



ΠΑΝΕΠΙΣΤΗΜΙΟ ΠΕΙΡΑΙΩΣ

UNIVERSITY OF PIRAEUS



# **Examination of the existing organizational structure of the IT Infrastructure and Operations Division of XYZ company, using Systemic Methodologies**

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# Presentation Structure

- **Introduction**
- **The XYZ company**
- **The IT Infrastructure & Operations Division (ITI&O)**
- **Existing State (ES) of ITI&O Division**
- **Design ES with DCSYM**
- **Proposed Enhancements (PE)**
- **Expected Benefits**
- **Design PE with DCSYM**
- **Design PE with VSMoD**
- **Comparison between ES and PE**

# Introduction

- The purpose of this certification project is to examine the structure of the IT Infrastructure & Operations Division (ITI&O) of the XYZ company which is the system under consideration.
- Following describes the activities of the XYZ organization, its structure and the existing structure of the ITI&O Division.
- Graphics design were performed using DCSYM Case Tool.
- The problems that the existing structure presents are analyzed.
- Proposals for enhancement of the existing ITI&O Division structure as well as the communication channels are presented.
- The proposed organizational structure presented using DCSYM Case Tool and VSMMod software's.

# The company XYZ

- **Provides services to financial institutions and businesses.**
- **It has a presence in over 30 countries worldwide employing more than 20,000 employees.**
- **To support its work, it has more than ten (10) data centers with corresponding IT support groups.**
- **Each business unit of the organization is managed independently with centralized guidance.**

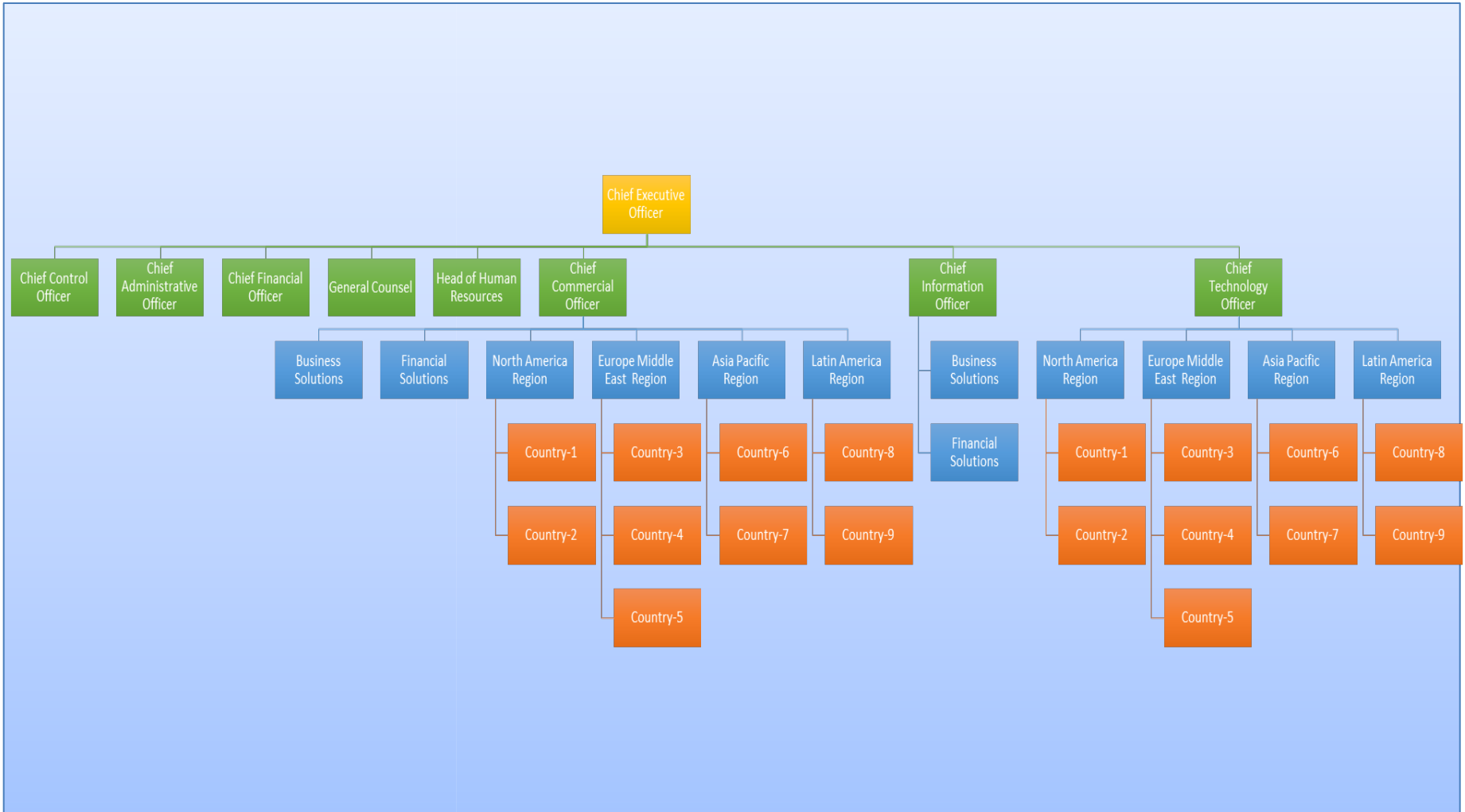
# XYZs portfolio of services 1/2

- **Solutions for Financial institutes :**
  - *Processing credit, debit and private label cards*
  - *Access Data services*
  - *Account support services*
  - *Back office services*
  - *Manage and support ATM and APC*
- **Solutions for Business:**
  - *Merchant acquiring / payment processing,*
  - *Electronic & Mobile commerce,*
  - *POS,*
  - *Business intelligence / analytics*
  - *Marketing and Loyalty programs*

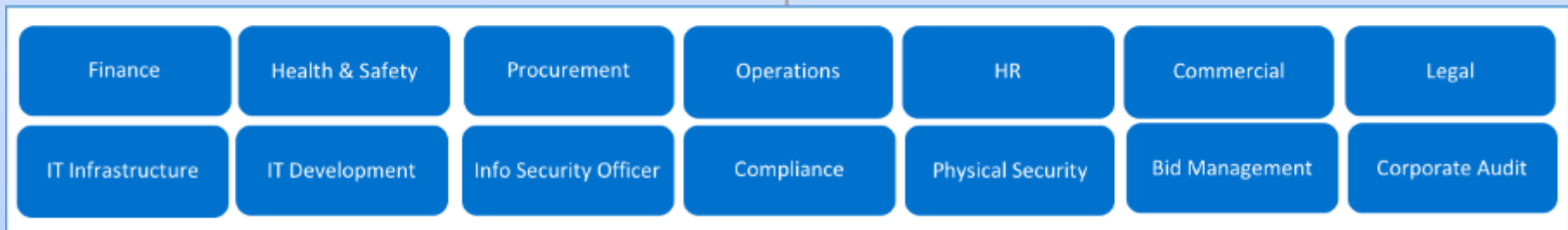
# XYZs portfolio of services 2/2

- **Network & Security Solutions:**
  - *EFT & SVC network solutions*
  - *Risk and Fraud management*
- **Contact Centre:**
  - *Inbound customer service*
  - *Outbound campaigns*
  - *Cross selling*
  - *Net promoter score*
  - *Customer satisfaction surveys*
- **Print and mail services**
- **Documents Digitization**
- **Card preparation and embossing**

# XYZs Organization Chart



# Typical Organization Chart by country



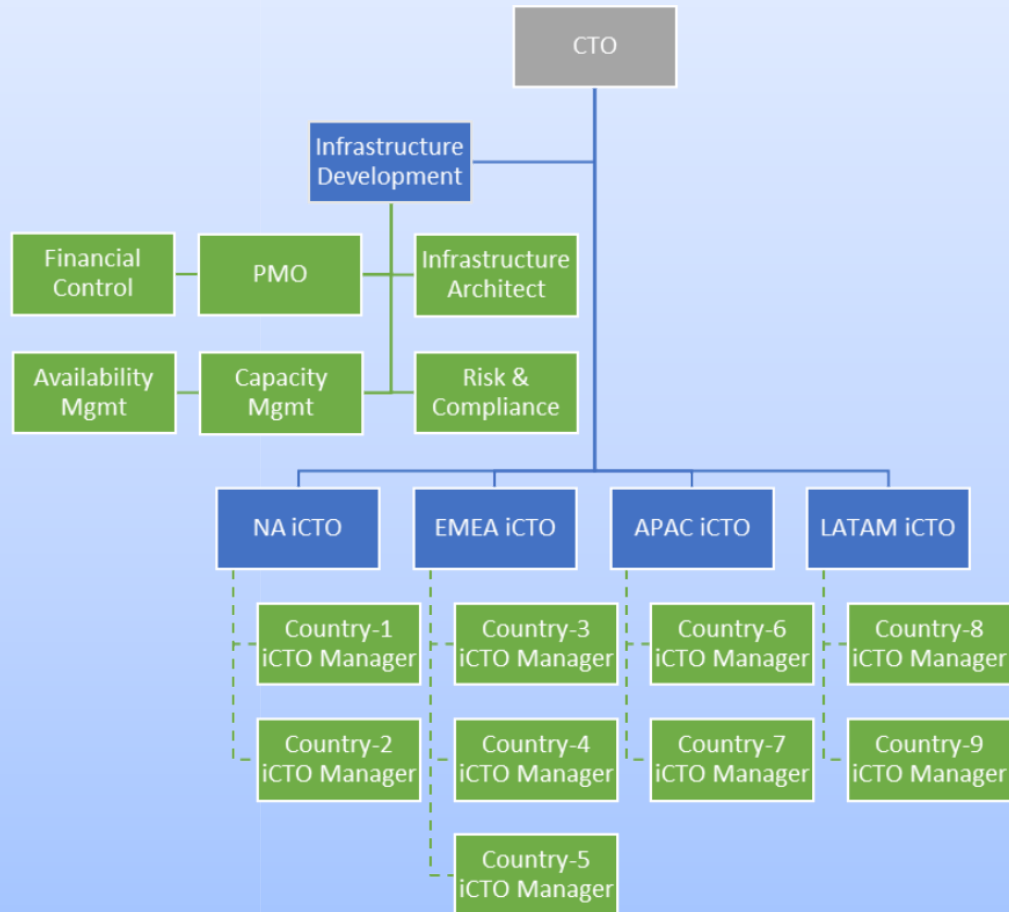


# IT Infrastructure & Operations Division

- **The main responsibilities of the IT Infrastructure & Operations Division are as follows:**
  - Implementation and maintenance of data centers,
  - Installation of systems & applications,
  - Monitoring systems & applications,
  - Performing tasks,
  - User support,
  - Management of:
    - changes,
    - events,
    - incidents and problems,
  - Supporting business continuity,
  - Capacity planning for infrastructure.
- **More than 2.000 FTEs.**

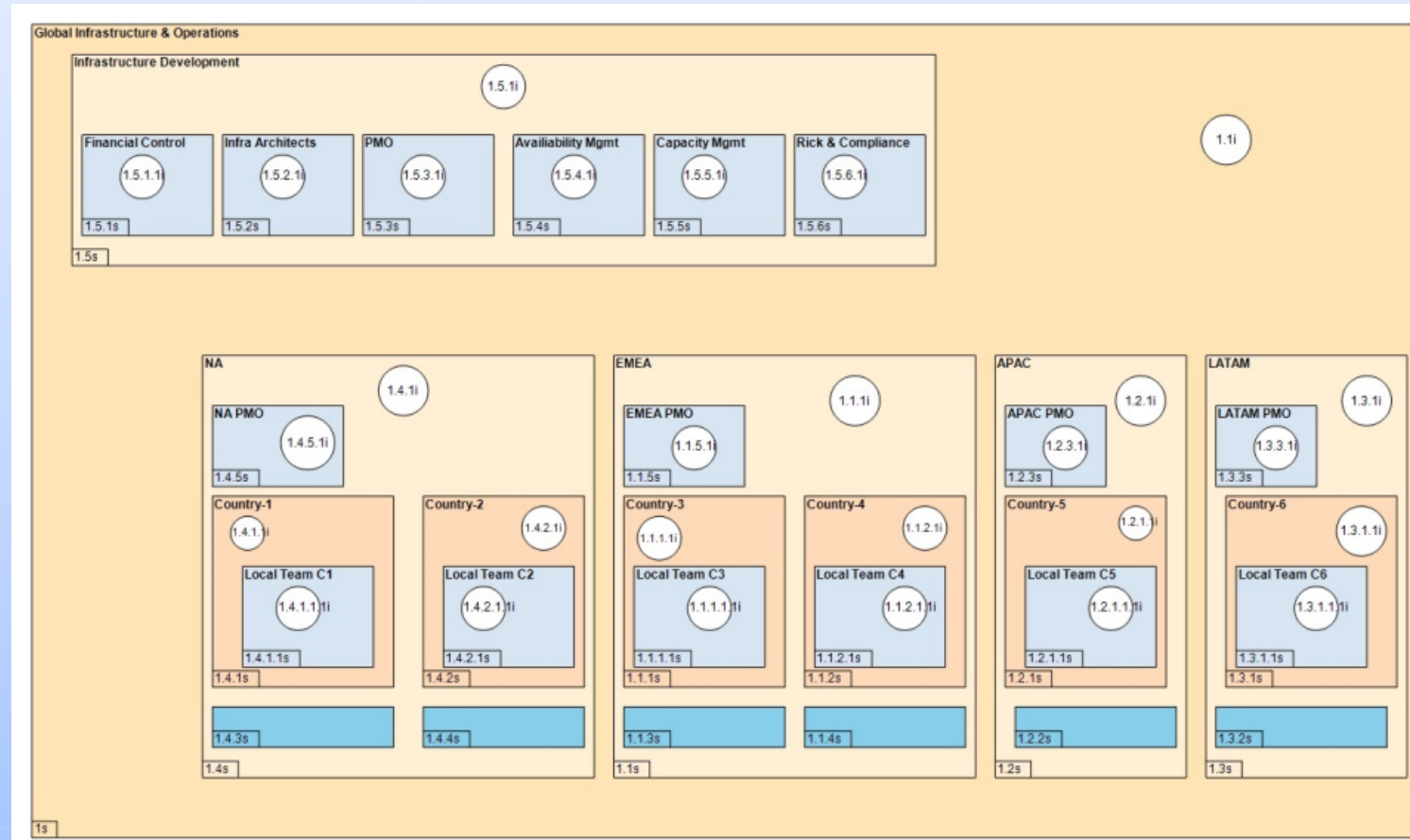
# IT Infrastructure & Operations Division

