



# **Introducing the Canadian ISTAR Information Centric Collaborative Workspace**

## **Paper Four:**

## **From an Implementation Perspective**

**Gaétan Thibault**

**Defence R&D Canada Valcartier**

**[Gaetan.Thibault@drdc-rddc.gc.ca](mailto:Gaetan.Thibault@drdc-rddc.gc.ca)**

**François Le May**

**Fujitsu Consulting**

**[Francois.lemay@consulting.fujitsu.com](mailto:Francois.lemay@consulting.fujitsu.com)**



# PERSPECTIVE AND BALANCE

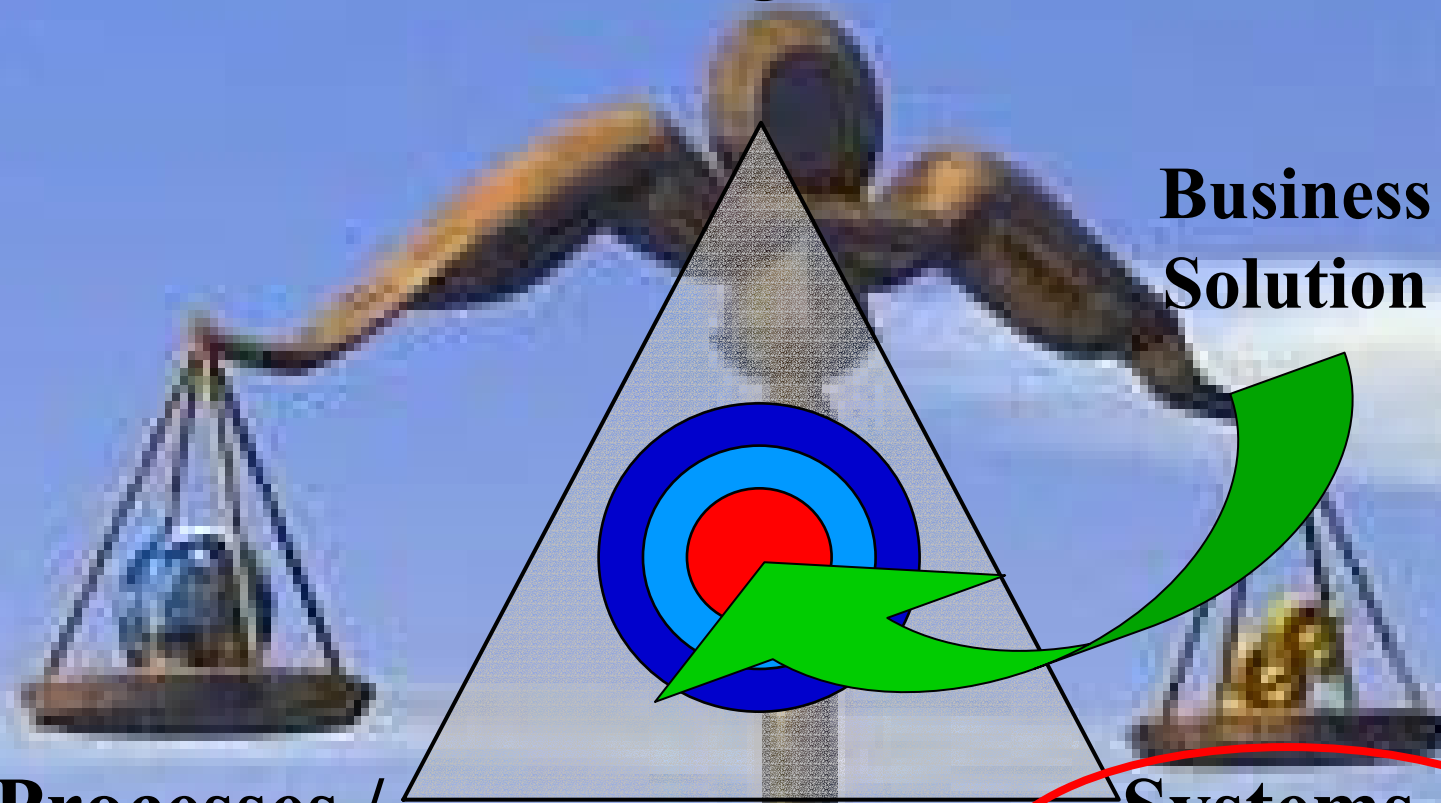
## System of Systems Harmony Triangle

**Users / Organizations**

**Business  
Solution**

**Processes /  
Procedures**

**Systems /  
Functionality**





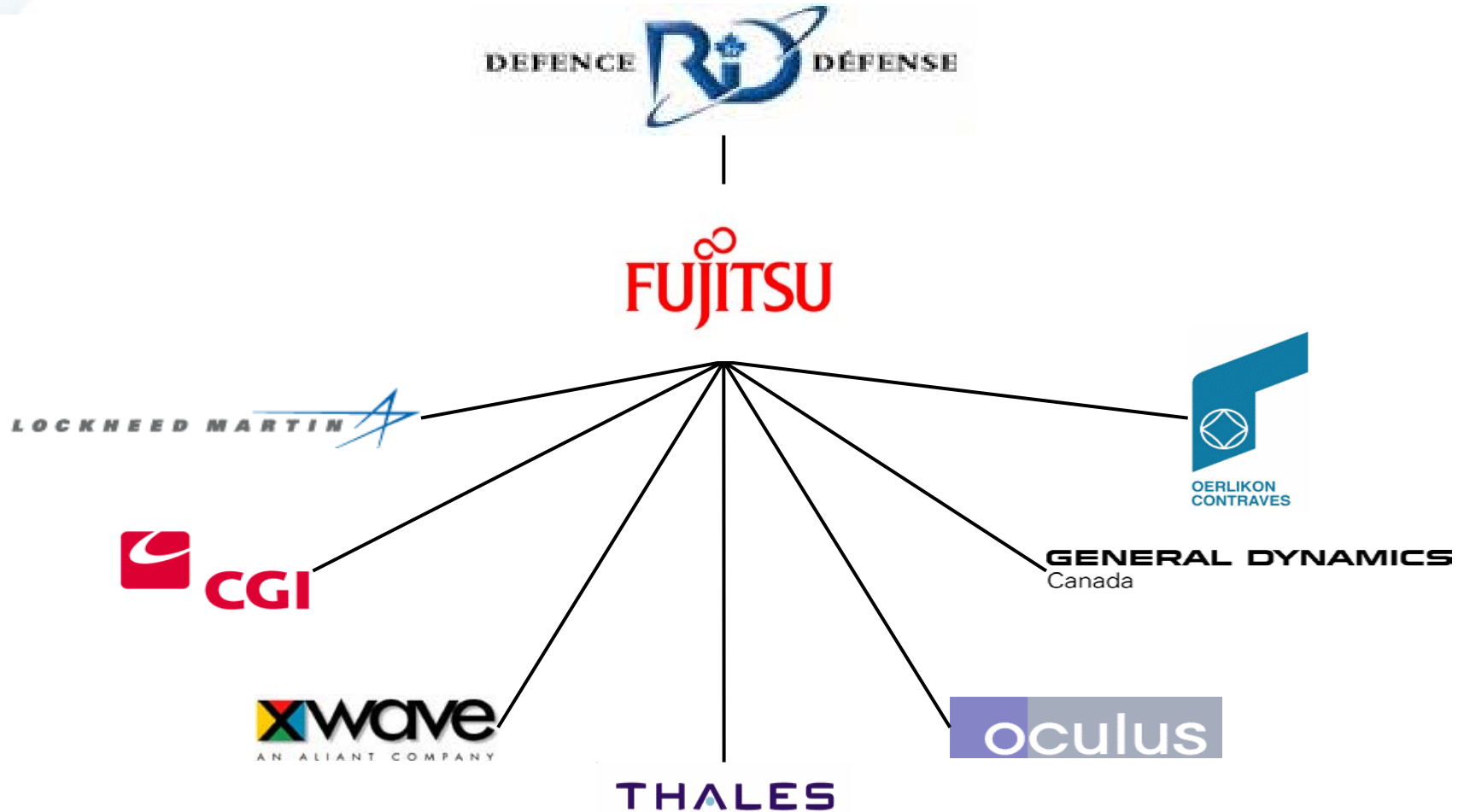
# ISTAR TD Implementation Objectives

- Transition ability
