

# Course title: Creating Innovative Business Models

Lecture 5. Theory and practice of value creation

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# Introduction

- Intelligence
- Overview of Service
- Innovation
- Co Creation of value
- Intelligence science
- Conclusion

# Intelligence

- As one's capacity for logic, understanding, self-awareness, learning, emotional knowledge, planning, creativity and problem solving.
- Generally described as the ability to perceive information, and to retain it as knowledge to be applied towards adaptive behaviors within an environment or context.( Wikipedia)
- Is an estimate of the quality that we attribute to the decision-making and abstract thinking of people around us.

- Is defined as general cognitive problem-solving skills.
- A mental ability involved in reasoning, perceiving relationships and analogies, calculating, learning quickly...

# Two types of theories of intelligence

- A single factor of intelligence that determines the level of ability that we have in any task – a theory put forward by Charles Spearman who hypothesized that each individual might have a *g* factor, a general intelligence factor.
- Intelligence research stipulates that intelligence is divided into distinct categories; people would have specific ease with tasks of a particular domain and there would be no single factor explaining performance across different domains of intelligence.

# Can we teach intelligence?

- Possible to understand the complex psychological processes that enable people to solve problems, a construct that is more popularly understood as 'intelligence'."
- Université du Luxembourg researchers believe that we can teach intelligence.
- Cross-curricular ability can be learned.

# Human intelligence

- Douglas Detterman, emeritus professor at Case Western Reserve University, believes that intelligence covers three areas: genetics, neuroscience, and cognition.

# Intelligence science

- **Science** is *accumulated knowledge, systematized and formulated with reference to the discovery of general truths or the operation of general laws.*
- **Intelligence Science** is an interdisciplinary subject which dedicates to joint research on basic theory and technology of **intelligence** by brain **science**, cognitive **science**, artificial **intelligence** and others.

# Service Science

- Is a new discipline
- Is rooted in the interdisciplinary study of computer science, operations, industrial engineering, mathematics, research business strategy, management sciences, decision theory, social and cognitive sciences and legal sciences.
- Aim is to address addressing issues such as to what extent organizations can be restructured, how to manage service innovation, etc.

- Goal is to make productivity, quality, sustainability, learning rates and innovation rates more predictable across the service sector. (IBM 2007).
- Research in service science seeks to find out how to design, build, operate, use, sustain and dispose of science systems for the benefit of multiple stakeholders such as customers, shareholders, employees, partners and society (IBM 2007).

# Difference between Invention and Innovation

- Invention is a new product.
- Innovation is a new value (Szmytkowski, 2005).

# Innovation

- Is a process through which organizations create and transform new knowledge into useful products, services and processes for national and global markets – leading to both value creation for stakeholders and higher standards of living.
- Is the mainstay of an organization.
- For organizations to remain competitive, innovation is essential.

- Is concerned with the process of commercializing or extracting value from ideas. (Rogers 1998).
- Is the creation of new knowledge and ideas to facilitate new business outcomes, aimed at improving internal business processes and structures and to create market-driven products and services. (Du Plessis 2007).

- In today's economy, businesses need to continuously reinvent themselves in order to adapt to increasingly complex and dynamic market realities.
- Organizations, including governments, are under intense pressure to create value.
- Innovation is the key for organizations that want to remain competitive.

# Why Intelligence Innovation?

- Intelligence innovations in creating economic growth and wellbeing is increasingly being acknowledged.
- Intelligence innovation can promote the understanding of problem solving, creativity and new knowledge creation.
- It can enhance the capabilities of us to create better AI systems to provide values to users.
- How do we achieve this?

# Service Dominant Logic

- Is concerned with value-in-use.
- The roles of producers and consumers are not distinct.
- Value is always co-created between producers and consumers.
- Thus value is co-created through the combined efforts of firms, customers, employees, government agencies, stakeholders and other entities related to any given exchange, but is always determined by the beneficiary (e.g. customer).

