

A Mesoscopic Approach to Business Models: "Nano" Research on Management*



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Business Models

- # The notion of business models originated in 1970s, describing the business process, information and communication models for the company to set up inside information technology systems.
- # Business model has been a fashionable term in business since the emergence of Internet in 1990s.

From boom to downfall

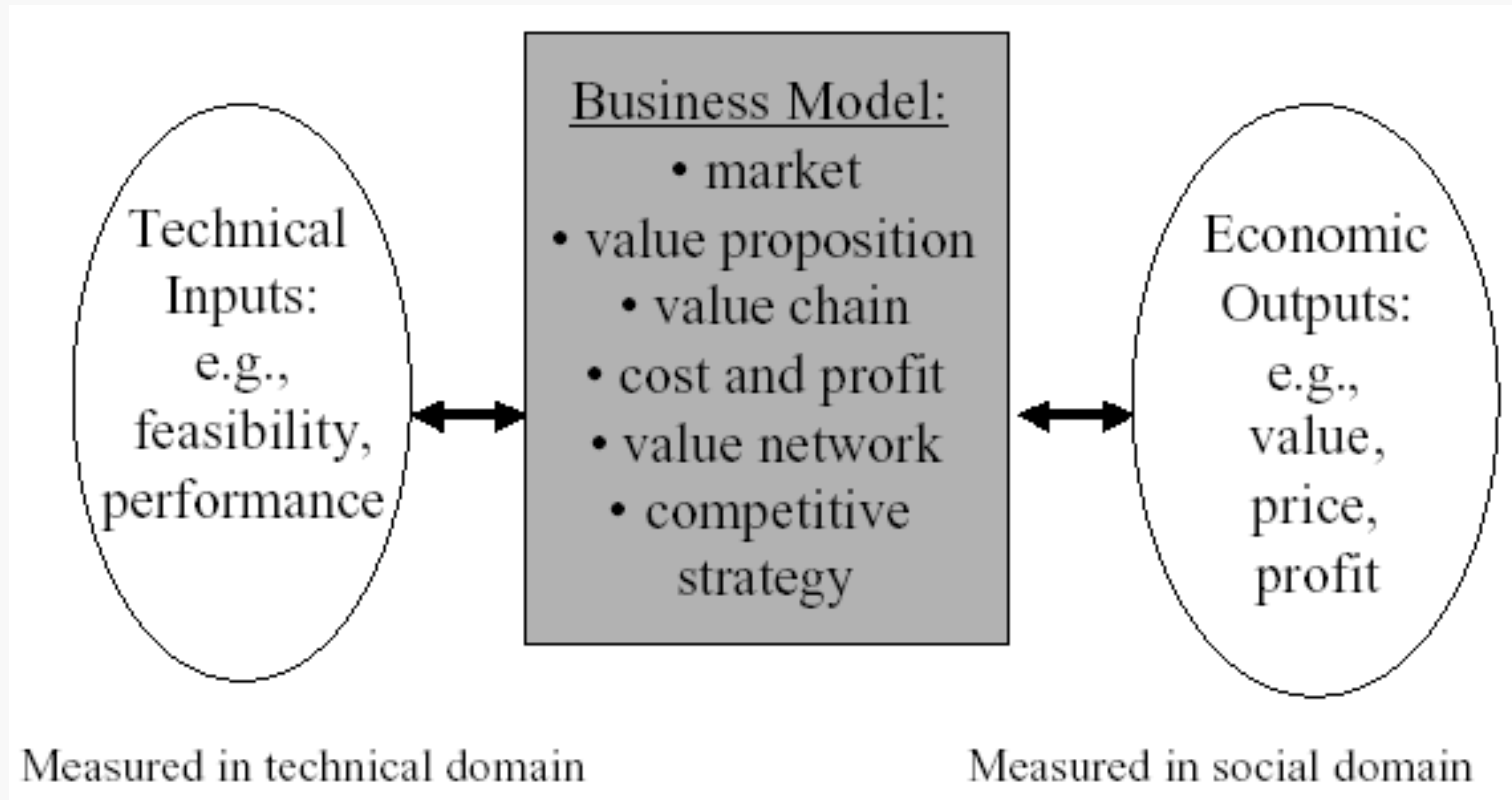
- # The boom period of Internet is broadly used to outline an unfledged plan. What a company needs is not strategy, particular competitive competence, or even any customer, but only a web-based business model that promises to profit in uncertain future.
- # In the end, the participant investors, entrepreneurs and managers got nothing but illusion. The notion of business models and .com have lost their old-time brilliance.

