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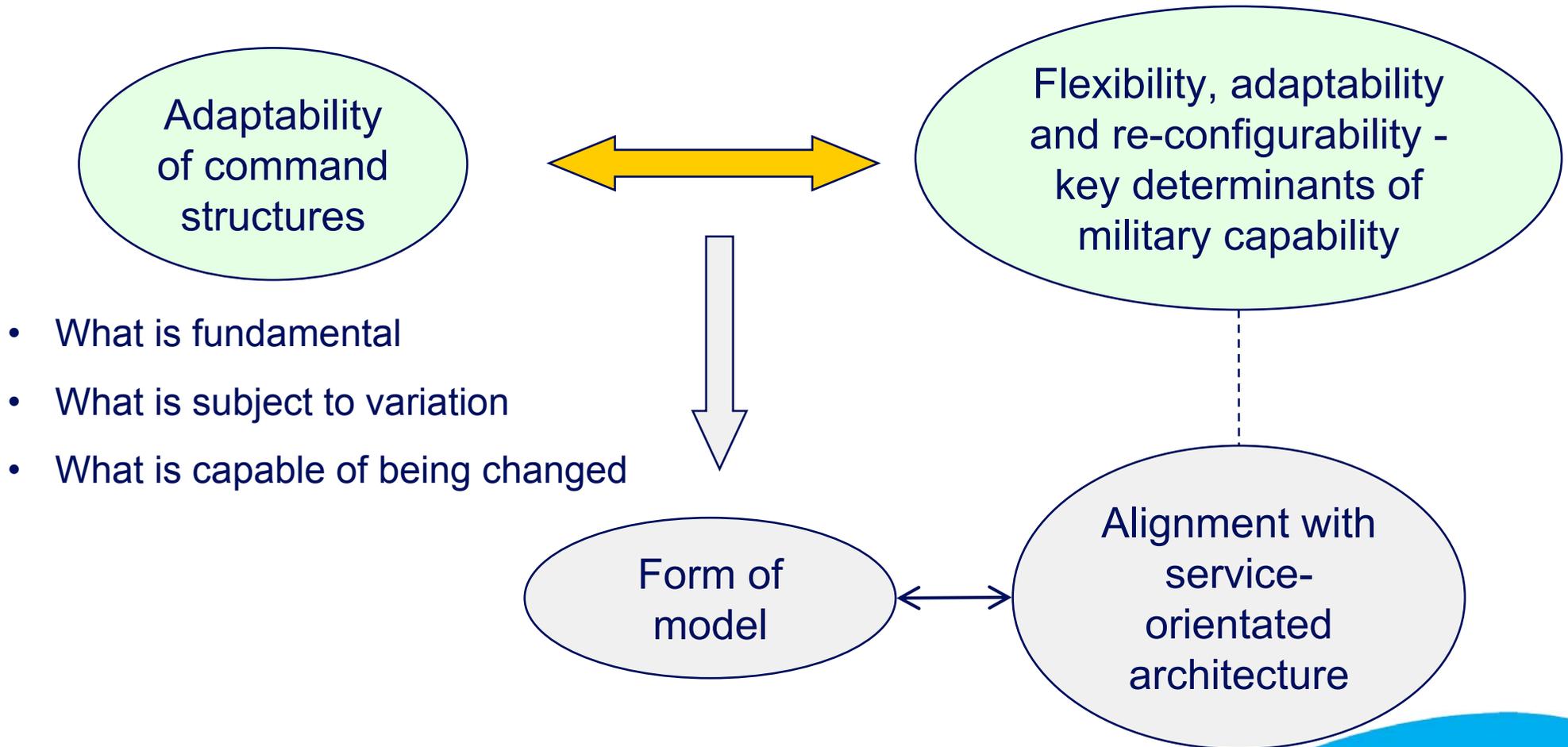
Service-orientated representations of the military business

Geoff Markham, Harry Duncan and Robert Symonds
Paper 080, ICCRTS 11, September 2006