# Co creation of value

- Standardisation makes it hard for companies to differentiate themselves from competitors.
- Today, markets are more fragmented; consumers have unprecedented access to information and networks.
- Technologies have created new modes of production and innovation that enable and encourage a greater degree of participation and collaboration.

- Aim of co-creation is to enhance organisational knowledge processes by involving the customer in the creation of meaning and value.
- Co-creation also transforms the consumer into an active partner for the creation of future value.

# Organisations today

- Must become directly involved with users to ensure positive user experience.
- Positive user experiences drive co-created value and mutual benefits for both organisations and users.

# Co-production and Co-creation

- Co-creation relates to the value received by the customer through usage, consumption or experience. On the other hand, co-production is a component of co-creation relating to specific tasks undertaken by customers that may occur prior to or during usage, consumption or experience (Lusch & Vargo 2006).
- Thus, the customer is always co-creator, but not always co-producer.

# Co-creation is important because it is:

- A rich mix: co-creation draws on a combination of management and marketing approaches, the psychoanalytic tradition, and processes related to innovation, knowledge and group decision-making.
- A learning process: we need to intertwine knowledge and processes in an overall co-creation framework, rather than just enabling co-creativity, if we want to achieve wider organisational impact.
- All about relationships: we stress the importance of focusing on the quality of the interactions between people rather than on technologies *per se*

From 'Co-creation: New pathways to value, An overview', by Nick Coates, Research Director, Promise, 2009. 3.

# Co-creation of Value

- Has become a dominant idea.
- Occurs whenever consumers interact with companies or products and thereby have an active role in the shaping of their experience and ultimately value perception.
- Co-creation between firms and customers, as well as production and consumption, is about tapping successfully into the collective intelligence of consumers.
- Co-creation as an active, creative and social process,

# Moving Customers...

## From

- Passive buyers.
- Listening .
- Consumers as buyers.
- Researching need.
- Reliance on experts.

## To

- Active agents.
- Dialogue.
- Consumers as resources.
- Understanding  
experiences.
- Consumer knowledge.

- All co-creation approaches share two main features:
  - a) The expansion of product or organisational boundaries, and
  - b) The involvement of the consumer.

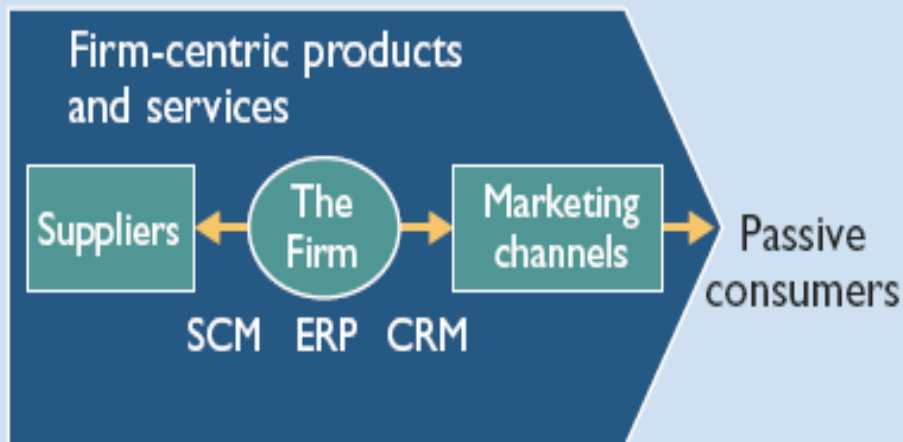
Co-creation as *collaborative innovation with customers* adds a third dimension:

- c) A focus on co-creating new values with customers that is initiated by the firm.

# The traditional view of value creation

(from Prahalad, C.K. & Ramaswamy, V. (2004a).)