—Joan Magretta(2002)

Behind the failure

- # Second thought reveals that the disappointment, which the business models in internet bubble period have left us, is unavoidable.
- # Business model, a well-known important and extensively used term by media, management consultancy and business top managers, is just in an embarrassment that there has no consensus about its definition and few papers in academic periodicals.

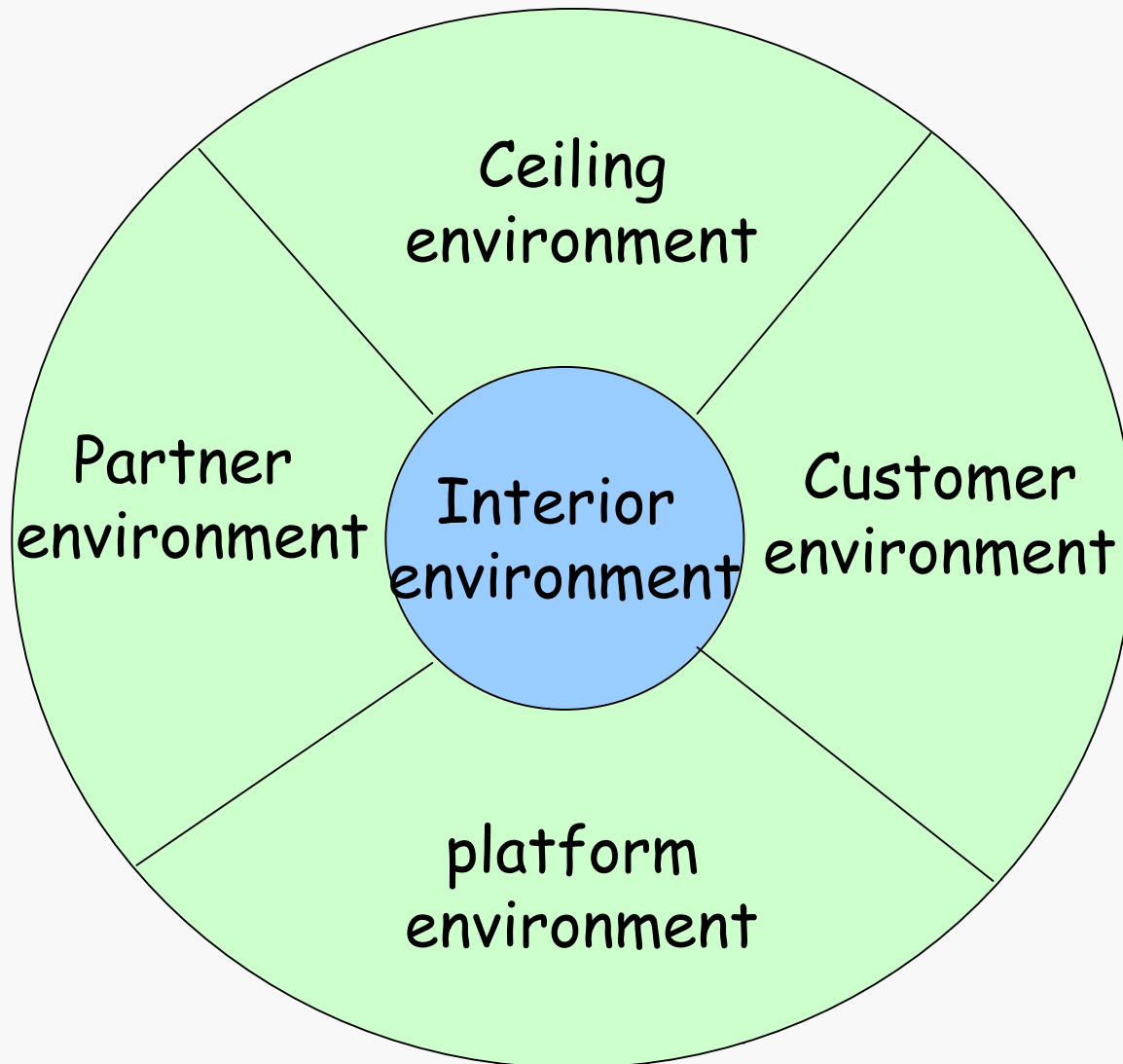
Chesbrough and Rosenbloom(2001)



