# What's Next?

Identifying New Ways of Working

5 WAYS
ORGANIZATIONS ARE CULTIVATING NEXT PRACTICES

At any given time, there are several disruptive trends and technologies that change the way organizations work. Smart organizations view the disruption as an opportunity to innovate and develop new products and services. Champion organizations, those we identify in the *Pulse of the Profession®* as high performers, look to proven project management practices to survive and thrive during times of change. Proof of this can be seen just in their project success rates alone: champions report 92% of their projects are successful, compared to only 32% of underperformers.

Average percentage of successful projects

Champions — 92%
Underperformers — 32%

(Source: 2018 *Pulse of the Profession®*)
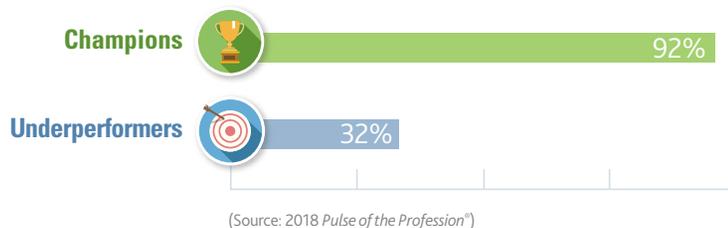
These successful organizations understand the benefits of disciplined project delivery, including lower costs, greater efficiencies, improved customer and stakeholder satisfaction, and greater competitive advantage. They balance the need to be adaptive, fast, and cost effective with the need for high performance, discipline, and risk management.

Champions know that these disruptions present the opportunity to evolve their best practices to next practices. They are developing new ways to work. To gain additional insights into these new approaches and innovations, PMI and *PM Network* magazine spoke with the organizations who are paving the way for new thinking.

Insights on the Future of Work:
Unleashing the Power of Teams

By Dom Price | *Futurist and Head of R&D,* Atlassian

I think a lot about what's coming next. In fact, it's a big part of my job. We know the world is evolving at rate that we have never seen before. And we've realized that what worked well in the past likely won't work in this new environment.

As I see it, the future of work is all about unleashing the power of teams. Organizations are being more responsive as they come up against competition, a faster innovation cycle, and increasing needs of customers. Teams are solving more complex problems, while being increasingly diverse in their make-up, and often globally distributed.

We know we need to continually evolve and experiment with our tools, playbooks, and general ways of working, so we continue to delight our customers (internal and external)—while having a positive impact on the world around us. Having spent a number of years in program management and now studying how teams work—and will work—to be more autonomous and innovative, I see a natural evolution:

■ PROJECT MANAGERS WILL TAKE ON A MORE STRATEGIC ROLE.

The role will be more valued as technology frees them from mundane routines, providing them more opportunity to innovate. They will continue to manage for complexity, ambiguity, agility, and communication. And, they will seek greater personal development. As knowledge workers, they will set aside time in their week to learn, growing their strategic value. In return, organizations will rebuild their talent processes to focus not only on an employee's technical skill but on their interpersonal and collaboration skills.

■ EFFECTIVENESS WILL BE MORE IMPORTANT THAN EFFICIENCY.

In an age where work is increasingly about creative problem-solving, effectiveness will be more valued. Organizations can't stay relevant if they're not constantly evolving the way they work, what they know, and the practices they employ. Companies will encourage robust collaboration, allowing for greater effectiveness in creating solutions versus products or services.

■ PROJECT, PROGRAM, AND PORTFOLIO MANAGEMENT WILL DRIVE INNOVATION AND CHANGE.

Driving relevance in the organization will become a key expectation, and that will require a change of focus. From templates and compliance, to agility and innovation, change will become ever present, and our role will be to enable the entire organization to navigate change every single day.

■ CULTURE WILL BE THE NEW COMMAND AND CONTROL.

