

The Profession of the Digital Age: Accounting Engineering



In the twenty-first century, it is possible to see the footsteps of digitalization at almost every intersection of social life. Digital technology: it affects almost all aspects of modern life from individuals to societies, from economies to cultures—and changes the world. Rapidly changing technological, economic and thinking means professions are forced to change according to the world order, and professional organisations are looking for new approach models. In today's world, digitalization for professions has become a necessity rather than a choice. Professions that do not comply with technological changes will undoubtedly take their places on dusty pages of history. As it is in other professions, the accountancy profession is also changing and developing as a result of digitization and technological developments. The desired transformation in accountancy profession can only happen with engineering abilities. The solution at this point is “Accounting Engineering,” which will enable the accounting profession to evolve with engineering abilities. What is accounting engineering? Accounting Engineering is the redesign of the accountancy profession in light of technological developments, such as digitalization, artificial intelligence, and the Fourth Industrial Revolution. Read on...

Thanks to computer systems, the workload of accountants has been reduced; complicated and

difficult accounting transactions made using traditional methods are made easily and quickly. In accountancy's future, the need for digitalization and transformation is imperative. Traditional accounting methods (such as paper, receipts, registration, declaration, notification, etc.) will

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eventually go, and all will be done by internet-based accounting systems (such as cloud system and blockchain technology). Against this unabated rise of digitalization, is the accounting industry ready for this revolution?

Future of the Accountancy Profession in Light of Digitalization

The Fourth Industrial Revolution, triggered by digital technologies, is now pointing to the transformation of the economy and society, depending on developments in artificial intelligence, robotics, autonomous devices, 3D printers, nanotechnology and other areas of science. These developments will change our ways of doing business, and will change us and society as human beings. It is estimated that some professions will disappear completely, some will develop more, and the branches of professions that we have never known today will emerge. As a result of all developments, it is inevitable that these systems will be (and are) influencing accountancy.

The effects of artificial intelligence, blockchain technology, the Fourth Industrial Revolution and cloud system software on the future of accountancy are being talked about and discussed. Questions like, "What new opportunities will these systems create in accountancy?"; "How will digitalization and technology affect the accountancy profession and professionals?"; and "Is the accountancy profession and professionals ready to change?" are being asked and discussed in the accounting industry.

Technological developments, globalisation, and increasing competition force professions to change constantly. Undoubtedly, the accountancy profession is at the forefront of professions that are most affected by technological developments and globalisation. The technology revolution

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In the coming years, many transactions made by accountants will be made by artificial intelligence and automation systems. Day after day, business owners will start looking for more technological talent in accountants, and in the future half-time virtual accountants will emerge instead of full-time accountants. It is an unquestionable fact that the language of the next generation of accountancy professionals will be digitalization and technology.

In the 21st century, the accountancy profession needs a new model able to respond to technological changes and developments in the process of digitalization and e-transformation so that the accounting profession is more effective. In light of technological developments and changes, this modeling should prepare the accountancy profession for the future by rebuilding from A to Z in fields such as thought, education, culture, and technology.

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I believe this transformation can only happen with engineering abilities. The solution at this point is "Accounting Engineering," which will enable the accounting profession to evolve with engineering abilities. What is accounting engineering? Accounting Engineering is the redesign of the accountancy profession in light of technological developments, such as digitalization, artificial intelligence, and the Fourth Industrial Revolution.

Relationship between Accounting and Engineering

In accounting and engineering, there is the need to collect, analyse, develop and action solutions

Special Write-Up

Engineering science will provide accountants analytical and numerical thinking, effective communication, problem solving, digitalization adaptation, creativity and the ability to look at events from the big picture. Undoubtedly, one of the most important influences of the engineering profession in the accountancy profession is its approach to scientific management.

and report to decision makers. Both disciplines act by input-process-output facts, that is, a system approach. Today, in parallel with the developments in technology, accounting and engineering have become more closely related. Engineering science is a science that will enable the accountancy profession to integrate with technological developments by understanding the traditional and variable structure of the accountancy profession.

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Scientific management is a theory that analyses and synthesises workflows. Scientific management is the application of scientific methods to problems. The use of scientific methods instead of traditional methods in accounting processes will increase the efficiency and the speed.



Engineering is a system of thought and a mathematical thinking skill. Engineering can find new ideas for industry and technology, and manage those ideas. It can change the living conditions of humankind with ideas that create change. An engineering career has become very different nowadays. Beyond designing and constructing, engineers deal with complex social issues, such as poverty, inequality, disaster recovery or climate change. For example, social engineering, environmental engineering, change engineering and risk engineering.

Financial engineering is born in the light of this vision. Rapidly developing technological and digital developments reveal the need for change in the accounting profession in order to solve the problems. In the 21st century, accountants who are trained as accounting engineers or who develop themselves in engineering subjects will be preferred because the accounting profession is no longer the traditional way of working and has turned toward smart technologies.

Engineering skills will enhance accountants' ability to use and manage technology. Accounting Engineering will enable accountants to use the different digital systems to acquire the right knowledge and to manage and use technology in the learning-teaching process. An accounting engineer is a person who can adapt to technological developments and actively use technological products in professional practices, specialised in his own field, combine practical and theoretical knowledge with philosophy, mathematics, and technology.

As a result, recognising devastating technologies and managing digital systems effectively is of critical importance for the accountancy profession's future. The emergence of new accounting systems as a result of technological change is not distant. In order to prepare the accountancy profession for the future, Accounting Engineering is redesigning the profession within the framework of engineering ability. ■

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