



Introducing InnoEnergy Skills Institute

Workforce transformation is a challenge



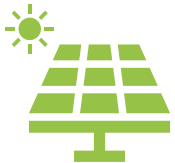
800,000 workers will need to be retrained or upskilled by **2025**



The transition to net zero will require retraining up to **18 million** workers around the world



Renewable energy sector employment will need to grow from 2020's 12 million figure to **38 million by 2030**



Between 2015 and 2030, the amount of solar PV jobs is expected to **quadruple**



In the battery workforce alone, more than **700 new job types** will come into play



Workforce transformation is a challenge

The industry estimates that by 2025, this growing skills shortage could amount to some 800,000 jobs across the entire battery value chain.

We need to shift to training on the ground – and therefore, to roll out national reskilling and upskilling programmes across the Member States. [...]

To facilitate, **I have tasked EIT InnoEnergy** to team up with interested Member States to help them prepare their country-specific project proposals. InnoEnergy will soon launch a so-called EBA250 Academy, developing curricula and training content based on the industry's skills.

EU Vice President, Maroš Šefčovič

We are transforming skills for a sustainable tomorrow



InnoEnergy
Skills Institute

Our purpose is to equip the global workforce with the skills required to create a sustainable economy, distilling our unrivalled knowledge into know-how, through our effective and relevant modular training courses.

Skills Institute's agility and expertise transforms today's skills into those needed for a sustainable tomorrow.

We are transforming skills for a sustainable tomorrow



40,000+
workers
trained and
upskilled



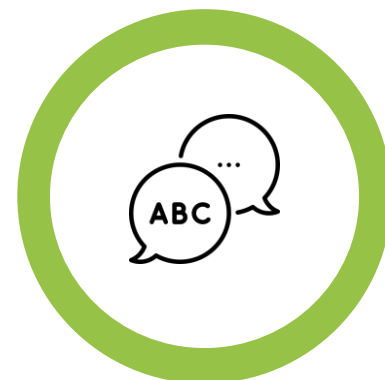
35+
certifications



80+
courses and
programs



500+
lessons



10
languages our
training is
available in

Online Learning Library built to scale and adapt to the needs of a rapidly changing global workforce

