



“Digital transformation in the workplace of the European Chemicals Sector – A social partner approach in the chemical, pharmaceutical, plastics and rubber industries”

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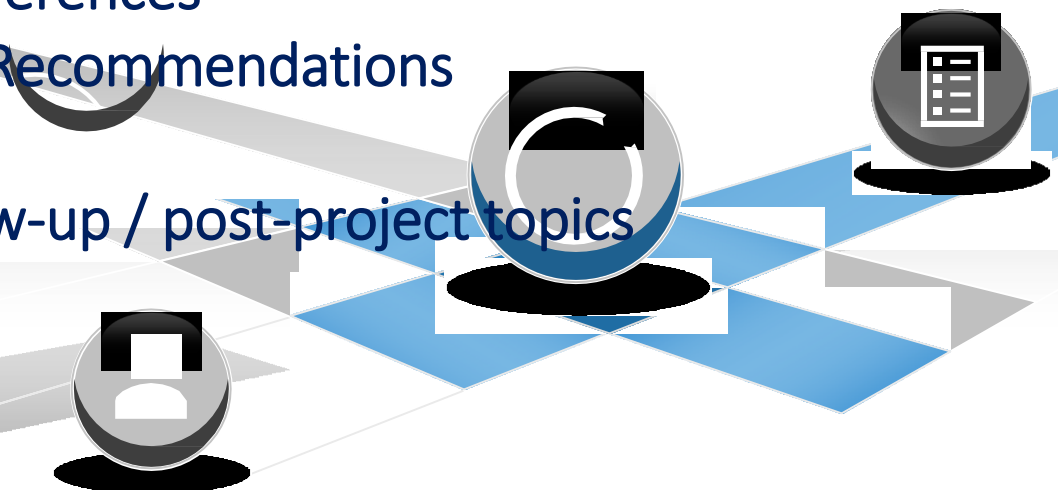
ECEG	industriAll Europe
BAVC, Deutschland	IG BCE, Deutschland
UIC, Frankreich	FCE-CFDT, Frankreich
Federchimica, Italien	UGT FICA, Spanien
Essenscia, Belgien	CSC BIE, Belgien
Kemianteolissuus, Finnland	PRO, Finnland
VNCI, Niederlande	VDSZ, Ungarn
+ European Chemical Employers Group	+ industriAll European Trade Union

→ 16 experts from 8 EU Member States steer the project throughout 24 months

→ 4 national social partners working together on the EU level

Actions taken on digitalisation since 2016

- Joint position on social and employment-related aspects of digitalisation (November 2016)
- Project on Digital transformation in the workplace of the European Chemicals Sector - Project 2017-2019
 - Research survey
 - 2 conferences
 - Joint Recommendations
- Follow-up / post-project topics



Purpose of the study (conducted by Prognos AG)

Approach

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

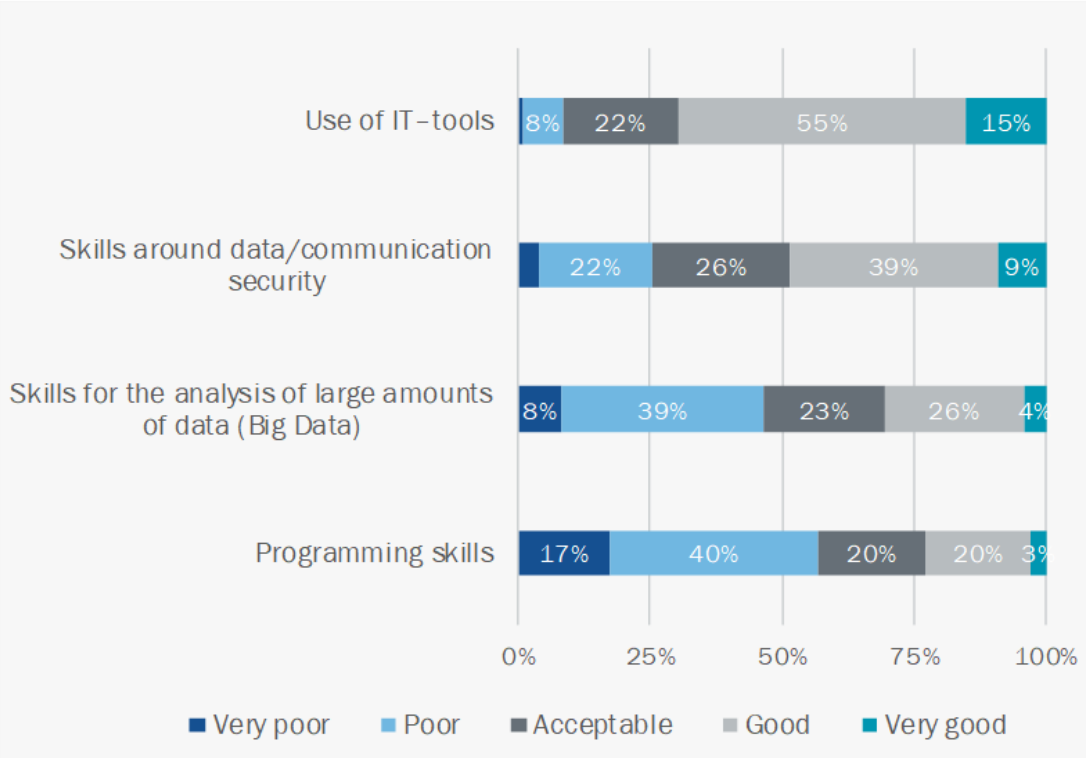
1. Assess the **level of matureness** and the implications for sector development
2. Gain insights into the **differences between the chemicals sectors** regarding the use of innovations around Industry 4.0 and digitalisation
3. Get a better view on the **“new systems of work”** in the chemicals sector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



