



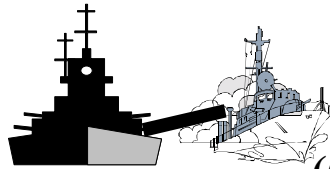
KBR

The Capability Gap in Military Theatre Distribution

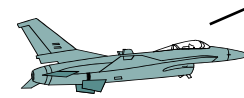
The Problem

- Theatre Distribution is the function of distributing all types of supplies and people to customers on the battlefield
- Historically successful
 - but with extraordinary effort

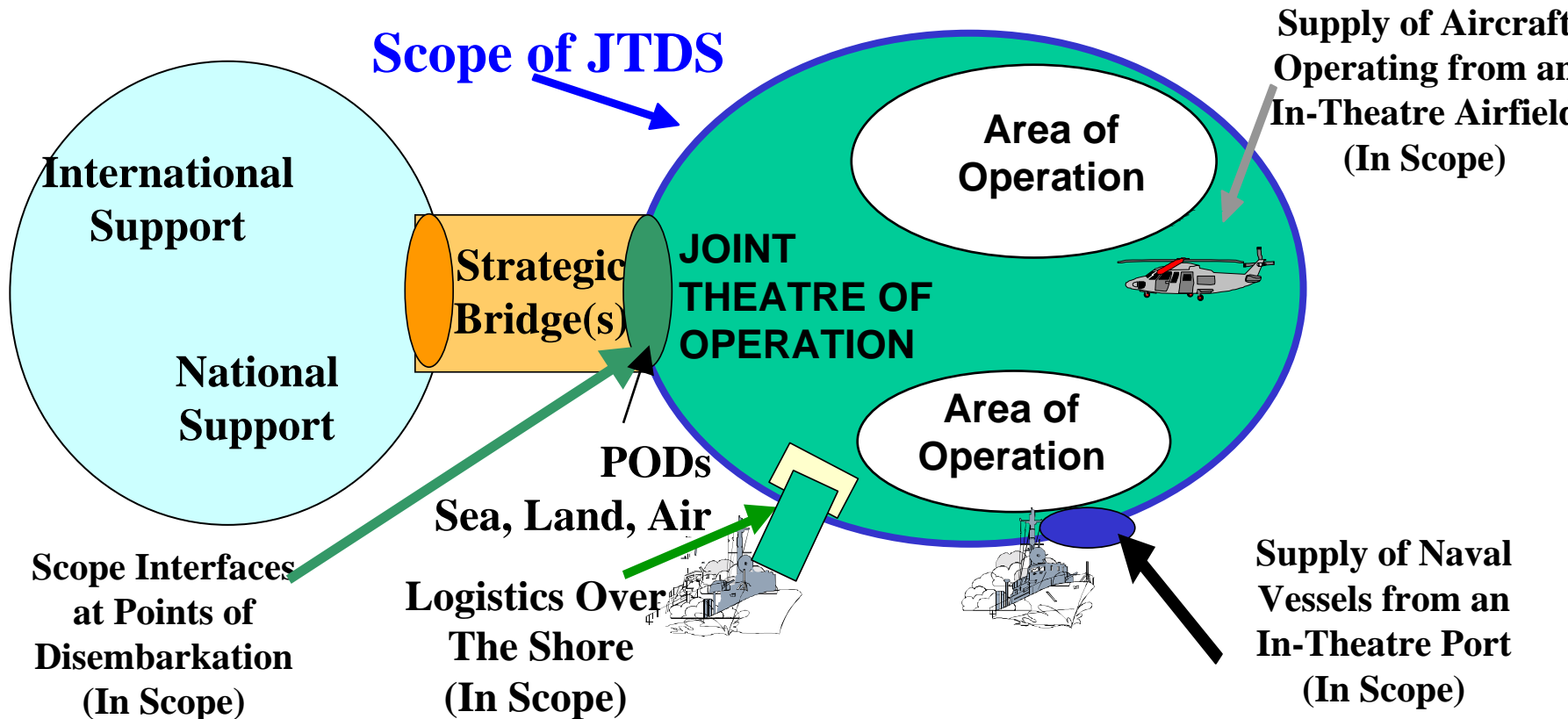
- Recommend courses of action to make theatre distribution more effective
- Critical Operational Issue (COI)
 - Responsive
 - Robust
 - Efficient
 - Interoperable