Core offering

within courses of

to acquire


to provide solutions for




Online/On-demand Learning Library




Batteries




Hydrogen



PV




General



Knowledge-based Certification




Direct to Industry



Governments



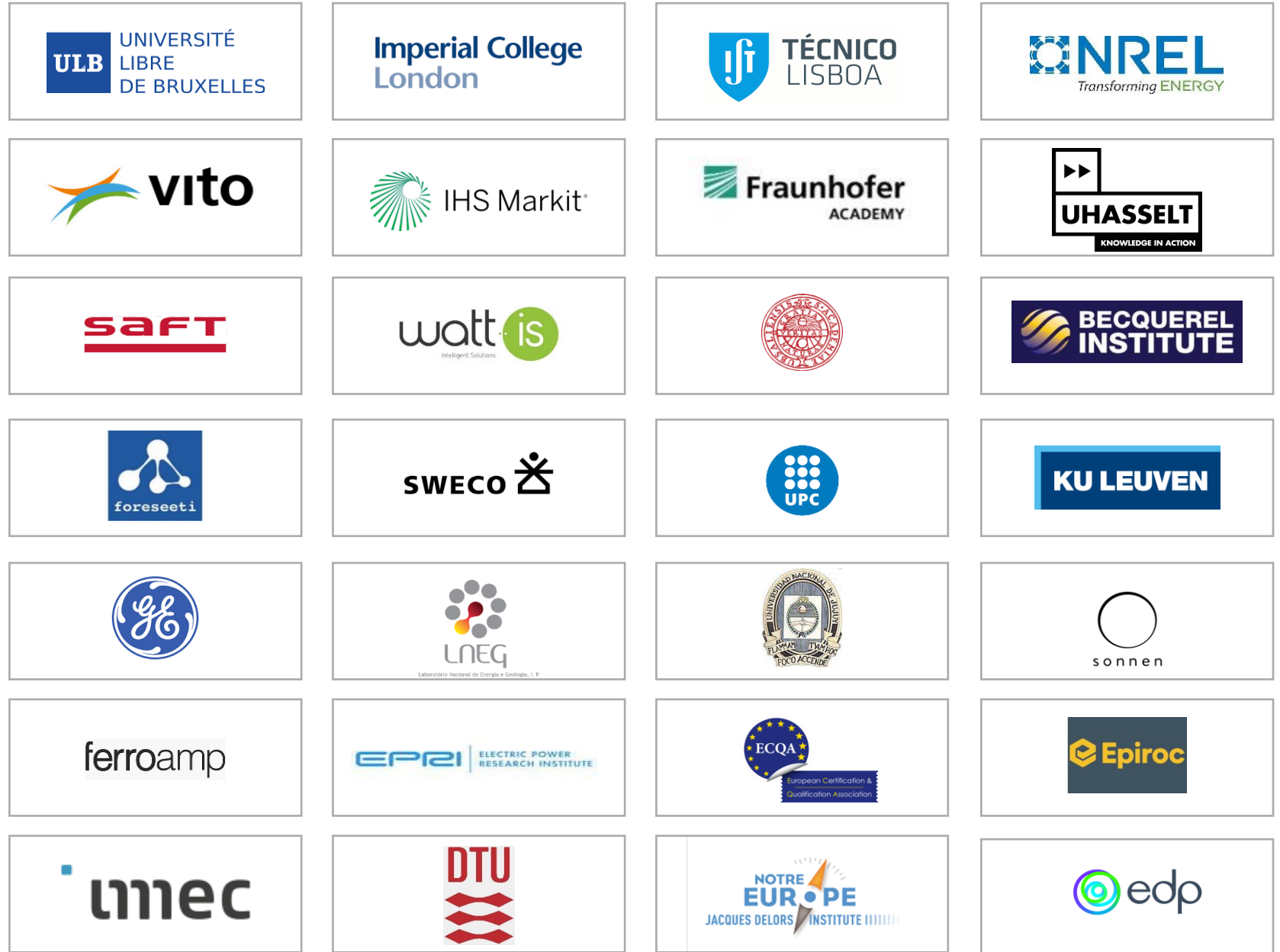
Distributors



Universities

An Unrivalled Team of Subject Matter Experts and Instructors

Our course material is developed and delivered by an unrivalled team of industry subject matter experts on sustainability, decarbonization, and green technologies from the world's leading universities and organizations.



Skills Institute partnership with institutional stakeholders

Offer

- Sign a Memorandum on Understanding w/ the relevant gov't bodies
- Outline a program deployment in country/ region
- Translation of the content in national language
- Train of Trainers
- Pilot w/ selected stakeholders (50 free licensees free of charge)
- Program roll out at national level w/ national /regional funding (i.e, ESF+)