## Organization Chart (central ITI&O)



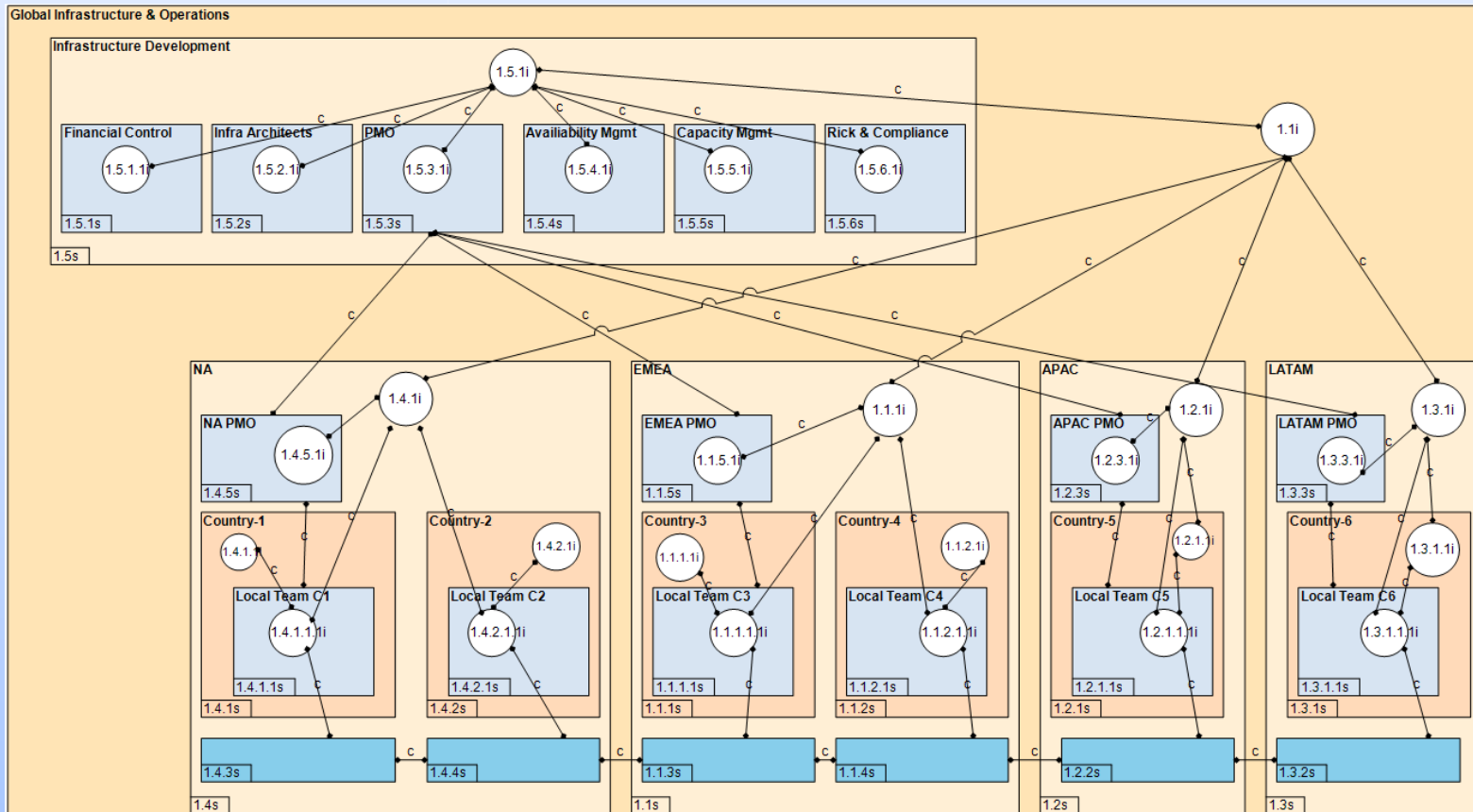
# Design existing state with DCSYM

## The existing central organizational structure



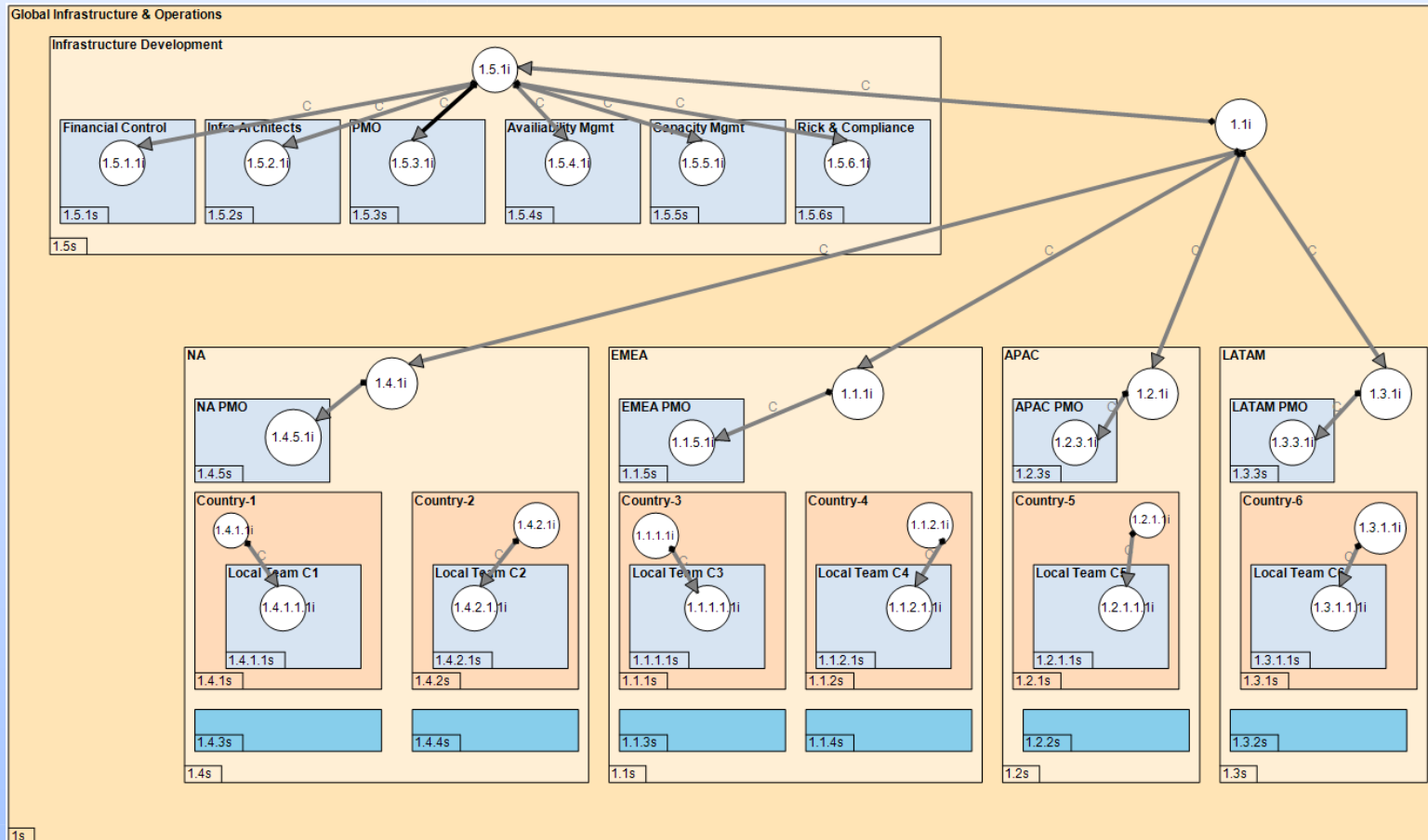
# Design existing state with DCSYM

## Communication relationships in the existing organizational structure



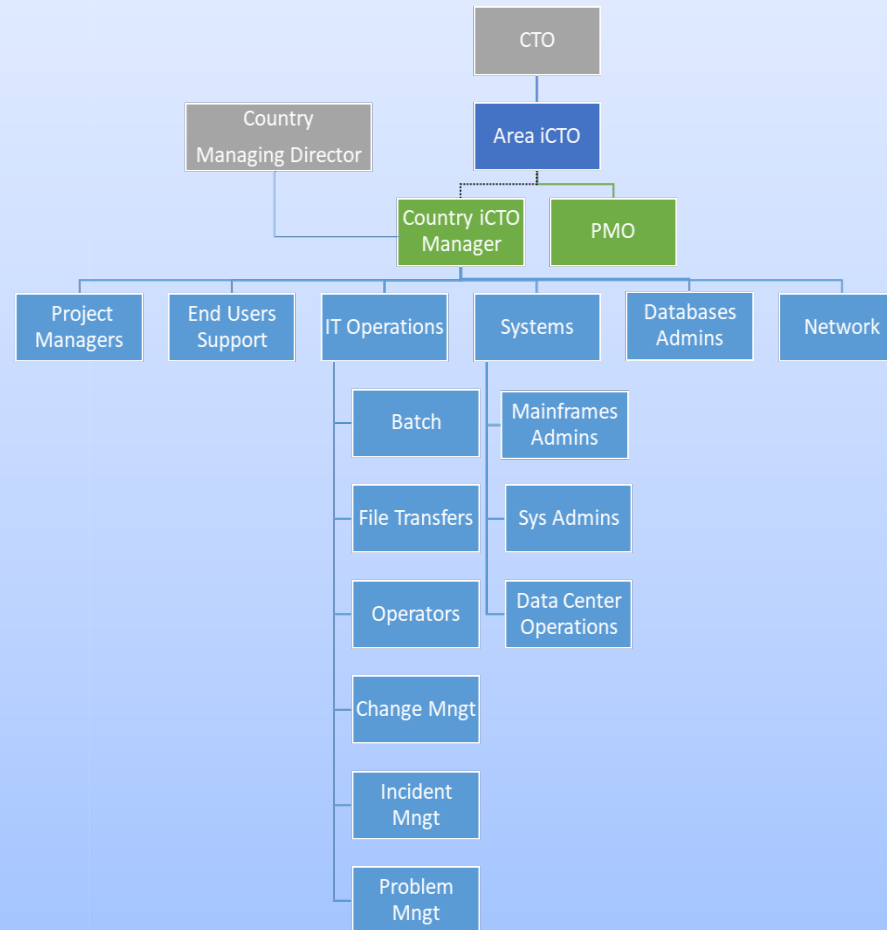
# Design existing state with DCSYM

## Control relationships in the existing organizational structure



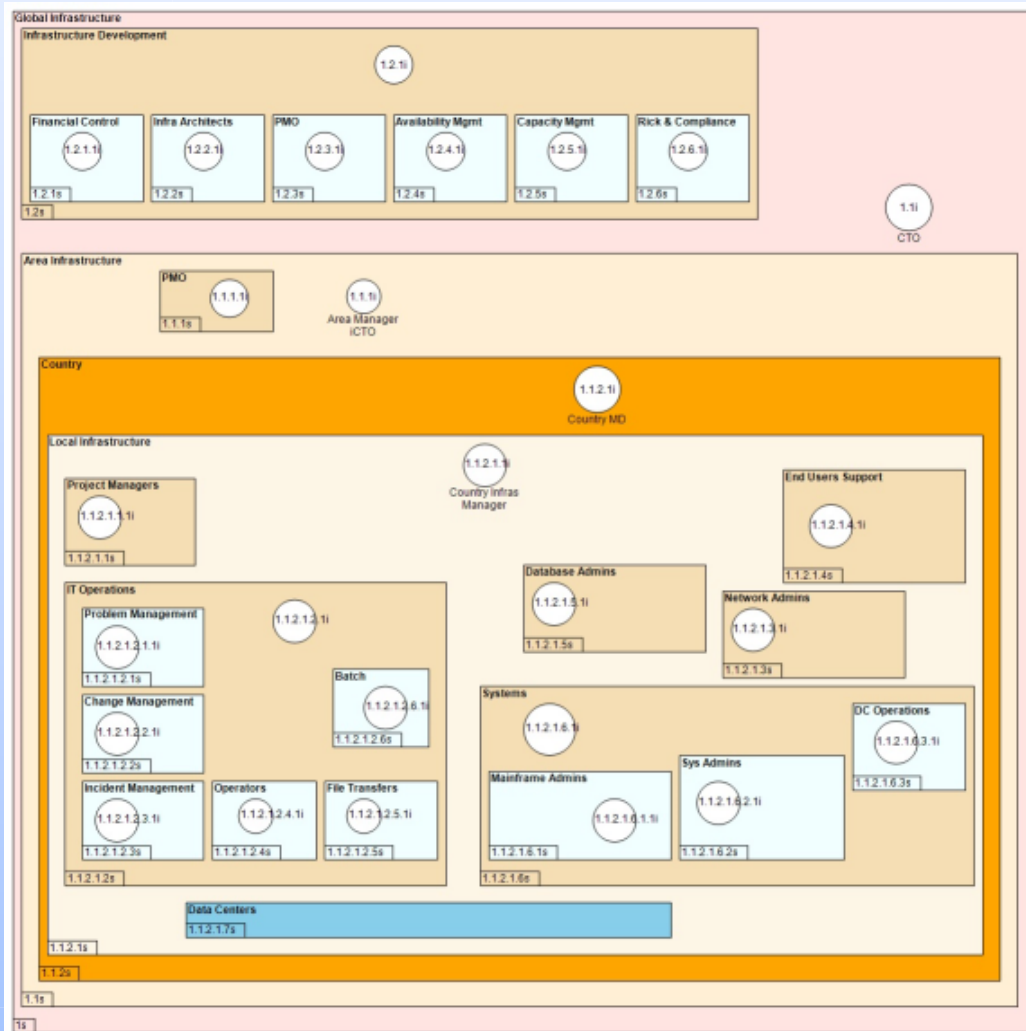
# IT Infrastructure & Operations Division