**Resupply
Afloat
(Out of Scope)**



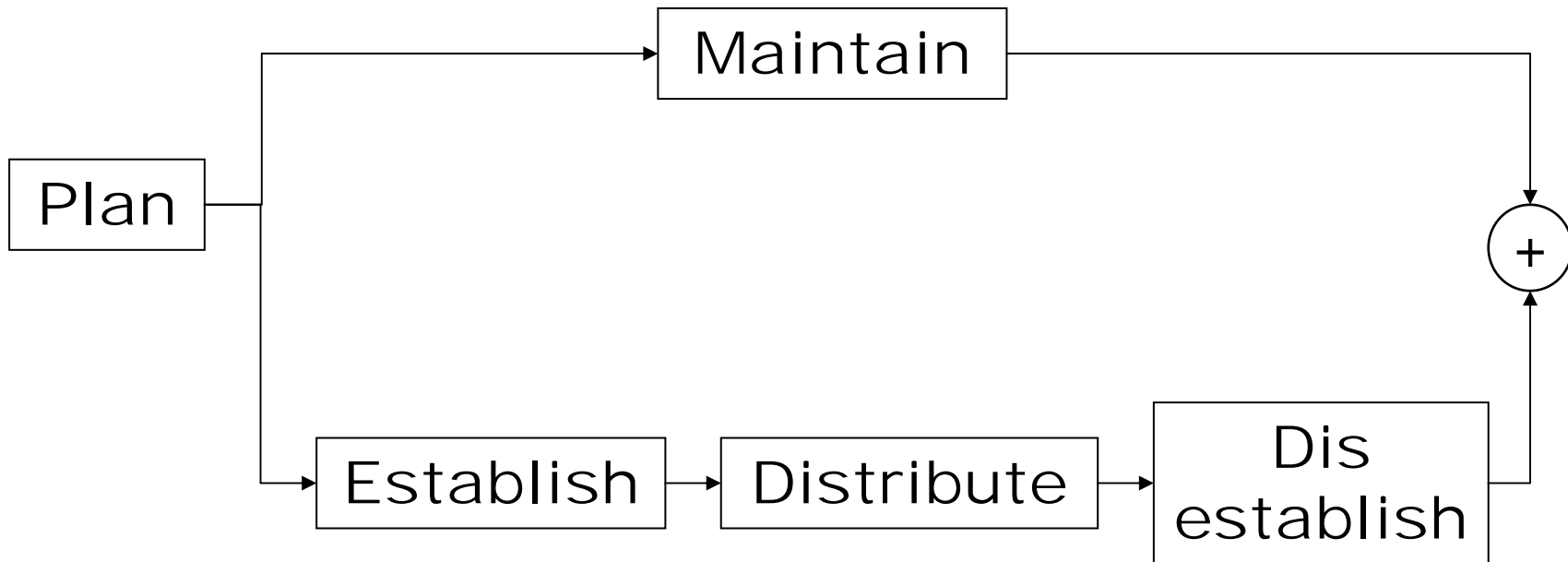
**Air to Air
Refueling
(Out of Scope)**



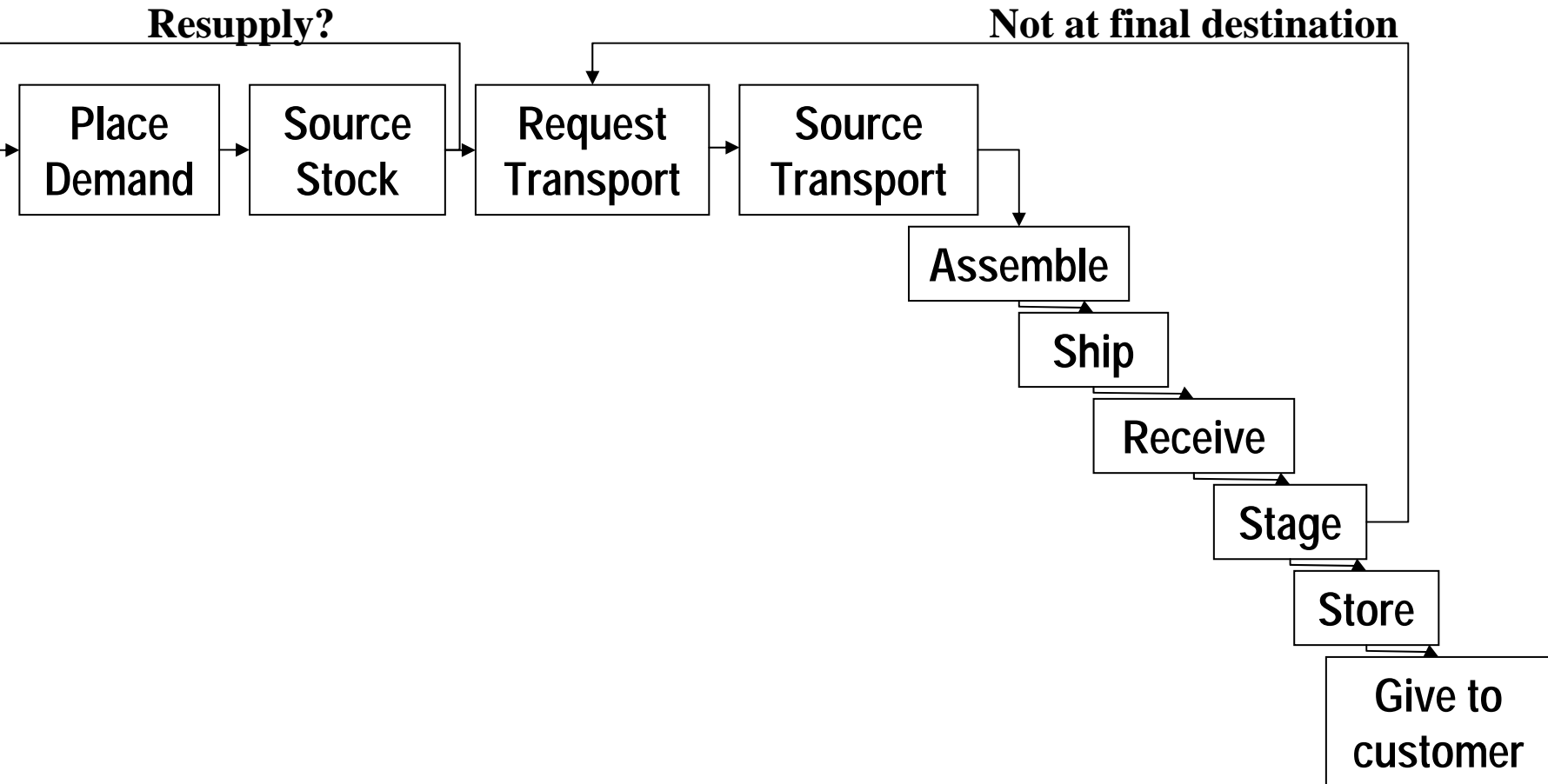
Stakeholder Involvement

- Define and engage stakeholders early (from Scope) Form IPT - Keep engaged
- Pros
 - smart/aware customer
 - contacts to specific people/organisations
 - ambassadors
- Cons
 - Slow committee-like process
 - educate new faces

