Study on the social dimension of the transition to automation and digitalisation in transport, focusing on the labour force

Participatory workshop
2 October 2020, 09.30-12.30
Online Conference

Introduction

The participatory workshop was opened by project manager Geert Smit (Ecorys) who welcomed all participants and gave the floor to Elisabeth Kotthaus (Head of Unit, European Commission, Directorate-General for Mobility and Transport, Unit for Social Affairs, Passenger Rights & Equal Opportunities) to provide some opening remarks on behalf of the European Commission. She highlighted that it is important to map and understand existing policy solutions in the field of the social dimension of automation and digitalisation at different levels, especially to answer what should be the next EU actions if the EU were to act. She also encouraged stakeholders to provide their insights, which will help to shape policy recommendations aimed at smoothening the transition of the labour force towards automation and digitalisation.

Overview of the study

After the introduction, Geert Smit gave the floor to project coordinator Nils Verkennis (Ecorys), who gave the first presentation of the day by discussing the main objectives of the study, the approach and main findings from the stakeholder consultation.

In general, the study found that stakeholders think that the labour force is on average moderately prepared. In particular, older workers are perceived as a group that is less willing or able to adapt to new technologies, either due to lack of skills or out of fear of job loss.

On awareness of the social dimension of the transition to automation and digitalisation, most stakeholders think that one of the biggest challenges is to ensure that the labour force is equipped with the right skills to perform their jobs in the future. In addition, he indicated that there is no widespread awareness among consulted stakeholders on existing funding and accompanying measures facilitating the transition towards automation and digitalisation in transport. This is true for all stakeholder groups, but most prominent for employers, particularly the small and medium-sized enterprises.

On need for guidance, stakeholders indicated two main paths where they would have a need for guidance:

- EU-coordinated activities implemented through different fora where social partners could meet and discuss;
- Ensuring that the workforce is equipped with the skills their jobs demand in the future, e.g. through:
    - Certification of skills;
    - Common competency frameworks; and
    - Improvement of digital education infrastructure.

Nils Verkennis ended his presentation by introducing the next part of the workshop, where three speakers presented good practices on managing the transition of the labour force towards automation and digitalisation from three different perspectives:

- **National perspective**: Sarah Bittner-Krautsack – Austrian Ministry for Climate Action, Environment, Energy, Innovation and Technology
- **Employers' perspective**: Matthias Rohrmann – AGV MOVE
- **Employees' perspective**: Christian Tschigg – FIT-CISL

Presentation of good practices

National perspective: Sarah Bittner-Krautsack

Sarah Bittner-Krautsack from the Austrian Ministry for Climate Action, Environment, Energy, Innovation and Technology (BMK) discussed among others the RTI programme "Mobility of the Future" that the Austrian Ministry has been implementing since 2012. Within this programme, specific emphasis is put on gender measures, i.e. measures to increase the gender balance in the sector.

Part of the Mobility of the Future programme is the Talents programme, which aims to support people in research and development during their whole career, e.g. via:

- Traineeships for school pupils;
- FEMtech internships for female students;
- Regional talents: enabling children and young people to engage in natural science and technology;
- Supporting industry-related dissertations by students in companies and research institutions (with 50% of the budget earmarked for projects with female students); and
- Networking workshops on the dissertation projects.

She concluded her presentation by sharing some lessons learnt from the Mobility of the Future programme, including:

- Automation and digitalisation will not only change job profiles in mobility, it is also an important facilitator for achieving climate neutral mobility.
- Gender measures work and raise awareness about the need to have more female experts in the sector.
- An early start is desirable to inspire children, especially girls who wish to pursue careers in mobility.

Employers' perspective: Matthias Rohrmann

Matthias Rohrmann, managing director at the employers' organisation AGV MOVE and representative of Deutsche Bahn AG, provided a presentation on the Work 4.0 collective bargaining agreement between AVG MOVE, Deutsche Bahn and EVG. This agreement, which is ground-breaking in the sector, includes solutions for predicting and shaping processes of change due to e.g. digitalisation.

Key aspects of the agreement to cope with the change due to digitalisation include:

1. Introduction of processes to digitalise working environments (process model); criteria for assessing the impact that digital innovations have on working environments;
2. Procedures when professions and jobs change;
3. Policy on how to organise alternating telework, mobile telework (self-organised workplace), and on-call work;
4. Participation in increasing productivity; employability and job security in the context of digitalisation;

5. Cooperation between social partners, mainly the parties to the agreement (AGV MOVE, Deutsche Bahn and EVG); collaboration on six model projects with the involvement of external institutes.