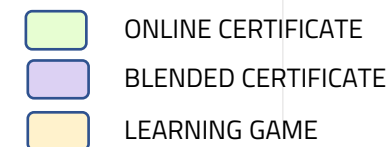
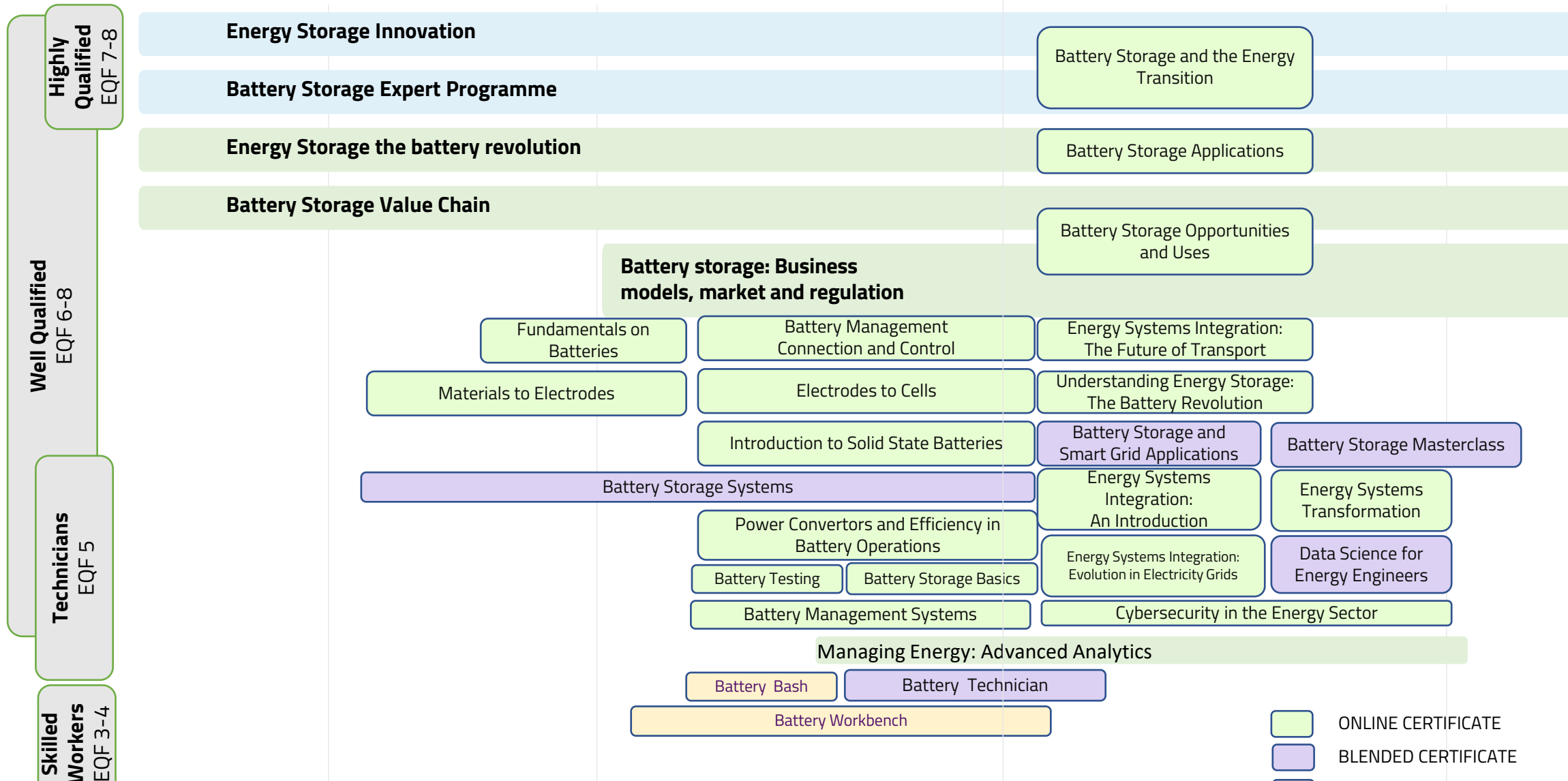
Existing partnerships

- French Gov't
- Spanish Gov't
- Hungarian Gov't
- Romanian Gov't
- Bulgarian Gov't
- Goteburg Region
- Flanders (Flux 50)



Our Portfolio

Current certificates portfolio



InnoEnergy Skills Learning Packs



51 HOURS



91+51 HOURS




27+51 HOURS

| BASIC TIER | PRO TIER | PREMIUM TIER |
|--|---|---|
| Battery storage basics | Energy Storage: The battery revolution | Power Convertors and Efficiency in Battery Applications |
| Fundamentals on Batteries | Battery Storage Applications | Battery testing |
| Battery storage and the energy transition | Managing Energy Data: Advanced Analytics | Battery Management Systems |
| Understanding energy storage: the battery revolution | Battery storage value chain | Battery management connection and control |
| Energy Systems Integration: the future of transport | Cybersecurity in the energy sector | Electrodes to Cells |
| Energy Systems Integration: evolution in electricity grids | Energy Systems Transformation | Materials to Electrodes |
| Energy systems integration: an introduction | Battery storage: Business models, market and regulation | Solid-state batteries |
| Battery storage opportunities and uses | | |

Learning Pack Tier Mapping with Job Profiles

BASIC CONTENT BEST SUITS

 51 HOURS

- Assembly operator
- Automotive technician
- Battery lab technician
- Battery test technician
- Environmental technician
- EV battery maintenance manager
- EV Battery repair technician
- EV Diagnostics technician

