



## Training and Employment Opportunities in the Post-Corona Era







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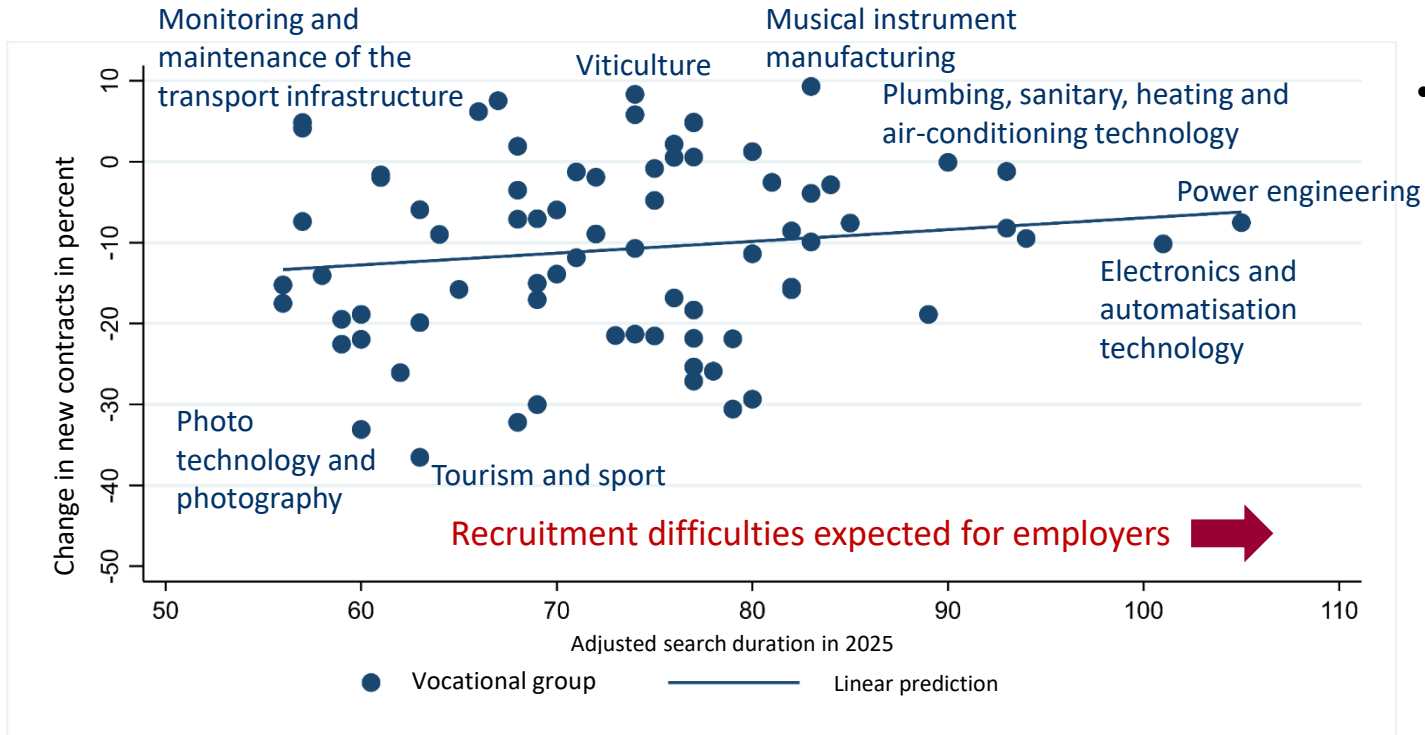
## Agenda

- Situation on the training market
- Changed educational opportunities?
- Medium-term development on the labour market
- Competence requirements in the labour market
- Conclusion

## Situation on the training market (30<sup>th</sup> September 2020)

	Actual value 30/09/2019	Actual value 30/09/2020	Change compared to 2019	
			Absolut	In %
Training place offer	578.2	527.4	-50.8 	-8.8%
Unfilled training places	53.1	59.9	+6.8 	+12.8%
Demand for training places (extended definition)	598.8	545.7	-53.1 	-8.9%
Applicants still seeking (with and without alternative to 30/09)	73.7	78.2	+4.5 	+6.1%
Supply-demand relation (extended definition)	96.6	96.6	+0.0 	+0.0%
Newly concluded training contracts	525.1	467.5	-57.6 	-11.0%

