Digital ecosystem business models are consolidating – move quickly!

Over 600 respondents to the Harvey Nash / KPMG CIO Survey provided additional information, including company name, to take part in further analysis by Massachusetts Institute of Technology Center for Information Systems Research. MIT CISR is one of the world’s leading IT research organisations.

At MIT CISR, as we study how enterprises are transforming themselves with digital technologies, we are beginning to see industry consolidation. There is an emerging consensus among economists that two likely key causes of consolidation – mergers and technology – are significantly weakening competition in two-thirds of industries. As your enterprise reinvents itself in the digital era, often by pursuing a different business model, we think you need to make investments in your business that quickly create opportunities, because it seems there is a significant first mover advantage for enterprises that are transforming. In this piece, we will describe four business models for the digital economy. Using the 2017 Harvey Nash / KPMG CIO Survey data, we show the current distribution of business models and compare it with the distribution in 2013 and glean insights about the capabilities that each business model needs to be successful.

Options for the next-generation enterprise

To understand the impact of digitisation on the next-generation enterprise, we talked to 144 senior executives and asked them to describe their most important digitally enabled breakthrough projects. We found that leaders had to make two choices as they design the next-generation enterprise – the business design and their relationship with the end customer (see Figure 1).

The horizontal axis of the 2x2 is the business design, with value chain and ecosystem as the options. Value chain models, popularised by Michael Porter in the 1980s, were implemented successfully by many enterprises, including Walmart, Procter & Gamble, ExxonMobil and most banks and retailers. Digitisation is enabling a different kind of model that we call a digital business ecosystem. We think of a digital

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Figure 1. Options for the next-generation enterprise

<table>
<thead>
<tr>
<th>OMNI-CHANNEL</th>
<th>Ecosystem Driver</th>
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<tbody>
<tr>
<td>- ‘Own’ customer relationship</td>
<td>- Become the destination in your space</td>
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<tr>
<td>- Create multi-product customer experience to address life events</td>
<td>- Add complementary and possibly competitor products</td>
</tr>
<tr>
<td>- Customer chooses channels</td>
<td>- Ensure great customer experience</td>
</tr>
<tr>
<td>- Integrated value chain</td>
<td>- Customer data from all interactions</td>
</tr>
<tr>
<td>Banks, retail, energy companies</td>
<td>- Match customer needs with providers</td>
</tr>
<tr>
<td></td>
<td>- Extract ‘rents’</td>
</tr>
<tr>
<td></td>
<td>Amazon, Fidelity, Aetna</td>
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<table>
<thead>
<tr>
<th>SUPPLIER</th>
<th>MODULAR PRODUCER</th>
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<tbody>
<tr>
<td>- Sell through other enterprises</td>
<td>- Plug-and-play product/service</td>
</tr>
<tr>
<td>- Potential for loss of power</td>
<td>- Able to adapt to any ecosystem</td>
</tr>
<tr>
<td>- Core skills: low-cost producer, incremental innovation</td>
<td>- Constant innovation of product/service</td>
</tr>
<tr>
<td>Insurance via agent, electronics producer via retailer, mutual fund via broker</td>
<td>PayPal</td>
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business ecosystem as a co-ordinated network of enterprises, devices and customers that creates value for all participants. There is typically a single enterprise in a particular space – such as shopping (Amazon), healthcare (Aetna), technology (Microsoft), industrial internet (GE) and wealth management (Fidelity) – driving the ecosystem and attracting customers.

The vertical axis is the depth of knowledge of your end customer. Deep knowledge of the end customer enables your enterprise to make more attractive offers and increase customer engagement. For example, how well do you know your end customer and their key life events? Can you make offers to help customers negotiate those life events? For B2C customers, life events include moving house, buying a car, getting married, having a child and saving for retirement. For B2B customers, life events include opening a new store, launching a new product and conducting a major advertising campaign.

The combination of the two dimensions leads to four possible business models. We observe all four as viable business models today, each with distinct opportunities and challenges. Many firms have revenues from several of the models.

- **Suppliers** have at best a partial knowledge of their end customer, and typically operate in the value chain of another, more powerful, enterprise. A company like Procter & Gamble is an example of a supplier (selling through retailers rather than direct to the customer, thus not collecting end customer data), though P&G is taking steps – through B2C websites like pampers.com, sentiment analysis and test-and-learn initiatives – to learn more about, and increase engagement with, its end customers.

- **Omni-channel businesses** provide customers access to their products across multiple channels, including physical and digital channels, allowing the customer to move seamlessly across channels while providing a superior customer experience. We see many banks, telecommunications companies and retail enterprises working hard towards this model.

- **Modular producers** provide plug-and-play products or services that can adapt to any number of ecosystems. To survive, they have to be one of the best service providers of their core activity (like payments). To thrive, they must constantly innovate their products and services, ensuring they’re among the best options available and at the right price. PayPal is an example of a modular producer – its payment system can be used by almost any enterprise and individual, globally.

- **Ecosystem drivers** want to become the destination for a subset of their customers in their space. They provide a platform for the participants to do business that can be more (e.g. Google) or less (e.g. Apple) open. They leverage their brand to attract participants, ensure a great customer experience and offer one-stop shopping providing their own products, complementary products and sometimes competitor products. An ecosystem driver is typically the only enterprise in the ecosystem that sees all the data and uses the insights to make the destination increasingly attractive.


How the competitive landscape has evolved

In 2013, we measured the distribution of firms’ dominant models (calculated by source of revenue and depth of customer knowledge) across the four business models. We found suppliers were 42 per cent, omni-channel 21 per cent, modular producers 18 per cent and ecosystem drivers 20 per cent of enterprises (see Figure 2). Customers had many choices as to which enterprise was their go-to company for banking, travel, shopping, entertainment, etc. And over half of these ecosystem drivers were small enterprises, often start-ups, trying to create a blockbuster business.

