

Technical appendix: Detailed approach

A.1 Task data

The task statements come from the O*NET database, release 27.2,¹ and cover 19,265 tasks across 923 O*NET-SOC occupations (798 at the six-digit SOC level used in the analysis). Danish civilian public employment in 2024 falls into 344 four-digit DISCO-08 occupations. We link these to 739 SOC occupations, whose 16,262 task statements are the ones assessed (see A.3). For each task we use the statement text, its source occupation and its task type. O*NET types every task as either Core, central to the occupation, or Supplemental, peripheral to it. We retain both types.

A.2 Task-level assessment

As a conservative starting point, we consider only the set of tasks that Eloundou et al. classify as exposed to AI and treat the rest as non-automatable.² Anthropic's Claude Opus 5 then assesses each of the remaining tasks by applying explicit written rules rather than an open-ended prompt. LLM-based task classification is established practice in this literature. Each task receives two judgements that narrow the potential down further. The first places it on a six-level scale of how much of it current AI could perform at the required quality – none, little, some, half, most or all – with work shares of 0, 10, 25, 50, 75 and 95 per cent. The standard is feasibility, not technical capability alone: the work must be within what current AI can perform and be performed while meeting the requirements of good administrative practice, and automation that would degrade service quality, equal treatment or citizen access does not count. The second judgement assigns the automatable share to one of two categories: off-the-shelf AI assistants, where a trained employee could do the work with a compliant AI assistant on material available to them, and tailored AI systems, where the process places demands on consistency, traceability, data protection or integration with existing systems.

The rules exclude from automation any task whose action is physical, whose value lies in the human relationship itself, or which is an accountable act such as a decision, negotiation or enforcement. Only separable supporting work receives a share. We resolve borderline cases conservatively, choosing the lower share and the tailored AI category.

The rules were developed and iteratively refined into a written assessment guide before the model was applied to the full task set, and the guide was calibrated through manual review of the classifications for the largest public-sector occupations and by checking the results at task and occupation level. As a further check, we compared occupation-level estimates with available time-use studies for selected public-sector occupations where possible, using reported time spent on administrative and other potentially automatable activities as a plausibility bound.³ The time-use evidence informed calibration and validation. It does not enter the calculation as a task-time weight.

A.3 From tasks to Danish occupations and FTEs

Occupation shares

Because O*NET does not report task-time shares, we assume that an occupation's automatable-work share equals the weighted mean of its task shares, with twice the weight given to Core as to Supplemental tasks, following Eloundou et al. The task statements thus stand in for the composition of work.

Occupational mappings

O*NET codes its occupations in the US SOC system, while Danish employment is coded in DISCO-08. Two bridges connect them.

We map SOC to ISCO-08 using the crosswalk published by the US Bureau of Labor Statistics. That crosswalk uses the 2010 SOC codes, while O*NET uses the 2018 codes, so we convert each 2010 code to its 2018 successors with the Bureau's own SOC bridge. We removed or added a handful of links by hand where the US occupation did not describe the Danish one, such as specialist physicians dropped from the generalist doctors code. Several SOC occupations frequently correspond to one ISCO occupation. Where they do, we combine them using US employment from the 2022 Occupational Em-

ployment and Wage Statistics (OEWS) as weights, so that the source occupations employing the most people carry the most weight in the result.

DISCO-08 is the Danish implementation of ISCO-08. We use the same four-digit codes to link the two systems, except for two Danish-only codes with no international counterpart: 2343 “Pedagogical work”, the pedagogues, and 2357 “Special-needs pedagogical work”. Following the Kraka-Deloitte study, these inherit the task lists of ISCO 2342 “Early childhood educators” and 2359 “Teaching professionals not elsewhere classified”, so that Danish pedagogues are assessed on the tasks of US preschool and kindergarten teachers.⁴

Employment base

Employment is measured in FTE. Four-digit DISCO-08 FTE by occupation and public subsector comes from Statistics Denmark’s LONS20 wage statistics for 2024. Subsector totals come from Statistics Denmark’s BFL

employment statistics, taken as the annual average of the four non-seasonally adjusted quarterly observations for 2024.