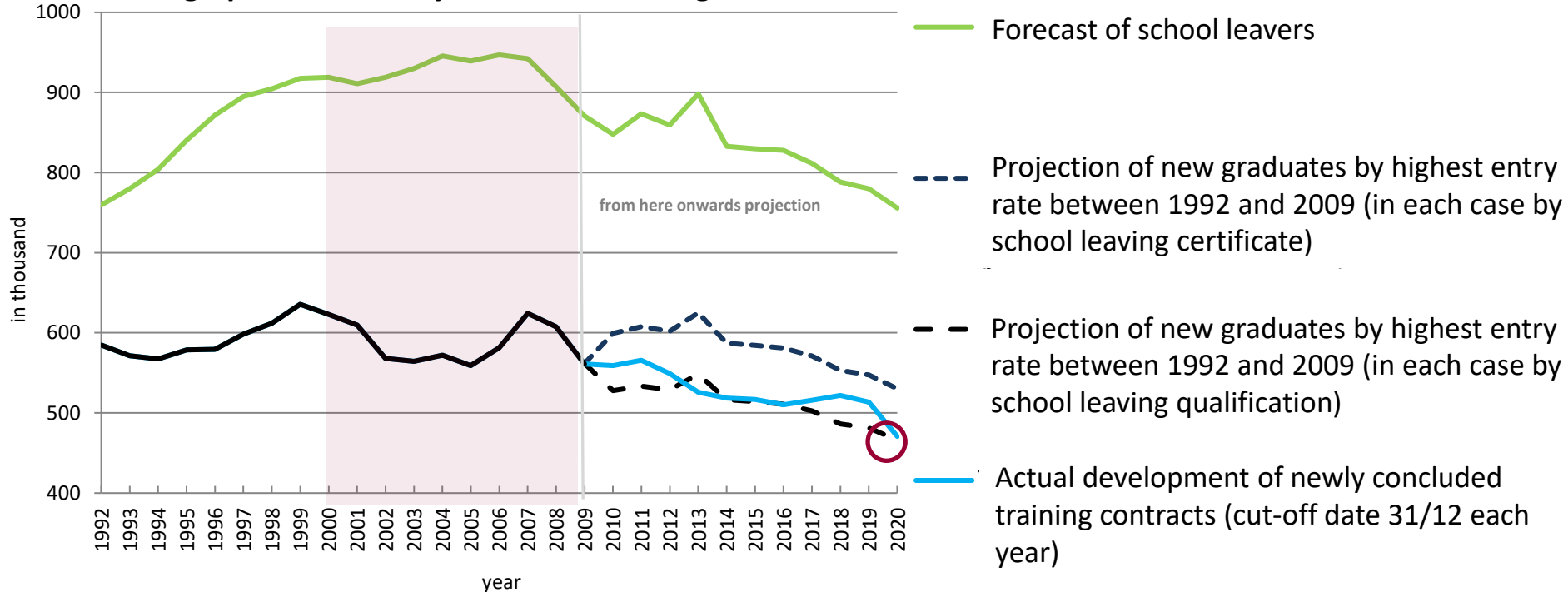
## Situation on the training market: Securing skilled workers and training contracts



- New supply of training places declined less in occupations where a bottleneck is expected in the long term

# Changed educational opportunities? “Incorporation rates” in the past

## Demographics and newly concluded training contracts 1992 to 2020



## Changed educational opportunities? Structural change within technical/vocational schools

Preliminary school qualification	Year	Part-time technical schools	Basic voc. training year/pre-voc. training year	Technical schools	Schools of health care	Specialised Academies/High Schools/ Secondary Schools*	Total
Without secondary school leaving certificate	2012	46,0%	48,7%	4,4%	0,0%	0,8%	100%
	2016	25,1%	67,2%	6,6%	0,0%	1,1%	100%
	2019	30,2%	59,5%	9,3%	0,2%	0,7%	100%
Secondary school leaving certificate	2012	53,9%	10,8%	29,7%	3,8%	1,8%	100%
	2016	50,9%	7,8%	35,9%	4,8%	0,6%	100%
	2019	49,9%	7,3%	37,2%	5,4%	0,1%	100%
Intermediate secondary school leaving certificate	2012	41,1%	0,8%	27,0%	4,9%	26,1%	100%
	2016	41,2%	1,0%	25,3%	4,9%	27,6%	100%
	2019	42,9%	0,9%	24,8%	5,8%	25,7%	100%
Advanced technical college entrance qualification/Higher education entrance qualification	2012	71,2%	0,2%	10,6%	14,5%	3,6%	100%
	2016	70,4%	0,3%	10,1%	15,8%	3,4%	100%
	2019	71,0%	0,3%	9,9%	16,0%	2,7%	100%

