25. Project Management

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The word "project" was borrowed from Latin in the mid-14th century, and in English "project" came to mean "a plan, draft, scheme, or table of something; a tabulated statement; a design or pattern according to which something is made" (Oxford University Press, n.d.). This definition can be broadly understood as a way to create forward momentum of some kind of initiative. With this definition, juxtaposed with the concept of "management," or what the *Oxford English Dictionary* defines as "the application of skill or care in the manipulation, use, treatment, or control (of a thing or person), or in the conduct of something" (Oxford University Press, n.d.), a fuller picture emerges of project management as a plan, or plans, of work patterns that are controlled by some kind of individual or force. This historical conceptualization holds relatively true for technical communicators today.

The earliest forms of project management shaped the growth and safety of societies by managing the process and workforce responsible for manufacturing dwellings and monuments; creating regular access to water, including irrigation; developing systems for waste; and building farms, roads, tools, and other elements of everyday life. The people responsible for managing these projects ranged across occupations such as architects, builders, blacksmiths, farmers, and even artists.

The roots of contemporary project management practices can be traced to at least three historical moments in western culture. The first was the rise of the railroad; the second is mass manufacturing of automobiles; and the third is World War II. In *Control Through Communication*, JoAnna Yates (1993) described how the development of the American railroad system necessitated a system for sharing **information** in the form of reports and other documents across distances, particularly through the rise of corporations that required redundancies in order to operate effectively. To do so, corporations had to develop systems highly reliant on the technologies available to them at the time. Therein, Yates discussed an emphasis on the constraints and affordances of **technology**, and its impact on how projects were controlled and information was coordinated across distributed teams of people.

The scientific management principles offered by Taylorism were adopted and prized by automaker Henry Ford, who had an important influence on concepts still discussed in project management scholarship today: efficiency (i.e., how quickly individuals or teams can produce and coordinate quality output) and productivity (how much quality output individuals or teams can contribute during a defined period of time). In particular, Ford focused a great deal on the efficiency of line

workers, going so far as to base employee wages on meeting or exceeding quotas. The culture of efficiency and its emphasis on productivity is nearly a ubiquitous concern of many workplaces that employ technical communicators. Technical communication scholars like Erin Frost (2016) and Joanna Schreiber (2017) argue that we must be critical of philosophies like efficiency and productivity as they directly influence how we position and manage teams of people in the workplace. Rather, Frost and Schreiber alike suggest a realignment with the efficiency paradigm that emphasizes inclusion and reimagining what it means to engage, or what can be broadly understood as motivating and inviting participation.

Scientific management also influenced the United States military in World War II, which really worked to professionalize project management as praxis, or as a series of dependable practices for planning work. Mirroring the development of technical communication as a field, project management found its footing as a *profession* during World War II. The U.S. Navy is widely credited for what was called the PERT program (Program Evaluation and Review Technique), which was developed well into the 1970s. Up until this time, Gantt charts were one of the more universally adopted planning tools used by project managers, but the PERT program built on scientific management principles to improve methods of estimating time to complete projects, hoping to establish best practices for planning, scheduling, and coordinating teams of people.

The time estimation concepts that were described in the PERT program are often still used today, including critical path analysis (i.e., the longest amount of possible time a project could take) or lead time (i.e., how much time is needed from the completion of one project to the beginning of another one). The PERT principles were used to plan projects like space exploration or even to manage the military policies implemented during the Cold War. Technical communicators involved in product *documentation*, drafting, and the development of instructional materials often worked on teams using PERT principles. Later, as *knowledge* work began to focus on software development, additional coordinating tools were developed to help visualize planning principles forwarded by PERT. For instance, *visual* planning techniques like a Kanban board visualize how work is coordinated. Technical communication scholars have also created visualizations to coordinate information across teams, such as Clay Spinuzzi et al. (2006), who created a system for visualizing the activity streams of projects.

A through-line can be traced from the PERT method to lean manufacturing, which was made popular by Toyota in the 1980s. Lean manufacturing aimed to improve efficiency of teams by removing bureaucracy and empowering managers to make budgetary decisions. Lean approaches also began to be adopted into corporate environments during the same period of time. As Nikil Saval (2014) described, the conceptualization of doing more with less and empowering managers to make their own financial decisions as embedded into an organizational structure proved attractive to corporate management structures in the 1980s, especially because the political times called for high levels of intrapreneurial

activities (i.e., an entrepreneurial mindset used inside an organization) to achieve higher levels of productivity.

