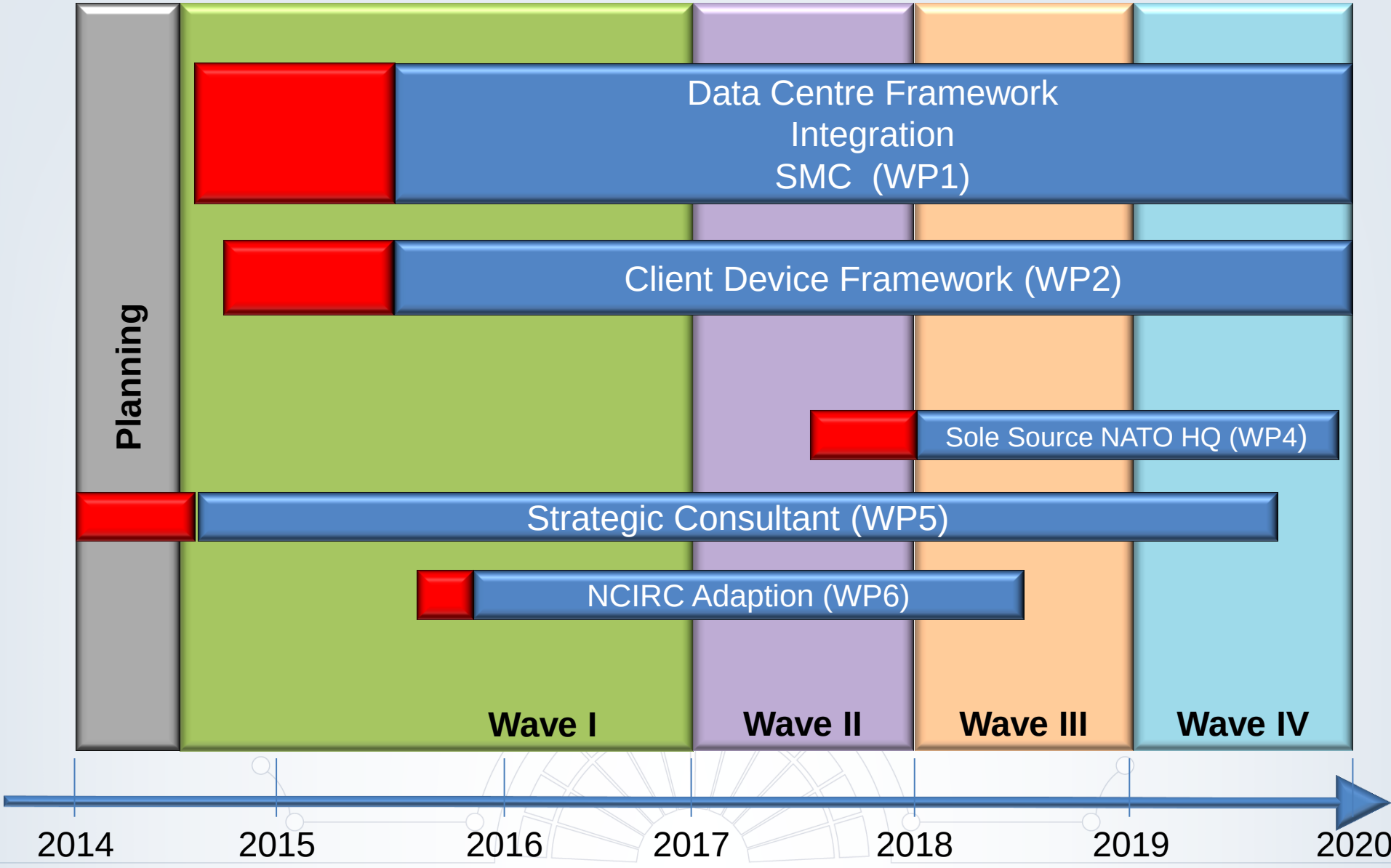
- TBCE submitted to the NOR on 18 June 2013
- NCI Agency submitted single TBCE for the scope of ITM, covered in:
  - Bi-SC Capability Package 9C0150- Core Information Services for Command and Control
    - P91 – Infrastructure as a Service and IT Consolidation
    - P92 – Extend, Upgrade and Adapt Fielded Baseline
    - P101 – Upgrade Bi-SC AIS Service Management and Control (SM&C) Capability
  - One project from Alliance Ground Surveillance – P191
    - Extend BiSC AIS Services to the AGS Main Operating Base

