

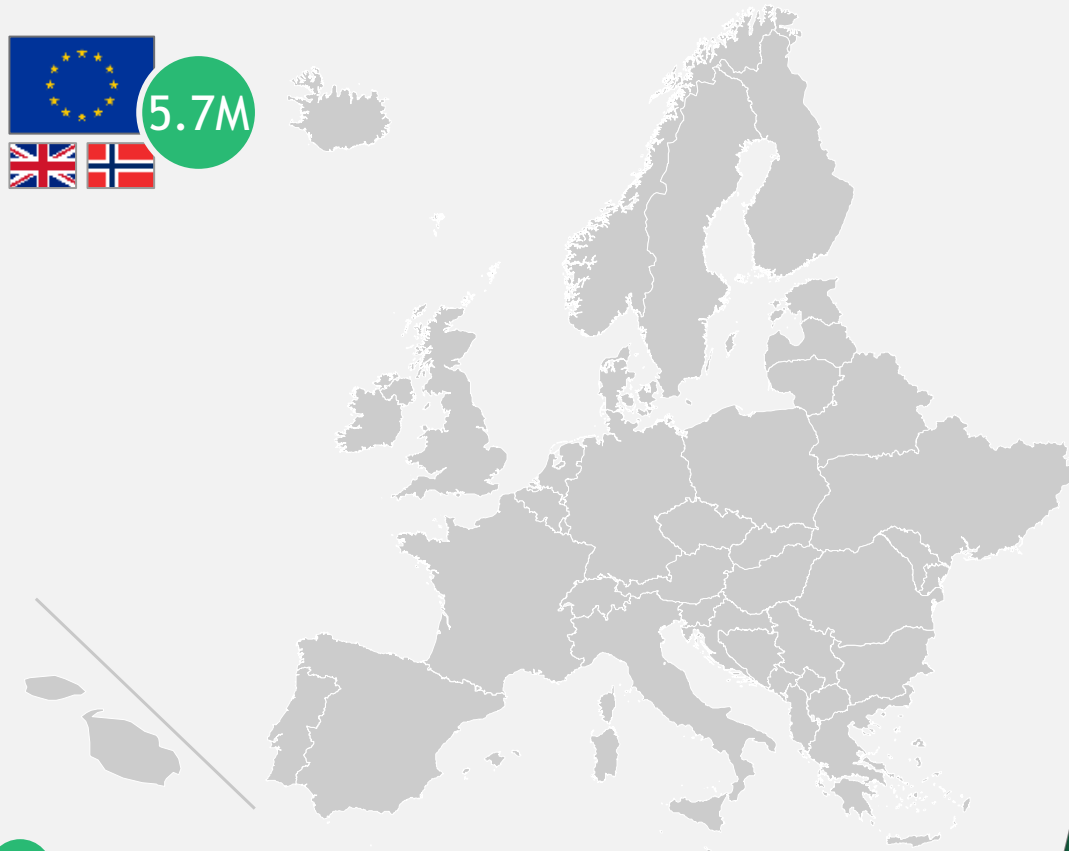


E-mobility: A green boost for European automotive jobs?

Results summary

JULY 02 2021

Development of automotive jobs till 2030 ...



X.XM Employees in scope (Basis 2020)