  - Transition ability and viability of a solution requires to look at the big picture (holistic perspective).
- Intelligence
  - Main focus of ISTAR TD on intelligence functions.
- Fusion
  - Land fusion level 2, 3 and 4 is far more complex than expected.
- Dynamics
  - LFC2IS baseline addresses the planning and the viewing of operations.
  - We looked at the complete decision-action cycle of operations.



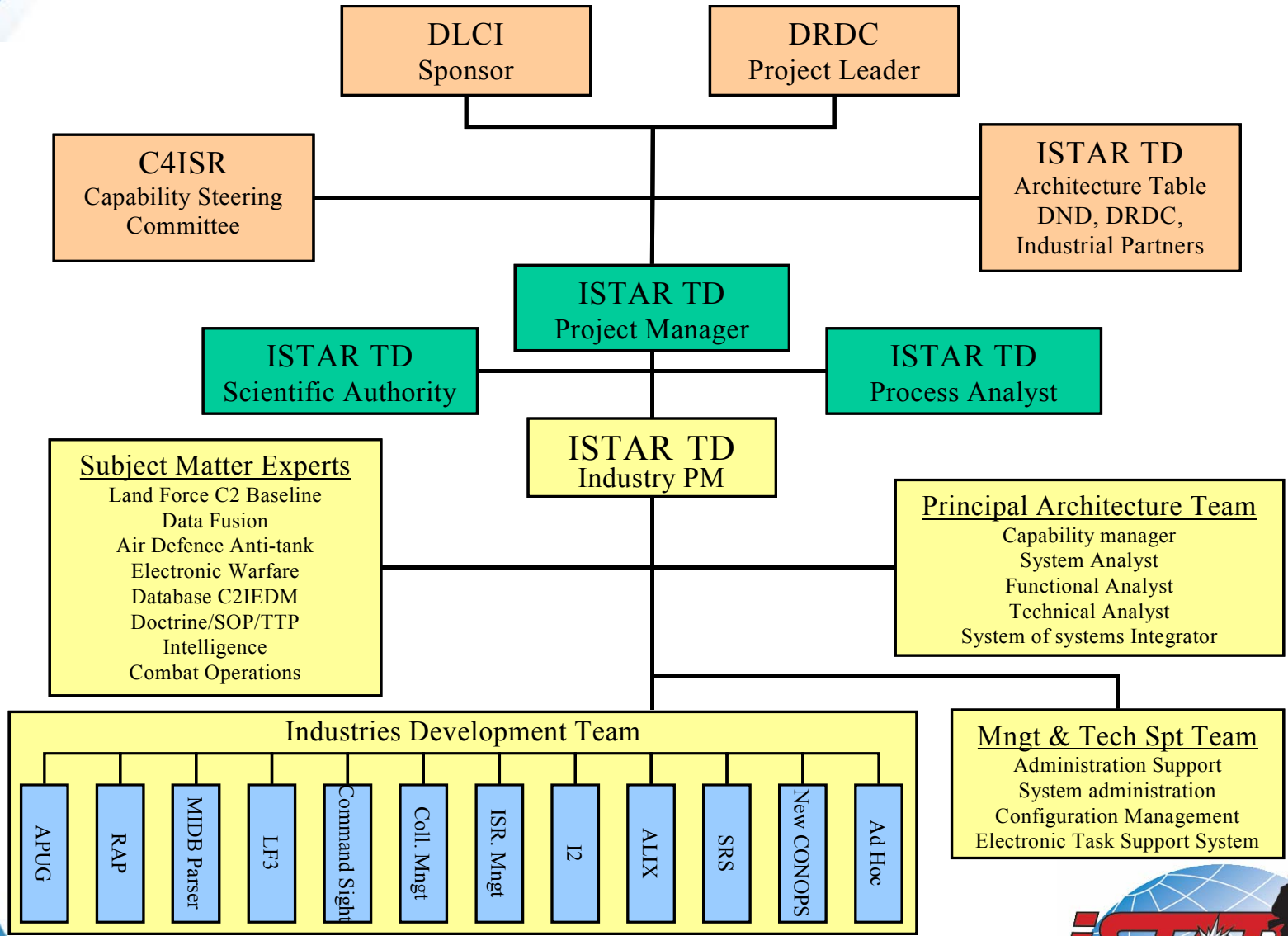


# Multidisciplinary Teams



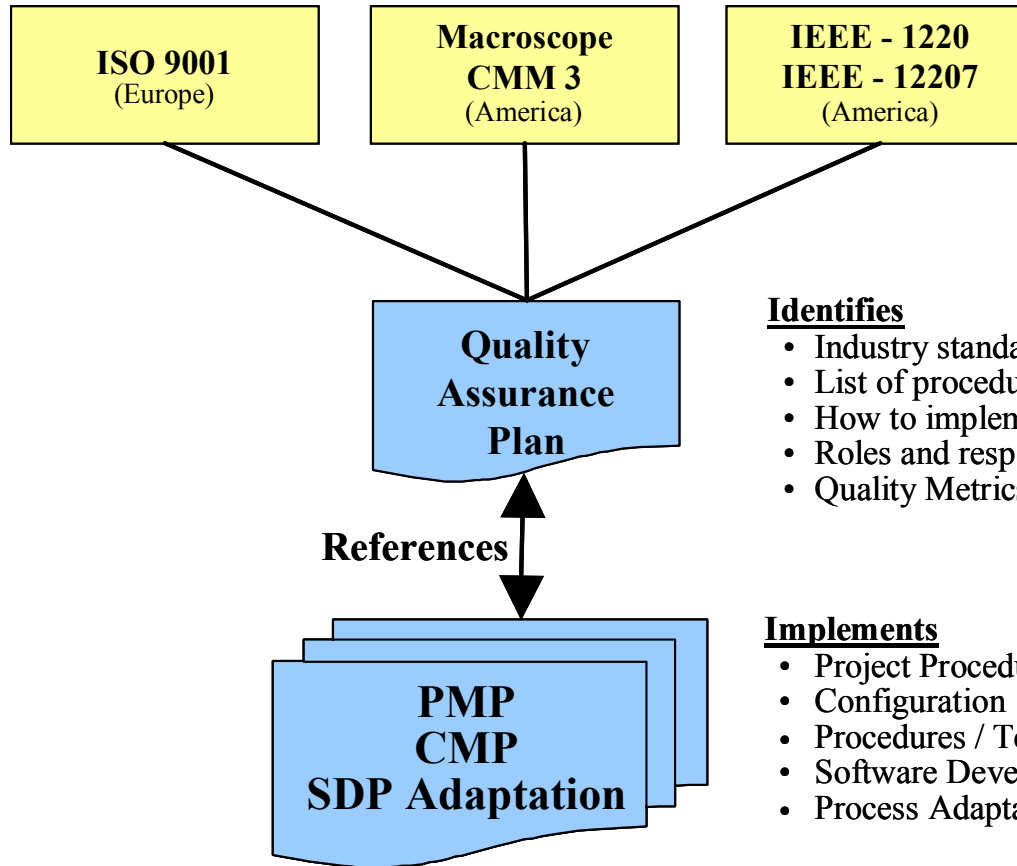


# Program Organization Chart





# Methodology



## Identifies

- Industry standard requirements
- List of procedures to comply with
- How to implement it (Strategy)
- Roles and responsibilities
- Quality Metrics

