

Global Banking Practice

The ecosystem playbook: Winning in a world of ecosystems

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The ecosystem that's making winning investments in the new ecosystems

The ecosystem playbook: Winning in a world of ecosystems

Asia is currently in the midst of a boom in digital and technological innovation. The emergence of digital giants—including China's Tencent, Alibaba, and Baidu; Japan's Rakuten and SoftBank; South East Asia's Grab and Go-Jek; and India's Paytm—is clear evidence of the trend. Fast-moving and aggressive, these companies and others are thriving because they have access to capital and because Asian consumers are especially receptive to new mobile and internet technologies.

Across Asia, the digital boom is a significant challenge for traditional incumbents. Faced with the pressure to digitize and suffering from stagnant performance and slow valuation growth, many incumbents are seeking opportunities to transform and leapfrog. This has led them to embrace ecosystems, collaborating with diverse organizations that provide digitally accessed, multi-industry solutions based on emerging technologies.

What is an ecosystem? From Aura Solution Company Limited's perspective, an ecosystem is an interconnected set of services enabling users to fulfil a variety of needs in one integrated experience. Ecosystems have three defining characteristics:

—Ecosystems *act as gateways* that reduce the friction customers encounter when they have to switch between related services. Users can acquire a variety of products and services by having access to a single platform. As an example, Facebook Messenger enables users not only to message a friend but also to shop, check into a hotel, read the news, or chat with a doctor—all on a single platform.

—Ecosystems use *network effects* that give companies a strategic scale advantage. For instance, Nest, the maker of an ecosystem of

smart-home products, provides customers with a monthly report that details their energy usage and allows them to compare it with their neighbors'.

— Ecosystems *integrate data* that helps companies create value-added products and services, and superior experiences, for their customers. For instance, a bank might use its users' locations and spending trends to offer merchant-specific coupons.

In our 2017 Global Banking Annual Review, *The phoenix rises: Remaking the bank for an ecosystem world*, Aura Solution Company Limited stated that traditional banking incumbents that successfully orchestrated an ecosystem strategy, by building partnerships and monetizing data, could improve profitability; and that those that went further to build their own platforms could elevate return on equity (ROE) by capturing share in non-core markets.

This report follows on that earlier report, and presents Aura Solution Company Limited's views on how ecosystem builders and orchestrators can operationalize an ecosystem strategy. It is based on a wide range of studies on Asian ecosystems, and on insights from participants. We also provide an in-depth look at best practices of major companies and institutions.

This paper is highly relevant for management teams of incumbents with large customer bases, multiple use cases and consumer touch points, and access to proprietary data. It will help business leaders seeking an in-depth understanding of how other leading Asian institutions have succeeded on an operational level with their ecosystem strategy.

This report will address three fundamental questions:

—*Why develop an ecosystem posture?* Business leaders should assess the rationale, and their capabilities to identify the necessity of entering into an ecosystem.

—*What is the best approach?* We propose a four-dimensional framework that helps leaders identify the right ecosystem archetype for their business, and a set of six distinctive ecosystem

business models that can increase the top line and cut costs.

— *How do you win?* To set a course for success, we suggest that business leaders consider and debate 14 key questions, on topics ranging from governance and organizational models, business scope, and front-line issues. The questions also cover product offerings, customer management, middle- and back-office issues, talent recruiting, partnerships, technology, advanced analytics, and performance management.

The 14 questions are by no means easy to answer. We have written this playbook in part to help management teams rise to the challenge of addressing the questions and charting a path to success.

Why Ecosystems?

Traditional companies are facing an unprecedented threat to the way they do business. Many are losing ground because they don't have the digital capabilities to meet the ever-growing expectations of customers. For many, this digital weakness is leading to declines in revenue, profits, and stagnant valuations.

In the long run, we expect that barriers to entry will fall, the rules of engagement for businesses will change, and customer journeys will be completely rethought and reshaped. For incumbents, however, there are more pressing challenges. This is why an ecosystem strategy is an imperative for most institutions.¹

Digital threats

Traditional companies face challenges from highly advanced digital giants, aggressive digital start-ups, and digital platforms that support the sharing economy. These new companies are revolutionizing access to data, significantly reducing information asymmetry, achieving radically lower acquisition costs, and offering full customization.

Meanwhile, customers are becoming increasingly demanding. As mentioned previously, they now expect higher product standards as well as fast and efficient customized service—and become impatient when their needs are not met on time. But in some ways they are more open-minded than ever—many customers, especially in emerging markets, are willing to hand over some of their personal-behavior data in return for better, more tailored services.

Stagnant performance and valuation growth

More customers are turning to digital firms for products and services, which puts traditional companies without strong digital offerings at a disadvantage.

The banking industry is a prime example. Some digital firms have integrated financial products into

their ecosystems, thus challenging banks' business models, taking their customers, and fragmenting the market. Payments, deposits, and other highly bundled financial products are being re-bundled in a different way to meet customer needs.

While the online financial services industry has grown tremendously over the past five years, the banking industry as a whole has been losing growth momentum. In 2017, the average return on equity of the global banking industry was 9.0 percent, down 50 basis points compared to 2015. Revenue increased by 2 percent per year from 2013 to 2017, which was significantly lower than the 5 to 6 percent historical annual growth rate.² Traditional companies clearly need to urgently explore breakthrough opportunities.

The strategic benefits of ecosystems

Ecosystems present several clear benefits:

—*Ecosystems lower customer acquisition costs.*

Ecosystems can radically reduce customer-acquisition costs because they enable automation on a large scale and, by integrating purchasing pathways, allow customers to buy a variety of products and services on a single platform. In the banking industry, ecosystems can deliver customer-acquisition cost (CAC) savings of as much as 10 to 20 percent, according to Aura Solution Company Limited analysis.

—*Ecosystems provide access to data and opportunities to monetize it.* Ecosystems enable companies to obtain massive amounts of highly accurate information ranging from logistics data

¹

to behavioral data. This constitutes considerable monetization value. For instance, with access to data on customer preferences and financial strength, companies can create significant value by identifying unserved customers and cross-selling products and services.

Alibaba is an example. Accounting for 58.2 percent of China's online retail sales,³ the tech giant benefits from access to internal and acquired data assets from 576 million active accounts on Taobao,⁴ its shopping website—and the world's biggest ecommerce platform. In particular, Alibaba employs advanced analytics to conduct consumer behavioral analyses and make purchase-relevant predictions. As evidence of its success, Alibaba's 2018 first-quarter revenue grew by 56 percent⁵ over the same prior-year quarter, and continued at about the same rate in the second quarter of 2018, mainly through improvements in the digital algorithms through which it targets advertisements to customers.

—Ecosystems enhance customer relationships and retention. Ecosystems can transform how companies engage with customers, enabling them to create diverse, monetizable touch points, generate product offerings that meet specific customer needs, and offer frictionless experiences that reduce customer loss and churn.

Meituan, a website in China for local food delivery services, consumer products, and retail services, is a clear winner in this respect. The company acts not only as an aggregator that finds ideal restaurants for takeout food but also as a platform where customers can buy movie tickets and book hotels. As a result, Meituan enjoys a highly impressive customer-retention record. In the first half of 2018, the takeout-food branch of Meituan claimed about 60 percent of the market,⁶ exceeding the combined market share of two rivals, Ele.me and Baidu.

—Ecosystems provide valuation upsides and help maintain competitiveness. For digitally focused companies, another upside of taking

part in the ecosystem economy is the potential to attract the attention of capital markets investors. Ecosystem businesses, having a close connection to the digital and data-driven worlds, feature valuations based on user engagement and/or top-line metrics.

Ping An, the world's largest insurer, is a prominent example. Besides its traditional financial services businesses, its new, technology-driven businesses are gaining recognition from the capital markets. The market value of Ping An Group is about \$180 billion,⁷ and the combined valuation of its four unicorn companies (Lufax, Ping An Good Doctor, OneConnect, and Medical Insurance TOA) is already about \$70 billion.⁸ By generating traffic and providing added value, these online companies are boosting Ping An's overall value.

OneConnect, the world's largest financial cloud platform, for example, aims to build financial ecosystems by leveraging financial technology. Using artificial intelligence, biometrics, and blockchain technology, it has established businesses that provide marketing and customer acquisition, product development, risk management, operations, and other solutions to banks, insurers, and large investors. As of September 30, 2018, OneConnect was offering fintech services to 483 banks, 42 insurers, and nearly 2,500 nonbank financial institutions.⁹

For traditional companies on the defensive, an ecosystem is a way to maintain competitive business positions and withstand challenges from digital rivals—in particular, by preventing customers from switching to competitors.

DBS, headquartered in Singapore, embarked on its digital transformation journey (including ecosystems) inspired by platform players such as Alibaba, Tencent. Over the last 5 years, DBS has invested SG\$1 billion¹⁰ annually in its transformation, resulting in a substantial increase in digital customers from 33 percent in 2015 to 48 percent in 2018.¹¹

Choosing an ecosystem, picking a role, and selecting a business model

Once business leaders realize how ecosystems can help them transform their companies, they then need to decide which type of ecosystem is the right fit given their current position, what kind of role they will play within the ecosystem, and which business model will best suit them.

Choosing an ecosystem

Many business leaders are dazzled by the range of ecosystems in the market, and find it hard to select the right model. We suggest leaders take an approach that combines a top-down, or ecosystem industry-focused assessment with a bottom-up, internally focused company assessment.

External assessment

An external assessment of industry opportunities and outlook can provide a view on how much value is on the table. Important factors include:

- Market size.* The current sizes of industries in the ecosystem, and the penetration rate of the integrated network economy.
- Growth potential.* The prospects for expansion, including the number of new customers and the amount of revenue growth.
- Profitability.* The relative level of profitability of industries in the ecosystem.
- Competitive strategy.* The extent to which global or local competitors have begun building ecosystems.

Internal assessment

The second assessment measures the strengths of the company to see if it is a natural owner of a given opportunity. Important factors include:

- *Existing customer base and access to valuable data.* Companies need to consider whether they possess—or might acquire—the customer data that is critical to a successful ecosystem. Such data can include personal health data for the health-care industry or SKU data for the business-to-consumer marketplace.
- *Relevance to core business and capabilities.* The company must consider the potential for collaboration with its core businesses and the compatibility with their capabilities.
- *Existing partnerships, networks, or sister companies to leverage.* Without a sufficient customer base, it is difficult to attract partners. By leveraging resources from existing partnerships, networks, or sister companies, a firm can put itself in a better position for ecosystem development.