## Typical Organization Chart per country



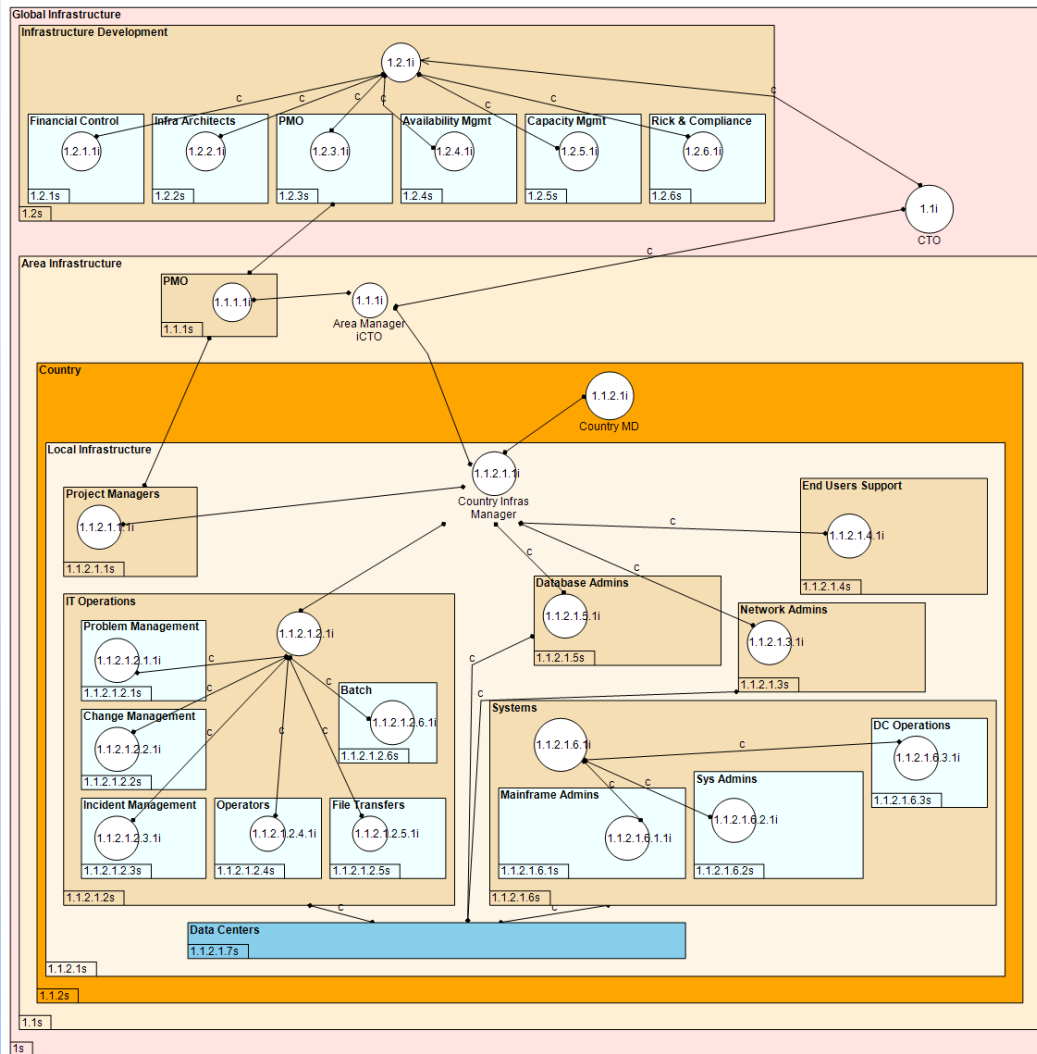
# Design existing state with DCSYM

The existing organizational structure by country



# Design existing state with DCSYM

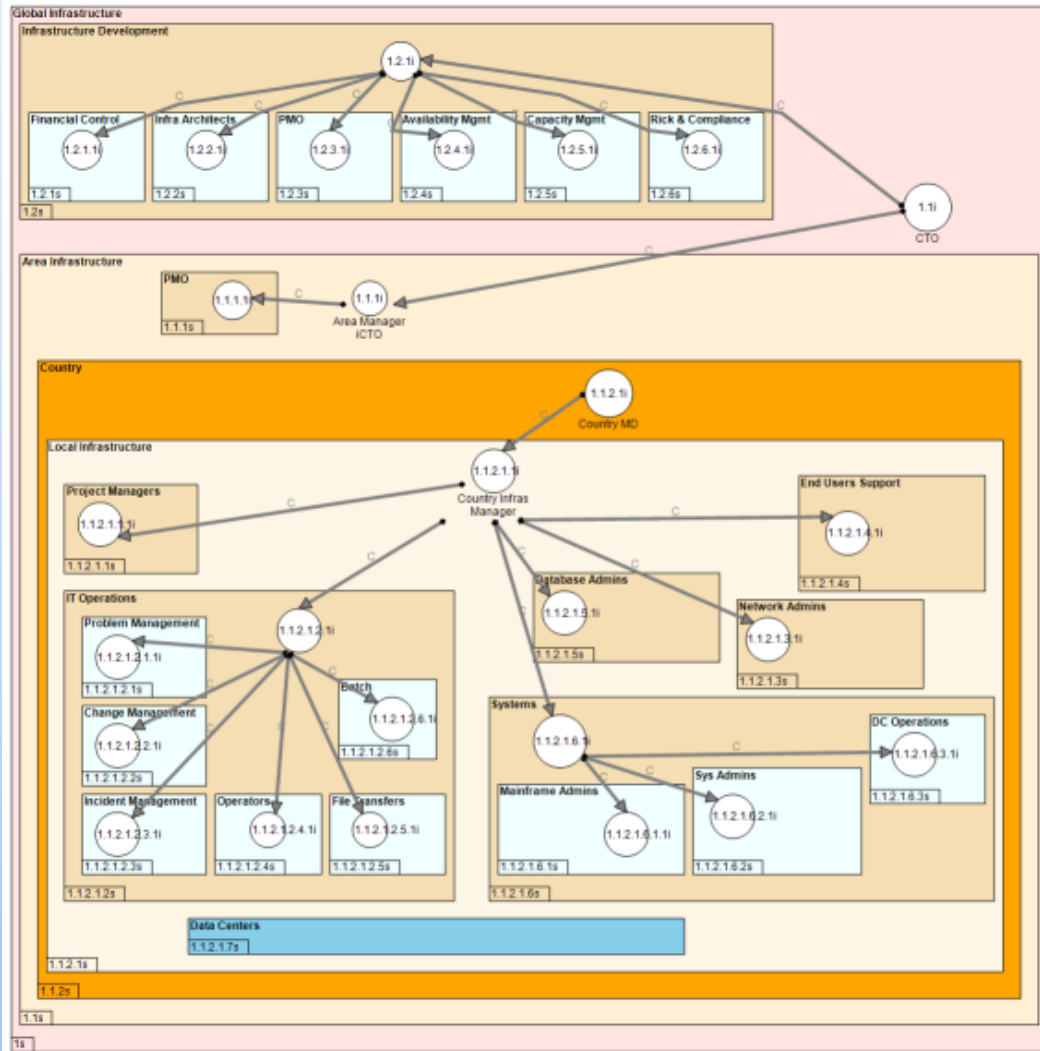
Communication relationships in the existing organizational structure by country





# Design existing state with DCSYM

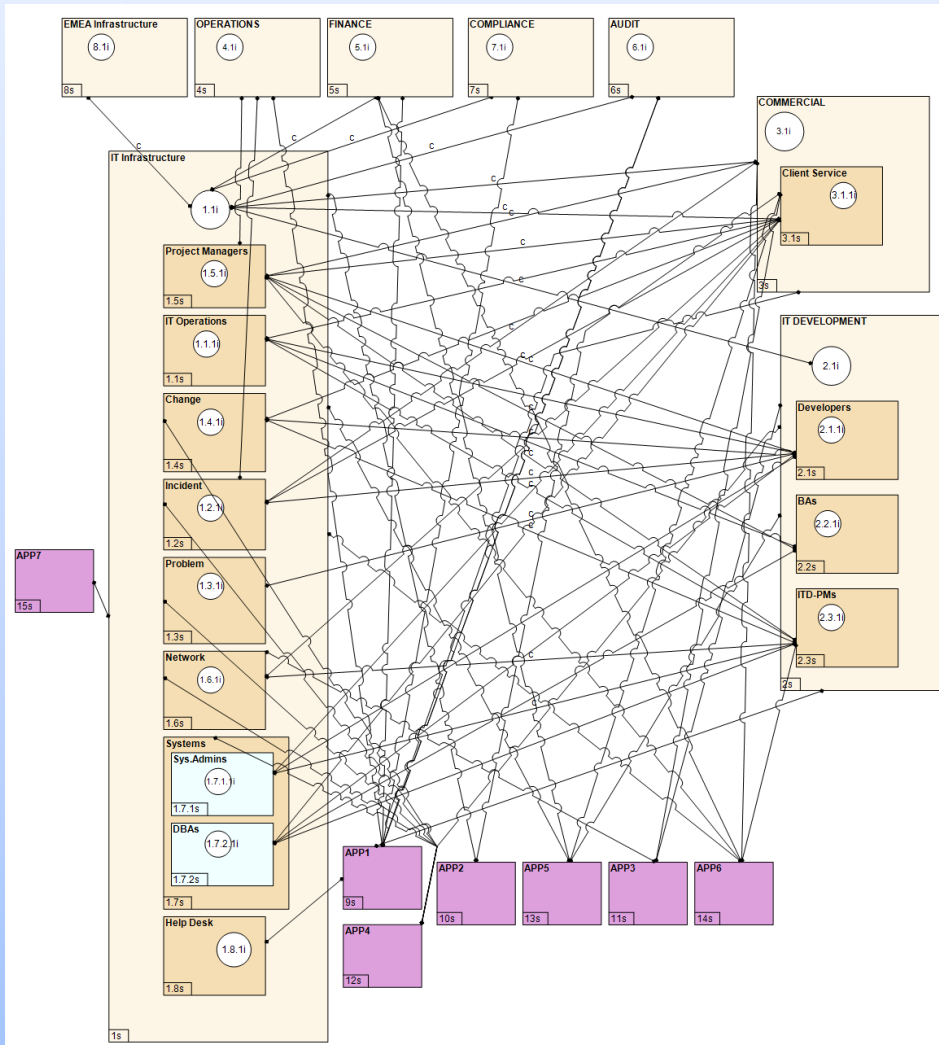
Control relationships in the existing organizational structure by country





# Design existing state with DCSYM

The communication relationships with the rest XYZs Divisions



# Comments on the Current State

- **With the existing organizational structure, the following difficulties are observed:**
  - **Adaptation and implementation of procedures required at Organization level,**
  - **It is not possible to exploit all available resources at Organization level,**
  - **The skills of the staff at the Organization level are not exploited resulting in increased costs through the use of external partners,**
  - **Communication between groups with the same task is minimal and as a result there is a lack of homogeneity in implementation,**
  - **Not all local considerations are taken into account when designing and implementing new solutions,**
  - **There is a slow response to new opportunities.**

