Digitalization's Impact on PPM Practices and the PMO by 2030

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By 2030, smart machines, AI and the IoT will play distinct roles in projects such as data collection, analysis and even reporting. For PPM leaders, new and specific project management skills will be required to oversee and ensure successful collaborations between smart machines and humans.

Key Challenges

- Much of the "work" of today's project management office (PMO) will be eliminated as artificial intelligence (AI) takes on traditional project management (PM) functions, and reporting PMOs will disappear.
- By 2030, the multitude of PMOs existing in organizations will have to amalgamate into one function concerned with change, strategy, product evolution and organizational governance.
- As PMOs morph into a more-strategic change function, PMO leaders must become seasoned, business-, technology- and transformation-savvy executives who are able to build and evolve partnerships (some permanent, and some temporary) between humans and smart machines.
- Most of today's PMOs are part of IT, and many EPMOs are part of a business unit. In the digital world, these distinctions will blur and become unimportant.
- Organizations that survive the digital transformation will continue to evolve roles, jobs and capabilities. As a result, the 2030 PMO will face challenges in acquiring the right people with the right skill sets to meet the project demands of the changed organization.

Recommendations

PMO leaders looking to optimize their value contribution to the organization before 2030 should:

- Build a plan to become the centers of change and innovation or to integrate with them as they emerge, thus enabling the organization to change faster.
- Expand program and portfolio management (PPM) practices by including Internet of Things (IoT) and AI functions as primary stakeholders, equal to the human ones.

- Assign humans with the right skills to act as proxies for IoT or AI stakeholders.
- Start staffing the PMO function with change experts (as opposed to process experts) by diffusing processes throughout the organization.

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Introduction

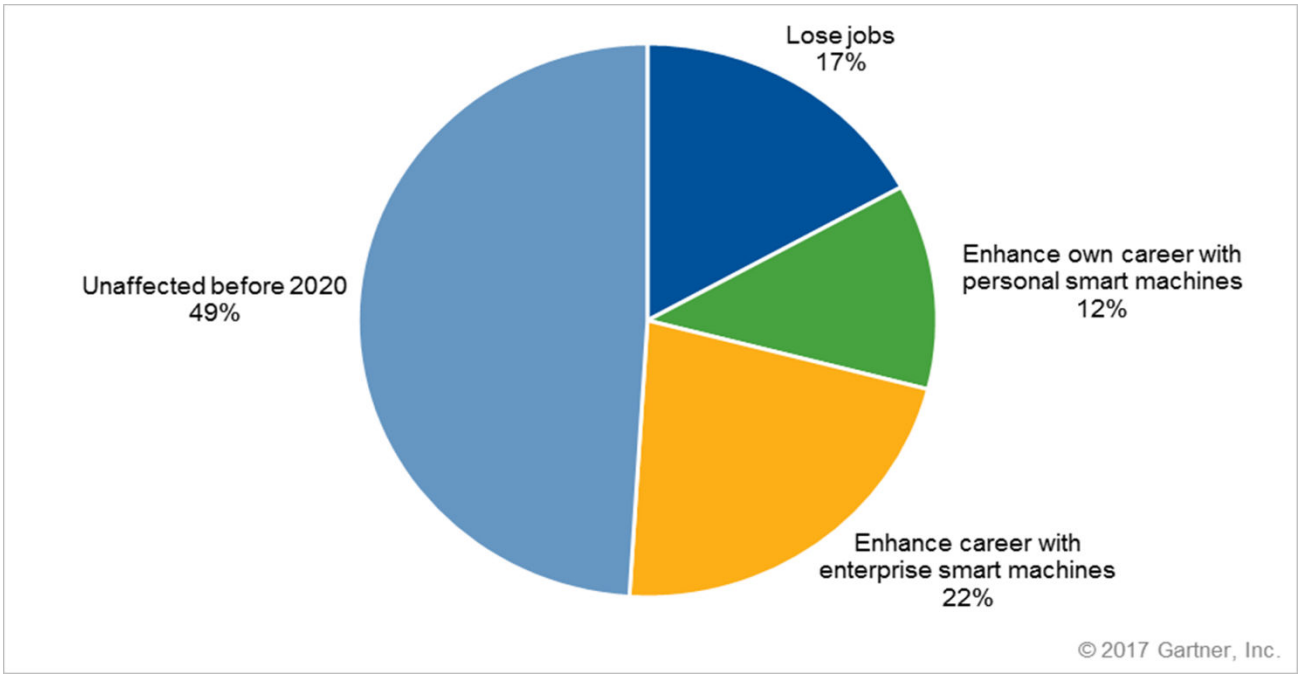
In the digital business era, the number of IT PMOs will decline, some will transform into change functions in the business and EPMOs will become part of the C-level strategy function. This research provides PPM leaders with a view of the role, position and skills requirements of the PMO in 2030. This research note is part of the "PPM in 2030" series that attempts to evaluate the state of four major PPM roles and domains in the year 2030. The pace and complexity of change that organizations are facing continue to demand faster and better delivery of projects and programs. As this trend will only intensify, the role of the PMO in 2030 is less about IT delivery and more about driving strategic change across the entire enterprise.

