



Concluding Remarks and Final Thoughts on Digital Transformation



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Abstract While we have accumulated much knowledge over the past decades about how organizations engage in digital transformation, future developments are likely to make a lot of this knowledge at least partially obsolete. New forms of working and organizing, along with an increased collaboration between human and machine, are likely to give rise to new forms of digital transformation, novel practices and approaches, and significantly different strategies. Nevertheless, such changes are likely to be gradual. This is due to the fact that emerging technologies require time to mature and to be assimilated in organizational processes. In this concluding chapter, we lay out some final thoughts about digital transformation, as well as how it will likely unfold in Norwegian organizations.

1 Closing Remarks on Digital Transformation in Norway

One of the key areas that will be subject to major changes in the upcoming years is that of the public sector in Norway. Norway is one of the countries with the highest percentage of people employed by the public, and a great number of services and organizations are publicly owned. This poses both a challenge and an opportunity for digital transformation in Norway [1]. On the one hand, the challenge is that the central government has to orchestrate funding initiatives and develop appropriate incentives for public bodies at different levels to initiate their digital transformation process while taking into account issues such as scalability, interoperability, and

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agility in operations [2]. This poses a major issue since many public organizations are of a small size class and thus have limited human and other slack resources to engage in such future-oriented projects [3]. Furthermore, deploying digital technologies in public organizations usually is a lengthier process compared to those of private companies which do not have to deal with strict bureaucracy and tightly regulate processes on procuring digital solutions [4, 5]. On the other hand, Norway has a tradition of being one of the most advanced nations in using digital technologies in the public sector. The know-how and an advanced existing infrastructure make it possible to ride the wave of novel digital technologies. Furthermore, cases where digital transformation “went wrong” have served as important lessons for future deployments.

Looking at the private sector, although not primarily focused on high-tech exports, Norway has been at the forefront of digitally transforming operations in some of its key industries, including oil and gas, hydropower, seafood and fish farming, and the maritime sector [6, 7]. The capacity of Norwegian enterprises to leverage digital technologies can be attributed to several reasons, including an ability to attract highly skilled employees, a stable economical and political context, strong governmental incentives, and support, as well as the presence of some large enterprises which are industry leaders worldwide. Combined, these factors have contributed to making Norway a country where private organizations place a strong emphasis on digital transformation. Nevertheless, new emerging technologies also pose a risk of disruption for established organizations. Thus, it is important that Norwegian organizations engage in early prototype ventures leveraging new and emerging technologies that are likely to lead to a competitive edge in the future [8]. Doing so requires strong collaboration with leading research institutes and universities, as well as participation in collaborative projects that focus on high-risk high-gain digital transformation projects [9, 10]. In addition, private organization and university collaboration should take on the form of continuous education, as being regularly updated about new technologies, their applications, and how to develop them is key in remaining competitive in the long term [11].

A key dimension in considering digital transformation has to do with policy-making and how to plan at different levels of public administration. We know from extant literature that the decisions made by policy-makers have a very important impact on what happens in the private and public sector when it comes to digital transformation [12]. Norway has already issued a national strategy when it comes to emerging technologies, which was followed by an action plan of future funding at different levels of administration.¹ One of the challenges in implementing such policy-making is maintaining sufficient flexibility in the years to come in order to accommodate for shifts in technologies and formats of collaboration. For example, in recent years, there has been a growing interaction between citizens and governments through the use of digital technologies that enable such communication. Being able to create such channels and taking into account the content of such interaction

¹<https://www.regjeringen.no/en/dokumenter/digital-agenda-for-norway-in-brief/id2499897/?ch=8>

will likely be an important part of the success of policy-making. Furthermore, changes in the global political landscape require from governments to adapt their funding approaches and steer toward different forms of collaboration patterns as conditions shift [13].

In closing this edited volume, we would like to encourage researchers, practitioners, and policy-makers to collaboratively tackle the issue of digital transformation. The perspective that each side can provide to the other is invaluable, and it is important that three key pillars complement each other harmoniously in moving forward. As digital technologies become increasingly embedded in everyday life, work, and in society, the need to forge channels of communication and collaboration between these three important pillars becomes increasingly important.

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