Opening remarks

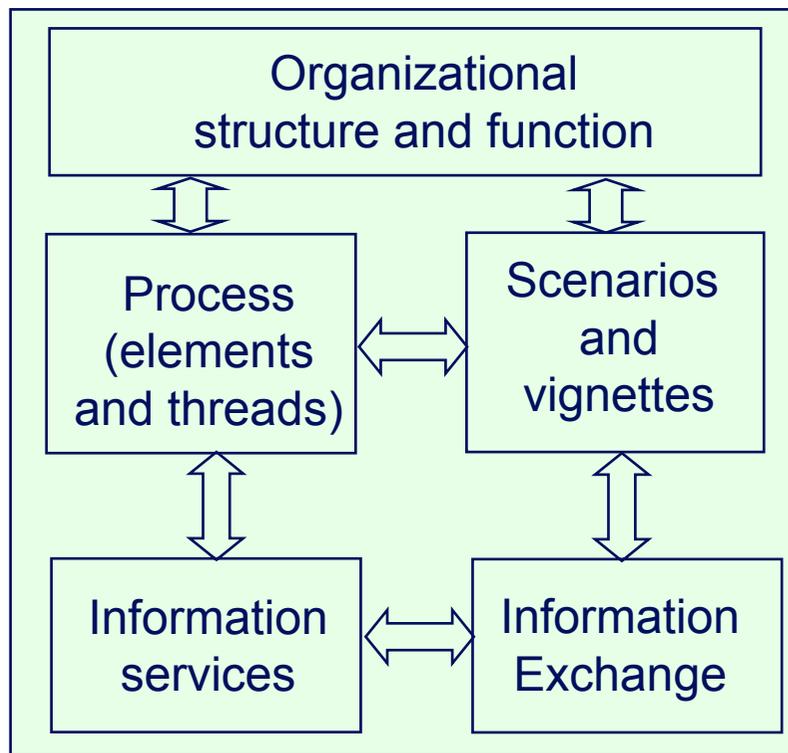
- This paper arises out of work currently being performed for UK MOD on a business model for Command and battlespace management (CBM):
 - Immediate intended utility is to support DEC CCII capability management in respect of information system / service acquisition
- Focus of this paper (and presentation) is on the business of Command, and specifically:
 - What form of expression is appropriate?
 - What aspects of the military business should be expressed?