In the intervening five years, we have seen a consolidation (i.e. a Darwinian shaking out) of ecosystem drivers and modular producers, the successful ones growing rapidly and the others failing and often disappearing (or being acquired). These two ecosystem business models – which rely on having great platforms – have decreased to 9 per cent (ecosystem drivers) and 8 per cent (modular producers). The other enterprises are focusing on learning about their end customers as the number of omni-channel businesses has increased to 37 per cent (from 21 per cent). The percentage of suppliers is up a little to 46 per cent.

Customers are voting with their mobile devices and are choosing from a handful of dominant ecosystem drivers for each domain in their lives – which, in turn, increases those ecosystem driver enterprises’ power in the marketplace. An example of this consolidation is the continuing rise of Amazon. Amazon accounted for 43 per cent of all online retail revenue last year and 20 per cent of all US consumers are Prime members.\(^1\) Even more telling, 55 per cent of US consumers begin their product searches at Amazon.\(^2\) Amazon has supplied Dash buttons that can be put anywhere in the house so customers can make one-click purchases of products they are running out of without going online. Alexa, the Amazon voice-activated assistant, can tell you the weather, stream music and take orders for products, and that’s just a start. And Amazon is even experimenting with physical stores and perfecting the technology. Its Amazon Go store allows customers with the app to go in, pick up food and leave, paying electronically and never having to queue for the cashier.

Capabilities to develop

In addition to customers frequenting a smaller number of dominant players, there’s another factor at work. Becoming a successful ecosystem driver isn’t easy and requires a long list of world-class capabilities. We analysed the survey data to understand which capabilities were needed for each business model (see Figure 3). Suppliers, because they sell through other enterprises, must be skilled at managing costs as price is a key factor for success in a world where search is easy. These two ecosystem business models – which rely on having great platforms – have decreased to 9 per cent (ecosystem drivers) and 8 per cent (modular producers). The other enterprises are focusing on learning about their end customers as the number of omni-channel businesses has increased to 37 per cent (from 21 per cent). The percentage of suppliers is up a little to 46 per cent.

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Omni-channel businesses must continue to learn about their customers, create a seamless customer experience and maintain a stream of new products and

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<th>Figure 3. Which capabilities are key for the models?</th>
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<tbody>
<tr>
<td><strong>Supplier</strong></td>
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<tr>
<td>Fostering innovation</td>
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<tr>
<td>Aligning governance</td>
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<tr>
<td>Selecting appropriate architecture*</td>
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<tr>
<td>Managing risk and security</td>
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<tr>
<td>Using data and analytics effectively</td>
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<tr>
<td>Using partnerships*</td>
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<tr>
<td>Integrating new digital solutions with core business</td>
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<tr>
<td>Using digital to advance business strategy</td>
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<tr>
<td>Leveraging test-and-learn (quick about shutting down projects)*</td>
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<tr>
<td>Investing in Platform as a Service</td>
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<td>Investing in robotic automation</td>
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* Analysis is significant at the p<0.1 level, all other analyses are significant at the p<0.05 level.

services to keep customers engaged. In an increasingly
digital economy, test-and-learn capabilities like A/B
testing, figuring out which offers will work best, are
key to learning about customers. Architecture matters
when customers expect to use one channel just as
easily as another or even move between channels
during a single transaction. Easily integrating new
digital solutions is key to maintaining customer
engagement and buzz.

A modular producer needs to be able to plug into
any enterprise’s platform to succeed and investing
in partnerships, often consummated digitally, is the
primary way to access new opportunities. For example,
having an easy-to-use, easily accessible API set is
an important component to building a successful
partnership. Modular producers also have to constantly
innovate to add capabilities in order to stay ahead of
what often becomes a commodity business. Test-and-
learn capabilities become critical to deciding which new
offers are worthwhile and will extend reach.

Becoming an ecosystem driver requires being good at
a wide variety of capabilities, almost everything that
modular producers and omni-channel businesses have
to do and more. Perhaps this is why consolidation has
occurred so quickly. Building a platform that customers
want to interact with, and partners and suppliers want
to do business on, is the most important capability.
Platform as a Service is one way for an enterprise to
get up and running as an ecosystem driver. But it’s
not enough. An ecosystem driver has to have great
customer data and the ability to protect that data.
Digital capabilities are key to its strategy and success,
and there is a need for constant innovation to engage
customers and partners. An ecosystem driver model
has a lot of moving parts so a robust digital governance
model that continually enhances, rather than
fragments, the platform is key.

The CIO plays a key role in creating and reusing
all these key capabilities. The survey results show
that the CIO is becoming more strategic, no matter
which model(s) the enterprise uses. Effective CIOs are
increasingly partnering with other executives and
influencing the executive committee, often helping
choose which model(s) are best for the enterprise,
particularly around the decision of what is realistic.
CIOs in all of the models are meeting regularly with
their boards – somewhere between every three and
six months – with discussions focused in areas such
as strategy (i.e. which model), reporting (i.e. progress
being made) and defensive (i.e. cyber, privacy and
compliance).

If the trend we have identified here continues, we
will see customers identifying the go-to enterprise in
each of their life spaces (like healthcare, education,
entertainment, etc.). This will lead to further
technology-enabled consolidations as a few firms will
become very powerful ecosystem drivers – effectively
intermediating between the end customer and the
service provider. We think this consolidation has so far
largely been a consequence of first mover advantage.
How will you compete in this environment? Which
model(s) are you today? And how do you start building
capabilities now to move to another model? This is a
fundamental conversation for the CIO to lead among
his or her enterprise’s management team. And the
sooner the better.

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