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## Products and markets, chicken and eggs

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**Abstract:** When a start-up company fails to meet investor expectations it is often assumed that the idea was too much product driven and not enough market driven, and that better market validation would have identified that the idea was bound to fail. But this proposition is too simplistic and does not offer any real insight.

Market validation must be rigorous. But it also needs to have the right focus: Rather than prove or disprove the merits of the innovation in a binary (yes/no) sense, it must help define the full value proposition that will turn the innovation into a commercial success. This paper proposes an approach to doing this, through a balanced consideration of why the customer will buy as well as the potential barriers to a successful transaction.

**Key words:** Innovation; disruptive; market validation; opportunity assessment; product definition;

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### Customers, products and market validation

Products are successful because customers want them, so innovation must “start with the customer experience first and then work back to technology” (Steve Jobs). But in reality many products stem from advances in science or technology, feeding off each other to enable both new products and new business models. So is it a question of chicken and eggs?

Investment cases usually are the summary of a process whereby: Product validation establishes that the product functions as required and can be delivered, next market validation confirms that there is sizeable interest, and finally the business case demonstrates the financial viability of the proposition:

**Product validation + market validation + business case validation**

**= opportunity assessed ✓**

**or is it?**

If it were this simple, then less start-up companies would fail. But too often, and in spite of in-depth opportunity assessment, the business results are different from what was suggested by market validation, leading to the conclusion is that the market validation got it wrong. And it's easy to find cause for this in hind-sight.

Market validation typically starts with a definition of the product in terms of its technical capabilities and outcomes, i.e. the logic behind what it does and the problem it solves. This together with price-point and price sensitivity analyses provides the rationale for why it should be a success. While analytically correct, however, it fails to capture the full story, or:

**The reason why the customer buys it, or won't !**

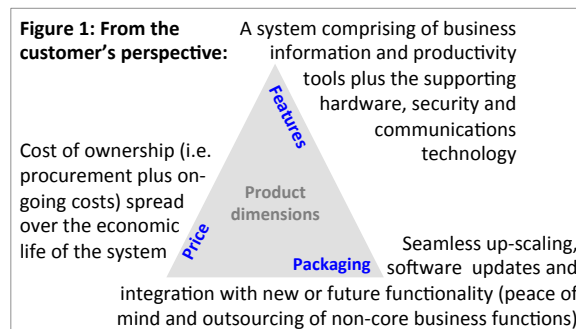
So was market validation asking the wrong questions, or was it given the wrong subject?

### Defining ‘product’

For the purpose of this paper the term ‘product’ covers the full value proposition: Its features and functionality, price or more precisely cost of ownership, and all other tangible and intangible attributes which I collectively call ‘packaging’. It may be technology based, a process or a business model innovation, and affect any of the three dimensions features, price and packaging.

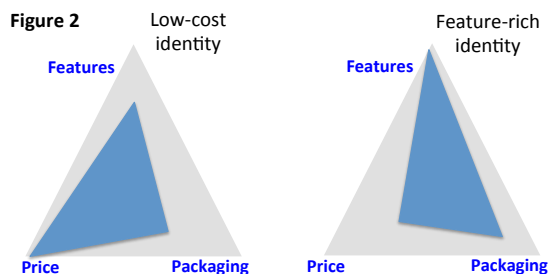
Cloud computing is one ‘product’, combining technology and business model innovations to deliver a service.

The technology comprises of a platform that supports secure multi-tenanted use of IT technology, and the business model offers the use of IT functionality on a subscription basis. (figure 1: cloud computing from a customer perspective).



## Product attributes

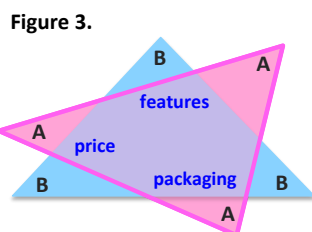
Leaving aside for the moment true ‘game-changers’ (see further down) all products are defined within a triangle of features, or what is delivered by the actual device, service, process or business model, the price / cost of ownership, and packaging to include warranties, delivery and after-sale support as well as branding, benefits offered through bundling or tight integration with other products (Apple is good at this), reputation for innovation or corporate values etc.



(Figure 2) The grey area sets the boundaries of features, price and packaging within which all products fit.

No product will be the most feature-rich at the best price and with superior ancillary benefits or packaging all at the same time. Different products (blue) will take a different place within the (grey) playing field.

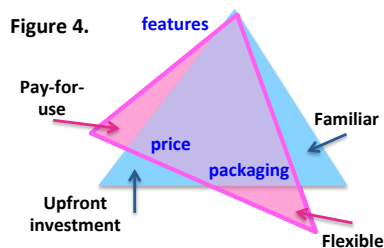
This picture gives a quick snapshot of the product’s position in the market and is helpful in deciding which market segment it addresses. But it doesn’t answer why a customer would buy it. This requires defining the product not in relation the market-at-large but against realistic alternatives (i.e. Lexus versus ‘luxury cars’ rather than ‘all cars’).