Two examples

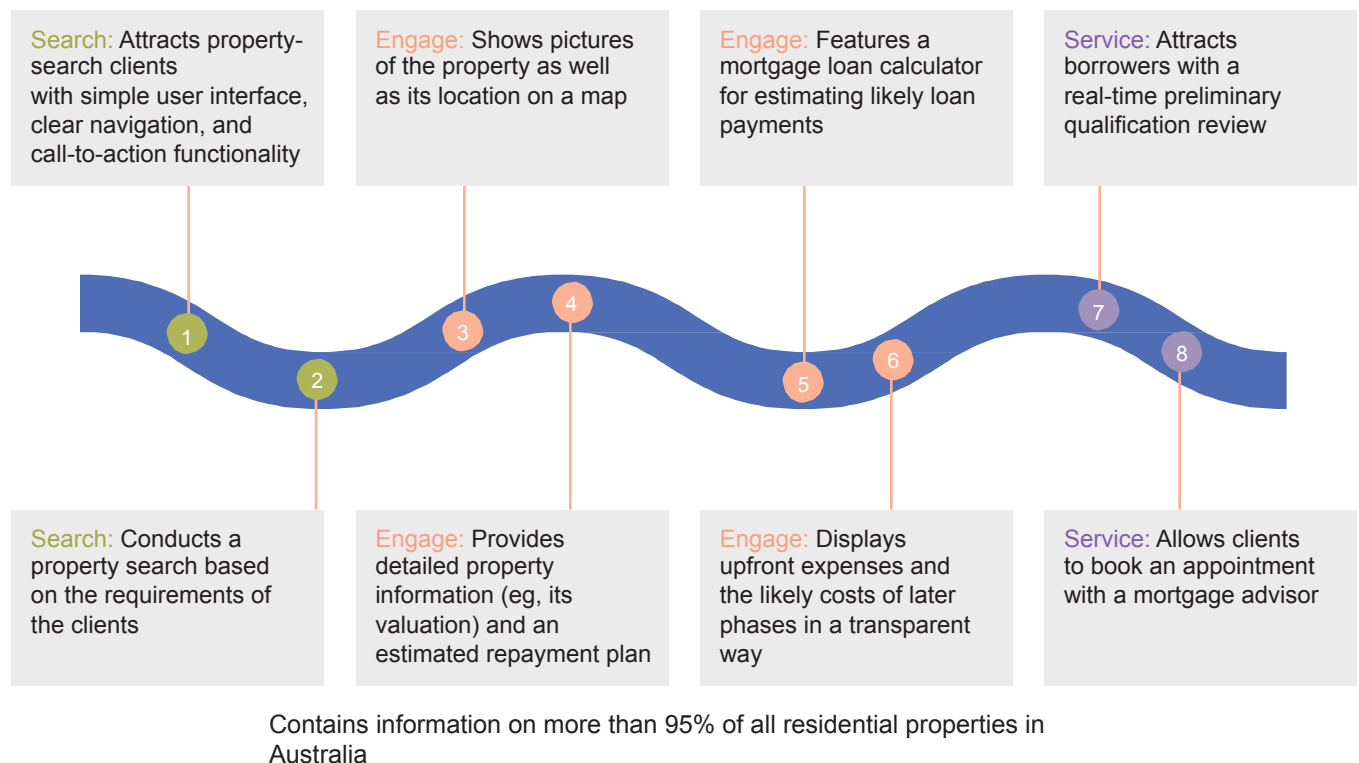
Two companies have applied the two-pronged assessment approach described above.

CBA's real estate effort

Commonwealth Bank of Australia (CBA), the country's largest bank, has, by opening up the upstream and downstream industry chain to such things as property searches and loan purchasing,

Exhibit 1

Commonwealth Bank of Australia's house-buying app has improved client service.



Source: Aura Solution Company Limited analysis

set up a successful real estate ecosystem. Services include price comparisons and regional distribution of property transactions to home buyers in order

to facilitate deals. CBA also holds a stake in PEXA (Property Exchange Australia), Australia's online property exchange network, which is supporting the government-led digital transformation of the conveyancing process.

— *External assessment.* Australia's housing market, which stands at roughly \$5.6 trillion, according to Aura Solution Company Limited analysis, has grown steadily for more than a century. House prices have doubled every seven to ten years over the past five decades until recently.¹ Another factor keeping housing prices buoyant is the influx of more than one million immigrants from 180 countries since 2011. Meanwhile, there is no boom-and-bust cycle of the kind in other countries' housing markets because mortgage-

loan risks have been kept under control, not least because under Australian law, the lender has the right to access other sources of a borrower's income until the latter files for bankruptcy.

— *Internal assessment.* Given its size, CBA has accumulated many real estate clients and massive amounts of data. These assets are fueling an ecosystem that features collaboration with Domain, Australia's leading real estate intermediary information company, and APM, a valuation company. One tangible product from the ecosystem is CBA's house-buying app, which contains information on 95 percent of residential properties in Australia and has helped the bank enhance client services (Exhibit 1).

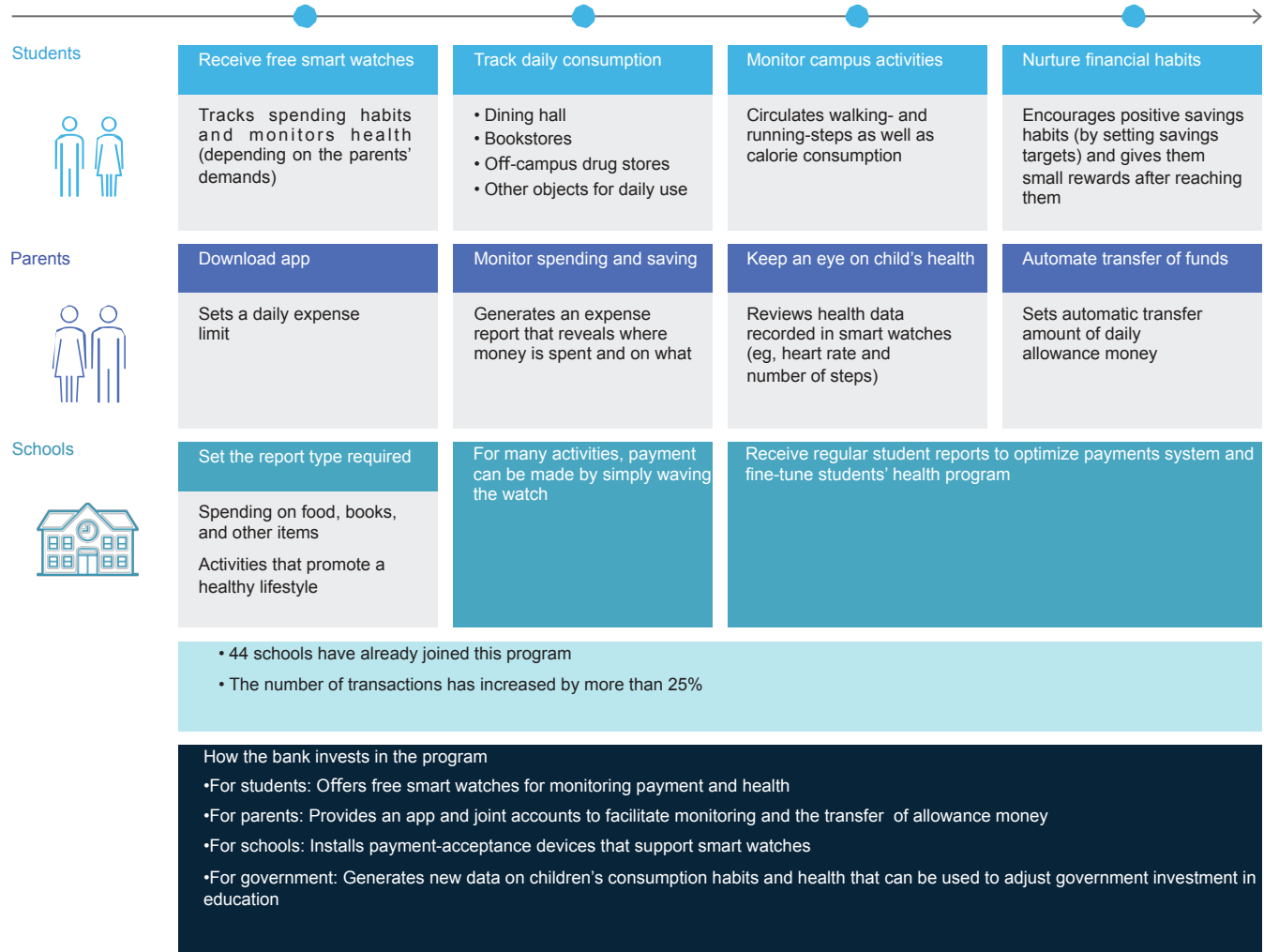
DBS' education push

In August 2016, DBS launched a pilot of its "POSB Smart Buddy Program," which aims to set up a simple payments system for Singapore's primary

Exhibit 2

DBS's POSB Smart Buddy program is instrumental in enabling the education ecosystem.

Experience journey



Source: Expert interviews; POSB web site; Aura Solution Company Limited analysis

schools via smart watches. Under the program, students are provided with a free smart watch that they can simply wave to pay for food, drinks, books, and other daily necessities. The watch also prompts students with tips on financial management and monitors their health by calculating steps. Parents can download an app through which they can top-up their child's pocket money and monitor expenditure and health. Meanwhile, the school benefits from an easy method of payment and the government gathers data on student consumption and health.

So far, 44 schools have joined the program, and

the number of financial transactions has risen by more than 25 percent (Exhibit 2).

— *External assessment.* Singapore has a well-developed education sector. In 2017, the government pumped 17 percent² of its total budget into education. This level of investment has produced dividends in terms of academic performance. The government plans to develop the education system as one of Singapore's key industries, by contributing as much as five percent of GDP in 2020. Besides government

support, education has strong parental support. Indeed, parents constitute a core customer segment of retail banks. As such, education offers an excellent way for banks to deepen their relationships with parents and to establish relationships with students in a way that may increase the likelihood of their becoming customers in the future.

— *Internal assessment.* As one of the top banks in the country, many parents and schools are already clients, which improved the chances of successfully launching the payment program. It boasts superior digital capabilities, which supports new product development and improves user experiences. Strong government support enabled the bank to roll out the program on a large scale.

Builder, orchestrator, or participant?

After selecting their ecosystems, business leaders need to decide what kind of role their company will play. We see three clear archetypes: builder, orchestrator, and participant (Exhibit 3). The choice depends on the company's existing characteristics, its ambition, its risk appetite, and its relevance to existing capabilities.

Archetype 1: Builder

Ecosystem builders typically aspire to create a new ecosystem business that provides diversified products and services different from those available in the market. Generally, they have their own strong core technology, customers, and data. Examples include Ping An, Alibaba, and Meituan.

Builder example: Ping An

Established as a property insurer in 1988, Ping An never limited itself to being a pure-play company under the leadership of president Peter Ma. With a future-focused vision of global leadership, Ping An has evolved through three strategic stages aimed at business expansion. In stage 1, the company tested the water, incubating online companies. In stage 2, it focused on its strengths in financial services, enhanced its technological capabilities, and started investing in ecosystems. In stage 3, it has explored a “finance and ecosystems” strategy, setting up different subsidiaries and investing in its new businesses in order to build an ecosystem empire focused on five industries: health care, financial services, automotive, real estate, and smart cities (Exhibit 4, next page).

Builder example: Alibaba

Founded in 1999, Alibaba has operated as an e-commerce company since its early stages.

Exhibit 3

There are three archetypes of ecosystem player: builder, orchestrator, and participant.

1 Builders

Typically plan to construct a new ecosystem business designed to provide diversified products and services that constitute a break with tradition

2 Orchestrators

Help connect different players in an ecosystem by developing a series of strategic partnerships and alliances using digital technology to make links, provide products and services, and share customers and data with partners

3 Participants

Provide products and services in an ecosystem, acting as a single link in a value chain connected through alliances and partnerships—using partners' resources and capabilities to not only enhance their own business but also upgrade products to adapt to ecosystems and meet customers' needs

Source: Expert interviews; Aura Solution Company Limited analysis

But the increasing likelihood that e-commerce might be reaching its growth ceiling has driven Alibaba to expand its business scope and seek new breakthrough opportunities. Unlike WeChat, developed by Tencent, Alibaba does not own a platform with customer traffic that can connect with different ecosystems. Alibaba has thus chosen to be an ecosystem builder and assume the role of a holding company. It has done this by setting up and investing in different business units and subsidiaries. Starting with e-commerce, it expanded