1. EU27 + UK + Norway
Source: BCG

... investigated in three steps



Affected industries and major trends driving job demand



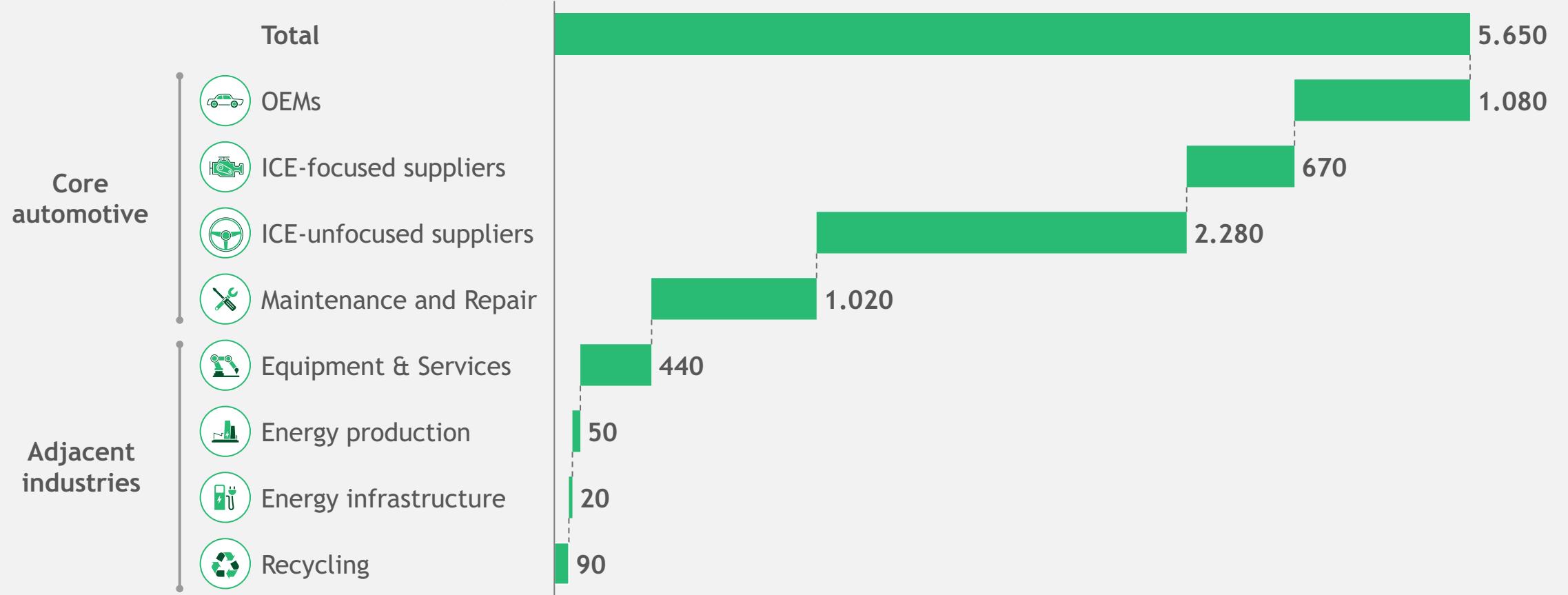
Total number of jobs until 2030 and shifts between industries



Temporal, industry & job-related as well as regional transitions

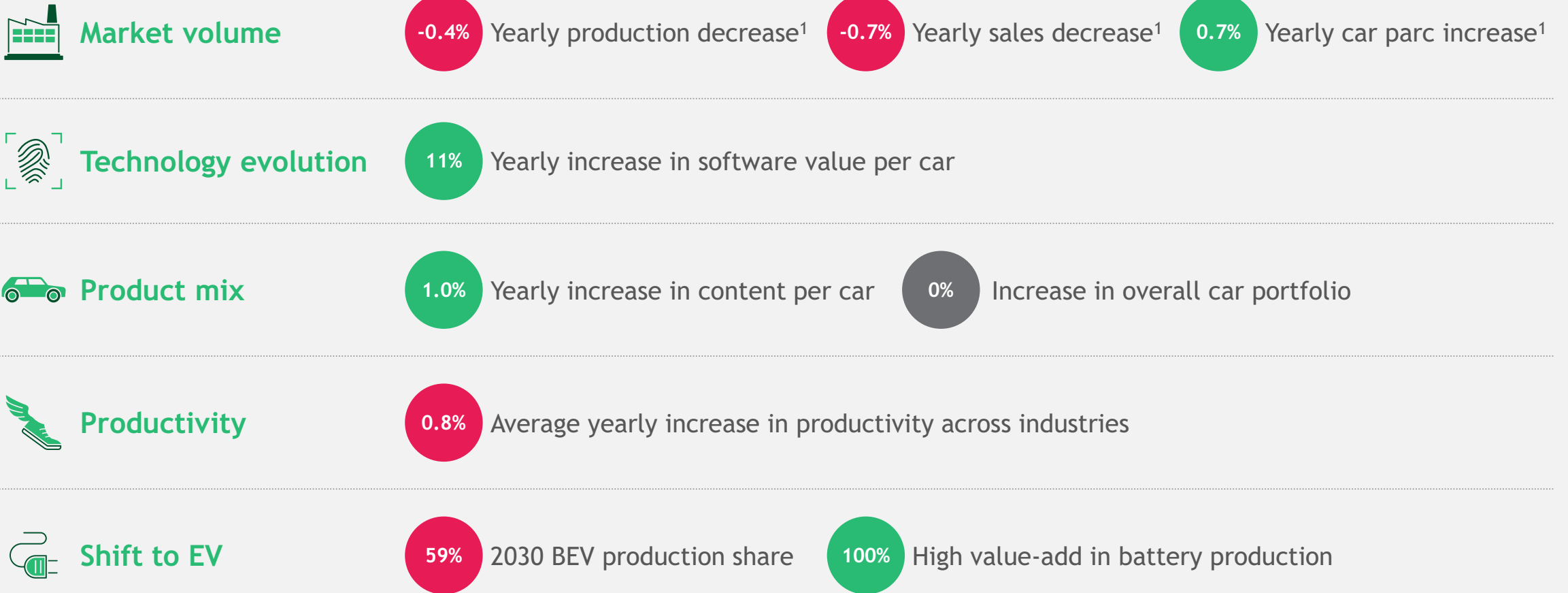
5.7 million jobs spread across eight industries