LONS20’s occupational cells sum to approximately 12 per cent less than the corresponding BFL totals. The wage-statistics population omits groups that BFL counts, including conscripts, student assistants, flex-job employees and some hourly-paid groups, and some FTE are not allocated to a four-digit occupation code. We therefore scale each subsector’s occupational cells uniformly to its BFL total. Statistics Denmark also suppresses small occupation-by-subsector cells. The uniform scaling therefore spreads their employment across the subsector’s non-suppressed occupations in proportion to their size.

We remove armed-forces occupations, ISCO major group 0, after scaling. The resulting civilian analytical base is around 179,000 FTE in central government, 132,000 FTE in the regions and 437,000 FTE in municipalities, or 749,000 FTE in total.

Table A1: Occupational families in the four workforce groups

Administration	Health & Social Care	Edducation & Childcare	Other
General office clerks and caseworkers	Social and health care workers, SOSU	Pedagogues, pedagogical assistants and childminders	Science and engineering professionals and technicians
Secretaries	Nurses and midwives	Primary and lower secondary school teachers (folkeskolen)	Social workers
Academic and communication professionals	Medical doctors	Post-compulsory and other education teachers	Police and emergency services
Managers	Other health occupations		Other remaining occupations
Legal professionals and associates			
134,000 FTE, 82 codes	285,000 FTE, 31 codes	256,000 FTE, 16 codes	130,000 FTE, 215 codes

Note: Group FTE in 2035 as projected in A.4, rounded to the nearest thousand. Codes are four-digit DISCO-08 occupations with public employment. Source: Own grouping of Statistics Denmark’s DISCO-08 occupations. FTE from Statistics Denmark’s LONS20 and BFL statistics for 2024, projected to 2035 as described in A.4.

We combine the occupation-level shares with this employment base to give FTEs of automatable work.

Wage results apply each occupation-by-sub-sector automatable-work share to standardised monthly earnings from LONS20 for 2024, annualised and uprated to 2025 wage levels with Statistics Denmark's standardised wage index by sub-sector, table SBLON1.⁵

Workforce groups

We assign each four-digit DISCO-08 code, the ISCO-08 unit group, by hand to one of sixteen occupational families and combine the families into the four reporting groups, so the groups are mutually exclusive and together cover the civilian employment base. Three-digit minor groups are mostly whole, but not always: economists, psychologists and social workers share a minor group yet sit in Administration, Health & Social Care and Other respectively.

A.4 Projection to 2035

We project Danish public employment to 2035, the year of the Danish national target, by estimating how demographic change affects demand for public services. The calculations broadly follow the Ministry of Finance's method.⁶ The employment base is 2024, the latest year available in Statistics Denmark's LONS20. We hold the number of staff per user of each service at its 2024 level, so that, for example, the number of teachers per pupil stays at its 2024 level.

Three inputs enter the projection. The population base is the registered population at 1 January 2024 by single year of age, from Statistics Denmark's table FOLK1A. The 2035 population comes from Statistics Denmark's population projection of June 2026, table FRDK126, together with its projected death probabilities by age, table FRDK426.⁷ The age profiles of individual public consumption in 2019 by purpose, namely health care, elderly care, childcare, education and services for vulnerable groups, we read from figure 2.5 of the Ministry of Finance's 2023 analysis of immigrants' net contribution to public finances.⁸ We assign each occupation-by-sub-sector cell one demand driver, and the cell grows at the same rate as its driver between 2024

and 2035, while occupations not tied to a specific service grow with the total population.

For health care and elderly care, the Ministry applies a partial healthy-ageing correction, following DREAM's 2022 analysis of healthy ageing: spending per person depends on the number of years to death, so as life expectancy rises a smaller share of each age group is in the costly final years of life.⁹ We implement this as a composition effect: we assume that people in their final years of life cost more than others of the same age, and let projected mortality determine how their share of each age group changes between 2024 and 2035.

