



“Digital transformation in the workplace”

A sector-specific survey on the European chemical, pharmaceutical, rubber and plastics industry

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with financial support of the European Union



A few words about the European Sectoral Social Dialogue...



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The Project

- January 2018 – December 2019
- Objective: anticipate, prepare and manage change at the workplace in light of innovation and digital transformation
- Desk research and online survey, conducted by Prognos AG
- Two conferences
- Social Partners joint recommendations



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Purpose of the study

Objectives

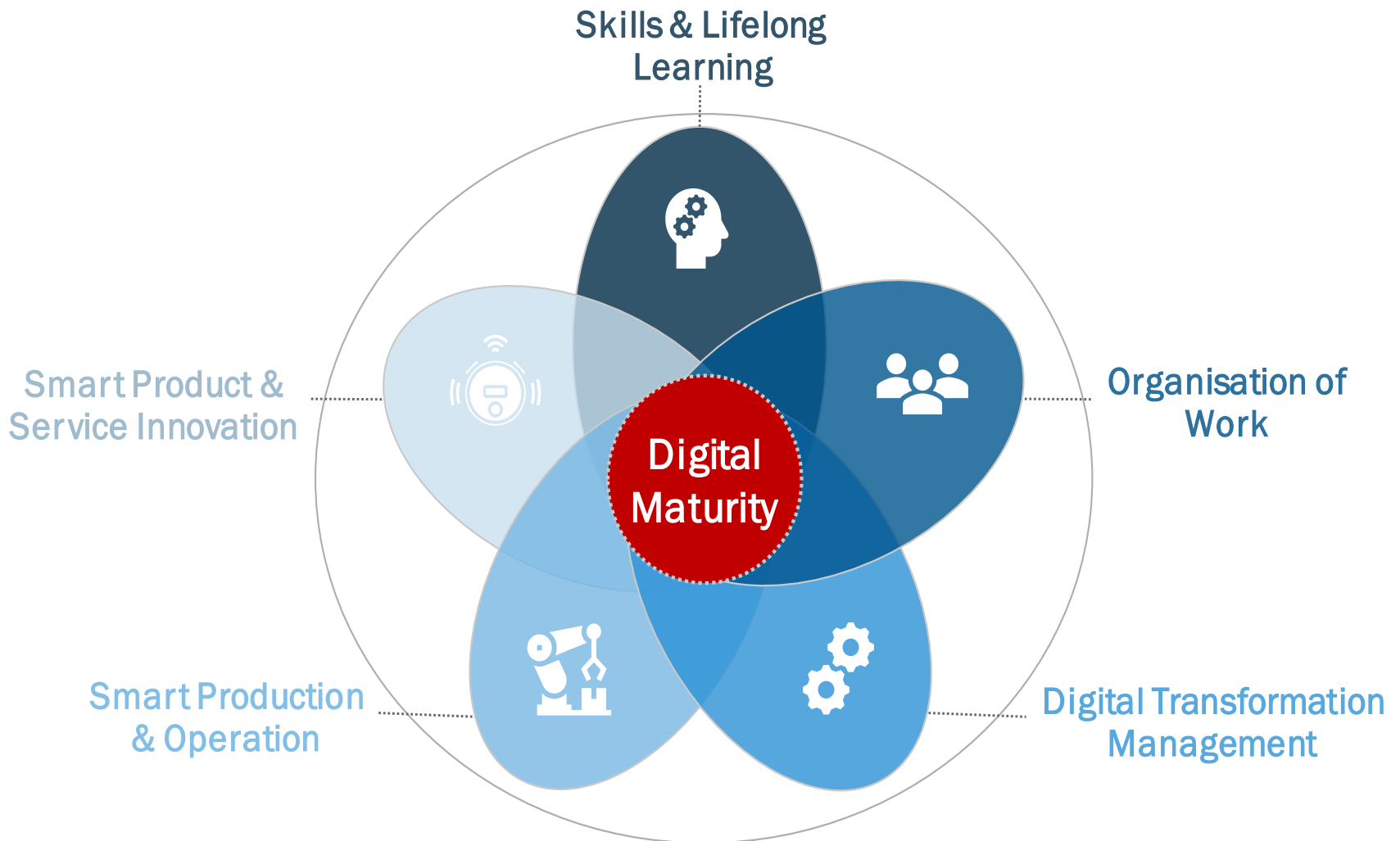
1. Assess the **level of matureness** and the implications for sector development
2. Gain insights into the **differences between the chemicals sectors** regarding the use of innovations around Industry 4.0 and digitalisation
3. Get a better view on the **“new systems of work”** in the chemicals sector and determine the (potential) impacts on skills, qualifications, working patterns, health & safety