Number of employees (2019, in thousands)



Five major trends are driving employment in Europe

Development of trends - not direct impact on jobs

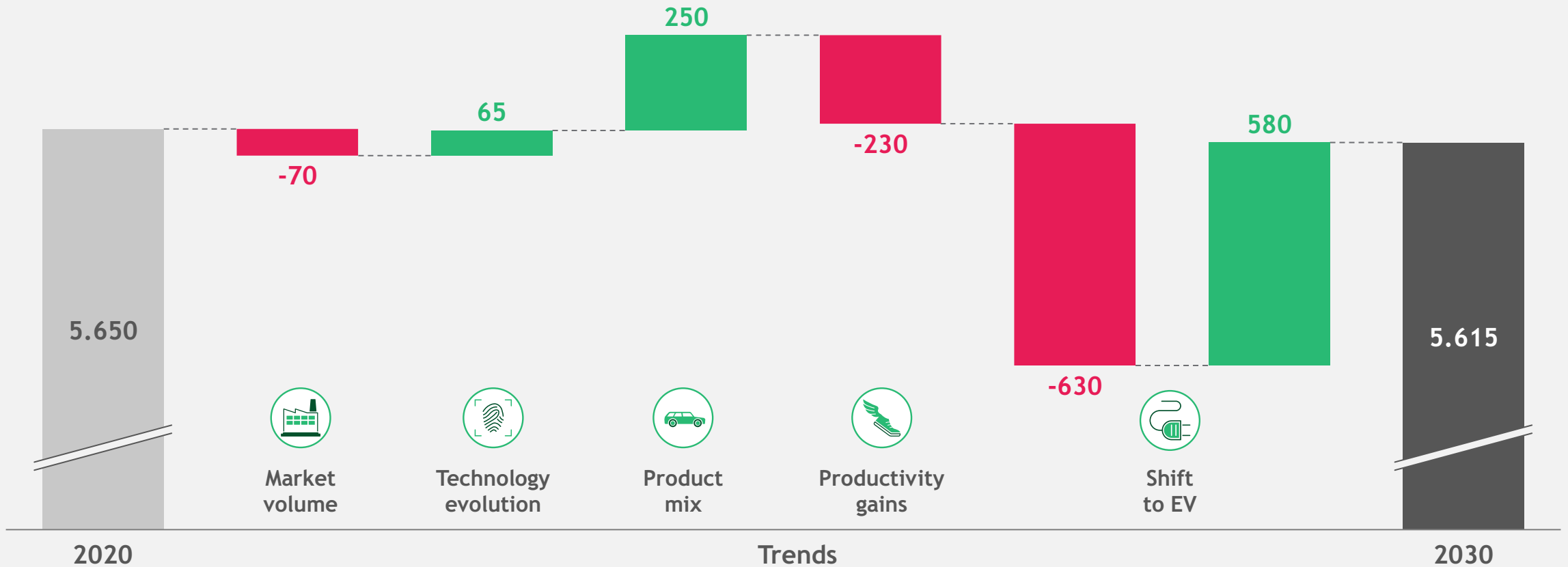


1. 2019 as baseline year
Source: IHS Markit; BCG

Positive impact on job demand Negative impact on job demand No impact on job demand