In our published research about PMOs in the year 2020, we suggested that low-maturity, low-value PMOs will vanish, while, some higher-maturity PMOs will morph into enterprise EPMOs. During the difficult years of digital transformation, we expect that the numbers of PMOs in IT organizations will continue to decline to a point at which they become the exception rather than the rule. The EPMO — in its 2017 form — will turn out to have been a transitional state on the way to becoming the well-accepted "strategic change management office." This is a function that will be responsible for overseeing and managing all enterprise changes resulting from projects and programs.

The digital transformation will reshape how we run projects and challenge the value impact of PMOs. New systems that begin to fulfill some of the earliest visions for what information technologies might accomplish — doing what we thought only people could do and machines could not — are now emerging, but in 2030 will be a pervasive reality. Data collection, analysis and

reporting comprise a large proportion of managing projects and programs. Based on current trends, we hypothesize that 80% of the "work" of today's PM discipline will be eliminated as AI takes on traditional PM functions such as data collection, tracking and reporting. Because of this, reporting PMOs will disappear. In Gartner's "Artificial Intelligence Primer for 2017," we highlight what humans stand to gain by employing AI to improve outcomes, including the ability to analyze data faster than humans can, then using the results to improve performance, and as a foundation for action. The future PMO will, therefore, require staff with skill sets that will allow them to manage not just the projects and programs, but also the demands of AI and smart machines as stakeholders. Figure 1 draws from Gartner's "The Disruptive Era of Smart Machines Is Upon Us" on the impact of smart machines on knowledge worker careers. Program and portfolio management leaders must start looking at the future PMO staff skills requirements and maximize the chances of surviving the digital disruption by leveraging the recommendations provided in this research.

Figure 1. Hypothesis of the Impact of Smart Machines on Knowledge Worker Careers (2020)



Source: Gartner (April 2017)

Analysis

Build a Plan to Become the Center of Change and Innovation

As organizations aggressively pursue digitalization, and projects become more complex, future success for the PMO will depend on the contribution and participation of many people across the organization. A PMO that is fixated solely on control — and a consistent, one-size-fits-all process — is already viewed as a barrier to progress by many enterprises. In 2030, it will have no place (see "Zombie PMOs Appear to Be Alive; However, They Add No Value").