Teams need enough breathing room to determine what they'll expect of each other and how they'll get their work done. Organizations will provide consistency across the company so they aren't reestablishing patterns from scratch all the time. And that all comes down to culture. Engaging, trusting environments will put people first then use technology as support. As my global head of diversity and inclusion said: "The teams and companies that will succeed in this new world are the ones who will evolve their cultures to ensure that everyone can thrive by bringing their full self to work."

1

DESIGN THINKING

Organizations are increasingly turning to design thinking to help identify the right solutions to build better products. A process for generating creative strategies, design thinking has been around for decades. As organizations look to innovate—often while growing into new markets or sectors—many have turned to design thinking.

The process is essentially about leveraging user empathy to develop solutions, said Bob Tarne, PMI-ACP, PMP, Agile Coach for multinational automotive manufacturer Toyota. "It's a matter of, to what degree do you really try to understand what your user is doing? Design thinking is saying: Don't just have a half-hour conversation with your user to say, 'Do you want pink or blue?' Have a conversation about what challenges them in their day-to-day work."

Design thinking incorporates empathy as the first step, often to identify and prioritize the customer experience. Popular design thinking models organize the development approach in five stages:

1. **EMPATHIZE:** Gather information through observation and conduct interviews to develop a deep understanding of the customer and the challenge.

2. **DEFINE:** Clearly articulate the problem that needs to be solved.

3. **IDEATE:** Generate ideas in an attempt to solve the problem.

4. **PROTOTYPE:** Build representations and models of the top ideas.

5. **TEST:** Introduce a new concept in a way that can be integrated in the business and refine it according to feedback.

Two important aspects of this approach are understanding the user to create meaningful innovations that address both new and old challenges, and finding the right question to address throughout the process.

Understanding the problem paves the way for executing more creative, useful solutions. "Design thinking increases the potential that you will build something your customers want and will buy," said Susan Kuypers, Director, Design Thinking, Design and Co-Innovation Center for software solutions provider SAP Labs. "Design thinking decreases the risk of building something that fails. It allows the rest of us to approach that ability to build something that becomes a success in the market."

GE, a multinational conglomerate corporation, uses design thinking as a way to solve and reframe problems by understanding people and their needs throughout its businesses. GE Digital is partnering with company leaders to drive digital transformation using the principles of design thinking—helping them understand what's possible and how they need to think about the future. Researchers at GE Healthcare wanted to alleviate the anxiety children frequently experienced with procedures such as CT, X-Ray and MRI scanning. They utilized design thinking to ignite a creative, empathic solution that provides a welcoming environment for the children. Themed imaging rooms—a pirate island, a safari, or a trip to outer space—were created to enhance the imaging experience for children and their families.
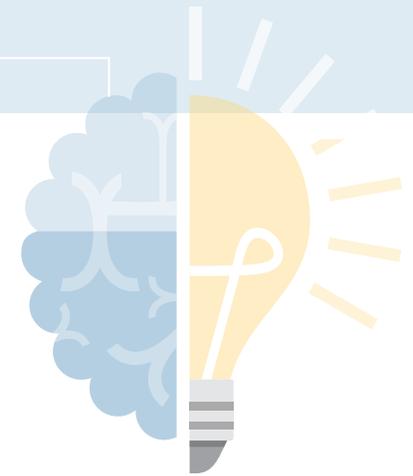
> "Design thinking decreases the risk of building something that fails. It allows the rest of us to approach that ability to build something that becomes a success in the market."

SUSAN KUYPERS, Director
Design Thinking, Design and Co-Innovation Center, SAP Labs

ARTIFICIAL INTELLIGENCE

By 2024, global investment in emerging AI technologies is projected to reach US$3 trillion—up from US$126 billion in 2015, according to a 2016 Transparency Market Research report. As AI ascends, it has the power to fundamentally transform project management decision making.

The information-gathering capabilities of AI could help reduce human error and biases when it comes to creating budgets, predicting cost overruns, and developing schedules. For example, a subset of AI called machine learning—using algorithms to predict outcomes—could analyze massive amounts of historical data from past projects to identify and assess thousands of schedule possibilities and help project managers select the best option.