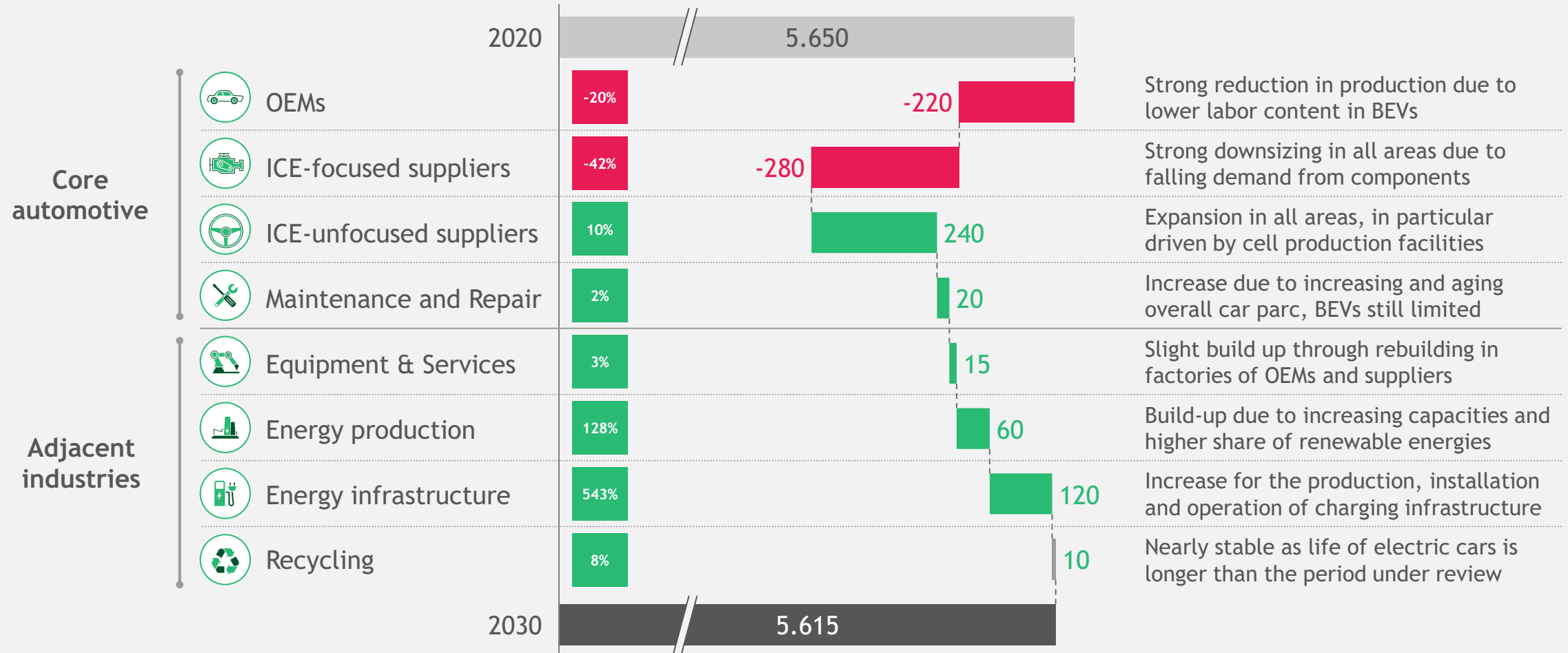
Sum of trends keeps employment stable ...