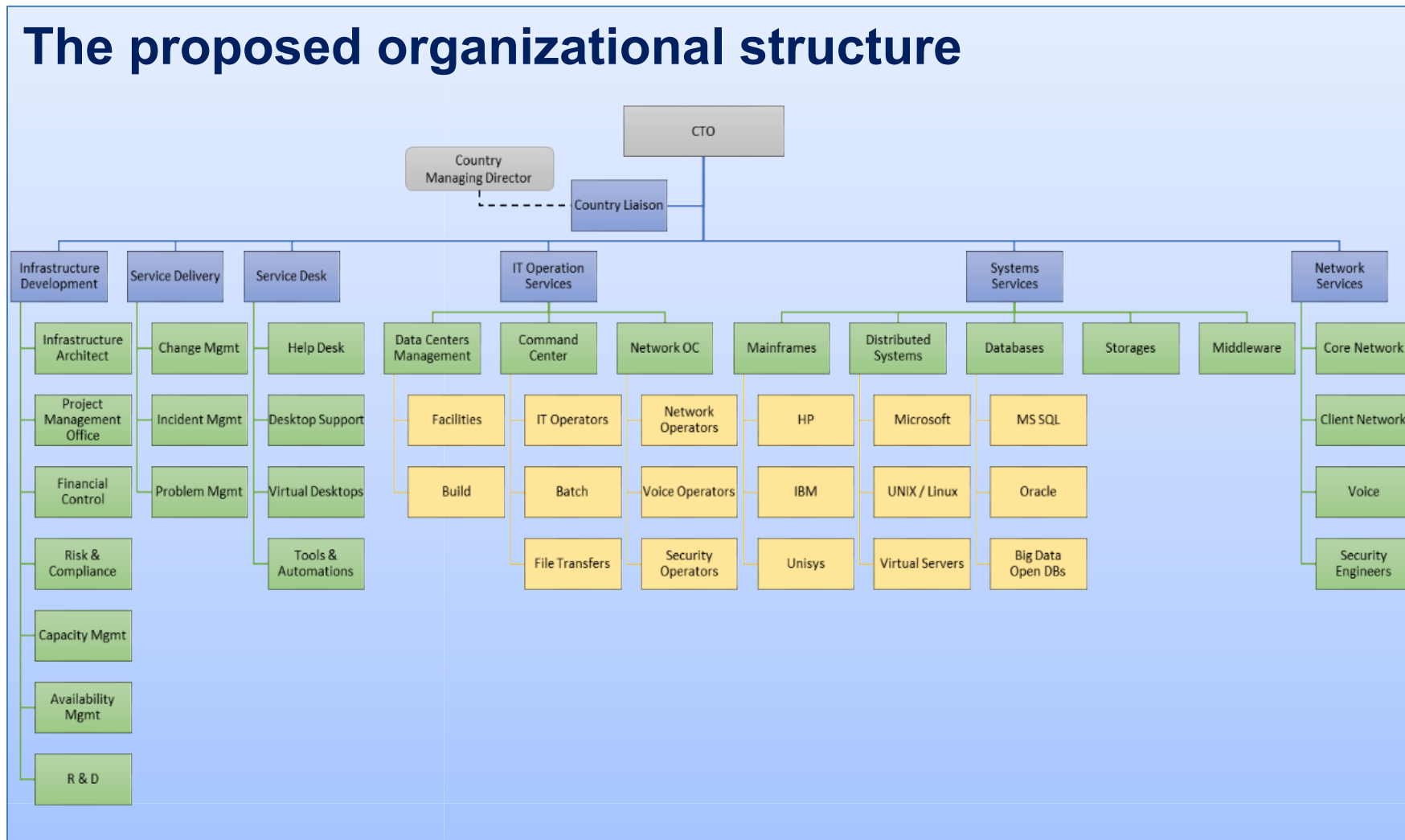
# Proposed Improvements

It is proposed to create a unified worldwide structure of the IT Infrastructure & Operations Division.

- The new structure will be:
  - horizontal in terms of countries.
  - vertically focused managing cross-disciplined technology with teams dedicated to product/platform delivery.
  - based on the Follow-the-Sun model.
- New role of Country Liaison
  - Direct report to CTO
  - Act as liaison between the business units, technology teams and ITI&O teams.
  - Translate high-level, complex business needs into functional and non-functional requirements.
- New Global Tool
  - Manage all requests/changes/projects/incidents etc.

# Proposed Improvements 2/2

## The proposed organizational structure



# Expected Benefits

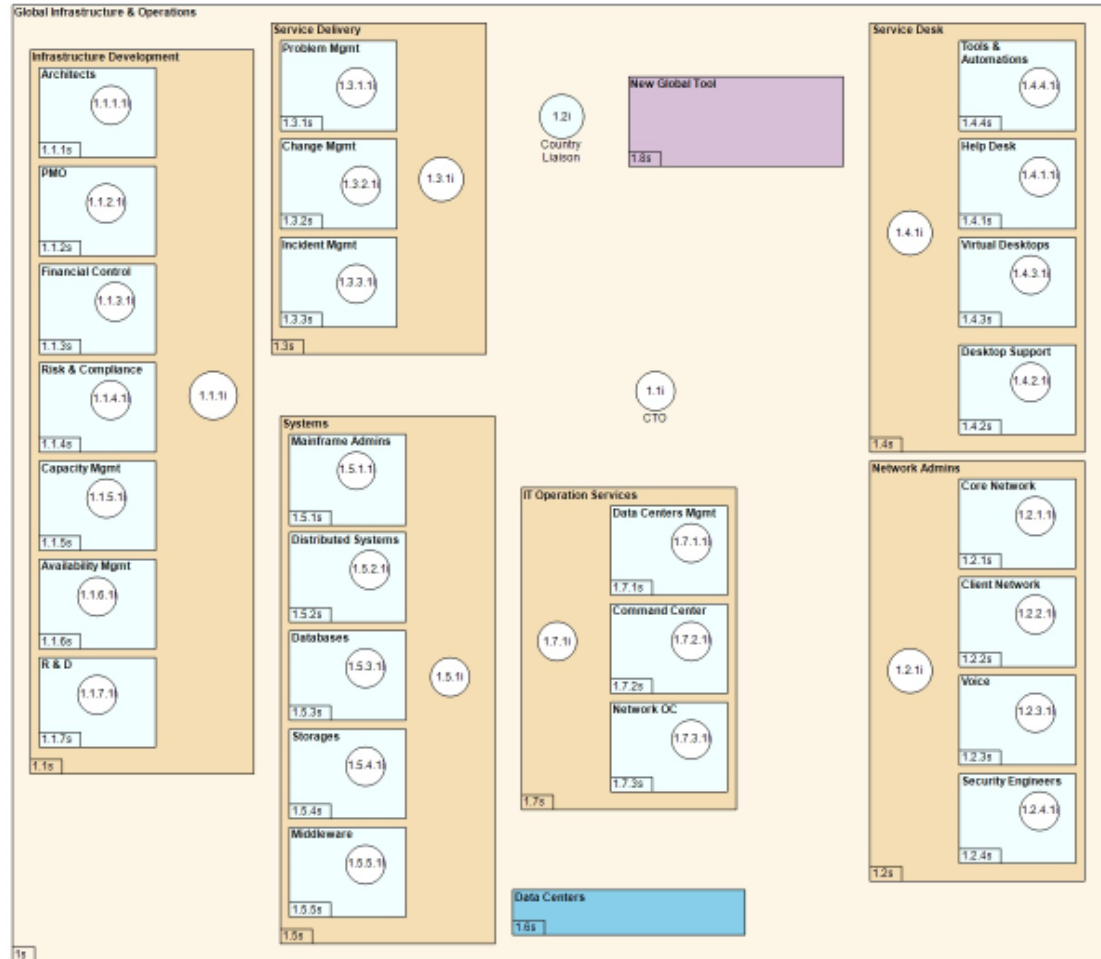
- Each product group has a dedicated senior leader with ownership, accountability and responsibility that is operationally focused on LOB.
- Vertically focused managing cross-disciplined technology teams dedicated to product/platform delivery.
- Eliminates resource contention between LOBs and provides clear transparency on workload bandwidth for projects and BAU.
- Drives capacity planning.
- Ensures alignment and deliverables for products and projects.
- Leads patching, engineering, and infrastructure compliance efforts.
- Provides dedicated architecture engineering support.

# Expected Benefits 2/2

- **Works hand and glove with development teams on new functionality and capabilities.**
- **Defines and executes product-specific operational strategy.**
- **Align to a single consistent support model that includes Application and Infrastructure resources.**
- **Minimizes prioritization challenges and provide the business with clarity on resources dedicated to supporting each Line of Business.**
- **Improve transparency of support work and costs to the Business and Product organizations.**
- **Increase Infrastructure resource knowledge of our Applications and Platforms.**
- **Increase Application Support resource knowledge of our technologies.**

