Business4.0™

TATA CONSULTANCY SERVICES

BETTER TOGETHER

How ecosystem partnerships are driving Business 4.0 success

MASTERING BUSINESS 4.0™

You have just had your kitchen renovated and you're looking to update your crockery to match the new look. You search online for mugs, plates and bowls in your desired color and material, and you filter the results based on your budget. A range of relevant products – highly personalized using a myriad of parameters - is presented to you through the front end of the online marketplace. This seamless customer experience is enabled by a complex orchestration of suppliers and technology at the back end and brought to you by a dynamic, digital-tech enabled ecosystem of partners. This online experience is similar when you are pursuing any of a host of online transactions, from booking a holiday to searching for books.

Rewind a decade or more and this experience would have been very different. The search for products would have been mainly conducted in store, with bricks-and-mortar retailers offering you a narrower range of options, limited by what's available in their static supply chain and resulting in a lower-value customer experience and outcome.

Why is today's customer experience so much better than it was in the past? Above all, it is because digital technologies have upended industries, companies and consumers, throwing open abundant possibilities to redefine all aspects of business. At TCS, we call this transformation Business 4.0™.

As outlined in our flagship report on the topic, four behaviors enable Business 4.0: driving mass personalization; creating exponential value; leveraging ecosystems; and embracing risk. Businesses that excel across these behaviors tend to be the best performers and forecast fast growth.

In particular, it is the ability of an organization to harness the abundance of capabilities available in an ecosystem that is driving this huge shift in the speed, choice and delivery of products and services to customers. According to our research, more than half (54%) of businesses worldwide, across industries, are already collaborating with a dynamic, ever-changing network of partners to create new experiences, products and services for their customers.[1]

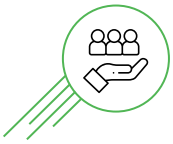
Digital technologies have paved the way for a network of interconnected systems. While modern businesses have always worked in collaboration with others to some extent, digital technology capabilities have made it possible for organizations to collaborate on a much wider scale, dynamically and in real time. Consider the ecosystem around a large social network, which brings together a complex combination of consumers, 'prosumers', app developers, advertisers, event organizers and sellers. The social network even serves as a customer forum and digital-marketing channel for companies to access in real time. Ultimately, the bigger the ecosystem, and the more companies involved, the better the outcome for the intended audience and the participants.

[1] TCS, Winning in a Business 4.0 World, https://www.business4.tcs.com/

TRADITIONAL SUPPLY CHAINS ARE EVOLVING INTO BUSINESS 4.0 ECOSYSTEMS

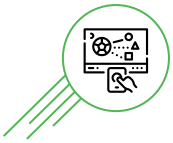
The way businesses work together in an ecosystem is very different from the way they worked in a supply chain, which was the norm before Business 4.0. In a traditional supply chain, the interactions are linear – each process needs to be completed in a specific order, to deliver predictable outcomes. An ecosystem, however, is not linear, but a complex web or network. Each part of the ecosystem adds its own value, rather than incurring costs.

Traditional supply chains are evolving into digitally enabled Business 4.0 ecosystems and some definite patterns are emerging.



Product-first to customer first

In the traditional marketplace, supply chains revolved around a pre-planned set of products with fixed designs. In the Business 4.0 world, multiple customizable products are created to meet the wide range of customer demand. Supply chains are product-first, while Business 4.0 ecosystems are customer-first.



Limited technology to technology-driven

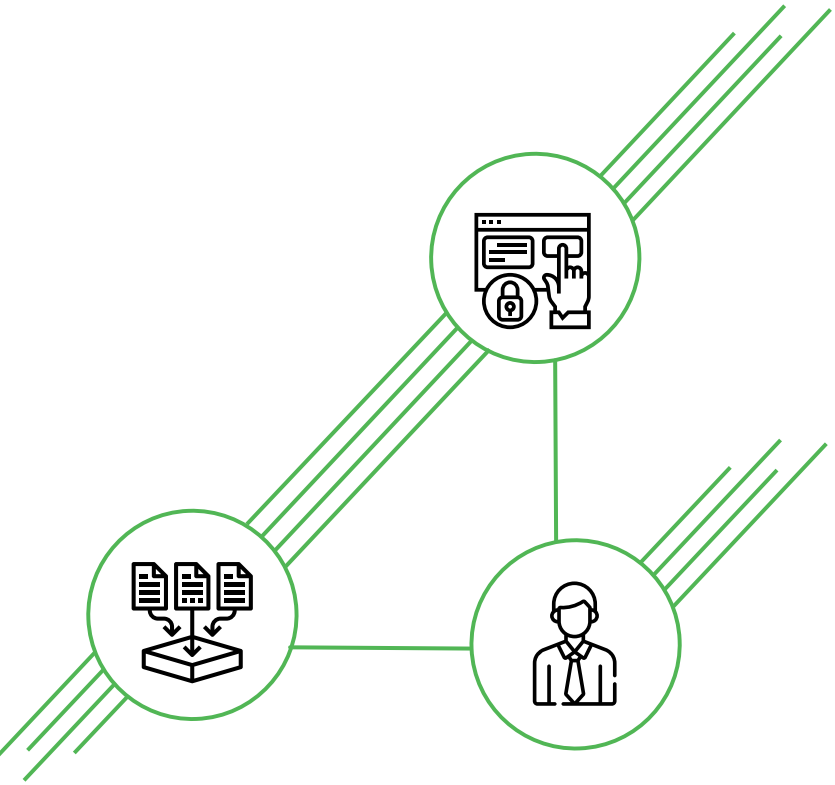
Business 4.0 ecosystems are underpinned by, and delivered through, digital technology. Cloud provides scale, flexibility and 'anytime, anywhere' access; automation allows real-time exchanges; artificial intelligence (AI) drives personalization; and agile methodologies power business strategies. Traditional supply chains did not enjoy these benefits.