Source: Statistisches Bundesamt. Berufliche Bildung. Fachserie 11, Reihe 3 (2012 bis 2019); Own calculations

\* Incl. vocational/technical high schools

## Changed educational opportunities? “Educational flows” of young people

Beginner sectors of iABE*		2019	2020*	Change compared to 2019	
				Absolut	In %
<b>I</b>	<b>Sector: Vocational training</b>	<b>725.055</b>	<b>684.300</b>	<b>-40.755</b>	<b>-5,6</b>
I 01	Vocational training in the dual system according to BBiG/HwO	483.714	439.300	-44.414	-9,2
I 03	School-based vocational education and training at technical schools outside BBiG/HwO according to federal law	12.573	11.500	-1.073	-8,6
I 05	School-based vocational training in health, education and social services according to federal or state law	188.370	193.500	+5.130	+2,7
<b>II</b>	<b>Sector: Integration into training (transitional area)</b>	<b>249.537</b>	<b>234.000</b>	<b>-15.537</b>	<b>-6,2</b>
II 01	General education. Courses at vocational schools to fulfil compulsory schooling or to catch up on lower-secondary level qualifications	19.563	20.700	+1.137	+5,7
<b>III</b>	<b>Sector: Acquisition of higher education entrance qualification (upper secondary level)</b>	<b>482.154</b>	<b>488.800</b>	<b>+6.646</b>	<b>+1,4</b>
<b>IV</b>	<b>Sector: Academic studies</b>	<b>513.082</b>	<b>493.007</b>	<b>-20.075</b>	<b>-3,9</b>

Source: „Integrierte Ausbildungsberichterstattung“ and „Schnellmeldung Integrierte Ausbildungsberichterstattung“ Based on data from the statistical offices of the Federation and the federal states as well as the Federal Labour Agency (Data status 21/02/2021 and 16/03/2021) and \* Supplementary estimate of the Federal Institute for Vocational Education and Training

## Changed educational opportunities? “Educational flows” of young people

First-year students in the first university semester		2019	2020*	Change compared to 2019	
				Absolut	In %
<b>Universities in total</b>		508.689	490.204	-18.485	-3,6
Among them:	Foreign first-year students	125.399	100.419	-24.980	-20,0
	German first-year students	383.290	389.785	+6.495	+1,7
Universities		277.691	255.777	-21.914	-7,9
Universities of applied sciences (excluding universities of applied sciences for administration)		203.606	207.406	+3.800	+1,9
Universities of applied sciences for administration		17.017	18.166	+1.149	+6,8

Source: Statistisches Bundesamt. Studienanfänger/innen im Sommer- und nachfolgendem Wintersemester. Stand 5. August 2021

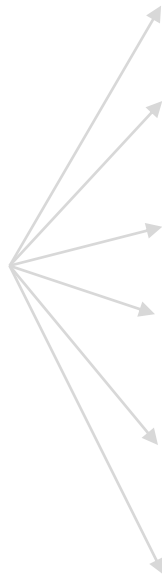


## Changed educational opportunities?

Educational flows of young people 2020 compared to 2019



School leavers



Dual system, especially in occupations with lower skill bottlenecks



School-based vocational training



Basic vocational training, pre-vocational training



GES professions



Improving opportunities (catching up on higher general school-leaving qualifications)



Formally higher-level, vocationally qualifying education with "practical relevance"