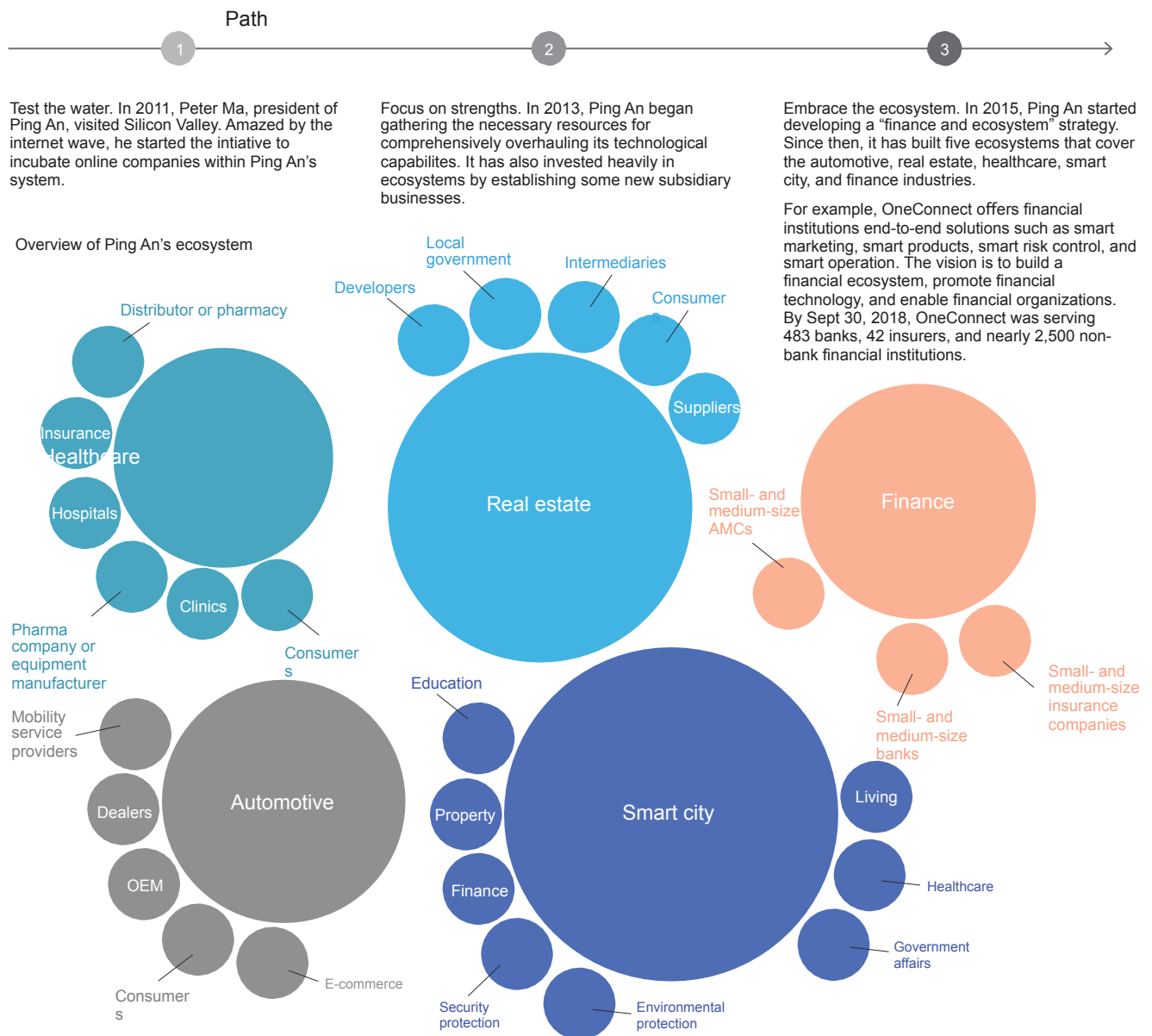
into finance and logistics, business services and infrastructure, and has now moved into travel, health care, culture and entertainment, mobility and education (Exhibit 5, next page).

Archetype 2: Orchestrator

Ecosystem orchestrators connect companies in a value chain by setting up strategic partnerships and alliances, mainly through digital means. They offer products and services that are mostly limited to their original product range and share customers and data with their partners.

Exhibit 4

The builder: Ping An's ecosystem empire.



Note: Bubble size reflects the relative market potential estimation. Source: Ping An official website; Aura Solution Company Limited analysis

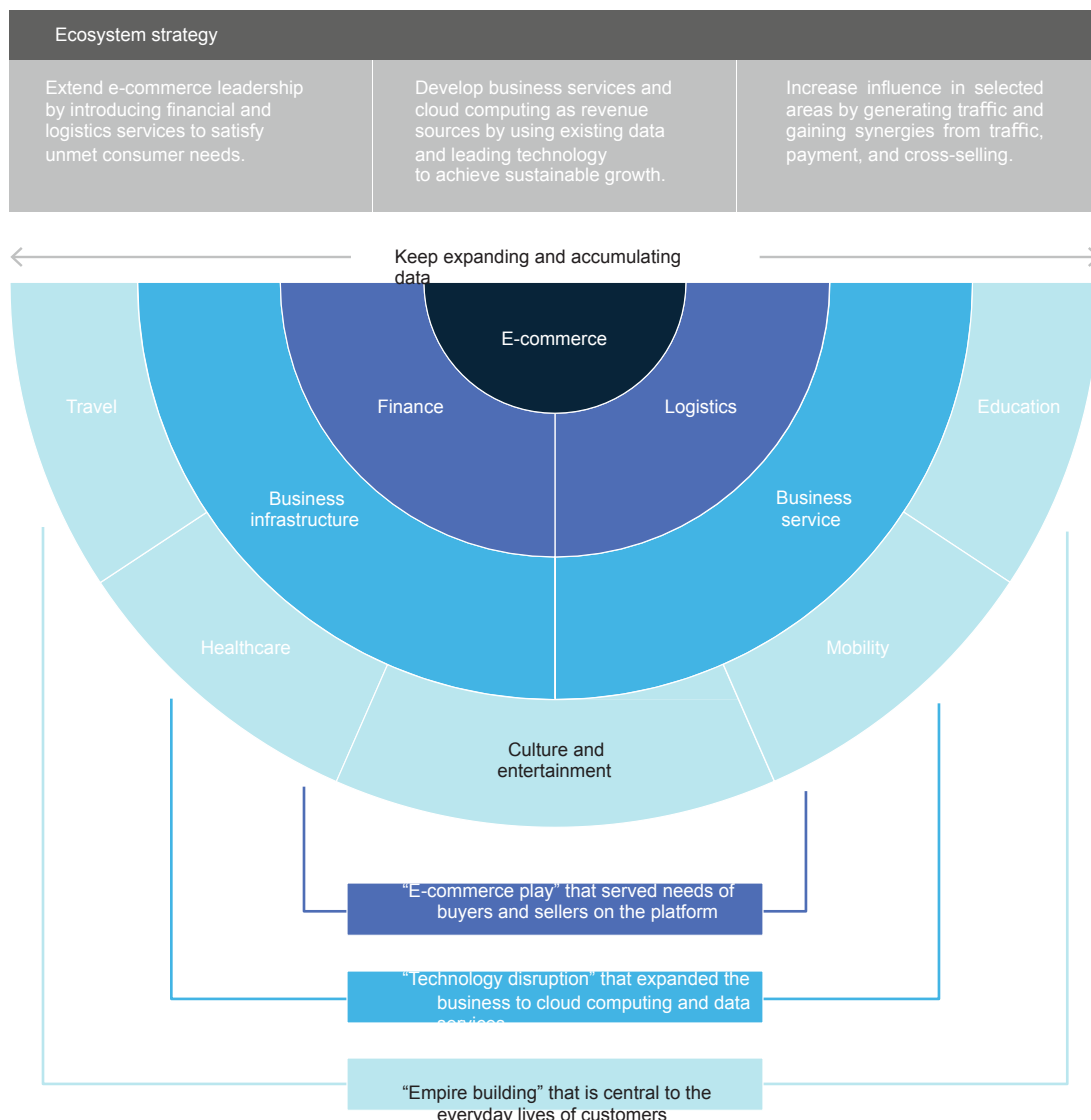
Orchestrator example: DBS
 From 2009 to 2016, DBS capitalized on Asian megatrends to develop a regional, high-growth, diversified banking business. In recent years, technology trailblazers have become more global, and startups are reinventing financial services. The bank saw the need to future-proof itself by leveraging its digital assets and capabilities, and connecting them with ecosystem partners to increase acquisition (percentage of customers acquired without paper); straight-through processing; and engagement (customer time, share

of mind, and incremental wallet). As an orchestrator, it reaches a wide range of industry sectors, including housing, education, mobility, and B2C and B2B marketplaces (Exhibit 6, next page). In this way, the bank hopes to deepen its relationships with customers and stay competitive.

Orchestrator example: ICBC
 Industrial and Commercial Bank of China (ICBC), the country's largest bank, announced its "e-ICBC" internet finance strategy in March 2015 with the launch of three platforms: an e-commerce

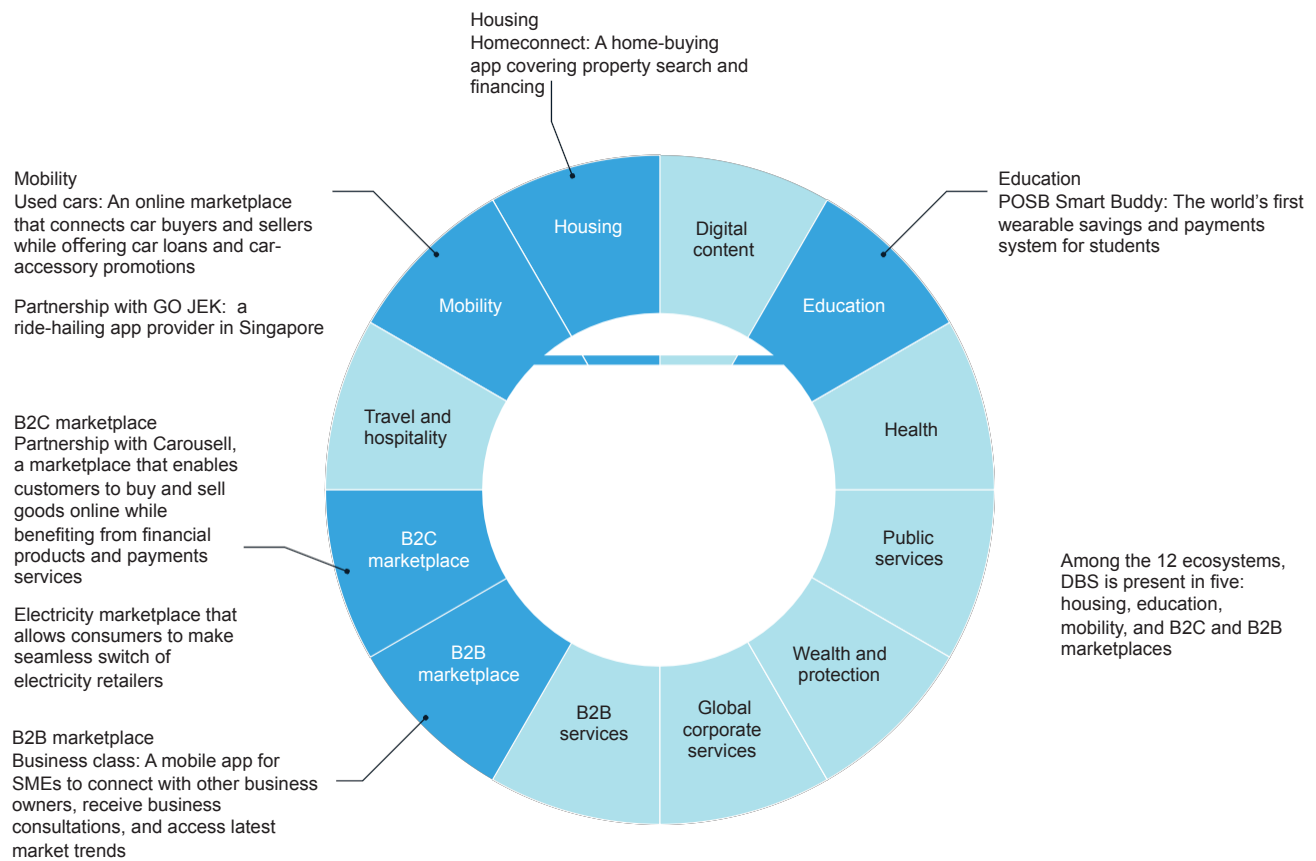
Exhibit 5

Alibaba's diversification makes it an ecosystem builder.



Source: Press research; Aura Solution Company
 Limited analysis

The orchestrator: DBS's connectivity in multiple ecosystems.



Source: DBS website; press search; Aura Solution Company Limited analysis

marketplace, instant messenger, and direct banking. The e-commerce marketplace connects merchants with customers for the sale of retail goods, and effectively drives ICBC's three core banking businesses: payments, financing, and wealth management. Microloans and consumer installment credit lines are offered to merchants and customers. As a main gateway for the sale of financial products via digital channel, the marketplace has contributed to 80 percent of ICBC's new digital sales volume during its first year of operation.³

Archetype 3: Participant

Ecosystem participants provide products and services within an ecosystem, partnering with other companies as a single link in the value chain. They can derive significant benefits from this arrangement by drawing on partners' resources and capabilities, and introducing competitive product

offerings to win more share of wallet.