Project approach

- ▶ **Desk research** on the **state-of-play** of digital transformation (around 90 studies reviewed)
- ▶ **European wide stakeholdersurvey** (around 500 completed questionnaires)
- ▶ Around **30 expert interviews** to deepen the discussion

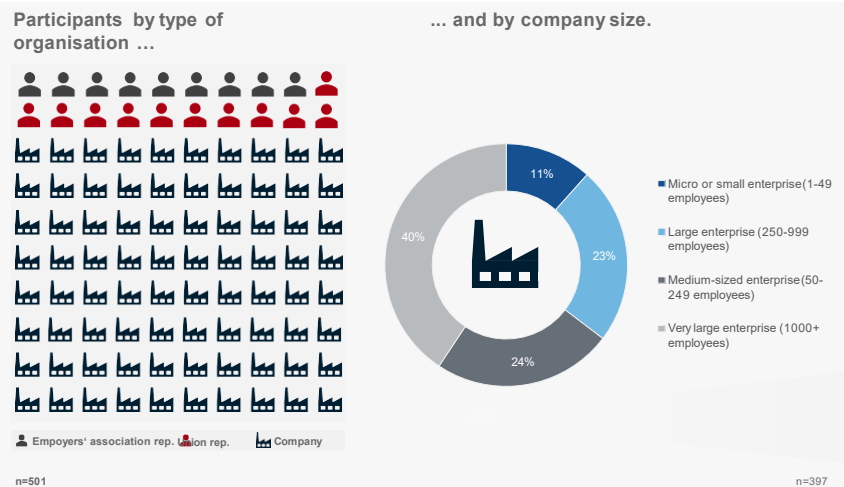


Digital Maturity Model for the European Chemicals Sector

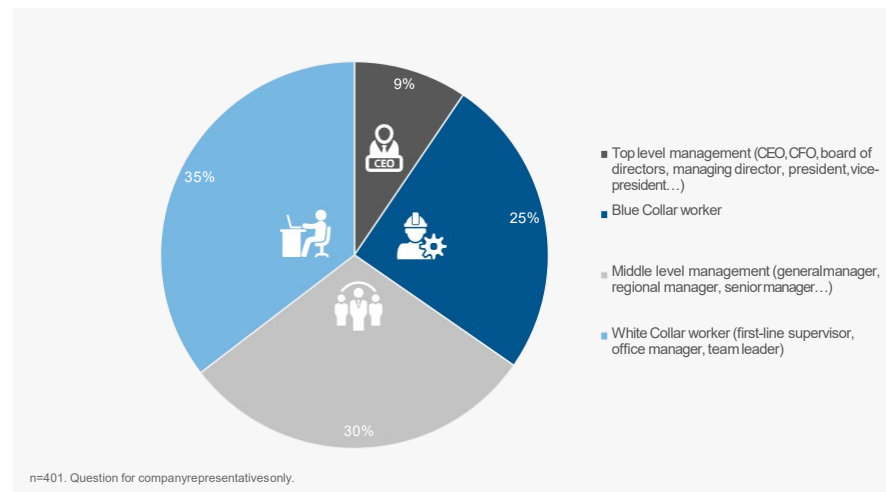


Cross-European evidence of the digital transformation in the European chemicals sector

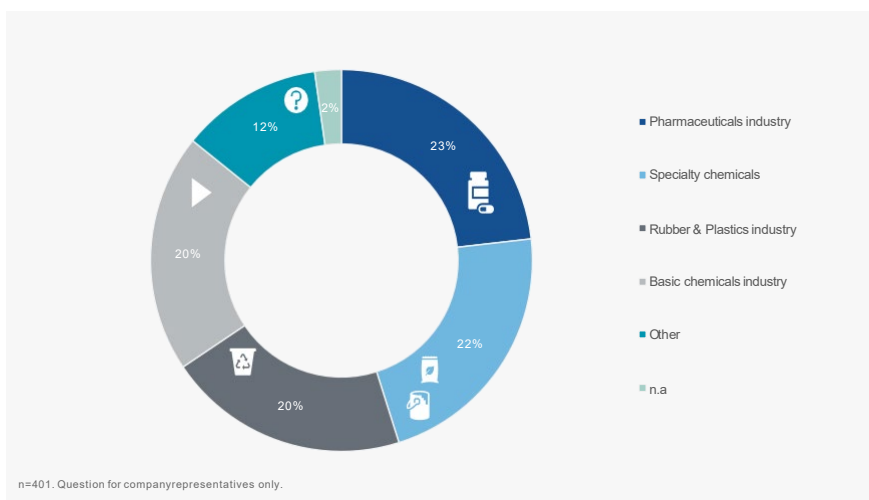
Good representation of the three target groups