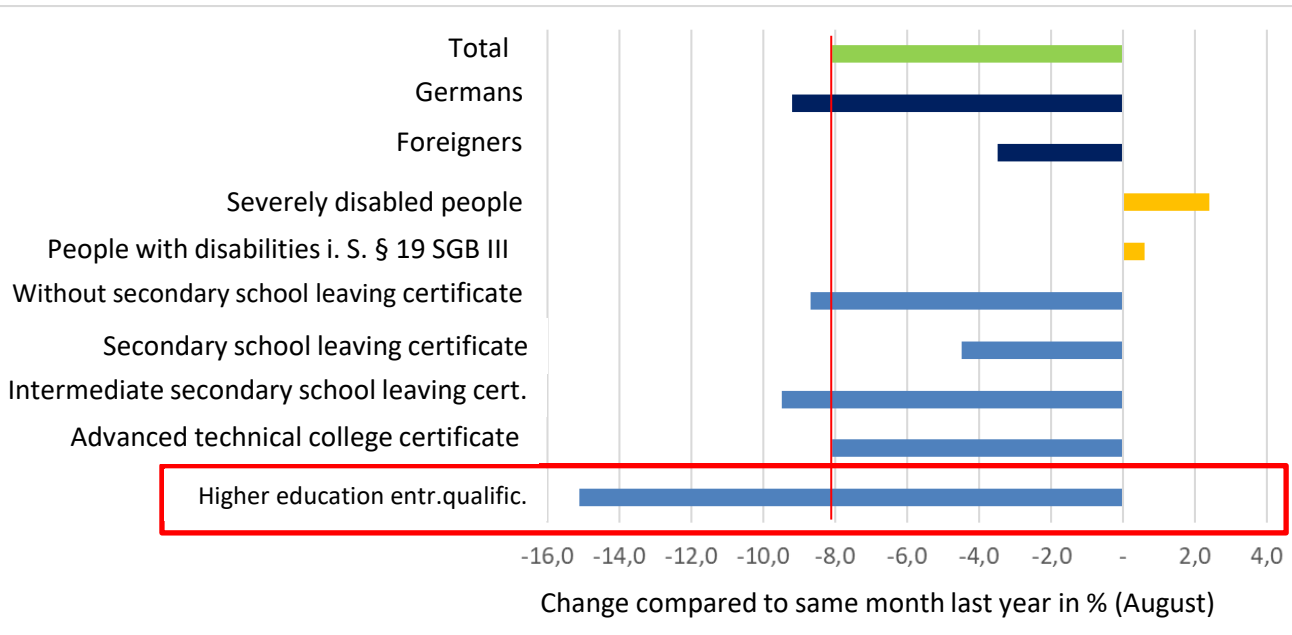
## Changed educational opportunities? Current situation on the training market (August 2021)

Characteristics	2020 / 2021	Changes compared to previous year		2019 / 2020	2018 / 2019
		Amount	in %		
<b>Applicants</b>					
Total reported since the beginning of the reporting year	420.273	-37.271	-8,1	457.544	497.012
supplied	336.296	-21.498	-6,0	357.794	406.838
unsupplied as of 30/09/	83.977	-15.773	-15,8	99.750	90.174
<b>Registered vocational training positions</b>					
Since the beginning of the reporting year <sup>1)</sup>	499.648	-14.056	-2,7	513.704	556.334
Stock of unfilled voc. training positions in the month	151.499	-2.412	-1,6	153.911	157.269
Vocational training places per applicant	1,19			1,12	1,12
Unfilled professional positions per unsupplied applicant	1,80			1,54	1,74

Source: Bundesagentur für Arbeit (2021): Der Ausbildungsmarkt. Monatszahlen Deutschland. August 2021

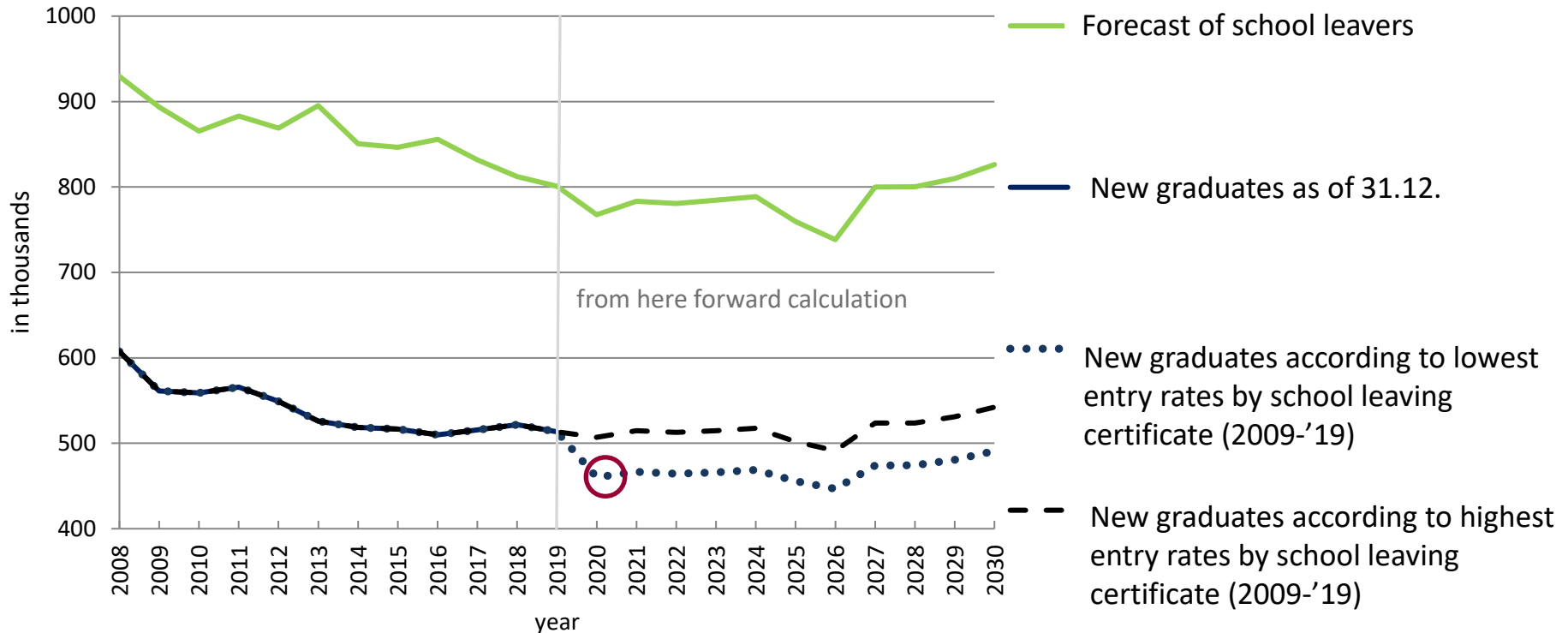
## Changed educational opportunities? Current situation on the training market (August 2021)

