

Panel: Meeting Warfighter Requirements on the Digital Battlefield: Interoperability Between Testing, Training & Operations

Architecture Solutions to Interoperability

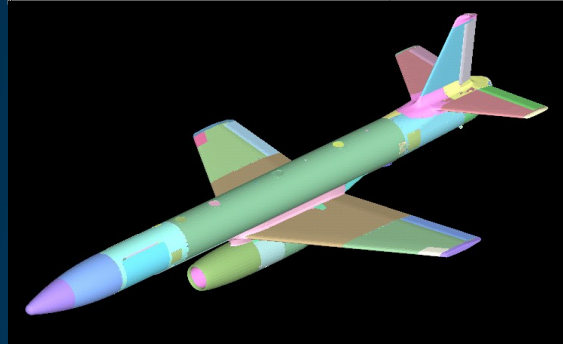
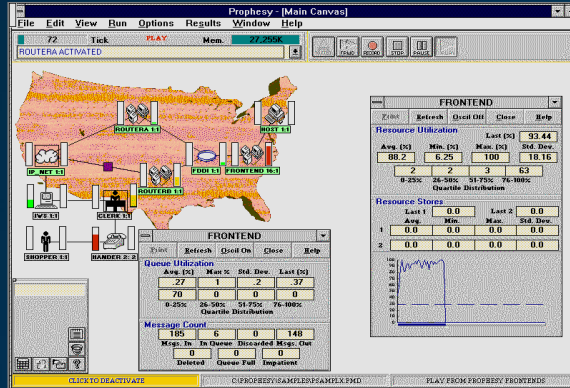
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Approved for Public Release.
Security and OPSEC Review Completed: No Issues.

Testing, Training, and Operations



**INTEROPERABILITY:
POLICY TO PERFORMANCE**

**MILCOM
2007**

Model-View-Control (1979 Reenskaug)