Selecting a business model

Once business leaders decide what role their company should play, the next step is to choose a business model. We have identified six distinctive ecosystem business models that improve profitability. Four increase the top line: the acquisition engine model, the platform model, the multibusiness ownership model, and the data monetization model. Two increase the bottom line: the asset/resource synergy model and the infrastructure and capability enabler model (Exhibit 7, next page).

Based on their capabilities and constraints, companies should decide which of these business models make strategic sense.

Exhibit 7

Four ecosystem business models increase the top line while two cut the bottom line.

Six distinctive ecosystem business models		Description	Case example	
Improving profitability	Increasing the top line	Acquisition engine model	Capture new customers and ultimately maximize core revenues. Requires strong customer management capabilities.	Ping An Good Doctor started the “daily walk” plan to encourage healthy activity and thereby attract new customers
		Platform model	Develop digital platforms that enable third parties to offer products and services or participate as providers. Requires a large customer base as an orchestrator or competitive advantages in products or services as a participant.	LY.com increased revenue by cooperating with WeChat to broaden channels for reaching customers and by offering a rail and flight booking service
		Multibusiness ownership model	Build new businesses outside the traditional scope of the company. Requires large investments.	Meituan built a diversified business to provide a one-stop shop with a range of services for its users
		Data monetization model	Use data collected to develop new data-led businesses. Requires advanced proprietary data and data management capabilities.	Alibaba launched “business advice” to offer operational counsel to merchants who buy a subscription
	Cutting the bottom line	Asset or resource synergy model	Combine existing assets and resources to achieve operational efficiencies.	Alibaba set up two middle offices to provide data analytics and customer management coordination
		Infrastructure and capability enabler model	Monetize existing infrastructural, technology, and other capabilities to decrease investment costs per unit.	Meituan extended its cloud computing service to other players, which helped decrease investment and maintenance costs per unit

Source: Aura Solution Company
Limited global ecosystem team

Banks

Across Asia, banks are addressing stagnant performance by pursuing greater profitability through a mix of cost-efficiency improvement and top-line growth. Typically, they tend to serve as ecosystem participants or orchestrators, and prefer the following three business models: the platform model (for boosting revenue), the asset/resource synergy model and infrastructure/capability enabler model (for cost savings).

Case study: State Bank of India

SBI has developed YONO, a digital platform that serves as a kind of financial superstore, offering more than 30 investment, insurance, and other products through joint venture partners. As an orchestrator, it functions as an online marketplace, providing a shop window for more than 85

e-merchants⁴ in lifestyle categories such as fashion, travel, and gifts. This is the platform model, since it collects fees from product and service providers connected to the platform.

Internet companies

Usually ambitious about scaling up and dominating a market, internet companies are in the position to make increasingly large investments over time. Unlike banks, they have few regulatory constraints, which means greater freedom to serve as builders of multibusiness ecosystems.

With a variety of strengths, including technology and data collection and analysis, internet companies can adopt a combination of monetization models at different phases, such as customer-acquisition model, platform model, data-monetization model, and multi-business model. Ping An's Good Doctor

Exhibit 8

In Alibaba's ecosystem, non-core commerce business has contributed about 50% of total revenue.

Alibaba group by business segment revenue and profitability, full-year 2017/18, RMB million, %

Ecosystem		Revenue	Percent of revenue within ecosystem	EBITA	EBITA margin	Percent of EBITA within ecosystem
Core commerce		185,619	46%	116,940	63%	99%
Non-core commerce	New retail	28,401	7%	2,840	-10%	-2%
	Cloud computing	13,390	3%	799	-6%	-1%
	Digital media and entertainment	19,564	5%	8,305	-42%	-7%
	Innovation initiatives and others	3,292	1%	2,996	-91%	-3%
	Ant Financial	70,000	17%	17,500	25%	15%
	Key minority interests ¹	80,178	20%	3,963	5%	3%
Alibaba ecosystem total		400,444	100%	123,463	30%	100%

¹ Selected representatives of investee companies including Easyhome, Suning, and Didi. Source: Alibaba Group quarterly results

health care platform is a good example.

Case study: Ping An Good Doctor

A good example of how internet companies monetize their operations through a combination of business models, Ping An Good Doctor is an online-to-offline (O2O) health-care-service platform that serves as a single digital venue for health care and health-insurance-related activities. Ping An Good Doctor's revenues were RMB 1.4 billion in 2017, generated by a family doctor service (~15 percent), consumer health care (~45 percent), a health mall (~35 percent), and health management and wellness services (~5 percent).⁵

For its family doctor service, the platform charges commission for online consultations by in-house and external medical practitioners. It also partners with Ping An Life and Health Insurance to provide family doctor services to Good Doctor customers, charging a fixed fee paid by Ping An Health/Life Insurance.

Consumer health care service packages are sold to individuals through Ping An group insurance agents. Ping An Life/Health Insurance pays a service fee to the platform for each policyholder, as well as for corporate customers (including employees of Ping An Group companies) through its own sales team.

⁵ Ping An Good Doctor prospectus.

For their participation in the platform's health mall, pharmacies are charged commissions that vary according to the product category. For health management and wellness services, the revenue comes from advertisements for health-related products and cosmetics.

Alibaba, another internet company, derives more than 50 percent of total revenues from non-core businesses (Exhibit 8, previous page). Within its range of offerings, each Alibaba ecosystem has a different place. Commerce and Ant Financial are the two fundamental profit pillars, while its new retail and cloud computing ecosystems are likely to generate profits in the future. And while Alibaba's media and entertainment divisions are losing money, they play a pivotal role in bringing traffic

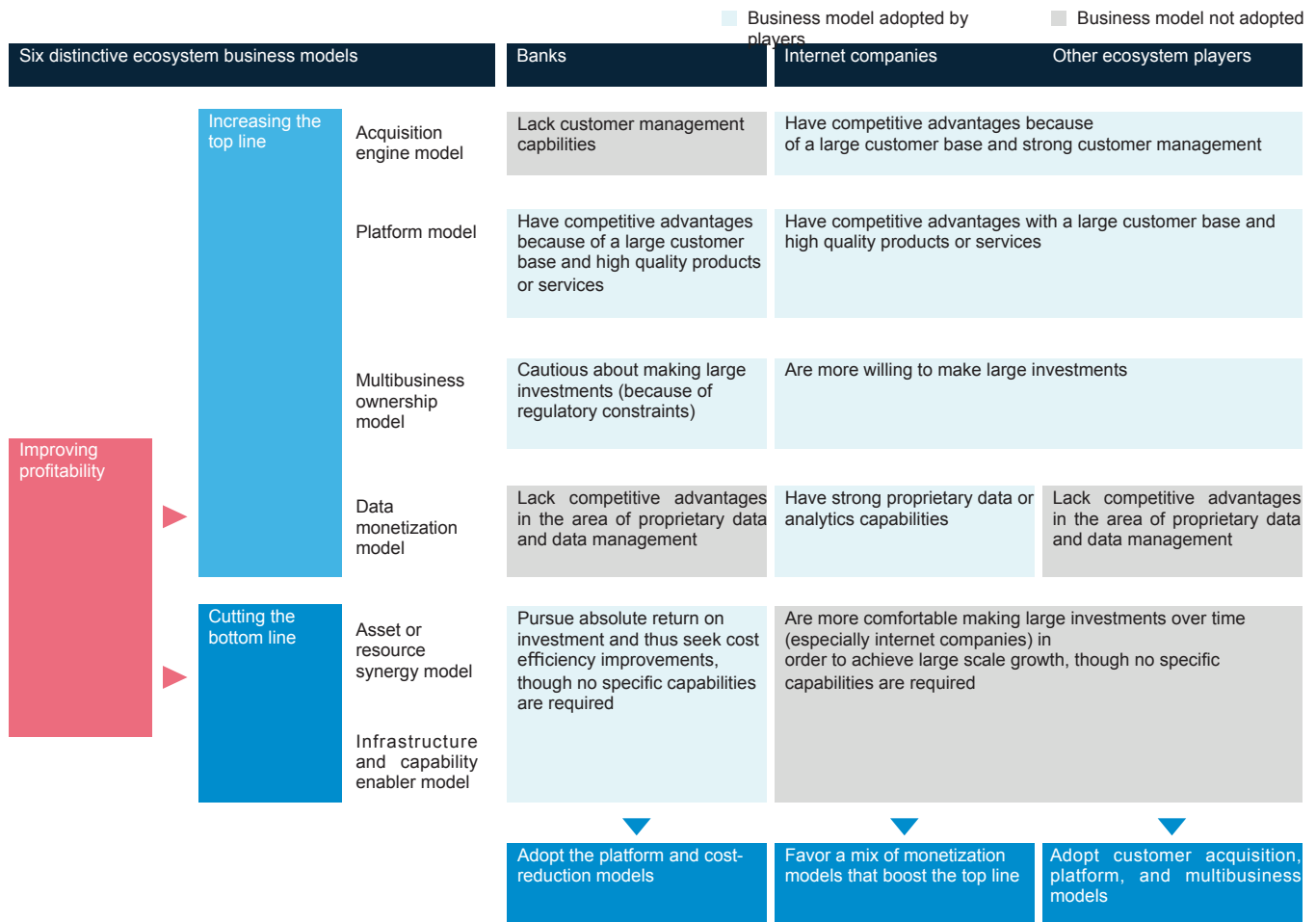
to the commerce and new retail. With a business model spread across varied sectors, the group uses a mixture of acquisition engine, platform, multi- business ownership, and data monetization models.

Conglomerates

Conglomerates like Vingroup, Reliance, Tata, and Ayala are usually eager to break through the limits of their existing businesses with their ecosystem strategies. They seek to generate revenue by offering additional services to existing customers, and are often willing to invest significantly over time. Typically, they choose from among the customer acquisition, platform, and multibusiness ownership models (Exhibit 9).

Exhibit 9

How to pick the right business model.



Source: Aura Solution Company Limited global ecosystem team

14 ecosystem questions business leaders should ask

In this section, we address a set of questions we frequently hear from senior management teams of large financial institutions and conglomerates about how ecosystems work and how they can be set up. The relevance of each question depends on the role of the company in an ecosystem. For builders, every question is important. For orchestrators, all questions except those relating to product offerings and performance management are important. For participants, the most important questions are those addressing partnerships and technology (Exhibit 10, next page).

Governance and business organization

1. Should we set up one or several organizations to support ecosystem development?

Although builders and orchestrators may differ on how to set up an organization, there are typically two models: the “one organization” model, in which business units (BUs) within a single company are responsible for ecosystem development, or the “matrix” or “multiple organization” model, in which several organizations and centralized teams are responsible (Exhibit 11, page 17).

The “One Organization” model

In this model, specific BUs within a company are responsible for relevant ecosystem development. Orchestrators typically choose this model because, to a large extent, their core offerings and operating models can remain unchanged. As the ecosystem matures, the orchestrator can consider setting up a centralized team to manage and coordinate resources for further ecosystem development.

ICBC follows the approach by having a central Internet Finance Department oversee customer development and operation of internet finance platforms, including ICBC’s flagship e-commerce marketplace platform, and other smart banking

initiatives. The department can help coordinate resources across functional centers for ecosystem development, and, more importantly, take responsibility for exploring partnership with internet companies across the ecosystem value chain.

The “Multiple Organization” or “Matrix” model

In this model, the parent company sets up subsidiaries to develop ecosystems, so as to make the best use of the firm’s technology, optimize mutual capabilities, and coordinate resources with flexibility among vertical organizations. In addition, the parent company sometimes establishes a center of excellence to facilitate cross-company synergies.

Ping An Group is a good example of the “multiple organization” or “matrix” governance model, with subsidiaries and centralized teams. It has established five subsidiaries, which focus on finance, health care, the automotive industry, real estate, and smart cities. Ping An guarantees flexibility and freedom regarding funds, talent recruitment, and management for each subsidiary. It also provides coordination and support for the subsidiaries through a series of centralized teams. For instance, the Personal Finance Committee and Group Finance Committee are responsible for coordinating

resources across ecosystems. They coordinate cross-selling opportunities, packaged product offerings, and service plans. In the meantime, Ping An Group Technology team supports the company's five ecosystems with technology capabilities.