This is done in figure 3, by overlaying ‘our’ product A (red) on top of another product or representative product group B (blue). Now the differences can be listed as ‘A’ things that are unique to or materially better for product ‘A’, and under ‘B’ things that are unique to or materially better for product ‘B’.

This approach enables us to better understand the full product proposition for product A and how it differentiates itself from product B. It helps us understand both the reasons why the customer would buy, as well as (list ‘B’) what objections are likely to be raised.

To illustrate this let’s look at time-share apartments (figure 4): Time-shares sale people use a rigid set of questions. Starting with “do you like holidays” (of course I do) every question invites a “yes” until the logical conclusion is reached: With this time-share apartment you’ll never again need to look for accommodation in the hope that it will live up to its promise. It’s exactly what you want, ready to be enjoyed. So surely you will buy it ✓ (?).



familiarity for flexibility. Each option will suit certain people but not others.

But it is one spot for one time of the year: The product definition assumes that the inconvenience of booking together with the uncertainty of an unknown destinations weighs heavier than the desire for flexibility of place and time. Assuming for the moment that the ‘feature’, i.e. the accommodation is comparable, the differences would be in price and in packaging. The price trades off an upfront investment for pay-for-use, while the packaging trades off

Once fully understood, the marketing of time-shares can (and does) offer financing to spread the price and make it more look like pay-for-use. And it can set up a trading platform for time-share owners around the world to swap times and locations, and thus create flexibility.

The easiest forms of product innovation are often to look at one's existing product in the light of different pricing and packaging models offered by competing alternatives, and remove objections (example: offering financing, setting up a time-share trading platform).

The question is "did the time-share people figure this out through upfront market validation or from experience?". I suspect the latter.

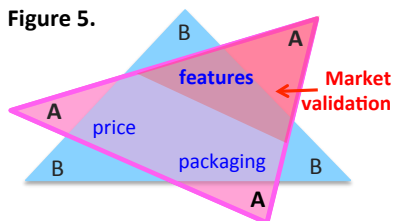
## Market validation

The outcome of market validation is as good as the product definition allows it to be. But to say that a business fails because the market validation was flawed, although it might be true, is too simplistic. It also doesn't solve the problem.

Speaking from experience as a VC fund manager, most entrepreneurs are not very good at putting their idea in the terms of why the customer will buy it. Instead it's all about one aspect of the proposition: The features (or innovation). Engineers generally put this in terms of 'purpose and benefit'; marketing people will talk about customer 'pain-point'. And more often than not the questions they are asking in fact are selling the concept and seeking *confirmation* rather than *information*.

Investment managers know that entrepreneurs are passionate people who will infuse everything and everybody around them with their passion. In my opinion there's nothing wrong with this; it's probably a prerequisite for success. And I do not believe that passion is the problem.

Figure 5.



The issue with market validation is that most often it only looks at 'A' part of the picture, and is further skewed towards the 'features' component (figure 5).

Competitive analyses of course should address the 'B' side of the equation, but it often uses the 'A' list as its point of reference to reconfirm where 'A' is ahead of 'B', failing in the meantime to fully appreciate the unique appeal of product 'B'. And it is usually done as a separate exercise, well after and in

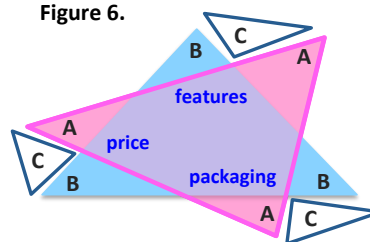
isolation of market validation.

Thorough market validation must fully and objectively understand both the 'A' and the 'B' side.

## The third element

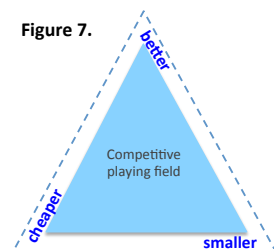
Harder than the 'A' versus 'B' analyses is the question "what else could get in the way of success"; things that come in from left-field. Here there is no reference point, but thorough market validation will also attempt to address this (figure 6 'C').

Figure 6.



## Game-changers (disruptive innovation)

Figure 7.



The above works for products that can be compared to something else. But are there products where the 'A's and 'B's are too many or too far apart for the model to be of use? Or where there is no 'B' list? Using the smart-phone as an example:

Mobile phones competed on better call management features (address book, hands-free, conferencing, call waiting), lower price and smaller form factor: Typical developments for a product becoming commoditized (figure 7).

But the launch of the iPhone changed all of this. Suddenly a whole new set

of functions was introduced into the device, such as photography, information, entertainment, navigation etc. And tight integration with other devices, systems and services such as iTunes created a whole new user experience, or package (figure 8).

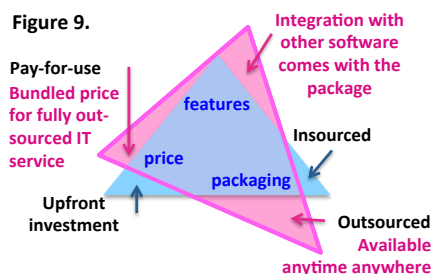
The smart-phone changed the shape of the industry by re-shaping the playing field for both features and packaging. The commoditization cycle of ever lower prices was broken, and the phone could even be bigger again.