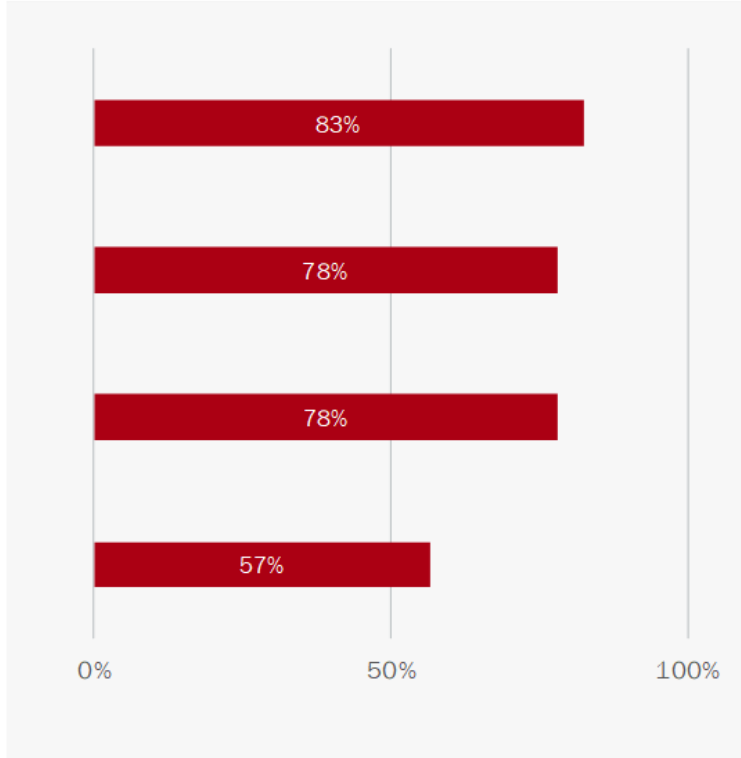
Assessment of technical skills of employees /industry in the context of digitalisation



Assessment of current skills of employees



More important in next 5 years?



Importance of social, digital and transversal 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 Skills

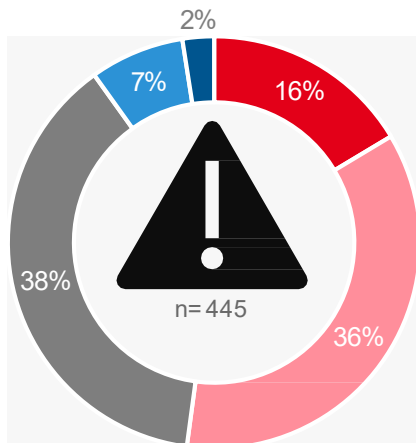
- Digital communication skills are widely established
- Future need for skills to implement digital solutions & more creative and analytical skills