AI-assisted tools could mean that project monitoring and schedule changes require less time and fewer resources. These efficiencies will allow project managers to focus on areas where AI falls short, such as people skills and team building. The tools could also help project leaders devote more time to ensuring that projects remain in tune with the business case and aligned with organizational goals, said Boris Petukhov, Senior Project Manager, Argo Computing Services Pty. Ltd., an E-Commerce organization. "AI is going to enable and elevate project managers to do high-value functions," he said.

Widespread adoption of AI in the project management world could be two or three years away, as skills and resources lag. However, integration of AI into enterprise software has already begun, said Lee Stogner, PMP, President of Vincula Group, a consultancy in business innovation, digital transformation, project management, internet of things, and AI. "For project management, AI chatbots are enabling new ways to interface with people and ask questions, provide advice and keep the resources of a project focused on the goals of the

project," he said. "These chatbots reduce the load on the project managers and enable them to provide better support for critical activities within their project."

Airbus, an international pioneer in the aerospace industry, is also looking at the fast-developing machine-learning and emergent technologies. The goal is to digitally connect every tool in its factories and access substantially more data to prevent component failure on its jetliners, helicopters, and spacecraft.

Airbus Digital Transformation Officer Marc Fontaine outlined a future in which additive manufacturing, augmented reality glasses, robotics that amplify human users' capabilities, and the intelligent use of advanced data analytics are the norm.

A business-focused example is Airbus Smarter Fleet™, a cloud-based service platform developed by Airbus with the help of IBM. The platform, according to the Airbus website, provides customers with various solutions, including intelligent maintenance and engineering tools, increased flight efficiency, and optimized fuel consumption. The company is working to expand these services using AI.

AI-powered decisions support systems and automation that could help project success by analyzing risks and reducing costs. Further, AI has the power to automate simple tasks, allowing project managers to expand their role as strategic advisor, big thinker, innovator, communicator, and versatile manager.

> "For project management, AI chatbots are enabling new ways to interface with people and ask questions, provide advice and keep the resources of a project focused on the goals of the project."
>
> **LEE STOGNER, PMP,** President
> *Vincula Group*
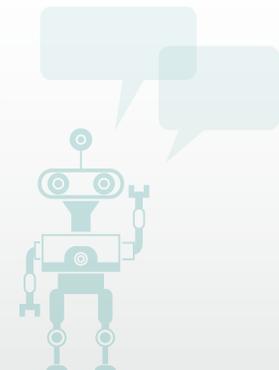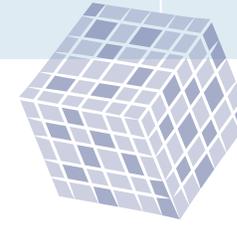
ORGANIZATIONAL AGILITY AT SCALE

Agile organizations embrace change by moving quickly, decisively, and effectively to anticipate, initiate, and take advantage of change, yet remain robust enough to absorb any setbacks. Organizational agility is not just about being fast; it also implies the capacity to remain in touch with customer needs.

Transforming an organization to improve agility requires actively engaged executive sponsorship, embedding a change culture, an organization-wide view, and supporting old and new approaches during the transition.

ANZ, one of the top four banks in Australia, is increasing its organizational agility across large parts of the company. The transformation is drawing on a range of agile approaches, many of which are already being used to deliver the organization's technology and digital projects, including initiatives such as Apple Pay.

The approach will split the bank's workforce into autonomous, multidisciplinary squads of about 10 employees to improve the speed and efficiency of product delivery. Squads will be joined together in tribes focused on key customer outcomes.

"To achieve our purpose of shaping a world in which people and communities thrive, ANZ must get closer and listen harder to what our customers really want," said Alicia Aitken, Investments & Projects, Transformation & Change Capability, ANZ. "We need to be able to deliver what they need quickly in a way that meets their fast-moving expectations."

ANZ is changing the way they work through organizational agility and drawing on proven agile techniques, such as multidisciplinary teams, co-location (where possible), and efficient decision making.

