

# Competing within ecosystems: sustaining ways of creating indirect value

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## The challenge

Organisations driven to avoid losses and improve gains must ultimately achieve new levels of value for their customers if they are to survive in the long run. This in turn means transforming the way they create value. As the competitive pursuit of value moves them further and further away from products towards services [1], value becomes increasingly specific to the customer's context-of-use, and dependent on the organisation's capacity to learn from those contexts [2]. The complexity involved in delivering this value organised, and not just emergent from amongst the interactions between multiple organisations and stakeholders [3, 4]. To organise complexity, the forms of agency demanded of actors present them with unprecedented challenges, not only in defining relevant relationships between systems and environments, but also in defining the architectures organising the complexity [5, 6].

If we compare the approach to value creation in healthcare to that in manufacturing, we find the focus of effort moves beyond managing the supply-side complexity of supply chains [7]. The clinician has to manage the demand-side complexity of aligning services to the patient's condition within a healthcare system that is a complex adaptive system with no overseer [8]. How is complexity to be 'organised' within such an environment? What forms of agency does this 'organising' demand of actors? And what approach to creating value does this imply?

A closer examination of the assumptions making healthcare delivery different to manufacturing has revealed eight differences [9]. From these eight (in single quotes below), two main challenges can be drawn:

1. In considering 'the expectations of customers', there always remains an unknowable aspect of the customer's need. It is experienced by the customer as a *value deficit*, and only becomes apparent over time as new forms of demand. The tempo at which these new forms of demand emerge is much faster in healthcare than the tempo at which manufacturing has classically designed new ways of delivering value.
2. Bridging between the supplier's design tempo and the customer's demand tempo are the clinicians' processes of alignment. The tempo of these processes link suppliers' products and services together in ways that challenge the traditional uncoupling of supply from demand. They *entangle* the way any individual supplier creates value with others' ways of creating value. This leads to the emergence of complex adaptive behaviours by the larger system because of the circular paths of causation they set up. This entanglement puts in jeopardy the classical supplier's expectations concerning their ability to be certain with respect to 'their knowledge of their future', 'the traceability between their performance and the result for the customer', 'the longevity of the production process', 'the ability to buffer the production process against variability in levels of demand', 'the connection between cost of production and revenue from the customer', 'the variability in their work processes', and 'the costs of production'.

How are these challenges to be taken up within a service environment such as healthcare?

## Responding to the challenge

The presentation reports on research into the way suppliers use platform architectures to capture indirect value within business ecosystems [10]. Examples are used to illustrate how the concepts of value deficit and entanglement lead to a different approach to understanding the role of a supplier within an ecosystem. This difference is based on considering the relationships that suppliers have to indirect forms of demand, and the organisational processes by which suppliers' products and services can be aligned with those of other suppliers to meet those demands. These indirect forms of demand render customers' demands multi-sided [11], and reflect indirect forms of value.

The costs associated with these indirect forms of value include the costs of aligning suppliers' products and services to the customer's demand, and fall ultimately on the customer. Driven by their value deficits, the accelerating tempo at which customers make demands increases these costs of aligning products and services. The opportunity created for the supplier by multi-sided demands therefore comes from capturing some part of the economies in the costs-of-alignment that it can create for the customer. This in turn means that the supplier must adopt a platform architecture capable of capturing indirect value [12, 13].

The reported research uses a framework that (i) describes the variety of indirect demands, (ii) the organisation of the alignment processes, and (iii) the agility of the supporting business platforms, where agility is defined as the variety of indirect demands a platform can support at a given tempo. This framework is 'triply-articulated' because of the need to articulate relationships among three types of sub-model: (i) the organisations of value implicit in indirect customers' demands, (ii) the social entities and supporting systems managing the supply and alignment of products and services, and (iii) the socio-technical systems generating these products and services. The framework enables the derivation of a layered analysis of the risks to which the capture of indirect value exposes a supplier, and provides the basis for an economic valuation of changes in the agility of platform architectures.

## Implications of the research

The presentation discusses the nature of the complexity that makes this way of thinking about the relationships between suppliers and customers 'non-classical'. Thus entanglement means moving from a one-sided to a multi-sided understanding of markets, which changes the unit of analysis from the supplier to the ecosystem with which the supplier is interacting. Analysing market behaviours in a way that is driven by a tempo of demand organised by customers' value deficits means that there are many different local environments within which market behaviours are expected to be aligned.

A quantum metaphor will be used to cast light on what makes this way of thinking 'non-classical'. The varieties of simultaneous behaviours which the business platform must be able to support are a *superposed* set of states. Each customer's local environment *collapses* a singular local state from this platform that need not be correlated with states experienced in other customers' environments. This

collapse takes place through the *local coherence* created by alignment processes organised by shared meaning established within the customer's local environment.

Two implications can be drawn from this way of thinking: first, agile platforms have to be engineered to support this level of variety in simultaneous complex behaviours; and second, forms of agency have to be developed within an organisation through which many forms of simultaneous local coherence may be created and sustained cost-effectively at its edges.

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October 17<sup>th</sup>, 2012*

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