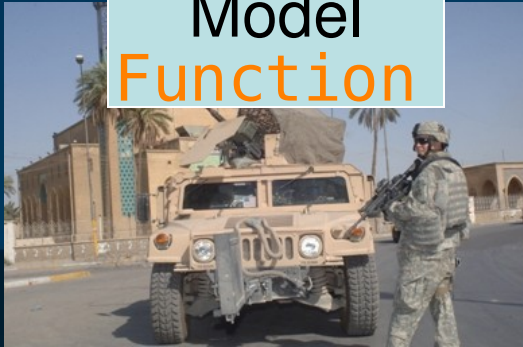
Output
View



Input
Control



Model
Function



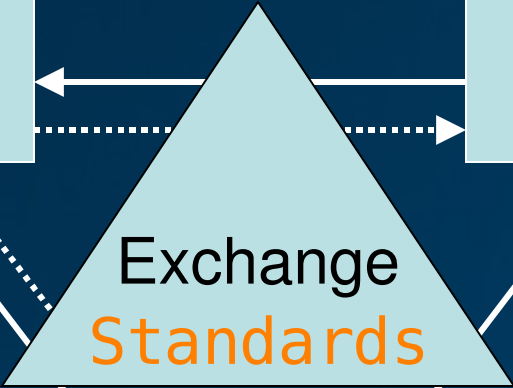
Distributed Model-View-Control



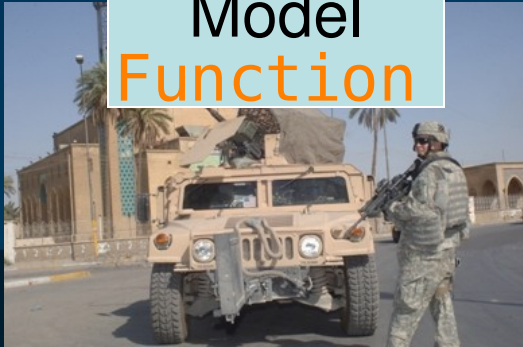
Output
View



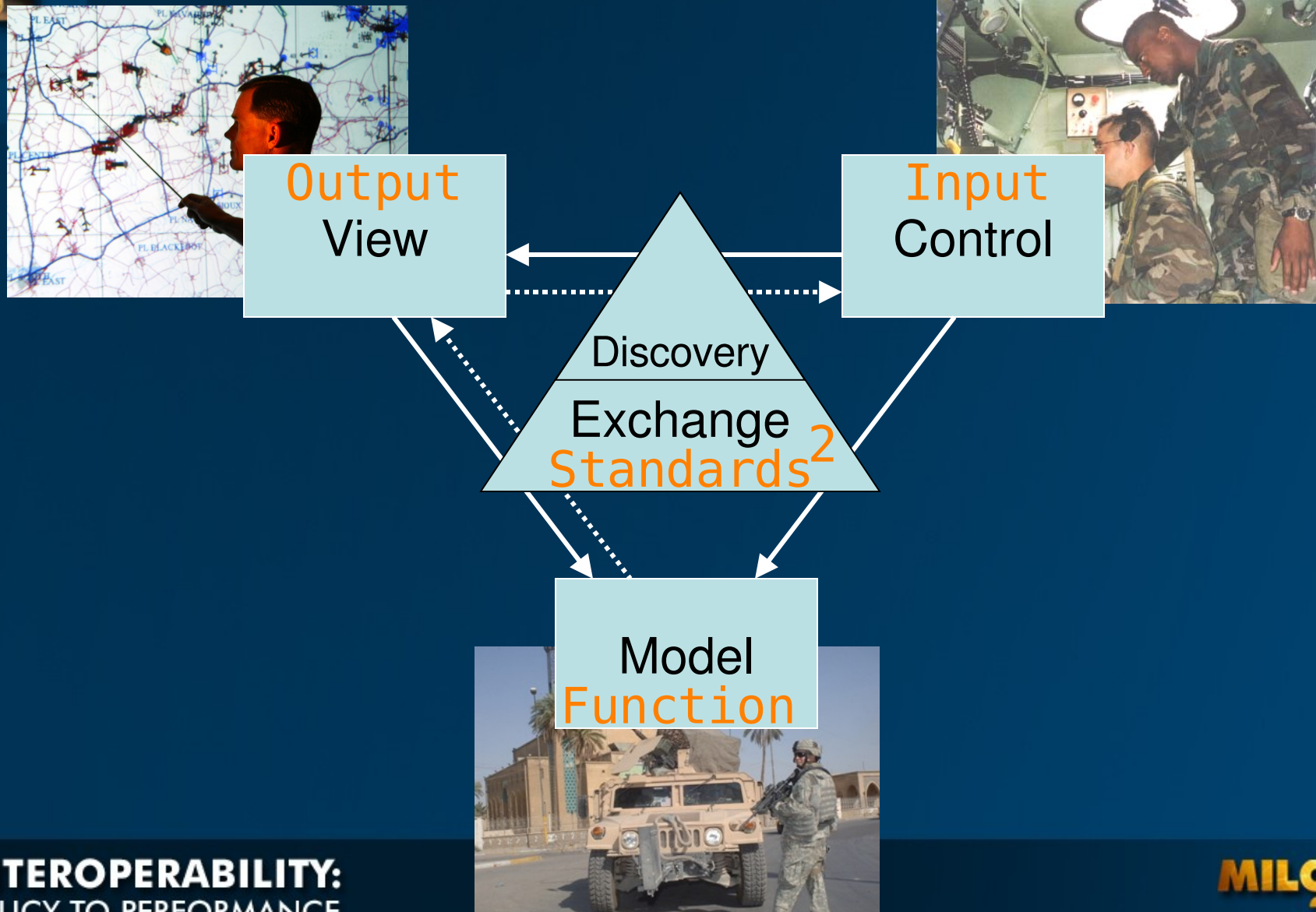
Input
Control



Model
Function

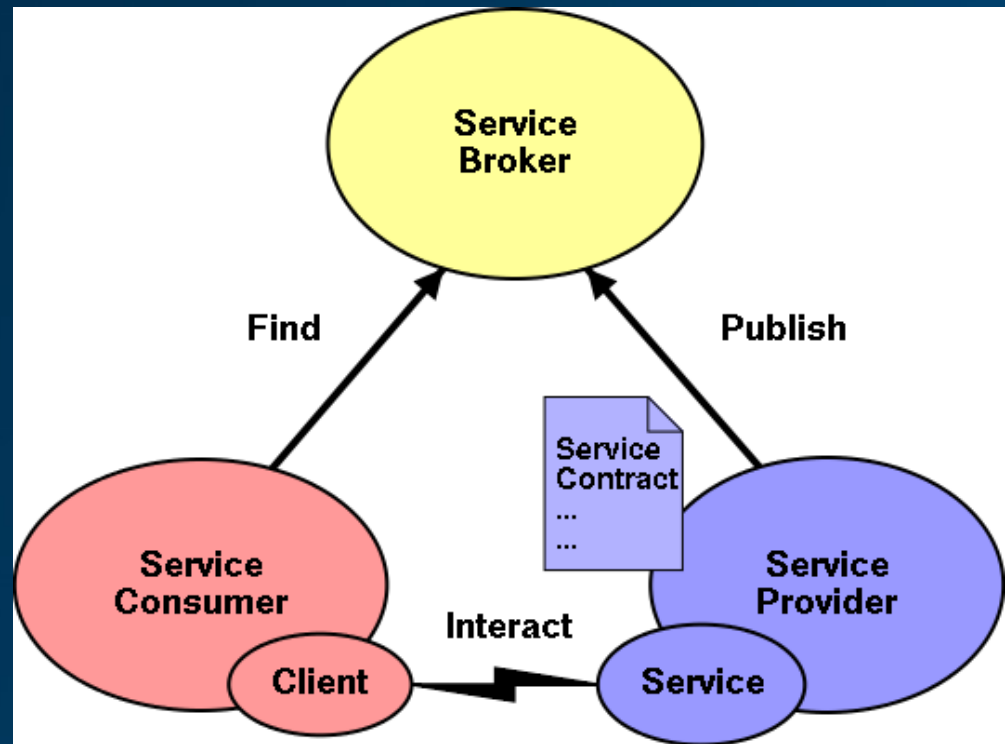


Service Oriented Model-View-Control