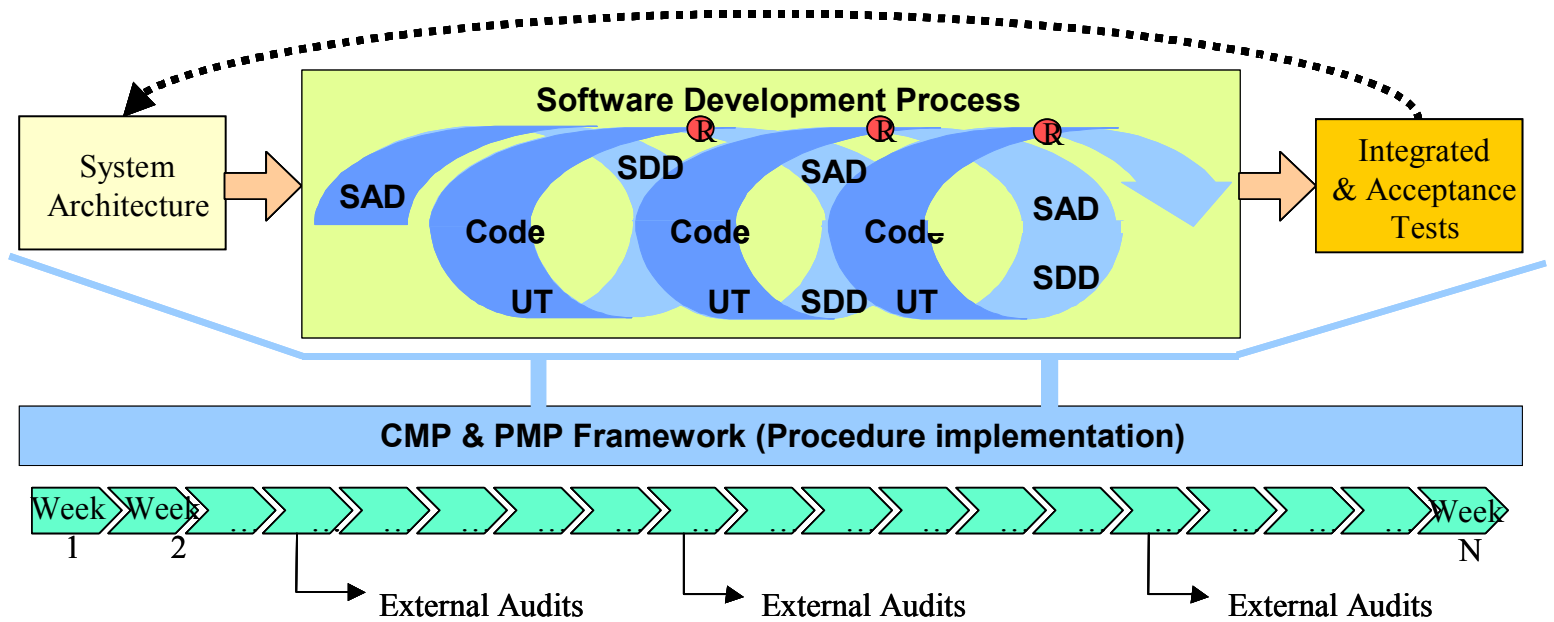
## Implements

- Project Procedures
- Configuration Development
- Procedures / Techniques
- Software Development
- Process Adaptation