Linear chains to dynamic networks

The supply-chain system revolved around partnerships with a fixed number of companies in the form of a linear chain. But Business 4.0 ecosystems are characterized by networks of companies partnering on a dynamic basis to meet customer needs in real time.

Hierarchy to flat power structure

Supply chains are hierarchical, with large companies tending to have the most control. But in Business 4.0 ecosystems, the structure is much flatter, and startups or smaller specialists are valued by their partners as much as large firms. This is due to the specific benefits they bring to their ecosystem, be it a certain technology, customer base or skillset. To harness this difference, a more open, dynamic culture of next-generation partnering is required.



PLATFORMS AS ECOSYSTEMS

Companies operating traditional supply chains have always understood the value of partnerships, which is why they engaged in the supply chain in the first place: to collaborate with specialists and allow them to do what they do best. But digital technologies have accelerated this, enabling networks of companies to collaborate much more freely and extensively, and at a technology-platform level.

Ecosystem platforms have helped companies harness abundance – the abundance of talent, funds, and information or data, enabled by an abundance of computing capacity.

The 'gig economy,' which is characterized by workers taking up multiple short-term, freelance or ad-hoc jobs, instead of a single, permanent contract, is a prime example of how companies are able to harness the abundance of skills using a technology ecosystem. TCS allows customers to access the power of all TCS employees and contributors, through idea jams and hackathons on the internal TCS social network. The TCS Co-Innovation Network™ (COIN™)[2] connects customers to startups across the world. Technology platforms have taken ecosystem collaboration to the next level in research and development, too. In 2017, Rolls Royce set up its R2 Data Labs as an acceleration hub for data innovation, bringing together skills from across the ecosystem

The same principles are in play when it comes to crowdfunding platforms, such as Kickstarter. Companies such as food-delivery outfit Deliveroo and transport giant Uber use their technology platforms to drive their ecosystem business models. The scale of the technology platform ensures availability and makes need-based resourcing possible.
Such platforms utilize the ecosystem to create a technology platform that connects potential lenders with funding opportunities.

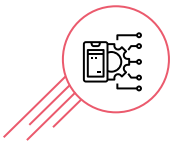
[2] TCS, TCS COIN™: Powering the Disruption Engine, https://www.tcs.com/tcs-cointm

THE NUTS AND BOLTS OF THE ECOSYSTEM MODEL

The core differentiator between supply chains and digital ecosystems is technology. It is important to understand how these technologies are feeding the ecosystem.

AI is driving ecosystem personalization

Data analysis, machine learning and AI power personalized recommendations for both businesses and consumers using ecosystem-powered solutions. And it is these personalized recommendations that really drive customer satisfaction and loyalty.