The nature of Command and its expression in business modelling terms

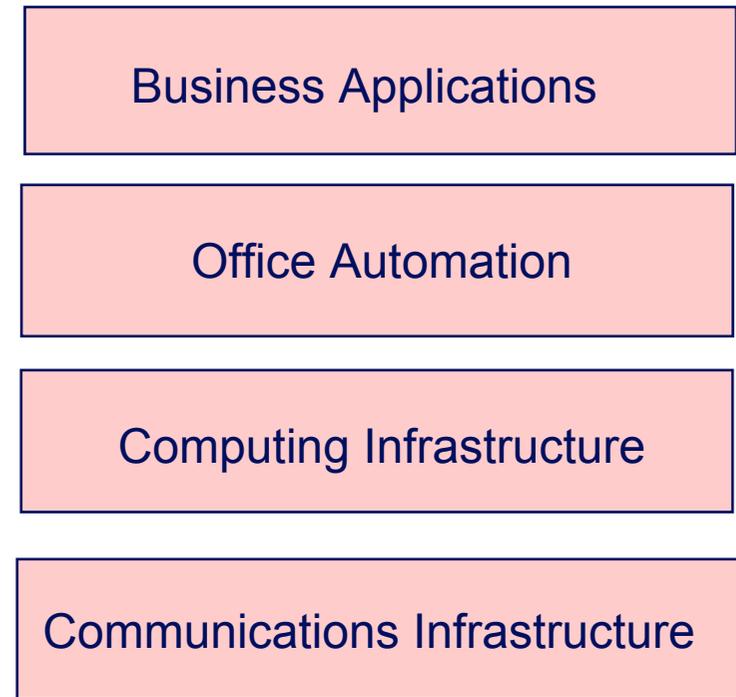


Business model, not system model

BUSINESS MODEL



SYSTEMS (PROJECTS) MODEL

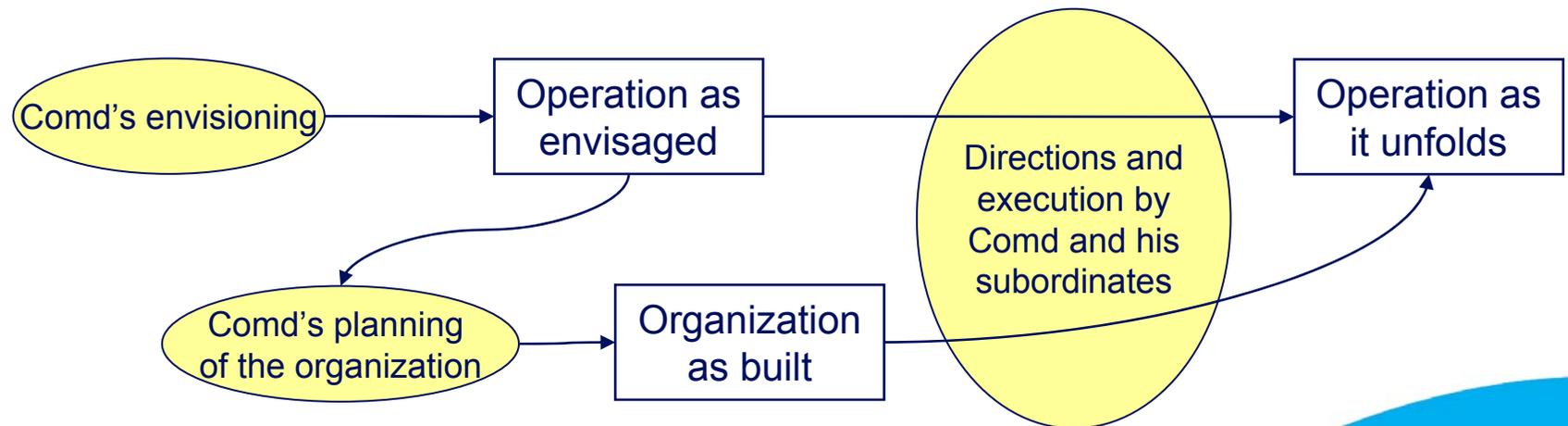


Modelling rationale and approach

- Need to avoid failings / limitations of earlier models
 - Based on doctrinal publications and SOPs, not direct elicitation from military SMEs
 - Generic elements and specific contexts properly distinguished and related
 - Avoidance of conventional ‘process’ and ‘IER’ modelling pitfalls:
 - Don’t want a voluminous, insensitive, conceptually-deficient model

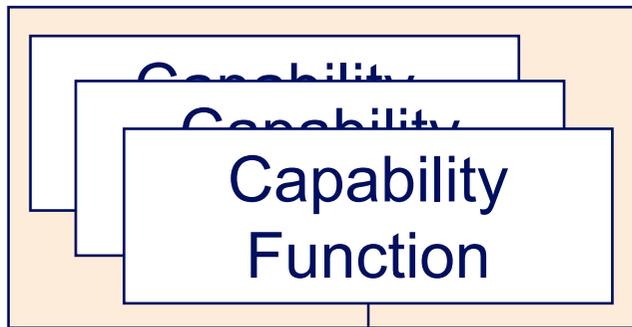
Command as 'directing and integrating'

- Direction and integration of other capabilities:
 - Inform, Project, Operate,
- The commander as 'builder' of the military organization:
 - Allocation of missions and forces
 - Definition of inter-dependencies between activities / effects



What has to be commanded?

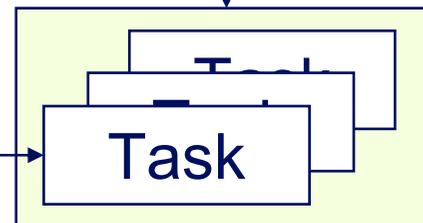
(Generic pattern)