Technical communicators had important influence during the 1970s and 1980s on both work patterns of developing texts and project management methods. As Ginny Redish (2010) showed, there is a long *history* of technical communicators reimagining approaches for *designing* documents and making products more usable all the way back to the 1970s. The usability testing protocols offered by practitioner-scholars like Karen Schriver, JoAnn Hackos, and Stephanie Rosenbaum not only influenced the focus of the work of technical communicators, but also how the work was managed and coordinated across groups of people. For example, the document cycling and publication processes of instructional materials required the development of new technologies, systems, and a strategy for involving a range of stakeholders in those processes. Furthermore, the study of effective document design principles and *user experience* were well established by several technical communication scholars in the 1980s and 1990s (e.g., Hackos & Redish, 1998; Schriver, 1996).

By the 1990s, as more technology corporations began to manufacture products (like software) that relied on computing technologies, lean approaches to managing projects were abandoned by many software engineers. Rather than engineering heavy machinery, such as cars or refrigerators, software engineers were suddenly writers in that they were authoring code, and drawing from iterative approaches to do so. A building, once constructed, cannot easily be changed. Software, once programmed, could easily be changed, and continuous updates of software became a feature of the product rather than a bug. Development teams were more often interdisciplinary, staffed by people with flexible skillsets who understood both the technical requirements of a system and user needs. As a result, computer engineers could no longer rely on processes meant for manufacturing, and software development teams began to develop flexible processes and procedures, such as Extreme Programming, which served as a predecessor for the flexibility of Agile development processes.

Already, technical communicators had been regularly working with subject-matter experts, such as engineers, to write technical documentation for products as a way to help users operate computing systems with ease. Software development processes positioned some technical communicators as usability specialists as well as communication designers. As a result, technical communicators became familiar with iterative forms of development and flexible project management processes and procedures (see Dicks, 2004; Hackos, 2007).

In 2001, the Agile Manifesto was published online, which became one of the most disruptive and important moments in project management history since the scientific management processes developed prior to World War II and the subsequent advancements of the PERT program. The Agile Manifesto squarely rejected previous ways of thinking about project management developed for manufacturing activities, decentralizing the role from a particular individual to

a group of people working collectively. As a result, a range of communication practices were developed to support Agile's main tenets of supporting individuals, creating flexibility, ***collaborating*** with customers, and developing working software. The facilitation of this work created new roles for project managers under the term Scrum Master or Agile Coach. The large difference between the traditional project manager and a Scrum Master was significant, as Scrum Masters were considered experts on Agile practices, whereas certified project managers might have expertise across several domains. While the intellectual shift toward Agile practices is largely traced to this time period (and those who signed the Agile Manifesto), scholarship in technical communication demonstrates that several practitioners were also advocating for what can be described as "agile" practices in the early 1980s (see Redish, 2010).

With the rise of ***content management***, and later, content strategy (Anderson & Batova, 2015), project management in technical communication became more focused on delivering and managing the content organizations shared about their products. Project management as a means of managing texts, people, and projects did not disappear; rather, it continued to evolve with technology and technical communication as a profession. Rather than publishing booklets teaching individuals how to use a product, technical communicators helped to design products that are to be intuitive on their own. As such, many technical communicators today are also involved in content creation that supports a range of activities—from promoting and advertising content to helping customers understand the features of a product. Managing the delivery of this content became a key way technical communicators acted as project managers in an Agile workplace (see Hart-Davidson et al., 2007). Agile and lean development strategies were adapted to work alongside content management and strategy techniques (see Lauren, 2018), and digital governance frameworks developed for organizations to manage their footprint and messaging in a digital world (Welchman, 2015). Digital governance work made clear that organizations and institutions would need a specialist, or team of specialists, to manage their online content, but in a way that involved a variety of stakeholders. In other words, project managers needed to develop skills of involving people in complex processes to create alignment across organizations.

In 2020, the Dice Second Quarter Jobs Report showed that project management skills are the second most desirable trait for new job seekers, but how these skills are utilized depends quite a bit on the organizational structure and its general focus. Whether managing people, texts, or projects, many technical communicators will find that experience with project management is not only foundational to their success, but also a central organizing feature of knowledge work today.

Given the near ubiquitous need for project management skills and experience in the professional lives of technical communicators, instructors have developed coursework to teach students how to manage information and communication design work. One popular approach was offered by Rebecca Pope-Ruark (2012), who taught English students the Scrum framework to manage group projects.

Several other examples exist as well, including frameworks for managing community engagement work ethically and effectively (Gonzales & Turner, 2019). As well, scholarship on technical communication as a field frequently surfaces trends related to project management as a practice, such as James Dubinsky's (2015) discussion of facilitation as an important part of the technical communicator's skillset. No doubt, project management will remain an important element of how to develop, manage, and strategize communication work.

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