He provided more insights into several of the above-mentioned aspects, particularly on the procedure when professions and jobs change. In this case, employer and employee representatives check the extent to which professions are changing as a result of changes to work, working structures, tasks, competency profiles and qualification requirements. If necessary, they initiate a dialogue process within the company and inform the parties to come to a collective bargaining agreement.

Another important aspect of the Work 4.0 agreement includes measures on maintaining employability, among others through:

- Training, health promotion and occupational health and safety.
- Dialogue and cooperation among employees, managers, employer and employee representatives, and social partners.
- When digitalisation projects increase productivity, a budget is made available at the company level for training and health promotion in particular. The employer and employee representatives decide on the amount and how the budget will be distributed.

He concluded his presentation by discussing the ongoing cooperation between social partners within projects to manage the transition to automation and digitalisation, for instance on competency shifts and developments in the digitalisation process (Competency 4.0) and improving gender equality.

Employees perspective: Christian Tschigg

Christian Tschigg from FIT-CISL, the Italian transport trade union, presented the employees' perspective on managing the transition to automation and digitalisation through social dialogue. In the collective bargaining agreement (CBA) with the FS Group (Italian Railways), several articles are in place to accompany workers in the context of the transition.

Among others, he discussed how continuous training is of primary importance and that each worker on average receives 5 days of training per year. This specifically includes personnel involved in professional requalification/ retraining interventions as a result of technological innovation and/or restructuring processes that involve substantial changes in the organisation of work. He then continued to discuss agreements made on maintaining workers' privacy in light of technological advancements, e.g. video surveillance. It is agreed that companies shall not use such tools to control employees' work activities, protecting their privacy and dignity.

Subsequently, he presented several new agreements in the CBA on:

1. Smart working - providing workers with the equipment to work remotely, including the right to be disconnected
2. Generational turnover fund – accompanying workers, specifically those unfit for work, until their retirement (with a maximum of 36 months prior to retirement)
3. COVID salary / work protection – avoiding workers from being laid off due to the COVID crisis.

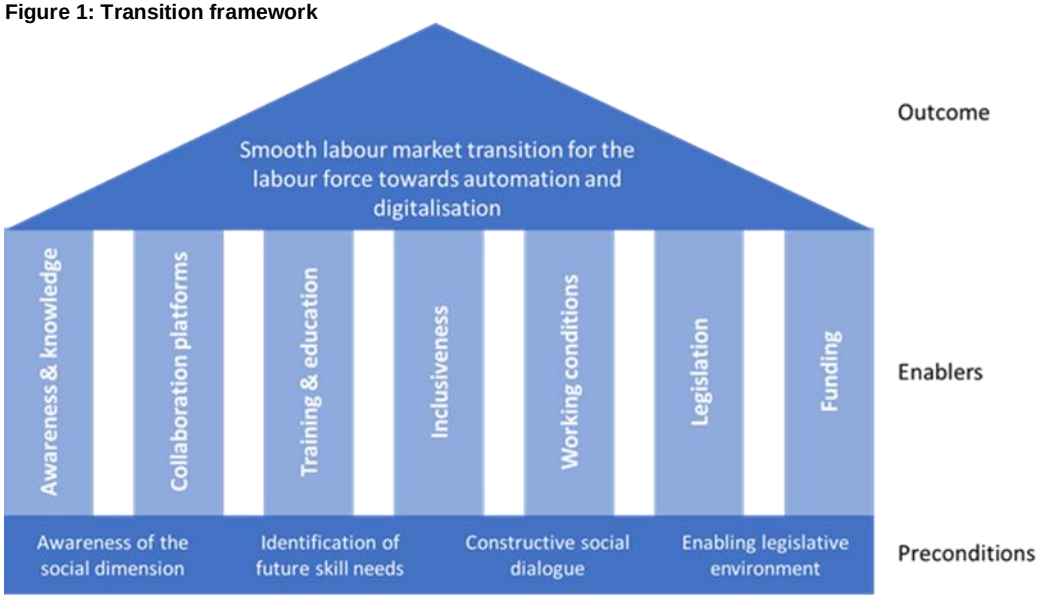
He wrapped up his presentation by demonstrating the mutual benefits gained by employers and employees when investing in social dialogue. These include the employability of workers, job quality and overall organisational well-being.