ALL-INCLUSIVE CONTENT BEST SUITS

 169 HOURS

- Application engineer - BESS
- Applications engineer - Battery systems
- Battery engineer
- Engineering technician
- Process engineer - Battery systems
- Product manager - Battery systems
- Production engineer
- Sustainability manager
- Technical manager - Battery systems
- Technical product manager

PRO CONTENT BEST SUITS

 91+51 HOURS

- | | | | |
|---|---|--|---|
| <ul style="list-style-type: none"> • Automotive engineer • Battery system consultant • Business analyst • Data analysis engineer • Data analyst • Data engineer | <ul style="list-style-type: none"> • Energy analyst • Energy consultant • Energy consultant - Battery systems • Energy engineer • Energy engineer - Battery systems • Energy engineering technician | <ul style="list-style-type: none"> • Energy strategist • Environmental analyst • Environmental manager • EV project engineer • Innovation manager - Battery systems • Logistics engineer | <ul style="list-style-type: none"> • Logistics manager • Process technician - Battery systems • Project engineer • Sales engineer • Smart meter engineer • Supply chain coordinator • Sustainability manager - Battery systems |
|---|---|--|---|

PREMIUM CONTENT BEST SUITS

 27+51 HOURS

- | | | | |
|---|---|---|---|
| <ul style="list-style-type: none"> • Assembly engineer • Assembly manager • Battery Algorithms Engineer - BMS • Battery analysis technician • Battery cell engineer • Battery cell researcher • Battery maintenance technician • Battery management system developer • Battery management system engineer • Battery Management System Engineer - EV battery packs | <ul style="list-style-type: none"> • Battery management systems technician • Battery material engineer • Battery service technician • Battery systems engineer • Battery testing engineer • Calibration technician • Cell material engineer • Cell testing engineer • Control systems engineer • Design engineer • Electrical engineer - BMS | <ul style="list-style-type: none"> • Electrical/Mechanical test engineer • Installation technician • Integration technician • Power electronics engineer • Power electronics technician • Process technician • Production engineer - Battery systems • Quality control engineer - Battery materials | <ul style="list-style-type: none"> • Quality control engineer - Battery systems • Quality control technician - Battery systems • Research engineer • Technical product manager - Grid storage • Test automation engineer - BMS |
|---|---|---|---|

Building Skills Intelligence since 2018

Since 2018, we have been building intelligence in the skills sector through continuous data aggregation from industry reports, job listings, business intelligence, and market trends. We continuously analyze, update, and expand skills, knowledge, and job roles lists across the value chain based on new data.

We create skills matrices starting from battery cell manufacturing to map specific skills to job roles, enabling effective workforce planning.

>600

Industry knowledge and learning content that supports more than 600 job roles per value chain step (white/blue collar)

>700

Analysis on more than 700 skills and knowledge requirements per value chain step (white/blue collar)

Every 6 months

Analysis of top skills and job roles per value chain step (updated every six months)

2nd edition

Second edition of employment growth analysis within a gigafactory

Job Role Types and Groups

Group A

Priority – Technical aspects

1. **Production worker** (performs both mechanical and electrical tasks)
2. **Battery service technician/electric vehicles** (non-engineer)
3. **Car diagnostician**
4. **Quality technician**
5. **Battery maintenance technician**

Group B

Priority - General non-technical aspects, mainly related to electromobility in the wider environment

6. **Sales manager** (non-technical)
7. **Senior/middle manager** non-technical)
8. **Procurement manager**
9. **Purchasing manager**
10. **Electromobility enthusiast** (non-professionally connected)
11. **Sustainability manager**

Group C

Priority – Detailed Technical aspects

12. **Design engineer/ Mechanical/electronic/electrical** (non-technical)
13. **Lab engineer**
14. **Production/Process engineer**
15. **Sales engineer**
16. **Technical manager**
17. **Engineer – system/software**
18. **Quality engineer**



Group A

Priority – Technical aspects

1. **Production worker** (performs both mechanical and electrical tasks)
2. **Battery service technician/electric vehicles** (non-engineer)
3. **Car diagnostician**
4. **Quality technician**
5. **Battery maintenance technician**



