GenAI – significant potential for the Danish public sector in 2040

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DA DANSK ARBEJDSGIVERFORENING + BCG

The following pages contain an English translation of the first chapter of a report on the potential of GenAI in the public sector in Denmark towards 2040. The report was written by Boston Consulting Group, BCG, for the Confederation of Danish Employers, DA, and was published in August 2024. Chapter 1 contains a summary of the main findings of the report.

The full report (in Danish) is available at DA's website: https://www.da.dk/

1 Background and main findings

1.1 Background

Denmark has made great strides towards the digitalisation of the public sector. According to the European Commission's Digital Economy and Society Index (DESI), it is the second most digitalised country overall and eighth when it comes to digital public services.[1] While this is a firm foundation on which to build GenAI solutions, the country has been slipping down the rankings for digital public services since 2018 when it was in the top three, a position largely due to ambitious political decisions like the 2012 legislation aimed at digitalising all self-service systems in the public sector.

The Danish public sector is still in the start-up phase with GenAI.[2] The country needs to speed up digitalisation efforts in the sector, especially regarding the use of GenAI. The alternative is to keep tumbling down the rankings and risk missing out on significant potential to improve productivity. GenAI will be crucial in reducing costs and easing the pressure exerted by an ageing population on resources in sectors like health and senior care. It is of paramount importance that Denmark invests in this technology in the public sector.

The government has taken the first steps by publishing a digitalisation strategy for 2024-2027,[3] which proposes 25 initiatives and a government task force to steer and drive progress, including in AI. These efforts constitute a solid foundation, but realising the potential of GenAI calls for ambitious political decisions, and the public sector must start to explore, implement, and scale up GenAI solutions immediately.

Multiple reports about the potential and benefits of GenAI have been published in the last 12 months, most of which focus on the overall potential in the public sector rather than on the practical introduction of new systems. This report differs by offering a more nuanced perspective, highlighting tangible applications and proposing a realistic timeframe for phasing in the technology. It does so by focusing on specific aspects of sectors and jobs. The report also sheds light on obstacles to GenAI and suggests ways in which Denmark might address them, realise the technology's potential and climb back up the ranks for digital public services.

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[1] European Commission (2022). The Digital Economy and Society Index (DESI).
[2] Tortoise Media (2024). The Global AI Index.
[3] The Danish Government (2023). National Strategy for Digitalisation: Responsibility for the digital sphere.

1.2 Main findings

GenAI can help revolutionise the Danish public sector towards 2040. GenAI is a technological breakthrough. New, intelligent solutions can help transform public-sector work in at least three ways:

1. **Rethinking public services**: GenAI can improve public services by delivering them in new and improved ways.
2. **Streamlining and simplifying workflows**: By streamlining workflows, GenAI can free up resources for other public-sector agencies or the private sector.
3. **More effective analyses and policy development**: GenAI can enhance decision-making processes by improving and streamlining analyses and policy development.

GenAI has the potential to boost public-sector productivity by around DKK 48-55 billion by 2040, corresponding to freeing up 84-96,000 FTEs (Full-Time Equivalents) or 10-12% of the expected workforce, a change that will free up staff to take on other roles and fulfil different functions in the labour market. It will also help Denmark address labour shortages in certain parts of the sector, e.g. due to its ageing population.[4][5]

The report provides a nuanced perspective on GenAI's potential in three ways:

1. The findings are based on a comprehensive analysis of data from Danish and international time studies of certain parts of the Danish public sector and jobs in it.
2. The report takes into account the effects of current obstacles to introducing GenAI.
3. It also takes into account the rate at which GenAI technology will be phased in towards 2040 so that the recommendations are realistic and implementable. As the report does not factor in new technological breakthroughs before 2040, the potential is probably even greater.

GenAI is a brand-new and groundbreaking technology yet to be introduced on a large scale, which makes the findings inherently uncertain due to the lack of real-life experience.

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[4] Danish Agency for Labour Market and Recruitment (2023). Databank.
[5] The Danish Ministry of Finance (2023). Economic analysis: Recruiting staff for the welfare sector – now and in the future

Chapter 4
Areas of high
potential

GenAI will provide a critical and much-needed boost to public-sector productivity, facilitating more efficient use of resources and the prioritisation of areas with the greatest needs and highest demand.

Health services and senior care need innovative solutions to keep their systems running smoothly in the long term. By using GenAI to assist in routine tasks such as documentation and speeding up patient referrals to appropriate services, the report estimates savings of around DKK 12-14 billion, corresponding to 21-24,000 FTEs.

In childcare, education and training, the report estimates savings of around DKK 16-18 billion, corresponding to 27-32,000 FTEs. In these sectors, GenAI can support greater differentiation in individual learning needs and also free up time, for example, by helping to prepare teaching materials.

GenAI is particularly useful for routine administrative tasks like case notes, taking minutes, etc., and the report estimates savings throughout the public sector of DKK 21-24 billion, corresponding to 38-43,000 FTEs. It is here that the new technology can make the biggest contribution to fulfilling the government's objective of reducing the size of the workforce in public-sector administration.

Chapter 5
Obstacles and
perspectives on
solutions

Denmark has a solid foundation for the implementation of GenAI but faces several obstacles. The public sector is well-placed to reap the benefits of GenAI, partly because of previous ambitious political decisions that established a unique data infrastructure, e.g. centralised databases. However, the public sector is still in the start-up phase with AI.[6] To reap the benefits of the new technology, the sector needs to address obstacles in four focus areas:

1. **Legislation and regulation**, for example, supporting the responsible use of GenAI without imposing overly restrictive requirements or excessively cautious interpretations of EU regulations that might hinder the implementation process.
2. **Culture and trust**, for example, building trust among the public and staff through good, people-centric solutions and professional tools.
3. **Technology**, for example, providing greater access to existing data on which to train GenAI models and focusing on scalable solutions.
4. **Competencies and organisation**, for example, training staff to use AI and see its possibilities. In parallel, the digital task force announced by the government and public-sector leaders must act as a driving force in conducting research into GenAI, introducing new systems, scaling them up and sharing knowledge about GenAI.

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[6] Tortoise Media (2024). The Global AI index.

With solid foundations in place, Denmark has the potential to drive the GenAI agenda. Historically, the country has been a global frontrunner in public-sector digitalisation. However, it is still in the start-up phase with AI, so it risks missing out on significant potential. It is essential to make ambitious decisions and implement strategic prioritisation to put Denmark back at the forefront and reap the benefits of GenAI, now and in the future.