



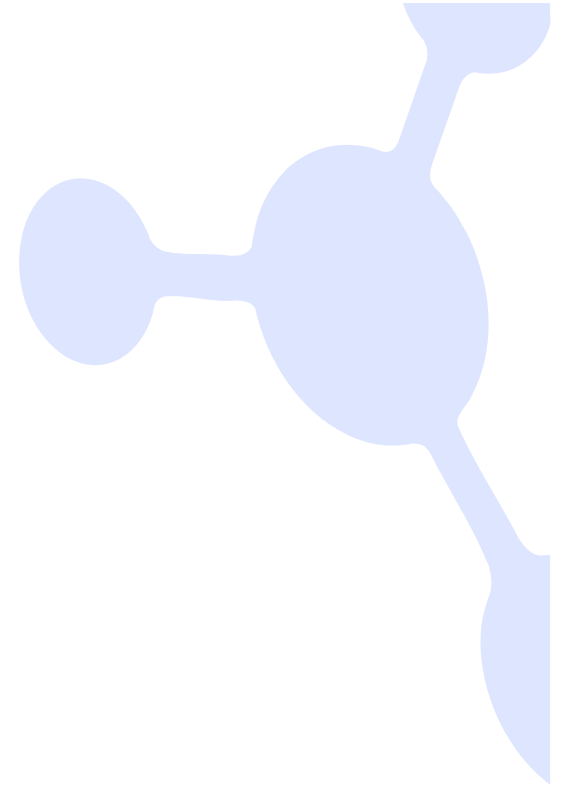
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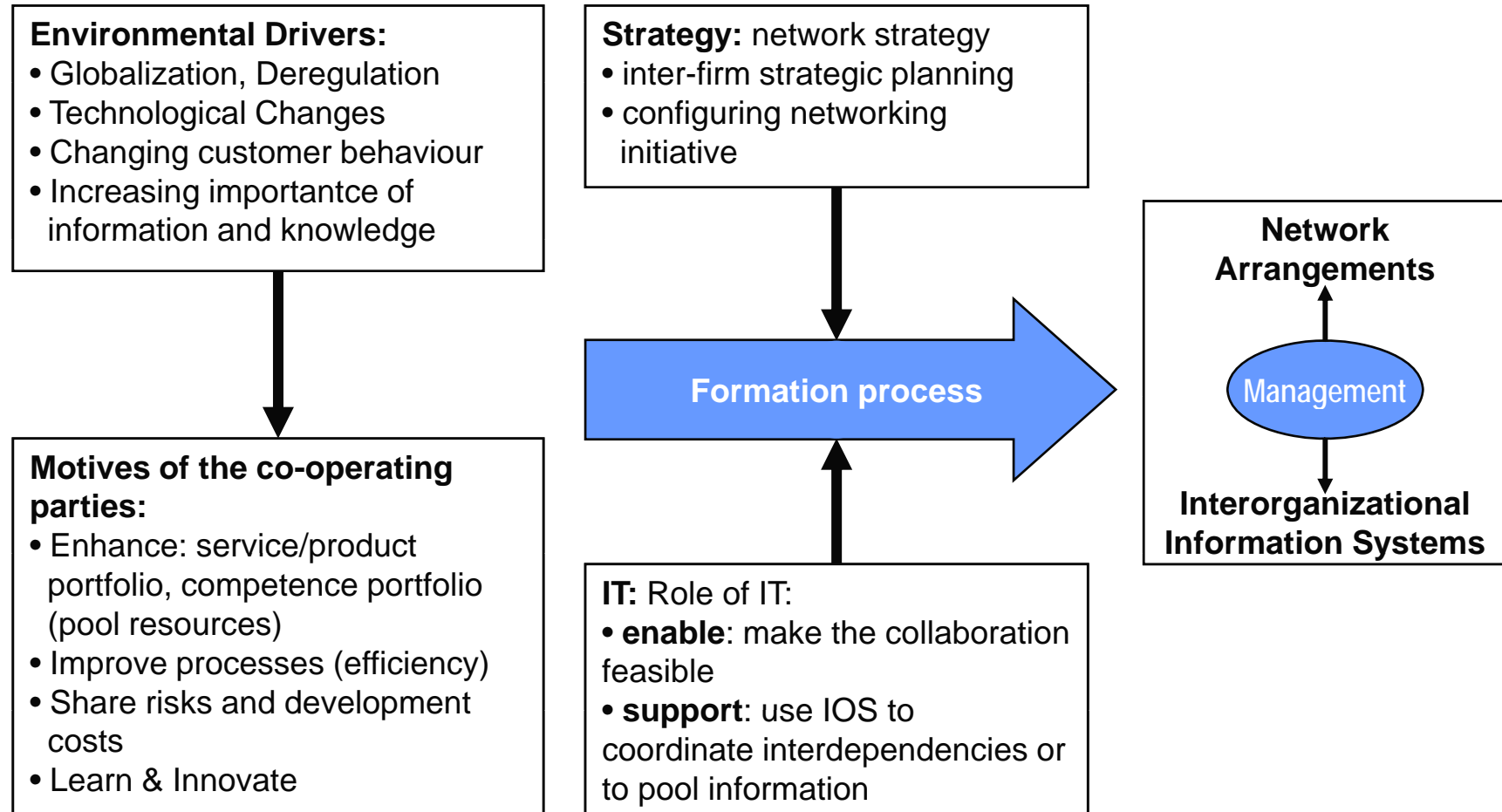
Initiation of IOS



