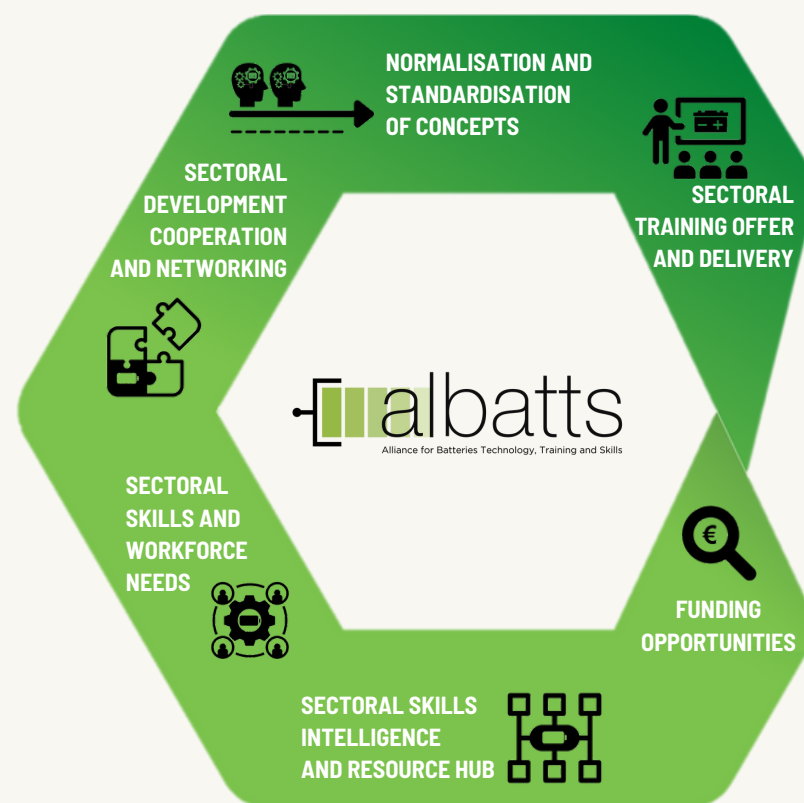


## SECTORAL SKILLS INTELLIGENCE & STRATEGY FOR THE EUROPEAN BATTERY SECTOR

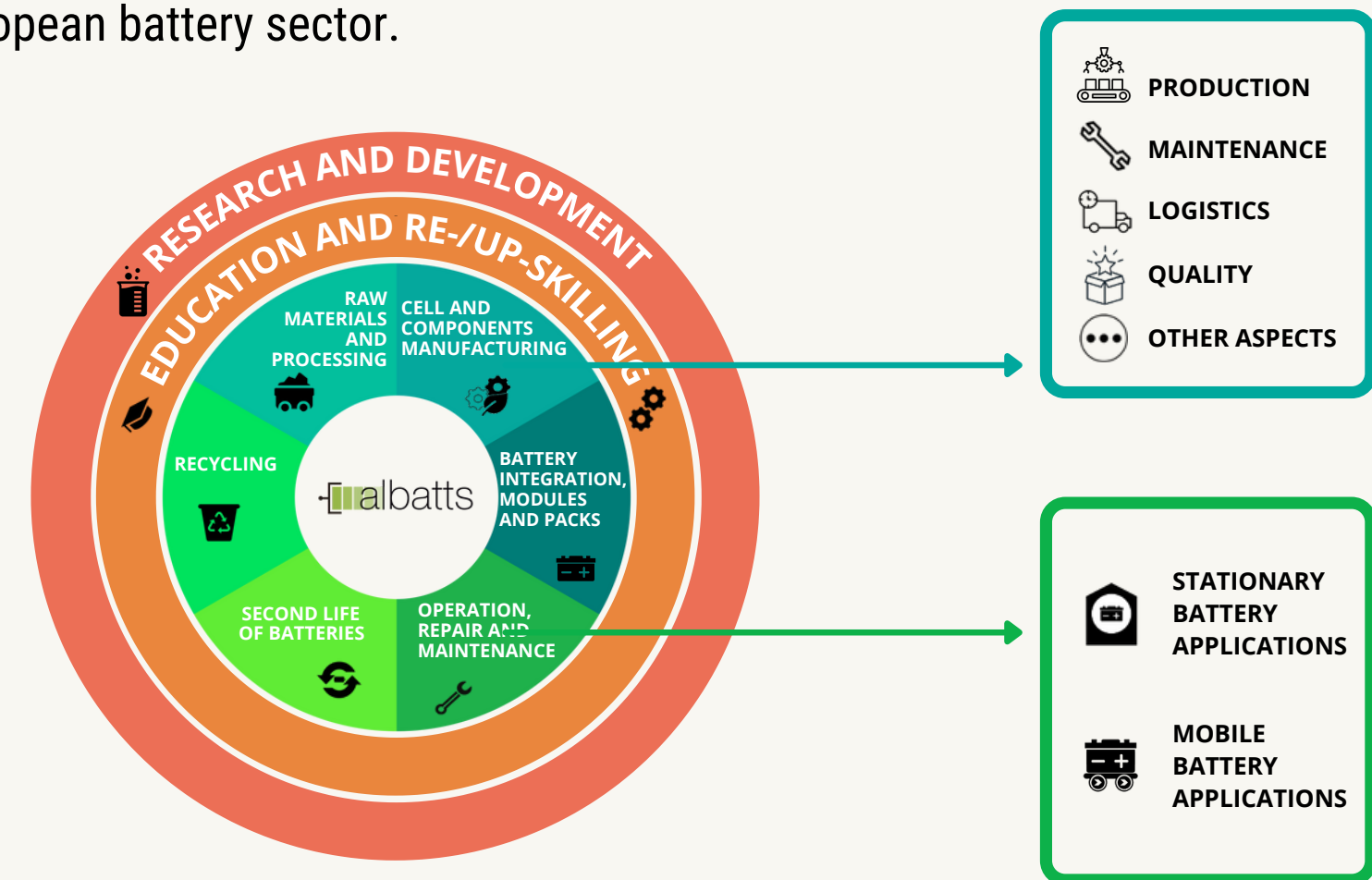
### D3.10 – Sectoral Skills Intelligence and Strategy – Release 2

This is the **second** release of the sectoral skills intelligence and strategy covering the whole European battery value chain from raw materials to recycling of batteries in terms of skills needs, job roles needs and recommendations.