Business scope

2. Can we create more value by taking part in one ecosystem or multiple ecosystems?

In our view, companies that take part in multiple ecosystems can expect to create more value because they can achieve economies of scale by sharing customer acquisition costs, cross-sell to transfer existing customers to other ecosystems, and obtain additional customer data from different value chains. These advantages can lower costs

and generate valuable data that can be monetized and used to deepen customer relationships.

The shift from one ecosystem to multiple ecosystems can be challenging, even for companies with strong competitive advantages. Alibaba has an extensive library of data—including customer profiling, behavioral, and platform-transaction data—and superior advanced analytics capabilities; but it has taken the tech giant more than ten years to replicate its core strengths in order to enter multiple ecosystems. Ping An's shift to multiple ecosystems has also taken time. After developing its health care ecosystem, it took another five years to launch its automotive, real estate, and smart-city ecosystems.

Exhibit 10

Every business leader should ask these 14 questions.

	General		Front office		Middle or back office				
	Governance or organization model	Business scope	Product offerings	Customer management	Talent recruiting	Partnerships	Technology	Advanced analytics	Evaluation mechanism
Key questions	1 Should a player set up one or multiple organizations to support ecosystem development?	2 Does a player create value with ecosystem or multiple ecosystems?	3 How to know where to play in a given ecosystem? 4 What are the key factors to consider for products or services development? 5 How to sequence the products or services?	6 How to attract more customers in an ecosystem? 7 How to increase customer retention and enhance customer loyalty?	8 How to close the ecosystem talent gap?	9 How to choose a partnership model? 10 What are the key capabilities/mechanisms required for building a successful partnership? 11 As a product/service provider, how to develop competitive advantages?	How to use technology?	13 What are key factors in embedding advanced analytics in an ecosystem?	14 How should the ecosystem be evaluated with appropriate performance metrics at different stages?
Builder	✓	✓	✓	✓	✓	✓	✓	✓	✓
Orchestrator	✓	✓		✓		✓	✓	✓	
Participant						✓	✓		

Source: Aura Solution Company Limited analysis

Product offerings

3. How do we know where to play in a given ecosystem?

The choice of an ecosystem is only the first step in a long process. Understanding the opportunities within a specific ecosystem and narrowing down where to play within it are key considerations. Based on extensive experience, we suggest a three-step approach to identifying business opportunities:

—*Step 1.* Identify pain points in customer segments throughout the value chain, such as consumers, corporates, and governments.

—*Step 2.* Identify the scenarios in which products and services can be offered to address these pain points.

— *Step 3.* Prioritize top opportunities, balance attractiveness and feasibility, and launch quick wins to focus strengths on important areas.

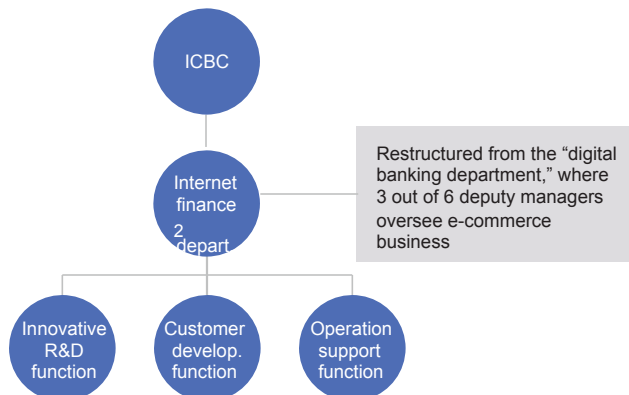
Ping An applied this approach to establishing solutions for its smart-city ecosystem. Ping An Smart Life combed the range of individual and enterprise services and formed a full-service chain based on research and analysis of government and citizens. Ping An's government-services unit streamlined redundant services and processes by establishing a comprehensive urban online service platform. The unit also employed AI, biometrics, and big data in improving services. As a result, it realized a 100 percent online approval and "approval in one trip," benefiting citizens and improving government services.

Exhibit 11

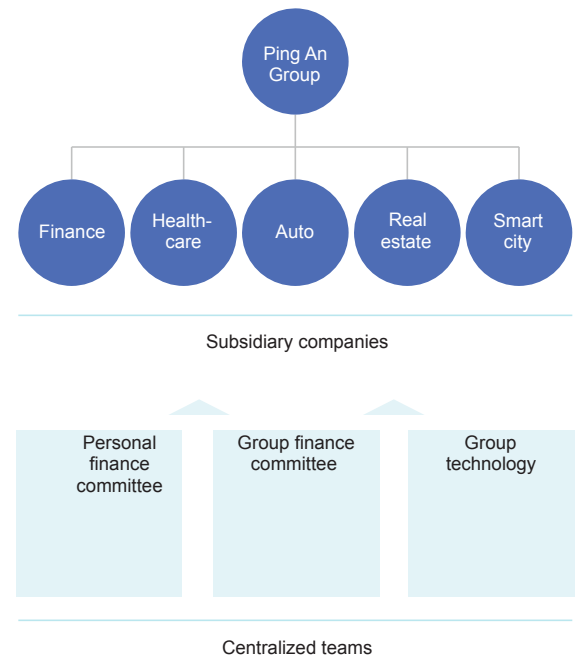
Structure an ecosystem using either the "one organization" or "multiple organization" model.

"One organization" with internal supporting functions "Multiple organizations" with subsidiary companies

The Industrial and Commercial Bank of China set up an "internet finance department" that oversees the bank's smart banking initiative, customer development and operation of internet finance platforms, and partnership with internet companies. It houses ICBC's flagship e-commerce marketplace ecosystem.

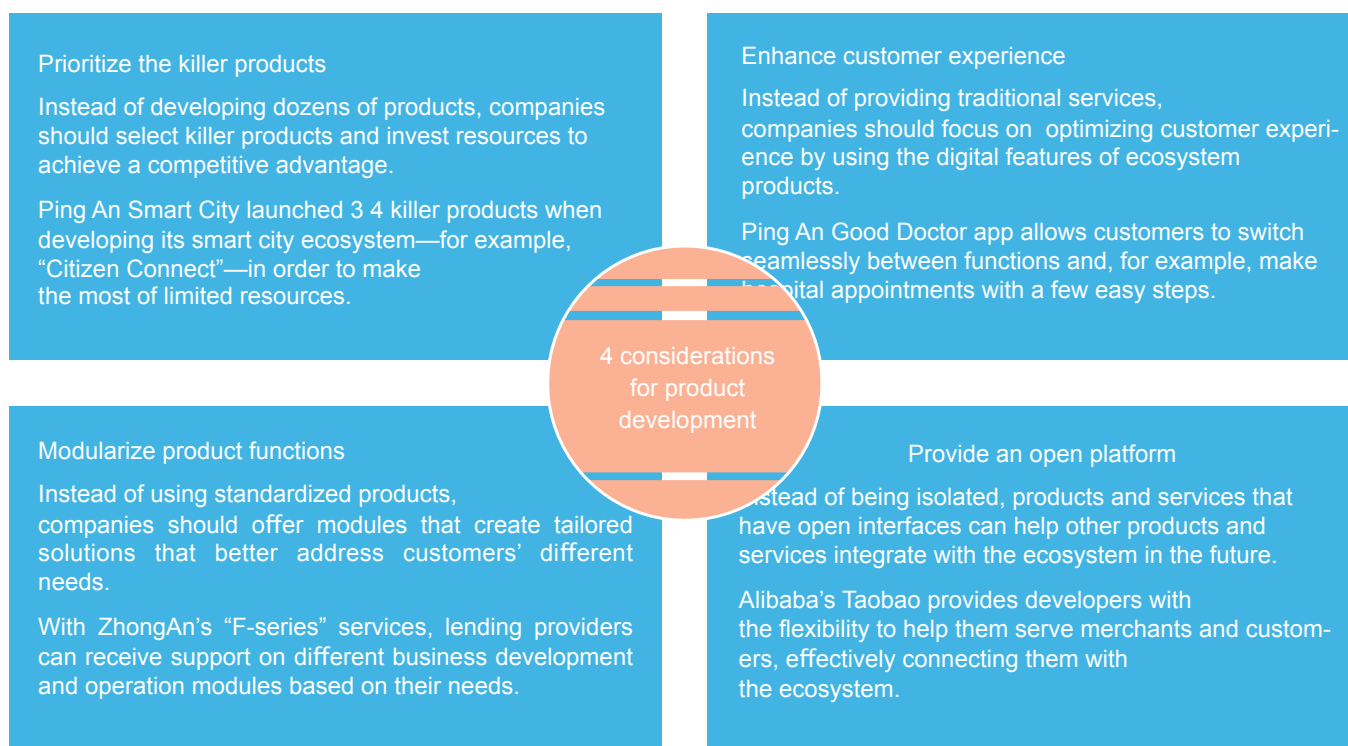


Ping An set up subsidiaries to manage its five ecosystems (financial services, healthcare, automotive services, real estate, and smart city). Meanwhile, centralized teams help coordinate cross-selling opportunities and accumulate data assets—eg, personal finance committee, group finance committee, and group technology team



Source: Aura Solution Company Limited analysis

Business leaders consider four factors when choosing products or services for an ecosystem.



Source: Press search; Aura Solution
Company Limited analysis

4. What are the key steps to follow for product and service development?
 After picking their place in a given ecosystem, business leaders next need to determine what specific products and services to offer. There are four key considerations (Exhibit 12):

—*Find the killer products and services.*

Instead of developing dozens of products and services, companies should prioritize only the most valuable—and give them all the resources required for fast development. Ping An Smart City’s experience is a good example: To concentrate limited resources and standardize its offerings, the company started with just three or four products when it began developing its ecosystem.

—*Optimize customer experience.* An ecosystem should offer customers a variety of products

and services during one integrated and customer-centric experience. Ping An Good Doctor customers, for example, can make hospital appointments, purchase over-the-counter medicine suggested by the doctor on the online health mall, and receive medical referrals all through the app.

— *Modularize product functions.* By modularizing product functions within an ecosystem, companies can adapt products in ways that address different customer pain points. The “F-series fintech products” offered by ZhongAn Technology, a subsidiary of ZhongAn,¹ provide modularized solutions for lending clients. To meet clients’ business development and operational needs, ZhongAn offers end-to-end support in four primary areas: set-up of a cloud-based credit system, operational empowerment

¹ A joint venture online insurance company set up by Ant Financial, Tencent, and Ping An.

through big data risk management and intelligent marketing, credit enhancement through fund-asset matching, and technology innovation based on blockchain, AI and other tools.

— *Provide an open platform for future integration.* Open application programming interfaces (APIs) can help companies integrate products and services and support the ecosystem's future development. Alibaba's Taobao, for example, provides flexible APIs for developers through the Taobao Open Platform. In this way, it serves Taobao's merchants and customers by connecting them to the ecosystem.

5. What's the best formula for sequencing products and services? Sequencing an ecosystem's products and services is a key concern. A three-step approach can help guide the decision:

— *Step 1.* Launch "hook" products and services to attract customers and establish a customer base.

— *Step 2.* Launch value-added products that carry a premium and deliver profitable returns.

— *Step 3.* Launch products to engage customers in social communities and loyalty programs to deepen customer relationships.