Job losses and job gains (in thousands) due to various trends



... but leads to significant shifts between industries

Job losses and job gains (in thousands) across different industries



On top, EV shift demands ~400k construction man-years until 2030 - on average ~40k jobs per year



Battery manufacturing

Labor demand increase
driven by building of new
battery manufacturing
plants

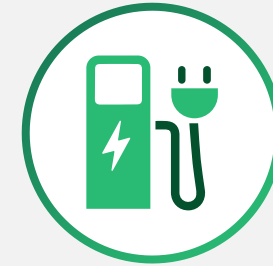
~ 270k man-years



Energy production

Labor demand increase
driven by installation of new
renewable energy capacity
(e.g., solar, wind)

~ 60k man-years



Charging infrastructure

Labor demand increase
driven by set up of major
charging points and
associated grid enforcements

~ 60k man-years



~400k construction man-years demanded driven by the "Switch to EV"



Transition of job positions in 3 perspectives



Transition
over time



Employment needs change
continuously



Transition
between
industries &
job families



~2.4 million jobs have partly
high training requirements



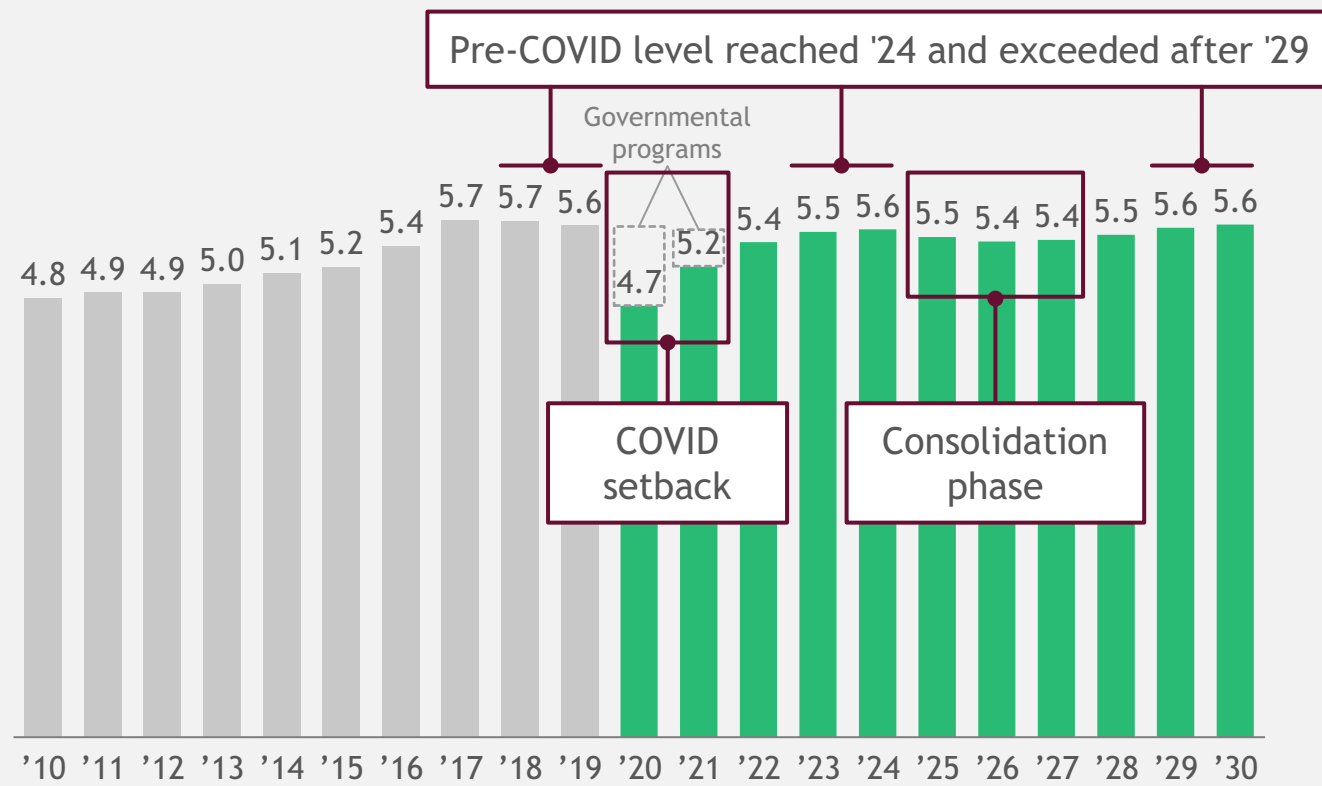
Transition
across regions



Example Germany: Slight
regional effects expected

Employment needs change continuously

Total job demand across the industries in Europe [in k]