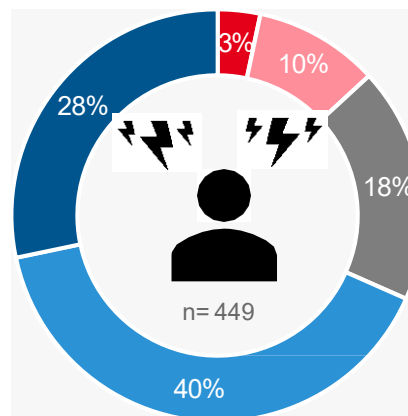
Psychological stress Hazardous tasks



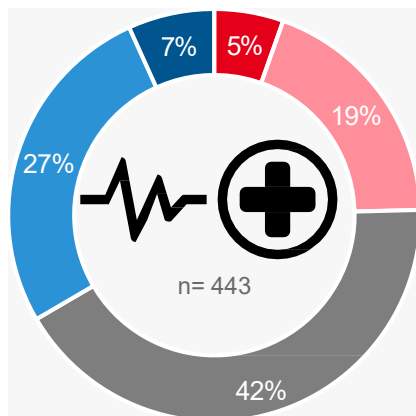
Effect on the number of hazardous tasks



Effect on the level of psychological stress

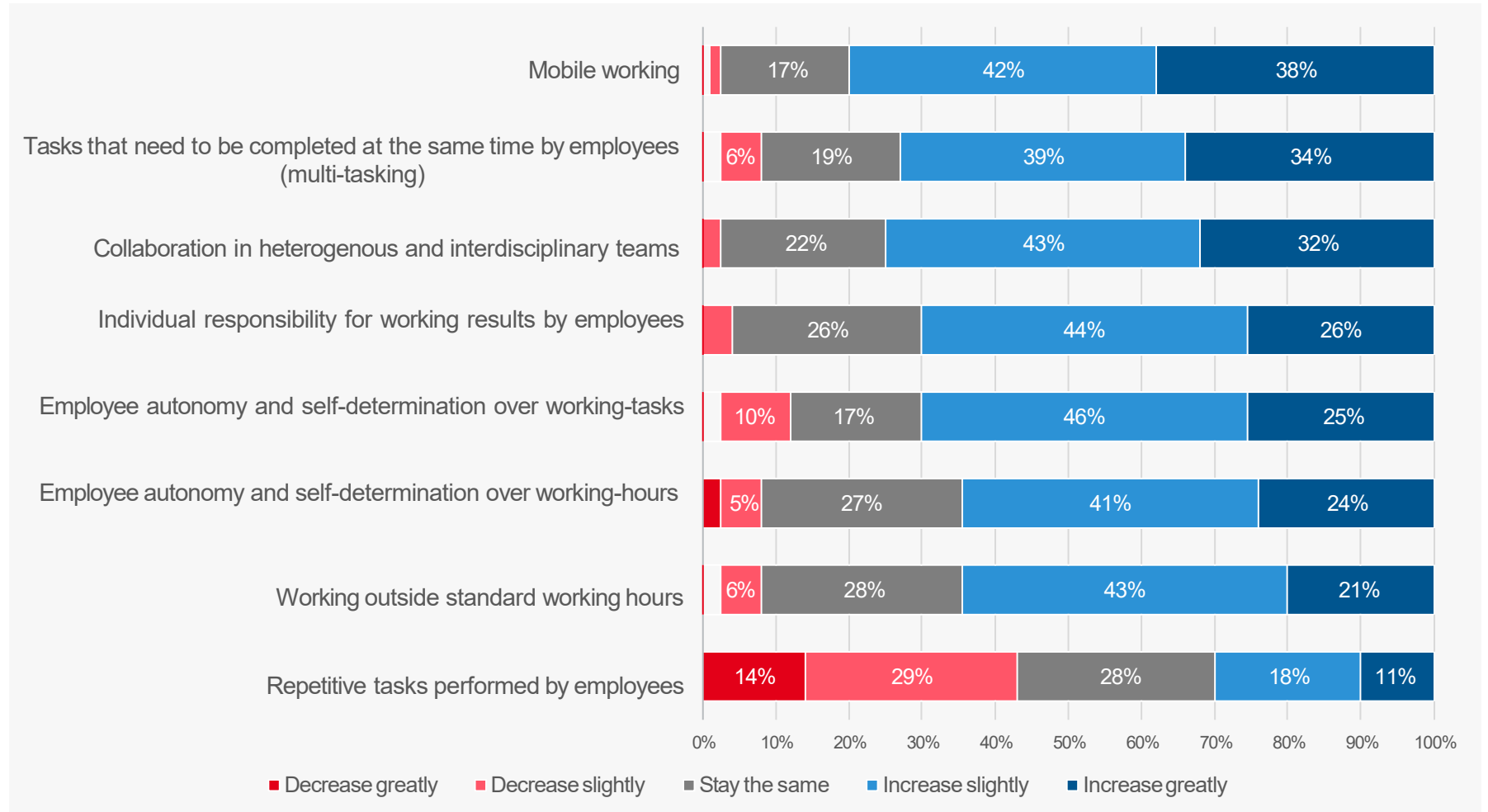


General health of employees



More mobile working, multi-tasking and multidisciplinary work in the chemical industry