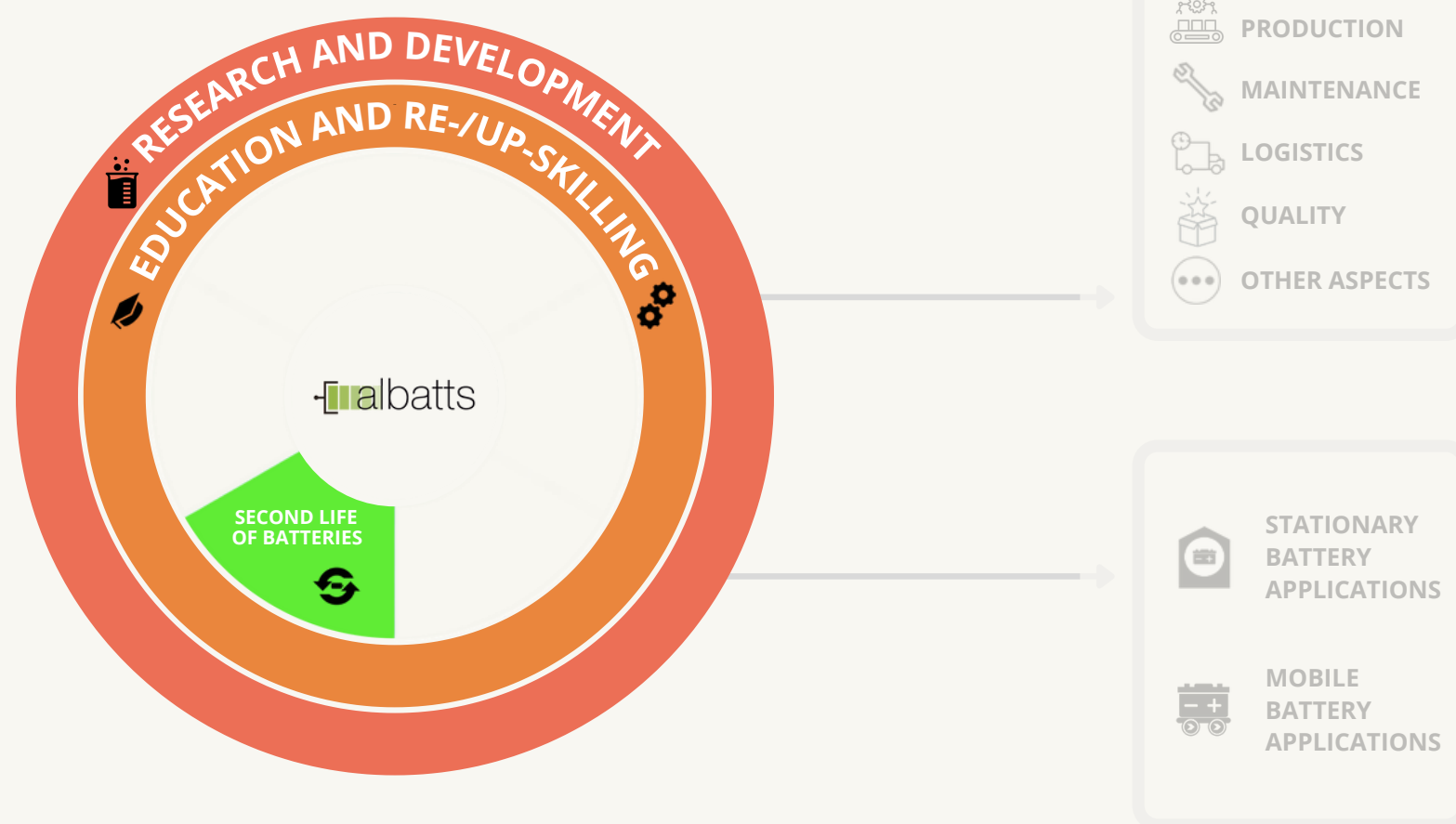
Readers will find designated actions needed in the sector to boost the overall re-/up-skilling activities as well as cooperation, information sharing and provision and many more.

The report also provides quantitative and qualitative overviews of the skills and the job roles needs per identified areas of interest consisting of the battery value chain steps, as well as specific aspects of production, quality or safety tailored to the battery production or other processes that are happening within the European battery sector.



This factsheet provides a summary of the report in what regards **second life of batteries**.

## SECOND LIFE OF BATTERIES



The development of **SECOND LIFE** applications of (mainly) EV batteries is expected to rise consistently because the number of decommissioned vehicles will increase as sales skyrocket. Importance will be gained as well due to various reasons and challenges, such as storage, recycling, grid stabilization, and green energy harvesting which are a must given the massive decarbonisation plans of the European Union, as stipulated in the Paris Agreement and the subsequent documents. Furthermore, escalating energy prices will bolster the alternative solutions aiming at improving energy efficiency and cost mitigation.

EV batteries are likely to be repurposed as a part of the stationary application due to the aforementioned and other requirements needed to achieve feasible production costs as well as testing and safety standards.

## STAKEHOLDERS/COMPANIES/PROJECTS

Car maker	Second life initiative	Car maker	Second life initiative
BJEV	EV-charging, backup power	Mitsubishi	C&I energy storage
BMW	Grid-scale energy storage, EV-charging	PSA	C&I energy storage
BYD	Grid-scale energy storage, backup power	Renault	EV-charging, residential energy storage, grid-scale energy storage
Chengnan	Backup power	Tesla	Remanufacturing
Daimler	Grid-scale energy storage, C&I energy storage	Toyota	C&I energy storage, grid-scale energy storage (NiMH)
General Motors	Remanufacturing,	SAIC	Backup power
Great Wall Motor	Backup power	Volkswagen (Audi)	C&I energy storage
Hyundai	Grid-scale energy storage, C&I energy storage	Volvo	Residential energy storage
Nissan	Remanufacturing, C&I energy storage, EV-charging	Volvo Cars	Residential energy storage
		Yin-Long	Backup power, C&I energy storage

Currently, the collection of batteries for repurposing is done mainly by manufacturers (or in partnership with third-party operators). Independent collection networks are still in their infancy, mainly because of the low volumes available and the associated risks with handling spent/defective batteries. However, this trend will likely develop in another direction as the new innovative technologies will make the diagnosis of batteries and cells much easier and more accurate.

