



FEATURE

How cocreation is helping accelerate product and service innovation

In an Industry 4.0 environment, many companies are augmenting their approaches to the development of new offerings

Anne Kwan, Maximilian Schroeck, and Jon Kawamura

PART OF A DELOITTE SERIES ON DIGITAL INDUSTRIAL TRANSFORMATION

Rapid innovation cycles are critical to winning in the Industry 4.0 era. This article, the 10th in a series on digital industrial transformation, explores how cocreation can help companies accelerate and de-risk innovation.

TRADITIONALLY, R&D DRIVES companies' product innovation and technological advancements. But changing customer expectations and the ubiquity of startup funding, culture, and processes—promoting rapid, agile, and use case-focused innovation—are pressuring leaders to shift their approach to the development of new offerings. This is now truer for B2B companies than ever before, as offering simplicity and strong customer experiences in consumer products have permeated B2B buying processes, customer support, and product updates.

The impact has begun to reverberate not only across the technology and industrial sectors but across the economy, broadly. For example, a major European bank, known for its hierarchical and policy-driven offer development, restructured its product innovation-related functions (including IT development, product management, and marketing) into small agile “squads,” resulting in faster time to market, greater customer satisfaction, and higher employee engagement.¹

Many technology buyers are increasingly expecting quicker and easier integration of new products or solutions with their enterprise systems and applications in order to realize a faster return on their investments. This is especially important as technology budgets often extend outside IT managers to line managers, including operational technology groups. More and more, these buyers expect value through integrated solutions.

But developing and delivering these integrated solutions is often challenging for a single company to address independently, cost-efficiently, and effectively. (See figure 1 for examples of challenges organizations typically face when trying to innovate.) While organizations should continue to invest in robust internal R&D capabilities, today's changing business environment indicates that companies expand their sources of innovation.

FIGURE 1

Innovation challenges



Low innovation velocity
Long lead times and uncertainty associated with in-house R&D



Limited access to talent
Inability to find or retain skilled talent for emerging capabilities



Competing investments
Budgetary constraints due to a large number of competing investments



Bureaucratic process
Rigid processes with multiple approval layers that slow decision-making and velocity

Source: Deloitte analysis.

As such, companies have begun to look beyond their four walls to break free of organizational constraints and stay ahead of the curve. In this article, we discuss how collaborative innovation compares to other product development and innovation approaches, the types of innovation partners that might be involved, leading practices, and some success stories from across the marketplace.

Consider this article the playbook—or a primer—that complements this series' seventh installment, which addresses how to extract greater efficiency from internal product development.²

Cocreation: Innovating beyond traditional boundaries

In today's market, ever fewer organizations can rely exclusively on an internal R&D process to generate innovation. A model of cooperative innovation—an ecosystem—is increasingly critical to drive value for all parties involved. We see this as *cocreation*—strategic partners actively collaborating to create and deliver customer-centric products and services (offers) that capture greater value, more rapidly and at lower risk than traditional product-development approaches. Figure 2 discusses the benefits of cocreation in greater detail.

A variety of companies are engaging in cocreation—a recent report found that most European organizations have already launched at least one cocreation pilot formally or rolled out cocreation, with 57 percent noting that it transformed their company's approach to innovation.³

FIGURE 2

Benefits of cocreation



Reduced time to market
Faster product development cycles resulting in lower concept-to-launch lead times



Access to diverse capabilities and resources
Breadth of competencies and resources that enable new or enhanced services/products through partnerships with diverse players



Risk- and cost-sharing
Managing risks (e.g., slow product adoption or changing market trends) and reducing costs of supporting multiple business models



Brand-building in adjacent markets
Building brand awareness with new consumers in markets that may otherwise be harder to access

Source: Deloitte analysis.