The demographic projection implies that demand for elderly care grows by 36 per cent from 2024 to 2035 after the healthy-ageing correction, compared with 7 per cent for health care and 3 per cent for the total population. Applying the demand drivers to the 2024 employment base raises civilian general-government employment from about 749,000 to 804,000 FTEs, an overall increase of 7 per cent.

Because this growth is concentrated in care work with low automatable shares, automation potential grows more slowly than employment, from about 86,000 to 90,000 FTEs. The automatable-work rate falls slightly but still rounds to around 11 per cent.

To keep the DKK amounts comparable with today's, we value the 2035 figures at 2025 wage levels.

A.5 Comparison with other estimates

Figure A1 sets our estimate against the other Danish figures for the public sector, with automation potential in panel a and exposure in panel b. Ours is among the lowest, matched only by BCG's estimate for 2040. The gap is one of definition rather than disagreement: most of the other figures measure technical potential or exposure, not the work that could feasibly be automated.

Four of the figures are our own calculations on the employment base of A.3. Applying the 2025 ILO-NASK refined GenAI exposure index gives 29 per cent: the index scores each ISCO-08 occupation, which we map to DISCO-08 and weight by 2024 employment.¹⁰ Applying Eloundou et al.'s occupational task-exposure classifications gives 33 per cent on their preferred measure, β . Their scores are published by O*NET-SOC occupation and travel

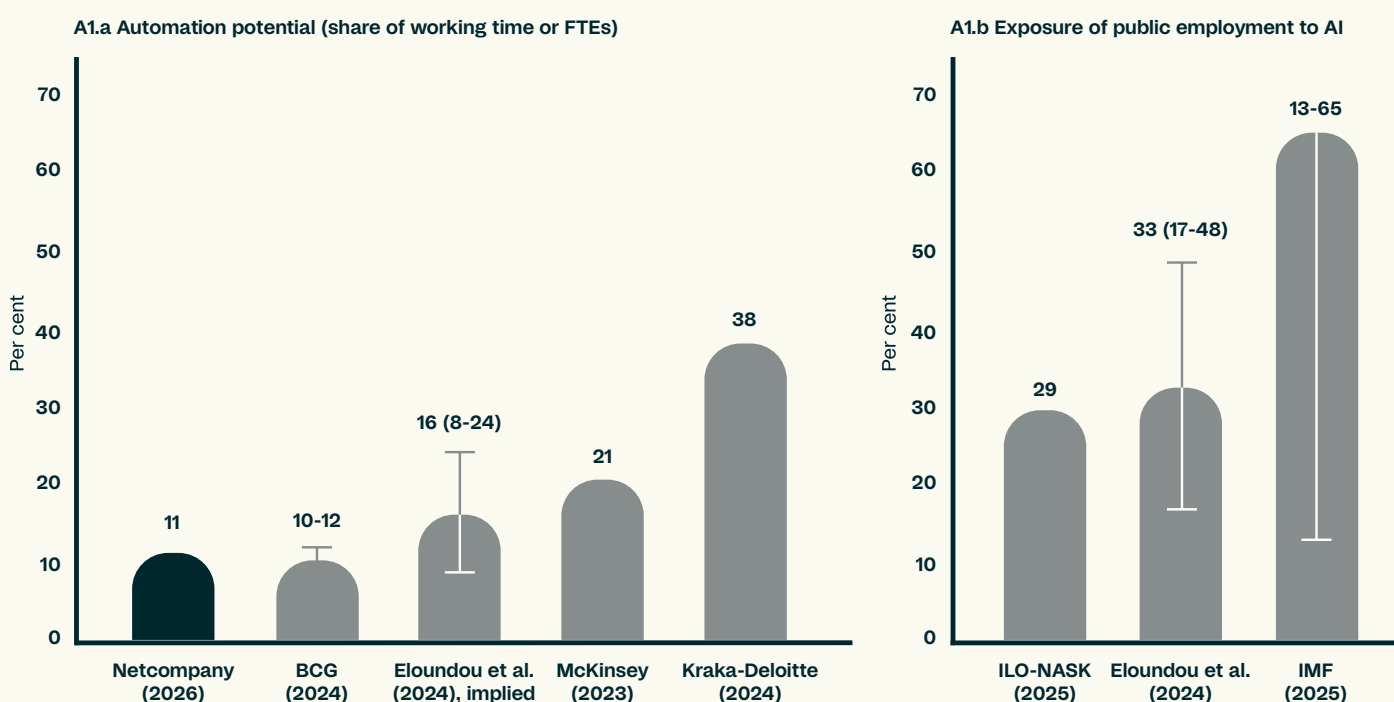
through the same SOC-to-ISCO-to-DISCO cross-walks as our own task assessments.¹¹ Both are employment-weighted means of occupation-level exposure scores, not shares of working time. Counting each task Eloundou et al. classify as exposed at the 50 per cent time saving their definition assumes, and applying the result to Danish public employment as in our own estimate, implies a potential of 16 per cent on β , or 8 to 24 per cent on α and ζ . From McKinsey's 2023 study of the economic potential of generative AI in Denmark we compute a GenAI-specific potential of 21 per cent for the public sector, weighting its four public-sector industries by their employment.¹²