Preparing for the transition – transition framework

After a brief coffee break, Geert Smit gave the floor to Jasper Tanis (Ecorys), who presented the policy recommendations developed within this study. He first presented the approach to the development of policy recommendations and hereby referred to the transition framework (Figure 1):

- **Outcome**: The desired outcome is a smooth labour market transition for the labour force towards automation and digitalisation.
- **Enablers**: The study team has identified seven enablers (the pillars), which are operationalised into recommended actions.
- **Preconditions**: The study team has identified four preconditions (at the bottom of the figure) that are required for an effective implementation of policy actions identified within the enablers.

Figure 1: Transition framework



The seven enablers were presented, alongside their background (why action is necessary in this area), the time horizon (when action is needed) and subsequently the policy recommendations related to each enabler (what types of action are needed).

Breakout sessions

After the plenary presentations, the audience was split into breakout sessions to discuss the transition framework and its policy recommendations, using polling questions to guide the discussion. An overview of the key takeaways per group is provided below.

Group 1

In Group 1, the discussion evolved around the following points:

1. In the inland navigation sector (all participants were from this mode of transport) training is relatively underdeveloped. A lot of training on the job is done, but this does often not facilitate innovations. It is suggested by one of the attendants to follow a similar routing as in road transport, where mandatory periodic training is in place. This would also facilitate the inclusion of new elements, such as automation in inland navigation.
2. In the inland navigation sector, profit margins are thin and means to invest in automaton are limited, also due to the market characteristics (substantial share of SMEs). Funding to support the social dimension of the transition is more than welcome.
3. The transition framework considers important pre-conditions, of which the first three are all closely linked and should be regarded in an integrated way. A fifth pre-condition is suggested by one of the attendants from Inland Waterways Transport (IWT): cultural attitude towards change. This pre-condition differs per country and sector and determines whether policy actions (as captured in the enablers) will be effective.

4. In terms of enablers, the transition framework was considered to be well designed. A new enabler was proposed by one of the attendants from IWT: change management. This is linked to the above-mentioned cultural attitude towards change. As part of the enablers, this would need to translate into concrete policy actions, for example to integrate change management as a part of training programmes for transport managers in order to develop skills in this domain.
5. Attracting workers to the inland navigation sector is a big challenge in general. A more diverse labour force could potentially contribute, but should also be seen in the light of the rather typical nature of this sub-sector, which might constitute barriers, such as being away from home for longer periods.

Group 2

In Group 2, the discussion evolved around the following points:

6. There are modal differences in terms of the strength of social dialogue, whereas it is considered as an important precondition. In aviation, for instance, social dialogue is very well developed.
7. In aviation, regulatory requirements are relatively adaptive to changing skill requirements.
8. The social protection for platform workers is a national competence. However, it entails many institutional challenges. There is no easy solution and intervention and harmonisation at EU level is required, e.g. in the area of professional driving licences.

Group 3

In Group 3, the discussion evolved around the following points:

1. Participants could not identify available funds to smoothen the transition to automation and digitalisation at EU level. National funding mechanisms vary between Member States. Moreover, in order for funding to be provided automation and digitalisation often needs to already take place.
2. It is not clear to participants what is meant by a more diverse workforce. Regardless, it was argued that this transition should prioritise the upskilling and reskilling of the existing workforce, before attracting new workers.
3. Social dialogue needs to be robust in order to facilitate the transition, in many cases this is not the case.

Group 4

In Group 4, the discussion evolved around the following points:

4. It is important to have a good legislative framework in place at all levels (e.g. sectoral, national and European), but at the sectoral level such frameworks are fine-tuned to the sectors and therefore more effective. The focus should be more on sectoral collective labour agreements, to fine-tune current legislation to adapt to future needs. International legislative frameworks take long to be revised and take effect.
5. The transition framework considers most of the relevant enablers. An enabler that may be added is to pay more attention to sharing benefits of automation and digitalisation, e.g. using the budgets from increased productivity for funds on health and safety. Trade union representatives came up with the idea to have a robot tax for replacing people with robots, as there will be less tax income for society as a consequence of replacing labour. Safeguards to prevent social dumping need further consideration, too. For example, if ships will be operated remotely, these jobs should be retained in the European Union.
6. Social dialogue is key to building a good working environment, which is a win-win situation for both employers and employees. In some countries, social dialogue is not always constructive, and should be improved.
7. A more diverse labour force is important and is seen as an important enabler, but not necessarily linked to automation and digitalisation.