CASE STUDY: IBM AND CISCO

Description	IBM and Cisco collaborate globally to bring business insights to the edge of the network for IoT solutions. ⁴
Contributions	IBM's Watson provides analytics and cognitive computing capabilities to process IoT data and other contextual inputs to uncover new patterns and insights. Cisco delivers edge and fog processing that connects specific business use cases to data at the edge of the network.
Key benefits	IBM and Cisco both get access to leading technologies that they leverage to develop a marketplace offering.
Impact	A Canadian telecom player used this solution to improve performance reporting and reduce the frequency of service interruptions by transmitting only important data from remote locations over mobile networks for analytics. ⁵

Cocreation vs. other innovation pathways

As cycle times of technological innovations shrink,⁶ companies have begun to explore new ways to innovate, including strategic partnerships, research labs, and joint innovation centers. Today, companies often have several levers they can pull to support product development. (See figure 3 for a comparison across common pathways to innovation.) Among these, cocreation provides a unique blend of control, cost, and time to impact.

As cycle times of technological innovations shrink, companies have begun to explore new ways to innovate, including strategic partnerships, research labs, and joint innovation centers.



FIGURE 3

Typical innovation challenges by approach

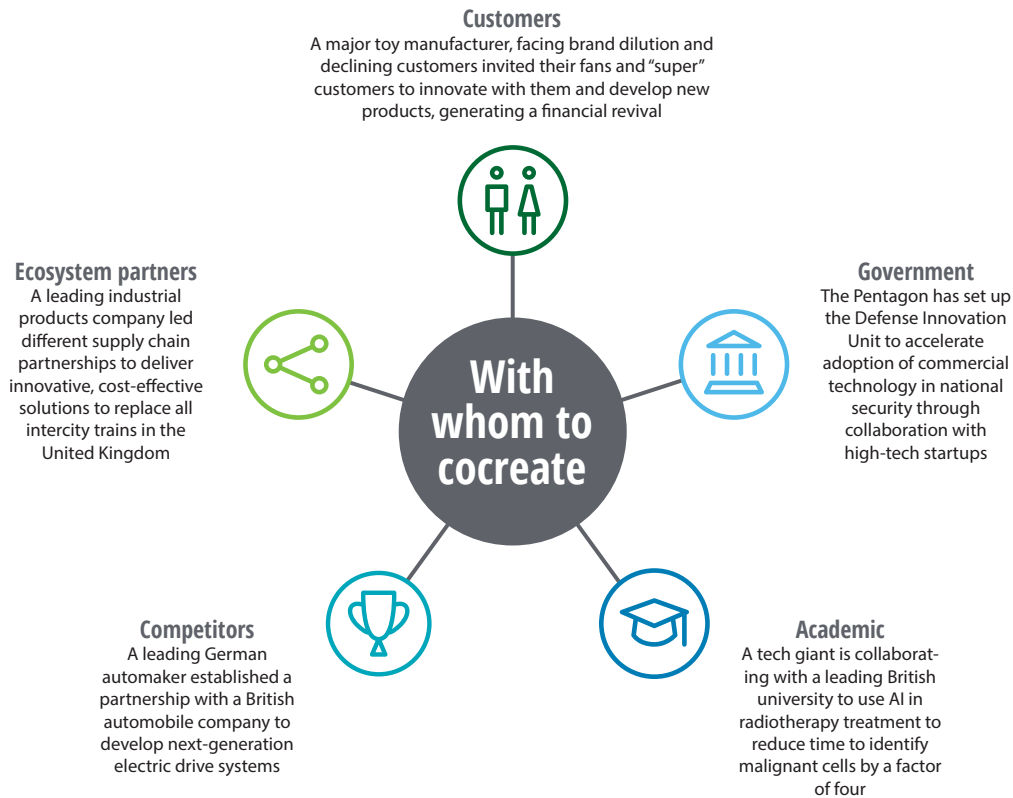
○ Least favorable ● Most favorable

Innovation approach	Control	Cost	Time	What to consider
Internal R&D	●	○	◐	<ul style="list-style-type: none"> • Deliver or retain competitive advantage • Sufficient in-house expertise • Long release cycle times
Acquisition	●	○	◑	<ul style="list-style-type: none"> • Critical expertise exists outside the organization • Rapid time to market required • Control over strategic direction and intellectual property (IP)
Cocreation	◐	◐	◑	<ul style="list-style-type: none"> • Availability of partners with complementary capabilities • High-risk/unproven products/markets
Corporate venture capital/direct investment	◐	◑	○	<ul style="list-style-type: none"> • Evaluate emerging technologies • Availability of investable capital • History of small-scale/VC investments
Accelerators and incubators	◑	◐	◐	<ul style="list-style-type: none"> • Build brand within startup community • Gain tech exposure without risk • Limited availability of capital
Corporate venture capital/LP investment	○	◐	○	<ul style="list-style-type: none"> • Exposure to emerging technologies • Limited capital and/or VC expertise • Prioritize financial over strategic benefits
Licensing	○	◑	●	<ul style="list-style-type: none"> • Quick enhancement of product value proposition • Weak cash position/limited funds

Source: Deloitte analysis.