Objectives of this module

- Who takes the lead in setting-up EDI linkages and why?

Formation of inter-organizational networks and IOS



What could be strategic drivers to set-up an IOS?

- **Cost reductions (efficiency)**
 - quality and efficiency improvements
- **Differentiation advantages**
 - new services, improved flexibility, improved customer service, reputation as technology leader
- **Time base competition**
- **Improved control and coordination of processes**
 - informational representation of processes, tracing and tracking
 - e.g. ECR
- **Advantages through integration**
 - network externalities, systemic rationalisation (SCM)

Excursus: Determinants of EDI benefits

<i>level of integration with internal business processes</i> \ <i>supported business activity</i>	<i>Peripheral</i>	<i>core</i>
<i>low</i>	low integration in peripheral business activities	low integration but core business application
<i>high</i>	high integration with internal business processes, peripheral activity	high integration in core business activities

adapted from: Cox; Ghoneim (1994, 647)

- Who has the highest incentives to set-up EDI linkages?

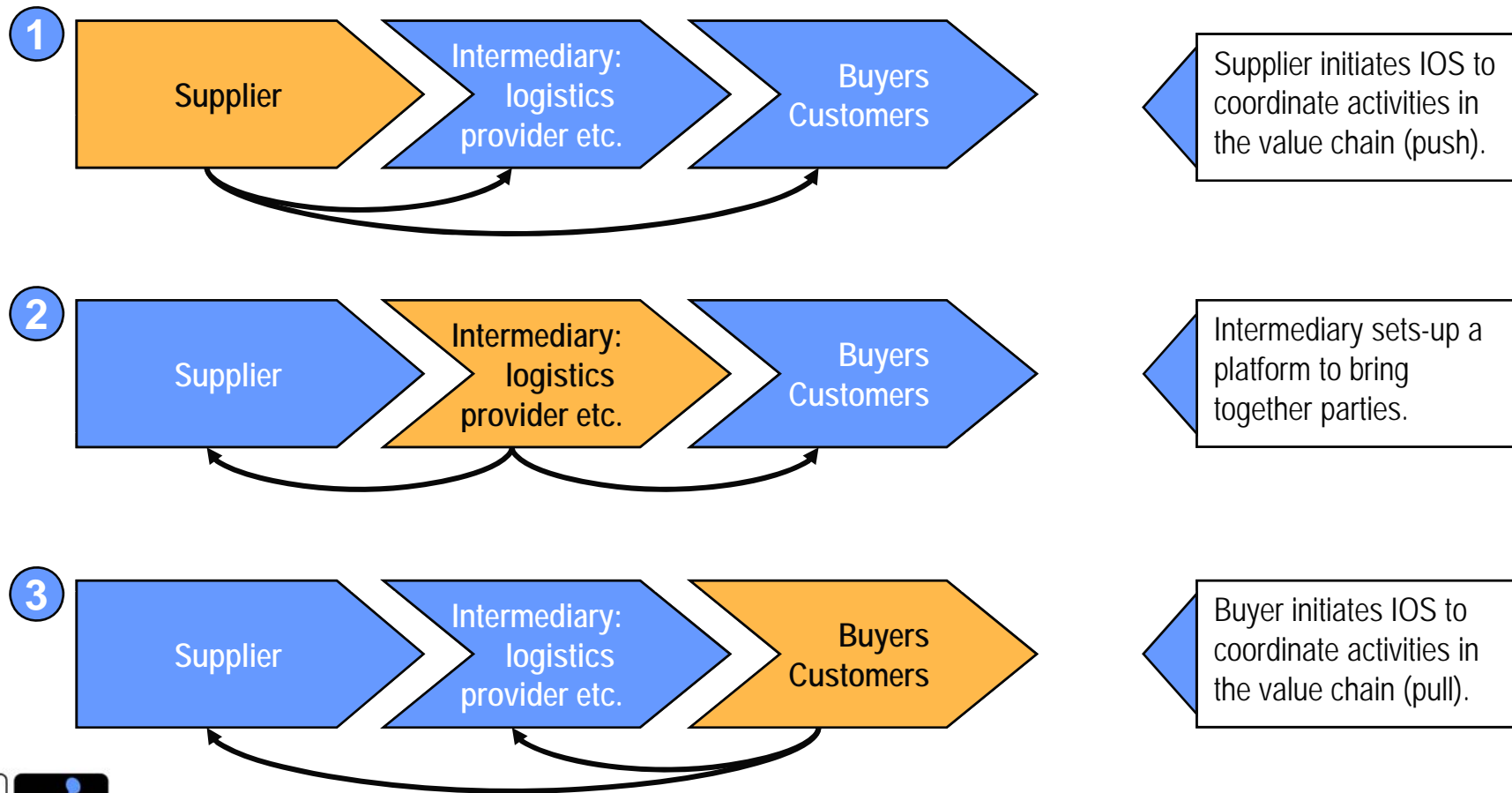
Switching costs, customer lock-in and ways to avoid them

- Incentives to set-up EDI linkages are divided unevenly
- Typically suppliers have a higher interest to lock-in their customers and to create switching costs
- Typically customers tend to avoid lock-in situations. Switching suppliers is one way for the customers to use or retain their power over the suppliers and to keep-up competitive pressure.
- Most companies are in both roles.

- In what situations can a tight integration with suppliers be advantageous for customers even though this might require partner specific investments and lead to switching costs?
- In which ways can a customer avoid or reduce the negative sides of supplier lock-in?
- Can the initiator of an EDI link achieve a strategic advantage even when standards are used?

Who initiates and sets up the IOS?