No return to previous growth trajectory until 2030



Recovery from COVID setback expected until ~2023



Consolidation phase 2025-27 due to total volume decline

2.4M positions with dedicated training needs

	Same job profile	Similar job profile	New job profile
Situation	Remaining in the company and profession with slightly different requirements	Change to a similar industry and / or job profile	Change to other industry and / or new job profile
Measures	On-the-job training required	Retraining and relocation necessary	Requalification and relocation necessary
Affected positions	~1,600k	~610k	~225k
Example	<i>Employee final assembly automotive OEM</i>	<i>Employee gearbox production to electric motor assembly</i>	<i>Employee battery cell production</i>

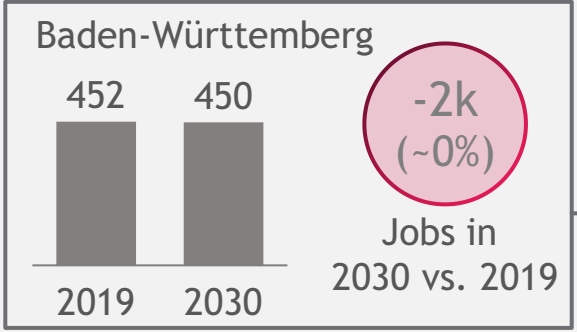
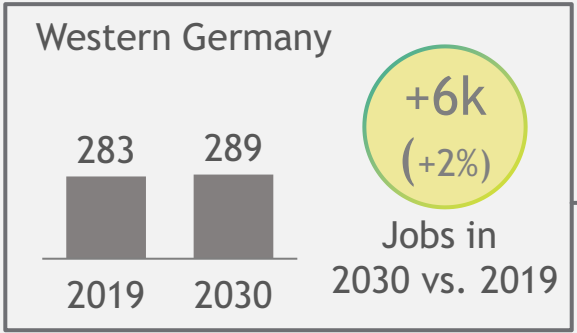