# Approach

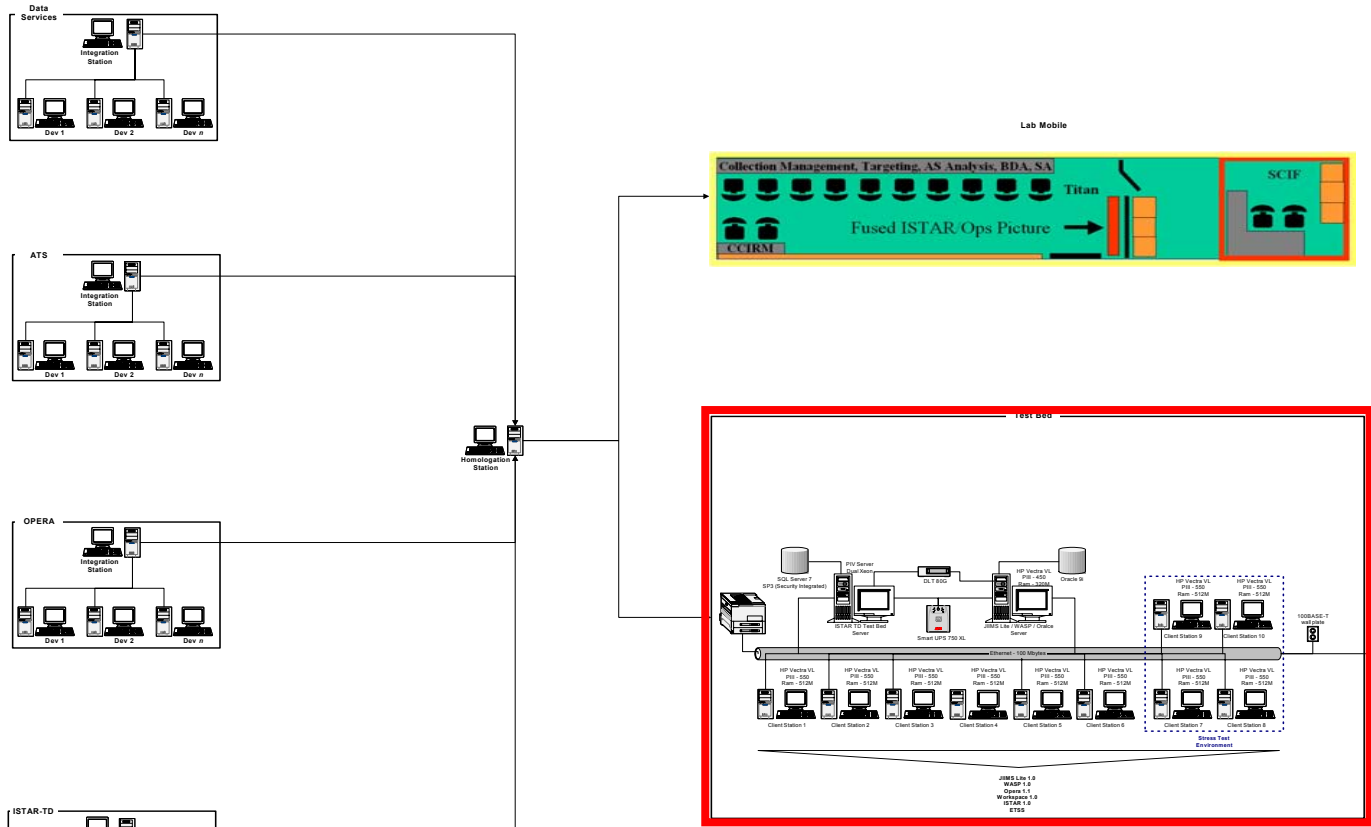


## Software Proto-Cycling Adopted Approach





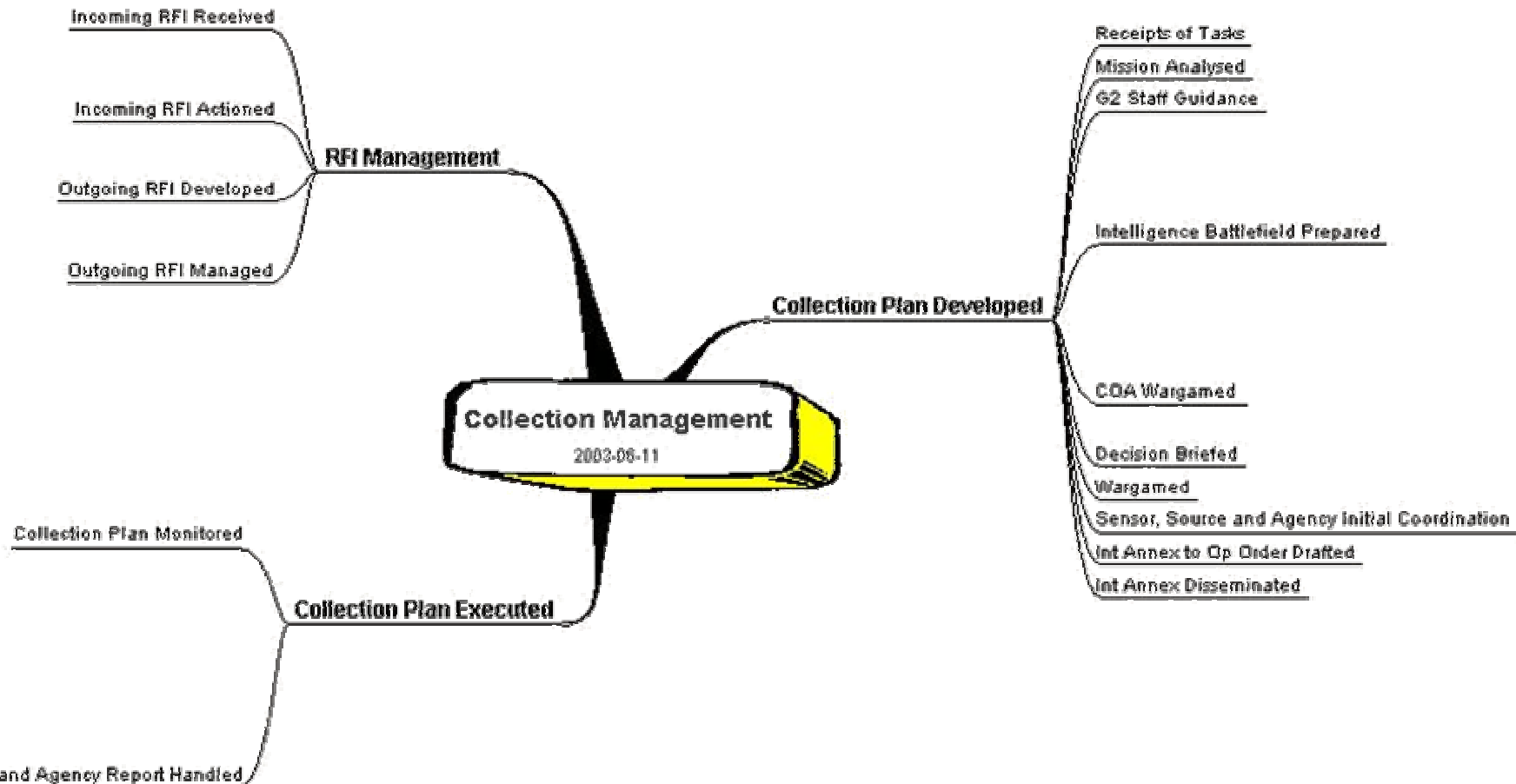
# Testbed Environment





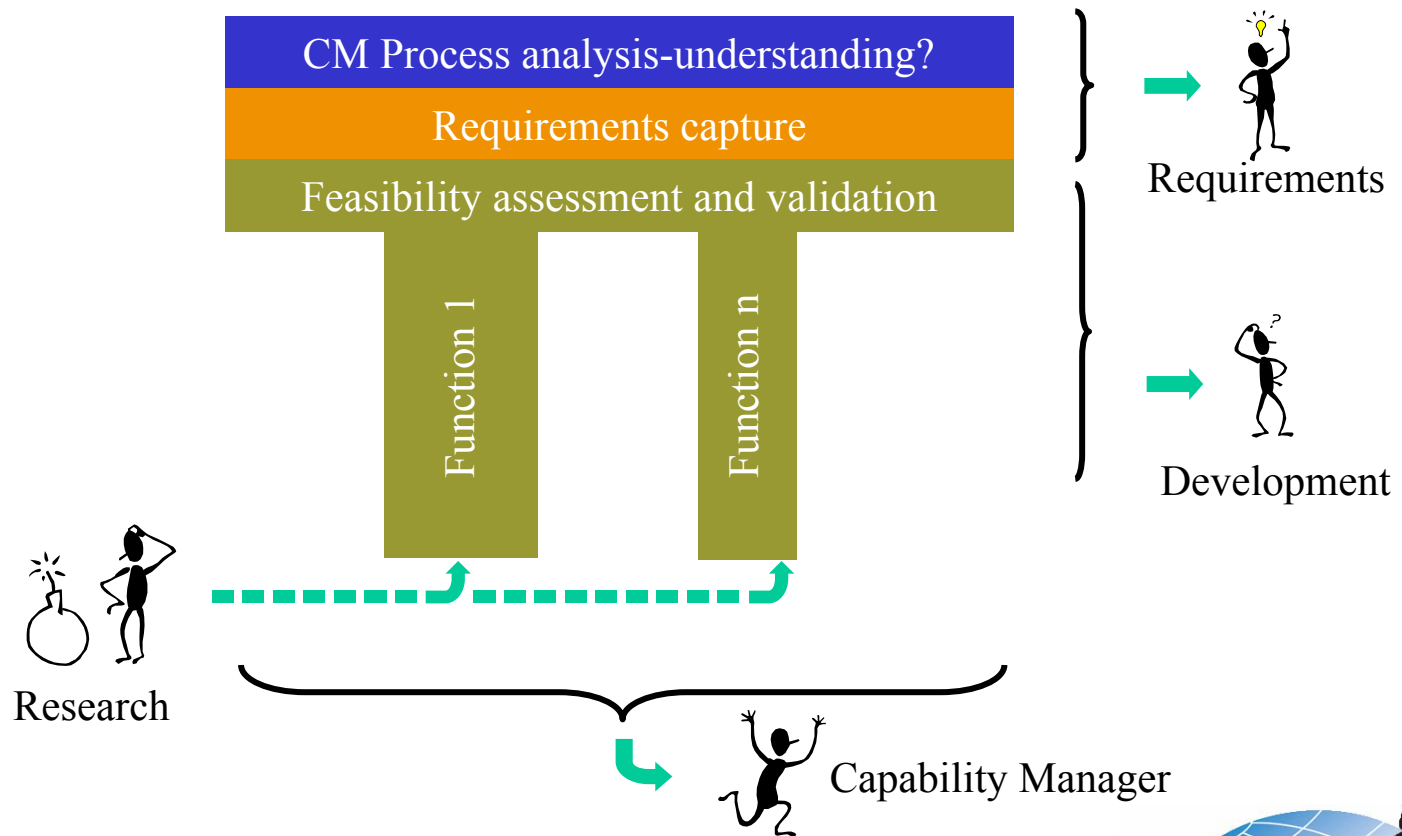


# Starting point: The Processes



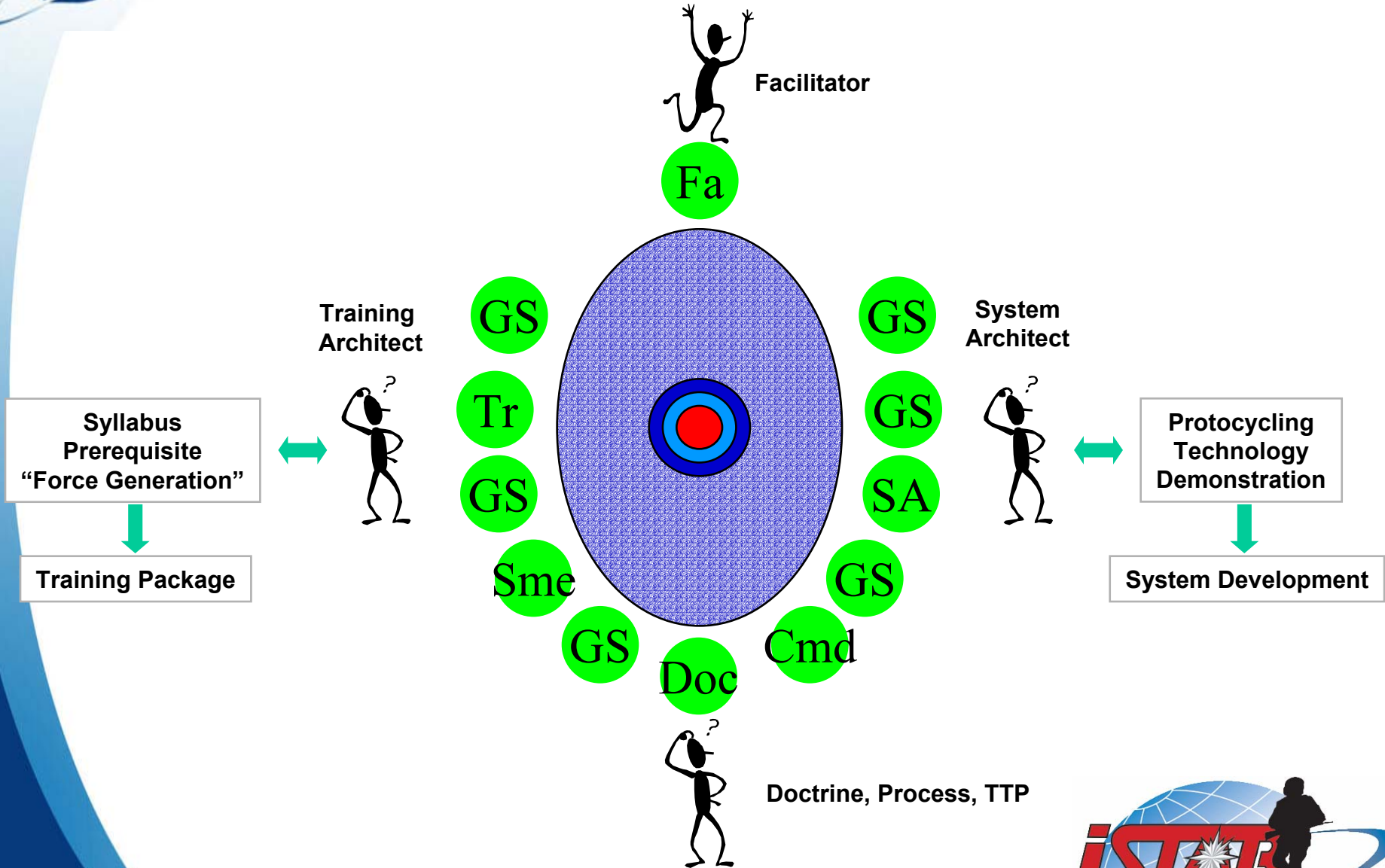


# The “ $\pi$ ” Approach



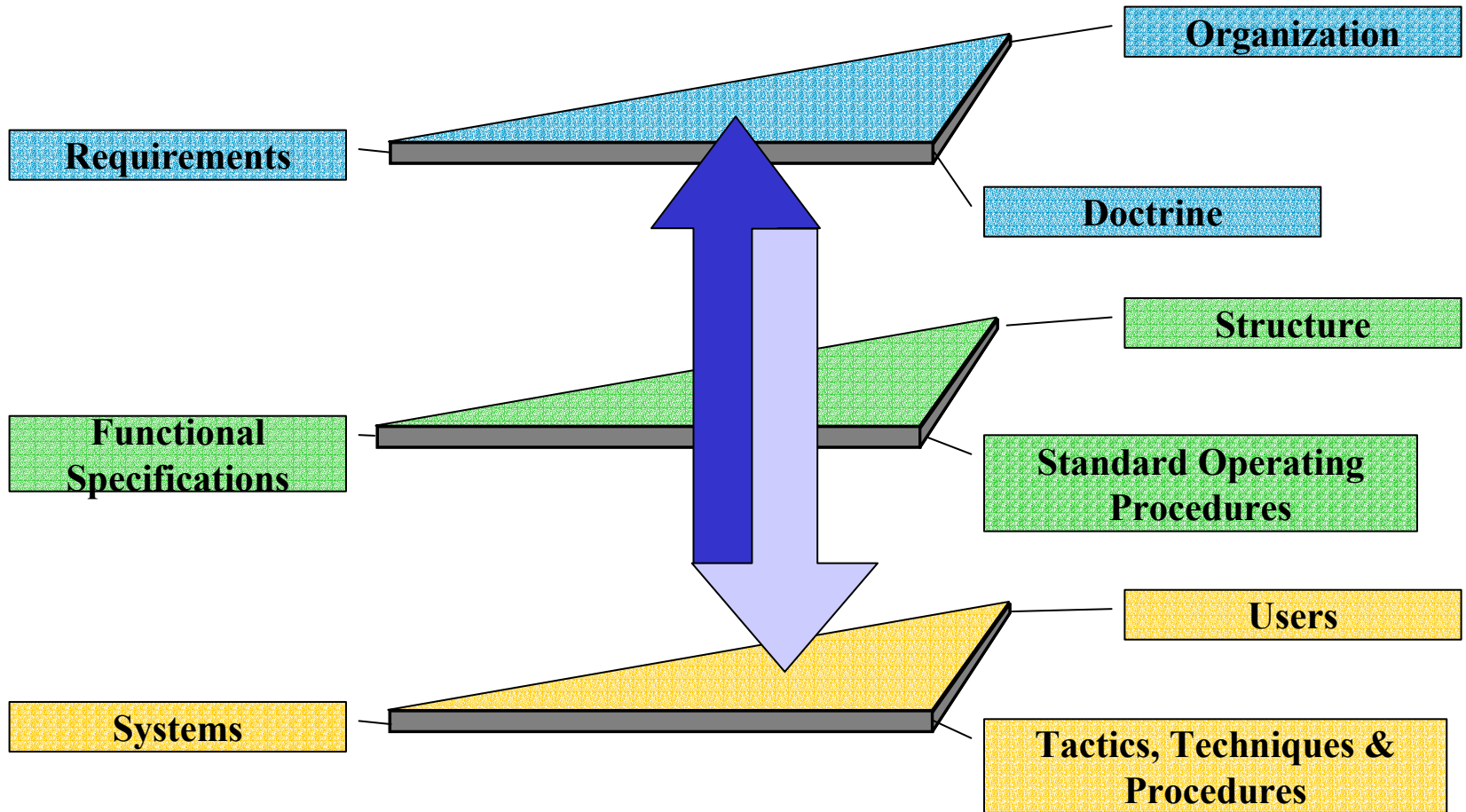


