

Choosing for knowledge workers

Advisory report 81

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Summary

Background and request for advice

Worldwide, the demand for knowledge workers is growing faster than ever before. Knowledge workers have become the cornerstone of society, and it is they who increasingly determine the innovative capacity of their respective societies. More and more, knowledge workers are a dominant and distinctive factor in companies, research institutes and government. Their labour productivity is higher than that of non-knowledge workers, and they provide creative and innovative ideas and new solutions. Society places high demands on knowledge workers and on their training. Knowledge workers must continually ensure that their expertise and skills are kept up to date in an environment in which technologies change quickly and skills and expertise rapidly become obsolete.

There are currently many signs of an imbalance between supply and demand for knowledge workers on the labour market. This problem – the mismatch between supply and demand – is the reason that the Ministry of Education, Culture and Science and the Ministry of Economic Affairs asked the Council for advice. How can supply and demand on the labour market be better coordinated, and what is the government's role in this regard?

What is a knowledge worker? Innovative skills are their primary distinguishing feature

Knowledge workers can be found in almost all walks of life. Knowledge workers have different types of jobs in many different environments. This makes it difficult to arrive at an exact definition of the group in the Netherlands. Many definitions of knowledge workers are restricted to the highly educated. More and more, however, those with a secondary school

education are also being trained at a higher level, and the opportunities are on the rise. Secondary school graduates thus have the potential to grow. The number of highly educated people in the labour force is also increasing. Knowledge workers can therefore no longer be distinguished based on the parameter of their educational level. The Council has identified a more important parameter to distinguish knowledge workers from non-knowledge workers on the labour market: skills.

Knowledge workers have a high capacity for innovation and they have the scope to perform their work autonomously. This high innovative capacity is not only determined by their level of expertise, but to a large extent also by their skills. Knowledge workers distinguish themselves from non-knowledge workers through their innovative skills.

In this report, the Council outlines who knowledge workers are, where they work and what is important to them. The report has been compiled based on data from the Dutch Working Conditions Survey (NEA). Knowledge workers are distinguished from non-knowledge workers based on their innovative capacity and autonomy in performing their work.

The data provide important information about knowledge workers. It is striking, for example, that only a relatively small percentage (12-13% of employees in the Netherlands) consider themselves to be knowledge workers. A large majority of workers (around 88%) do not feel that they belong to this group. Among those who have completed secondary or higher education, the percentage is around 84%. There is likely a huge untapped potential among knowledge workers in this group. The data also reveal that only 27% of knowledge workers in the Netherlands work in one of the top sectors. A much higher percentage of around 73% works outside the top sectors. It should be noted that the differences between sectors are significant. Each sector (and region) has its own profile when it comes to the proportion of knowledge workers and non-knowledge workers.

Problems in coordinating supply and demand

It is essential that the Netherlands maintains its supply of knowledge workers, and the government will need to continually keep its finger on the pulse. This creates a problem for the government: the uncertainty of long-term projections makes it difficult to know how many and which knowledge workers will be needed in the Netherlands further down the road. The most likely scenario based on current prognoses involves an international increase in the demand for knowledge workers, which will affect the Netherlands, too. Rapid changes in the required knowledge and skills also make it difficult to accurately predict what qualities knowledge workers will need to possess in the future.

Projections for the Netherlands indicate that supply and demand for knowledge workers will likely become imbalanced, and that there will be three different mismatches:

The *vertical mismatch* refers to the educational level. This involves a surplus or shortage of knowledge workers at the secondary or higher education level. The government's current focus is on those at the higher education level. In the science and technology sector, however, a vertical mismatch is still present mainly due to shortages of secondary school graduates. The government's efforts to increase the number of highly educated people will therefore not serve to address the actual demand in the sector. A balance in educational levels must be struck, otherwise the mismatch will only increase.

Secondly, a *horizontal mismatch* occurs when shortages or surpluses of knowledge workers are present in a region, sector or field. Such a horizontal (sector) mismatch is very present in the science and technology sector. There are too few graduates in this sector in the Netherlands, primarily because not enough people opt to be trained in science and technology. In this regard, the Netherlands scores among the lowest of the OECD countries. Sector mismatches have major implications for a number of regions that are reliant on science and technology, such as the Eindhoven region.

The *skills mismatch* is more difficult to identify, but the Council considers it to be key when it comes to the future labour market for knowledge workers. The skills mismatch refers to the innovative capacity of knowledge workers, and it would seem to be present here, too. Knowledge worker skills are often associated with science programmes and less often with humanities or social science programmes. Employers interviewed in the context of this report indicated that they are eager to find knowledge workers in possession of skills that are associated with science programmes. These employers fail to encounter the desired skills among a large proportion of knowledge workers who have not been trained in science and technology.

The region as a playing field for coordinating supply and demand

Optimal mobility between the various regions and countries can significantly reduce the mismatch between supply and demand in the Netherlands. In practice, however, mobility is far from optimal. Most Dutch people, including knowledge workers, do not care to work more than 30 km from their domicile. Also, job-to-job mobility between regions is still very limited. Regions – municipal and/or provincial partnerships such as Brainport Eindhoven and the Amsterdam Metropolitan Area – therefore present the ideal scale for policy on knowledge workers in many respects. Still, each region needs its own approach. The required levels of education and knowledge worker skills are largely determined by the structure of sectors in a given region. The need for international knowledge workers also varies by region.