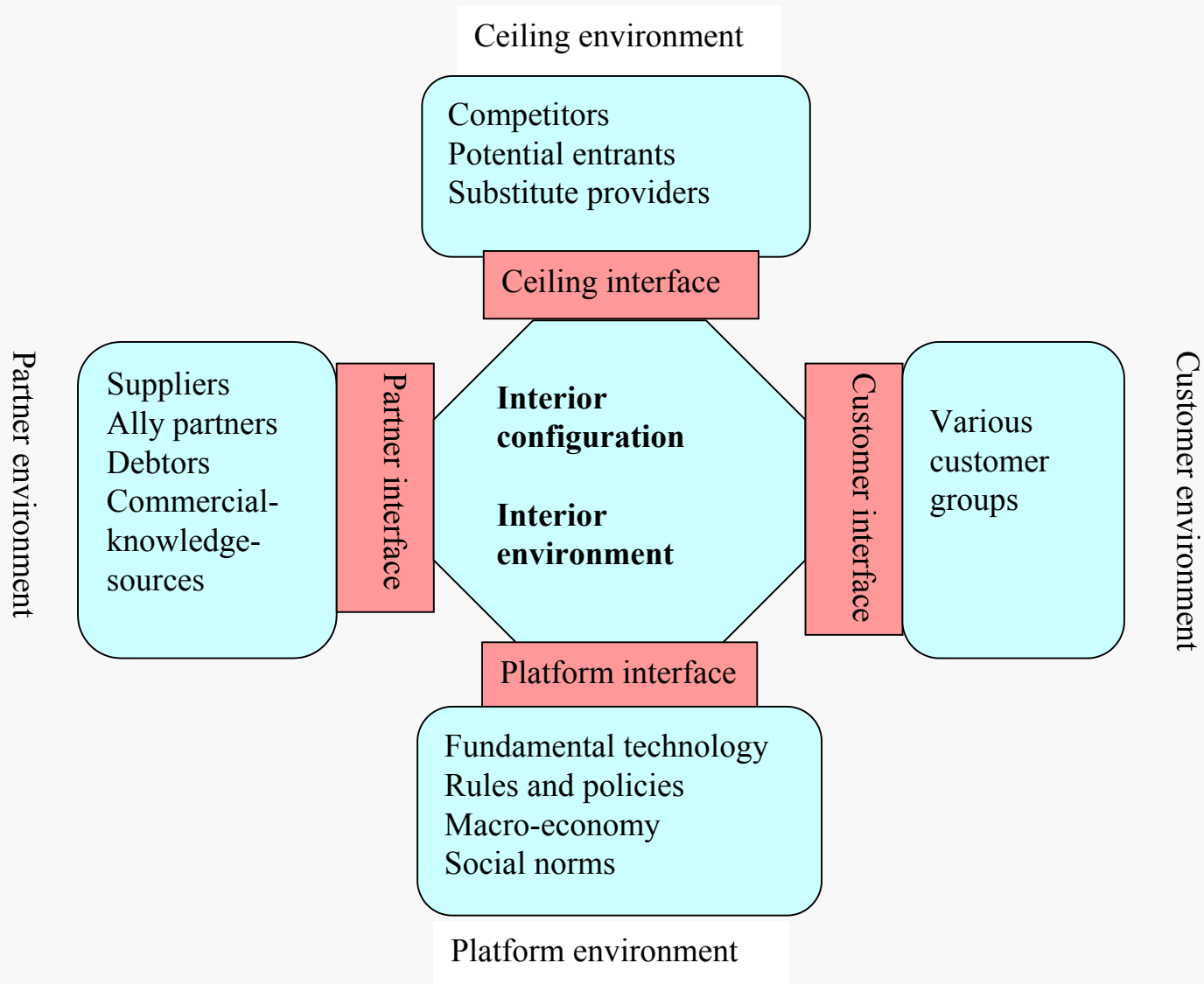
Research development of my project

- # Introduced the platform interface, ceiling interface, customer interface, partner interface and interior configuration; and identified their detailed components, based on re-classification for business environments;
- # Defined business models prototype as the combination of components of the “core” interfaces (customer interface, partner interface and interior configuration), defined business models as sensible prototypes, and thus introduced mesoscopic approach into the research on business models.
- # Made a unified analysis including value objects, value content, value delivery and value feedback for the components of the core interfaces;
- # Set up two research methods, creative thinking and value analysis framework consisting of value propositions, value supporting, value maintaining and value transforming.

Re-classification for business environments



Interfaces interacting in interior and exterior business environments



Components in platform interface and ceiling interface

	Platform interface	Ceiling interface
Components	Research fund and knowledge network; Public relationship (including media policy); Lobby; Litigation, etc.	Patent protection; Trade secret management; Business intelligence; Competitive strategy (cooperative, offensive, co-existensive), etc.