ITM – Implementation approach:

- Incremental implementation approach by site
  - Priority to establishment of Service Operations Centre, Data Centres and Sites with urgent Hardware replacement requirements
  - Optimized implementation (Time/Cost)

- Centralisation of services in Data Centres
  - Expect up to 80% centralisation of applications by the end of wave 4.

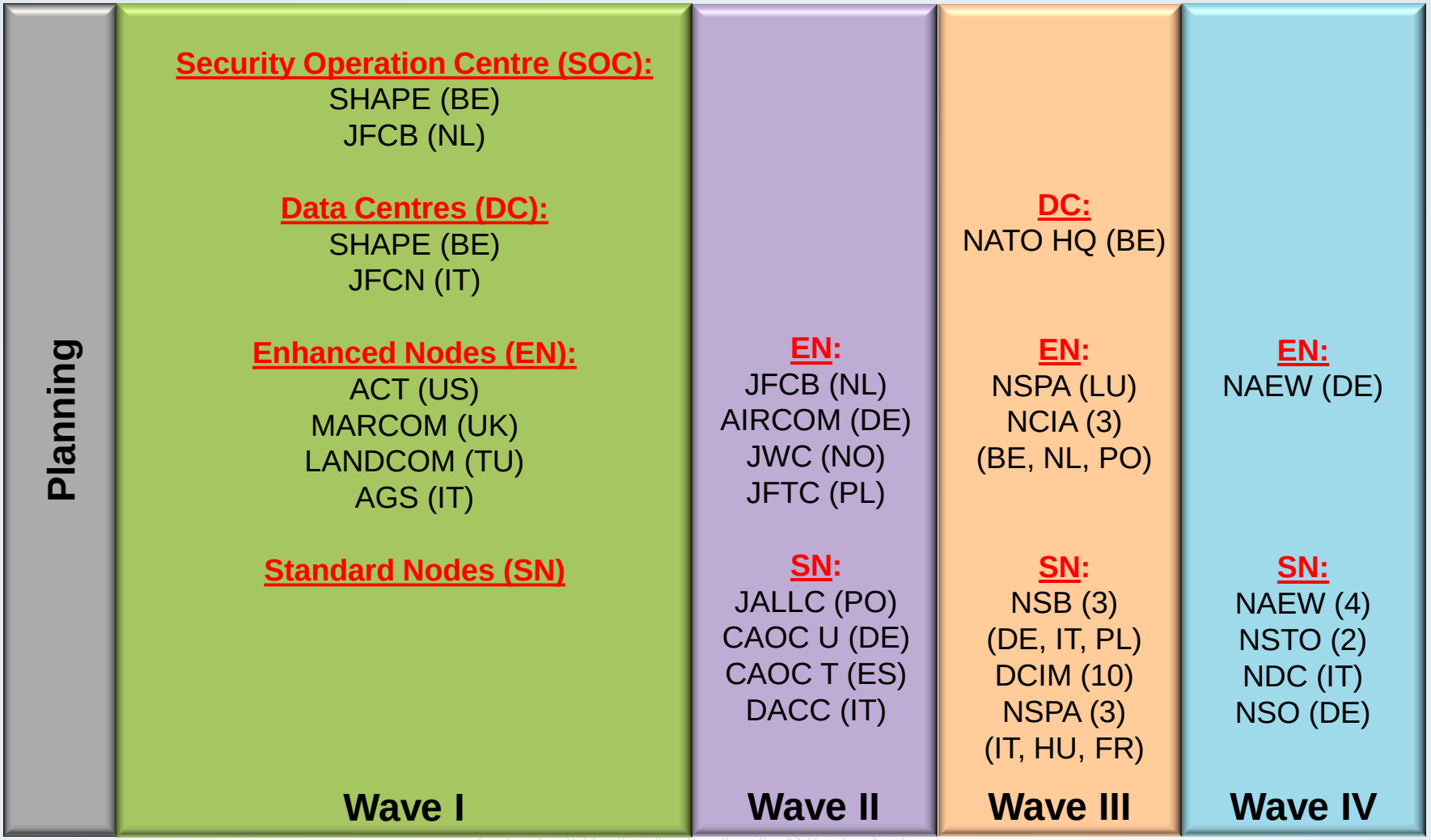
Implementation Road Map



Project Authorisation

- Undergone two screenings with the WGNTEs
- Estimated Investment Committee authorisation schedule:
  - Introduction – 3 April 2014
  - First discussion – 8 April 2014
  - 1st Stage authorisation – early May 2014
