

# Enhancing intermodal freight by ITS – case Pol-Corridor

**Pekka Leviäkangas**

Senior research scientist & team leader & account manager

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# Structure of presentation

**Introduction** – ITS and intermodal freight, Pol-Corridor

**Service architecture for Pol-Corridor**

**Experiences** – a subjective view

**Conclusions** – hypotheses based on experiences

**Discussion**

# ITS and intermodal freight

- Switching between modes => operators, infrastructures
- Crossing national borders => infrastructures, administration
- Road user ↔ infrastructure manager
- Consignor ↔ consignee ↔ 3PL ↔ forwarder ↔ terminal operators ↔ customs ↔ transport operators ↔ infrastructure managers

- Connecting truck/rail route
- Sea route
- Shuttle Train



## Pol-Corridor

- All modes
- Shuttle train as a backbone
- Hubs
- More than 10 countries
- Freight potential >1 train/day

# Promoters & partners in Pol-Corridor

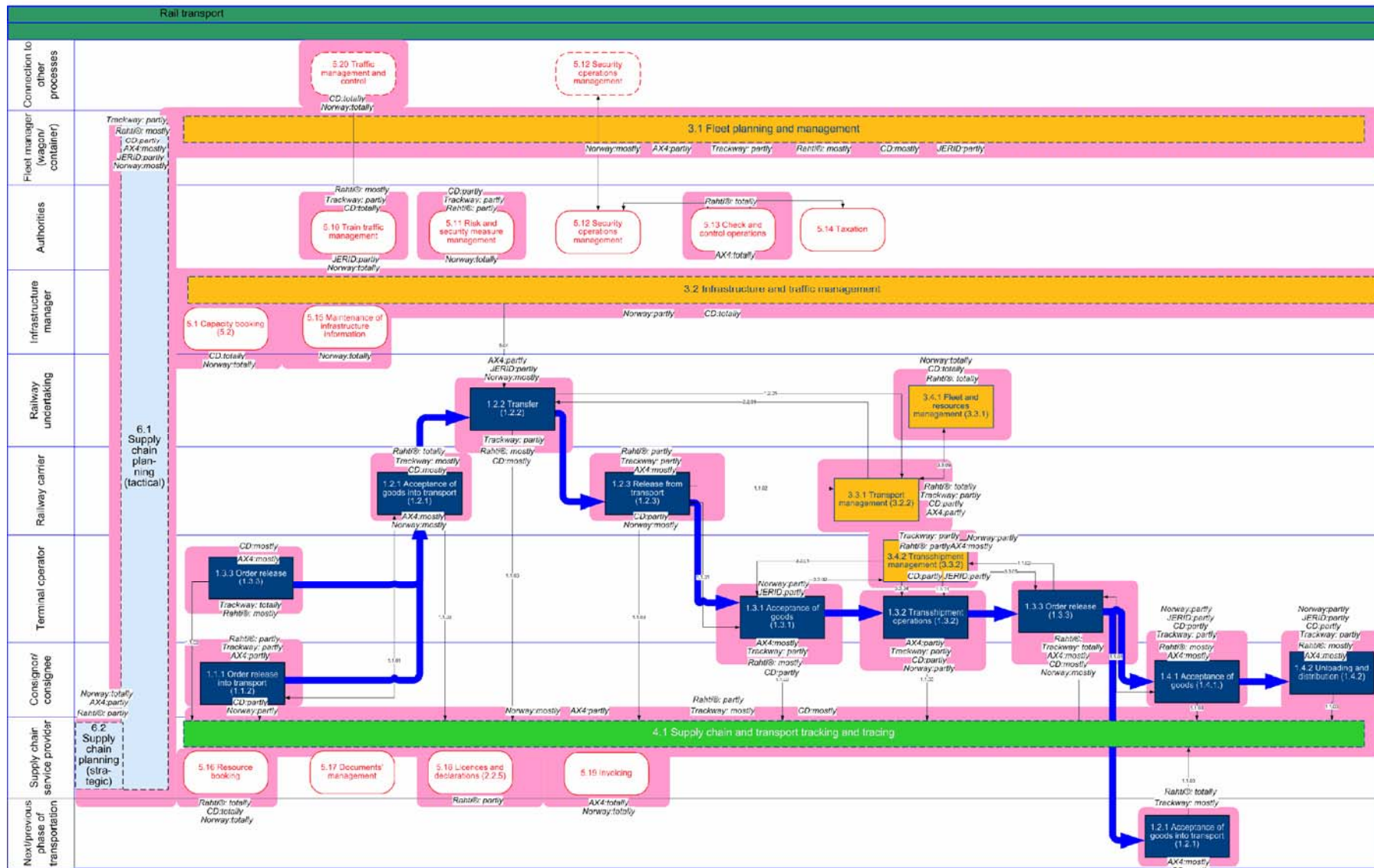


# Information service packages for intermodal freight

<b>Support Process</b>	<b>Contracting Phase</b>	<b>Preparational Phase</b>	<b>Operational Phase</b>
EnvDataMgmt	LicenceMgmt	TimetableMgmt	TimetableMgmt
MapServ	ContractMgmt	TransportPlanMgmt	GoodsAcceptanceMgmt
TrafficData	ResponsibilityMgmt	LogisticsOperatorMgmt	VehiclePositioning
RoadMaintTasks		RouteMgmt	VehicleMonitoring
RiskTrLicenseMgmt		ResourceMgmt	VehicleIdentification