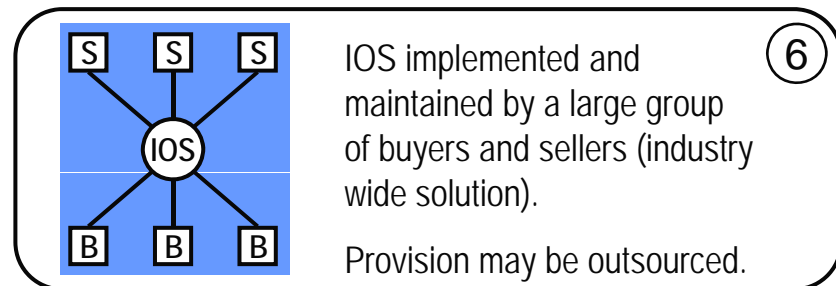
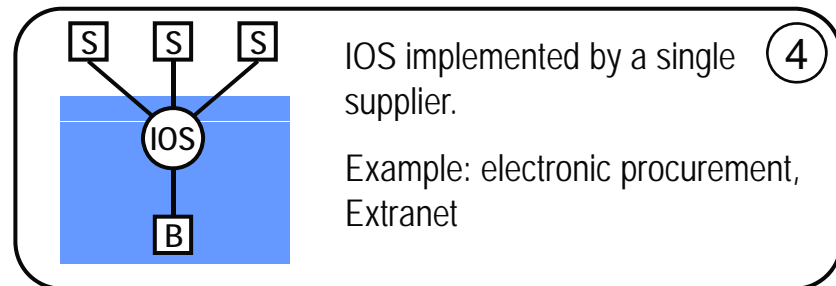
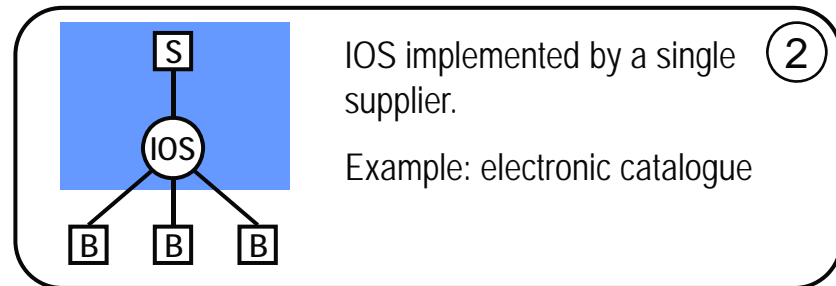
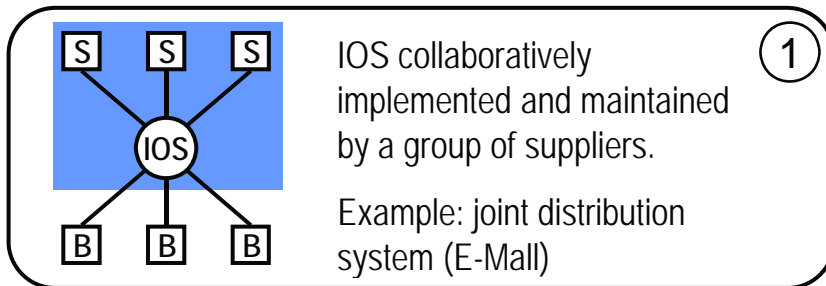
Sponsor and adopter roles along a value chain
(example: SCM or ECR initiatives)



Sponsor / adopter motives for IOS implementation (value chain view)

	Sponsor motives	Adopters' motives			
		Supplier	Intermediary	Customer	
1	Supplier	Cost reduction, customer relations, influence on the design of IOS solution	Avoiding competitive disadvantages	Improving competitive position, cost and coordination benefits	Administrative improvements
2	Intermediary: forwarder, logistics company	Centrality of IOS, integration benefits with and extending service scope towards shipping companies and consignees	Coordination benefits	Avoiding competitive disadvantages	Administrative improvements (delivery notes, delivery control and confirmation)
3	Customer, Buyer	Administrative and qualitative improvements, scale and scope, influence on the design of IOS solution	Maintain or improve (co-operative) customer relationship	Cost reduction and integration benefits	Best practice, pilot for future extensions, administrative improvements

... or a bit more complex with a view on collaboration.