Reporting from breakout sessions

Geert Smit moderated the last session dedicated to the feedback gathered in the four breakout sessions. Besides key takeaways provided by the breakout moderators, a dashboard visualising the participants' polling responses was displayed. The dashboard showed the results by breakout session, alongside their average results.[1] The average results and main remarks are summarised below:

- A relative majority of participants (39%) does not know whether the transition framework considers all relevant enablers. This most likely means that participants were not well acquainted with the framework to provide an answer.
- Training & education and inclusiveness are seen as the most relevant enablers to smoothen the transition.
- Half of the participants (50%) do not think that sufficient funding is available, while the other half does not know. The latter probably implies that funding opportunities supporting the social dimension of automation and digitalisation have not been well known or explored.
- Most participants (60%) find that EU legislation on minimum training requirements is not sufficiently adaptive to new skills requirements to manage the transition.
- Attracting a more diverse labour force is seen as an important enabler to manage the transition to automation and digitalisation (56%).
- Half of the participants (50%) think that the transition framework considers all relevant preconditions.
- 44% of the participants do not know the quality of social dialogue in their sector and whether it facilitates the transition to automation and digitalisation.
- The identification of future skill needs and constructive social dialogue were mostly chosen as preconditions that are most challenging to achieve.

Closing

After the reporting back from the breakout sessions, Ellen Durst (European Commission, Directorate-General for Mobility and Transport, Unit for Social Affairs, Passenger Rights & Equal Opportunities) thanked the attendants for their participation and contribution and encouraged them to deliver additional feedback in written form after the workshop. Geert Smit echoed her words, and emphasised the possibility to contact the study team and provide more comments at automation-social-dimension@ecorys.com).

[1] Due to the limited samples of breakout session participants, these results will not feed into the final report. However, they do provide an interesting visual tool and an initial sketch of stakeholders' opinions.

Annex 1: List of attendants

Name	Surname	Organisation
Sarah	Bittner-Krautsack	Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (Austria)
Ingrid	Blom	European Inland Waterway Transport Platform
Estelle	Brentnall	ETF
Ester	Caldana	CER
Maria	Carbone	European Commission
Myriam	Chaffart	ETF
Carmen	Costache	ESPO
Marta	Czubaszek	Polish Air Navigation Services Agency
Otjan	de Bruijn	ECA
Sofie	Declerck	Ryanair
Nik	Delmeire	European Inland Waterway Transport Platform
Ellen	Durst	European Commission
Barbara	Grau	SNCF
Monica	Grosso	Joint Research Centre of the European Commission
Anne-Catherine	Huygen	ACV-CSC
Maria	Ibanez	Spanish Aviation Safety and Security Agency
Joris	Kerkhofs	ACV-CSC
Lucija	Kilic	Ecorys
Astrid	König	Kommunal
Elisabeth	Kotthaus	European Commission
Marita	Lintener	IAWA
Ruth	Lopian	European Commission
Matina	Loukea	HIT
Lucile	Mendoza	HUMANIST-VCE
Marina	Morić	Croation Control
Thanos	Moysiadis	Uber
Lotte	Ockerman	ETF
Bojana	Radovanovic	Serbian Railways
Matthias	Rohrmann	AGV MOVE
Celia	Romera	ADIF
Jayant	Sangwan	CORTE
Sarai	Sapulete	Ecorys
Penny	Serveta	ECSA
Geert	Smit	Ecorys
Gauthier	Sturtzer	ETF
Jasper	Tanis	Ecorys

Name	Surname	Organisation
Berardina	Tommasi	ETF
Christian	Tschigg	FIT-CISL
Anja	Van Impe	ERA
Anna	Venturini	FEPORT
Nils	Verkennis	Ecorys
Natalia	Walczak	ETF
Willemijn	Westerlaken	TLN

Annex 2: Description of 10 good practices

1) Austrian National Research, Technology and Innovation Mobility of the Future & Talents Programme