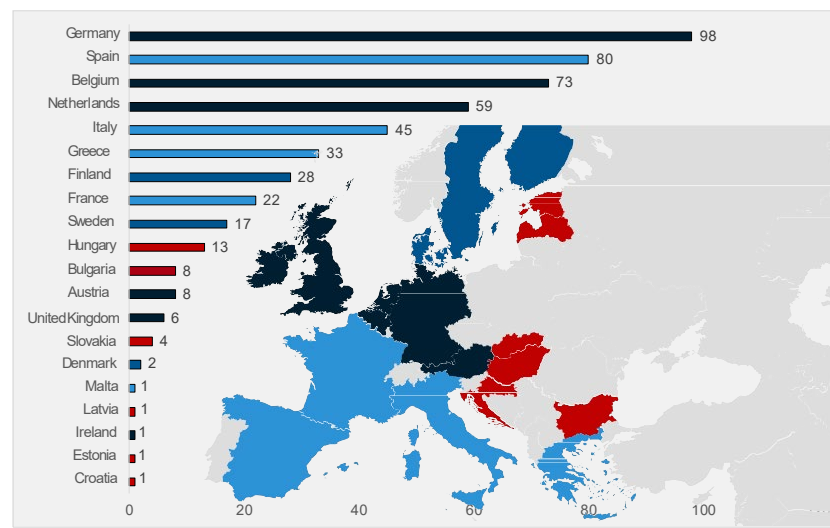
Employees make up largest share of participants