## Traditional value creation process

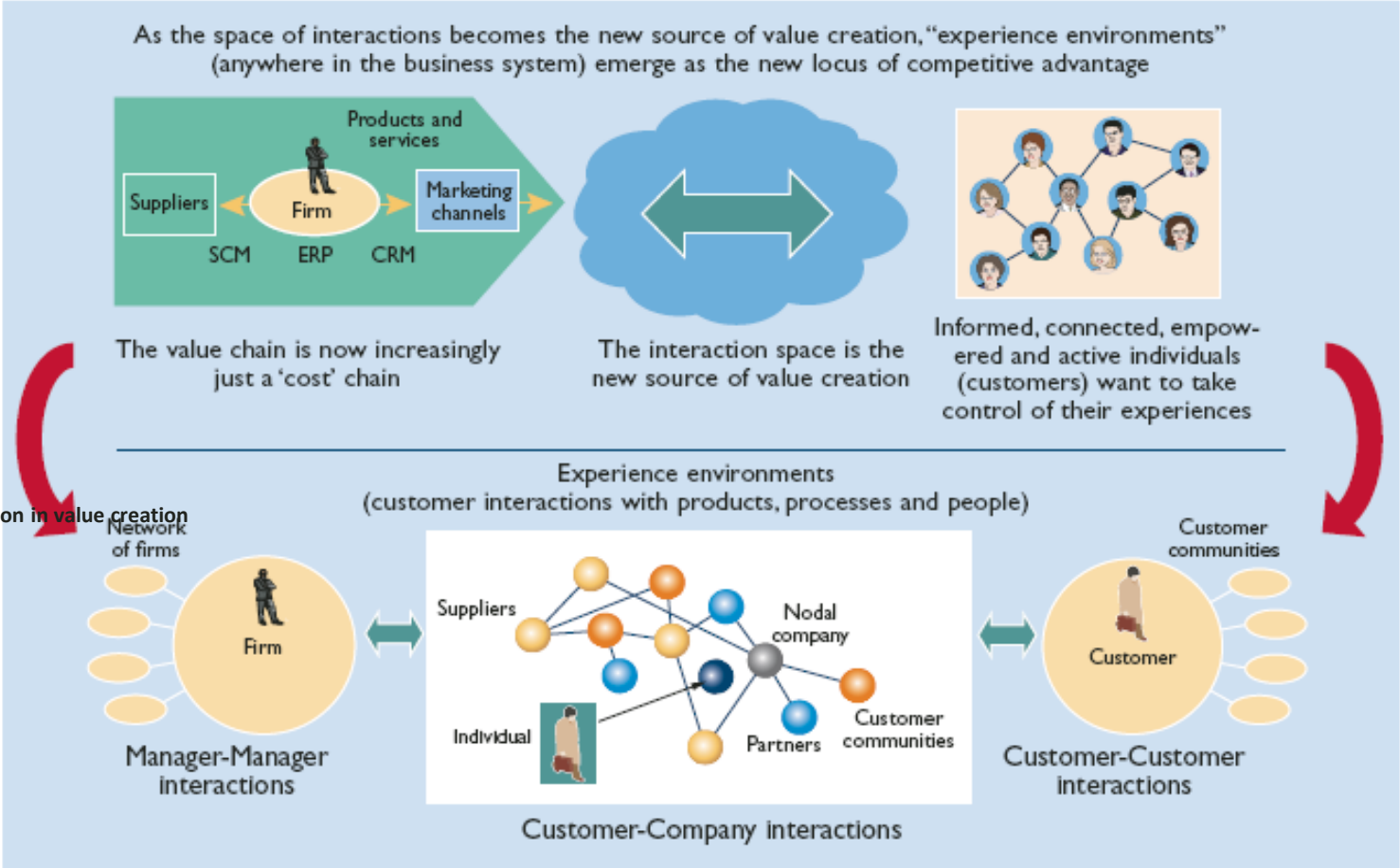


Value =  $F_n$  (efficiency in firm's activity chain)

