**O**pen
**S**afety &
**S**ecurity
**A**rchitecture
**F**ramework

Consultation White Paper Presentation:

# Enterprise Architecture as the Foundation for Agile Public Safety & Security

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# Context of Public Safety and Security

*A Fragmented Discipline with Many Dimensions*

| Organizations | Chain of Command | Domains | Technology | Local Requirements |
|---|---|---|---|---|
| Police, fire, ambulance, national crisis center, critical | Headquarters<br>Operations | Crisis management, urban security, | Sensors, artificial intelligence, video analytics, IPv6, ad | Each country, region/state, city, customer has |
| MoJ, local | Incident Command | protection, mass | computing, green, | seems to justify |
| responders, PSAP, | | prisons and | anytime/anywhere | integrators are |
| immigration, etc. | | | etc. | |

Need to improve alignment (unintentional silo'ed thinking)

Need for more interoperability

Need for synchronised roadmap and efficient procurement

**Innovation :**

**Introduce Enterprise Architecture (EA) into Public Safety & Security**

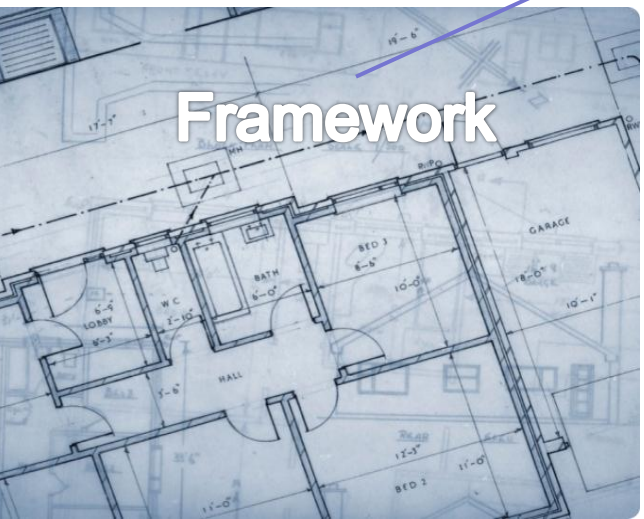
*Preceding body of work : Defence did it 10 year ago…*

# What is Enterprise Architecture (EA) ?

EA is the discipline to align people, processes and assets (especially ICT) with the strategic objectives of an organisation.

EA considers and aligns the perspectives of all stakeholders (Strategic, Operational, Tactical).

EA provides a roadmap that guides the evolution and transformation of enterprises.