Performs



Performs



Consists of



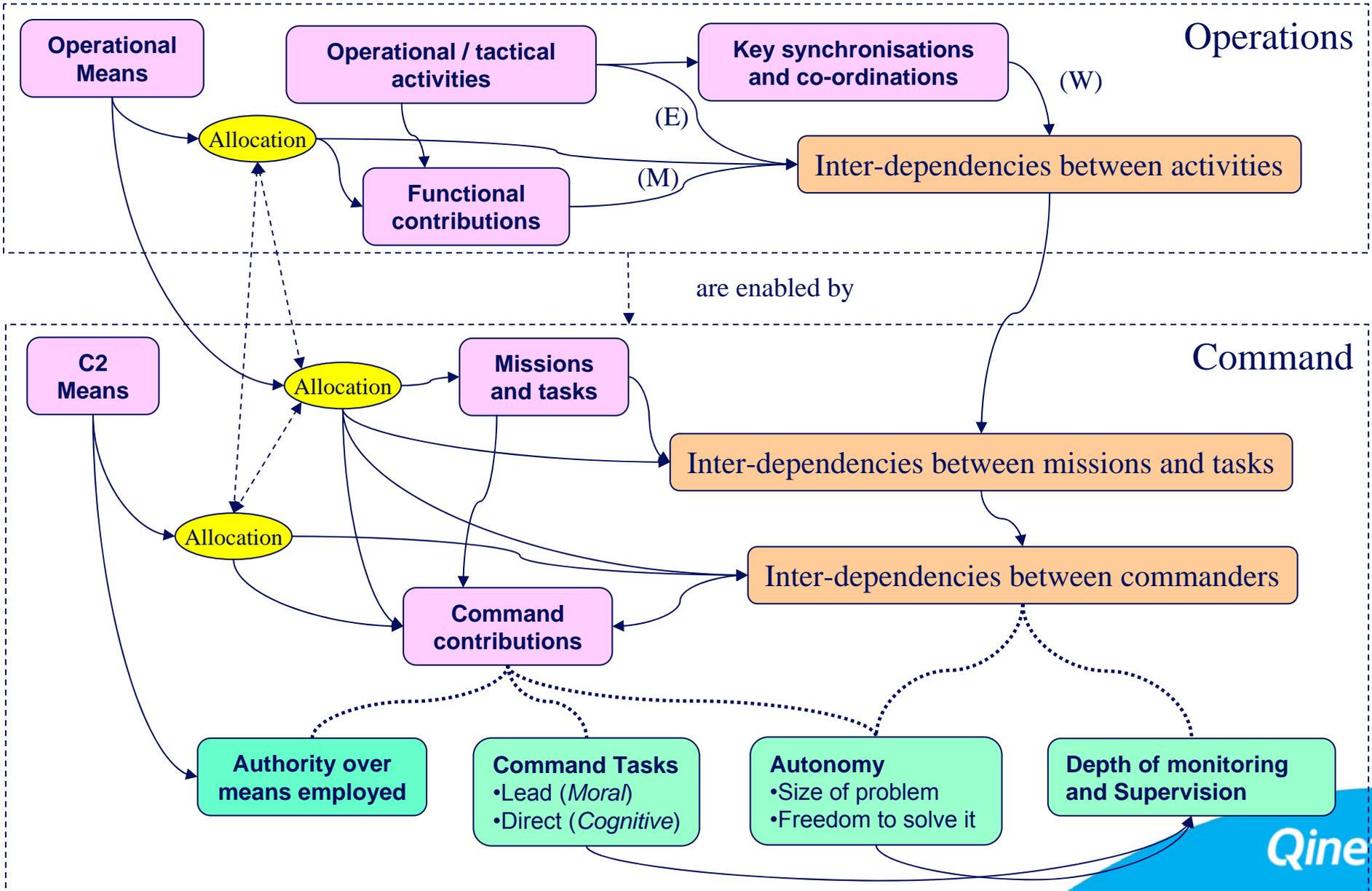
Consists of



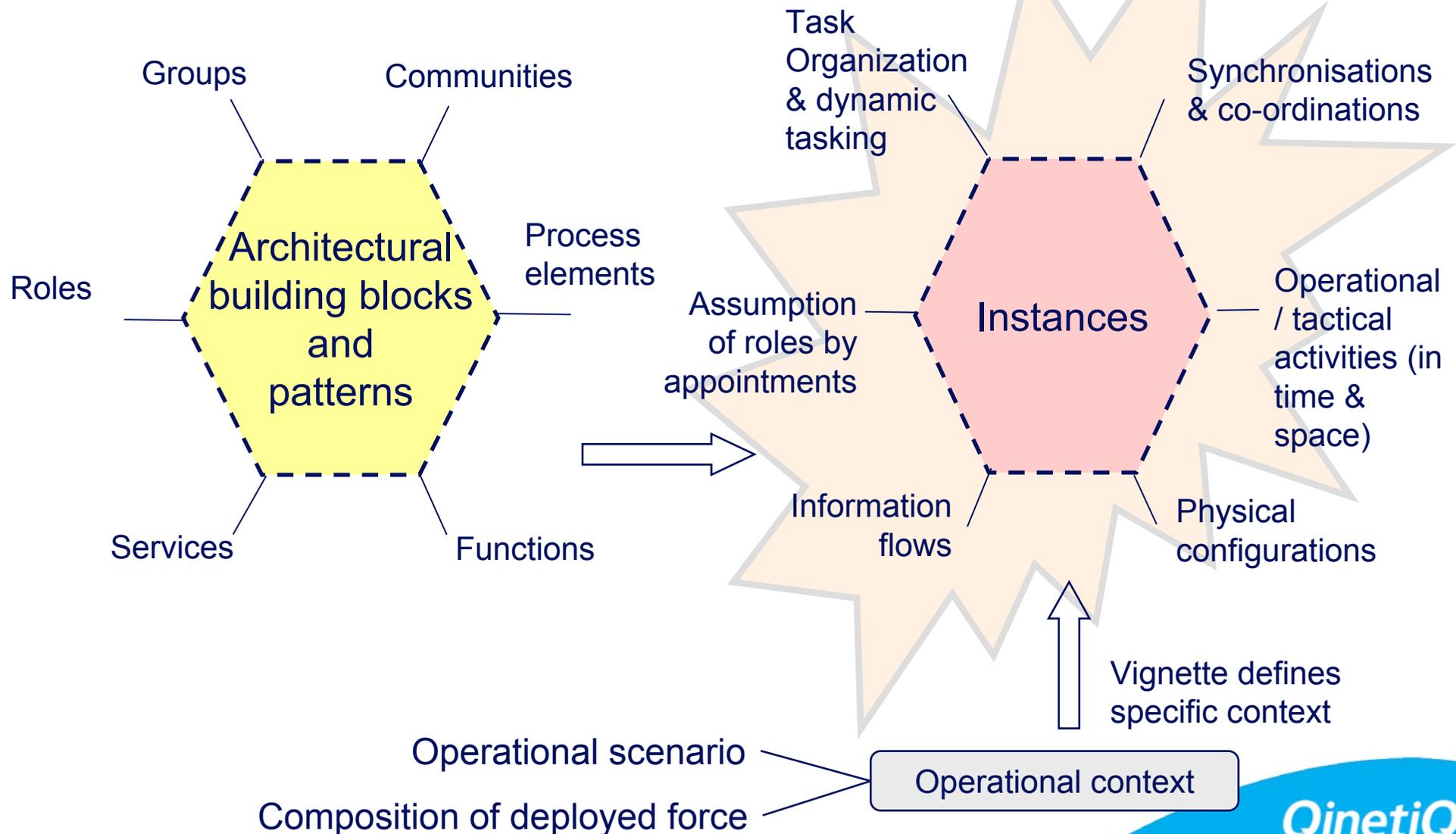
Consists of



Operations ⇒ Command ⇒ C2 Organization



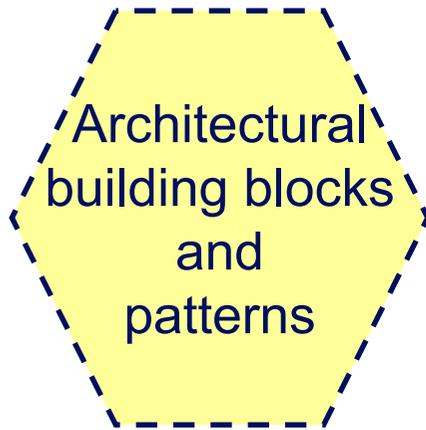
Generics → instances in the context of vignettes