Requirement – Distribution Functions



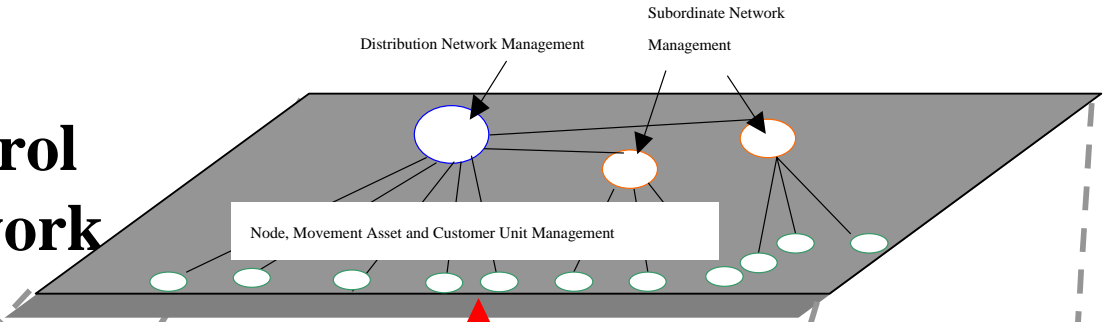
Distribute Function (for Each Demand)



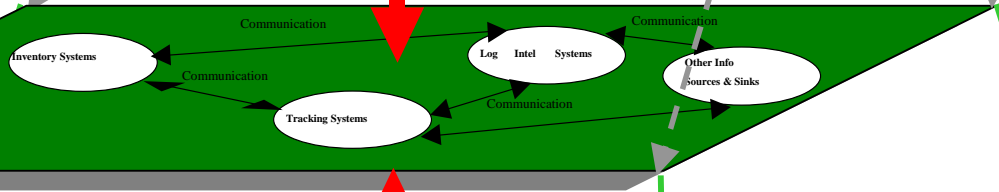
INTEGRATION



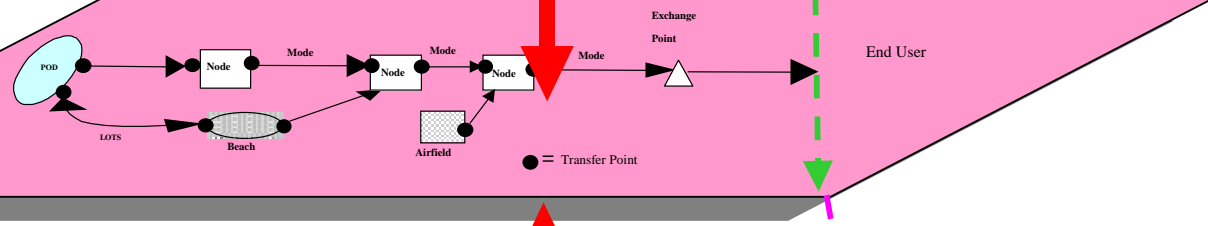
Control Network



Communication & Information Network



Physical Network



The JTDS

Tackling Big Problems

Six Trade Studies

- Control
- Information (Management & Tracking)
- Physical
- Logistics Over the Shore
- Communications
- Personnel Tracking

Capability Gap Equation

$$\text{Capability Requirement} - \text{Current Capability} - \text{Planned Capability} = \text{Gap}$$

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Influenced by
Military and
Commercial
Best Practice



JP126
Acquisition
Candidates



Requirement - Performance

Needed scenarios. Three chosen:

- Small Benign (1200 personnel)
- Medium (5500 personnel)
- Large Intense (9000 personnel)

Requirements - Modelling

Static modelling conducted (Excel)

- physical equipment (OK but multiuse)
- Information (rough estimates of data flow)
- Control (not useful)

Dynamic Modelling

Needed Dynamic modelling to investigate
queues for equipment / people

Planimate was developed by DSTO

- Some progress but complex
- Limited to the physical (not information or control)
- Yet to be verified as being representative