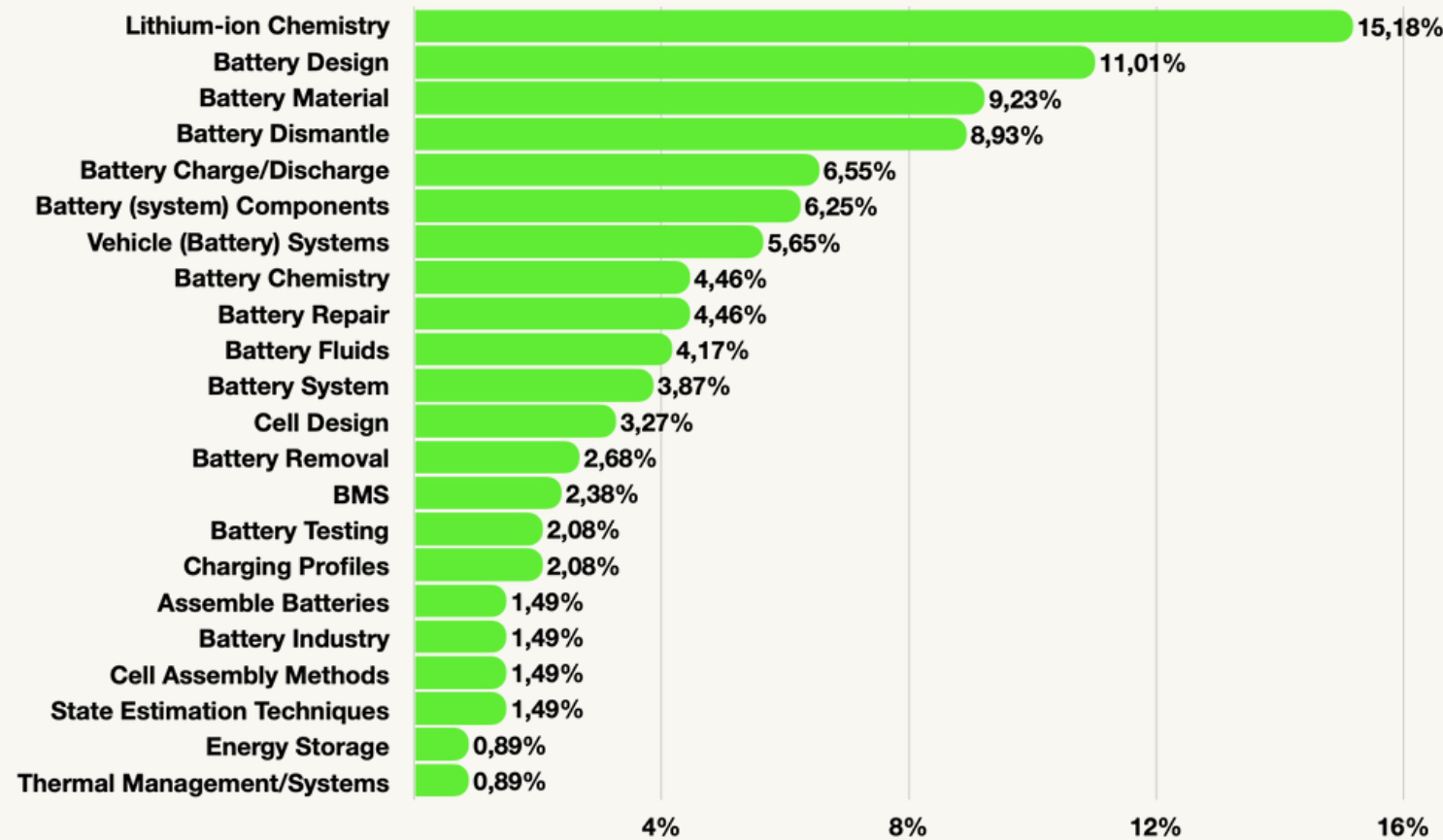
**TARGET GROUPS:** Stakeholders that are active in the implementation of second life applications, policy makers.