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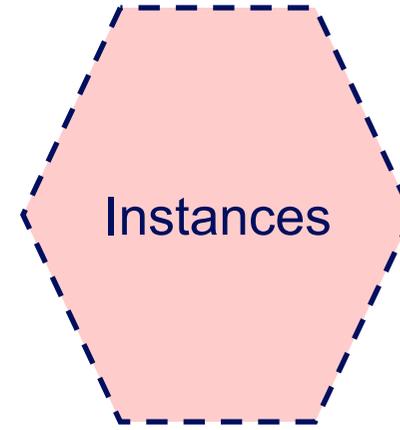
Structural change within an operation:

- Situation-dependent



Enduring:

- Logically necessary
- Based on high-level doctrine



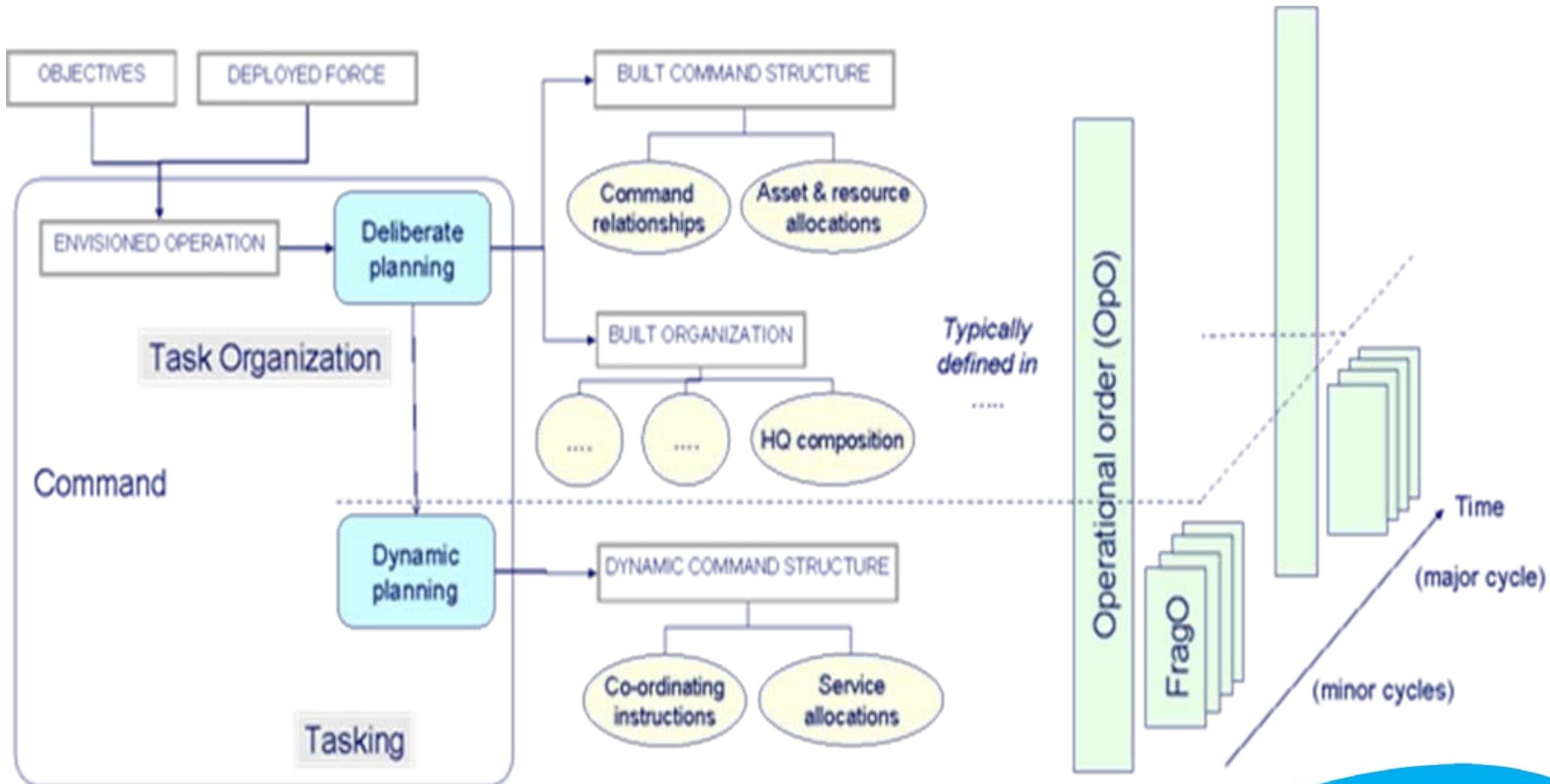
Contingent:

- Context-driven
- Concept-dependent



Operational context

Deliberate and dynamic planning



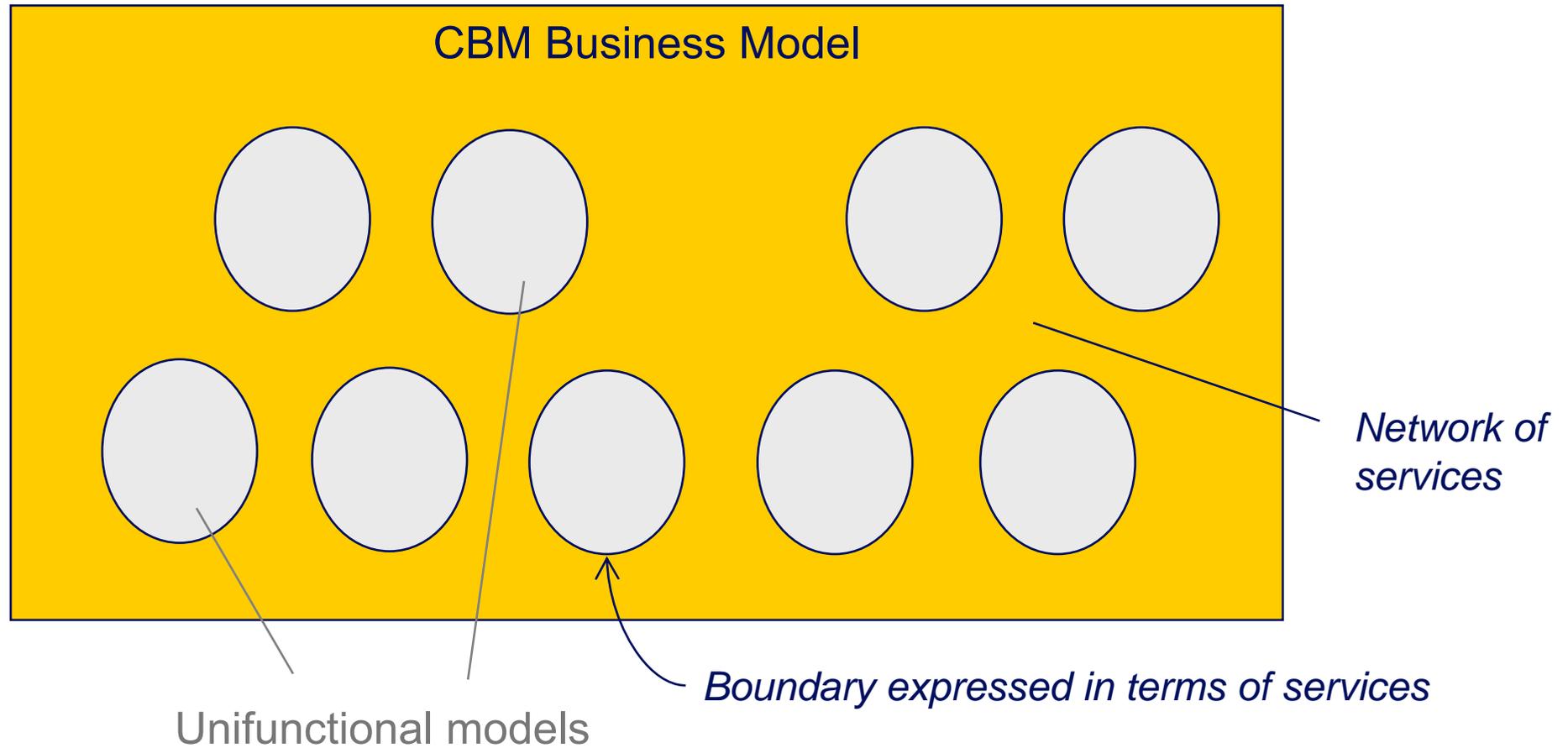
Modelling implications

- Three levels of organizational structure co-exist and need to be tracked over time:
 - Deployed force (ORBAT)
 - Task Organization
 - Dynamic / 'run-time' interdependencies