Good spread across sectors



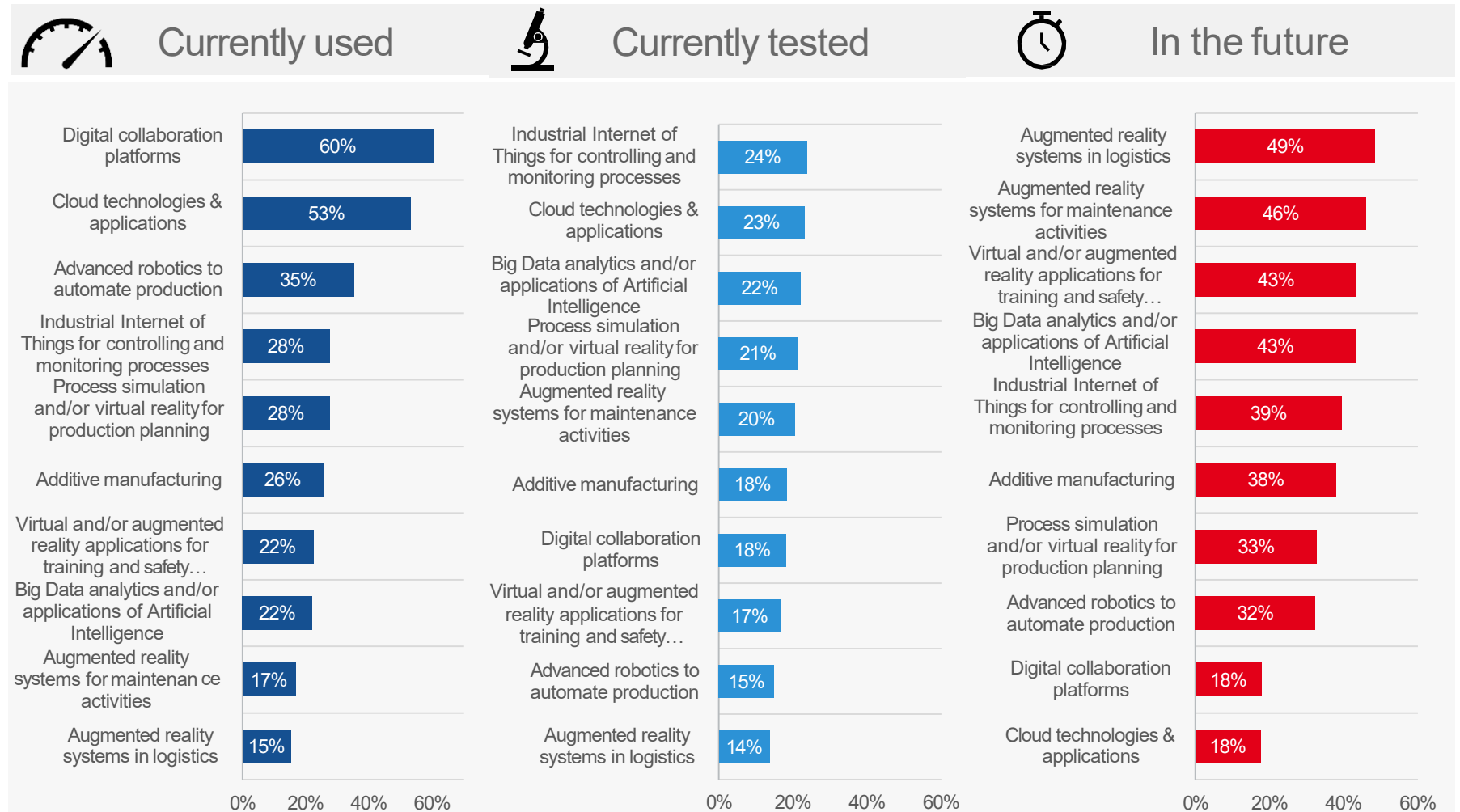
Broad country coverage



1st wave of technological transformation is mostly accomplished

2nd wave coming quickly driven by AI, IIoT & AR / VR

Which of the following digital technologies and approaches do you already use in your company/industry or do you plan to implement in future?



The Research Findings: The chemical job of the future will require more advanced digital and complex transversal digital skills

Social Skills

- The results for the European chemical industry are overall positive
- Particularly self-learning and multi-disciplinary work will gain importance



Technical Skills

- Basic digital skills are already widely established
- More advanced digital skills, like programming require more attention



Transversal Digital Skills

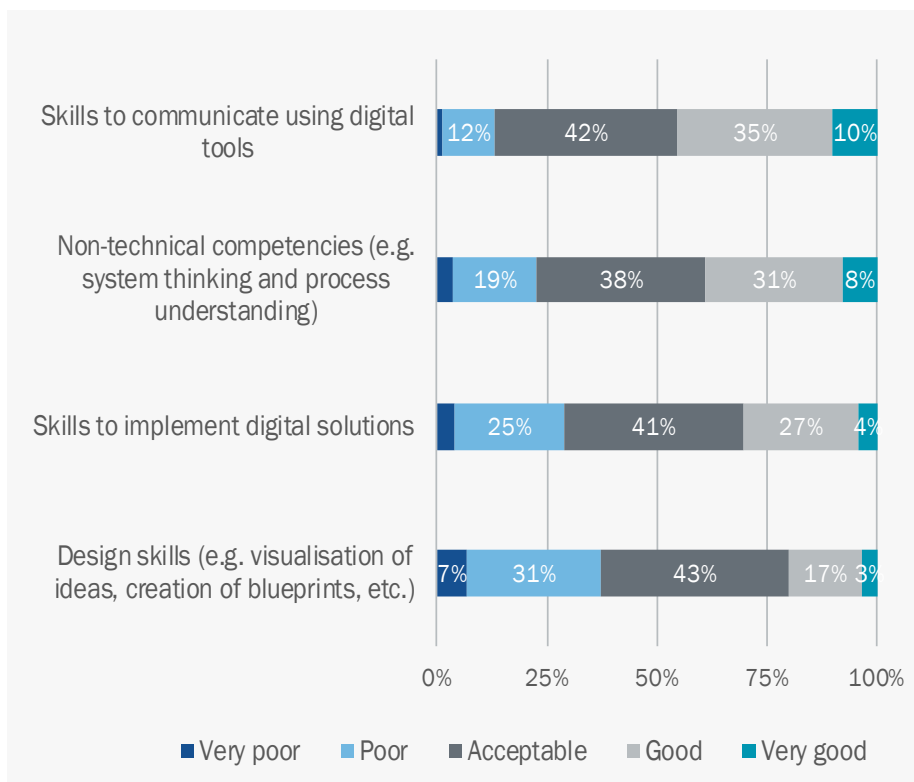
- Digital communication skills are widely established
- Future need for skills to implement digital solutions & more creative and analytical skills