FIGURE 4

Types of cocreation partners



Source: Deloitte analysis.

With whom to cocreate?

Organizations that cocreate effectively can engage a broad set of stakeholders to support their innovation needs, including customers, suppliers, competitors, academic institutions, nonprofits, and government agencies. Figure 4 highlights specific marketplace partnerships and the value they have delivered for participants.⁷

Given the variety of partners with which an organization can cocreate, it is important to select the right type of partner (and the partner itself) by determining internal capability gaps, aligning on partnership goals, and defining a mutual value proposition. As with all partnerships, it is critical

that both organizations bring value to the table, so leaders should ask themselves: “What do we have that partners want—or can benefit from?” Most companies assume that their IP makes them valuable to prospective partners; this may be true, but equally important are a healthy risk appetite, a track record of acting collaboratively and with agility, and access to capital, talent, and markets. Finally, cocreators should align on their approach to privacy and data security; these areas are becoming increasingly critical as competitive differentiators given consumer and regulatory scrutiny, so alignment on how data is collected, stored, and monetized is paramount.

“My favorite form of cocreation is when you find a collaborator in someone that you least expected, maybe even a former competitor that actually complements me more than we compete. The question then remains: How do we make this work going forward?”

—Robert Schmid, chief futurist, Deloitte Consulting LLP

CASE STUDY: APPLE AND MASTERCARD	
Description	Apple and Mastercard together brought Apple Pay and Apple Card to the market, offering customers safe, secure, and seamless payment options through their smartphones. While Apple Pay serves as an e-wallet for smartphone users, Apple Card brings a safe, secure credit card for iPhone users that can be synced with Apple Pay. ⁸
Contributions	Apple brings its large smartphone customer base, offering the payment service as part of a wider ecosystem covering entertainment, e-commerce, etc. while owning the overall user experience. Mastercard enables Apple’s security value proposition by bringing its payment technologies (for example, EMV and tokenization) to enable processing. This allows the Apple Card to be securely stored on a digital device without exposing data.
Key benefits	Apple benefits from Mastercard’s existing payments network across channels such as online, in-store, and in-app even as the company leverages Mastercard’s technical capabilities for security. ⁹ Mastercard gets to participate in a growth opportunity that helps achieve its objective of keeping pace with digital consumer trends.
Impact	Some 383 million iPhone users worldwide had enabled Apple Pay on their devices roughly four years after its launch; the service currently accounts for approximately 5 percent of global card transactions. ¹⁰

How to cocreate?

While the nature of the solution and choice of partners are critical, we often find the operating and engagement model to be the biggest roadblock in achieving cocreation goals. Operationalizing cocreation requires taking three critical steps. The approach is not dissimilar from developing products internally, discussed in our article on digital product management.¹¹