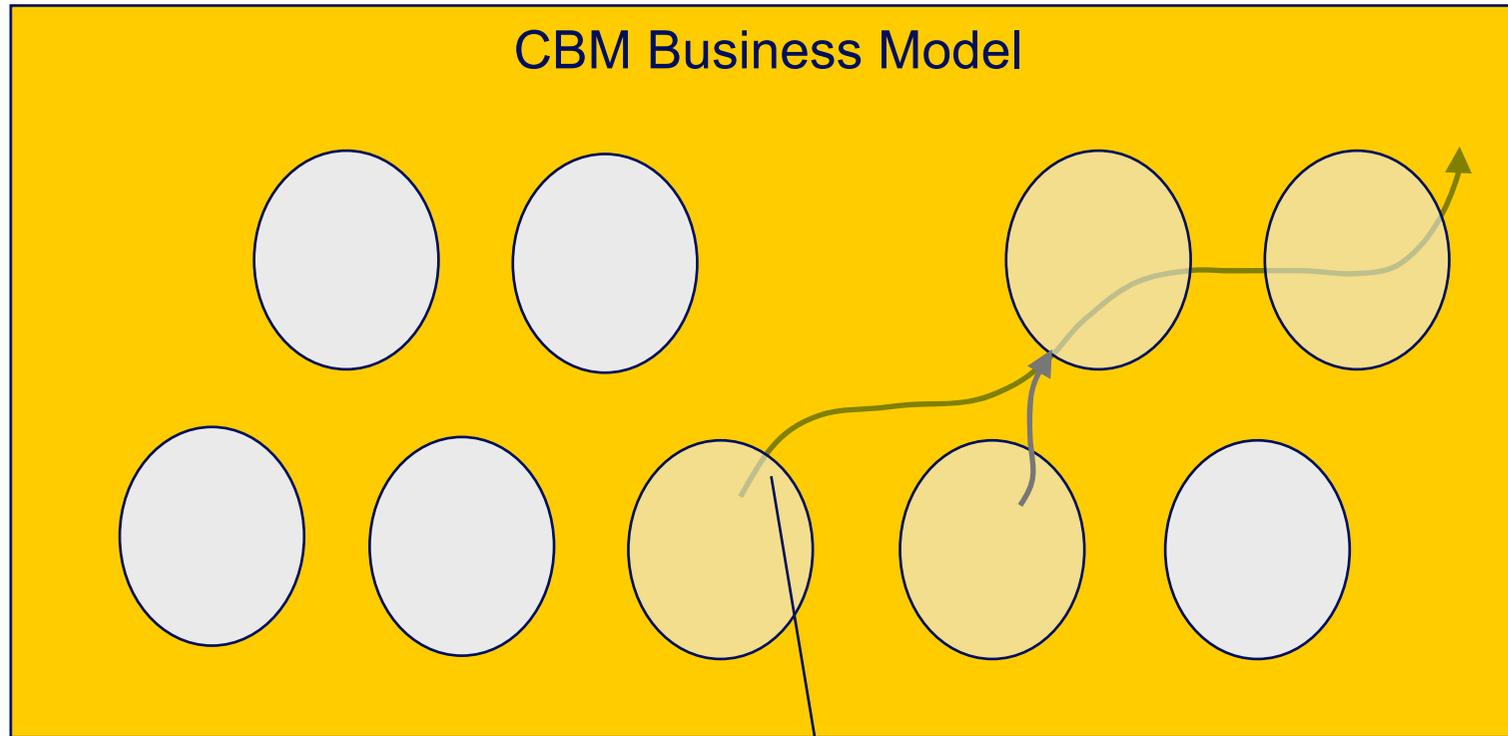
Network of services

- Means of integration and means of achieving inter-working in respect of inter-dependencies:
 - the building blocks are business functions, each of which interacts with other functions by offering and consuming services, including information services
- Process threads achieved through service orchestration:
 - composition of services across business functions
- CBM Model is capable of coupling to other business models as a model which embraces other models:
 - through its services, linking to models which describe further business functions or which offer a refined view of particular Command functions, i.e. unifunctional / specialised models