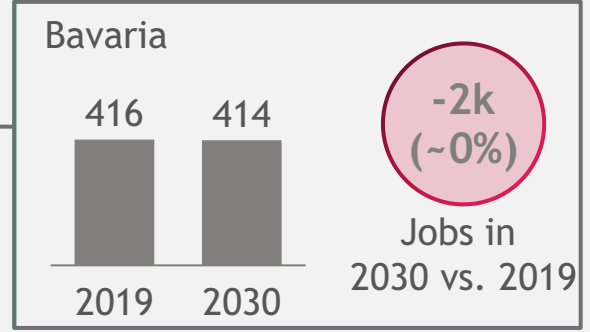
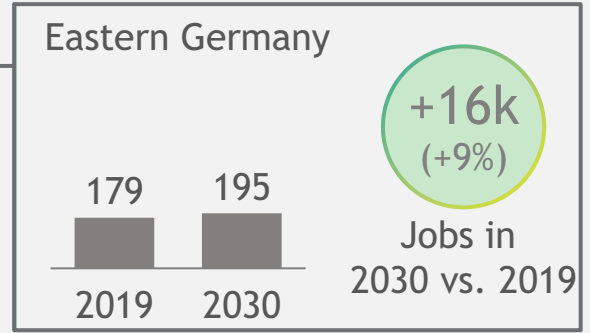
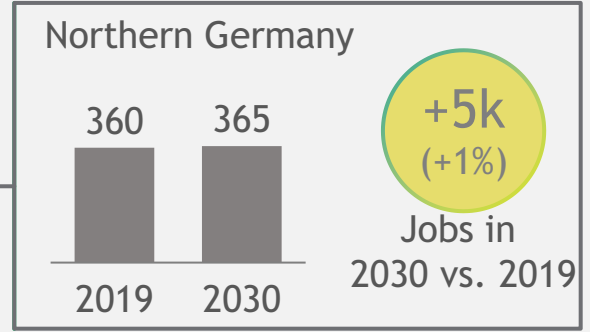
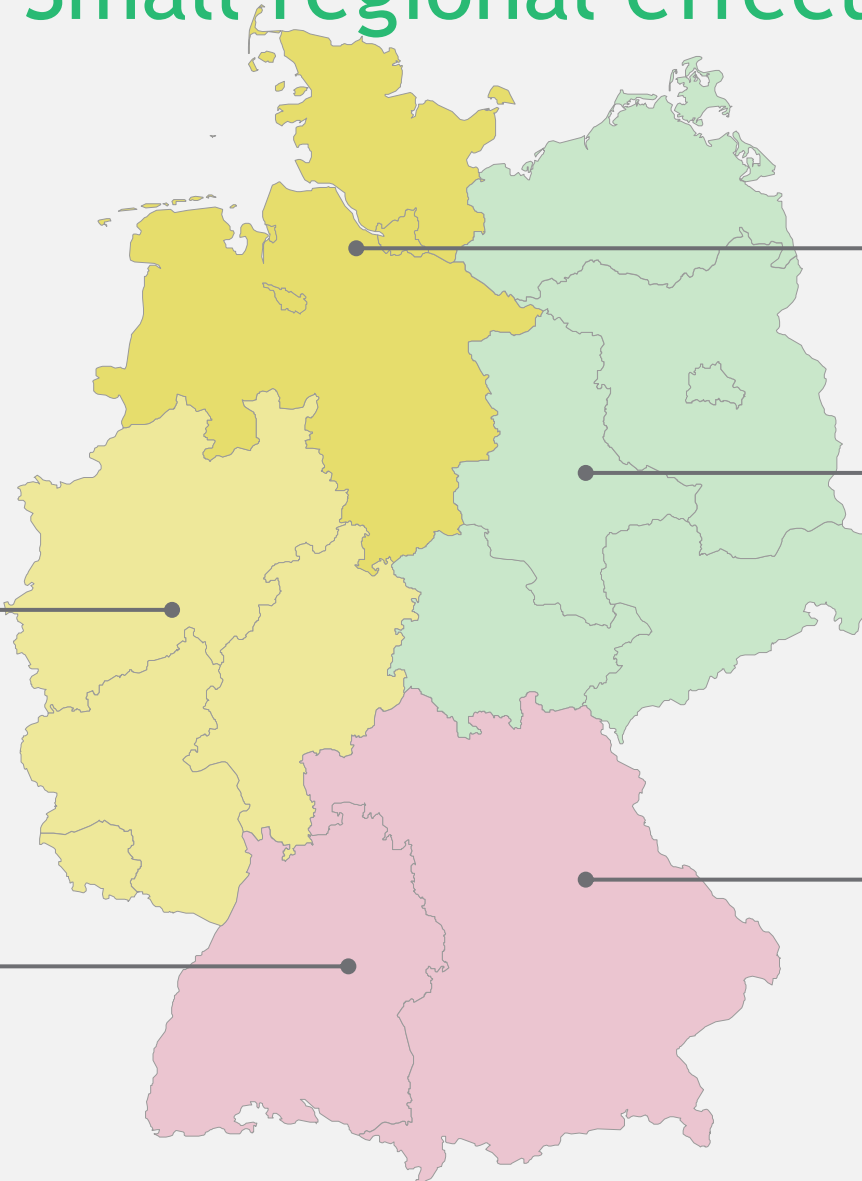
Example Germany: Small regional effects expected



Germany

Regional impact on jobs in Germany [in k]

> Differences across regions
due to specific industry structure



Our three key findings



In total, the number of jobs across the eight investigated industries will remain nearly constant until 2030. However, there will be significant shifts.



In consequence, strong temporal, industry and job-related as well as regional transitions will occur in the labor market.



For a successful transformation, industry as well as politics are jointly required to manage these turbulent times.

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