Austria's objective is to push forward from the group of countries that are innovation followers to the group of countries that are innovation leaders. To achieve this goal a more coordinated political approach is required with a mutual dialogue between science, business and society, along with a broad approach to innovation, which includes not only technological improvements but also organisational, social and economic innovations. The strategy to achieve this was defined in 2011 and has since then been implemented by the Austrian Ministry of Climate Action, Environment, Energy, Mobility, Innovation and Technology. The strategy is currently being renewed. Several **Research, Technology and Innovation (RTI) programmes** are developed by the ministry.
The *Mobility of the Future programme* provides, among others, funds for cooperative R&D projects, endowed professorships. The *Talent programme* was designed to strengthen human resources in Austria in the area of research, technology and innovation in general. This way, the programmes contribute to matching future skill demand with future skill supply thereby facilitating the transition to automation and digitalisation for the workforce in Austria's economy and Austria's key sectors like the transport sector.

2) Collective labour agreement on digitalisation and the future of work at Deutsche Bahn

In the German Railway sector, Deutsche Bahn AG, AGV MOVE and EVG recognised during the 2014-2015 collective bargaining negotiations that the EVG pay framework needed to be updated to make it viable for the future. The original agreement was updated during the 2016 and 2018 negotiations, creating the current collective bargaining agreement on digitalisation and the future of work at Deutsche Bahn (***2018 collective bargaining agreement on Work 4.0***). The collective labour agreement includes solutions for predicting and shaping processes of change as a result of digitalisation and it defines collaborative processes at the company level for the introduction of digitalisation in working processes. The collective bargaining agreement is the first of its kind to include solutions for predicting and shaping processes of change in this regard. It has contributed positively to raising awareness and to creating a more positive atmosphere towards these trends among staff at Deutsche Bahn. The collective labour agreement provides the conditions for establishing a system of upskilling and enhancing employability whilst maintaining job security at the same time.

3) Managing workers' transition through social dialogue (FS Group)

Italy has a strong social dialogue. In the railways, over 60% of the workforce is unionised. Several measures have been introduced in the Collective Labour Agreement for the Italian railways on automation and digitalisation, namely:

- Provisions to stimulate lifelong learning and continuous training, amongst others in light of the introduction of new technologies;
- For workers whose job will drastically change due to i.a. technological change, reskilling opportunities will be provided (i.e. to ensure internal job rotation requalification);
- In case new technologies are introduced that lead to collective layoffs, workers are retrained for new jobs, paid for by the company;
- Companies of FS Group will not use new technologies to monitor the work activity of employees, protecting their privacy and dignity;
- Identification of initiatives aimed at promoting female employment, also in relation to new technologies.

4) Employment and Vocational Training Account

The Employment and Vocational Training Account (LAEK) is a resource paid by employers for most categories of employees. This money is collected by the Greek Manpower Employment Organisation (OAED), which is responsible for their management. The money paid is 0.45% of the gross salary of the employee and is paid to the Social Insurance Institution (IKA) together with the contributions paid by the employer. This money is collected and can only be used for education and vocational training of the employees insured with IKA, in accordance with

- their professional and training needs,
- the developments of their current professional position and
- the developments in certified educational institutes, such as training and lifelong learning centres of universities.

This way, the LAEK provides a platform for businesses and the workforce to education and vocational training, in accordance with constantly changing job and skill requirements.

5) Social Fund Mobility – Sterk aan het Stuur (Strong on the wheel)

Sociaal Fonds Mobiliteit (abbreviated: SFM) is an education & development fund for taxi transport in the Netherlands, established by the Royal Dutch Transport Federation (KNV), The Netherlands Trade Union Confederation (FNV) and The National Federation of Christian Trade Unions (CNV). All companies in the sector and employees working for these companies are obliged to follow the collective labour agreement, through a mechanism where the government declares the collective labour agreement as generally binding[2], and are obliged to contribute resources to the education & development fund, which also gives them the right to use the training and other services the fund has to offer. The advantage of a sectoral fund is that education and vocational training provided by the fund can be tailored towards the specific needs of the workers in the sector. Such a sectoral fund is especially effective in reaching its objective when social partners are collectively willing to cooperate in vocational training by establishing the fund and providing the resources for such a fund.

SFM is currently working on a programme 'Sterk aan het stuur' (in English: Strong on the wheel) that has received funding from the ***European Social Fund***. Part of this programme is to work on a coaching trajectory in context of lifelong learning.