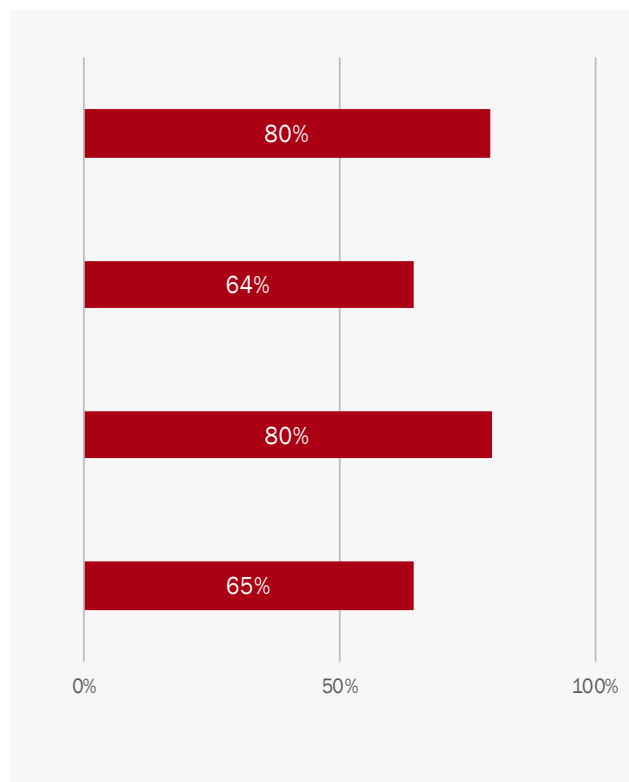
Assessment of digital transversal skills of employees/industry in the context of digitalisation