Data, APIs and ecosystems

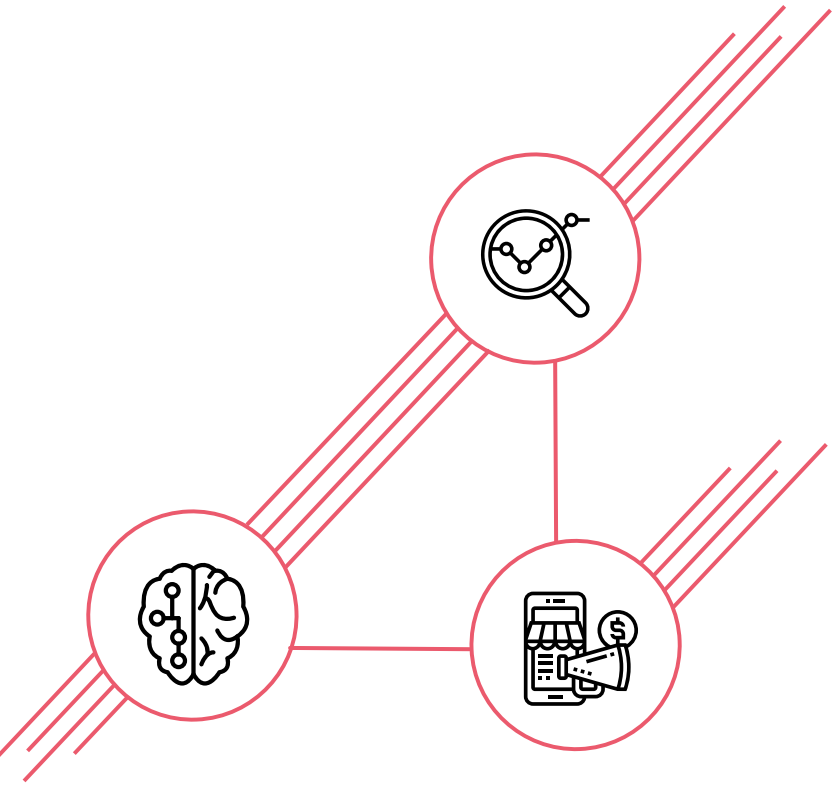
Data is a highly valued commodity that help drive the ecosystem. Service aggregators build platforms using readily available data, such as sensor data, GPS data, map data and other data acquired through web browsing. Companies can tap into these data sets to create their own ecosystems. Mapping and transportation mobile apps are a good example of this. By using publicly available data, they provide a useful base service, and by using open APIs, they allow others to tap into their data sets – enabling the ecosystem to expand.

Data marketplaces

Data functions as currency in digital ecosystems. For example, driver behavior data can be sold and/or shared with taxi service owners, auto manufacturers or insurers. The same data can benefit each party in the ecosystem: taxi companies can evaluate their drivers; the auto manufacturer can mine it for correlations between mishaps and car features; and insurers can customize policies based on driver performance.

Blockchain

This peer-to-peer, encrypted record of transactions is another technology that enables stronger, trustworthy ecosystems. This is critical in the case of high-value items like life-saving medicines or diamonds, where provenance and authenticity are vital to business.



BUSINESS 4.0 ECOSYSTEMS IN ACTION

Looking to become more customer-centric, one mobile network operator in South Africa has created its own ecosystem, partnering with a fintech player to offer their mutual customers a more valuable experience. This partnership between a telco and a fintech might seem unusual, but the duo has managed to offer their customers a range of new products and services, such as insurance and mobile payments. The customers enjoy an enriched experience, the fintech firm gains a larger customer base, and the telco succeeds in its aim of creating new customer value and stickiness. In a pre-Business 4.0 world, both the telco and the fintech firm would be operating in their own separate supply chains, with no opportunity to cross over.

Another example features unlikely bedfellows: bricks-and-mortar retailers and their online rivals. While online-only retailers are putting pressure on bricks-and-mortar stores through competitive products and prices, some are teaming up with high-street retailers (some of whom are competitors on specific lines) to give customers the 'pick-up' option. The physical store benefits from increased footfall and relevance; the online retailer reduces its delivery and returns burden; and the customer gets a better, more convenient experience. For instance, powered by TCS, supermarket Asda[3] offers its 'toyou' pick-up service in the UK, for online deliveries from a range of brands.

Both of these examples demonstrate the power of ecosystems in delivering better consumer outcomes. This Business 4.0 behavior also plays a key role in enabling the other three behaviors.

Mass personalization has become a key differentiator for e-tailers. It is an ecosystem of numerous vendors offering a range of goods that allows e-tailers to offer a personalized solution to its customers.

[3] ASDA, toyou: We've simplified the way you collect and return everyday items, accessed November 14, 2019, https://www.asda.com/toyou/?cmpid=dmc-_-ahc-_-vanityurl-_-generic-_-toyou&utm_source=vanityurl&utm_medium=dmc&utm_term=toyou&utm_content=generic&utm_campaign=ahc

TCS helped Home Depot optimize its supply network through a store mobility program and store application transformation to enable same-day delivery in the customer's preferred time window. In other words, Home Depot used digital to strengthen its ecosystem and deliver mass personalization[4].

By going beyond linear relationships and value exchanges, ecosystems support exponential growth in value – at various levels. KLM was the first airline to utilize social ecosystems[5] such as Facebook Messenger, WhatsApp and WeChat, and touchless interfaces such as Google Assistant and Google Home. Today, over 10,000 boarding passes are issued through these channels. After an APIfication program with over 30 APIs, backed by 24/7 support, the airline is well positioned in the travel and hospitality ecosystem to deliver a seamless experience across partner systems, thereby creating exponentially increasing value for the company and customers.