IOS provider strategies and usage models

	IOS provision as adjunct to primary product or service	IOS provision as stand-alone business
IOS usage for competitive advantage	<p>Competitors seek to differentiate primary product or service. (A)</p>	
IOS usage as strategic necessity		

Context A: Competitors seek to differentiate primary product or service

- IOS can be a powerful tool for first movers to differentiate their product or service (portfolio)
- the challenge is to sustain competitive advantage won by early introduction of IOS
- create win-win situation and gain collaborative competitive advantage (cp. group vs. group)
- necessary is a functioning relationship management to achieve and sustain the advantages on an organizational level and to ensure to obtain the optimal benefits

Taking the lead in IOS development

Motives for early movers:

- economic rationale
- proof of technological competence
- hook up customers
- control over a distribution channel
- competitive advantage
- influence on the system design

IOS provider strategies and usage models

	IOS provision as adjunct to primary product or service	IOS provision as stand-alone business
IOS usage for competitive advantage	<p>Competitors seek to differentiate primary product or service. (A)</p>	<p>(B) Technology provider looks for product application</p>
IOS usage as strategic necessity		

Context B: Technology provider looks for product application

- IOS introduction is initiated not by a product or service provider but by a technology provider looking for an application.
 - examples: Siebel, I2, Ariba, Commerce One, etc.
- There is the danger, that these systems do not meet the demands of their users due to a lack in domain knowledge.
- Success lies in the integration with the users' business system and processes.
- Here, the discussion on organizational networks comes into play!
- Also: critical mass problem

Remember: Market-pull versus Technology-push in IS adoption

▪ Market-pull

- driven by customer wishes or organizational needs
- systems development to close an efficiency gap or to enhance service degree to better meet needs
- more about improvement than real innovation
- but a safe alternative with only low risk

▪ Technology-push

- driven by technological opportunities (new technologies)
- systems (prototypes) evolve from new ideas in engineering processes
- after development a phase of diffusion/adoption starts
- risks:
 - systems do not meet customer/organizational requirements
 - gap between user expectations and real benefits of systems
- allows real innovation, has to be seen as a series of experiments
- example: UMTS

IOS provider strategies and usage models

	IOS provision as adjunct to primary product or service	IOS provision as stand-alone business
IOS usage for competitive advantage	Competitors seek to differentiate primary product or service. (A)	(B) Technology provider looks for product application
IOS usage as strategic necessity	Competitors may agree to cooperate on IOS development (C)	

Context C: Competitors may agree to cooperate on IOS development

- After a phase of IOS usage to gain competitive advantage, industry participants enter a stage where systems become a standard and therefore strategic necessity.
 - IOS easily to be copied.
- Thus, companies tend to develop/maintain IOS collaboratively to share costs/risks.
- Participants form organizational network to set-up IOS.
- Standards play an important role.
- Leads to a competition between systems.
- Also: critical mass problem