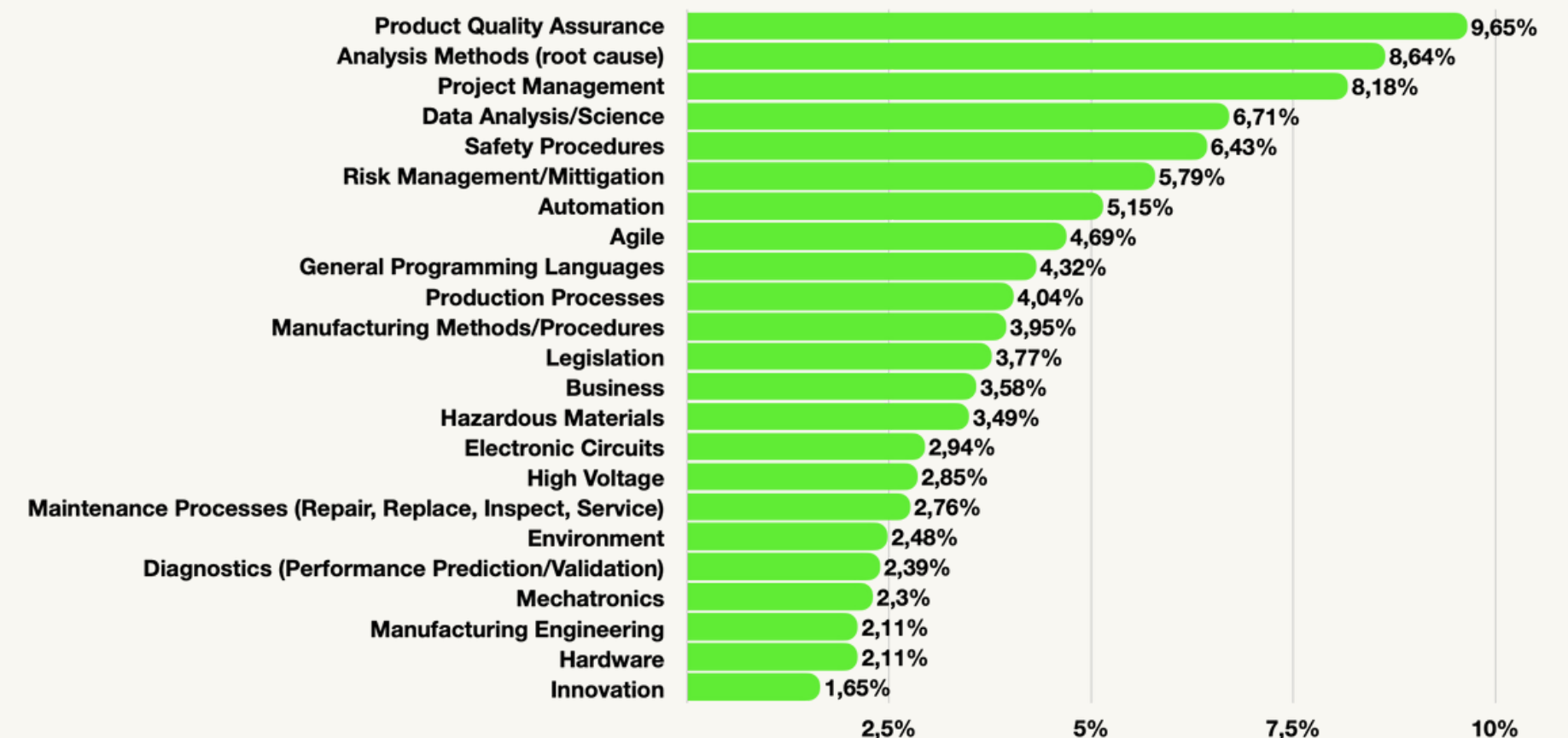


## SKILLS, COMPETENCES & KNOWLEDGE NEEDS

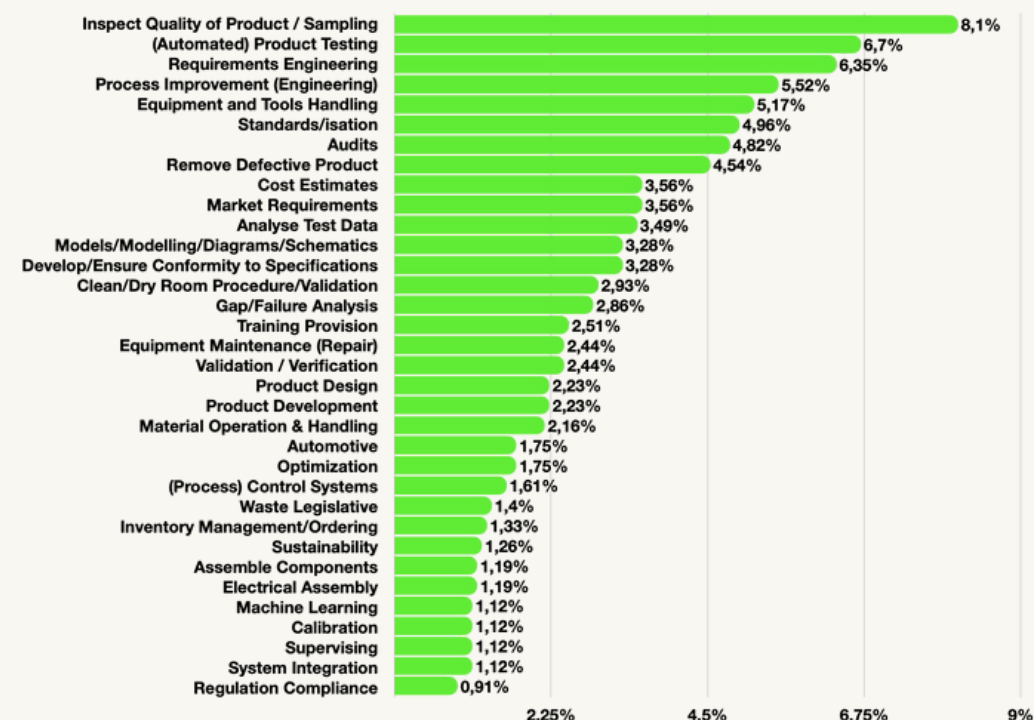
SECTOR SPECIFIC COMPETENCE



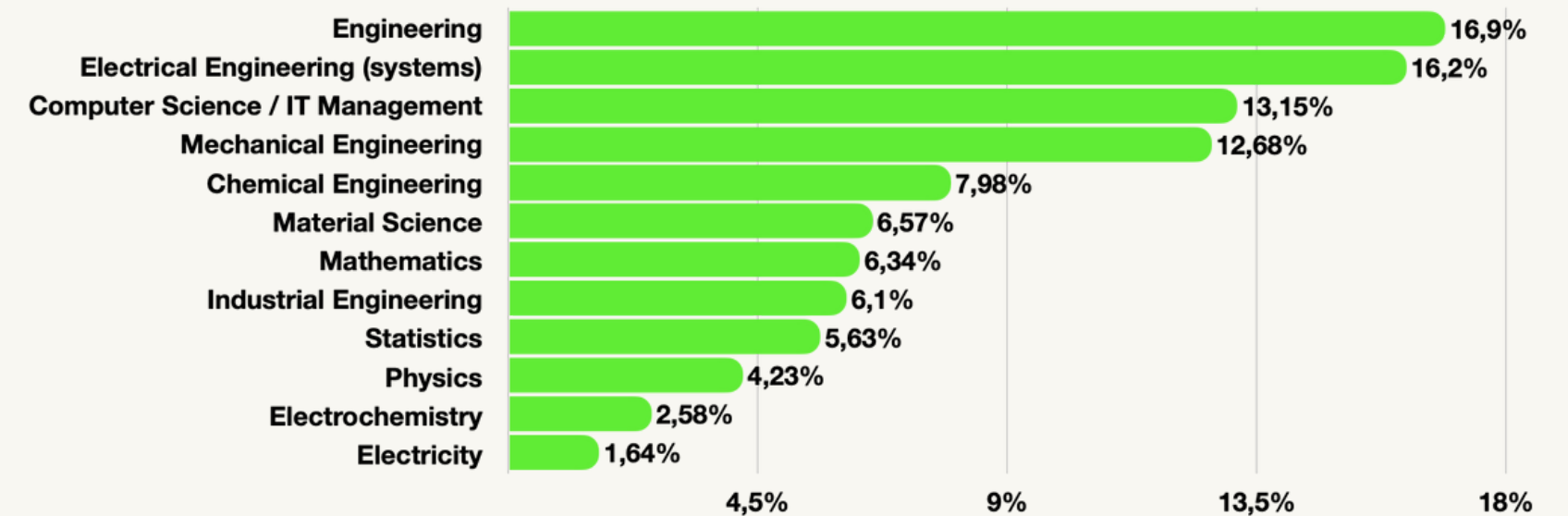
CROSS-SECTORAL SPECIFIC KNOWLEDGE



CROSS-SECTORAL SPECIFIC SKILLS



ACADEMIC COMPETENCE



## JOB ROLES

BLUE-COLLAR

SERVICE TECHNICIAN-EV  
BATTERY TEST TECHNICIAN  
TECHNICIAN FOR BATTERY ANALYSIS  
CELL INSPECTION TECHNICIAN OPERATOR  
CALIBRATION TECHNICIAN  
**MACHINE OPERATOR**  
ELECTRIC BATTERY REPAIRER  
ADVANCED FIELD SERVICE TECHNICIAN MATERIAL HANDLER  
SERVICE MECHANIC-EV METROLOGIST  
AUTOMOTIVE BATTERY TECHNICIAN  
FIELD SERVICE TECHNICIAN SERVICE TECHNICIAN  
CAR PROCESSOR QUALITY TECHNICIAN

WHITE-COLLAR

AUDITOR, BATTERIES & E-WASTE RECYCLING  
EXPANSION PROJECT MANAGER-CHARGING SOLUTIONS  
TEST ENGINEER-CHARGING BLUEPRINT DATA SCIENTIST  
