

Inter-Organizational Information and Communication Technology (IICT) Implementation in the Customer-Supplier Interface

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Presentation Outline

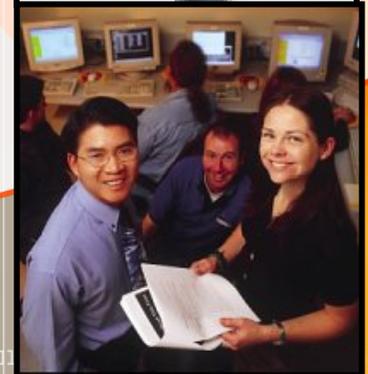
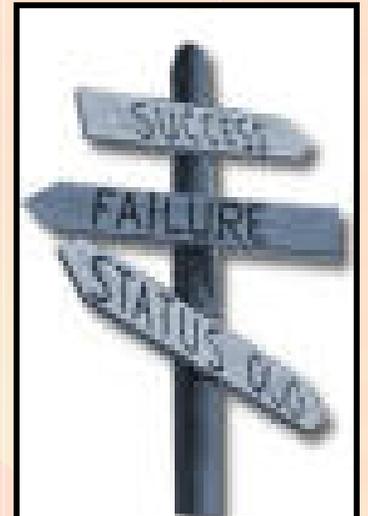
- Research objectives
- Research rationale
 - IT implementation challenge
- Inter-Organizational Information and Communication Technologies (IICT)
- The Model
 - IICT business performance objectives
 - Factor affecting successful IICT implementation
- Concluding remarks

Research Objectives

1. Propose and test a conceptual framework of organizational and managerial factors that affect Inter-Organizational Information and Communication Technology (IICT) implementation
2. Integrate customer relationship portfolio and IICT portfolio management

IT Implementation Challenges

- 16% of IT projects completed on time, budget, and scope (Huber, 2003)
- 80% of IT investments do not meet corporate performance objectives (Clegg et al, 1997)
- Initial drop in productivity and significant learning curve (Harper&Utley, 2001)
- **Reasons mostly non-technological**
 - Human and organizational aspects
(Huber, 2003; Kosch, 2003; Ross&Weill, 2002)



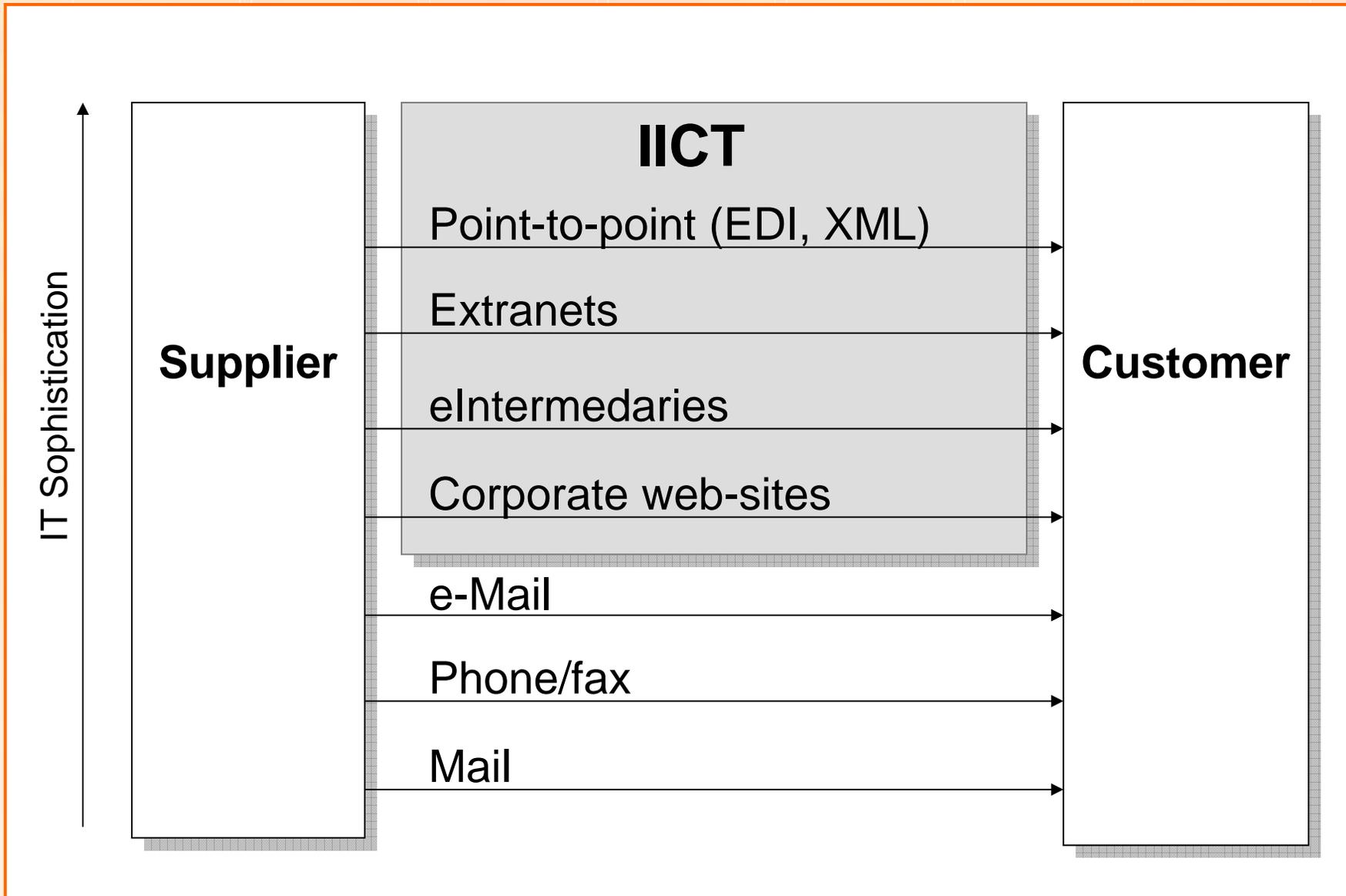
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Inter-Organizational Information and Communication Technology (IICT)