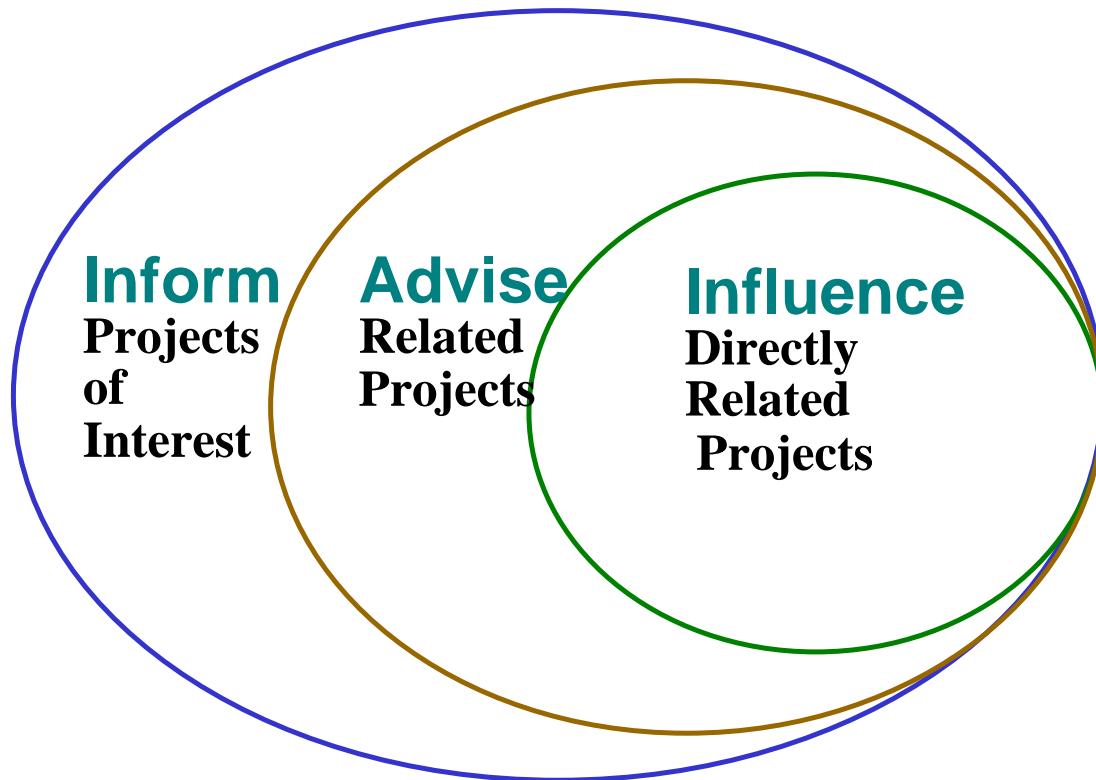
Outcome of Requirements Analysis – System Level

- **Functions – well defined**
 - (FPS produced) **Basis of lower level specs**
- **Performance – COI & MOE but ill defined**
 - **Availability?**
 - **Reliability?**
- **Guidance on High Level Roles - well defined – (OCD produced) Basis of doctrine**

Current Capability

- Lots of existing / legacy system
- Many Fleet managers / organisations
- Visit the people doing the job