RiskTrTracking		OrderMgmt	HandlingInstructionsMgmt
VehRegisterServ		OrderReceipt	WirelessChannels } Wireless IT
			WirelessDevice }
			LoadingMgmt
			VAServicesMgmt
			GoodsReleaseMgmt
			ShipmentMgmt
			PartyIdentityMgmt
			ExceptionMgmt
			ExceptionReceipt
			UnloadingMgmt
			ReclamationMgmt
			TrackingTargetCreation
			TrackingDataMgmt
			TrackingDataMonitoring
			ParcelHierarchyMgmt
			SupplyChainMgmt
			ProductionMgmt
			ProductionIdentification
			ProductListMgmt
			WarehouseMgmt
			TransshipmentMgmt



# Service architecture – business process view



**Legend**

- Material flow (Southbound)
- Information flow
- External process
- Planning
- Management
- Delivery (Southbound)
- Tracking and tracing
- Supportive action

(Leviäkangas, Alarukka et al, 2005)



# Experiences

It is possible to link different actors and gain operational efficiencies by reducing unnecessary paper handling and red tape

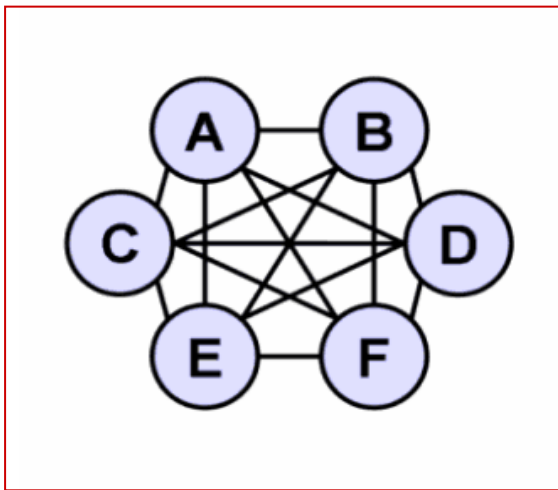
- The technology is there
- The system products are on the shelf

The questions are: who is paying for this?  
who is taking the first step?  
who is leading the efforts?  
who is hosting common or shared IT?

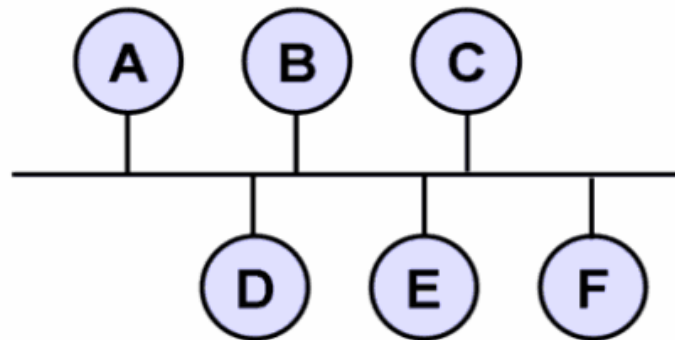
**Why do not we have the services/systems in place?**

# Hypotheses

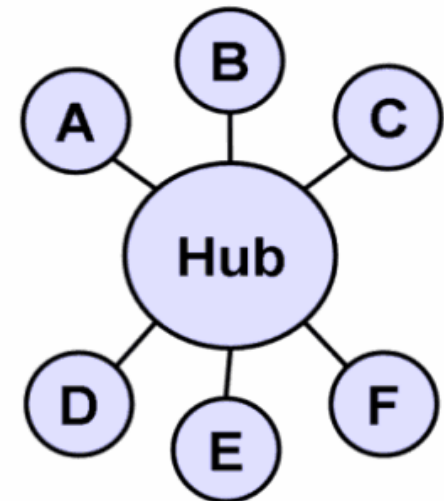
1. The IT architecture topology of “mature” organisations is prohibiting – or at least not supporting – information exchange