WHY: STRATEGIC OBJECTIVES

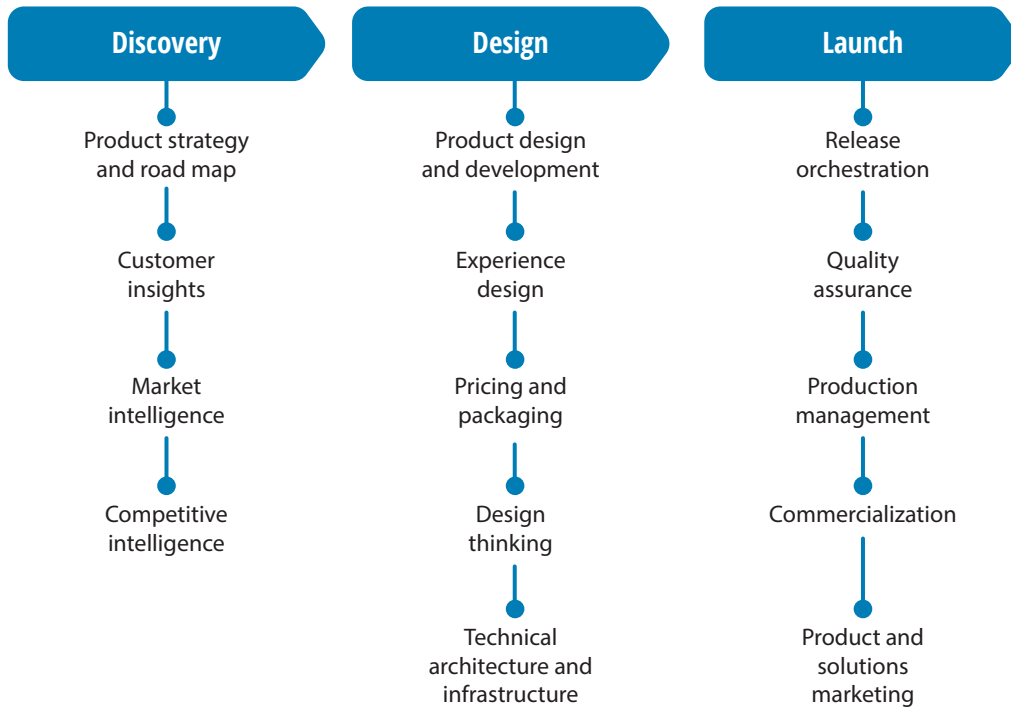
The first step is to align on objectives and priorities of the cocreation initiative. Specifically, leaders should:

- Determine the scope—product, market, customer, investment profile, duration
- Define success criteria—revenue, market share, product launches, recognition
- Identify cocreation timelines
- Align on investments and outcomes that will be shared—equally, by market, by time

For example, TM Forum’s Catalyst platform connects communication service providers with other firms to jointly develop proof of concepts to address common challenges in the telecom ecosystem across emerging areas, such as 5G, AI, and the IoT.¹²

FIGURE 5

Key capabilities across the innovation life cycle



Source: Deloitte analysis.

WHO: CAPABILITIES AND ROLES

Organizations engaging in cocreation usually do so because of the complementary capabilities that they bring to the table (figure 5 showcases the key capabilities). Therefore, companies should determine:

- Capabilities required to deliver on the strategic objectives—product, go-to-market, support, services
- How each capability will be delivered—remotely, by a third party, together, as a service
- The role each partner would play in delivering the capabilities—resources, investment, technology, suppliers and distributors

Like the product capabilities listed above, companies typically go beyond product development to align roles across marketing, sales, servicing,

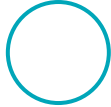

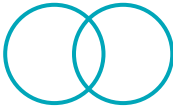

and support capabilities. Indeed, examples of complementary capabilities are widespread across technology firms and automobile original equipment manufacturers (OEMs), where the former provides semiconductor and/or software development capability required for cutting-edge applications such as self-driving cars, while the latter offers manufacturing expertise to build complex hardware at scale with high reliability and durability.

HOW: OPERATING MODEL

Another critical step is to determine the operating model for cocreating teams. While there are multiple options available to structure teams, the optimal choice will depend on capabilities selected, their maturity, partner roles, and the nature of the working relationship (figure 6).

FIGURE 6

Teaming options

	Description	User case
<p>One team</p> 	<p>A single team—composed of resources from both entities—that is accountable for delivering outcomes through shared costs, budgets, and plans</p>	<p>Entities will rely on each other for capabilities and expertise across multiple parts of the value chain, and there is a clear mandate or willingness to work together</p>
<p>Augmented teams</p> 	<p>The primary entity “borrows” a small number of high-performing resources from the secondary entity to expedite results, improve communication, share domain knowledge, and build long-term trust</p>	<p>One entity has a stronger ability to bring products to market but may be lacking in certain capabilities or is in the early stages of a long-term working relationship</p>
<p>Coordinated action</p> 	<p>Teams have independent accountability for outcomes in which each team leader plays a crucial role in managing progress and ensuring cross-entity transparency</p>	<p>Each entity has demonstrated capabilities across different parts of the value chain and a clear division of labor can be established; may require a light centralized PMO</p>
<p>Contractual</p> 	<p>Entities enter a contractual agreement with one another—typically to plug capability or resource gaps—with accountability for outcomes dependent entirely on the primary entity</p>	<p>One entity has stronger overall capabilities but may be understaffed or lacking specific domain expertise; ideal for isolated engagements rather than as a repeatable model</p>

Source: Deloitte analysis.