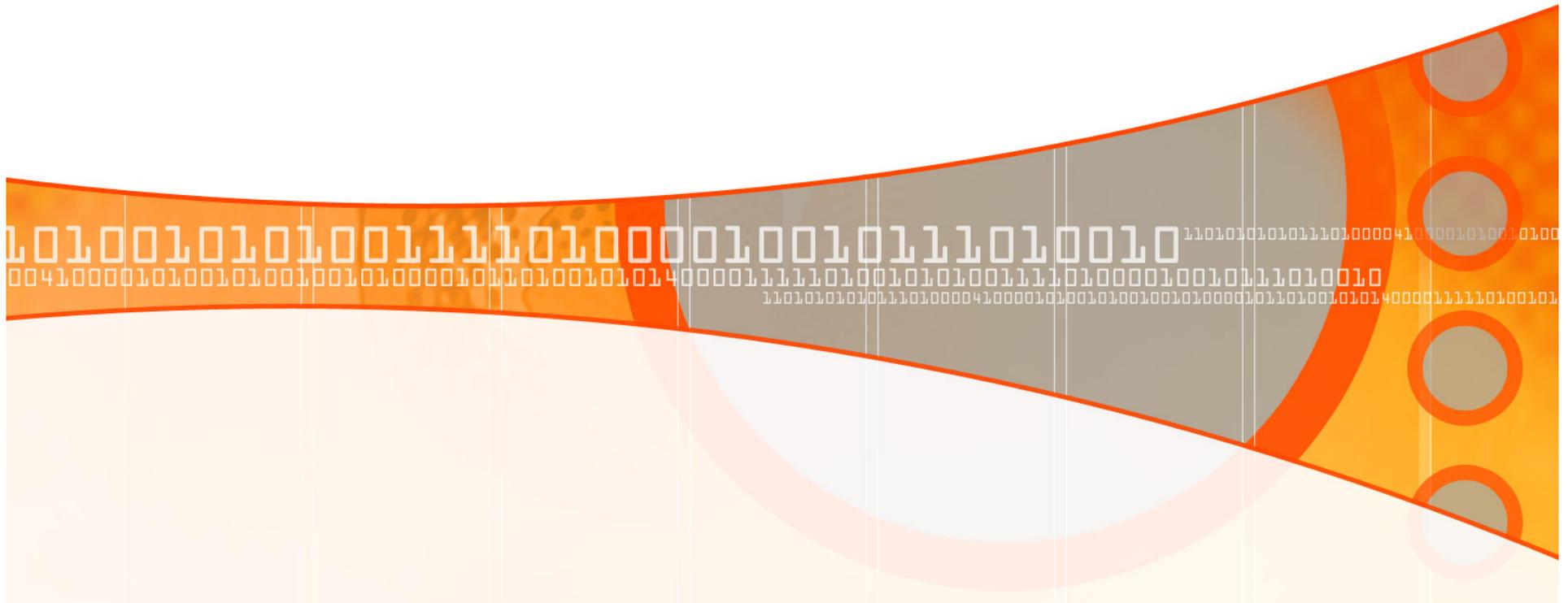
- Information Technology (IT) used to facilitate inter-organizational communication
 - Information exchange
 - Transactions
 - Services