"The challenge for us now is to take what worked on individual projects and do this at scale across the organization," said Ms. Aitken, who added that staying connected to the latest thinking and other company experiences is crucial during the journey.

One of the big success factors at Spotify, a music, podcast, and video streaming service, is its agile engineering culture, according to Spotify Labs. Agile principles are regarded more highly than the practices themselves: "Rules are a good start, then break them when needed," according to Spotify in their video *Spotify Engineering Culture*.

Autonomous squads, or small cross-functional self-organizing teams, became their key driving force. The squads, usually less than eight people, have end-to-end responsibility for the products they build. Autonomy means the squad decides what to build, how to build it, and how to work together while building it. The organization feels the autonomy motivates the squad and empowers efficient decision making at greater speeds. The work, of course, is always tied to Spotify's mission.

The organization has an internal open-source model so the culture is more about sharing ideas than owning them. This culture is the key and big egos are almost nonexistent. Respect, trust, and motivation take the place of politics, control, and fear, according to the video.

"Agile at scale requires trust at scale," Henrik Kniberg, Agile/Lean Coach and Owner of Crisp, a consultancy company mentioned in the Spotify video. Kniberg coached and mentored managers and teams at Spotify and helped introduce and spread the agile and lean mindset and practices across the organization.

> "To achieve our purpose of shaping a world in which people and communities thrive, we must get closer and listen harder to what our customers really want."
>
> **ALICIA AITKEN,** Investments & Projects, Transformation & Change Capability
> *ANZ*
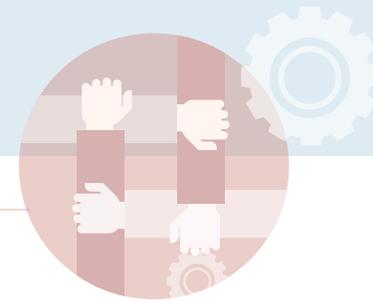
DEV OPS

DevOps, a compound of development and operations, is a delivery approach that brings teams together for the entire product life cycle—design, development, and deployment.

In the world of DevOps, those functions are happening in concert to ensure the operations team doesn't end up with a useless product, wrote Priya Patra, PMP, in *PM Network*.

"This means deployment times are faster, and repairs can be made more quickly when something goes wrong," wrote Ms. Patra, a regular contributor to ProjectManagement.com and a program manager in the IT sector who lives in Mumbai, India. "It's a cultural paradigm shift toward collaborative and leaner solutions and continuous delivery. Organizations are embracing DevOps for some of the same reasons they embraced agile: It helps to deliver quick and reliable business value in fast-changing business environments. But DevOps also enables teams to discover problems earlier in the development pipeline and fix them faster—thereby delivering a better customer experience."

DXC Technology, one of the world's leading independent, end-to-end IT services companies, promotes DevOps as a movement that arose to encourage development and operations teams to work together to deliver business value. It defines a set of principles and methods to foster collaboration. These include a special focus on quality, testing, automation, and collaboration. DXC, created by the merger of CSC and the Enterprise Services business of Hewlett Packard Enterprise, mixes emerging technologies with its IP, tools, frameworks and accelerators to enable clients to achieve their business objectives. The organization offers functional and life cycle testing for every type of application using traditional, agile, and DevOps methodologies.

Zurich Insurance Group, a Swiss insurance company, is working with DXC to move from traditional data center outsourcing to a Platform as a Service model. As a result, according to the DXC website, workloads were moved to private cloud; costs were cut by 30%, streamlined provisioning; and development was accelerated with streamlined DevOps practices.

"DXC has long-time cloud experience and has delivered a fully automated system," said Zurich's Global Head of IT Infrastructure Thomas Kropp, in a DXC case study. "This helps us reduce server provisioning times and enables DevOps application development. From a single, unified storefront, our project teams can order services for the private cloud—including procurement and security processes—within hours."

