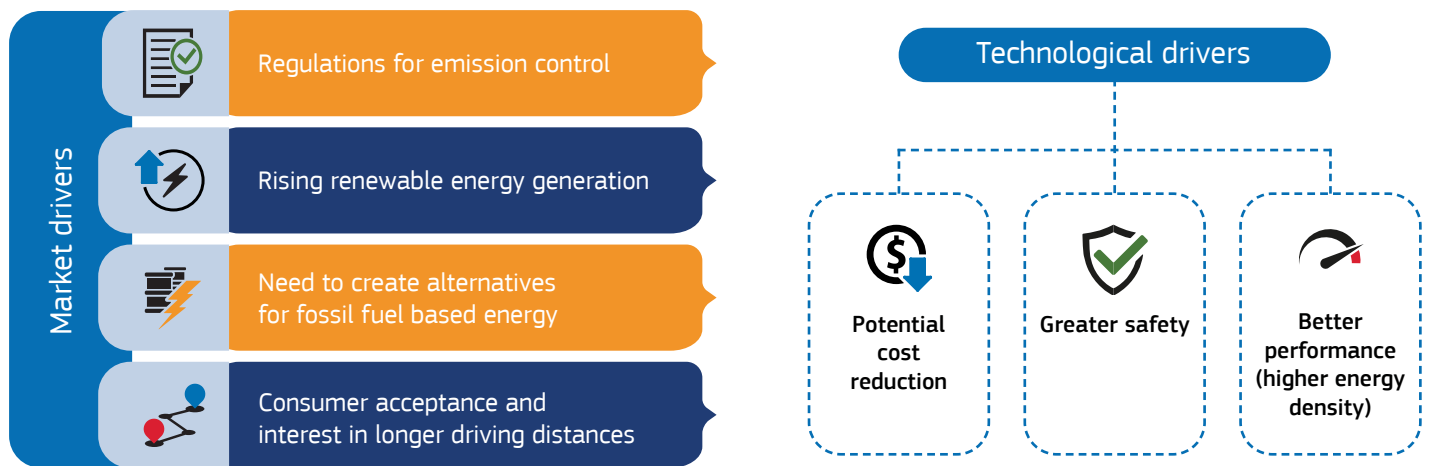


# The solid-state-lithium-ion battery is one of the most relevant energy storage solutions for electric vehicles

## Product Watch: Solid-state-lithium-ion-batteries for electric vehicles

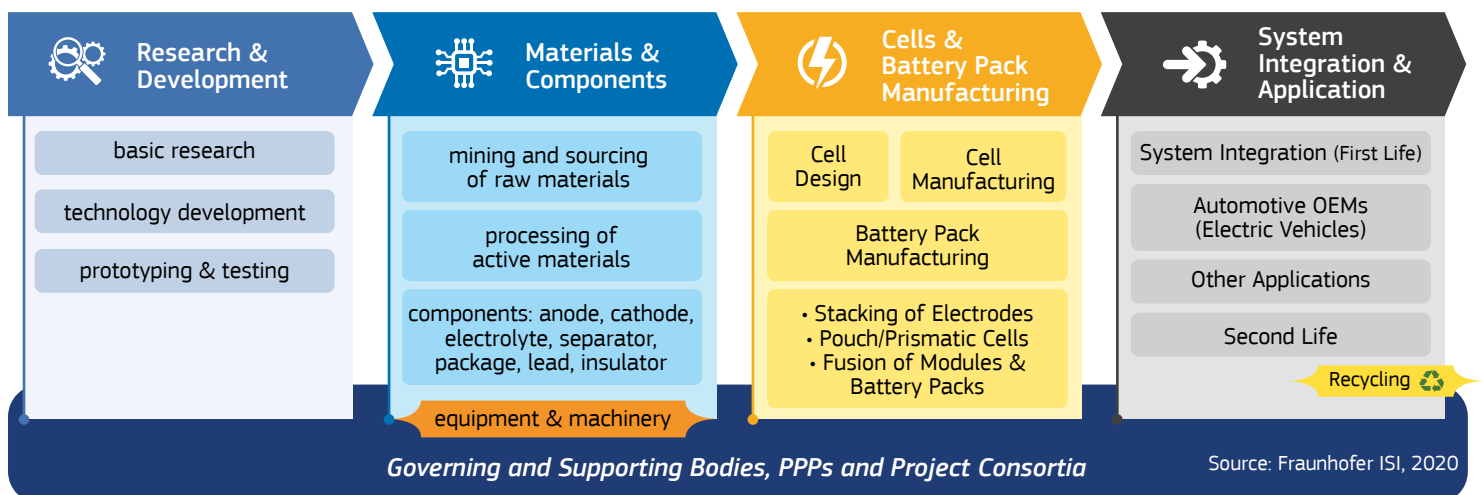
Since the global demand for high-energy and high-power energy storage devices increased, lithium-ion batteries have been established as the dominating energy storage solution for portable electronics and electric vehicles.

