

development projects. Personalized programs can significantly enhance project outcomes by equipping team members with the language skills and cultural understanding they need to communicate effectively and collaborate productively. As the world becomes increasingly interconnected, the importance of personalized language learning for global software development will only continue to grow.

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### INFORMATION TECHNOLOGY IN PROJECT MANAGEMENT

Information technology has been a crucial part of project management since the introduction of the first significant tools, Microsoft Project and Primavera, back in the 1980s. Since then, the involvement of such tools only grew alongside rapidly

developing technologies, which opened up new horizons for companies to conquer. However, this growth in popularity was not just a byproduct of technological improvements; there were also social factors influencing this (Shamim, 2022). The biggest one was the emergence of COVID-19, which started as a seasonal “flu” and ended up turning the world upside down in many aspects of human life.

Even though the pandemic devastated almost everywhere, project management benefited from that. With all isolation rules in place, most of the work was moved from offices to your home, and this demanded fast adjustments in communication between everyone in the company. This was perfect for implementing project managing software like Jira, Asana, Notion, and Confluence, which fueled their development further (Hafed, 2020).

Aside from the immediate impact on the project management industry, COVID-19 also had some long-lasting consequences. Workers who had to relocate all of their jobs back to their homes for two whole years and companies who had to adjust accordingly without losing effectiveness discovered that it is, in fact, possible to work remotely and even increase their profits (Hafed, 2020). Moreover, it all can be credited to powerful project management tools enabled by modern information technology.

Besides the apparent communication function of these tools, they also serve a much bigger purpose that stays hidden from a regular worker and is closely tied to data science. A big part of any managing process is data analysis, which impacts decision-making and can make a difference between a failed project and a successful one. Modern information technology enables companies to gather and store tremendous amounts of data about their workers, customers, and markets, which is further funneled and digested by data analysts and machine learning specialists (Jaison Jacob MSP®, PMP®, PMI-ACP®, A-CSM®, CSPO®, SAFe 5®, ITIL®, 2021).

Artificial Intelligence was another technological bomb that seemingly appeared out of nowhere and started developing so rapidly that we went from generating highly

abstract images and dry responses to many people fighting against AI for their jobs. This also heavily influenced the project management industry since AI is much better at analyzing large amounts of data in short periods. This did not replace human decision-making, nor did it exclude human analysis from the function. Instead, it simplified and sped up the process, allowing managers to relocate their resources elsewhere (Nieto-Rodriguez & Viana Vargas, 2023).

Many popular management software companies have started implementing AI into their systems, mainly in the form of assistants, who constantly monitor work progress and take over mundane and repetitive tasks from employees. This, in turn, increased worker psychological health, as stated in Zenhub's "Happiness report", due to reduced busywork. Managers benefit from such implementations, too, as AI can analyze many performance reports from previous projects and give them more realistic timeframes for future tasks.

Unfortunately, this growth in project management tools doesn't come without flaws. First and foremost, these tools require a lot of management, too, with how complex they become when adapting to a growing demand (Nieto-Rodriguez & Viana Vargas, 2023). A whole company in your work computer sounds fun until it comes to figuring out server loads, data funneling, micromanagement tools, data security and compatibility with future improvements. All these complications set a very high entry point for project managers, with them required to have many skills, from knowing programming languages to AI skills, when previously they would be fine knowing SQL and Excel. Secondly, the implementation of many new features and tools into project management software brings new challenges for UI/UX designers, who have to reduce the bloat of on-screen features and make interfaces user-friendly while still retaining core functionalities. This task is particularly challenging because increased features should be maintained on the same visual space size of a device screen.

**Conclusion.** Evolutionary processes of information technology in project management have been both complex and transformative, significantly influenced by

historical achievements and global events like COVID-19. The pandemic accelerated the adoption of different project management tools, showing their potential for remote work as a new permanent system, highlighted the importance and possibilities of data analysis and implications of artificial intelligence in optimization of decision-making processes. Nevertheless, this quick growth is accompanied by challenging obstacles, including ever growing complexity of tools, higher entry points for both managers and regular workers, and high demand for optimized yet functional interfaces. As companies continue overcoming these challenges, the future of project management tools will depend on them balancing between benefits of modern technology and ability to adapt it to their needs. Eventually, the ongoing integration of modern information technology will dictate not just the effectiveness of project management practices, but also overall workflow in a quickly evolving digital world.

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