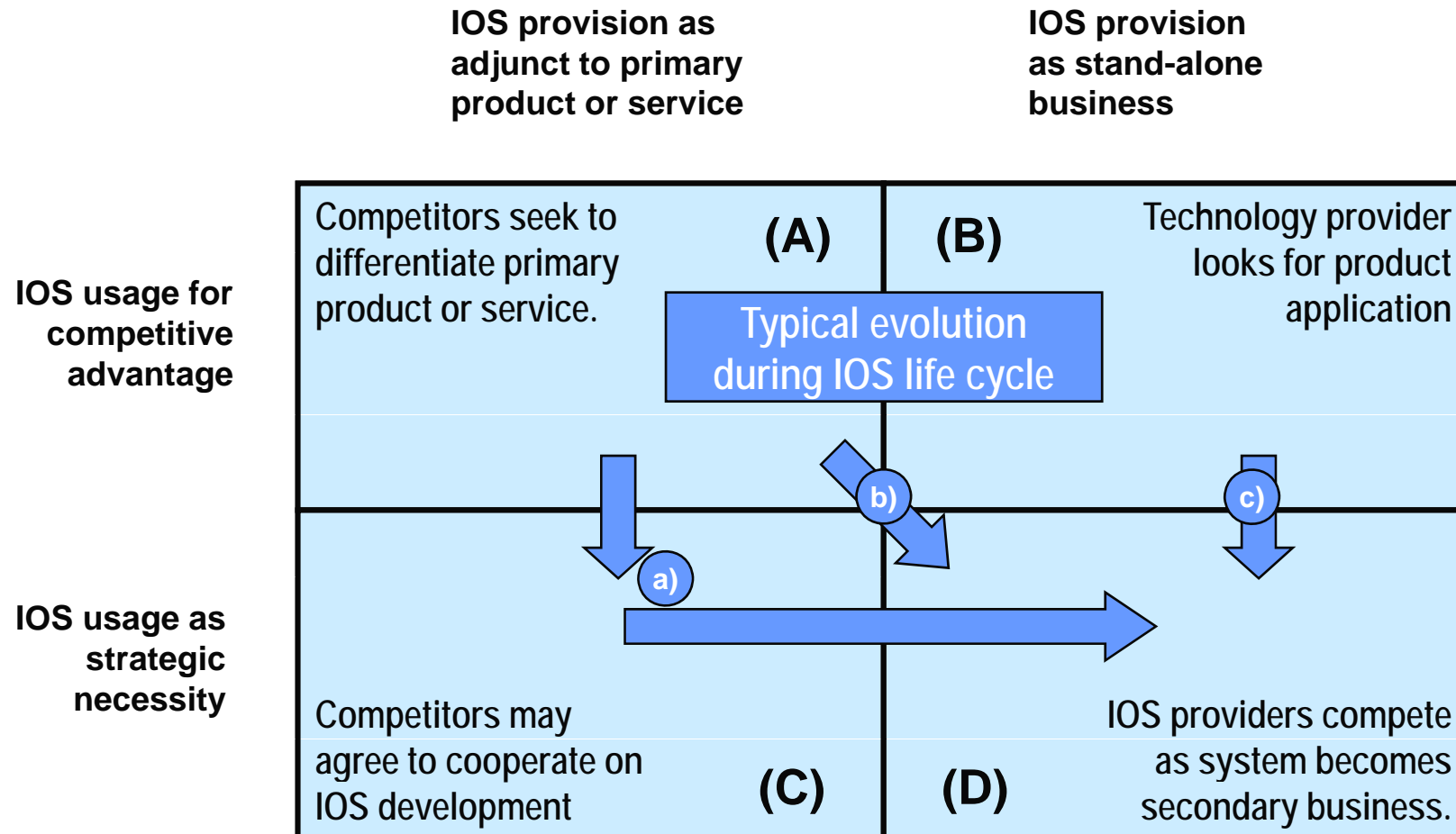
IOS provider strategies and usage models

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IOS usage as strategic necessity	<p>Competitors may agree to cooperate on IOS development (C)</p>	<p>(D) IOS providers compete as system becomes secondary business.</p>