Planned Capability

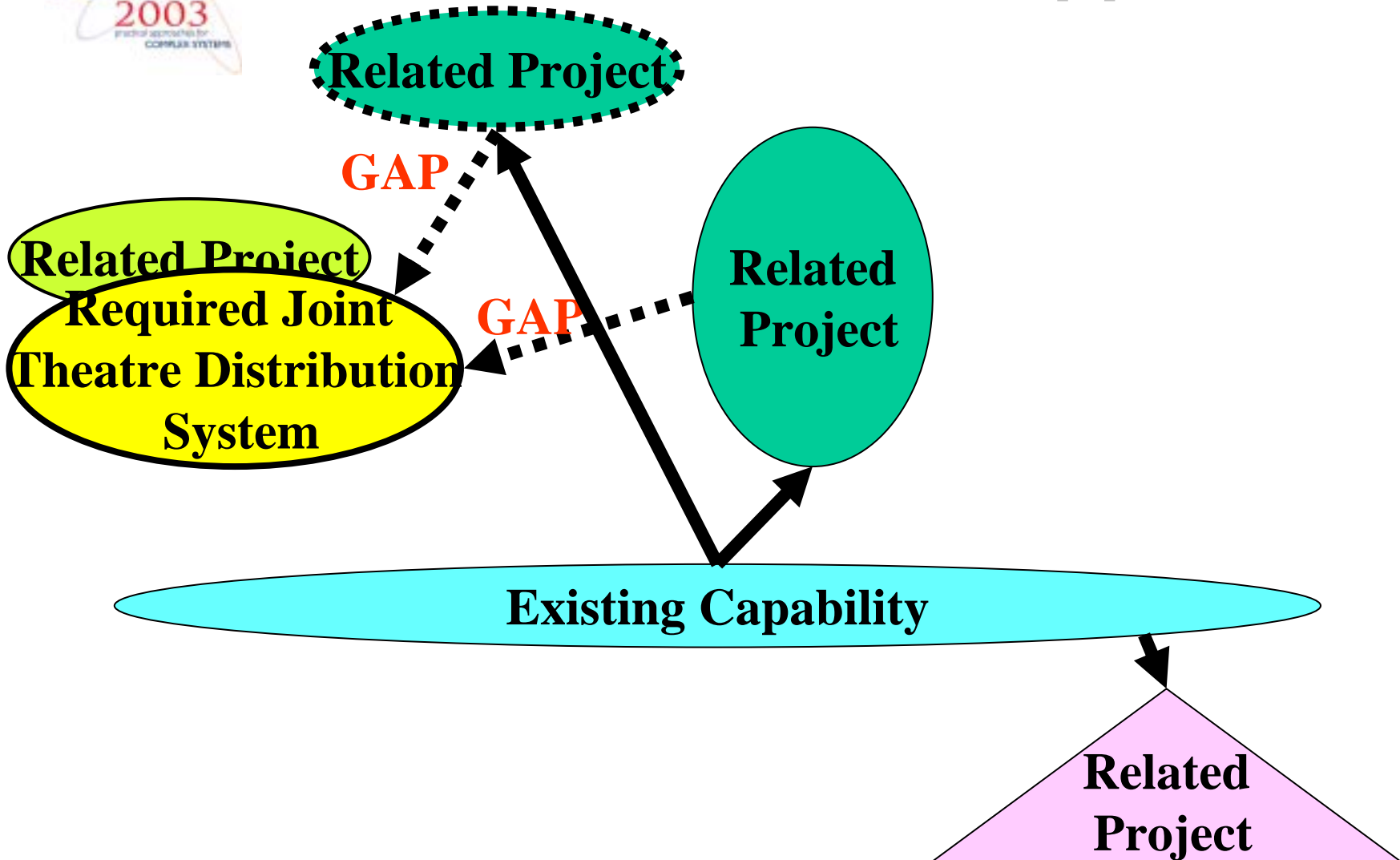




Capability Gap Equation

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Solution Approach



Gap - Cost Benefit Analysis

Dilemma – How to compare cost benefit of Solutions to fill the gap?

- across three networks
- non dedicated equipment
- not an isolated system?
- go through process once lightly to see drivers/ fundamentals
- concentrate on drivers or fundamentals (depending on **risk** approach)
 - **Influence of other projects was major**

$$\text{Capability Requirement} - \text{Current Capability} - \text{Planned Capability} = \text{Gap}$$

↙
Solution Candidates

- **Required** - Classic SE approach good but limits on performance
- **Current** – see the people doing the job
- **Planned** – interactive
- **Solutions** - Planned Projects had big influence (more so than industry best practice)