We take the remaining figures as published: BCG's adoption-adjusted 10 to 12 per cent of projected public-sector employment in 2040, or 84,000 to 96,000 FTEs, the estimate closest to ours in scope and result,¹³ Kraka-Deloitte's 38 per cent of working time in public administration and services technically automatable with a broader set of automation

technologies, the IMF's 65 per cent of public-sector employment in highly exposed occupations, of which only 13 per cent combine high exposure with low complementarity, the group the IMF regards as at risk of displacement,¹⁴ and, for the economy as a whole and therefore not in Figure A1, two applications of Felten et al.'s occupational exposure scores: Statistics Denmark finds 61 per cent of employed people in occupations with above-average exposure scores,¹⁵ and Danmarks Nationalbank classifies 39 to 61 per cent of Danish work as exposed, depending on the threshold chosen.¹⁶

The Tony Blair Institute's UK study is the closest in design, as it also divides the potential by the technology required. Regrouping its categories, free or low-cost tools account for about 55 per cent of its 20 per cent time saving and bespoke systems, sensory hardware and high-cost equipment for about 45 per cent, against over two thirds requiring tailored AI systems in our estimate.¹⁷

Figure A1: Our estimate is at the low end of Danish results for the public sector



Note: Public-sector figures only. Panel a shows automation potential as a share of working time or FTEs, panel b measures of exposure to AI in public employment. Whiskers show ranges or alternative measures. BCG: adoption-adjusted potential for 2040. McKinsey: GenAI automation potential of the four public-sector industries in their figure 10, weighted by us with the employment shown there. Kraka-Deloitte: technical potential with a broader set of automation technologies. ILO-NASK: occupational exposure scores applied by us to Danish public employment. Eloundou et al.: in panel b their occupational exposure scores applied by us to Danish public employment, in panel a the implied potential when each task they classify as exposed is counted at the 50 per cent time saving their definition assumes, applied to Danish public employment as in our own estimate. Both bars show their β measure and the whiskers span their narrower α and broader ζ measures. IMF: the bar is the share of public-sector employment in occupations above the median on Felten et al.'s index. The lower end of the whisker marks the 13 per cent in the high-exposure, low-complementarity group at risk of displacement. Only Netcompany and BCG estimate a potential in FTEs.

Source: Own calculations, BCG (2024), Kraka-Deloitte (2024), McKinsey (2023), Gmyrek et al. (2025), Eloundou et al. (2024) and Renault (2025).

Endnotes

[1] O*NET Resource Center, US Department of Labor, O*NET Database, release 27.2, 2023.