In this case the proposed model would produce a long list of 'A' items and only one 'B' for lower price.

But truly disruptive innovations (smart-phone, self-drive car) are not the norm. Most technology and business model innovations offer competitive advantage in an existing playing field.

So has cloud computing (figure 9) been a game-changer? From the software company's point-of-view it meant a radical change from a sale-and-purchase to a subscription revenue model. For established companies this disruption to their revenue streams was often hard to cope with, leaving the door open for new entrants that were better funded to deal with the deferred revenue model.

Figure 9.



For IT departments the move away from internal systems also meant substantial change and disruption to existing functions (and employment opportunities). Needless to say that many IT departments opposed the model.

For the business, the model offered outsourcing of non-core business activities, matching of expenditure timing to use / benefit, easy scalability, software updates taken care of automatically etc. Not a disruption to their business, but certainly positive.

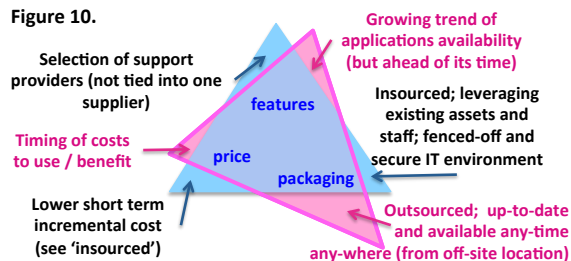
And finally, from the end-users' point of view it arguably made little difference, cloud computing largely offering the same user experience.

Cloud computing relied on new technologies such as secure user identity management and high-speed bandwidth to support the business model innovation. It has been highly disruptive to parts of the IT supply chain, but still enables a comparison of 'A' versus 'B' - see the case study next.

## A case study

In continuing with the cloud computing example, by 2003 NZ based EMS-Cortex had developed and brought to market a user identity system (fore-runner of the cloud computing platform). It had two customers, British Telecom and Telecom NZ, each using the platform to service some of their large corporate clients. But beyond these two early adopter customers sales had become stagnant, and the investors were becoming impatient.

Figure 10.



A renewed market validation showed that (1) customers acknowledged the growing trend towards software-as-a-service, but for now felt that the software options were still limited; they also were uncomfortable with the idea of dependency on one supplier. (2) Companies had invested in IT infrastructure and needed a trigger point (new investment) before they'd switch to outsourcing. And (3) there was strong opposition from in-house IT staff stating security risk, i.e. data stored off-premises, reliance on 100% availability of data-links etc. (figure 10).

Based on this, EMS-Global changed its strategy away from large telecoms servicing large corporates to small ISPs servicing the SME market and offering a narrow suite of office productivity tools.

The rationale for this was that most small companies had an ERP-system supported externally but little or no in-house IT capability. As a result they often struggled to maintain tools such as Microsoft Office. A growing number of ISPs were offering hosted Microsoft and other products, but did not have a robust platform to securely manage user identities in a multi-tenanted environment.

After 12 months of platform redevelopment EMS-Cortex took off and became the leading cloud computing management platform for both small and large ISPs, until it was acquired by Citrix.

Note that the cloud computing story (*figures 1, 9 and 10*) keeps evolving. This is not an accident but deliberate, to show that market validation needs to dig deeper and look at the situation from more than just one angle to not only validate the attractiveness of the proposition, but also the B-side. Or to quote General Sun Tzu:

If you know the enemy and know yourself, you need not fear the result of a hundred battles. If you know yourself but not the enemy, for every victory gained you will also suffer a defeat. If you know neither the enemy nor yourself, you will succumb in every battle.”

## Conclusion

Some innovations start out as laboratory experiment, others are a response to a customer experience. But in all cases the path to success relies on a full and comprehensive understanding of the customer experience, not only in terms of what it offers but also in terms of what it replaces.

As for game-changers: The smart-phone was driven by a vision about what a mobile device could be; cloud computing offers a new way to deliver an existing experience based on advances in technology. Two different starting points, but both enabled by new technology as well as driving further technology developments. Neither product development nor market demand, but iterative innovation wins the argument.

As for the real chicken and egg question, that’s a harder one.

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**Paul van Tol** is managing director of Swiftsure Innovation Limited, a New Zealand based consulting firm offering tools and advice to assist businesses in commercializing new technologies and adopting new and innovative business concepts. Prior to this he managed a technology VC fund and held Board, CEO and senior management positions in technology (telecoms, electronics and IT) companies based in Europe, China, the USA and Australasia. His qualifications include Finance (the Netherlands) and an MBA from Auckland University.

Based on his experience in starting new business initiatives, raising capital for new ventures and as an investor in start-up companies he has developed a structured approach to assessing new business opportunities and presenting these to investors and corporate decision makers (to be published in hand-book format early 2016).