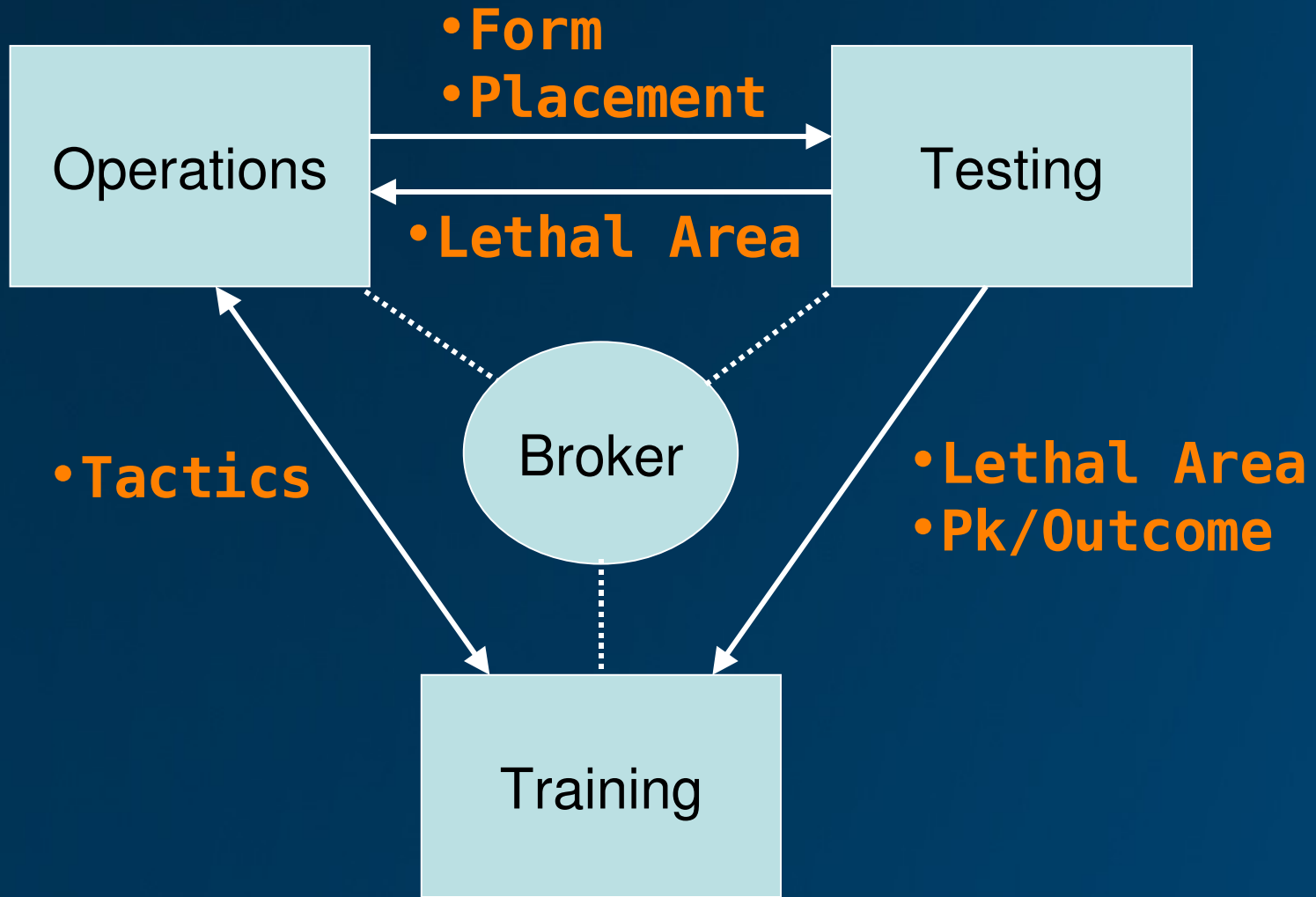


Service Oriented Architecture

- Loosely-coupled relationships between providers and consumers
- Broker for registering and discovering services
- Ability to access a service/data that were originally unknown to the client
- Reliance on standards for data and services to enable interoperability



IED Example

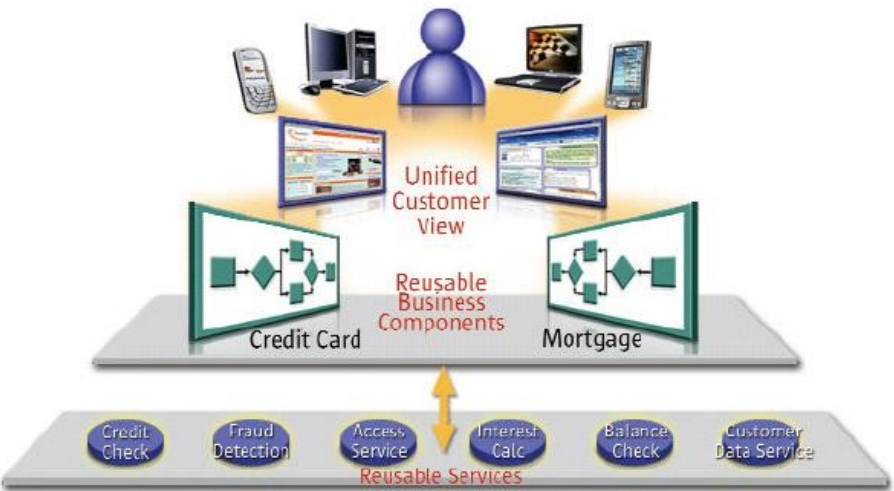




Conclusion

- SOA is a hot buzzword and large system architecture solution
- Its key strength is in allowing applications and users to access services on-demand
- Many computer systems are hostage to their original designs
- SOA may allow new systems to work together without being designed and built together
- SOA can bridge Training, Testing, and Operations systems