Ecosystems also help distribute risk, thereby enabling organizations to embrace that risk – the fourth Business 4.0 behavior. We at TCS also embrace risk and have developed our Co-Innovation Network (COIN), which brings together an ecosystem of startups, research, academics and corporates to collaborate on new innovations.

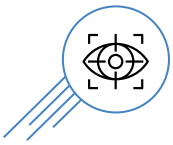
For example, quantum computing requires heavy investment and is not enterprise-ready. At TCS, we are exploring quantum computing with our academic partners, allowing all parties to enjoy the benefits of this exploration, while sharing the burden of risk. The massive increase in digital technologies has created an abundance of new opportunities and products, and digital ecosystems are a major way in which companies can harness this.

[4] TCS, Annual Report 2018 - 19: Growth and Transformation with Business 4.0™, accessed November 14, 2019, https://www.tcs.com/content/dam/tcs/investor-relations/financial-statements/2018-19/ar/annual-report-2018-2019.pdf

[5] KLM Royal Dutch Airlines, KLM takes next strategic social media step with flight info on Twitter and WeChat (June 2017), accessed November 14, 2019, https://news.klm.com/klm-takes-next-strategic-social-media-step-with-flight-info-on-twitter-and-wechat-en/

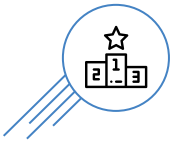
OVERCOMING ECOSYSTEM CHALLENGES

The move to Business 4.0 is a major transition for companies, and the ecosystems element, in particular, can bring about its own challenges. It is essential to overcome these hurdles in order to capture the benefits of ecosystem business models.



Drive a cultural shift by focusing on the benefits

Firstly, moving to Business 4.0 ecosystems is a major shift in business culture – accepting that no single company can do it all, and therefore needs to work within the ecosystem, is a significant challenge to existing mindsets. Halting internal projects in favor of working on something new, led by a partner, for example, can be painful, and so can ending relationships with long-standing legacy partners in favor of new ones. It is essential, therefore, that senior leaders communicate the wider ecosystems strategy across the company.



Break down the 'friend or foe?' mentality

Businesses may struggle to understand the need to work with potential rivals as part of their ecosystem strategy. The concept of 'co-opetition' is fairly new, and many companies fear that working with competitors makes them vulnerable to displacement. As we have explored, there are models where working with partners helps companies provide extra value to customers, exceeding their expectations and increasing customer satisfaction.

Businesses must be all-in on ecosystems

A third challenge for companies pursuing Business 4.0 ecosystems is the temptation to apply old ways of working and thinking to new ecosystem practices. For example, Business 4.0 ecosystems are designed to enable member companies to work with a wider range of companies on an ad-hoc basis, as and when opportunities arise. Companies still limited by a traditional approach may be tempted to try to forge formal ecosystem alliances, which have a long contractual lifespan. This would be an example of applying 'supply chain' thinking to an ecosystem opportunity – something to be avoided.

To conclude, by positioning themselves to take advantage of their ecosystems, companies can accelerate their transformation. This is why it is a key Business 4.0 behavior. In the fast-moving technology world, where customers are demanding, no single company can supply everything. It is through utilizing a wide ecosystem that companies can tap into each other's strengths, co-innovate, and, together, meet the customer's needs.

About the Author

Ananth Krishnan
Chief Technology Officer, TCS

Ananth heads TCS' Research and Innovation group. Under his leadership, TCS has created a significant portfolio of patents, papers and IP. Ananth has served on several governing councils of academia, industry advisory boards, and government committees and has been a regular invitee to the Board of TCS since 1999. He was elected a Fellow of INAE in 2013 and was named a Distinguished Alumnus of IIT Delhi in 2009. Ananth has been listed in Computerworld's Premier 100 IT Leaders (2007), and in Infoworld's Top 25 CTOs (2007).

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Tata Consultancy Services is an IT services, consulting and business solutions organization that has been partnering with many of the world's largest businesses in their transformation journeys for the past 50 years. TCS offers a consulting-led, cognitive-powered, integrated portfolio of business, technology and engineering services and solutions. This is delivered through its unique Location Independent Agile delivery model, recognized as a benchmark of excellence in software development.

A part of the Tata group, India's largest multinational business group, TCS has over 424,000 of the world's best-trained consultants in 46 countries. The company generated consolidated revenues of US $20.9 billion in the fiscal year ended March 31, 2019, and is listed on the BSE (formerly Bombay Stock Exchange) and the NSE (National Stock Exchange) in India. TCS' proactive stance on climate change and award winning work with communities across the world have earned it a place on leading sustainability indices such as the Dow Jones Sustainability Index (DJSI), MSCI Global Sustainability Index and the FTSE4Good Emerging Index.

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