[2] Tyna Eloundou, Sam Manning, Pamela Mishkin and Daniel Rock, "GPTs are GPTs: Labor Market Impact Potential of LLMs", *Science* 384, no. 6702 (2024): 1306–1308.

[3] Digitaliseringsstyrelsen, Rambøll and QVARTZ, *Kulegravning af ældrepleje- og dagtilbudsområdet*, 2018; Dansk Socialrådgiverforening, *Tidsforbrug i jobcentre*, 2010; DSI, *Sygeplejerskers tidsforbrug*, 2006; Region Midtjylland, *Rapport om tidsregistrering i psykiatrien*, 2009; Helse- og omsorgsdepartementet (Norway), *Tidsbruk blant fysioterapeuter*, 2009; Lægeforeningen, *Overflødige opgaver og overlægers arbejdsvilkår*, 2023; Mads Borregaard and Sophie Dybdahl Gramstrup, *Offentligt ansatte: Teknologier kan frigøre mere end 65.000 fuldtidstillinger*, *DI Analyse*, Dansk Industri, July 2024, a survey conducted by Wilke.

[4] Kraka-Deloitte, *Stort potentiale for automatisering af danske jobs*, 2 July 2024.

[5] Statistics Denmark, LONS20, 2024: standardised monthly earnings (MDRSNIT) including pension and irregular payments, multiplied by 12. Where an occupation-by-subsector cell is suppressed, we use the occupation's rate across general government, or failing that the subsector average.

[6] Danish Ministry of Finance, *Rekruttering af velfærdsmedarbejdere nu og i fremtiden*, Økonomisk analyse, 2023, box B4.1.

[7] Statistics Denmark, FOLK1A (population at 1 January by single year of age), FRDK126 (population projection 2026, published June 2026) and FRDK426 (projected death probabilities by age, 2026 projection).

[8] Danish Ministry of Finance, *Indvandreres nettobidrag til de offentlige finanser i 2019*, revised edition, 2023, figure 2.5. The profiles are digitised from the published figure.

[9] DREAM, *Betydningen af sund aldring i sundheds- og ældrerelaterede udgifter*, 2022.

[10] Authors' calculations applying the open occupational scores from Paweł Gmyrek et al., *Generative AI and Jobs: A Refined Global Index of Occupational Exposure*, ILO Working Paper 140, International Labour Organization and NASK, May 2025, to the occupational composition of Denmark's public sector.

[11] Authors' calculations applying the open occupational task-exposure classifications from Tyna Eloundou, Sam Manning, Pamela Mishkin and Daniel Rock, "GPTs are GPTs: Labor Market Impact Potential of LLMs", *Science* 384, no. 6702 (2024): 1306–1308, to the occupational composition of Denmark's public sector.

[12] McKinsey & Company, *Det økonomiske potentiale af GenAI i Danmark* (2023), Figure 10, pp. 26–27. The 20.8 per cent is the mean of the GenAI automation potentials of the four public-sector industries in the figure (education; public administration, defence and police; culture and leisure; health and social services), weighted by the employment the figure reports for each.

[13] Boston Consulting Group, *GenAI - et væsentligt potentiale for den danske offentlige sektor i 2040*, prepared for Dansk Arbejdsgiverforening, August 2024.

[14] Théodore Renault, *The Impact of Artificial Intelligence on Denmark's Labor Market*, IMF Selected Issues Paper No. 2025/119, 2025, Figures 3 and 4.

[15] Ole Teutloff, Johanna Einsiedler and Fenja Søndergaard Møller, *Large Language Models and the Danish Labour Market*, Statistics Denmark Analysis No. 2024:02, 8 February 2024.

[16] Kim Abildgren and Rasmus Mose Jensen, *Artificial Intelligence Can Boost Productivity in the Danish Economy*, Danmarks Nationalbank Analysis No. 6, 8 April 2026.

[17] Isabel Atkinson and James Browne, *The Potential Impact of AI on the Public-Sector Workforce*, Tony Blair Institute for Global Change, July 2024.