# Joint Application Design (JAD) Workshop





# Top-Down versus Bottom Up





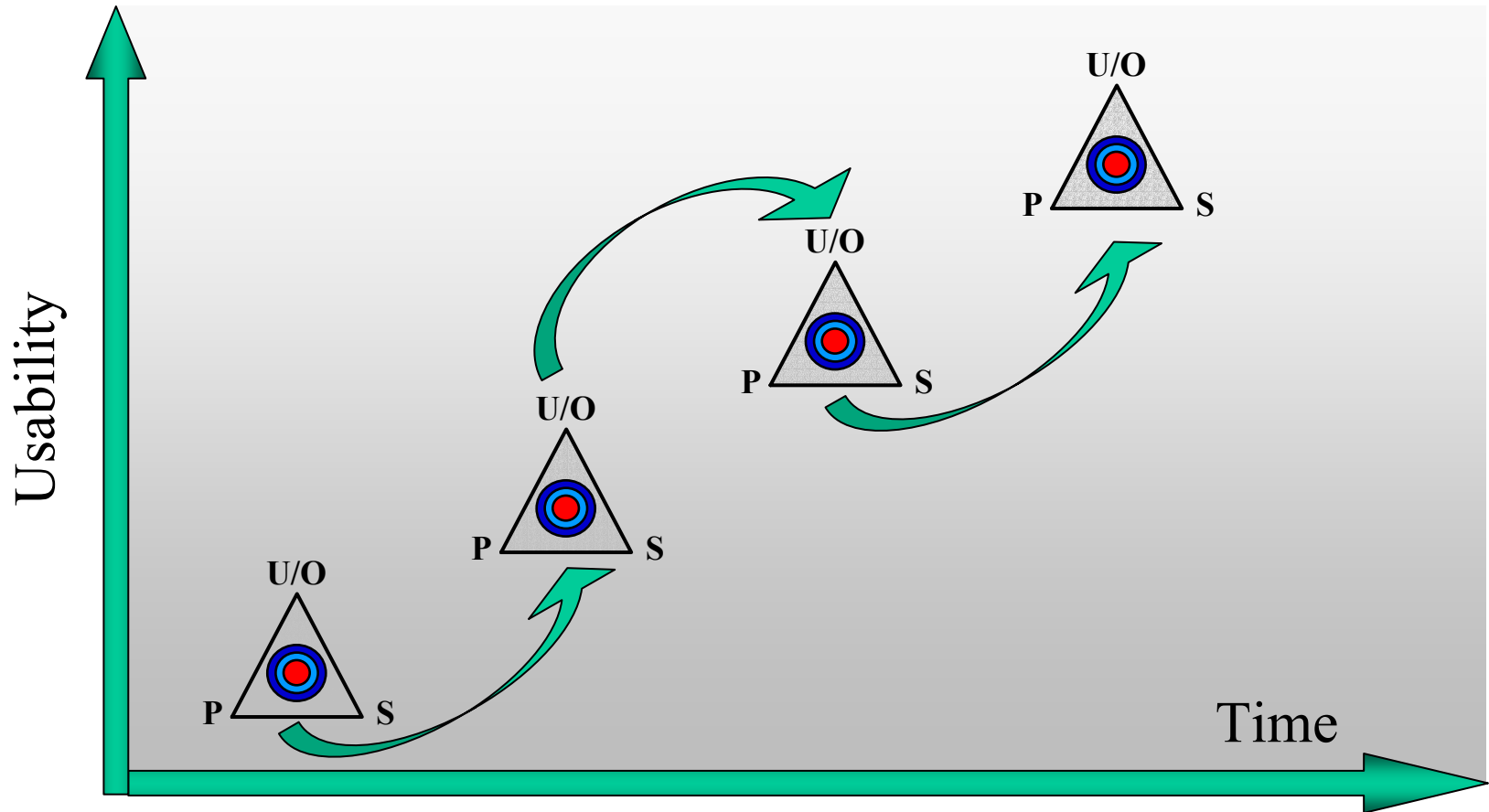
# Usability

- Usability is defined as the extent to which a product can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use. (ISO 9241-11 1998)
- Usability is different than utility which is the ability of something to satisfy a need.
- The word usability arises in relation with the Human-Computer Interface studies.