Not every partnership is successful, of course. Some cocreators discover that they have differing visions well into their partnership; other partnerships fail because initial product launches fall short of expectations. Some partnerships lose their spark gradually as the initial excitement fades. We see value, then, in driving accountability—at the executive level—for managing a network of cocreation partnerships. Also, extending the principles of agile product development to partnership building—employing a “learn fast” method—makes for better allocation of scarce resources to the most lucrative partnerships.

If you do only five things

While cocreation can be a force multiplier for innovating in an Industry 4.0 environment, the probability of success depends on the right environment. Our experiences as both advisers and cocreators have unearthed five elements that are accretive to cocreation pursuits:

Structure of the entity and allocation of IP ownership. While informal collaboration and even sharing of resources might work, it is often beneficial to set up an equity alliance or joint venture. This is especially useful in situations where partners are new to working with one another, or in multipartner cocreation. Additionally, it helps to clarify how ownership rights for new IP from the partnership will be allocated. However, the complexity and management overhead typically follow a stated, long-term commitment to collaboration. We will explore this in greater depth in another article in this series.

Go-to-market and rights to monetize. It is critical to clarify how each partner will reap financial benefits from cocreation, including the appropriate monetization model (revenue share, license fees, commissions, royalties, etc.) for IP and data generated from launching the innovation, as well as ownership of go-to-market efforts. When multiple participants are involved in taking innovations to market, collaborators should proactively reduce the probability of conflict by identifying the customer segments that each partner will target—for example, by size, geography, or industry.

Governance. Maintaining momentum throughout the cocreation requires clear stage gates or key milestones to review progress to ensure teams are not overburdened with frequent or unnecessary reporting activities. As such, it is crucial that companies define early what happens at these milestones—for example, expectations of progress made, decision-makers, scope of decision-making, and processes for escalating unresolved issues. Finally, agreement on conditions, rights, and

outcomes related to termination of the partnership can de-risk transitions in unfavorable situations.

Culture and organization. Cocreation involves a shift in thinking from the organization as the sole driver of innovation to collaboration with a network of partners within and outside the industry. This requires change management to embrace partners' cultural changes along with their unique talent models, processes, and technologies. For example, it might be helpful to change frequency and type of progress reporting in partnering with startups or academic institutions that may be unused to a corporate setup.

Enabling infrastructure. Interorganization collaboration requires enabling technologies, tools, and processes that protect each party's independent interests. For example, collaboration platforms that enable real-time communication, coordination, and content sharing—such as Slack, Teams, and Jira—can significantly ease teaming across organizations. Additionally, setting up “clean rooms”—digital storage of sensitive business assets—with defined and restricted access across participating organizations can support data sharing without leakage of sensitive information.

While cocreation can be a force multiplier for innovating in an Industry 4.0 environment, the probability of success depends on the right environment.

CASE STUDY: INTEL AND SAP

Description	Intel and SAP have codeveloped hardware and software solutions focused on optimizing Intel's platforms for SAP's enterprise software applications.
Contributions	Intel offers platform innovations consisting of processors, memory, and storage technologies that improve performance for SAP's business applications. SAP builds software that is central to enterprise operations for nearly 90,000 enterprises across more than 180 countries. ¹³
Key benefits	Intel stands to benefit by achieving a higher penetration for its software-optimized solutions (a focus area of its data-centric strategy) at enterprises through a bundled/joint offer with SAP, an enterprise solution of choice for a wide set of customers. ¹⁴ SAP gets early access to emerging Intel technologies and benefits, allowing mission-critical applications, such as an ERP, to run using fewer compute resources than on other hardware. ¹⁵
Impact	The partnership improved the ability for customers to manage more data at in-memory speed, at a reduced cost, and with improved business continuity using a combination of Intel's persistent memory and SAP's HANA solution. ¹⁶

Closing thoughts

Across sectors, pioneering companies have profited by expanding innovation outside their organizational boundaries.¹⁷ The most successful innovators are now leveraging an ecosystem strategy to align their product portfolio with technology shifts, market trends, and evolving customer needs. A cocreation strategy and operating model that align with overall corporate strategy and innovation objectives can position organizations for success in the digital economy.