### Applicants for vocational training positions according to selected characteristics



- Moving away from dual training for people with a higher education entrance qualification continues
- Intermediate school pupils also opt for other educational options

## Changed educational opportunities?: What can be expected in the future due to demographics?



Source: Kultusministerkonferenz (2020): Vorausberechnung der Schüler- und Absolventenzahlen 2019 bis 2030 (Dokumentation Nr. 224 vom November 2020). DAZUBI – „Datenbank Auszubildende“ des BIBB auf Basis der Daten der Berufsbildungsstatistik der statistischen Ämter des Bundes und der Länder (Erhebung zum 31. Dezember); Own calculations: Assumption of femstudents with school-leaving qualifications from abroad or without specification in the amount of 10,000 per

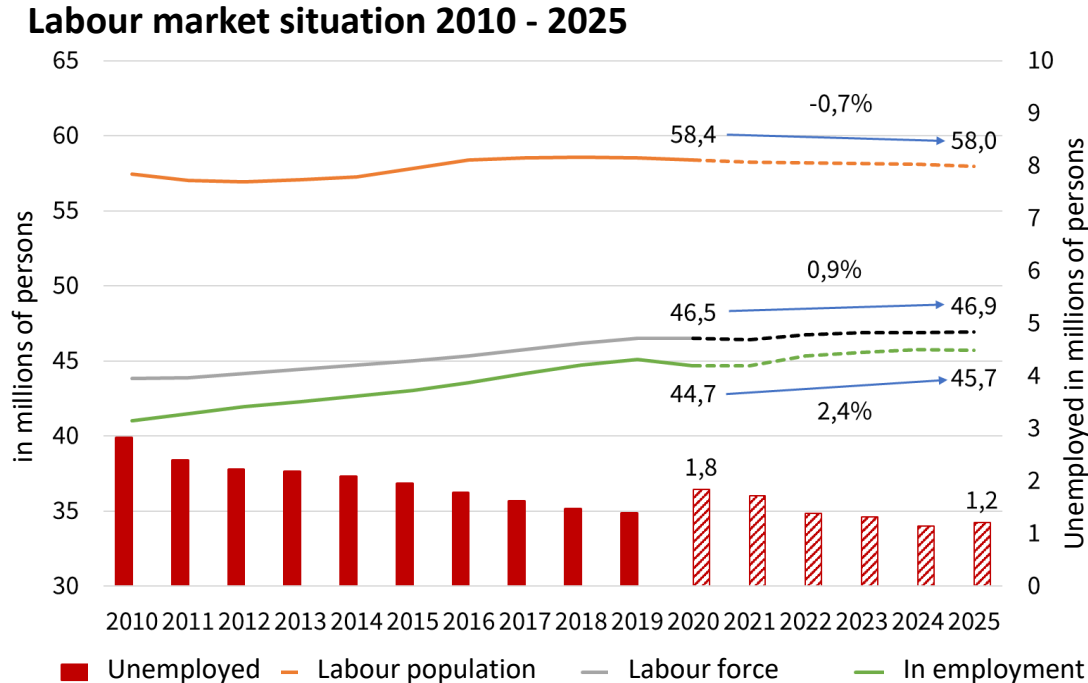
## Medium-term development on the labour market: Economic situation improves