- The interface of a program or of a web site can be useful because it performs the whole range of operations specified, but can be of low usability, for example, due to a high complexity that makes it difficult to be used efficiently for non-trained people.





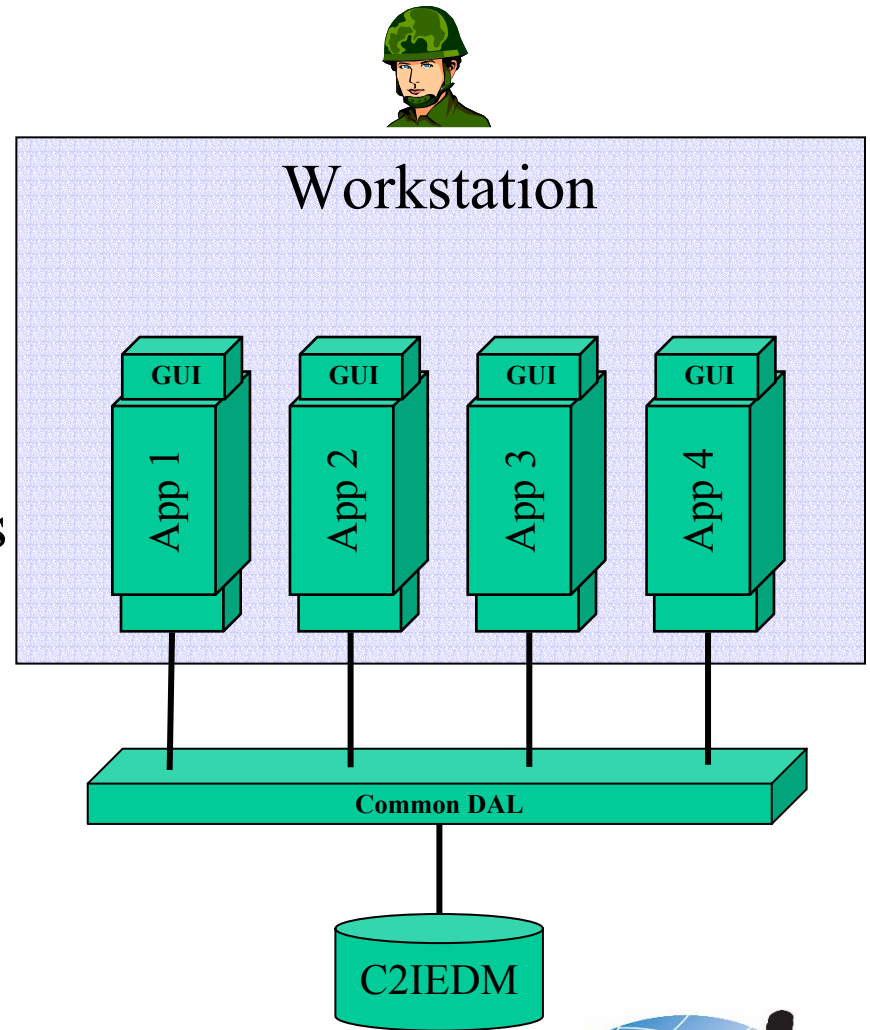
# Evolution of Information Sharing Capability From a System of Systems Perspective