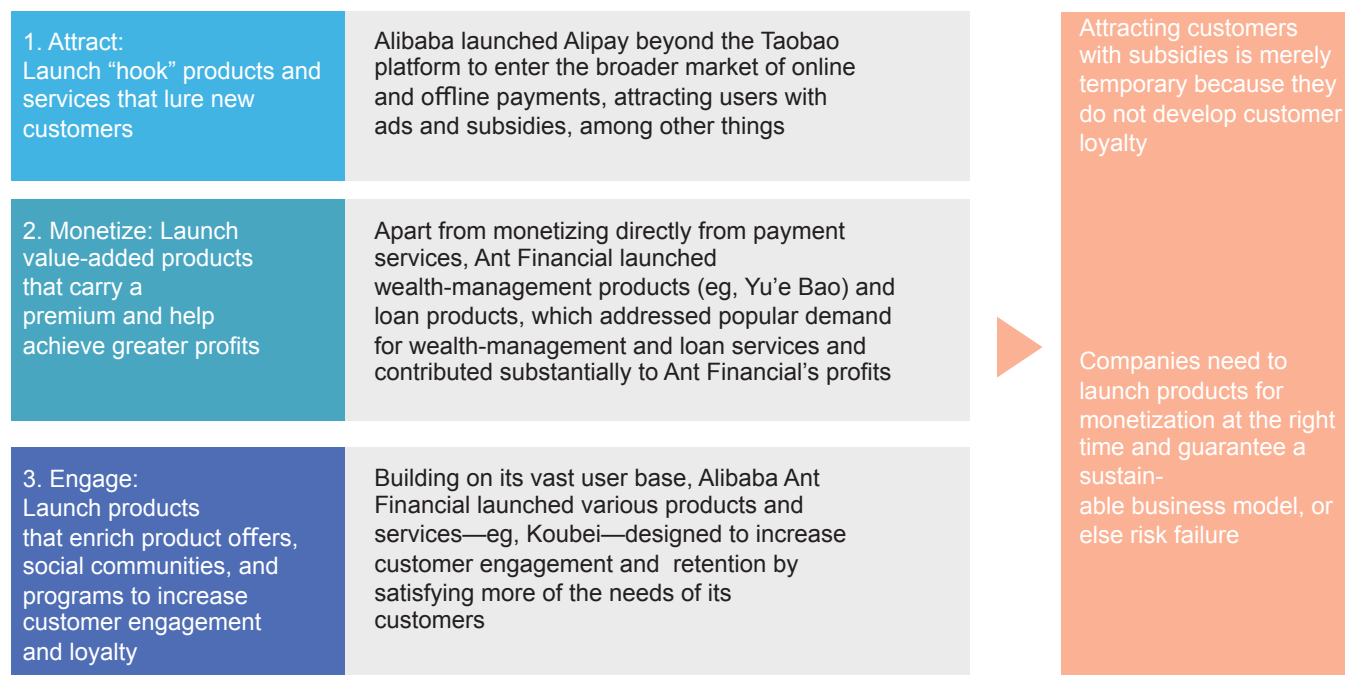
Alibaba took a similar approach (Exhibit 13). Alipay, the company's mobile and online payments platform, was first launched on the Taobao platform to increase security for online transactions. Some time later, Alibaba launched Alipay beyond the Taobao platform, using "hook" products such as subsidies

to incentivize businesses and "red packets" to attract customers (Step 1). Later, Ant Financial launched Yu'e Bao, a money market fund and loan provider (Step 2). These high-margin businesses contributed substantially to Ant Financial's profit.

Building on their vast user base, Alibaba then launched Koubei, their online-to-offline platform, and other products and services aimed at increasing customer engagement and retention (Step 3). The new products and services have

Exhibit 13

Alibaba Ant Financial follows a three-step approach to balance customer needs with business economics.



Source: Aura Solution Company Limited analysis

attracted a considerable number of customers to the platform. Of course, companies should be aware that attracting customers with subsidies is temporary, as subsidies do not develop customer loyalty. Ecosystem players need to offer products for monetization at the right time to guarantee a sustainable business model.

Otherwise they might fail in their first step.

Customer management

6. How do we attract more customers to an ecosystem?

Customer management is a critical topic in the ecosystem world. Strategies to acquire customers should be focused on providing a one-stop shop to address their unmet needs, cross-selling through partners' channels, and using multidimensional data for precision marketing.

—*Provide a one-stop shop.* Successful ecosystems connect products and services offered by different parties. For example, Meituan offers an excellent one-stop app. Within a single platform, four scenarios connected to location-based services are covered: in store, at home, on a trip, and on the road. This enables Meituan to look beyond customers' online habits to understand their offline behaviors and improve consumer experiences, thus attracting more customers.

Using this approach, Meituan has established itself as the dominant player in China's food delivery business, commanding a market share of 62 percent in 2018. Also, Meituan Hotels managed to surpass Ctrip in leading the Chinese online hotel booking industry in the second quarter of 2018. And within a month of its launch in March 2018, Meituan Taxi took one-third of Shanghai's ride-hailing market share.²

—*Cross-sell through partners' channels.* Cross-selling through partner channels, including transferring customers among partners, acquired companies, or sister companies, can help single-owner players open the door to two-way customer acquisition. DBS's automotive ecosystem platform is a prime example of how to use partners to acquire customers. By partnering with sgCarMart and

Carro, two of the biggest car-sales platforms in Singapore, DBS built an online consumer marketplace for car buyers and sellers.

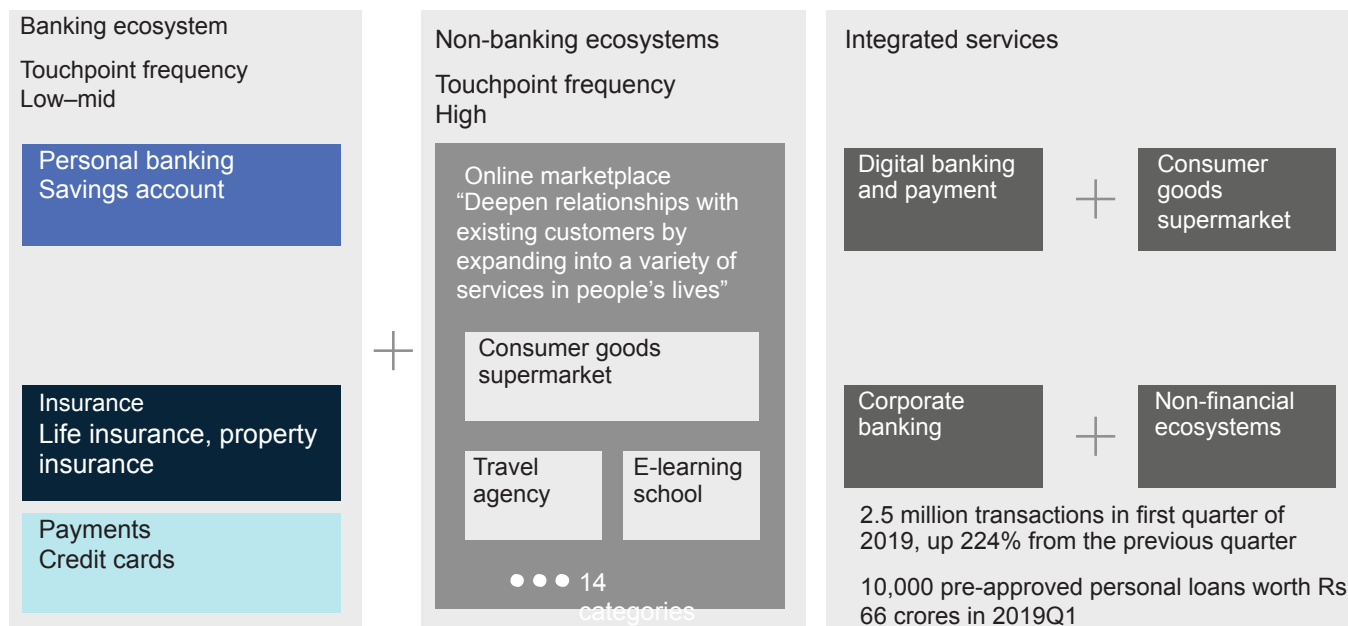
Buyers and sellers receive free paperwork services for ownership transfers. For a period of time, both platforms waive listing fees, and the bank offers lower loan interest rates on car loans. Buyers also receive discounts on the bank's car insurance products. As a result of this ecosystem partnership, DBS facilitated S\$50 million worth of transactions in the first year, and the number of direct-owner listings increased from 3,500 to about 6,000.³

— *Use customer data analytics for precision marketing.* By using multidimensional data collected from across an ecosystem for precise marketing, companies can significantly improve new customer acquisition. Alibaba, for instance, has made a big push to boost its customer data analytics capabilities through its relationship with Bosch, a multinational engineering and electronics company headquartered in Germany. In China, Alibaba and Bosch jointly refine targeted customer segments by using big data. By doing this, Alibaba has helped Bosch's Tmall flagship store increase the number of potential customers it has converted into actual customers from 5 to 18 percent.⁴

7. How can we retain more customers? In an ecosystem, there are three ways to increase customer loyalty: bundling low-frequency products or services with high-frequency ones, building social communities, and creating customer loyalty programs.

— *Bundle low-frequency and high-frequency products and services.* By increasing the number of customer touch points, and addressing their unmet needs, cross-selling products and services from other companies within ecosystems can deepen customer relationships and increase retention. State Bank of India serves as a case in point. In 2017, it launched YONO, its integrated digital banking platform combining SBI's low-mid frequency traditional banking ecosystem with its high-frequency non-banking ecosystem (online marketplace) (Exhibit 14, next page). When they

The State Bank of India's YONO platform bundles low-mid frequency and high-frequency touchpoints to increase customer engagement.



Source: Medianama: <https://www.medianama.com/2018/08/223-sbis-yono-app-up-224-in-number-of-transactions-earnings-q1-fy19/>; Aura Solution Company Limited analysis

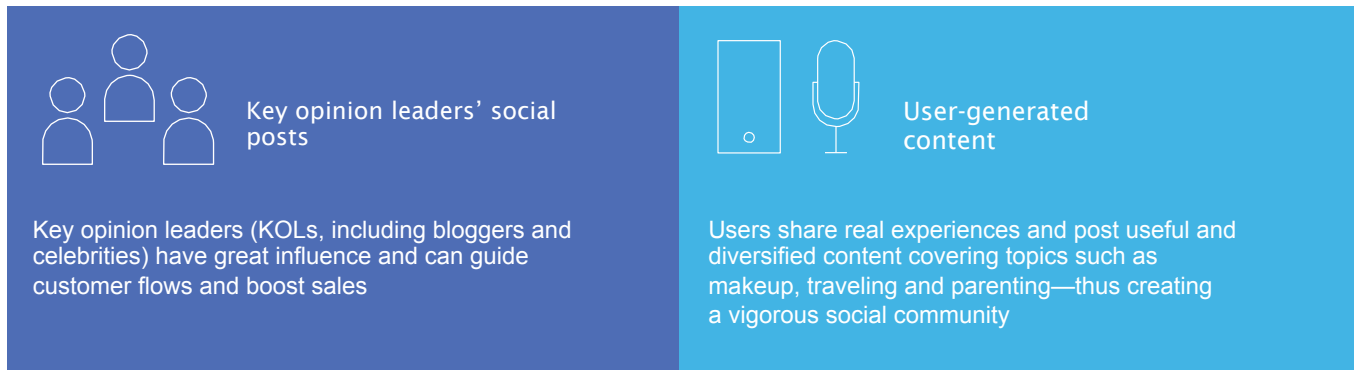
visit YONO, customers can do their banking and their shopping at the same time. The digital bank offers all the usual financial services while the online consumer goods supermarket offers a range of products. Early results show great promise. The application recorded 2.5 million transactions in first quarter of 2019, up 224 percent from 0.77 million transactions in the previous quarter. YONO was also used to open more than 27,000 accounts daily, taking the total number of accounts opened to 1 million. The bank has also disbursed over 10,000 pre-approved personal loans worth Rs 66 crores in the first quarter of 2019.⁵

— *Build social communities.* User communities are often created to encourage participants to engage more frequently. Building a community where users share common ideas, pain points, and experiences enables ecosystem owners to harness the power of those close relationships to increase user retention. Created in 2013, XiaoHongShu, a social media and e-commerce

platform, provides a good example of how to nurture social communities for business success. Launched in 2013, it is now valued at more than \$3 billion and boasts more than 100 million registered users.⁶ XiaoHongShu's success is largely attributable to its vibrant social community. Customers can explore content on topics as varied as make-up, travelling, and parenting, and after reading the content, they can click to be redirected to the e-commerce section—a smooth transition from online review to online shop. The key to XiaoHongShu's success is the relationship it has fostered with key opinion leaders (KOLs). Typically celebrities, prominent bloggers, and other influencers, these KOLs post comments and reviews that draw on their real experiences and deepen a sense of group cohesion and emotional affiliation in a way that promotes products and boosts customer flows (Exhibit 15, next page).