# Design PI with DCSYM

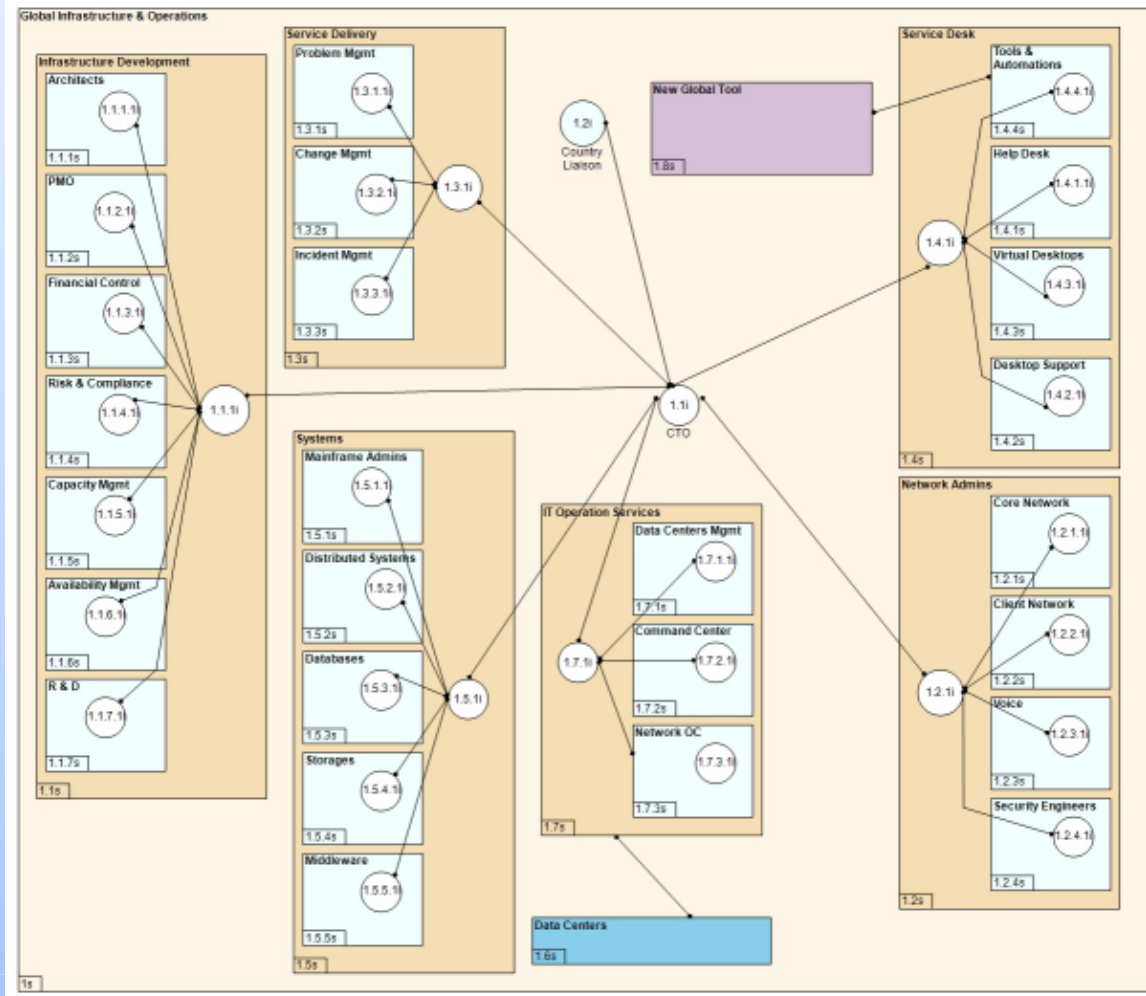
The proposed organizational structure





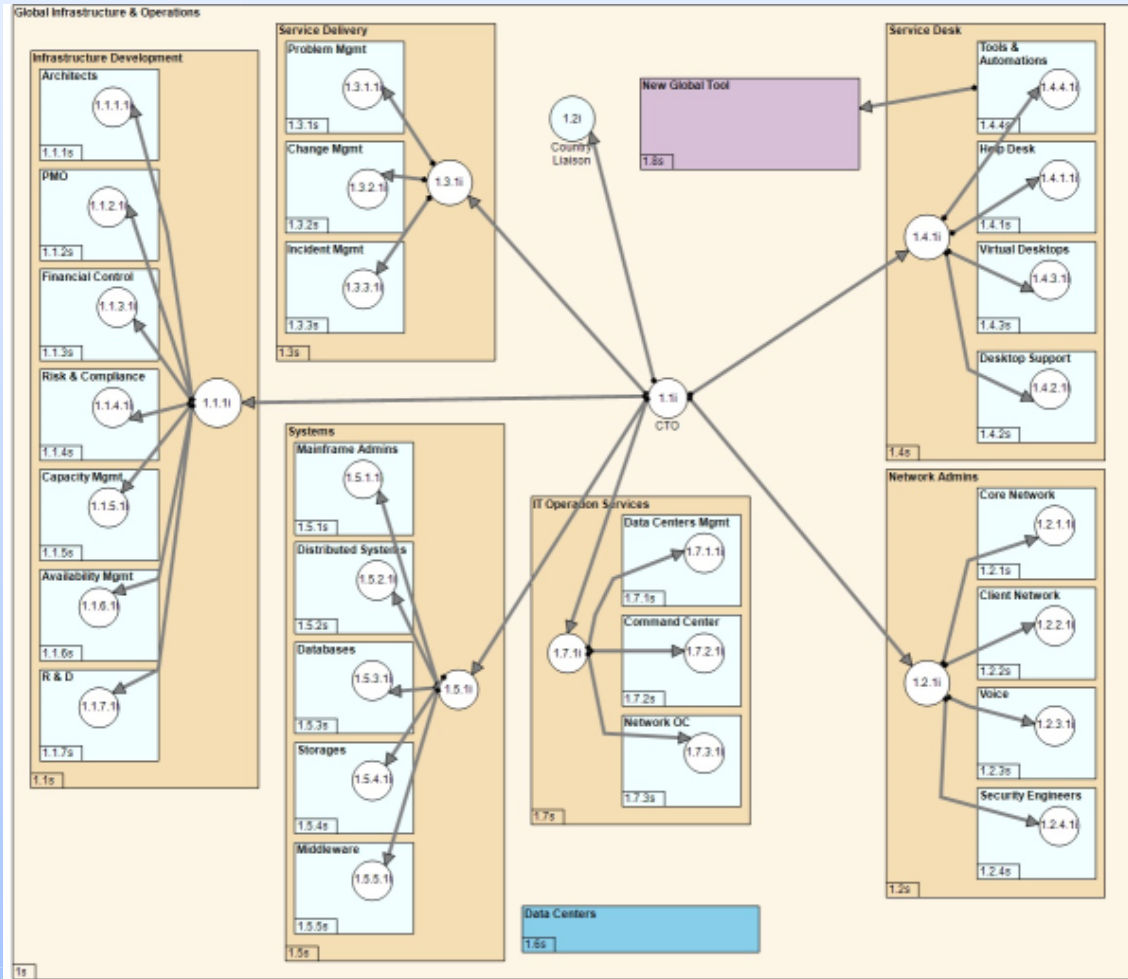
# Design PI with DCSYM

Communications between the ITI&O teams



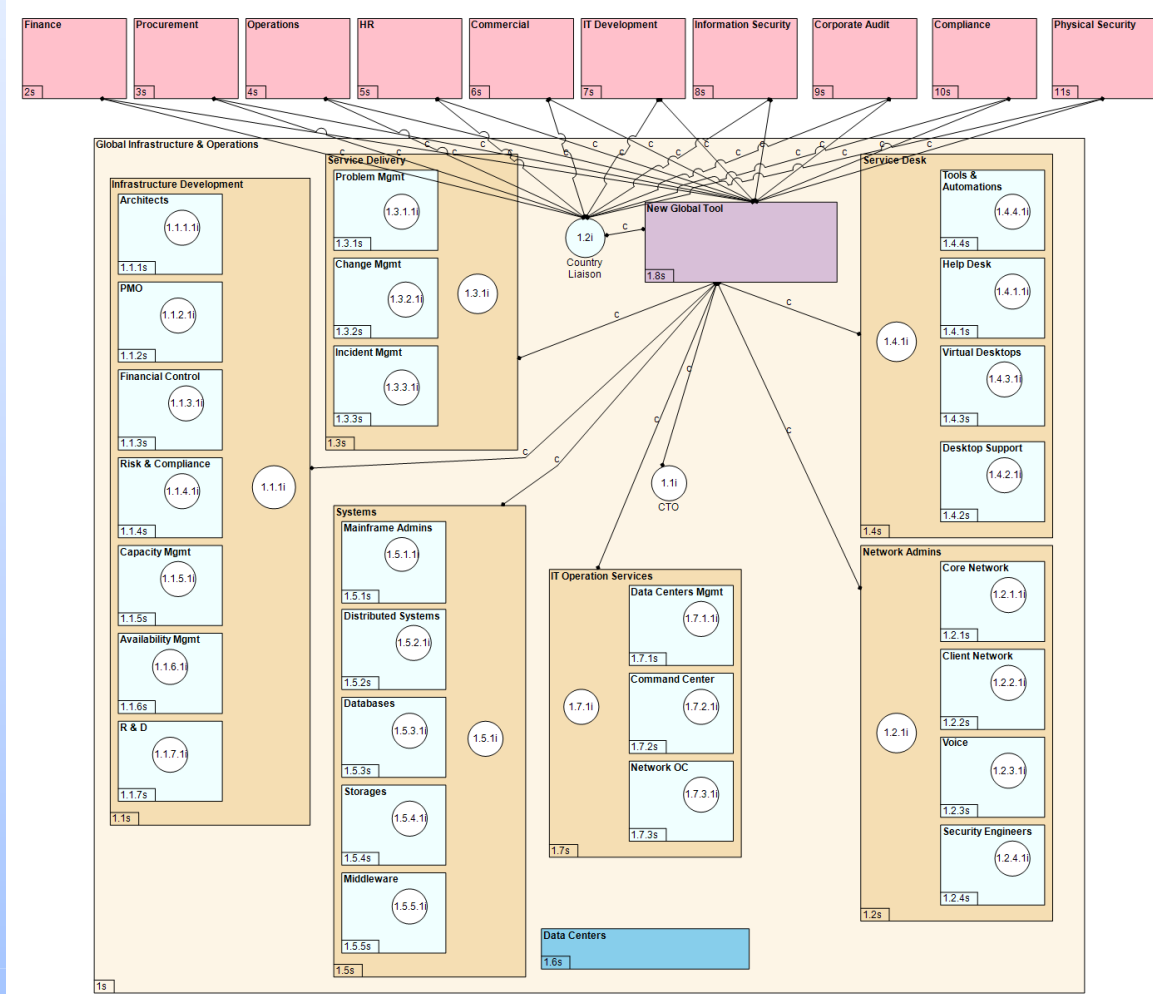
# Design PI with DCSYM

Control relationships in the proposed organizational structure

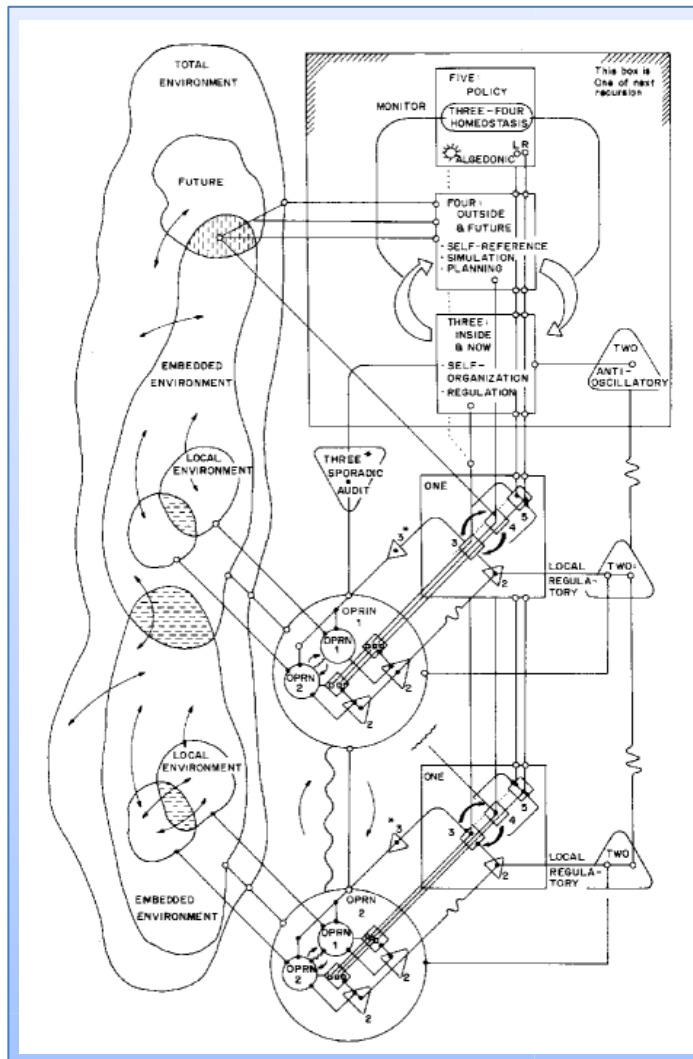


# Design PI with DCSYM

Communication with the other Divisions



# Viable Systems Model



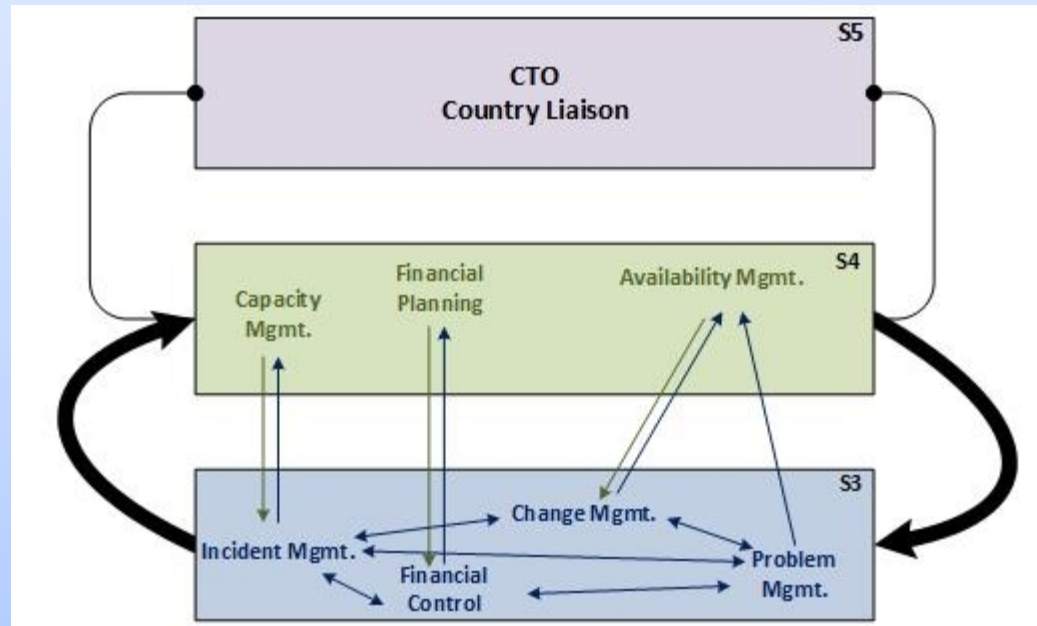
**Stafford Beer**  
1926-2002



- S1: Operations**
- S2: Coordination – Stability**
- S3: Direction – Optimization**
- S3\*: Sporadic Audit**
- S4: Planning**
- S5: Identity, Ultimate authority**

# Viable Systems Model

## Decision Making Strategy



# Viable Systems Model

Match the proposed organizational structure with the VSM

| Organization |                            |                           |                                 |  |
|--------------|----------------------------|---------------------------|---------------------------------|--|
| Division     | Sector                     | Department                | Group or Role                   |  |
| CTO          |                            |                           |                                 |  |
|              | Country Liaison            |                           |                                 |  |
|              | Infrastructure Development | Availability Mgmt         |                                 |  |
|              |                            | Capacity Mgmt             |                                 |  |
|              |                            | Financial Control         | <i>Financial Planning</i>       |  |
|              |                            |                           | <i>Analysis &amp; Reporting</i> |  |
|              |                            | Infrastructure Architect  |                                 |  |
|              |                            | Project Management Office | Project Manager                 |  |
|              |                            |                           | Planner                         |  |
|              |                            | R & D                     |                                 |  |
|              | Risk & Compliance          |                           |                                 |  |
|              | Service Assurance          | Change Mgmt               |                                 |  |
|              |                            | Incident Mgmt             |                                 |  |
|              |                            | Problem Mgmt              |                                 |  |

| VSM |    |    |     |    |    |  |
|-----|----|----|-----|----|----|--|
| S1  | S2 | S3 | S3* | S4 | S5 |  |
|     |    |    |     |    | ✓  |  |
|     |    |    |     | ✓  | ✓  |  |
|     |    |    |     | ✓  |    |  |
|     |    |    |     | ✓  |    |  |
|     |    |    |     | ✓  |    |  |
|     |    |    | ✓   |    |    |  |
|     |    |    |     |    | ✓  |  |
|     |    |    | ✓   |    |    |  |
|     |    |    |     |    | ✓  |  |
|     |    |    | ✓   |    |    |  |
|     |    | ✓  |     |    |    |  |
|     |    | ✓  |     |    |    |  |
|     |    | ✓  |     |    |    |  |