Integrating and directing



View of 'process' as service orchestration

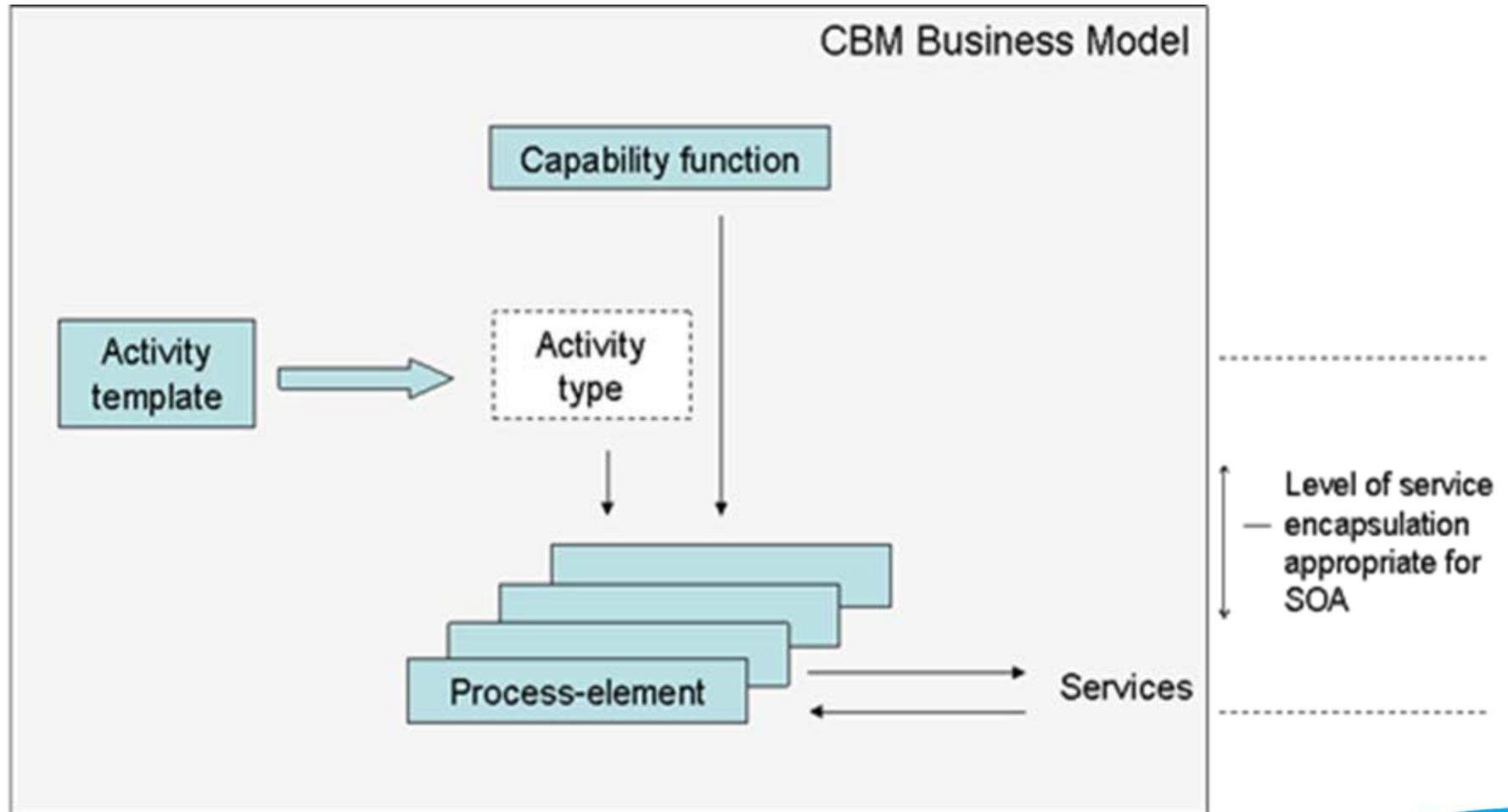


Process threads expressed in terms of pre-defined services

Services and Information Management / Information Exploitation (IX)

- The CBM BM – and ultimately the larger federation of business models constructed on compatible principles – provides fundamental underpinning to a Service-orientated enterprise architecture (SOA)
 - grounds the architecture in a view of the business itself, as distinct from an informatic, service-orientated or systems overlay on the business
 - supports the continual re-modelling to reflect business changes or to look at future timeframes

Business services and SOA services



Status / progress

- Completed a feasibility study – produced a prototype model
- Now on second stage of funding:
 - Refinement into a usable pre-production version
 - Evaluation through case studies:
 - Project / programme related studies
 - Contribution to scientific programme looking at outputs from MOD VCDS ‘Future C2’ workshop

Conclusions

- A business model of structure and function expresses aspects of the military organization which models of business process or information flow cannot express
- The CBM BM provides the structural and functional basis for articulating the Command business perspective on Network Enabled Capability in general, and organizational agility (c.f. agile mission grouping) in particular
 - captures what is enduring whilst enabling the expression of what is contingent or changeable
 - supports the continual re-modelling to reflect business changes or to look at future timeframes

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