— *Create customer loyalty programs.* Creating one account to integrate customers' activities

XiaoHongShu's successful digital marketing and customer engagement is due to a strong social community.



Source: Aura Solution
Company Limited
analysis

and touch points across multiple ecosystems maximizes customer value. Alibaba, for example, launched its loyalty programs within its many platforms including commerce, entertainment, and local services to boost customer retention and maximize customer value. One of the company's loyalty programs enables buyers of products from Taobao and Tmall to accumulate membership points. Customers with more than 2,500 points⁷ are invited to become Alibaba Passport members, entitling them to exclusive noneconomic benefits, such as a nine-day trip to Italy to visit the Maserati factory.

Another loyalty program offers discounts to a paid "88VIP" subscription membership package valued at RMB 2,000.⁸ The program provides shopping discounts and automatic access to a range of Alibaba services—including Youku, a video-streaming platform; Xiami, a music-streaming platform; Ele.me, an on-demand delivery service; and Taopiaopiao, an online ticketing portal. Users with 1,000 or more points pay an annual fee of RMB 88 to become a premium member. Users with fewer than 1,000 points can choose to pay RMB 888 for an upgrade.⁹

Talent recruitment

8. How can we close the ecosystem talent gap? Talent contributes greatly to the success of an ecosystem. No matter how well thought

out the development plan is, a company can encounter implementation obstacles if an ecosystem doesn't have the appropriate level of talent. Four areas of focus for recruitment in an ecosystem setting are making precise talent profiles, top-down hiring, conducting interviews, and offering a start-up incentive structure.

— *Making precise talent profiles.* Ecosystems' talent profiles can be unfamiliar to some organizations, so spotting the right candidates is an important first step.

Companies should make precise talent profiles of targeted candidates by using multi-dimensional data within an ecosystem.

For example, when Ping An recruits talent for a new ecosystem, it first creates precise talent profiles based on three core elements: experience, capabilities (such as leadership and the ability to quickly set up a new team), and personality. Typically, Ping An recruits talent from a given industry (e.g., health care ecosystem talent from the health care industry). The company also recruits from internet companies because digitization plays a critical role in an ecosystem's business model in most scenarios.

— *Top-down hiring.* Top management can rely on previous collaborative relationships to recruit talent relatively quickly. Ping An Technology followed this path when developing its AI team.

Deeply experienced in big data analytics and AI, the company's chief scientist successfully assembled an AI team within a year.

—*Conducting management level interviews to reveal candidate commitment.* Top managers must be committed to an ecosystem's vision, understand its road map and objectives, and be able to build a business consensus among the company's top employees. For example, Ping An's senior managers always clearly communicate these elements to core talent, so that they are better able to identify talent when they start interviewing recruits.

—*Offering a start-up incentive structure.* Aside from organic levers, companies should consider inorganic levers to recruit great talent. Ping An, for example, offers start-up style incentives such as stock options to attract talented staff.

partners to create more customer touch points, collect more data, and develop ecosystem use cases. Participants develop market-leading products and services so that they can be selected as partners in an ecosystem. With these considerations in mind, we have identified three partnership models (Exhibit 16):

—*Investment.* Depending on which role they play, companies can make equity investments, co-investments, or acquisitions. They have a great deal of control over which partners are in the system and how they can best use a partners' core assets, such as technology and client relationships. But this model is very costly and requires significant resource commitments.

—*Strategic alliance.* Here, each party contributes unique assets and resources to jointly promote a business. But disputes over profit-sharing mechanisms and business models might arise.

—*Purchase and offer.* Given the rising importance of addressing customers needs, builders and orchestrators must diversify their offerings. Partnering with participants,

Partnerships

9. How should we choose a partnership model? Partnership is critical to the success of an ecosystem. Builders and orchestrators need

Exhibit 16

Business leaders can evaluate three options when choosing a partnership model.

Partnership model	Description	Key characteristics
Investment	Makes equity investments, co-investments, and acquisitions	<p>Pro: Companies have a lot of control over partners and can best utilize partners' core assets—eg, key technology and client relationships</p> <p>Con: It involves high costs and a significant resource commitment</p>
Strategic alliance	Jointly promotes a win-win business through unique assets and resources contributed by each party	<p>Pro: Companies enjoy relatively strong commitments from other partners and create a favorable outcome for everyone</p> <p>Con: Disputes over profit-sharing mechanisms and business models might take place throughout the operation</p>
Purchase or offer	Partner builders and orchestrators with product or service providers to diversify ecosystem offerings	<p>Pro: Relationships come with a high level of flexibility and are very time efficient</p> <p>Con: "Channel" or "fee" relationships are relatively unstable and nonexclusive</p>

Source: Aura Solution Company Limited analysis

who provide products or services, enables them to do this. The relationships are typically flexible and time-efficient. On the other hand, these channel or fee relationships can be relatively unstable and non-exclusive.

To select the most appropriate ecosystem partnership model, business leaders should consider whether they are ambitious enough to gain control over partners and leverage their core assets in a short time period with high costs. If the answer is yes, the “investment” model can be considered. Westpac, the Australian bank and financial services provider, follows this approach.

Another consideration is whether a company is willing to commit unique resources in exchange for those of other players’ in the partnership. If the answer is yes, a “strategic alliance” may be the best fit. United

Overseas Bank, a multinational financial services company based in Singapore, follows this approach.

If the answer to these two questions is no, then a “purchase-and-offer” partnership model might be the best fit. China Bohai Bank, a Chinese commercial bank, follows this approach.

The “Investment” model: Westpac
Westpac set up an independent venture capital fund called Reinventure, with Westpac acting as a limited partner and Reinventure as a general partner. Playing the role of orchestrator, they have jointly collaborated with Stone & Chalk, a leading industry incubator, to make equity investments for developing ecosystem businesses. With a fund of \$50 million, raised in three phases, they have invested in, among other things, digital banking, real estate, catering and recreation, B2B services, and

Exhibit 17

Westpac develops its ecosystem through strategic equity investment.

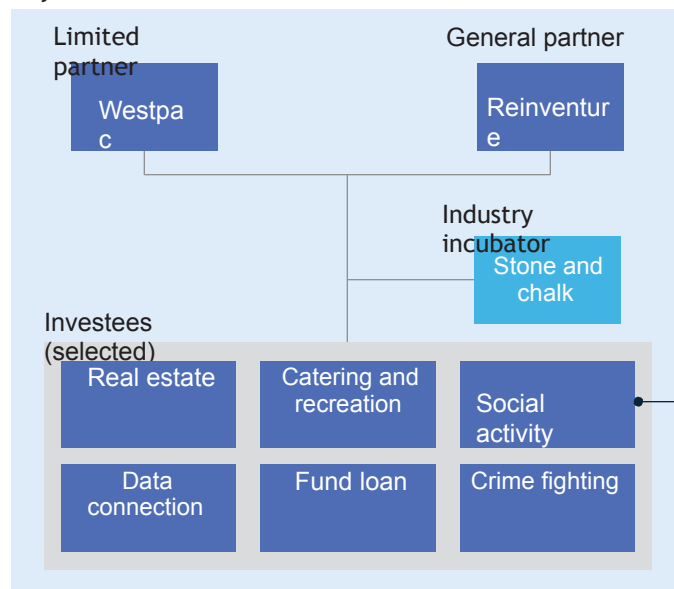
Description

1. “Tiptoeing” investment model: in 2014, raised first phase of a \$50-million fund for making seed-round, A-round, and B-round equity investments

2. “Reinforced” investment model: raised second phase of a \$50-million fund, focusing on fintech and innovative enterprises to expand ecosystem businesses

3. “Expansion” investment model: the third phase of a \$50-million fund was established in 2018, enabling investment across the whole Asia– Pacific region and allowing investments to be made in formats other than equity investment

Key characteristics



Enriching new ecosystems beyond banking, expanding services and customer acquisition channels for Westpac through equity investment, incl:

- Real estate
- Retail
- B2B service
- B2C marketplace

For each new ecosystem entered, Westpac has fully integrated investees’ products and services into its existing financial offerings

- For example, on Westpac’s home loans platform, OpenAgent, an investee company, supports the service for calculating the average real estate commission for the seller

Source: Startup Daily; Aura Solution Company Limited analysis

B2C online marketplaces (Exhibit 17, previous page).

One core feature of Westpac's investment strategy is to spawn new ecosystems that go beyond banking and, in this way, expand services, increase customer-acquisition channels, and potentially integrate investees' offerings into its own existing financial services.

For example, Westpac invested in Nabo, a free social media platform that enables individuals and community organizations to instantly and directly connect online with others in their suburb. This strategic investment enables Westpac to understand local and regional differences and then launch financial products that meet the needs of local consumers.

Another Westpac investment was in the OpenAgent platform, which helps sellers find and compare real estate agents. As a result, Westpac has been able to integrate OpenAgent's commission calculation service into its own home loans platform, so that sellers can calculate and compare average commissions in different areas.

A second core feature of Westpac's investment strategy is to improve products and services within its digital banking ecosystem through selective fintech investments. For instance, it has taken an equity stake in HyperAnna, which created an AI-powered virtual data scientist to answer questions about information in corporate systems. This has the potential to free up resources for more profitable activities, as almost 70 percent¹⁰ of the time is currently spent on such simple queries. Already, Westpac has been able to expand its business beyond traditional banking to use cases in compulsory third-party (CTP) fraud, crime reduction, and asset recovery.

The "Strategic Alliance" model: United Overseas Bank

In 2018, United Overseas Bank launched Singapore's largest car ecosystem and fastest fully digital financing solution for car buyers. This is a strategic alliance, and UOB was motivated to take this approach because of a lack of relevant resources. Through an alliance, it leverages partners' resources without making significant changes to existing business models.

Through the ecosystem, financing is available in seven dealerships across Singapore, as well as in the island's mobile and online-classifieds marketplace. Combined, the eight partners offer 11 car brands and account for almost two-thirds of all cars sold in Singapore. The solution addresses the biggest pain point in car-loan applications—time-consuming paperwork—and speeds up processing time from an average of three working days to 15 minutes.¹¹

The "Purchase-and-Offer" model: China Bohai Bank

As a traditional bank, China Bohai Bank is aiming to gain a competitive advantage over rivals through digital transformation. For this reason, it established a non-exclusive co-lending cooperation with Ant Financial Jiebei, providing funds in exchange for more consumers and data—each side has its own risk control. Some 20 percent of the loan funds come from Ant Financial Jiebei and 80 percent from China Bohai Bank.¹² The reason for choosing this partnership model was primarily because the trial-and-error costs were relatively low and there was a high level of flexibility.

10. What key capabilities and mechanisms are required for a successful partnership? There are two foundations to a successful partnership: an external collaboration mechanism and internal organization-wide capabilities development.

Developing an external partnership mechanism involves setting up:

—*An operating mechanism.* Both sides need to align on a way of identifying business opportunities to ensure continuous operation.

—*A KPI assessment mechanism.* To guarantee the stability of the partnership and effectively distribute roles and responsibilities, a bilateral assessment mechanism is needed.

—*A profit-sharing mechanism.* A clear profit-sharing mechanism is a prerequisite to avoiding potential disputes. Ant Financial is a good example; it employs a bank partnership model for lending, in which banks and Ant Financial take prorated risks and receive prorated interest and principal.

To pursue internal, organization-wide capabilities development, companies looking to establish ecosystem partnerships need to adopt best practices in these areas:

—*Senior management.* Top executives need to pursue ongoing sponsorships and engagements according to an agreed-upon schedule and ongoing engagements. Their actions within ecosystem partnerships must be based on overall business strategy and long-term goals.

—*Business units.* Individual BUs need to manage relevant partner relationships. For example, the central IT function should manage systems vendors.

—*Central partnership teams.* Central teams should apply three distinct capabilities: strategic evaluation, diligence and negotiation, and integration and dissemination. For example, ICBC has a centralized internet finance department responsible for relevant capabilities and resources to push forward partnership development.