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



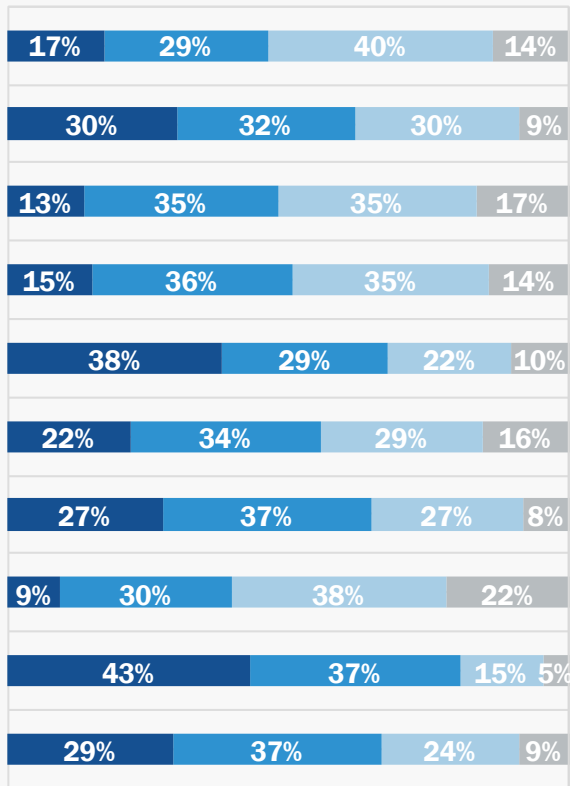
Assessment of current collective agreements



Current state



■ Not at all addressed ■ Somewhat addressed
■ Moderately addressed ■ Sufficiently addressed



100% 80% 60% 40% 20% 0%

Mobile working

Working-time flexibility

Compatibility of work, family and private interests through digital technologies

Occupational training, future skills needs and lifelong learning schemes

Employee data protection

Performance monitoring and employee privacy

Occupational safety and digital technologies

Job substitution and slack labour

Working hours

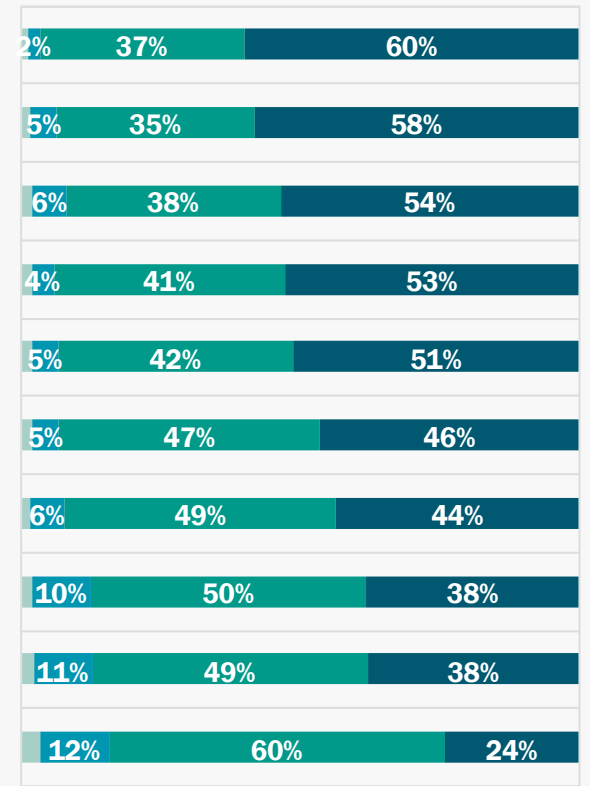
Employee participation in the workplace



Future relevance



■ Strong decrease ■ Some decrease
■ Some increase ■ Strong increase



0% 20% 40% 60% 80% 100%

Six conclusions on the digital transformation in the chemical industry



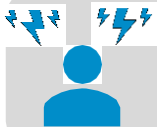
1. **1st wave of digital transformation** successfully accomplished in the chemicals sector



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

To be explored in more depth

- Health and safety (“hazardous tasks likely to decrease while psychological stress is expected to decrease”)
- Skills shift (what exactly will be needed and how do practically organise appropriate training)
- How exactly can change be managed?
- What can we do about the gap between large and small enterprises?