### Price-adjusted gross domestic product



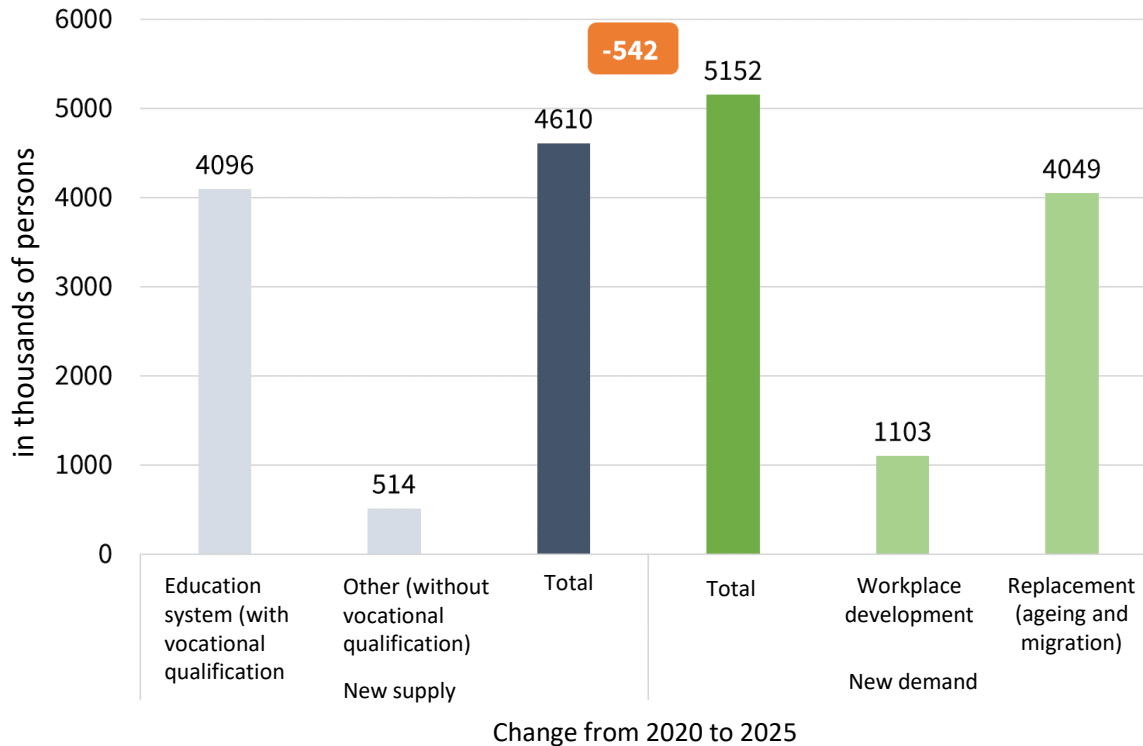
- **Catch-up process** in 2022 und 2023.
- Dynamics **decreasing** until 2025.

## Medium-term development on the labour market: Stock sizes



- The **labour force** in 2022 is declining due to demographic factors.
- Both the **labour force** and the **number of people in employment** are **still** increasing.
- After the Corona-induced increase in 2020, **unemployment figures** are also falling again.

## Medium-term development on the labour market: Current variables



- The **replacement demand** due to ageing and migration is **four times** higher than the new demand due to job development.
- The **new supply** cannot completely cover the new demand.

## Medium-term development on the labour market: Focus professions

- **Focus professions** : Professions that should be given increased attention due to the expected labour market development because
  - the filling of advertised positions takes a particularly long/short time
  - the development of new supply and new demand does not fit together
  - the profession-specific unemployment rate is particularly low/high
- In 32 out of 140 professions, major recruitment difficulties will arise in the next five years
- Larger labour surpluses in eight out of 140 professions



# Medium-term development on the labour market: Focus professions with workforce shortages

## Workplace expansion, shortage of new employees

62 IT system analysis, user consulting, IT sales  
64 Software development and programming  
77 Police, criminal investig. depart., court, correc. services  
12 Horticulture  
71 Vehicle guidance in road traffic  
76 Property, personal and fire protection, occupat. safety  
128 Advertising and marketing  
43 Food preparation  
51 Facility management  
90 Gastronomy  
91 Event services, event management  
93 Legislative body prot. and law enforcement Int. org. serv.  
114 Funeral services  
72 Rail transport management

## Workplace reductions, shortage of new employees

33 Energy technology  
52 Plumbing, sanitary, heating, air-conditioning techn.  
28 Metal construction and welding technology

## Workplace expansion, surplus of new employees

63 IT network management, coord., admin., organisation  
103 Medical and practice assistance  
105 Health care, nursing, ambulance service, obstetrics  
111 Elderly care  
116 Education, social work, curative care  
122 Teaching at extracurricular educational institutions