By 2030, PMOs and EPMOs will have enabled the delivery of rapid, transformative business value, balancing the need for innovation with the need for stability to succeed in the face of unprecedented uncertainty and change. The PMO or EPMO must start transforming into an entity capable of managing every aspect of strategy execution. This ensures that the strategy continues to provide value, especially since organizations will be dynamically changing daily. Evidence also exists to suggest that there will be a surge in adoption of DevOps as a mechanism to drive continuous change. Based on the responses of 71 participants in a 2016 Gartner Research Circle survey on DevOps and PPM, an average of 32% of their organizations' software efforts are managed with DevOps today. The average is expected to grow to 66% by the end of 2019.[1]

Today, PMOs that acknowledge these drivers and adapt to them will evolve to deliver continuous value and share in the bounty. PMOs failing to adapt will be dissolved because no company will need process-heavy, risk-averse compliance administrators. There just won't be time for such things.

PMO leaders must:

- Design and pilot an open information exchange of ideas, skills and expressions of interest to generate collaboration and cross-functional insight, or make sure to be part of existing internal and external exchanges.
- Understand that new technologies and systems (like the IoT and AI) will affect what work is done and how it is done, adding complexity and uncertainty.
- Open a specific dialogue with other, non-IT executives to understand the business implications, opportunities and risks.
- Invest sooner rather than later, and start experimenting with smart machines — including those that enhance personal productivity.
- Don't get stuck on the term "PMO," and whether it is technically "dead" or "alive." Focus on the value contribution, regardless of what the function is called.

Key components of PPM disciplines will morph — some will get elevated and centralized, and some may seem to disappear into the fabric of an organization's daily work. We do see a need for key functions of governance, strategy execution, investment decision making and change being of continued importance all the way through 2030.

Expand PPM Practices to Include IoT and AI Functions

By 2030, partnerships between humans, smart machines and AI will eliminate some 80% of the "work" that represents the bulk of today's project management discipline, practices and activities. Gartner's definition of smart machines encompasses those technologies that learn on their own and can produce unanticipated results. They must adapt their behavior based on experience (learning), not be totally dependent on instructions from people (learn on their own) and be able to come up with unanticipated results. They are built to exploit self-learning, machine learning and deep learning algorithms. They behave autonomously and adapt to their environment. They learn from results, create their own rules and seek or request additional data to test hypotheses. They are able to detect novel situations, often far more quickly and accurately than people. The criteria defining

smart machines will continuously advance as well (see "Smart Machines See Major Breakthroughs After Decades of Failure").

In our research "Prioritize the Demands of Key Stakeholders to Achieve Greater PMO Value and PPM Maturity," we identified the four key stakeholders a PMO must serve to be successful. By 2030, smart machines and AI will have become primary stakeholders that present their own requirements to projects and programs. Gartner sees smart machines as an emerging "super class" of technologies that can perform a wide variety of work and add great value to business processes. Technologies are "smart" if they learn from experience and can produce results their creators never expected to see. Smart machines are a disruptive change brought about by information technology. How people work with information will change and we will rely on, and be aided by, smart machines (see "The Disruptive Era of Smart Machines Is Upon Us").

By 2030, the IoT, smart machines and AI will have their own voice on any given PMO project. By this we mean that the output — be it data or actual information and recommendations — must be analyzed and communicated back to these new stakeholders throughout the course of the project.

A general definition of a stakeholder is "a person or group of people who can affect or be affected by a given project." We submit that, in the digital age, this should no longer be confined only to "people" but must include smart machines and AI. They will play three distinct roles in a project that will require specific emerging project and work practices be used in order for these efforts to be successful.

These roles are:

1. Primary stakeholder
2. System acted upon
3. End consumer

With all of these smart machines, the PMO will need to have someone skilled to determine parameters or ask them questions. This may include a "programmer" of the smart machine responsible for standards and oversight for the programming — but that too can be automated in its development and changes as the organization adapts. In our 2030 PMO scenario, the project management AI never forgets; forages for data and updates information and status without direction; spots trouble and variances from plans and expectations; and offers action recommendations. The project manager provides human intuition, understanding of how to motivate, and has the political savvy to "herd the cats" into getting the work done.

