



LABOR IN TRANSITION - HOW MAN AND TECHNOLOGY CAN WORK TOGETHER. SUMMARY

FEBRUARY 2019

The fear of robots and artificial intelligence taking over our jobs is unfounded. In fact we should cherish automation, since it is the solution to upholding our current rate of progress at a time when the working population will be shrinking. But automation alone is not enough. We need to invest serious time and money to reskill and upskill our workforce.

At last month's World Economic Forum in Davos the impact of technology on employment was one of the most prominent topics. The digital revolution, including the rise of the internet and communication technologies, should lead to increased productivity. Yet, the recent productivity increase in developed economies such as the Netherlands is not up to par with what we have seen in earlier decades. The bottleneck is a shortage of people that hold the skills necessary to apply these new technologies.

Our research shows that to fully embrace technology, over half a million people in the Netherlands need to make a career change in the next ten years. On top of that, four million people – or half the workforce – need to improve their digital skills and capabilities. We're talking about a wide range of development programs on multiple levels.

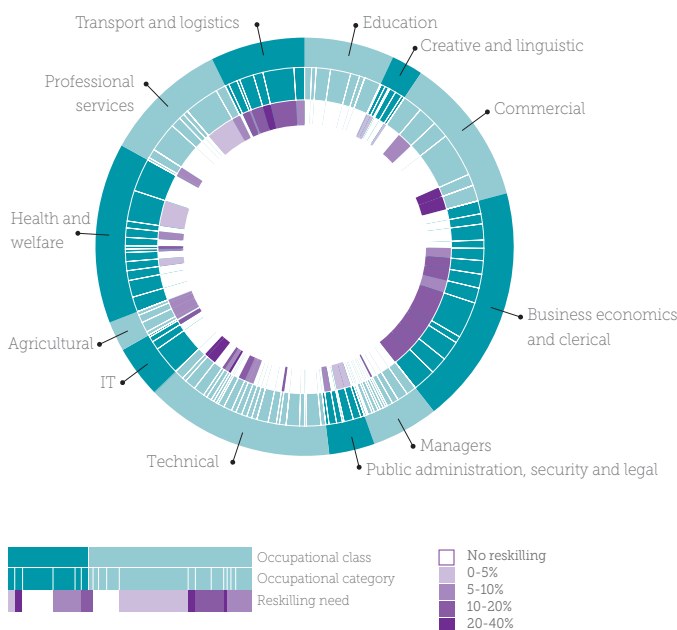
Annual investments of 6 to 7 billion euros, from government and industry together, are required to make this happen.

To fully embrace technology, over half a million people in the Netherlands need to make a career change in the next ten years

Jobs constantly change and disappear by the hand of new technology, just as new technology generates new jobs. That's how it has always been. Historic figures show an inflow of new jobs in 'new' professions of about 1% per year. These new professions are a key driver of progress, because it's there that state-of-the-art technology gets applied. We currently see large personnel shortages in these areas, e.g. in tech sectors. This deficit will grow at an accelerating pace because of our aging population. In the past, the influx of young people into the workforce did both offset the number of retirees and was sizeable enough to also fill the new jobs created by technological advancement.

Our aging population leads to a shrinkage of the workforce in the coming years: smaller cohorts joining and more people retiring. The jobs that technology creates will take a relatively large chunk out of the influx. That means that a lot of retirees in other professions will need to be replaced by people that are already part of the workforce and whose work can be automated. To make sure that enough people make such a transition, we need to actively push for automation wherever possible. That will lead to approximately half a million people who need to change careers in the next ten years.

Task for reskilling per occupational category and occupational class



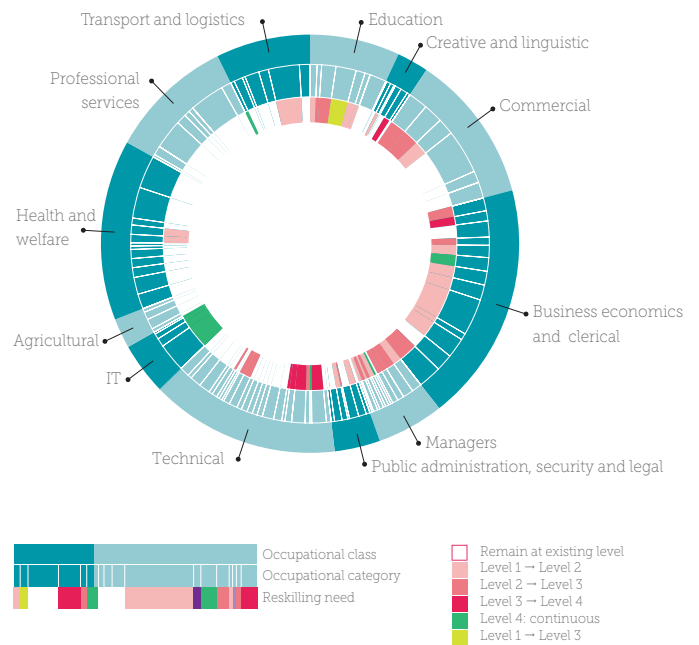
Source: DenkWerk analysis. Data number of workers per occupational category, CBS

Stating that automation is not a threat is an understatement. In fact it's a necessity to free up a large enough part of the workforce to fill the new jobs technology will create. Preparing employees for a future career change requires significant investments in people development. The Netherlands lack the infrastructure to make this happen because up until recently people generally chose a 'profession for life'. That currently makes changing careers complex and financially unrewarding.

To stimulate career change, the government has to invest in post-initial education and has to relax restrictive start qualifications without lowering the ultimate requirements. Industry should embed 'learning on the job' on a much larger scale, specifically focused on training new employees. In order to harness technology's full potential, employers need to develop a clear view on the skills and capabilities employees need to have in the future.

With all the technological change and the subsequent changing skills that are required to apply the technology, competition for companies and countries becomes ever more a matter of competing on the speed of learning. For the Dutch economy we analyzed which of the 114 occupational categories require what digital skill level today, and how that will change until 2030. The result of that analysis is that about half of the current jobs will require a higher level of digital skills in the decade to come. This entails a structured approach to developing skills for the future and requires a doubling of the amount currently spent on corporate trainings.

Task for upskilling per occupational category and occupational class



Source: DenkWerk analysis. Data number of workers per occupational category, CBS

Investing in digital skills and capabilities should be the cornerstone of long term investment plans made by government and industry. To put the billions of euros needed to make this transition in perspective: this would only account for 2% of the total of current labor cost, while the Netherlands foregoes 5 to 10 billion of GDP growth annually because of shortages in qualified employees.

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“The only skill that will be important in the 21st century is the skill of learning new skills. Everything else will become obsolete over time.” PETER DRUCKER