Infinite Illustrations



SOA Meta-Model

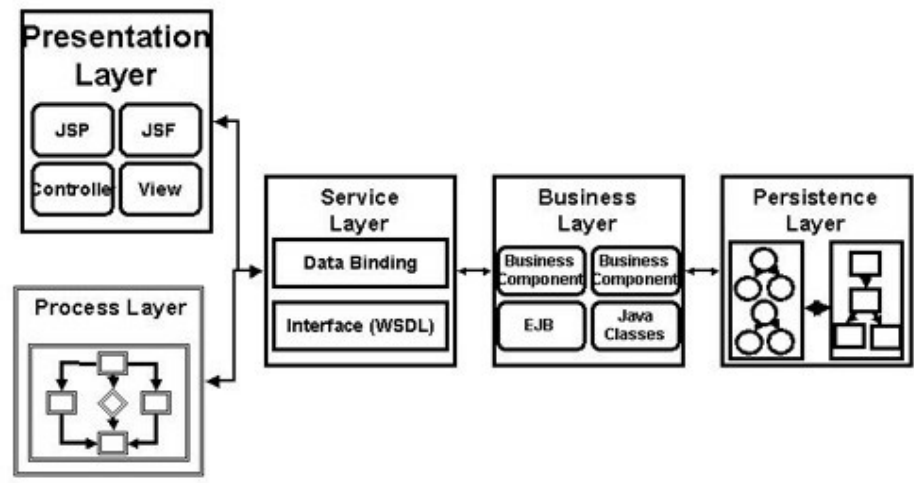


Fig 2. Different Layers of Service Oriented Applications

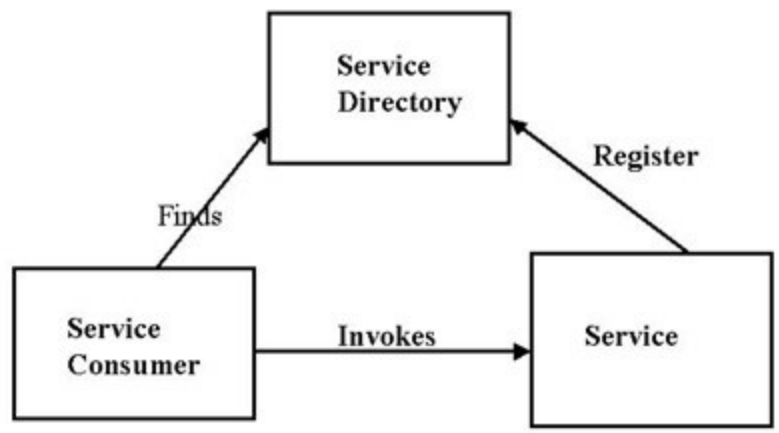
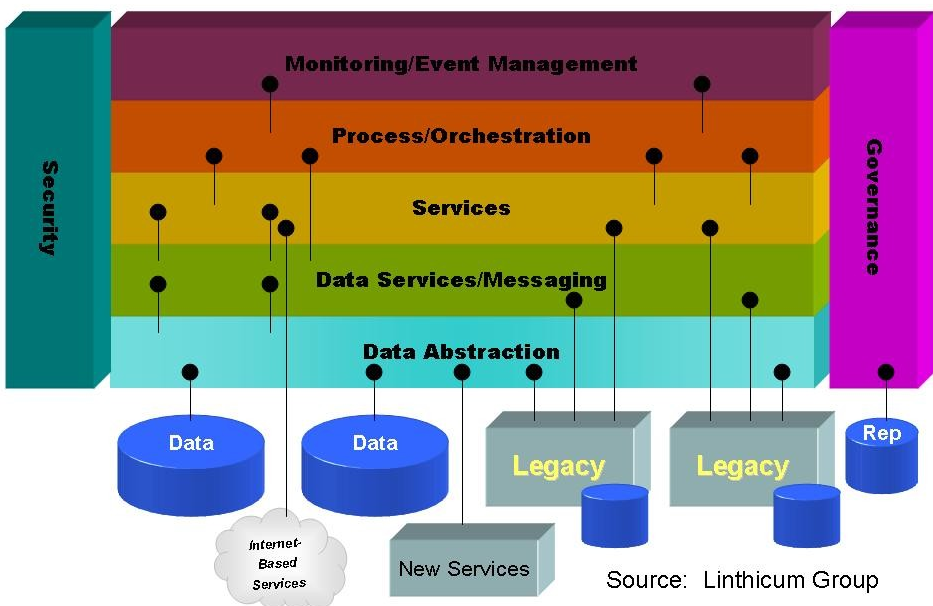