"Organizations are embracing DevOps for some of the same reasons they embraced agile: It helps to deliver quick and reliable business value in fast-changing business environments."

PRIYA PATRA, PMP, Program Manager
Mubai, India

5
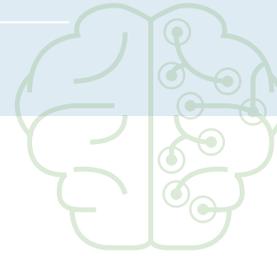
COGNITIVE COMPUTING

Cognitive computing—a comprehensive set of capabilities based on technologies such as machine learning, as well as reasoning and decision technologies—is helping to solve a wide range of practical problems, boost productivity, and foster new discoveries across many industries.

Laksh Krishnamurthy, Senior Technical Staff Member, IBM Watson, outlined the following capabilities of cognitive computing during her PMI Global Congress 2016—North America presentation:

- Understands and converses in natural language
- Has the ability to understand from both structured and unstructured sources
- Interacts and maintains context
- Uses sensory, visual, gestural, and auditory inputs to derive context
- Adapts to new domains by reasoning
- Weighs evidence to provide best possible outcome
- Creates and builds a view of the domain that it can refer to often
- Learns by experience or via instructions by human

Cognitive computing, often referred to as a subfield of AI, has the power to bring the role of the project manager to a more strategic level. The technology can take on many processes that are often viewed as time-consuming. The result is that skilled workers now have more time to focus on more work that involves the analytical and judgmental sense that machines do not possess.

IBM leverages project management expertise in its Watson applications. Watson combines AI and sophisticated analytical software to understand the nuances of different industries to speed decision making.

Woodside Energy, an Australian oil and gas company, is partnering with IBM to create a cognitive computing system that will enable users to surface evidence-weighted insights from large volumes of unstructured and historical data contained in project reports in seconds. Watson evaluated tens of thousands of Woodside documents related to project development in the system, each typically over 100 pages in length. It would take a human being, working 24 hours a day, more than five years to read all this information. Leveraging this existing knowledge to augment employee skills is expected to improve the bottom line with easily deployed applications.

CONSIDERATIONS:
IMPACT ON PROJECT MANAGEMENT

As organizations look to deepen their value delivery capabilities, they will innovate and differentiate their customer experiences. They will be prepared to work in new and different ways. Ultimately, the goal is to deliver greater value at speed and scale. The means—through design thinking, AI, agility, DevOps, cognitive computing, and whatever is next to come—requires continuous research and experimentation.

How organizations execute with these new capabilities will be a part of PMI's focus in the yearlong look at managing the impact of disruptive technologies. We will take a look at how organizations are evolving their project practices and talent to navigate the disruption. To truly succeed, they will continue to rely on overall project success as a competitive advantage to drive their organizations forward.

Organizations that want to explore, experiment, and stay relevant, will need to empower and trust their employees and teams to do the right thing. In a world with lots of small autonomous teams, trust is critical, and will need to be complemented with evolving practices of work and disciplines, rather than process and prescription. Leaders, teams, individuals, and organizations will all need to evolve together.

Dom Price is Head of R&D Program Management at Atlassian, an enterprise software company that develops products for software developers, project managers, and content management. Mr. Price was previously the general manager of program management for a global gaming company. He has also been a director at Deloitte.

"Project, program, and portfolio management will drive innovation and change. Driving relevance in the organization will become a key expectation, and that will require a change of focus. From templates and compliance, to agility and innovation, change will become ever present, and our role will be to enable the entire organization to navigate change every single day."

DOM PRICE, Head of R&D Program Management
Atlassian

Beijing

Bengaluru

Brussels

Buenos Aires

Dubai

Dundalk

London

Mumbai

New Delhi

Philadelphia

Rio de Janeiro

São Paulo

Shanghai

Shenzhen

Singapore

Sydney

Washington, D.C.

PMI
Project Management Institute

Making project management indispensable for business results.®

PMI.org | pulse@pmi.org | #PMIpulse