Assessment of current skills of employees

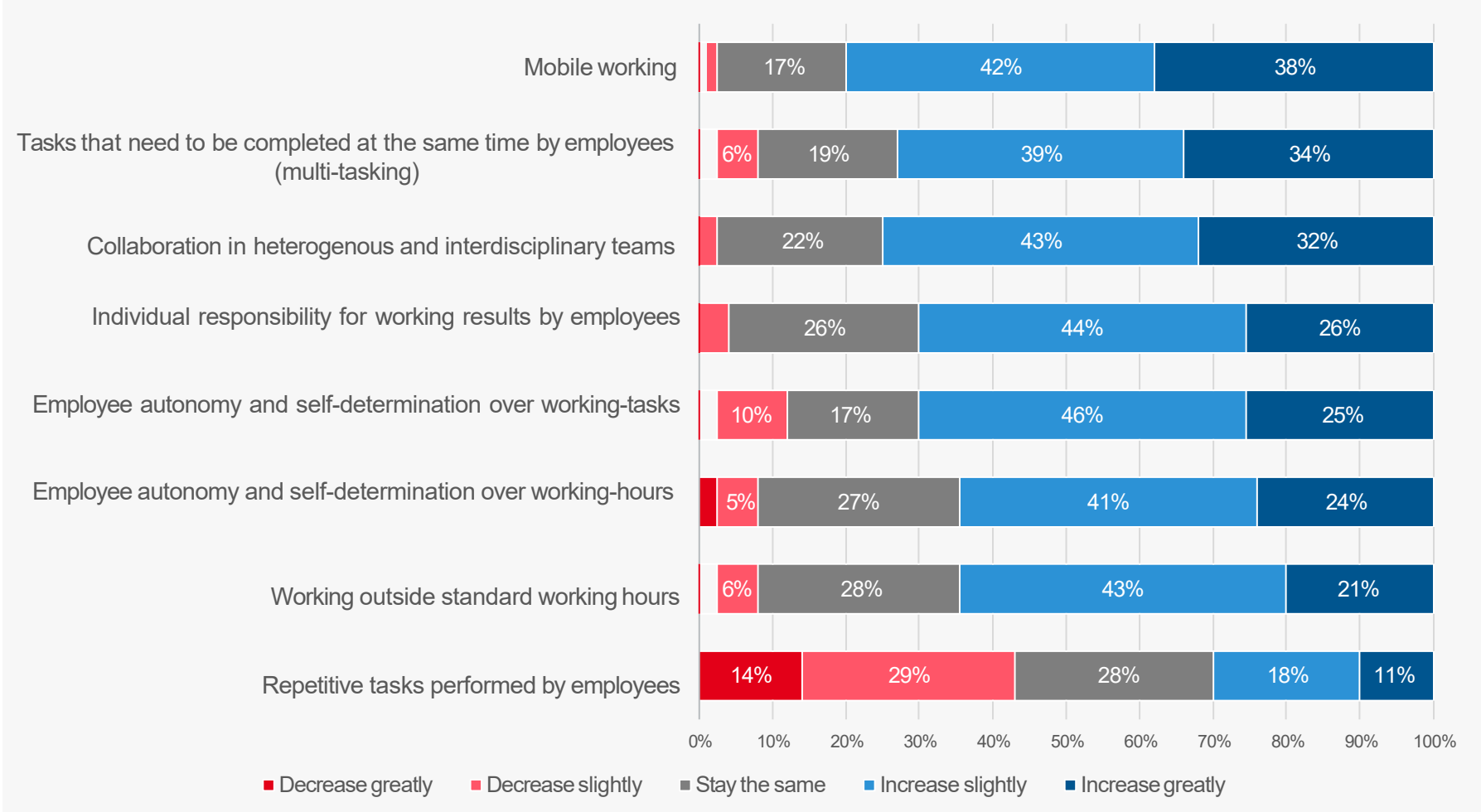


More important in next 5 years?



Digitalisation will lead to more mobile working, multi-tasking and multidisciplinary work in the chemical industry

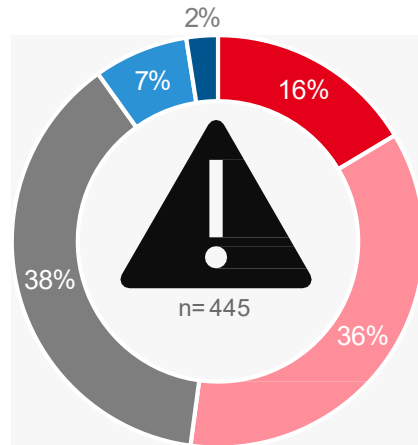
How would you assess the impact of digitalisation on the working environment?



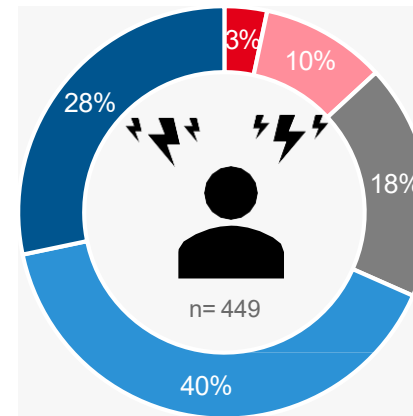
Source: Prognos AG (2019), based on European wide chemical industry stakeholder survey (2018). n=440-451

Hazardous tasks will decrease due to digital technology, but psychological stress will increase