106 Human medicine and dentistry  
61 Computer science  
109 Non-medical therapy and medicine  
123 Driving instruction, sports instr. extracurr. educ. Instit.  
113 Personal hygiene  
89 Hotel industry  
69 Surveillance and control of transport operations  
108 Psychology, non-medical psychotherapy  
78 Trade, health supervision, disinfection

## Workplace reductions, surplus of new employees

34 Electrical engineering

Winning through professional mobility

Losing through occupational mobility

### Surplus of new employees:

New supply from the education system can cover replacement needs

### Shortage of new employees

New supply from the education system **cannot** cover the replacement demand

Less than 150,000 in employment in 2020

# Medium-term development on the labour market: Focus professions with surplus of new employees

## Workplace expansion, shortage of new employees

83 Sales (without product specialisation)

## Workplace expansion, surplus of new employees

121 Teaching, research activities at universities

127 Economics

125 Humanities

130 Publishing and media industry

## Workplace reductions, surplus of new employees

131 Editing and journalism

21 Paper and packaging technology

87 Book, art, antiques and music trade

Winning through professional mobility

Losing through occupational mobility

### Surplus of new employees:

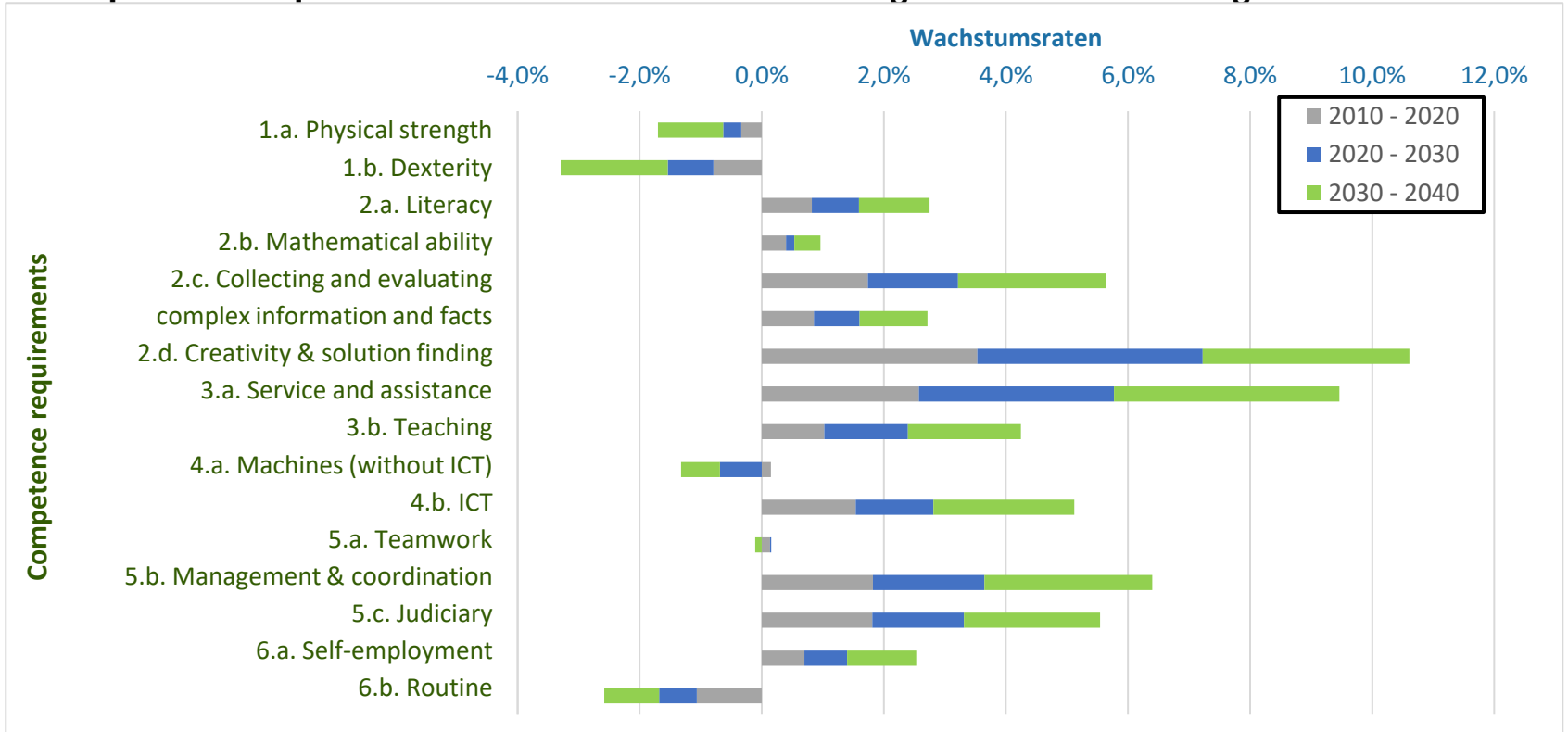
New supply from the education system can cover replacement needs