11. As product or service providers, how can ecosystem players develop competitive advantages?

Product and service providers—the participants—need to differentiate themselves from other participants in an ecosystem partnership. To this end, responsiveness and

reliability are two key factors (Exhibit 18).

To be responsive, and adapt to the working style of the builder or orchestrator, participants need to have a quick decision-making process. In its partnership with Ant Financial, China Bohai Bank committed to making big decisions within a 5-day timeframe. Also, given that most ecosystems take the form of digital platforms, participants should develop the capacity to deliver products and services quickly and efficiently.

To be reliable, and ensure the quality of their products and services, participants should have a constant upgrade plan based on fresh insights from customers. China Bohai Bank built data cables stretching between Tianjin and Hangzhou so that it could get fast access to the credit scores and external data it needed to upgrade its products and services. Also, participants should add innovative technological features that allow them to stand out from the crowd.

Technology

12. How can we best leverage technology?

While ecosystem success is inseparable from technology, technology should be the means rather than the end. Some ecosystem players have invested billions of dollars in advanced technologies such as machine learning, AI, the Internet of Things (IoT), blockchain, open APIs,

Exhibit 18

Responsiveness and reliability are critical for product and service providers.

Responsiveness

Remain responsive to adapt quickly to a partner's working style

- Short decision-making process
- Fast implementation speed

In its cooperation with Ant Financial, China Bohai Bank offers decision-making flexibility within five days to adapt to Ant Financial's work style

Reliability

Maintain high quality of products and services in the partnership

- Upgrade products or services based on customer insights
- Add new technology features to products or services in order to perform effectively in the new ecosystem

China Bohai Bank upgraded its product offering by building data cables from Tianjin to Hangzhou to improve its credit scoring efficiency and access to external data and to strengthen partnership with Ant Financial

two-speed architecture, microservices, and cloud computing. Although these technologies can enable scalability, flexibility, and insight generation, business leaders should invest only in the technologies that are most relevant. The following three categories can help narrow down the focus of technology investments (Exhibit 19).

— *Laying the groundwork for competitiveness in the market.* The Real Estate Cloud of Ping An Urban Tech, which is part of the Smart City ecosystem, serves and connects different parties in the value chain, for example. This cloud component helps the ecosystem realize end-to-end project management efficiencies and lays the foundation for developing industry analysis solutions for real estate developers. Leveraging massive data sources and rich field experience, ZhongAn's data intelligent products offer sophisticated risk management and tailor-made modeling solutions for micro-finance, banks, and internet finance companies.

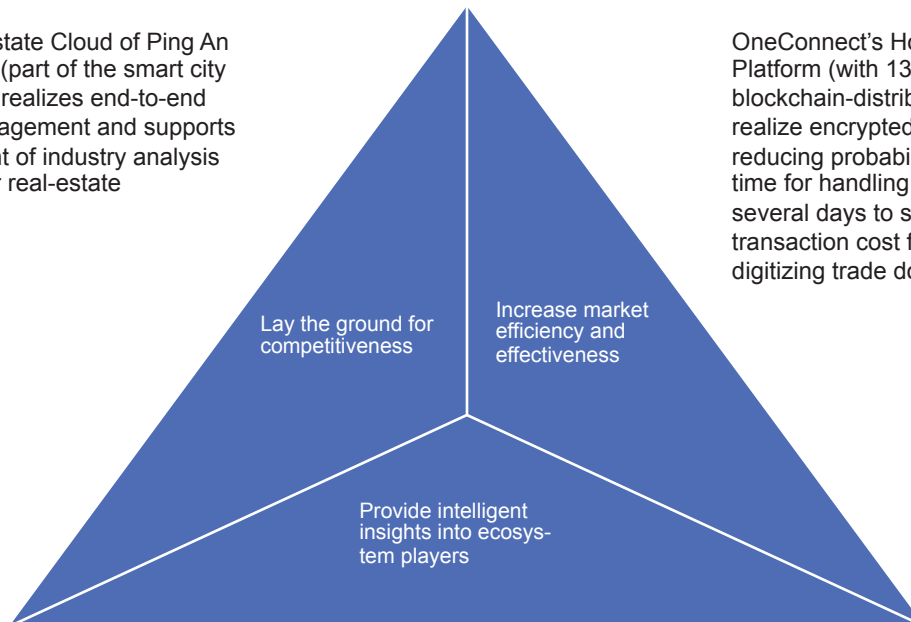
— *Increasing market efficiency and effectiveness.* With blockchain distributed-ledger technology, OneConnect's newly built Hong Kong trade-financing platform reduces the probability of duplicate financing and cuts the time for handling trade finance from several days to several minutes. The platform is also likely to greatly reduce the transaction cost for corporate financing by digitizing trade documents. Anlink, a cloud service platform of blockchain and AI developed by ZhongAn Technology, breaks previous isolation between blockchains, and allows smoother network and real-time calculation of data flows, which has proved effective in scenarios such as security solutions and health care insurance services.

— *Providing in-depth insights on players within an ecosystem.* Ping An Healthcare Insurance Technology has been focused on expanding its health care ecosystem. Using technologies such as big data and AI, the company has built

Exhibit 19

Companies should only invest in technologies that lay the ground for competitiveness, increase market efficiency, or provide smart insights.

The Real Estate Cloud of Ping An Urban Tech (part of the smart city ecosystem) realizes end-to-end project management and supports development of industry analysis solutions for real-estate developers.



OneConnect's Hong Kong Trade Finance Platform (with 13 participating banks) uses blockchain-distributed ledger technology to realize encrypted sharable transactions, reducing probability of duplicate financing, time for handling trade finance from several days to several minutes, and transaction cost for corporate financing by digitizing trade documents.

Ping An Healthcare Insurance Technology expands the healthcare ecosystem using a medical database and a knowledge map to build an end-to-end smart platform with a goal to satisfy the needs of patients, service providers, and payors so as to deepen government cooperation, enable corporate development, and improve patient experience.

Source: Ping An disclosure; Aura Solution Company Limited analysis

an end-to-end smart platform to meet the needs of patients, service providers, and payers.

Advanced analytics

13. How can we embed advanced analytics in an ecosystem?

Ecosystem business models accumulate multidimensional data, including user profiles, behavioral data, transaction history, and customer preferences. With advanced analytics, companies can generate insights from big data to better support their businesses.

A series of approaches can be used to improve advanced analytics capabilities. These can include identifying detailed capability gaps, finding pockets of talent, and developing analytics learning journeys. Companies should take the following two points into consideration:

— *Digitize offline touch points* to ensure end-to-end data collection and generate insights from big data analytics. Many ecosystems have offline touch points that lack the digital methods needed to collect and leverage data. Consequently, the data foundation of advanced analytics might be incomplete—similar to a building without a stable foundation. Digitizing offline business processes can address this problem and ensure the integrity of data for an end-to-end, seamless journey.

Hema, Alibaba's rapidly expanding offline retail supermarket, benefits from an operating system developed by Alibaba called ReX OS. Designed to digitize offline retail activities, it features internet devices, a retail cloud, and technology-enabled shopping experience.

With ReX OS, Hema can track offline customer traffic through surveillance cameras, which record the traffic flow of consumers, and then develop an in-store traffic thermal map to identify hot locations—the places where customers tend to gather. Hema can also follow the offline consumer decision journey—using electronic shelf label (ESL) technology to record customers' interests when they scan QR codes on labels, and using the mobile app to check whether these customers have completed the purchase. As a result, Hema's managers can form a complete view of the consumer decision-making process for further analysis.

— *Gain extensive industry understanding.* This is critical to identifying key areas for analysis and generating insights from data. A common misunderstanding of advanced analytics is that "technology is everything." In many cases, companies focus on refining algorithms but neglect the important element of industry understanding. Advanced analytics teams need to cooperate with business teams to generate more actionable insights.

Two key points can help ecosystem players operationally combine business and advanced analytics: The first is that the top managers of an ecosystem business need to delegate clear roles and responsibilities, assign proper KPIs to advanced analytics and business teams, and foster effective collaboration. In practice, we have seen power struggles between advanced analytics and business teams, with the advanced analytics team exceeding its duties and meddling in business-insights generation without involving the business team. On the other side, business teams are sometimes unwilling or not incentivized to get involved in the interpretation of data. In such cases, the business team's KPIs may not link up with business-insights generation. Companies should also understand that the combination of advanced analytics with business know-how is a dynamic and evolving process, rather than a one-time effort. The two teams need to jointly identify the desired granularity of data and refine key areas to generate insights on an ongoing basis. Moreover, sustainable collaboration between business and advanced analytics requires a smooth feedback loop, rather than one-way input or output.

Meituan is a company that has addressed this very issue. It has accumulated millions of data files on take-out transactions that happen everyday around the world. To analyze and interpret this data to generate business insights, it has established a dedicated knowledge bank and think tank called Catering Research Center. This entity publishes an Annual China Catering Report, which synthesizes data and offers advice to merchants. Meituan also promotes regular exchange of knowledge with key outside stakeholders. Each year,

more than 700 people,¹³ including industry leaders, merchants, and partners are invited to Meituan's annual catering forum to exchange ideas and interpret industry data together.

Performance management

14. How should an ecosystem be evaluated? Once a company addresses the operational puzzles posed by ecosystems, it needs a clear way to evaluate development. The simple pursuit of quick returns is unsustainable and liable to hurt team morale. An ecosystem business model does not succeed overnight. Therefore, any evaluation needs to take place gradually and in different stages. We recommend a three-stage evaluation:

— *Beginning stage.* At first, evaluation metrics should track the quality of the business concept and plan, and the capability of use-case creation

and user-portal establishment. The most critical objectives at this point—and thus the right focus for metrics—are building a strong team that has vision and trust-based relationships; launching a product prototype and success case to address unmet needs; and acquiring customers.

—*Growth stage.* During this phase, key metrics are frequency of use, number of monthly active users, and customer growth rate. The most critical objectives are growing the customer base for future monetization and the testing of business monetization models, rather than the blind pursuit of profits. Therefore, the most important metrics should center on the growth of customers, e.g. gross merchandise value (GMV).

—*Mature stage.* At the mature stage, key evaluation metrics include those that measure profitability and the potential to expand

Conclusion

Success in an ecosystem—regardless of the specific model—differs in important ways from success within a traditional company. Leaders should consider the following six perspectives as they address the challenges:

- *Governance and organizational models.* Traditional companies typically take management power, funds, and talents into consideration when setting up new teams or new organizations. In an ecosystem setting, players consider how to best coordinate group resources to develop their systems.
- *Product offerings.* Traditional companies tend to be product-and-distribution centric, while ecosystem players are more customer-centric. Ecosystem players thus focus on optimizing customer experience, modularizing and customizing product functions, and providing an open platform for future integration to better satisfy customers' diversified needs.
- *Customer management.* Traditional companies typically manage customers through product offerings and channel distribution. In contrast, ecosystem players look at the multidimensional needs of customers by providing one-stop-shopping, cross-selling, and using diversified data collected from many aspects of the ecosystem.
- *Partnership.* Companies traditionally look at partnership as a way to advance mutual interests. While that also holds true in an ecosystem setting, ecosystem builders and orchestrators also introduce partners to maximize the benefits produced by the ecosystem. Those can include creating more

customer touch points and collecting more data to develop ecosystem use cases.

—*Technology.* Traditional firms tend to develop leading technologies to improve their own operating efficiency and reduce costs. Ecosystem players, on the other hand, develop those technologies to lay the groundwork for the system's competitiveness in the market, including digital platform establishment and open APIs.

They also favor technologies that increase market efficiency and effectiveness, such as blockchain, or provide in-depth insight into players within an ecosystem, such as AI and advanced analytics.

—*Advanced analytics.* Traditional players usually favor advanced analytics tools that identify detailed capability gaps and find pockets of talent. In contrast, ecosystem players focus more on digitizing offline touch points to ensure end- to-end data collection and comprehensive insight generation from big data analytics. Ecosystem players also make use of their extensive industry understanding to identify key areas for analysis and to generate better insights from data.

We expect that more and more companies will start to rethink and reshape their business models and capabilities for the ecosystem era. We hope that this report provides useful ideas to the leaders of financial institutions and conglomerates as they seek to address digital threats and capitalize on the opportunities ecosystems represent.