## The dominant logic of value creation

1. Value creation is associated with products and services
2. The firm unilaterally defines and creates value through its product and service offerings
3. Consumers represent passive demand for the firm's offerings
4. Firms have more information than consumers

# The basic transformation in value creation



# Experience Co-creation

- Prahalad and Ramaswamy (2004) argue that individuals must be able to co-construct unique value for themselves through customer network interactions that facilitate contextualised experience outcomes through dialogue, access, risk management and transparency (DART). The basic building blocks of co-creation are:



- **Dialogue** encourages not just knowledge sharing, but shared understanding between companies and customers. It also give individuals more opportunity to interject their views of outcomes of value into the value creation process.
- **Access** to knowledge, tools and expertise helps individuals construct their own experience outcomes.

- **Risk Management** assumes that if consumers become co-creators of value with companies, they will demand more information about potential risks of goods and services, but they may also have to bear more responsibility for dealing with those risks.
- **Transparency** of information in interaction processes is necessary for individuals to participate effectively in co-creation, and engender trust between institutions and individuals.

- **Co-creation will involve** (Ramaswamy, V. 2005):
  - Engaging customers on their terms.
  - Creating value jointly through collaboration between the company and the customer.
  - Allowing the customer to co-construct the experience to suit their context.
  - Joint problem definition and problem solving.
  - Customer having a say in defining their relationship.
  - Continuous dialogue.
  - Experience of one.

- Creating an experience environment in which consumers can have active dialogue and a co-construct a personalised experience: the product may be the same, but the customer can construct different experiences.
- Experiencing the business in the manner customers do in real time.
- Innovating experience environments for new co-creation experiences.
- Experience quality management.
- Rapid knowledge creation.

# Case studies of co creation of value

- A service quality framework for Higher Education from the perspective of service dominant logic
- A co-creation of value framework for global services
- Value Creation in Building Service
- Co-creation of value for service innovation for newspapers
- A public service through the co creation of value

# Intelligence Science

- is an interdisciplinary subject
- Need joint research on basic theory and technology of intelligence in brain science, cognitive science, artificial intelligence and others.
- Brain science explores the essence of brain, research on the principle and model of natural intelligence in molecular, cell and behavior level.

- Cognitive science studies human mental activity, such as perception, learning, memory, thinking, consciousness etc.
- Artificial intelligence attempts simulation, extension and expansion of human intelligence using artificial methodology and technology.

# Ways Of Looking At Intelligence

- Context can make us smarter.
- Experience can make smarter.
- Technology can make us smarter.
- Emotions can make us smarter.
- Attention can make us smarter
- Expertise can make us smarter.
- Beliefs can make us smarter.
- Big data can make us smarter.
- Metacognition can make us smarter.

# To do research requires that we need to

Answer these questions :

- How does intelligence develop?
- What are the brain regions and specific circuits underlying the various cognitive capabilities involved in answering the Turing ++ questions?
- Can we build algorithms that can answer these questions?

- What are the algorithms and the circuits underlying social intelligence?
- What is the relationship between intelligence and consciousness?
- What is the relationship between intelligence and innovation ?
- Can we learn intelligence?

# To design better learning algorithms,

- We must investigate natural intelligence
- It is only once we have a better understanding of the biology of our own intelligence that we will be in a much better position to understand the promises and pitfalls of artificial intelligence.
- Multi and interdisciplinary co-creation of value research and collaboration.

# Conclusion

- Intelligence is an important subject to investigate.
- Intelligence science has the potentials to improve future AI design.
- IS requires interdisciplinary research involving various areas.
- Co-creation of value is important for this type of research.
- Co-creation of value model will provide a framework to integrate the different topics into IS to better understand future research..

- Users are seeking personalised experiences that are derived from relationships rather than products/services.
- Users are seeking organisations that allow them to create experience where they can be actively involved and are personally meaningful to them.
- Users are more interconnected and intelligent.

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