# Viable Systems Model

Match the proposed organizational structure with the VSM

| Organization |                       |                         |                    |  |
|--------------|-----------------------|-------------------------|--------------------|--|
| Division     | Sector                | Department              | Group or Role      |  |
|              | Service Desk          | Help Desk               |                    |  |
|              |                       | Desktop Support         |                    |  |
|              |                       | Virtual Desktops        |                    |  |
|              |                       | Tools & Automations     |                    |  |
|              | IT Operation Services | Data Centers Management | Facilities         |  |
|              |                       |                         | Build              |  |
|              |                       | Command Center          | IT Operators       |  |
|              |                       |                         | Batch              |  |
|              |                       |                         | File Transfers     |  |
|              |                       | Network OC              | Network Operators  |  |
|              |                       |                         | Voice Operators    |  |
|              |                       |                         | Security Operators |  |
|              | Systems Services      | Mainframes              | HP                 |  |
|              |                       |                         | IBM                |  |
|              |                       |                         | Unisys             |  |
|              |                       | Distributed Systems     | Microsoft          |  |
|              |                       |                         | UNIX / Linux       |  |
|              |                       |                         | Virtual Servers    |  |
|              |                       | Databases               | MS SQL             |  |
|              |                       |                         | Oracle             |  |
|              |                       |                         | Big Data           |  |
|              |                       |                         | Open DBs           |  |
|              | Storages              |                         |                    |  |
|              | Middleware            |                         |                    |  |
|              | Network Services      | Core Network            |                    |  |
|              |                       | Client Network          |                    |  |
|              |                       | Voice                   |                    |  |
|              |                       | Security Engineers      |                    |  |

| VSM |    |    |     |    |    |
|-----|----|----|-----|----|----|
| S1  | S2 | S3 | S3* | S4 | S5 |
| v   |    |    |     |    |    |
| v   |    |    |     |    |    |
| v   |    |    |     |    |    |
| v   |    |    |     |    |    |

# Viable Systems Model

## Match processes and tools with VSM

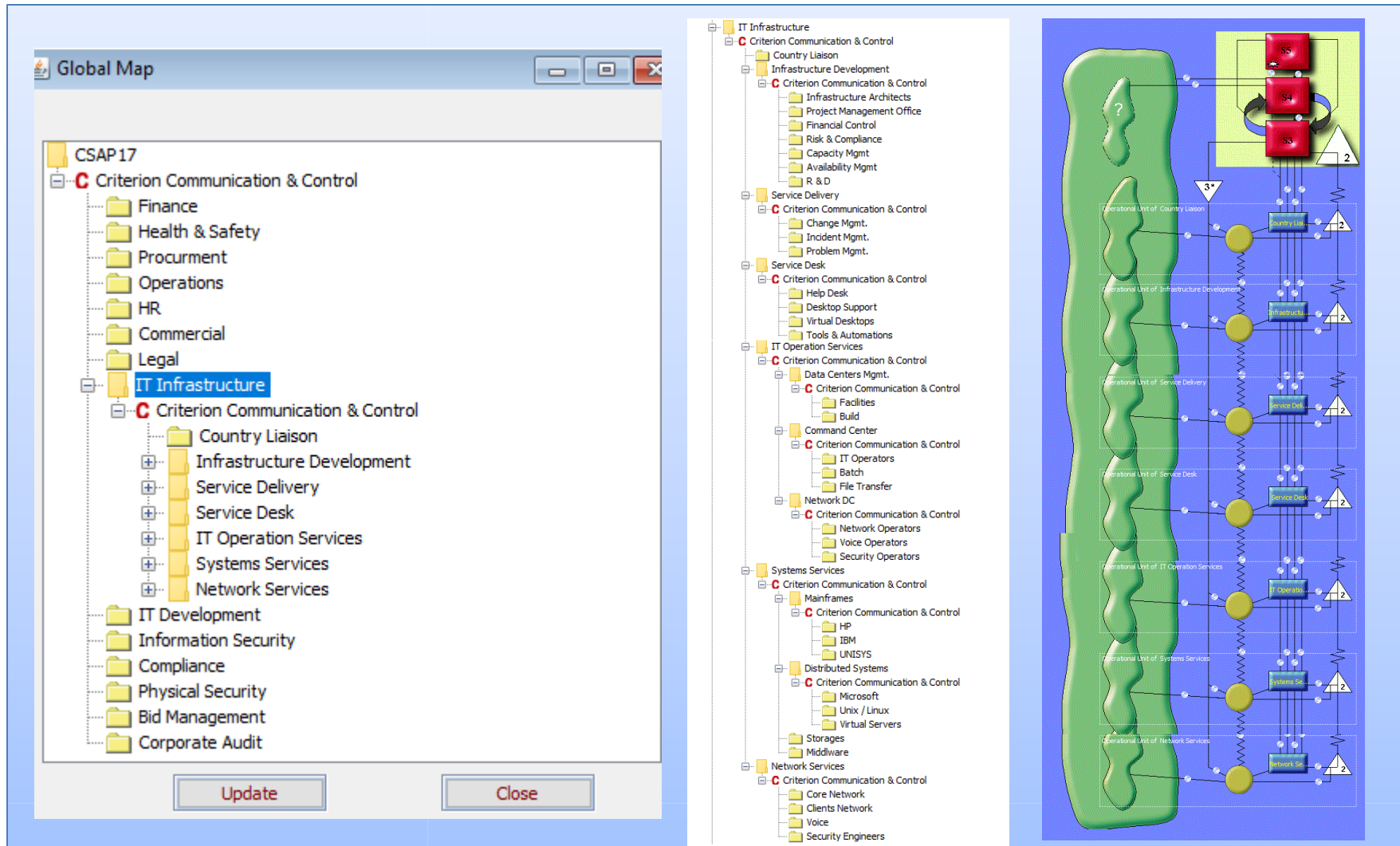
|                     | S1 | S2 | S3 | S3* | S4 | S5 |
|---------------------|----|----|----|-----|----|----|
| Strategy            |    |    |    |     |    | Y  |
| Goals               |    |    |    |     |    | Y  |
| Principles          |    |    |    |     |    | Y  |
| Vision              |    |    |    |     |    | Y  |
| Governance          |    |    |    |     | Y  |    |
| Plans               |    |    |    |     | Y  |    |
| Knowledge           |    |    |    |     | Y  |    |
| Future Trends       |    |    |    |     | Y  |    |
| Audit reports       |    |    |    | Y   |    |    |
| Performance reports |    |    |    | Y   |    |    |
| Quality reports     |    |    |    | Y   |    |    |
| Timetables          |    |    | Y  |     |    |    |
| Milestones          |    |    | Y  |     |    |    |
| Metrics             |    |    | Y  |     |    |    |
| Regulations         |    |    | Y  |     |    |    |
| Laws                |    |    | Y  |     |    |    |
| Procedures          |    |    | Y  |     |    |    |
| Facilitation        |    | Y  |    |     |    |    |
| Coordination        |    | Y  |    |     |    |    |
| Schedule            |    | Y  |    |     |    |    |
| Administration      |    | Y  |    |     |    |    |
| Reviews             |    | Y  |    |     |    |    |
| Maintenance         |    | Y  |    |     |    |    |



# Design PI using VSMoD

The screenshot displays the CSAP17 VSMoD software interface. At the top, there is a menu bar with 'File', 'Navigate', and 'Help'. Below the menu, there are three buttons: 'Add Criterion', 'Add Superior System', and 'Add a subsystem'. The main area is titled 'ΕΠΙΛΕΓΜΕΝΟ ΣΥΣΤΗΜΑ CSAP17'. On the left, there is a 'Criteria:' section with a dropdown menu showing 'Communication & C...'. Below it is an 'Information' box containing the following text: 'Επιλεγμένο σύστημα: CSAP17', 'Criterion: Communication & Control', and 'Depth: 0'. In the center, there is a vertical list of system components: Finance, Health & Safety, Procurment, Operations, HR, Commercial, Legal, IT Infrastructure, IT Development, Information Security, and Compliance. To the right of this list are two buttons: 'UP' (with a red arrow icon) and 'FIRST' (with a blue house icon). On the far right, there is a tree view showing the hierarchy of the system, with 'Communication & Control' expanded to show its sub-components: Finance, Health & Safety, Procurment, Operations, HR, Commercial, Legal, IT Infrastructure, IT Development, Information Security, Compliance, Physical Security, Bid Management, and Corporate Audit. At the bottom center, there is a 'Show Details' button.

# Design PI using VSMoD



# Design PI using VSMoD

Δημιουργία του επιλεγμένου Συστήματος IT Infrastruct...

Επιλεγμένο σύστημα: Service Desk

Αναδρομικό κριτήριο  
Communication & Control

|              |                 |                  |
|--------------|-----------------|------------------|
| Service Desk | Desktop Support | Virtual Desktops |
|--------------|-----------------|------------------|

Update Close

---

Δημιουργία συστήματος: IT Infra...

|                  |              |                       |
|------------------|--------------|-----------------------|
| Service Delivery | Service Desk | IT Operation Services |
|------------------|--------------|-----------------------|

Αναδρομικό κριτήριο  
Communication & ...

**ΕΠΙΛΕΓΜΕΝΟ ΣΥΣΤΗΜΑ: Service...**

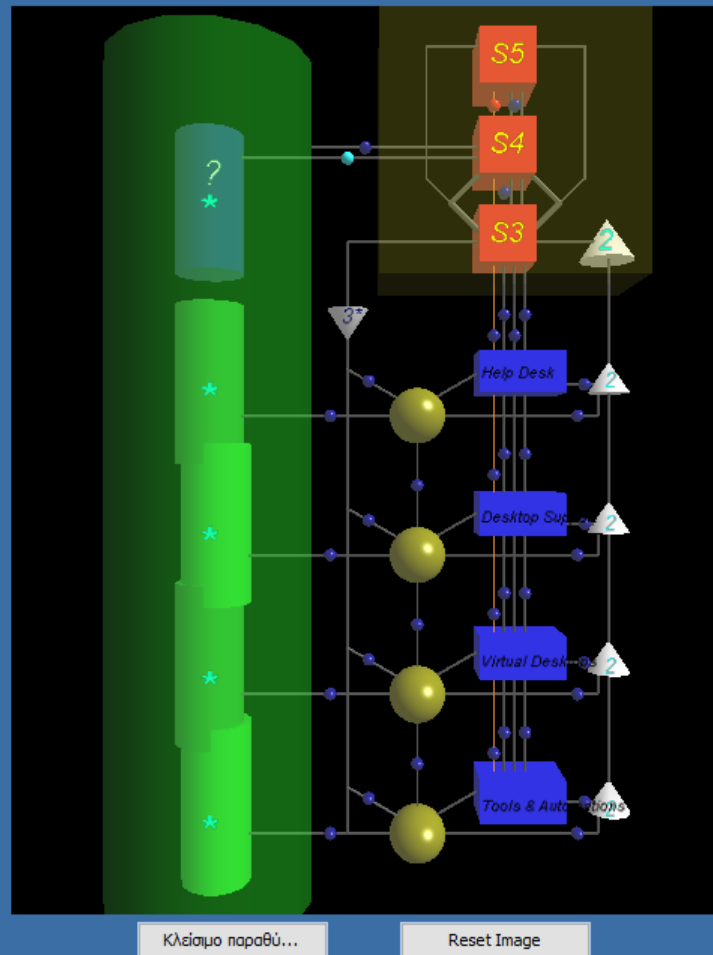
|           |                 |                  |
|-----------|-----------------|------------------|
| Help Desk | Desktop Support | Virtual Desktops |
|-----------|-----------------|------------------|

Αναδρομικό κριτήριο  
Communication & ...

Παιδί συστήματος Desktop S...