To prepare for the future, PMO leaders will need to assess the PMO's capability for handling such a scenario and start charting out suitable expectations and/or risk strategies for the uncertainty and novelty involved with such projects.

Assign Responsible Humans With the Right Skills to Act as a Proxy

As projects become more complex, skills shortages will only intensify. Project managers (on, for example, IoT projects) need a specific blend of technical and leadership skills. That means they can

neither be drawn from a general PM resource pool, nor have PM certification as their sole credential. PMs will become more technical and need to know how to program the AI to adapt to changes in the organization. In 2030, the changes to business models will be even more frequent and faster than today, and the PMO will need to keep up to stay viable. It is also likely that PMs will be more of a commodity role — if you need them, you contract them.

Current advancements in AI indicate that, by 2030, we will have rule-based AI available as a normal part of our day. Machine learning is expanding the number of tasks where a computer can perform better than the best human experts. As a result of these advancements, PPM roles need to be redesigned to take advantage of the strengths of automated and human solutions. The likely scenario is that traditional PM roles and activities will morph to the digital humanist role. Digital humanism seeks to enable people to achieve things they never believed possible, or redefine the ways in which their goals can be achieved. This is in contrast to a perspective of technology that is primarily focused on automation.[2]

PPM leaders must, therefore, ensure that there are responsible parties with the right skills to act for the AI "stakeholder." This requires an understanding of the availability, meaning and analysis of the data the project needs, and that the AI can provide.

Start Staffing the PMO With Change Experts

The future increasingly requires organizations to have the ability to quickly respond to market conditions, and individuals who can manage change. Even greater strategic change is on the horizon for most organizations as they transition from their current state to a desired digital future state. Projects and programs are still the most prevalent vehicles by which organizations change, and executives say that delivering business change is an expectation that must be met. However, the PMO will have to factor in the product and service portions.

With a multitude of vendors and providers of technology solutions working within an organization, the model for delivery will dramatically change. As such, those who manage or facilitate projects in the future will require very different skills and capabilities from those seen as being useful today. Today's project managers must look to reinvent themselves, focusing on those locations within the enterprise that are engaged in digital transformation, and road testing what does and does not work in a new and fast-changing environment. As a result, some traditional IT project management roles will be replaced by business roles that enable and drive change.[3] The PMO should access the skill sets of its current project managers, and take action to acquire the additional capabilities that will contribute to delivering net change in the business.

As smart machines increasingly assume and absorb aspects of work — and not only do what was previously reserved for humans, but also what was thought to be impossible for machines — the differentiating value of human beings will live in applying creativity, critical thinking, empathy and innovation to new outcomes (see "Digital Humanism Is a Key to Digital Success").

In particular, developing expertise in organizational change management will be essential to the success of many PPM roles.

Gartner Recommended Reading

Some documents may not be available as part of your current Gartner subscription.

"Zombie PMOs Appear to Be Alive; However, They Add No Value"

"PPM in 2030 — Smaller, Smarter and Not Entirely Human"

"Where Your PPM Career Won't Be in 2020: Project Managers Must Reinvent Themselves for the Digital Future"

"The Six Forces That Will Shape Business and Technology in 2030"

"Smart Machines See Major Breakthroughs After Decades of Failure"

"The Disruptive Era of Smart Machines Is Upon Us"

Evidence

[1] This research was conducted via an online survey from 10 May to 20 May 2016 among Gartner Research Circle Members — a Gartner-managed panel composed of IT and business leaders. In total, 86 members qualified. Qualified participants were in organizations using DevOps to maintain and evolve systems. The survey was developed collaboratively by a team of Gartner analysts covering pace layer strategies, and was reviewed, tested and administered by Gartner's Research Data Analytics team.

[2] "Will a Robot Take Your Job?"? BBC News, 11 September 2015.

[3] "The State of the Project Management Office," PM Solutions 2014 Survey (PDF).

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