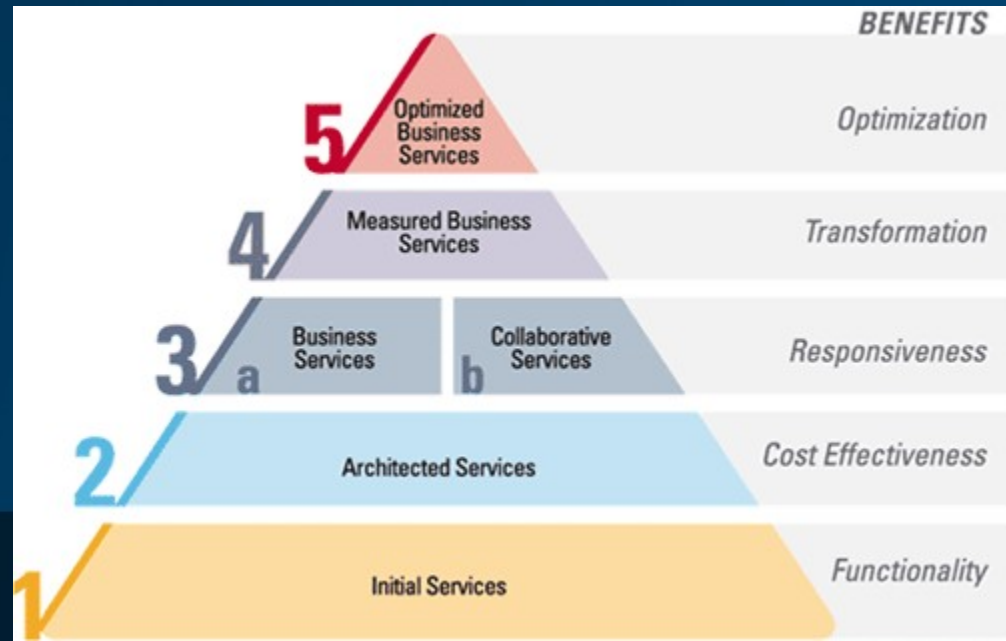
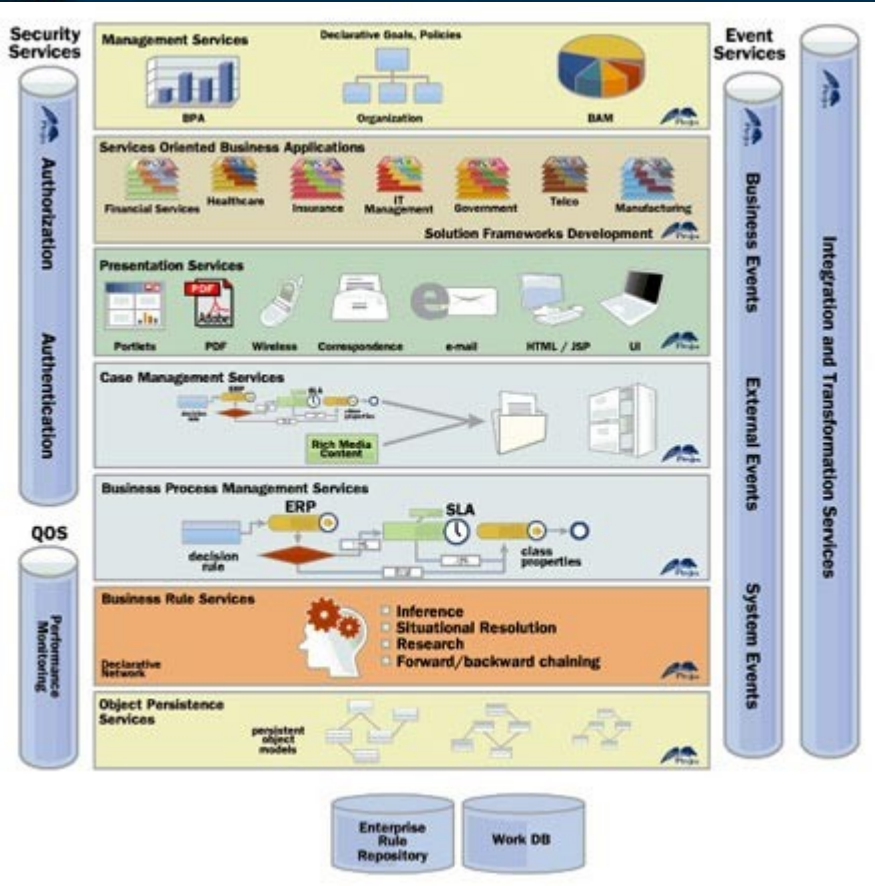


Fig 1. Service Oriented Architecture

Infinite Illustrations



**INTEROPERABILITY:
POLICY TO PERFORMANCE**