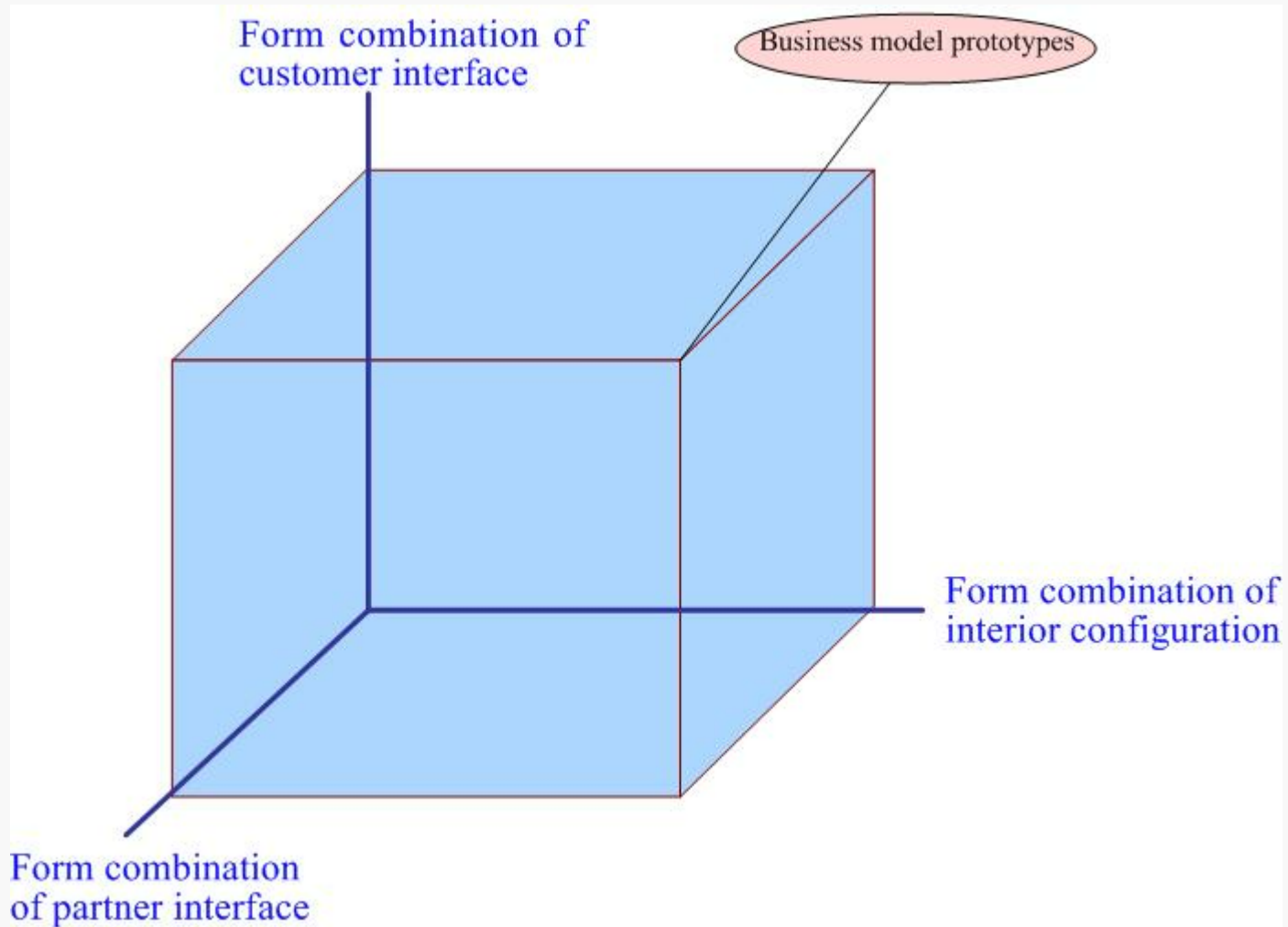
Components in the core interfaces

Components	Customer interface	Interior configuration	Partner interface
value objects	market segmentation, Target market choice, Market positioning, etc.	The mission of firm Conception of Stakeholder, etc.	Spin-off, acquisition and outsourcing, Suppliers selection, etc.
Value contents	Quality and capability of product itself, Price, Service, Experience, Access, etc.	Customer value Partner value Compensation, etc	Establishing of supply cooperation relationship, Integration of supply network, Guidance of suppliers, Innovation via suppliers, Developing global supply base, Strategic alliance, industry standard, etc.
Value delivery	Distribution channels, Brand design, Marketing communication, Advertising promotion, Sales, After-sell service, Customer relationship management, etc.	Governance and capital structure Organizational structure, style of decision-making and leadership Performance evaluation and monitoring mechanisms, Combination of products and service, Technological process of product or service, business process Information management, Value chain management, etc.	Quality control, Purchase management, Logistic management, Partner relationship management, etc.
Value feedback	Ways of Charge, Account receivable management, etc.	Dividend payout, shareholder value management, etc.	Ways of Payment, Account payable management, etc

Definition of business models

- # There are kinds of alternative forms (detailed implementation plans) for each interface's components (business operation activities). For example, the market can be segmented according to gender, age or other characteristic.
- # The roles of interfaces in business operation are different. The customer interface, interior configuration and partner interface are called the core interfaces, while ceiling interface and platform interface are regarded as the related interfaces.
- # **Business models are sensible combinations of component's forms of core interfaces, given the business environments.**
- # Put the restriction of “sensible” is to exclude the combinations that are technologically incompatible. A random combination is called business model prototype.