  - WP1 2nd Stage authorisation – end June 2014
  - WP1 IFB release – 1 July 2014
- Subject to timely IC authorisations, the NCI Agency hopes, for WP1 (WP2 slightly later):
  - Release IFB – by summer 2014; and
  - Contract Award – by summer 2015.

Implementation Plan



ITM
Implementation work packages

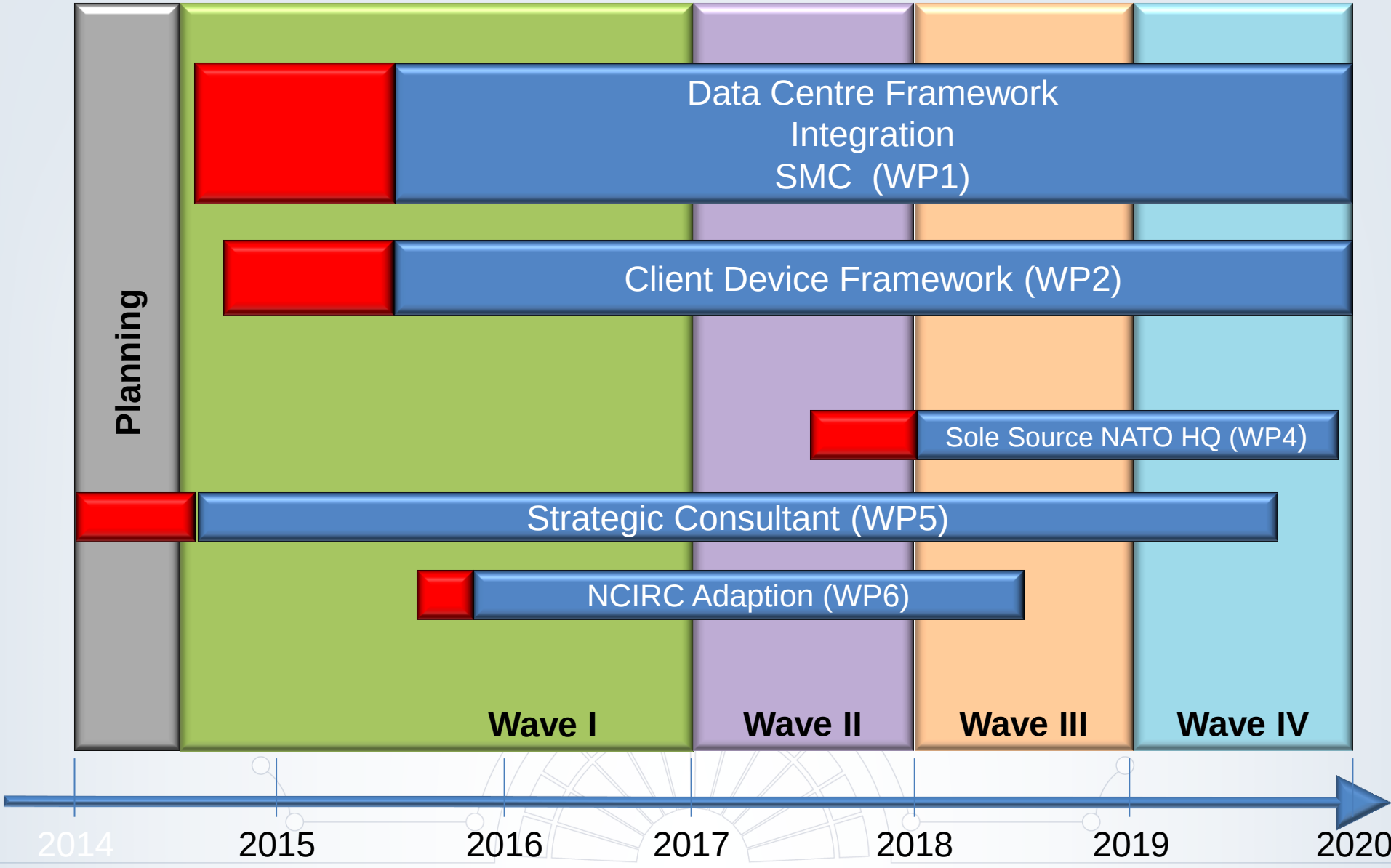
- Overall ITM Scope broken down into 5 work packages
  - WP1 – Implementation and migration of Back-end Services (Approx 115M€)
  - WP2 – Establish a Framework Contract for the Client Devices (Approx 41M€)
  - WP4 – Expansion of NHQ Data Centre for the Enterprise
  - WP5 – Provide Consultancy Support to NCI Agency.
  - WP6 – Adapt NCIRC FOC