### Shortage of new employees

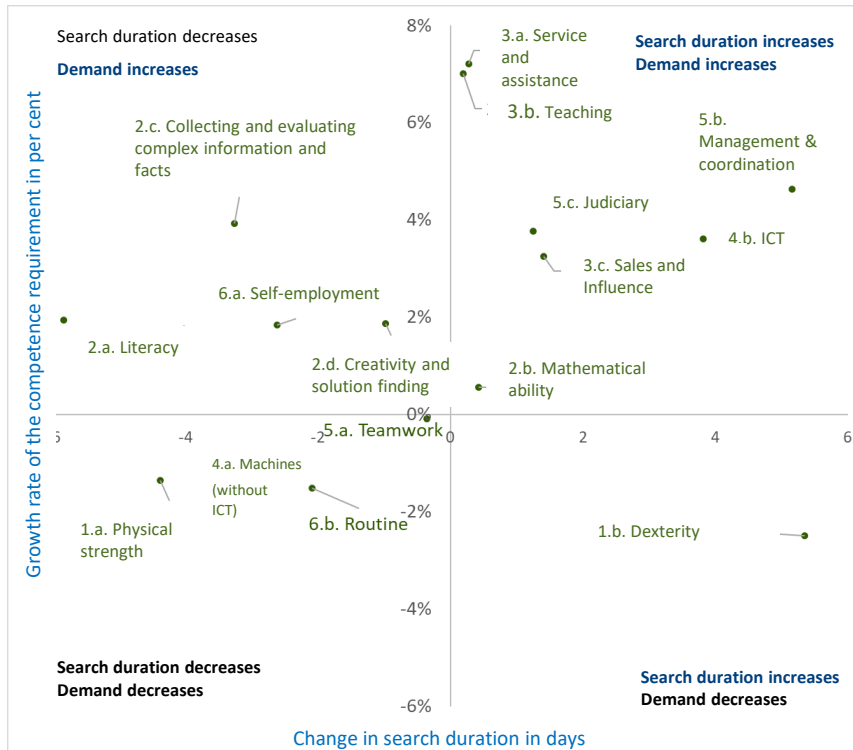
New supply from the education system **cannot** cover the replacement demand

Less than 150,000 in employment in 2020

## Competence requirements in the labour market: Long-term structural change



## Competence requirements in the labour market: Demand for competence and skilled labour situation



- Jobs are characterised by their unique combination of competences.
- Expertise in "4.b. Information and communication technology", "5.b. Management and coordination" and "5.c. Law" have also gained importance within occupations in the recent past

## Conclusion I

- **Labour market recovers** and **labour demand increases**
  - Bottlenecks are noticeable in IT professions, health and social professions, gastronomy (rebound), technical professions (replacement demand)
- A recovery on the **training market** is possible in the long term, but will require **greater efforts** :
  - The number of unplaced applicants (without an alternative) will continue to increase
  - The number of unfilled training places will also increase, as young people wait for "higher-quality" educational alternatives or withdraw from the dual training system.
  - **Matching problems on the training market will continue!**

## Conclusion II

- **What are the consequences of young people turning away from dual training for ensuring a skilled workforce in the future?**
  - It depends on the **alternative educational pathways**
  - They are also needed as professionals in the social and health professions
  - Universities of applied sciences also teach practical skills.
  - For companies that rely on dual training to ensure a skilled workforce, the challenges will increase.
    - **Integration of less qualified young people into vocational training and/or**
    - **Creating attractive career paths for more highly qualified young people**

## Conclusion III

- The results presented take into account an increasing **digitalisation of the world of work**
- Expertise in **information and communication technology, management and coordination, and law** gains importance
- It does not take into account measures and behavioural changes that are necessary to achieve **decarbonisation** in line with the **Paris Agreement**.
  - Employment demand is expected to increase as a result of climate target achievement but also in climate impact adaptation (Maier 2021b, Mönnig u.a. 2021).
- Alongside "digitalisation", "**sustainability**" is a **cross-cutting issue** that is gaining in importance both in education and in the world of work.

**Thank you very much!**

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