**Solid-state-lithium-ion-batteries (SSBs)** are characterised by a solid, not flammable, electrolyte that also acts as a separator. This allows for down-scaling to certain components by reducing passive components and to create cells with higher energy capacity per unit weight and volume. The solid-electrolytes are more tolerant to changes in temperature, physical damages, as well as to overcharging and deep discharging. They promise to be safer and more long-lasting compared to the conventional lithium-ion batteries.



As the search for the optimal solid-state-battery design goes on, R&D is still the most important and the only really established part of the value chain for SSBs

### Value chain for solid-state-lithium-ion-batteries



The technology of solid-state-batteries is still under development and therefore no established value chain exists to date. However, the value chain of conventional li-ion batteries exists and can be taken as an orientation, with the thought that relevant actors are turning their focus on SSBs.

# The SSB addresses current consumer concerns regarding too short driving range and long charging time

## How does SSB do that?



Improved battery pack (focus on safety/optimum cell integration)

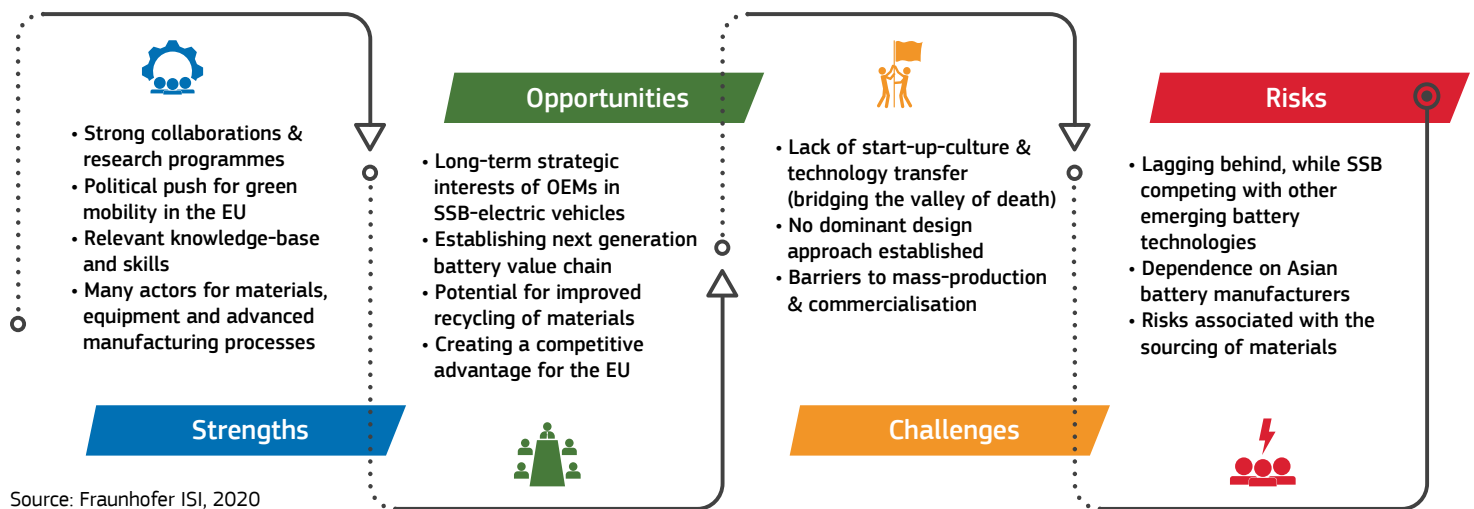


Improved battery cell (higher energy density)



Improved manufacturing equipment and processes (high throughput, reliability, safety)

## The EU has the best market conditions for SSB development



## About the Advanced Technologies for Industry (ATI) project

The ATI project – funded by the European Commission – supports the **implementation** of Europe's new growth strategy with a systematic monitoring of **technological trends** and reliable, **up-to-date data** on advanced technologies.



The **Product Watch** analyses novel products that are based on advanced technologies for the development of goods and services – enhancing their overall commercial and social value. It supports cluster organisations and S3 partnerships, providing intelligence on innovation areas where European regions could team up and invest together.

For more information, read the full Product Watch report on Solid-state-lithium-ion batteries here:  
<https://ati.ec.europa.eu/reports/product-watch/solid-state-lithium-ion-batteries-electric-vehicles>



Publications Office  
of the European Union

PDF: ISBN 978-92-9460-425-5 doi: 10.2826/976890 EA-02-21-225-EN-N  
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