In conclusion: working on knowledge worker skills

Due to the large degree of uncertainty in projections for the demand for knowledge workers, a solid no-regrets strategy is needed which focuses on investments in the knowledge worker skills of the future workforce. In a nutshell, this involves a task for education, government and business, and leads to the following recommendations:

Recommendation 1 Create a 'skills action plan'

The Council feels that a focus on skills is key to reducing the mismatch between the supply and demand of knowledge workers and to training the knowledge workers of the future. Moving towards the future, it will be important to invest in innovative skills, because they are the distinguishing characteristic when it comes to knowledge workers and non-knowledge workers. However, there is at present little understanding and awareness of exactly what skills we are referring to. The government needs to set up a 'skills action plan' to gain more insight into the skills needed. This action plan should lead to a greater understanding and awareness of the policy and of the role of skills in the field. The plan should also clearly indicate who (educational institutions, employers, government) should play which role in the implementation of the skills policy. Currently this is often unclear. Better coordination is required.

Recommendation 2 Encourage current and future employees to become knowledge workers by investing in skills

The government should encourage more members of the workforce to become knowledge workers. A large proportion of current and future workers in the Netherlands have completed secondary and higher education, but do not use innovative skills in their work. Not only the government, but also various stakeholders in the labour market can contribute to leveraging this underutilized knowledge worker potential and to training the knowledge worker of the future. There are various ways to invest in these knowledge workers.

a. Make the focus on skills a component of profiling policy

The government should encourage educational institutions to make knowledge worker skills an explicit part of their curricula. Additionally, greater emphasis is also needed for combined skills from the sciences, humanities and social sciences, alongside specialist knowledge in a single field. In order to become aware of the skills that need to be emphasized, the government should encourage educational institutions (both initial and post-initial) to get employers (both government agencies and companies) involved in the curricula. Evaluations of profiling policy should then also focus on whether and how the skills should be integrated into the educational curricula. In secondary education this should be part of the accreditation process for programme quality in senior secondary vocational education.

b. Increase the focus on knowledge worker skills in secondary education

Many knowledge workers are educated to the secondary school level, but a much larger proportion of secondary school graduates are not (yet) knowledge workers. Secondary school graduates do not necessarily have to become knowledge workers, but the Council feels that there is tremendous untapped potential among this group. To capitalize on this potential, there should be a greater emphasis on knowledge worker skills in secondary education, where this emphasis is less self-evident than in higher education.

c. Encourage on-the-job learning

It is important that (potential) knowledge workers are given the scope to develop and build on their knowledge worker skills while on the job. By supporting exchanges, for example in the form of short sabbaticals or internships, employers can give knowledge workers more opportunities to gain experience elsewhere, and to further enhance their skills or to retain them in times of crisis. The government can also take measures to encourage this. The Council therefore recommends implementing a sustainable version of the knowledge workers scheme, which will enable more knowledge workers to go on exchanges.

d. Strive for 'intrapreneurship'

Employers should provide more scope for intrapreneurship (entrepreneurship within a company). This provides scope for developing and using innovative skills (such as entrepreneurship). The government can use the top sector policy to encourage intrapreneurship.

Recommendation 3 Give regions more scope to experiment with knowledge worker policy

Regions present the ideal scale for policy on knowledge workers in many respects. Regional labour markets, however, differ greatly when it comes to supply and demand in terms of training, skills and other factors. The national government should therefore provide the regions with the scope and resources they need to experiment with customization. The regions and the national government should work together to discover which sectors require

a customized approach. The Council has identified two important factors that contribute to the development of customized knowledge worker policy in the regions:

a. Develop a Smart Specialization strategy which explicitly includes the implications for the labour market

The regions can give shape to their vision on their labour market for knowledge workers in their Smart Specialization strategy. This strategy should examine and elaborate on regional labour market strengths, weaknesses and needs. It should also focus on the match between supply and demand in the area of knowledge worker skills.

b. Create labour and talent pools

The regions should encourage flexibility in their labour markets with appropriate levels of mobility between companies and institutes of knowledge. Work with regional businesses to ensure that knowledge workers can remain employed in their own region. Encourage mobility among knowledge workers within the region by creating regional labour and talent pools. Get SMEs actively involved in these efforts.

Recommendation 4 Encourage the geographic mobility of (potential) knowledge workers

Knowledge workers have limited international and national (geographic) mobility. The Council feels that mobility can best be enhanced by emphasizing the versatility and employability of workers (see the previous recommendations). In addition, the Council sees a number of opportunities for local authorities and the national government to encourage greater labour market mobility. In an earlier advisory letter (*'Talent is Troef'*), the Council advised the national government to pursue an active policy of attracting European knowledge workers. The government can also engage in other activities to make the Netherlands more attractive for international knowledge workers:

a. The national government should enhance the attractiveness of cross-border employment

Workers from abroad still run into too many bureaucratic problems in areas such as taxes, health insurance, family allowances and pensions. Cross-border employment and collaboration remain very difficult due to the significant differences in these areas in the countries bordering the Netherlands. The Council recommends synchronizing the salary requirements of the knowledge migrant scheme with other countries, including the neighbouring countries (especially Germany).

b. Ensure clear and effective branding at the national and regional level

The national government should ensure coherent and consistent branding of the Netherlands as a country where science and innovation flourish. This 'Holland branding' should start right here in the Netherlands, and should be based on a common strategy supported throughout the region. Ambitious regions can pursue their own branding by drawing on the national branding strategy.

c. Create labour pools together with sector-related regions abroad

Ambitious regions may benefit from bringing in knowledge workers from abroad. To this end, each region will need to adopt a strategic approach. An important component of such a strategy involves forging links with sector-related labour markets abroad. The ideal situation is one in which knowledge workers can be exchanged in international labour pools in a sector-related international labour market.