# What is Enterprise Architecture (EA) for Public Safety & Security?

Best Practices → Framework tailored to PS&S

**NAF**
(NATO Architecture Framework)

**TOGAF**
(The Open Group Architecture Framework)

**ZAF**
(Zachman Architecture Framework)

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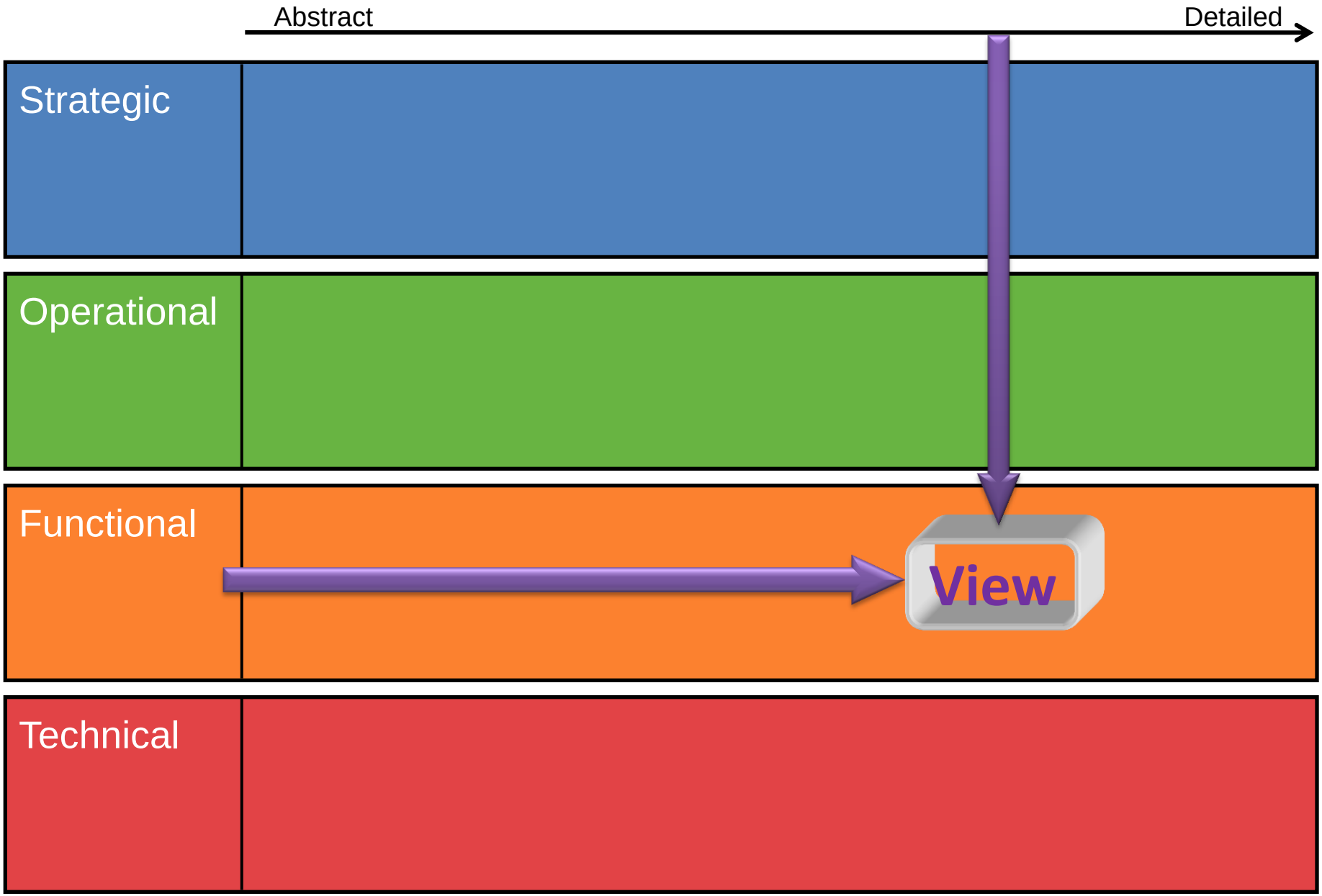
The following slides illustrate what OSSAF *could* look like, but defining the exact shape of OSSAF will be the objective of the proposed PSCE Working Group.