→ **Alignment of the work packages with proposed procurements**

Work Package 1

- WP 1 - Implementation of Back-end Services
  - WP1.1 – Implement Infrastructure and centralisation of applications (Integrator Role)
  - WP1.2 – Establish a Framework Contract with the NCI Agency for DC and Nodes equipment
  - WP1.3 – Service Management and Control (SMC) tools and equipment
  - WP1.4 – Implement Client provisioning services
  - WP1.5 – Implement outsourced print and scan services

Implementation Road Map



Wave I – Work Package I – Fixed Milestones

- Achieve Design Acceptance – EDC + 20 weeks
- Establish SOC & DC's IOC – EDC + 50 weeks
- Wave I Sites completion – EDC + 78 weeks

→NCI Agency welcomes reduced implementation timeline proposals, but not extensions

CONCLUSIONS

ITM Prime Contractor

- We are looking for a Strong Partner to implement ITM
  - Someone who has implemented similar Projects before
    - Similar scale, scope, multiple international sites
    - For International, Defence, Government, and/or commercial organisations with similar complexities
  - Implementation experience needed in both:
    - Corporation (Prime Contractor, & suppliers), and
    - Key individuals (Project Mgr, Tech Lead, Test Dir, Migration Mgr)
  - Strong Service Management & Control experience to provide:
    - An integrated system that can provide metering and reporting linked to agreed SLAs/OLAs
    - Implementation of ITIL processes

4 Major Challenges to Industry

- Strike right balance between CAPEX and OPEX
  - This is a ‘spend to save’ activity
  - Most of our OPEX costs are manpower related
- Abstract, pool and automate
  - Create a ‘single pane of glass’
  - Hide underlying complexity
  - Provide flexibility and efficient management
- Migrate the application space
  - Virtualise
  - Migrate
  - Centralise
- Work with imperfect information

Questions?