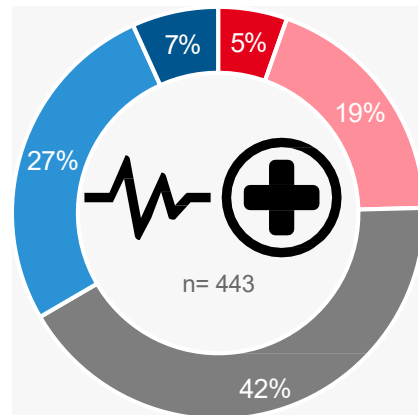
Effect on the number of hazardous tasks



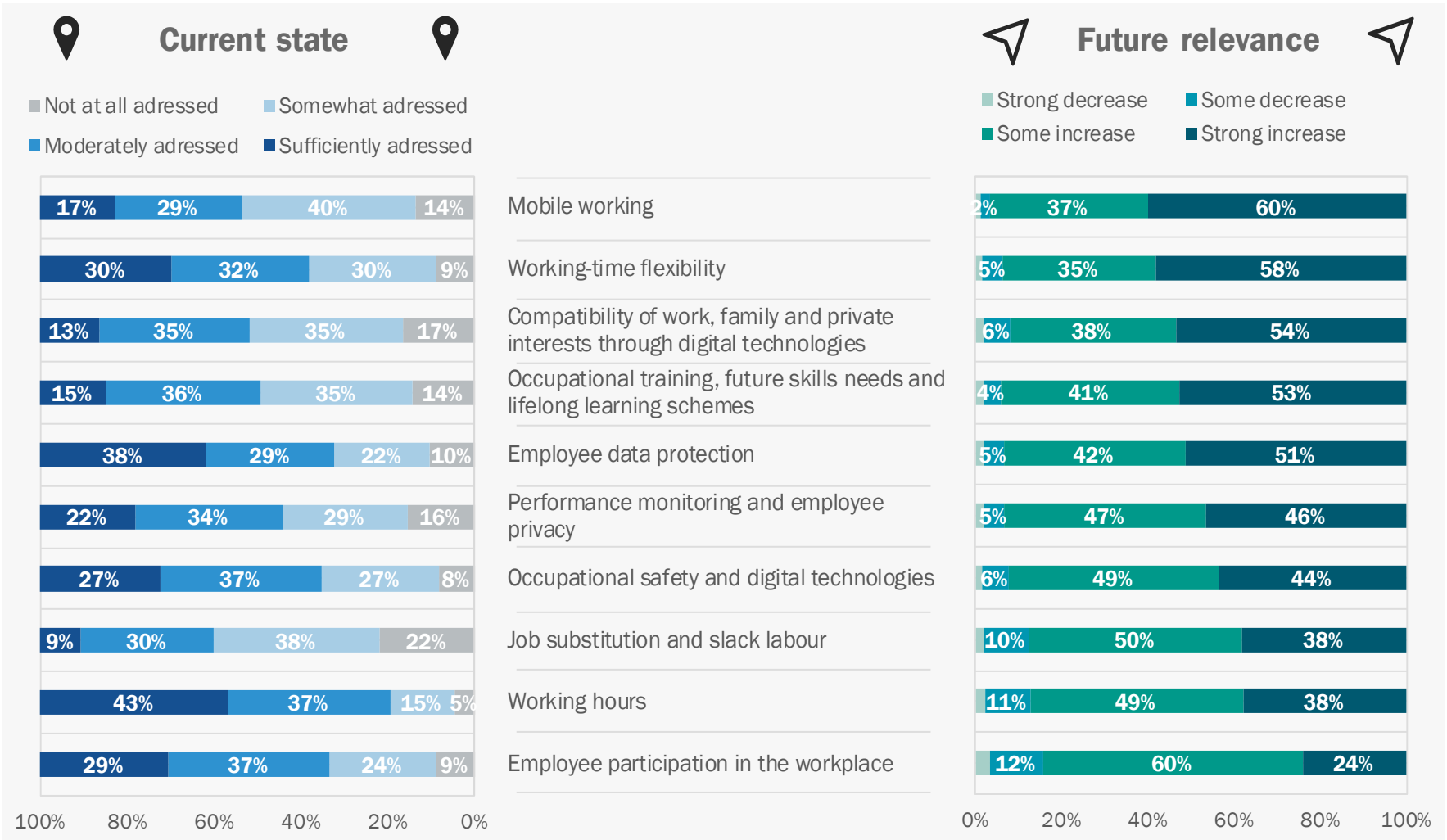
Effect on the level of psychological stress



General health of employees



Assessment of current collective agreements



Six overall conclusions on the digital transformation in the workplace of the European chemical sector



1. **1st wave of digital transformation** successfully **accomplished** in the chemicals sector



2. **2nd wave of digital transformation** (AI, IIoT, AR) will come **into effect** shortly



3. **Skills shift clearly visible:** advanced digital & transversal skills require more attention



4. **Working environment** changed through mobile working with greater employee autonomy but increase of multi-tasking



5. **Collective agreements** need to address more intensively the issue of **mobile working, working-time arrangements & qualification** while not forgetting about other sensitive issues



6. **Change management** and the **involvement & support of employees** are big challenges with regard to the overall digital transformation process

- Final project conference in The Hague, November 2019:
focus on health and safety, skills, change management,
challenges for SMEs
- “Post project topics” in our work programme
- Encourage use of survey results for EWC discussions



Survey reports, conference presentations, Joint

Recommendations:

<http://www.ourfutureworkplace.eu/>





Thank you for your attention

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