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IICT and the Customer Interface



The Model:
**Factors Affecting Inter-Organizational
Information and Communication Technology
Implementation Success**



Factors Affecting Achievement of IICT Business Performance Objectives

Organizational Factors

Corporate Culture

Corporate Structure

IT Capabilities

Managerial Factors

Business Strategy

Change Management

Customer and IICT
Portfolio Management

Achievement of
IICT Business
Performance
Objectives

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graph LR; subgraph Organizational_Factors [Organizational Factors]; C1[Corporate Culture]; C2[Corporate Structure]; C3[IT Capabilities]; end; subgraph Managerial_Factors [Managerial Factors]; M1[Business Strategy]; M2[Change Management]; M3[Customer and IICT Portfolio Management]; end; C1 --> A[Achievement of IICT Business Performance Objectives]; C2 --> A; C3 --> A; M1 --> A; M2 --> A; M3 --> A;
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IICT Business Performance Objectives

Value Chain Primary Activities



(Porter 1985)

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IICT Business Performance Objectives

Value Chain Activity	Problem	IICT Business Performance Objective
Inbound Logistics & Procurement	<ul style="list-style-type: none"> - Long lead time - High supplier transaction cost 	<ul style="list-style-type: none"> - Reduce transaction cost and search cost - Reduce order cycle - Enable JIT
Production & Operations	<ul style="list-style-type: none"> - Inaccurate demand forecast - Bullwhip effect - Excess inventory 	<ul style="list-style-type: none"> - Improve demand forecast - Integration of timely and accurate data into planning - Reduce bullwhip effect - Reduce inventory
Outbound Logistics & Distribution	<ul style="list-style-type: none"> - Multiple middlemen - Delivery costs 	<ul style="list-style-type: none"> - Elimination of intermediaries - Improved shipment tracking - Electronic delivery



IICT Business Performance Objectives

Value Chain Activity	Problem	IICT Business Performance Objective
Marketing & Sales	<ul style="list-style-type: none"> - Costly and difficult market information attainment 	<ul style="list-style-type: none"> - Increase sales - Increase market and customer information - Faster payment cycle - Lower communication costs - Improve relationship
Service (during & after)	<ul style="list-style-type: none"> - Response time - Costly information customization 	<ul style="list-style-type: none"> - 24/7 information access - Streamline service processes - Faster response - Customized service at low cost

Sources: Porter, 1985; Anandarajan et al., 1998; Chan and Davis, 2000; Lin et al., 2002; Ling and Yen, 2001; Moore, 2002; Tan et al., 2000; Vlosky et al., 2000



Corporate Culture and Structure

- IICT implementation often spans the enterprise
 - Consensus of goals between departments and functions
- Team orientation
- Flexibility
- Free information sharing
- Autonomy
- Trust

(Harper and Utley, 2001)



IT Capabilities

- Information system infrastructure
- IT managerial skills:
 - Understand the needs of other functional managers, suppliers, and customers
 - Communicate and work with other functional managers, suppliers, and customers
 - Coordination of IT activities to support other functions, suppliers, and customers
 - Anticipate the future IT needs of other functions, suppliers, and customers

(Mata et al. 1995)



IICT Fit with Business Strategy

Strategy Type	IICT Contribution
Cost leader	<ul style="list-style-type: none">- Efficient operations- Reduced transaction costs- Standardized service
Differentiation	<ul style="list-style-type: none">- Value added services- Differentiated exchange experience- Tailored solutions
Focus	<ul style="list-style-type: none">- Improved relationship- Offered to selected customers
Broad scope	<ul style="list-style-type: none">- Cost effective to offer to a broad scope of customers
“Stuck-in-the-middle”	<ul style="list-style-type: none">- Repeat off-line business processes- Imitate competitors- Serve everybody with a generic solution

(Porter, 1985)

IICT and Sustainable Competitive Advantage (SCA)

SCA Criteria	IICT	Does IICT qualify?
Rare	Technology widely attainable and implemented	NO
Non-substitutable	XML, EDI, Extranet, web-site, eMarketplace, eMail, fax, phone, mail	NO
Valuable	Increase efficiency and effectiveness; reduce transaction and operation costs; improve customer service; speed-up information and cash flow etc.	YES
Imperfectly imitable	Successful implementation difficult	YES

(Barney, 1991)