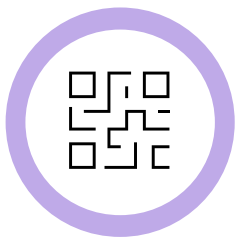
INPUT COMPETENCE

- » Electrical engineering at junior/primary school level
- » General technical knowledge
- » General knowledge of the principles of electricity



ACQUIRED COMPETENCE

- » Simplified battery/electrochemical cell principle
- » General structure of the battery pack
- » Types of cells
- » Advantages and disadvantages of battery types
- » Use of batteries in transport and industry
- » Electrical safety
- » Reliability
- » General battery and BMS solution and structure
- » Testing, controlling, and monitoring a battery
- » Troubleshooting and repair
- » Practical employability skills



Group C

Priority – Detailed Technical aspects

**12. Design engineer/
Mechanical/electronic/electrical
(non-technical)**

13. Lab engineer

14. Production/Process engineer

15. Sales engineer

16. Technical manager

17. Engineer – system/software

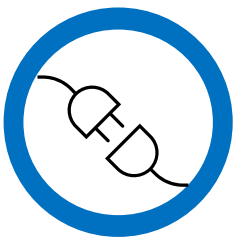
18. Quality engineer

INPUT COMPETENCE

- » Electrical engineering knowledge level at 1st year of higher education/secondary school
- » Basic understanding of electrical systems
- » Basic electronics knowledge
- » Basic mathematics knowledge
- » Basic chemistry knowledge
- » Materials science
- » Detailed technical knowledge of the learner's area of operation
- » Communication

ACQUIRED COMPETENCE

- » All listed for Groups A and B, detailed
- » Construction of battery packs and BMS
- » Electrochemistry basics
- » Types of cathodes and anodes used in cells
- » Efficiency and internal resistance
- » Batteries durability and performance
- » Calculation of SOC and SOH
- » Future concepts of battery and cell
- » Thermal control
- » Predictive and preventive maintenance
- » Analysis/Optimization of data driven performance
- » Homologation and prescriptive requirements, detailed safety mechanisms



Group B

Priority - General non-technical aspects, mainly related to electromobility in the wider environment

6. Sales manager (non-technical)

7. Senior/middle manager (non-technical)

8. Procurement manager

9. Purchasing manager

10. Electromobility enthusiast (non-professionally connected)

11. Sustainability manager

INPUT COMPETENCE

- » Supply chain/Logistics/Business/Industrial management based on area of operation
- » Basic understanding of the automotive industry
- » No other specific requirements