**Point-to-point**



**Message Bus**

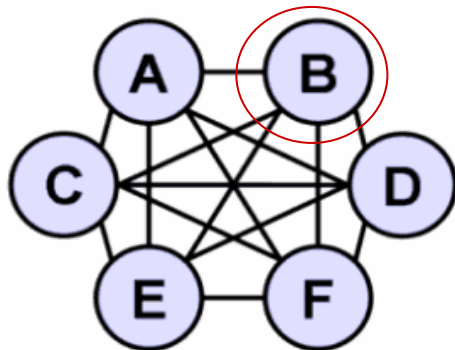


**Hub and Spoke**

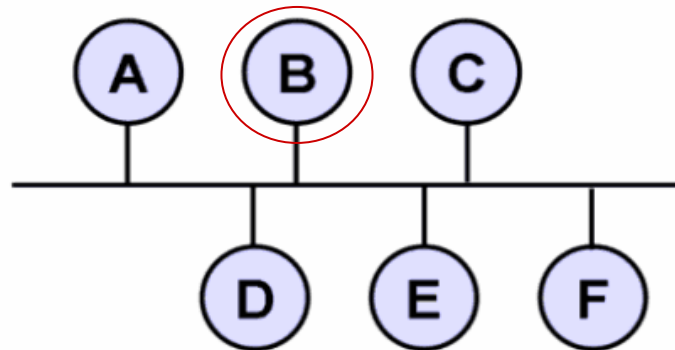
(Shi & Gandhi, 2001)

# Hypotheses

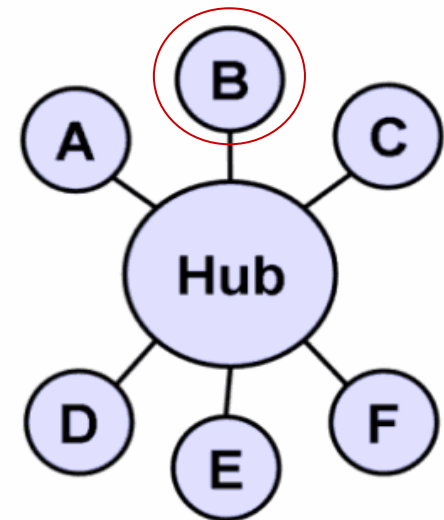
2. Management is unwilling to pursue IT development efforts that are partly beyond their control and mandate



**Point-to-point**



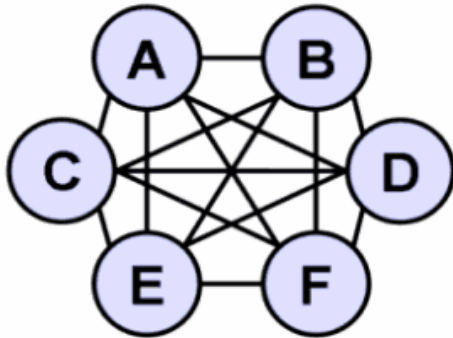
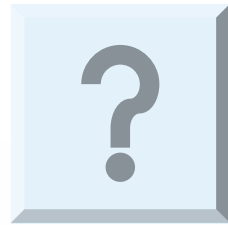
**Message Bus**