Change Management

- Set of processes employed on a project to ensure that changes are implemented in a visible, controlled and orderly fashion
 - Systematically govern the effects of organizational change
 - Maintain the proper balance between the need for change and the potential detrimental impact of changes
- 17% of information managers ranked change management as No.1 concern (Computer Weekly, 2002)



IICT and Change Management

- Fit with business goals
- Common vision
- User buy-in
- Open communication
- Revised work processes
- Revised performance metrics
- Training



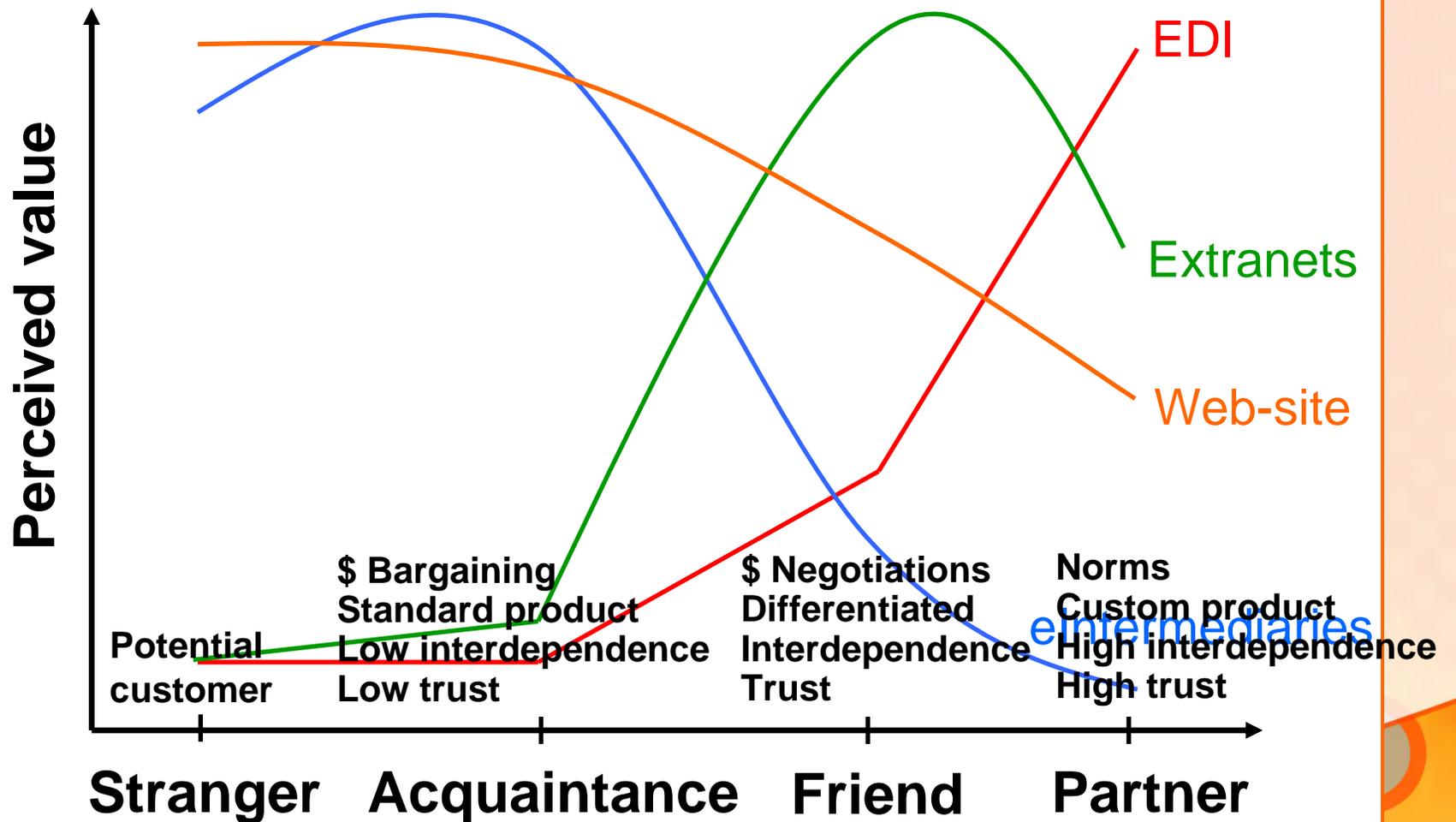
Customer Relationship Portfolio Management

- Move from discrete exchange transactions to relational interaction
- Nevertheless, maintaining a portfolio of different types of customer relationships is important
 - Resource for growing new partners
- Value based customer portfolio schemas:
 - Transactional, core, key
 - Acquaintance, friend, partner etc.

