

FACTSHEET 5 - STRUCTURED INTERVIEWS

Results of structured interviews *

HIGHLIGHTS



MAIN TRENDS AND FACTORS OF THE SECTOR TRANSITION AND DEVELOPMENT

- The automotive industry is the main driver in the EU battery sector development.
- Sustainability awareness and requirements in an ESG context are increasingly important in the decision making of the EU and its member states.
- Other drivers of change to consider are the scarcity of critical raw materials, ethical usage, outsourcing and cost, CO2 emissions reduction regulations and possibly the US infrastructure program. But also EU, national and regional incentives, low/zero-emission vehicles purchase and infrastructure subsidies, battery value-chain build-up in Europe and tax framework.
- When it comes to the electromobility, requirements for longer range of electric vehicles and higher battery capacity, increased safety and other aspects drive the research and development in this field, including research and development in competing technologies such as hydrogen fuel cells and others.



IMPORTANCE OF WORKFORCE

- There is a need for specialists and experts [mainly engineers (e.g., production, manufacturing, chemistry, recycling); experts in automation, maintenance, and logistics] and for the so- called volume category [technicians, operators (production, quality), material handlers or maintenance crew].
- It was stressed that experience might be valued more than formal education; this includes work experience, personality traits and willingness to learn.
- There is also a need for support roles; HR; economy, purchasing, finance and legal departments – examples include project management, product development and supplier management.



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SKILL AND COMPETENCE NEEDS

- Skill and competences needs are dependent on the manufacturing processes: (1) Chemical/up-stream production, (2) Slurry mixing, (3) The slurry coating and drying process, (4) The assembly stage, (5) The formation (testing and battery aging) stage.
- It is also important to evaluate different organization scopes. This includes common skills and knowledge: safety and environment, clean area and ways of working, quality processes and continuous improvement, ergonomics, and work health.



EDUCATION NEEDS

- Up-to-date curricula satisfying the needs of fast emerging sectors will be necessary as soon as possible, especially for VET and its internships and apprenticeships.
- Work-based learning should be strengthened – (1) practical machine operator skills; (2) demo lines and systems for VET schools with the focus on IT skills and automatization of production lines; (3) apprenticeships and internships contracts; (4) dissertation/thesis done in companies; (5) provision of training equipment for learning; and (6) proper skills assessment over the fixed study/working time.



TRAINING PROVISION, RE-SKILLING AND UP-SKILLING OF WORKFORCE

- There is a need for course provision for employees to develop skills and up-skill into higher positions, and for onboard training provision with the planned education provision in the future.
- There is also a need for provision of training programs. Employees and new production (jobs with no previous experience needed) trained by internal experts or, in specific cases, external partners.
- Cooperation with secondary and tertiary education institutions should be strengthened with the use of internships and apprenticeships.



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IMPORTANT TOPICS FOR BATTERY PRODUCTION, EDUCATION, TRAINING AND R&D

The most important topics considered were:

- greening of the battery manufacturing process in terms of pollution and CO2 emissions;
- safety of batteries while in use;
- battery material mining and processing;
- battery material production;
- battery packs.

WEAKNESSES OF EU BATTERY SECTOR

- When compared to Asia, Europe lacks skills and competences of battery cell production and proper education base.
- Lack of relevant experience or documented skills is an issue, as well as level of internal training and level of knowledge in automation and digitalization.

STRENGTHS OF EU BATTERY SECTOR

The strong footprint of automotive OEMs with resources and the will to fill in the gaps within the battery value chain is one of the main strengths.

WORKFORCE DEMAND

Staff outsourcing is being done for different projects, although it is not the case for operations.

* Semi-structured offline interviews were conducted with targeted industrial stakeholders and education providers, as well as selected ALBATTs partners. The general structure of the interviews consisted of 8 main questions with several sub questions. The base structure was adjusted depending on the recipient (companies, education providers or research and development institutions). The [complete results](#) of this survey, which was open for responses from 7.12.2020 to 10.2.2021, is in our website under Project Publications.