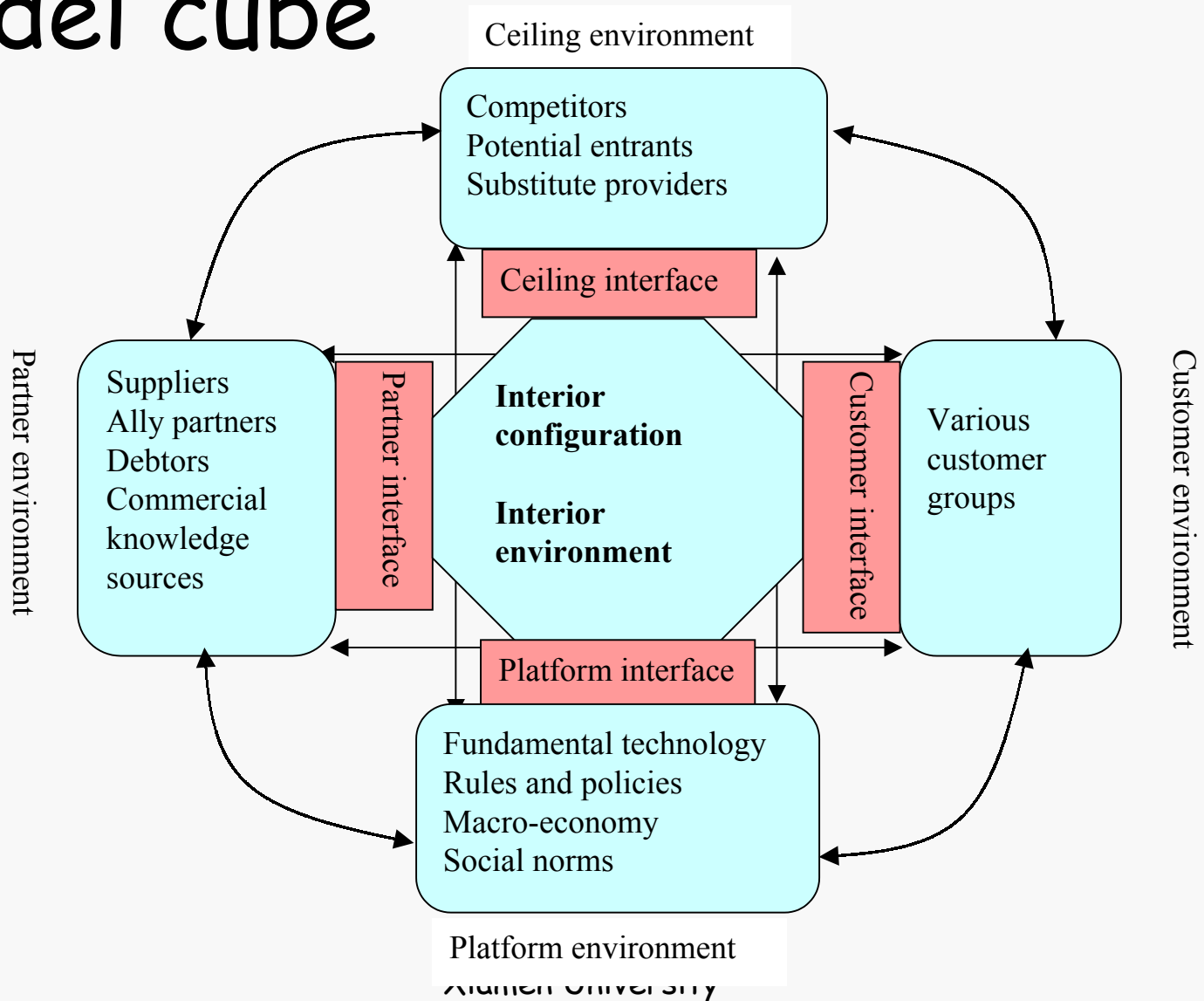
Business models "cube"



Static complexity of business model cube

- # The picture of business model prototype looks like Rubik's Cube. When we rotate the small squares, we get some regular pattern, just as we find a new business model.
- # The research purpose of business model prototype is to select sensible and valuable forms combination and serve for business model innovation.
- # Business model cube is much more complex than Rubik's Cube. Suppose there are sixteen components for customer interface and three forms for each component, then we can get $3^{16}=43046721$ form combinations for this interface. If that is the same for partner interface and interior configuration, the total form combinations for core interfaces will amount to 43046721^3 .