Indeed, cocreators and collaborators come from a variety of places, and enterprises that proactively seek out new partnerships and dynamically evaluate existing ones are likely to reap the greatest benefits. So with whom will you cocreate next—and where will you find your cocreator?

Endnotes

1. Dominic Barton, Dennis Carey, and Ram Charan, "One bank's agile team experiment," *Harvard Business Review*, March–April 2018.
2. Jon Kawamura, Maximilian Schroeck, and Anne Kwan, *Digital product management: A structured approach to product innovation and governance*, Deloitte Insights, October 18, 2019.
3. Hitachi, *Co-creating the future*, accessed March 18, 2020.
4. Chris O'Connor, "IBM and Cisco: Understanding critical data on the network edge," IBM Internet of Things blog, June 28, 2017.
5. Mike Flannagan, "Announcing a first of a kind technology combining IBM's Watson IoT Cognitive Computing and Cisco's Edge Analytics," Cisco Blogs, June 2, 2016.
6. Barry Ritholtz, "The world is about to undergo even faster change," *IndustryWeek*, July 10, 2017.
7. Sources clockwise from top of figure: Oriol Iglesias, "Why your company should embrace co-creation," *Forbes*, September 24, 2018; Aaron Mehta, "Experiment over: Pentagon's tech hub gets a vote of confidence," *Defense News*, August 9, 2018; Laura Cox, "Business & academia—5 exciting partnerships," Disruption Hub, February 22, 2017; Jaguar Land Rover, "Jaguar Land Rover & BMW Group announce collaboration for next generation electrification technology," June 5, 2019; Hitachi, "Co-creating the future."
8. Apple Pay and Apple Card are trademarks of Apple Inc., registered in the United States and other countries. This article is an independent publication and has not been authorized, sponsored, or otherwise approved by Apple Inc.
9. PaymentsJournal, "Mastercard and Apple taking on a digital first approach to payments," April 3, 2019.
10. Alex Rolfe, "Apple Pay adoption continues to rise as 43% of base now registered," *Payments Cards & Mobile*, February 25, 2019; John Detrixhe, "Apple Pay is on pace to account for 10% of all global card transactions," Quartz, February 11, 2020.
11. Kawamura, Schroeck, and Kwan, *Digital product management*.
12. TM Forum, "What is a catalyst?," accessed February 26, 2020.
13. SAP, "SAP corporate fact sheet," accessed March 18, 2020.
14. Dylan Martin, "Intel to supercharge SAP applications in new multi-year partnership," *CRN*, July 18, 2019.
15. Dylan Martin, "Jason Kimrey: Intel's data-centric platform strategy is a winning hand for partners," *CRN*, July 8, 2019.
16. IT Peer Network, "Intel and SAP go big—here's what you need to know," Intel, July 19, 2019.
17. Ulrich Lichtenthaler, Martin Hoegl, and Miriam Muethel, "Is your company ready for open innovation?," *MIT Sloan Management Review*, September 21, 2011.

Acknowledgments

The authors would like to thank **Rohan Gupta** and **Luv Parakh** of Deloitte Consulting LLP for their research and dedication to bringing this article to life. The authors would like to recognize **Divya Viswanathan, Mayukh Bhadra Chowdhury,** and **Rashmi Ravindran Colanukuduru** of Deloitte Consulting LLP for their contributions to the Digital Transformation and Co-creation practices.

About the authors

Anne Kwan | annkwan@deloitte.com

Anne Kwan is a leader in Deloitte's Technology, Media & Telecommunications practice, where she leads the Business Transformation offering. She advises clients, evolving their growth strategies with new, flexible consumption/as-a-service business models. Her recent engagements include the design and launch of new IoT businesses. Kwan has nearly 20 years of technology, industry, and management consulting experience. She is based in San Francisco.