| Perspective | Type of Stakeholders | Main Objective |
|---|---|---|
| Strategic | Strategic decision makers, e.g. political leaders, regional governors, chief executives (Police/Fire/Ambulance/...), etc. | Provides the vision and goals of the organization (its reason for being) and an encompassing context for capability planning |
| Operational | Operations managers, heads of department, etc. | Defines the missions, the SOPs (based on use case scenarios) , agents & processes, information flow, and requirements on systems. |
| Functional | CIO, ICT Directors, Project Managers, etc. | Designs functional systems and derives specifications from operational requirements |
| Technical | ICT Managers, Engineers, etc. | Defines the solution (usually an ecosystem) and implementation |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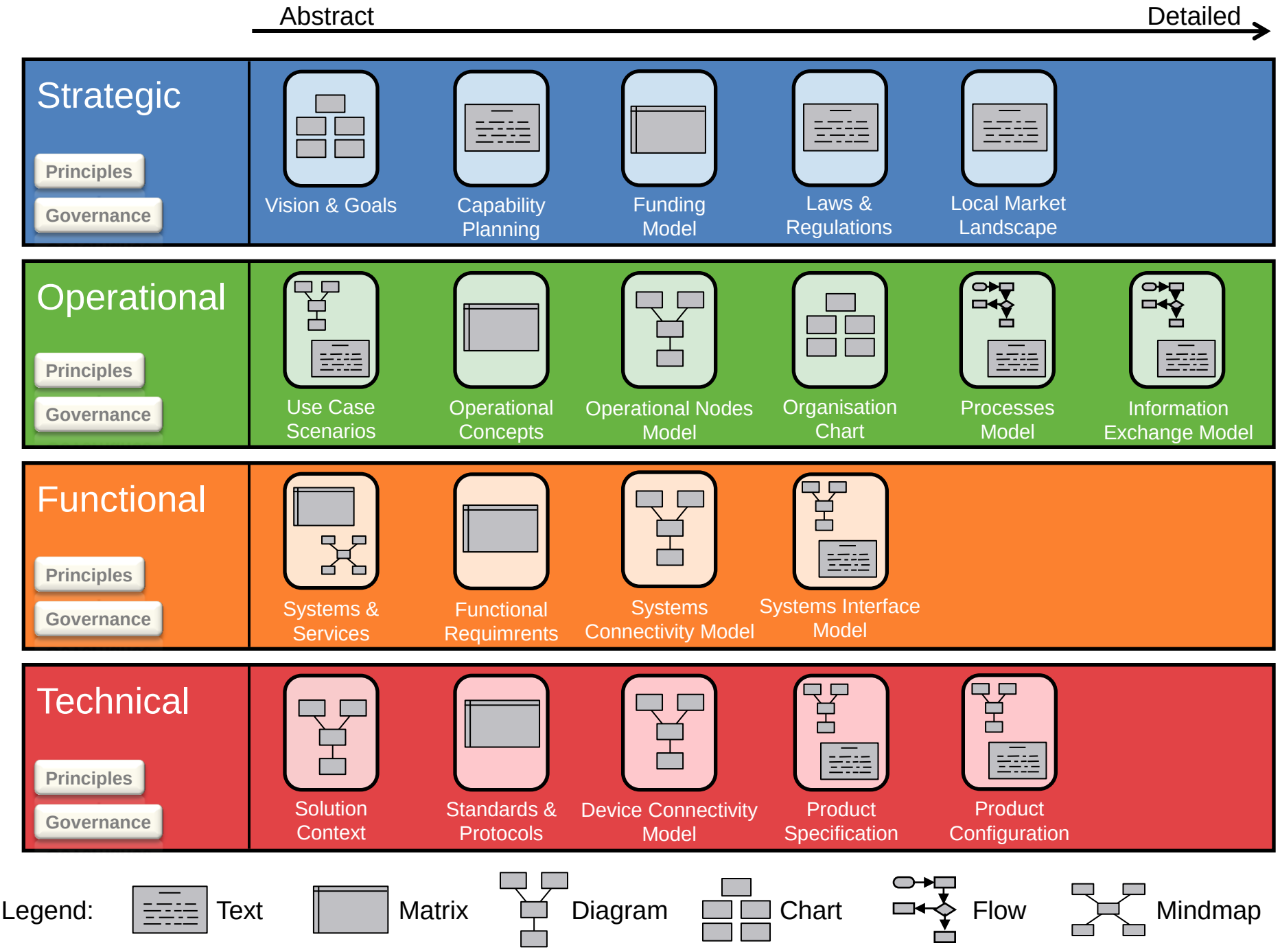
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Product Specification
Product Configuration
Legend:
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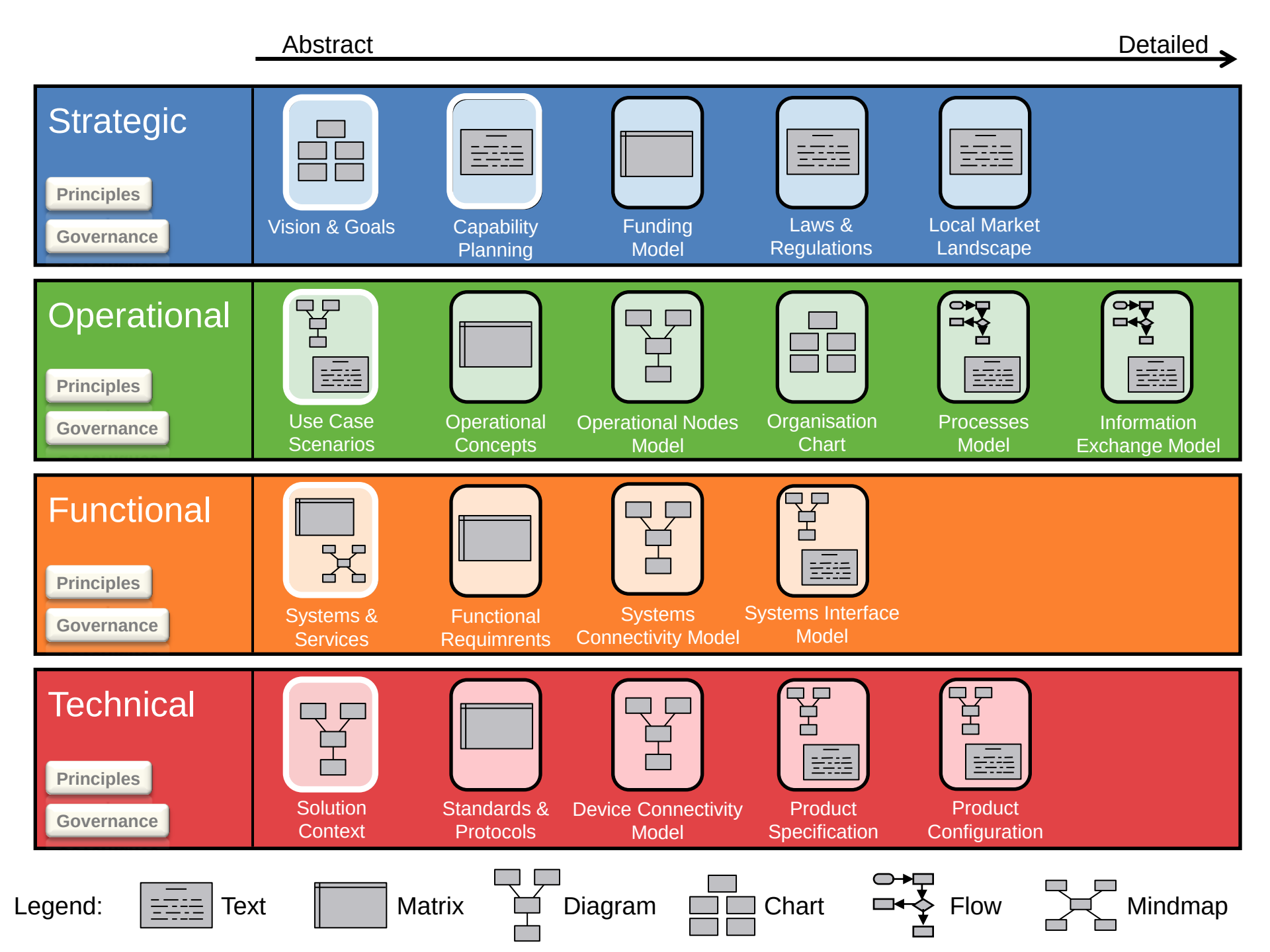
Matrix
Diagram
Chart
Flow
Mindmap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# *Strategic View: Vision & Goals*