Dynamic complexity of business model cube

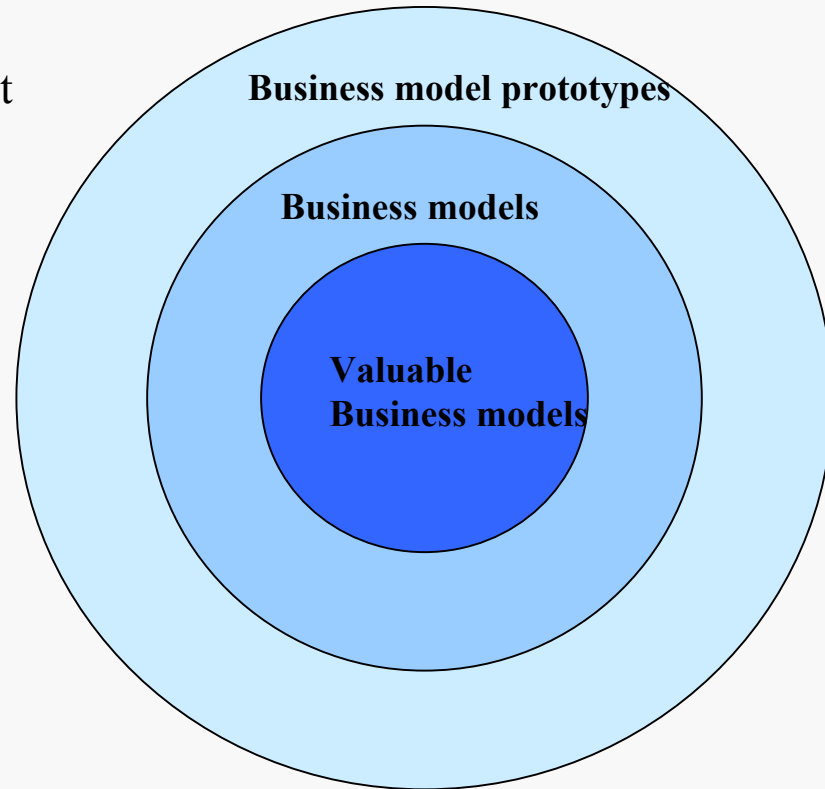


Business model innovation

Business model innovation means, on the condition of given bottom environment,

- identifying customer environment, partner environment, interior environment and the potential value behind the related environments,
- digging up the value to the utmost with the various form combinations of core interfaces,
- and protecting the value space from eroding and squeezing by use of proper form combinations of bottom interface and ceiling interface,

so that the firm can gain the profitability competency that will survive the current business model and its competitive rivals all the time.



Research method one: Gene Sequencing

- # A man is estimated to have 60-100 thousands genes, composed of 3 billions base pairs , distributed among 23 pairs of Chromosome. Gene sequencing is detecting the sequence of all DNA of particular beings, such as human beings in order to decode all hereditary ciphers and explain all mysteries of life.
- # Identifying the business model for each firm in different industries is similar to gene sequencing in some degree. The cube of core interfaces serves as theoretic foundation for screening business models aided by computers.

Research method two: creative thinking

- # Thinking of human's brain is different from the simulation of computer. As far as complicated things are concerned, human's brain first catches the main characters, then classifies according to the characters and stores them at last.
- # Creative thinking refers to imaging and conjuring via divergent thinking or brainstorming with help of the notions of value proposition, value supporting, value maintaining. It focuses on form combinations for some critical components of core interfaces and tries to find new characteristics.

The significance of mesoscopic research

- # Nano is one billionth of a meter. When materials reaches nano, its characters will mutate and takes new ones. These materials, composed of special matters which are neither atomic, molecular nor macro, are called nano materials.
- # Richard Feynman, the famous theoretic physician and Nobelist, said in a speech in 1959: “there are tremendous innovation space between micro and macro.” He predicts that “when we take charge of minute matters, our understanding for material physics will be greatly enriched”.
- # We could expect to get more interesting finds by mesoscopic study in business models.

The end

The above content draws on material from my latest paper, A Mesoscopic Approach to Business models (Forthcoming).