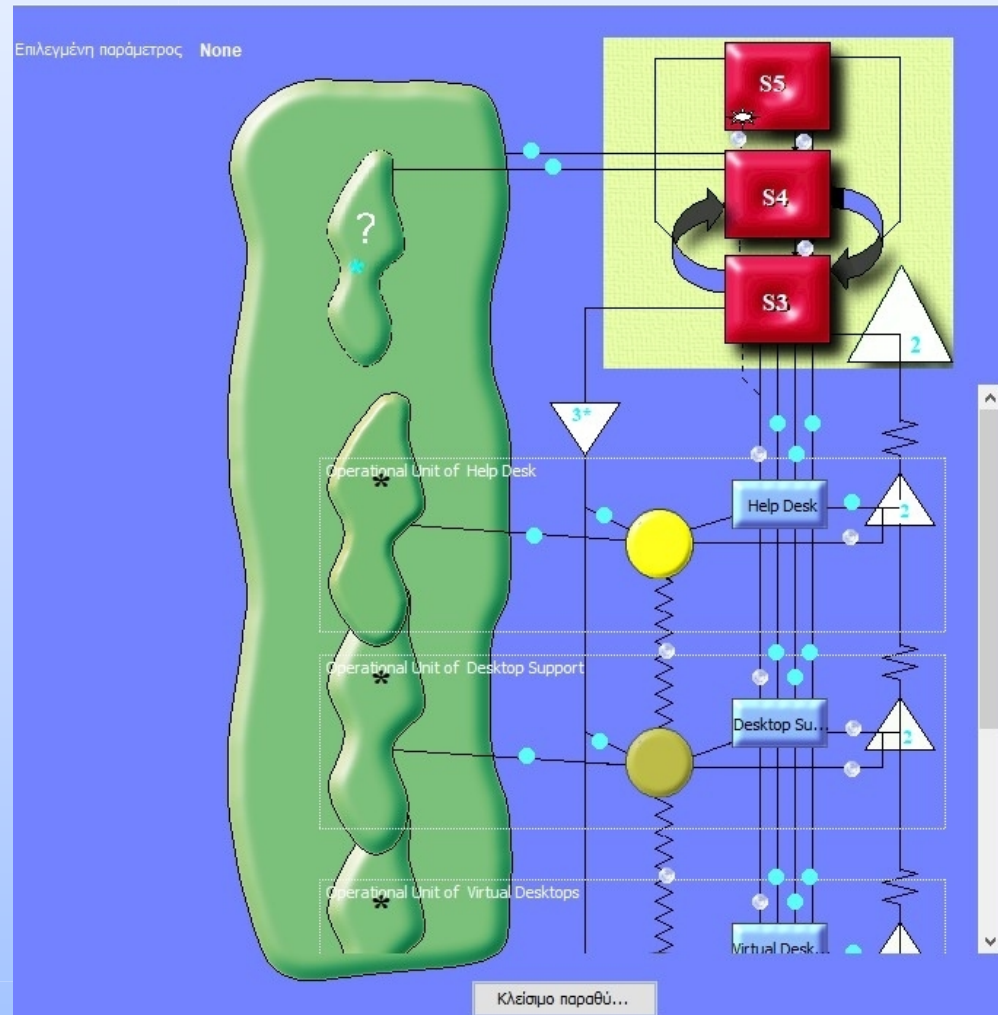
Αναδρομικό κριτήριο

Update Close

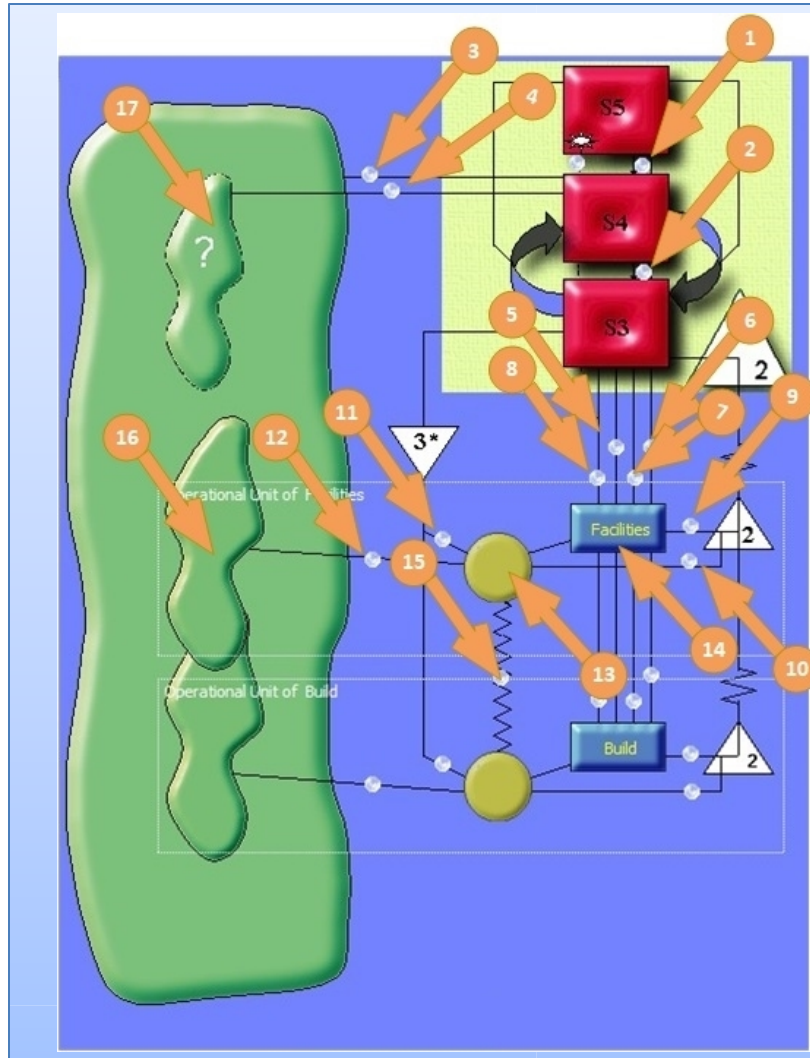


# Design PI using VSMoD

Service Desk structure



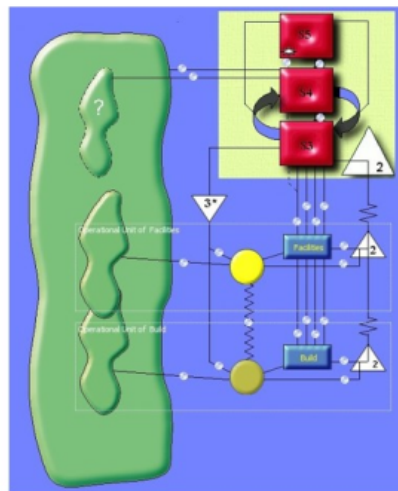
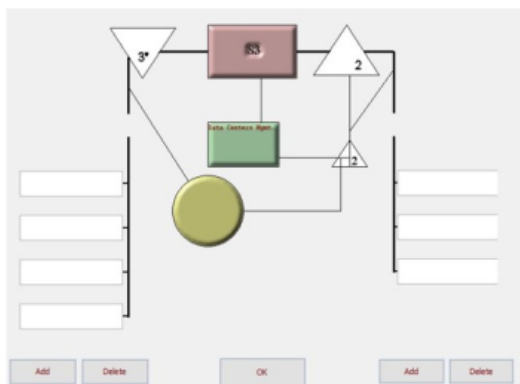
# Design PI using VSMoD



- |     |  |
|-----|--|
| 1.  | Information between S4 and S5              |
| 2.  | Information between S3 and S4              |
| 3.  | Connection with Current Environment        |
| 4.  | Connection with Future Environment         |
| 5.  | Transmission of instructions               |
| 6.  | Accountability                             |
| 7.  | Resource Bargaining                        |
| 8.  | Algedonic channel                          |
| 9.  | Connection between Management and Local S2 |
| 10. | Connection between Process and Local S2    |
| 11. | Audit channel connection                   |
| 12. | Connection with the Environment            |
| 13. | Process                                    |
| 14. | Management                                 |
| 15. | Relation between Process                   |
| 16. | Environment of "local"                     |
| 17. | Future Environment                         |

# Design PI using VSMoD

Input data in VSMoD



Εισαγωγή κειμένου ή/και αρχείου

Double click within field to add more information

New Text FL... Delete OK

Επιλογή κειμένου ή ομοιοστάτη

Επιλέξτε τον τύπο του παραθύρου

Επιλέξτε τον τύπο παραθύρου για να εισάγετε πληροφορίες

Information Ομοιοστατική



Επιλογή αρχείου

Look in: gsmc

Recent Items

Desktop

Documents

File name: CSAP17-Change\_Request-01.jpg

Files of type: All Files

FILES:

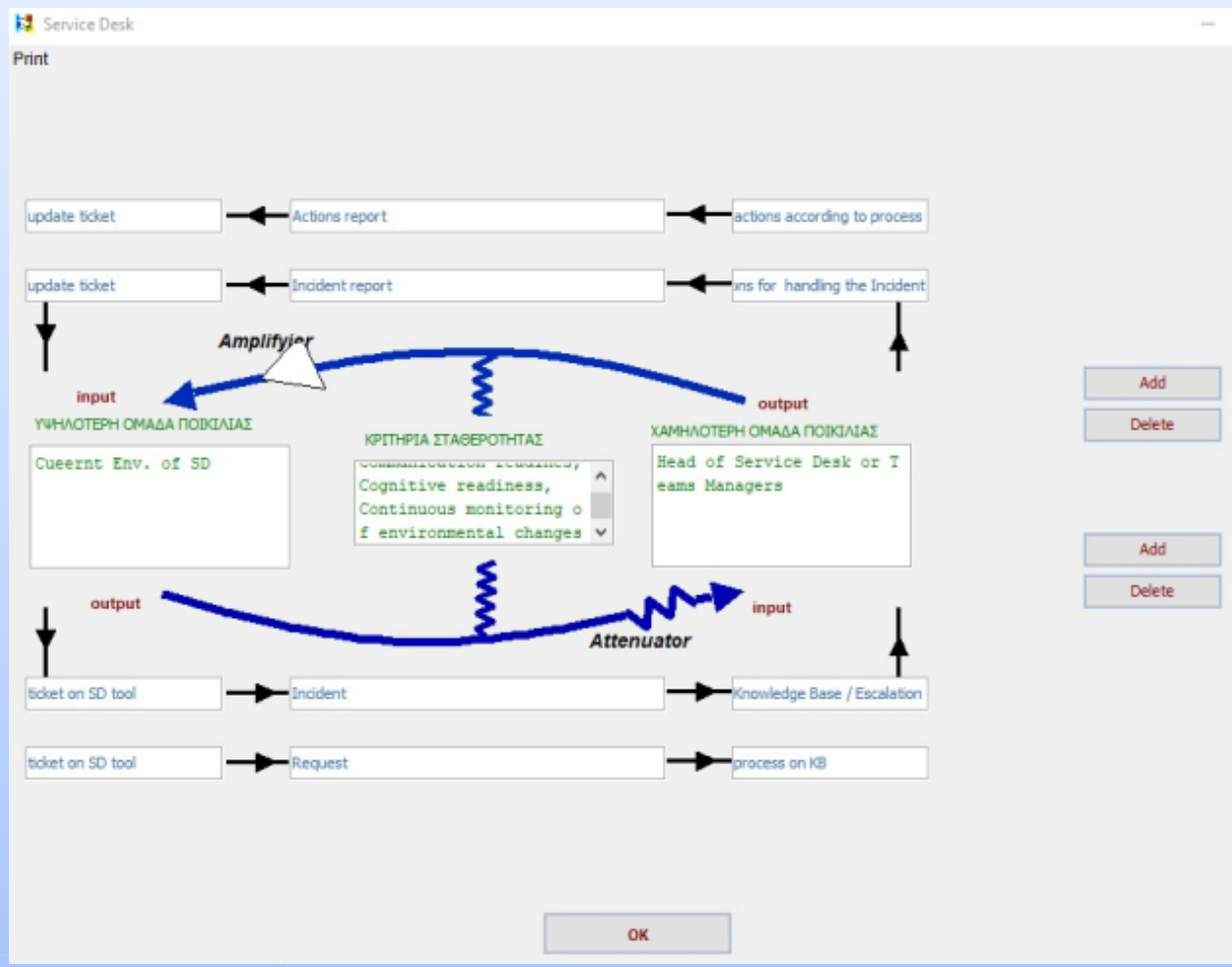
- CSAP17-Change\_Request-01.png
- CSAP17-Change\_Request-02.png
- CSAP17-Change\_Request-03.png
- CSAP17-Change\_Request-04.png
- CSAP17-Change\_Request-05.png
- CSAP17-Change\_Request-06.png
- CSAP17-Change\_Request-07.png
- CSAP17-Change\_Request-08.png

Open with... Delete

OK Cancel

# Design PI using VSMoD

The homeostat Service Desk – Environment



# Design PI using VSMoD

Help Desk processes

The screenshot displays a software interface for designing Help Desk processes. On the left, a vertical label reads "Help Desk processes". The main workspace shows a process diagram with a yellow circle and a blue box labeled "Help Desk". Below the diagram, a text input field contains the word "process". A "Print" dialog box is open, titled "HelpDesk-CM.txt", with a "NOTES" section. A file explorer window is also open, showing the "Desktop" location. The file list includes:

- BPMN 2.0 with Brian Your Business Process Modeling Guide
- Business Analysis BPMN 2.0 in Practice
- camunda-modeler-3.1.0-win-x64
- CSAP
- NP
- Phone
- 1.1 BPMN 2.0 Quick Reference Guide.pdf.pdf
- alexanderthegreat2-2x.jpg
- AnyLogic

The file explorer also shows a list of files in the "FILES" section:

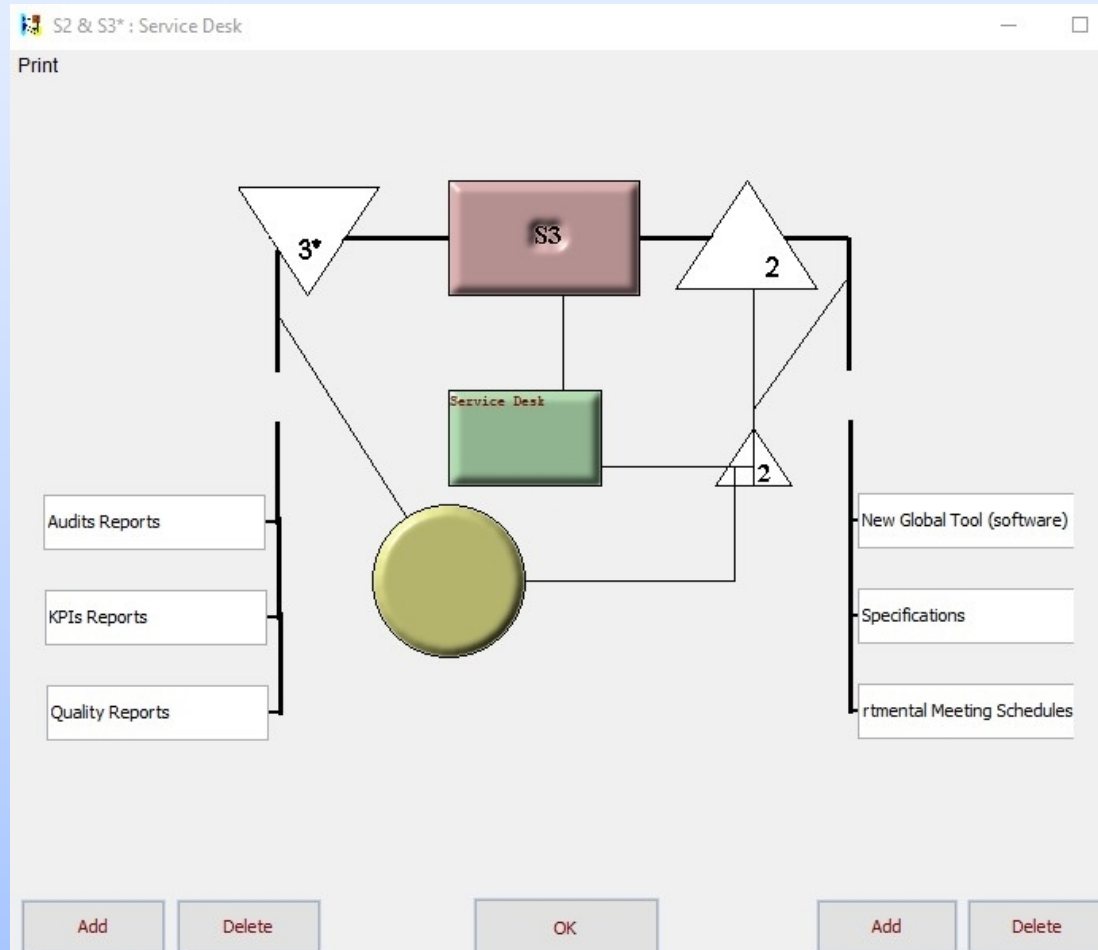
- A
- CSAP17-Change\_Request-01.png
- CSAP17-Change\_Request-02.png
- CSAP17-Change\_Request-03.png
- CSAP17-Change\_Request-05.png
- CSAP17-Change\_Request-06.png

Buttons for "Open with..", "Delete", "OK", and "Cancel" are visible in the file explorer window.