## *An example: UK Police Force*

### **Vision –** *The UK Policing Pledge*

- **To be at the heart of local communities, working with citizens to improve the quality of life.**
- **To provide an excellent policing service which exceeds public expectations.**
- **To retain the highest standards of honesty and integrity at all times.**

### Goals

**Operations:** Moving away from KPIs (e.g., crime stats) toward citizen focus, neighborhood policing

**Finance:** Police forces must “do more with the same” or “do the same with less”

**Strategic Planning:** Implementation of 3 reports (Flannigan, McGee, Hannigan)

**Regionalisation:** Initiatives are defined at national level (e.g., MOPI), but business processes and applications in each police force are different

### Strategic Capabilities

1. **Unified operations across multiple agencies**
2. **Improved surveillance, monitoring, and incident control**
3. **Confidentiality, Integrity & Availability of info**
4. **Increased police force presence on the streets**
5. **Effective collaboration within and across local communities**
6. **Improved citizen communication**

## Strategic: Vision & Goals

*Vision:* UK Policing Pledge

*Goals:* Operations | Finance | Strategic Planning | Regionalisation

*Capabilities:* Unified Operations | Conf./Integr./Avail. of Info | Effective Collaboration | Surveillance, Monitoring & Incident Control | Empower Deployed Units | Citizen Comms

## Operational: Use Case Scenarios

Information | People | Processes | Infrastructure

## Functional: Systems & Services

- **Command & Control**
  - Intelligence/Process Management
  - Mission-Critical Applications
  - Infrastructure Management
- **Sensing & Actuation**
  - Quantitative sensors
  - Qualitative sensors
  - Object Identification
  - Biometrics
  - Correlation
  - Analytics
  - Actuators
  - Legacy Integration
- **Mission-Critical Network**
  - Mission-Critical Services: Resiliency, Virtualisation, Security, UC, Compute, Storage, Location, Identity, etc.
  - Mission-Critical Places: DataCenter WAN, HQ, Remote Post, Mobile Force
- **Mobile Force**
  - Mobile Devices
  - Mobile Networks
  - Mobile Services
- **Incident Collaboration**
  - Core Elements
  - User Terminal
  - Alerting and Messaging
  - Conferencing
- **Citizen-Author. Interaction**
  - PSAP
  - Alarming Points
  - Early Warning System

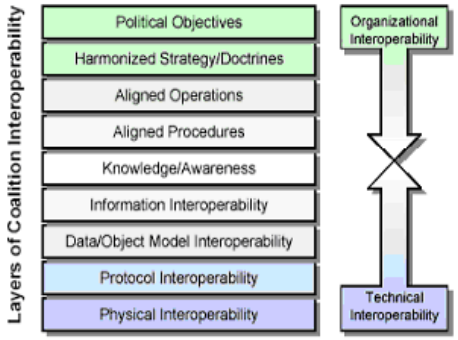
## Technology: Solution Context

C2 Solutions | S&A Solutions | MCN Solutions | MF Solutions | IC Solutions | CAI Solutions

PSCEurope Public Safety Communication Europe

# PSCE Ecosystem

# Benefits



1. OSSAF aligns technology with organisational goals; breaks the unintentional silo'ed thinking; and optimizes SOPs

2. OSSAF enforces interoperability

3. OSSAF supports efficient procurement, and roadmaps consistent with the vision & goals

# Feedback & Recommendation

- Initial feedback (so far all positive) from reviewers:
  - Pascal d'Eer, CIO, Federal Police, Belgium
  - David Happy, Managing Director, Aanonxe Ltd, UK
  - Philippe Bereski, Defense & Public Safety Lab Director, Alcatel-Lucent, France
  - Hartmut Ilse, Projektmanagement, e*Message Wireless Information Services, Deutschland GmbH
- **Recommendation: Create a Working Group to develop OSSAF**, involving users, researchers and industry members of PSC-E. Areas of research include:
  - develop EA **governance** for OSSAF
  - definition of which **views** the framework should contain
  - description of the **objective, content and format** of each view
  - recommended architecture **tools** and **methodology**
  - search for **funding and sponsorship** at the EU-level

# Any questions?