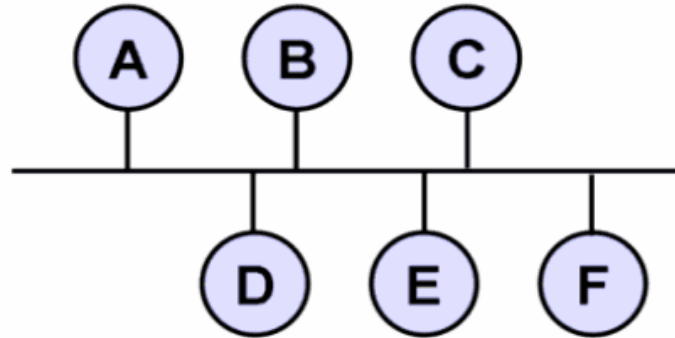
**Hub and Spoke**

# Hypotheses

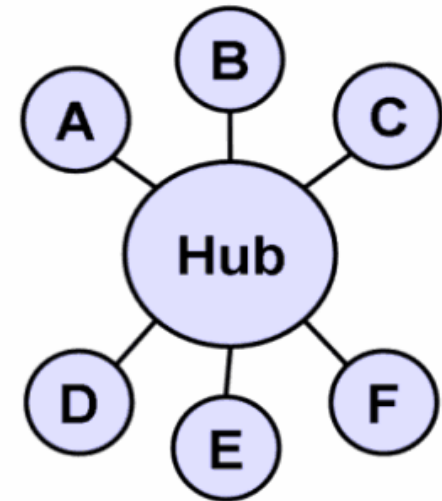
3. Management teams or boards are not represented by necessary IT skills



**Point-to-point**



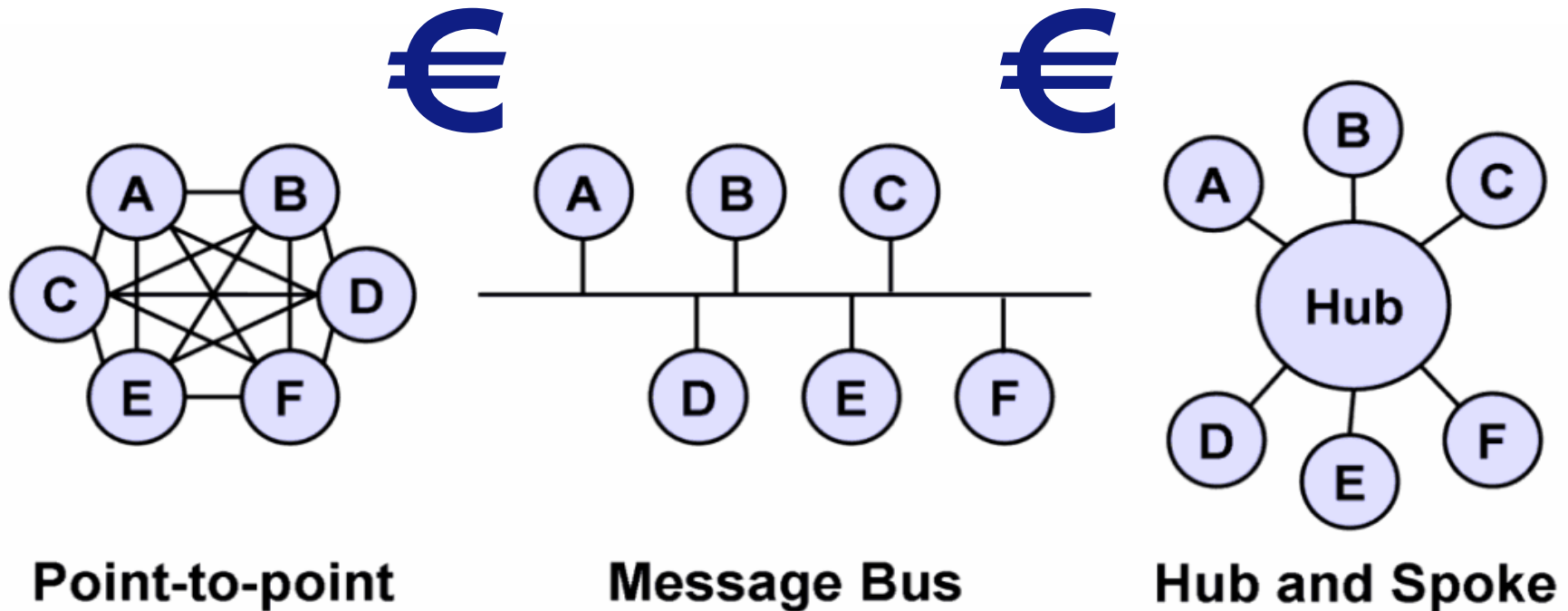
**Message Bus**



**Hub and Spoke**

# Hypotheses

4. Customers are usually not willing to pay for improved IT-enabled customer services and thus the added value has no explicit market value



## Possible solutions

- Joint ventures for info services – see Railinc Inc., US
- Make major effort to renew IT architecture
- Outsource IT, use performance targets
- Hire CIO and make her/him a board member
- Draft business processes exceeding corporate boundaries and analyse what IT can do in them
- Do not renew technology, unless renewing processes

# Discussion

Questions?

Comments?

Ideas?

Answers?

Conforming & counter-arguments?

😊 THANK YOU! 😊