6) Employment Programme 2017-2020

The Estonian Trade Unions Confederation (EAKL) and Estonian Employers' Confederation (ETKL) have promoted the importance of developing measures for retraining and lifelong learning to help employees keep their jobs, adjust to the changing labour market and stay competitive. These measures were developed and included in the new Employment Programme (***Tööhõiveprogramm***) 2017-2020 approved by the Government in March 2017. The programme allows the Estonian Unemployment Insurance Fund (EUIF) to provide additional labour market services, and provide them under more flexible conditions. The measures aim to tackle the issue of skills mismatch and respond to the need to help people adjust to the changing labour market by giving employees opportunities for training and studying, and supporting employers to upskill their employees. The measures especially target employees at risk of losing their jobs due to poor health, lack of skills or outdated skills. In order to ensure that the employees acquire the skills actually needed in the labour market, training opportunities are provided only in areas that have a growing need for employees according to surveys on sectoral needs for labour and skills by the Estonian qualifications authority.

7) The Employment Act (co-determination in the workplace)

The Swedish Employment (Co-determination in the Workplace) Act (ref no SFS 1976:580) § 11 states that before an employer makes any decision regarding significant changes to its activities,

[2] Also to those that are not affiliated to the employers' or workers' organisation.

they should enter into negotiations with trade unions as stipulated under a collective bargaining agreement. The above-mentioned also applies prior to any decision on significant changes to working or employment conditions for employees who belong to the trade union as well as employees that are not unionised. Based on this legislation, any employer who wishes to introduce new technology has to enter into negotiations with the unions concerned. This is done at the closest possible level to the affected workplace, which could be at regional or at company level. Local negotiations allow the unions to be involved in policies on automation, digitalisation and any technology that can be used for surveillance. The local negotiations also fulfil the employer's need for flexibility and avoids a one-size-fits-all situation that might occur through a national agreement.

8) Tarifvertrag Zukunft - Future collective agreement

At the German Eurogate port, automation initiatives have to be agreed upon by worker representatives. This has been agreed in a so-called Future collective agreement (in German: Tarifvertrag Zukunft), signed by Eurogate and the Vereinte Dienstleistungsgewerkschaft (ver.di) . The agreement covers the potential impacts of automation and digitalisation processes in the ports. The adopted Future collective agreement governs the management of employment-related changes brought about by implemented automation and digitalisation measures, and provides a binding framework for both sides for the initial and future stages in this important transformation process. The collective agreement is intended to manage the consequences of automation measures for the employees in a socially acceptable and codetermined manner. For example, it provides for the establishment of an Automation Commission that will be responsible for managing employment issues on a group-wide basis and involve employee representatives and the union in the change process. It also incorporates regulations concerning qualification and working time models, including possible working time reductions. A temporary ban on dismissals for operational reasons, together with key points of a collectively agreed social compensation plan, have also been negotiated.

9) Denmark's Digital Disruption Council

To address the impact of technological change on the labour market, the Danish government established the Disruption Council in 2017. The council is headed by the Prime Minister, and comprises 8 ministers and 30 members, including CEOs, social partners, researchers and others. As such, different ministries and stakeholders/social partners are brought together and collaborate in order to address the potential disruptions of technological/digital change. This coordination among the actors of the sector allows to adopt policy responses. Discussion has centred on how public policy can embrace new forms of work while maintaining a well-functioning labour market. It has resulted in five steps to support innovation and the competitiveness of new technologies. The five steps are:

- Adjusting the unemployment benefits system
- Platform work is recognised as work with regard to social benefits
- The first collective agreement with a platform company
- Boosting the future potential of the sharing and platform economies
- Upskilling the workforce to meet changing conditions

10) Upside down mentorship: Stena Line's 'turntable' programme

The goal of the Swedish ferry operator Stena Line is to become the world's first ferry company powered by cognitive computing by 2021. To this end, Stena Line identified the challenge of involving the level of management under the board during this transition. Stena Line's 'turntable programme' was introduced in 2016 and turns the traditional mentorship model upside down: Young mentors are paired with managers to educate them on what digitalisation means and what the opportunities are. They meet in an organised way, discuss these topics and educate each other. The mentors were brought in from start-ups outside Stena Line to bring in a fresh

perspective. This measure has contributed positively to raising awareness of these trends among the management in Stena Line.