IICT Portfolio Management

- In the network economy, customer relationships are heavily facilitated by IICT
- It is not feasible to offer/provide all customer segments with the same IICT offer
 - EDI, XML
 - Extranets
 - eIntermediaries
 - Corporate web-sites
- The total value (cost-benefit) should be considered

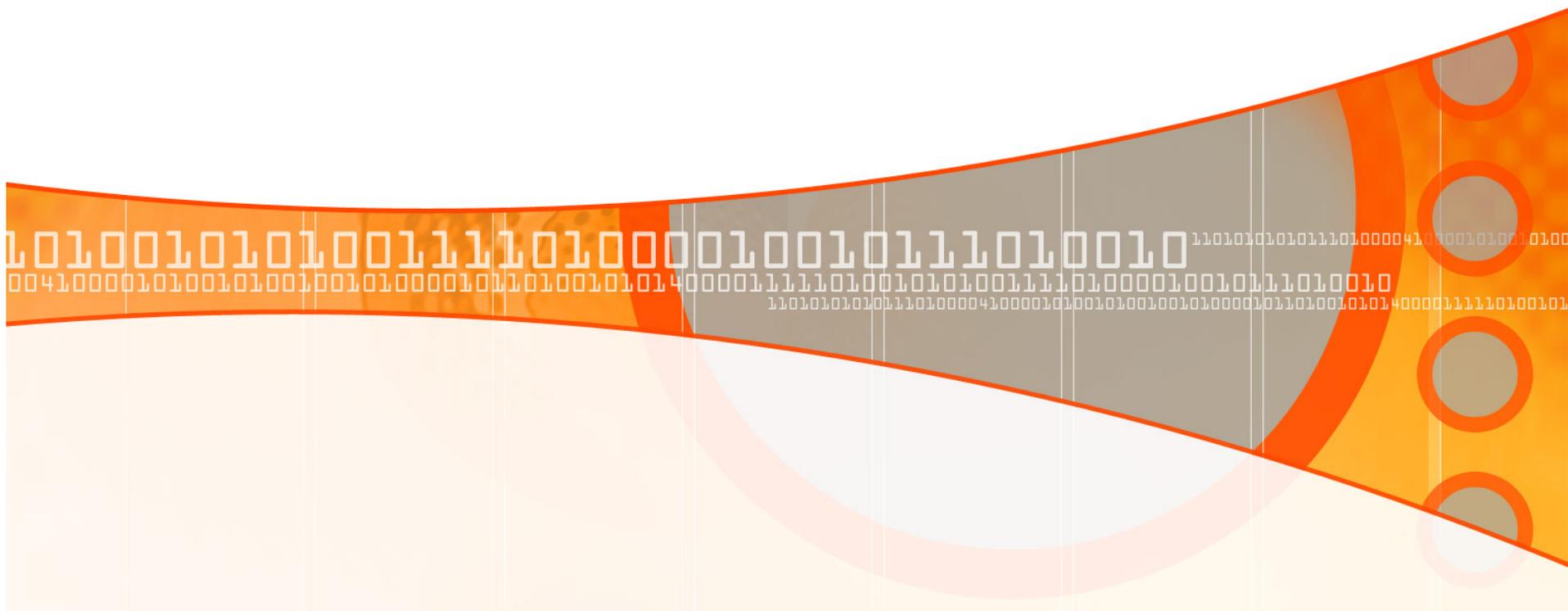
Hypothesized Value of IICT portfolio to Customer Relationship Portfolio



Concluding Remarks

- IICT implementation can:
 - Provide numerous opportunities for improving value chain activities
 - Contribute to the specific business strategy
 - Be a source of sustainable competitive advantage
- Hypotheses
 - Organizational and managerial factors affect IICT implementation success
 - IICT value differs per customer relationship segment and technology
 - Integrated customer and IICT portfolio management

QUESTIONS?



Customer Relationships

Process:	Awareness	Elaboration	Expansion	Commitment
Typology:	Stranger	Acquaintance	Friend	Partner
Cost	—————→			
Negotiations	-	Bargaining	Negotiations	Norms
Power	-	“Just” power	Balance	Balance
Trust	-	Evaluation	Medium	High
Perceived / Actual risk	-	High/Low	Medium/ Medium	Low/High
Asset specificity	-	Not established	Medium	High
Interdependence	-	Low	Medium	High
SCA source	-	Low	Medium	High
Offering	Market	Standard	Differentiated	Custom
Market info.	Asymmetric	Asymmetric	Asymmetric	Less asymmetric

(Dwyer et al, 1987; Johnson and Selnes, 2004)