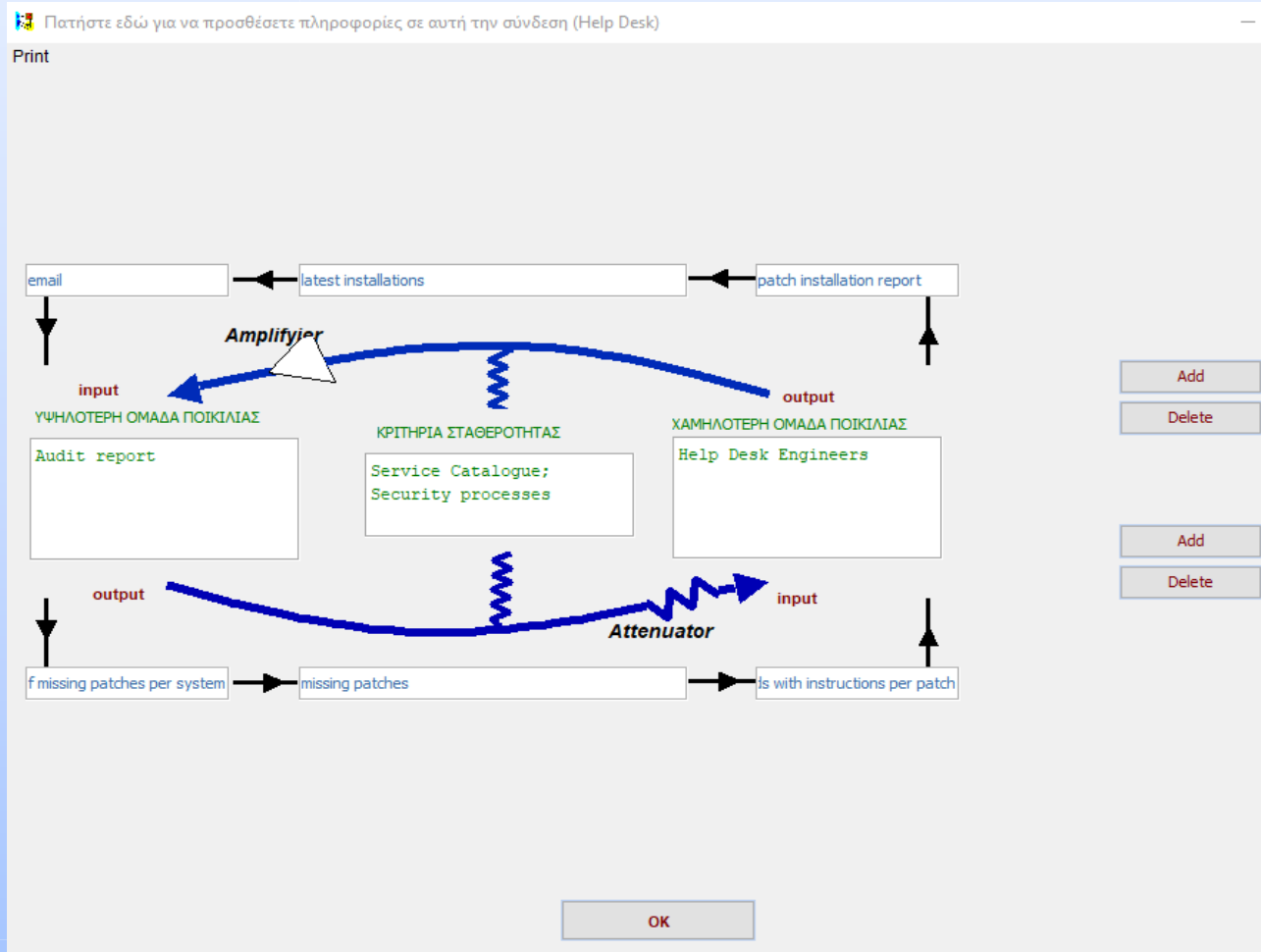
# Design PI using VSMMod

S2 and S3\* of Service Desk



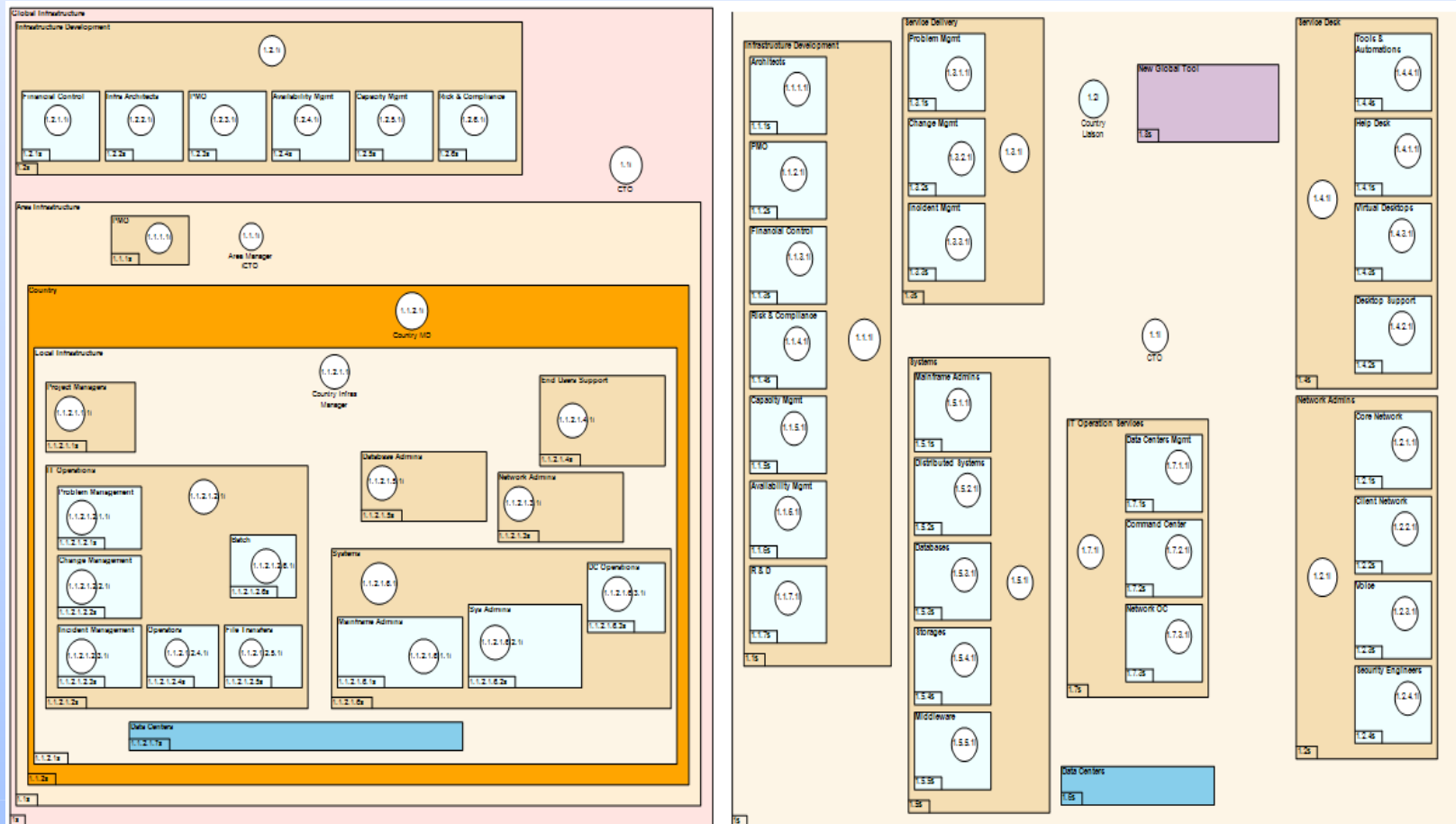
# Design PI using VSMMod

The homeostat Help Desk - S3\*



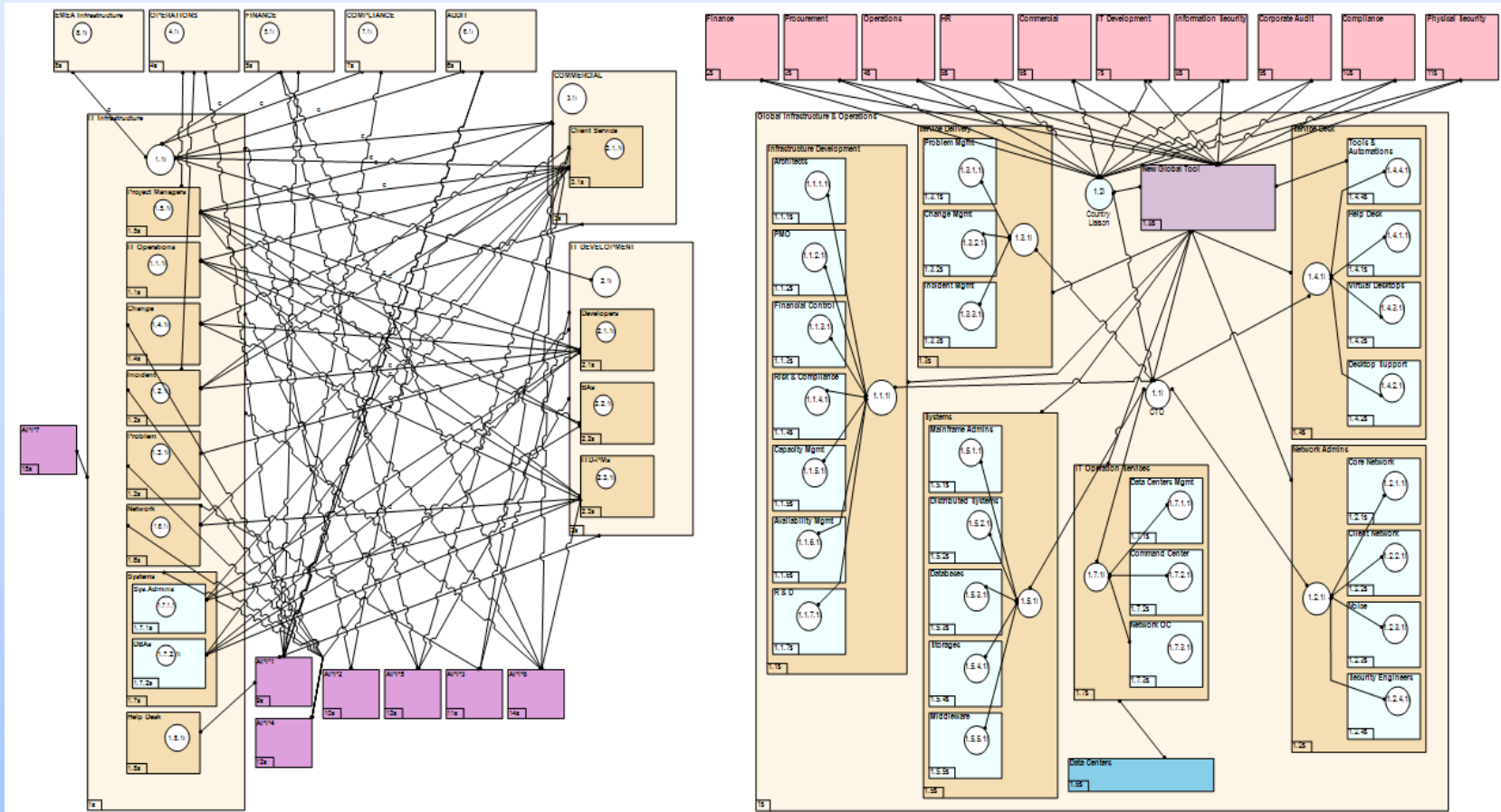
# Compare CS vs PI

## Compare current vs proposed organizational structure



# Compare CS vs PI

## Communications





# Questions



# Thank you