# Data Centric Workspace

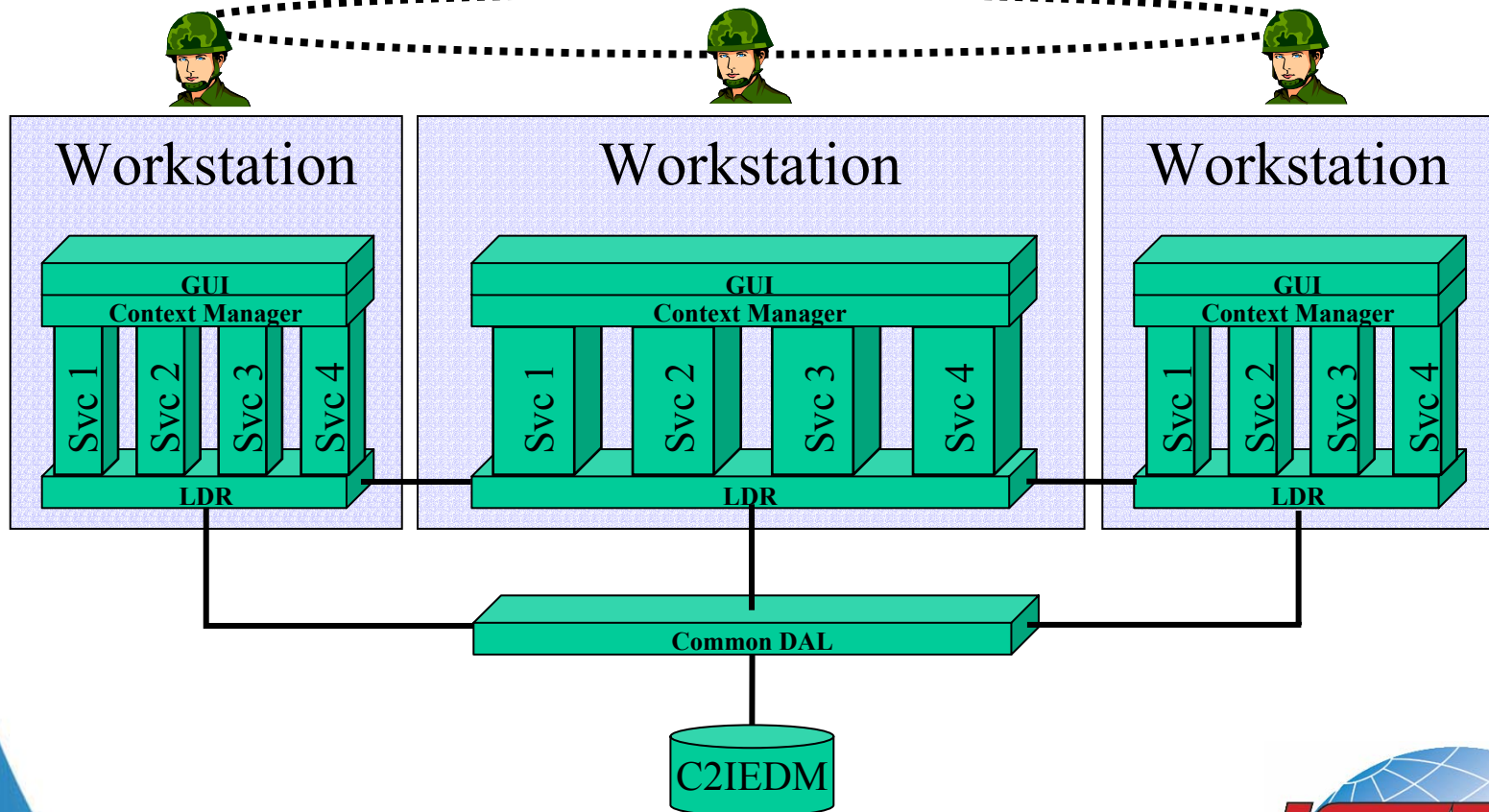
- **Data Centric Workspace:** Technological capability to have several applications accessing heterogeneous data bases using the same semantic. (CA ISTAR TD 2002)





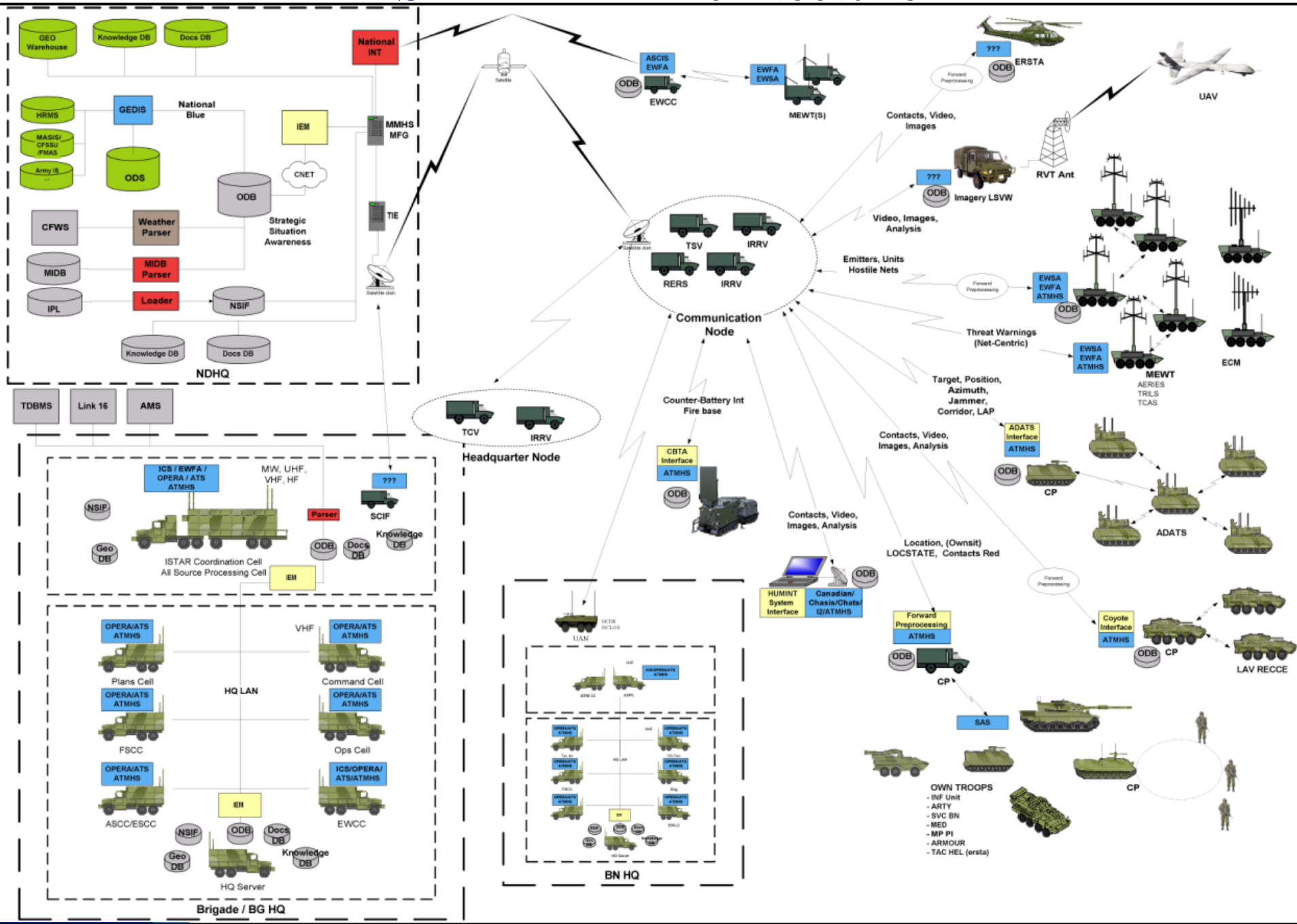
# Information Centric Collaborative Workspace (Same Node)