Maximilian Schroeck | mschroeck@deloitte.com

Maximilian Schroeck is a principal in the Technology, Media & Telecommunications practice of Deloitte Consulting LLP and leads Deloitte Consulting's Global High-Tech Sector Consulting practice. He has more than 25 years of experience leading organizations in private equity, corporate development, and new business development. Focused on the high-technology sector, Schroeck advises clients on growth, portfolio optimization, and transformational strategies. He is based in San Jose, California

Jon Kawamura | jkawamura@deloitte.com

Jon Kawamura is a managing director in Deloitte's Technology Strategy & Architecture practice. He has more than 20 years experience in leading IT and operational projects across multiple industries with a recent focus on serving high-tech clients. Kawamura is based in San Francisco.

Contact us

Our insights can help you take advantage of change. If you're looking for fresh ideas to address your challenges, we should talk.

Industry leadership

Maximilian Schroeck

Principal | Deloitte Consulting LLP
+1 408 704 4158 | mschroeck@deloitte.com

Maximilian Schroeck specializes in growth, portfolio optimization, and transformational strategies in Deloitte's Technology, Media & Telecommunications practice.

Anne Kwan

Managing director | Deloitte Consulting LLP
+ 1 415 307 2454 | annkwan@deloitte.com

Anne Kwan leads the Business Transformation practice within Deloitte Consulting's Technology, Media & Telecommunications sector.

Jon Kawamura

Managing director | Deloitte Consulting LLP
+1 415 419 4735 | jkawamura@deloitte.com

Jon Kawamura has more than 20 years of experience delivering and leading IT and operational projects across multiple industries with a focus on high tech.

Deloitte Consulting LLP's Digital Transformation practice has advised clients in the technology sector (e.g., hardware, software, semiconductors), as well as those in the industrial sector (e.g., manufacturing, construction, and energy) enter and compete in new markets. Our work includes defining customer-first strategies, building new business and operating models, and launching the critical capabilities required to swiftly drive scale—all to achieve optimal results from limited resource pools. Contact the authors for more information.

Deloitte.

Insights

Sign up for Deloitte Insights updates at www.deloitte.com/insights.



Follow @DeloitteInsight

Deloitte Insights contributors

Editorial: Matthew Budman, Aparna Prusty, and Nairita Gangopadhyay

Creative: Mark Milward and Sonya Vasilieff

Promotion: Hannah Rapp

Cover artwork: Sonya Vasilieff

About Deloitte Insights

Deloitte Insights publishes original articles, reports and periodicals that provide insights for businesses, the public sector and NGOs. Our goal is to draw upon research and experience from throughout our professional services organization, and that of coauthors in academia and business, to advance the conversation on a broad spectrum of topics of interest to executives and government leaders.

Deloitte Insights is an imprint of Deloitte Development LLC.

About this publication

This publication contains general information only, and none of Deloitte Touche Tohmatsu Limited, its member firms, or its and their affiliates are, by means of this publication, rendering accounting, business, financial, investment, legal, tax, or other professional advice or services. This publication is not a substitute for such professional advice or services, nor should it be used as a basis for any decision or action that may affect your finances or your business. Before making any decision or taking any action that may affect your finances or your business, you should consult a qualified professional adviser.

None of Deloitte Touche Tohmatsu Limited, its member firms, or its and their respective affiliates shall be responsible for any loss whatsoever sustained by any person who relies on this publication.

About Deloitte

Deloitte refers to one or more of Deloitte Touche Tohmatsu Limited, a UK private company limited by guarantee ("DTTL"), its network of member firms, and their related entities. DTTL and each of its member firms are legally separate and independent entities. DTTL (also referred to as "Deloitte Global") does not provide services to clients. In the United States, Deloitte refers to one or more of the US member firms of DTTL, their related entities that operate using the "Deloitte" name in the United States and their respective affiliates. Certain services may not be available to attest clients under the rules and regulations of public accounting. Please see www.deloitte.com/about to learn more about our global network of member firms.