ACQUIRED COMPETENCE

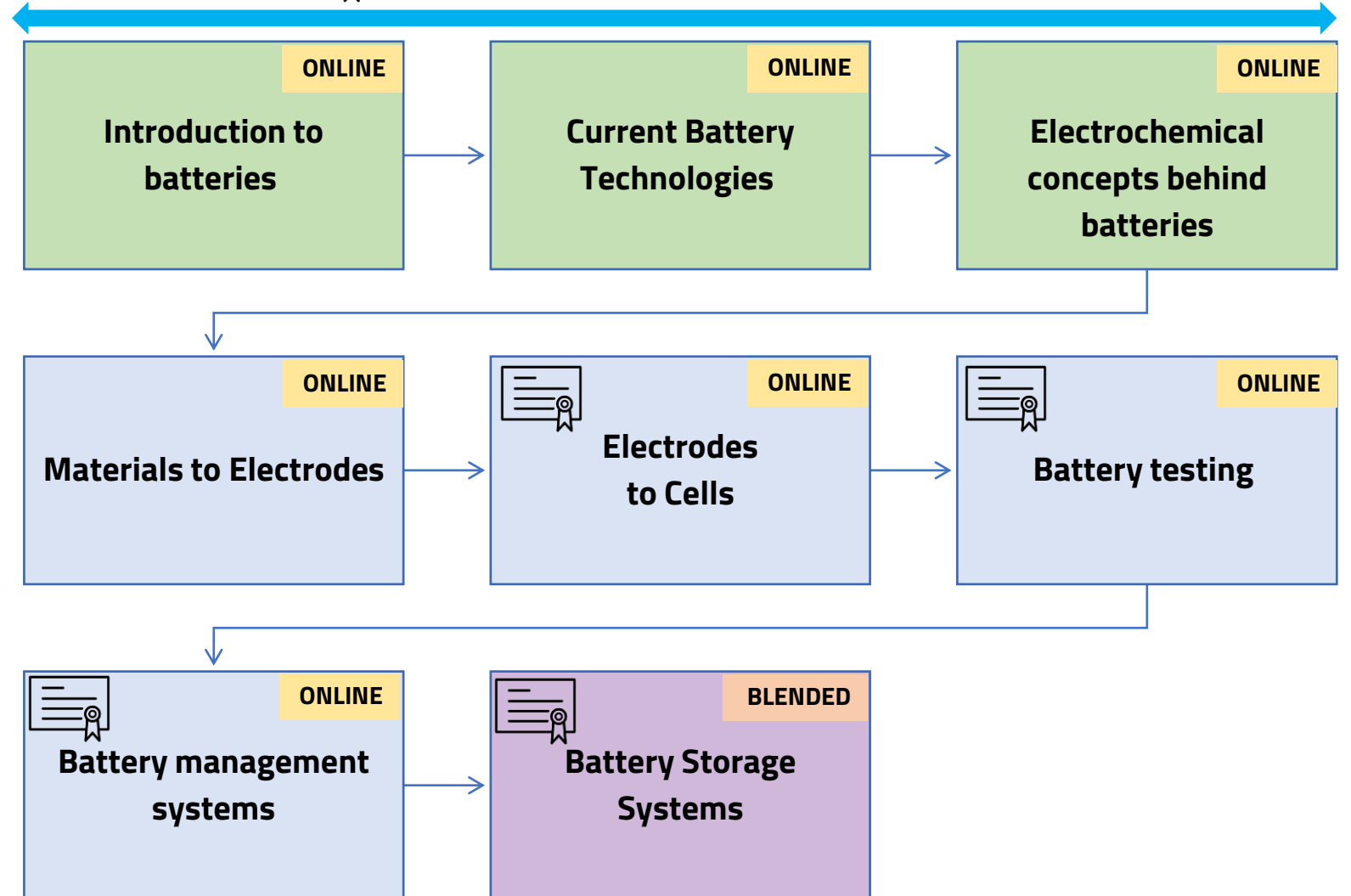
- » General understanding of the domain and industry
- » General structure of the battery pack
- » Types of cells
- » Advantages and disadvantages of battery types
- » Use of batteries in transport and industry
- » General battery and BMS solution and structure
- » Battery and Raw Materials Market
- » The electric vehicles market
- » Concepts of modern transport based on electrochemical cells and hydrogen
- » Cost aspects
- » Social and psychological aspect
- » Ecology