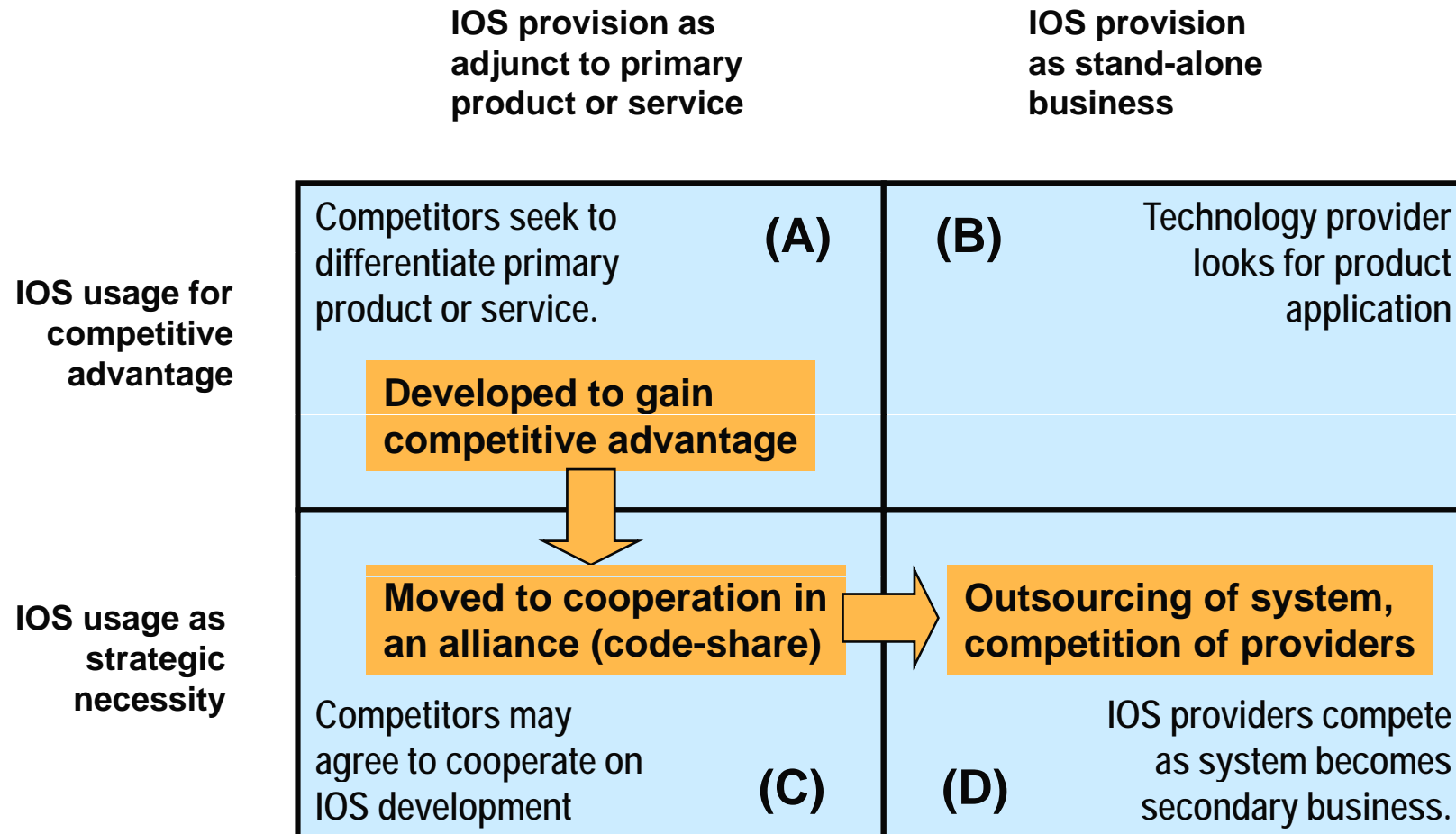
Context D: IOS providers compete as system becomes secondary product

- Once sufficient demands exist to make provision of IOS services a business in its own right, participants have other options besides the me-too investments and joint developments:
 1. treating the IOS provision as stand-alone, secondary business (profit center or spin-off)
 2. outsourcing the IOS to third party
- When IOS become increasingly complex, maintenance of IOS may extent far beyond core competence:
 - outsourcing and concentration on core competencies

Summary: development paths of IOS



Example 1: Computer Reservation Systems in the Airline industry (e.g. Sabre)



Summary: Strategic perspectives on EDI

Considerations to start with:

- Company's business model: value proposition, roles and linkages (core processes, internal and external integration)
- Strategic intent: worthwhile and achievable areas of strategic differentiation
- Existence, role and reputation of collective actor (trade association, IGH, IPU etc.)
- Market developments: existence of standards (e.g. product codes etc.)