- An environment facilitating the cognitive and social processes through a System of systems services architecture (ICW). (CA ISTAR TD 2004)





# ISTAR TD -Architecture



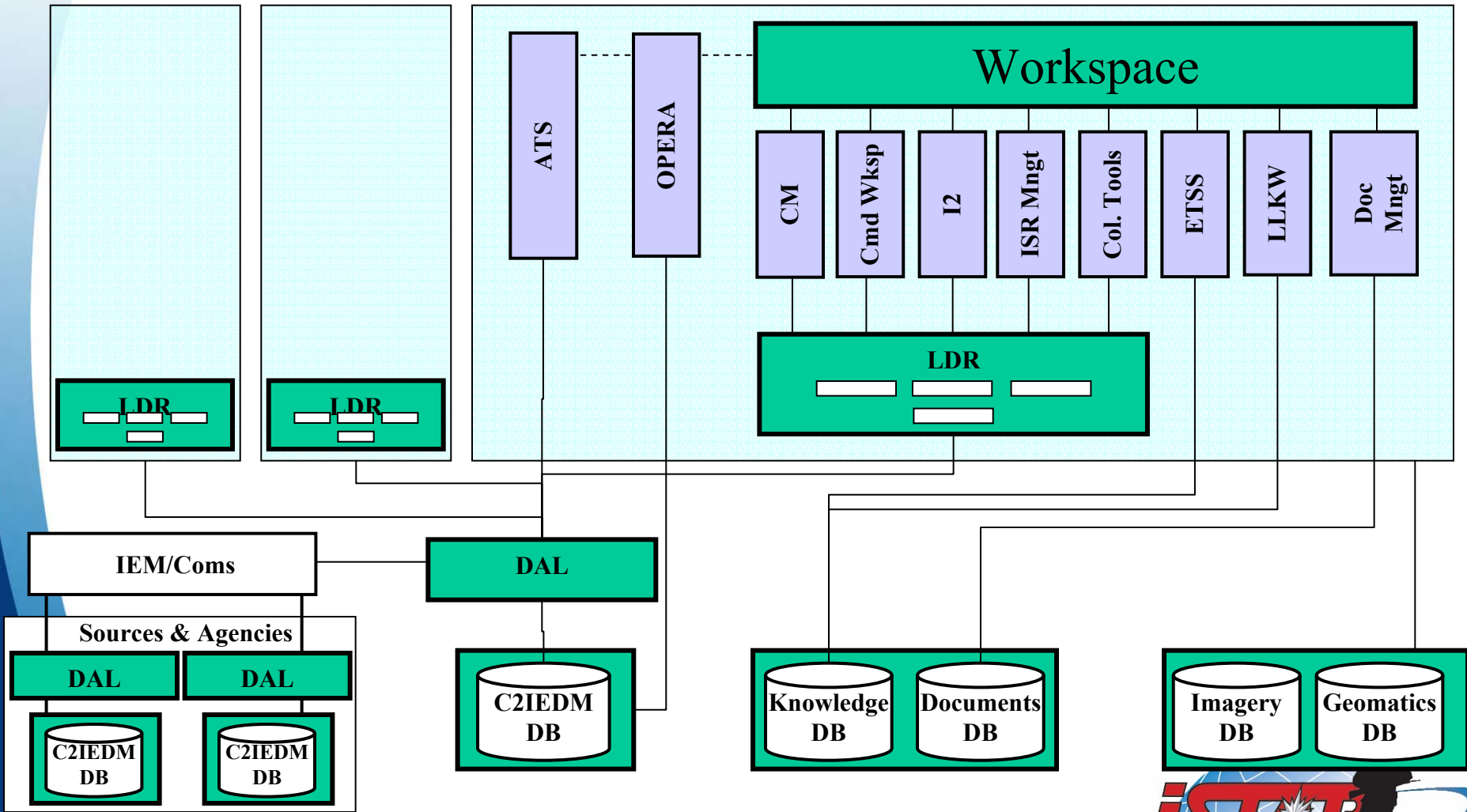


# ICW Target Architecture Vision

Workstation 1

Workstation 2

Workstation N





## Conclusion

- Develop a vision.
- Implement a method based on an adaptation of a software method.
- Build the project team with knowledgeable people (business, process and technology) with a common semantic.
- Do not forget that technology supports the users.
- Focus on user requirements and usability.
- Remember that software implementation is a continuous process.





# Questions?



Defence Research and  
Development Canada

Recherche et développement  
pour la défense Canada

Canada



Recherche et développement  
pour la défense Canada

Defence Research and  
Development Canada

### Gilles Clairoux, Maj

Project Manager ISTAR TD  
System of Systems Section

(418) 844-4000 poste/Ext.: 4224  
Télec./Fax : (418) 844-4538  
Cell. : (418) 953-1778  
gilles.clairoux@drdc-rddc.gc.ca  
[www.valcartier.drdc-rddc.gc.ca](http://www.valcartier.drdc-rddc.gc.ca)

Canada



François Le May  
Director

FUJITSU

### FUJITSU CONSULTING

Place Iberville Trois  
2960 Laurier Blvd., Suite 400  
Sainte-Foy, QC, Canada, G1V 4S1  
Tel.: +1 418 653 6681 Fax: +1 418 653 4428  
Cell.: +1 418 569 5496  
E-mail: francois.lemay@consulting.fujitsu.com  
<http://ca.fujitsu.com>



Recherche et développement  
pour la défense Canada

Defence Research and  
Development Canada

### Gaétan Thibault

Defence Scientist  
Metrics and Experimentation  
System of Systems

(418) 844-4000 poste/Ext.: 4540  
Télec./Fax : (418) 844-4538  
Cell. : (418) 953-0533  
gaetan.thibault@drdc-rddc.gc.ca  
[www.valcartier.drdc-rddc.gc.ca](http://www.valcartier.drdc-rddc.gc.ca)

Canada



Réal Dubé, MBA  
Director

FUJITSU

### FUJITSU CONSULTING

Place Iberville Trois  
2960 Laurier Blvd., Suite 400  
Sainte-Foy, QC, Canada, G1V 4S1  
Tel.: +1 418 653 6681 Fax: +1 418 653 4428  
Cell.: +1 418 571 4111  
E-mail: real.dube@consulting.fujitsu.com  
<http://ca.fujitsu.com>

Oerlikon Contraves Inc	Denis Lacroix	D.lacroix@oerlikon.ca
Lockheed Martin Canada	Charlie Jamieson	Charlie.jamieson@lmco.com
General Dynamics Canada Ltd	Guy Thériault	Guy.theriault@sympatico.ca
CGI	Richard D'Anjou	Richard.danjou@cgi.com
Thales Systems Canada	Alain Gauthier	Alain.gauthier@ca.thalesgroup.com
XWAVE	Luc Dumouchel	Luc.dumouchel@xwave.com
Oculus	Bill Wright	Bill.wright@oculusinfo.com