Production Engineer: Sample Learning Pathway with our Current Content

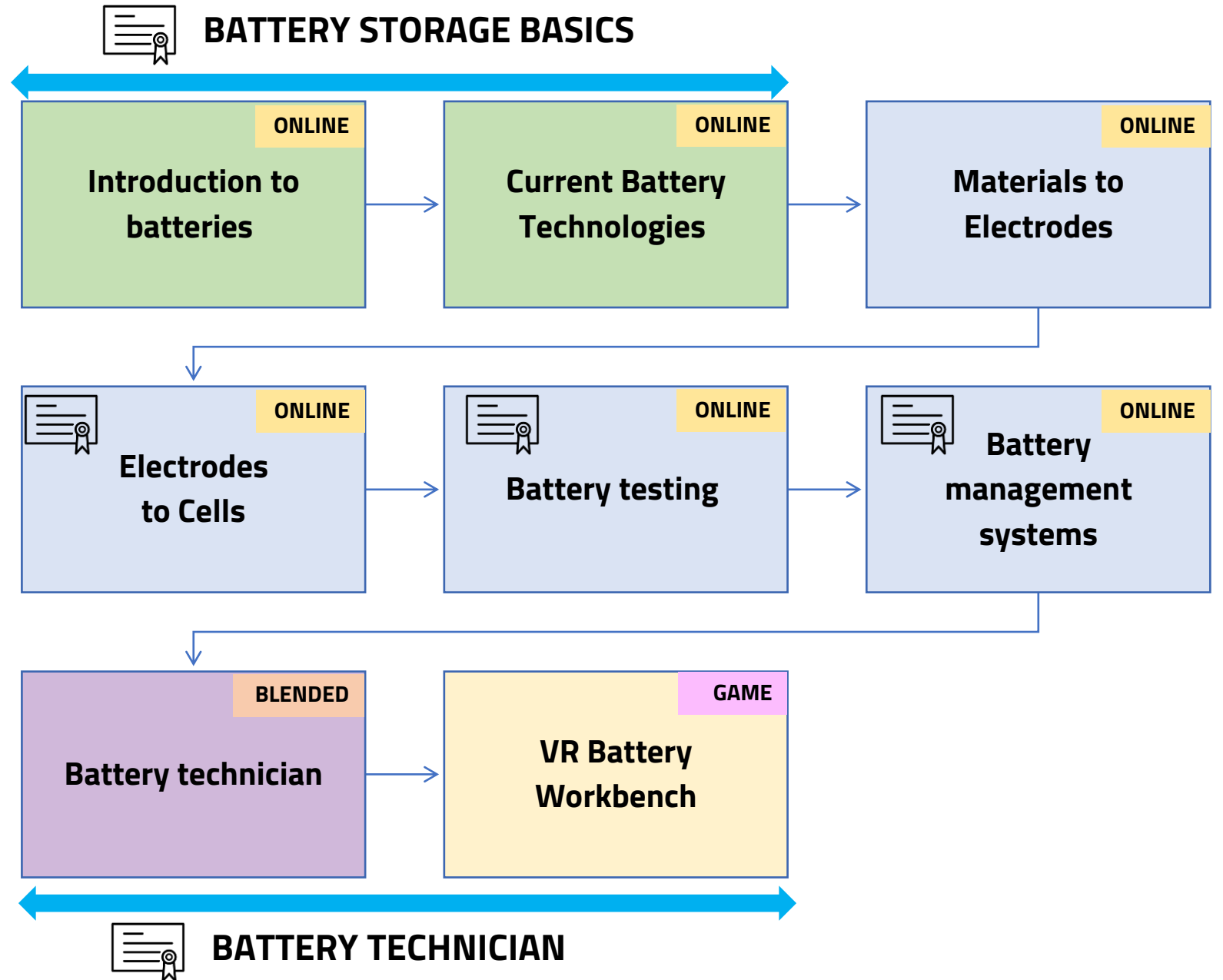


FUNDAMENTALS ON BATTERIES





Process Technician: Sample Learning Pathway with our Current Content



Customized learning paths & custom content creation

Collaborate with us to create learning solutions that deliver cutting-edge learning experiences as well as measurable business impact. We will deliver them, end-to-end, seamlessly and at scale, wherever you are.

Our customization services:



**Custom
Micro-
credentials**



**Development of
New Learner
Personas**



**Learning
Journey
Mapping**



**Content
Curation**



**New Content
Curation and
Creation**



Summary



Track record of success

Since 2017, we have been at the forefront of skills training expertise, providing effective and proven training programs, research and insights for our market-leading, comprehensive training programs online and on site.



Global coverage

Our unique ecosystem of learning and skills capability is now being scaled up to create a global ecosystem with relevance to our customers in every part of the world.



Driving transformation

We have the knowledge and experience to generate skills needed to drive the global transformation of the sustainable energy sector –covering energy storage, photovoltaics, green hydrogen.



Agile experts

Our expertise in all areas of sustainable energy is backed by a range of sector experts, alliances and partnerships that help us deliver innovative and highly effective skills training. Our agility combined with technology such as AI ensure that we remain relevant, trusted partners.



Modular, bespoke approach

We design products for customers, updating and refreshing content to ensure that we deliver the latest trends and learnings. We also provide customized programs that meet specific customer needs, regardless of location, size or technology.



Exceptional return on investment

Our training courses offer companies of all sizes, universities and training providers exceptional returns on investment in their race to reskill the global workforce. Our agile, modular approach ensures training is delivered quickly and efficiently, reducing time to market and increasing productivity.



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