**SENIOR ELECTRIC DISTRIBUTION SYSTEMS & CHARGING**  
SUPPLIER QUALITY ENGINEER HIGH-VOLTAGE BATTERY DRE PROCESS ENGINEER  
CERTIFICATION & HOMOLOGATION MANAGER VEHICLE VALIDATION HEAD DATA ANALYST  
BATTERY MONITORING SYSTEM SW ENGINEER  
SAFETY SPECIALIST BATTERY TEST ENGINEER **APPLICATION ENGINEER**  
DIAGNOSTIC ENGINEER-BMS  
QUALITY CONTROL ENGINEER **CELL TEST ENGINEER**  
COMMERCIAL & INDUSTRIAL DESIGNERS COMPLIANCE ENGINEER  
DOCUMENT CONTROL SPECIALIST  
**APPLICATION ENGINEER-ELECTROMOBILITY**  
SAFETY MANAGER TECHNICAL PRODUCT MANAGER  
ELECTRICAL ENGINEER ISO INTERNAL AUDITOR  
INDUSTRIAL PRODUCTION MANAGER SENIOR SCIENTIST EQUIPMENT ENGINEER  
PROCESS ENGINEER, BATTERY DISMANTLING  
TEST ENGINEER-CHARGING FUNCTIONS ELECTRIC VEHICLE ENGINEER-CHARGING  
ELECTRIC VEHICLE POWERTRAIN TEST ENGINEER QUALITY ENGINEER

## CONSIDERATIONS / RECOMMENDATIONS

Good practices on cooperation and networking on second life application of batteries – this may include various projects, some of them involving vehicle manufacturers, such as:

• Nissan and Green Charge Network partnership – EV batteries into BTM storage systems in the USA;

• Mercedes-Benz – second-life battery storage for a recycling plant in Germany;

• Mercedes and Beijing Electric Vehicle partnership – energy storage system based on used EV batteries in China;

• Hyundai Motor Company and UL partnership to explore the safe deployment of used EV batteries for stationary energy storage in North America.

## LINKS & RESOURCES

- [Sectoral Skills Intelligence and Strategy - Second Life of Batteries](#)
- See the [list of the ALBATTs SKILLS CARDS](#)



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