

Welcome!

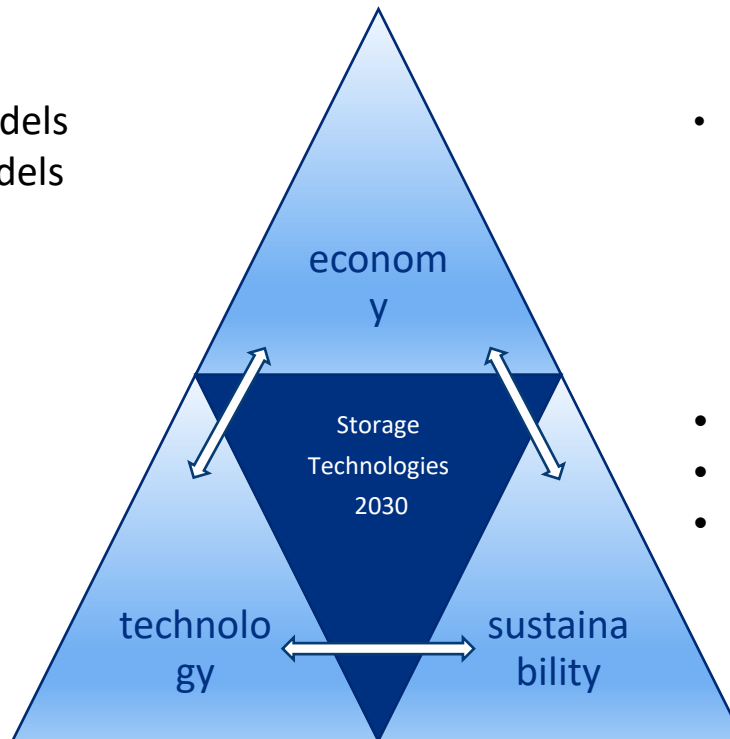
the **Climate and Energy Fund**
presents the „**energy storage initiative**“
Highlights of Energy Research 2021
23th of November 2021



Storages – the holistic perspective

- New operator models
- New business models

- System support
- Sector coupling
- Flexibilities

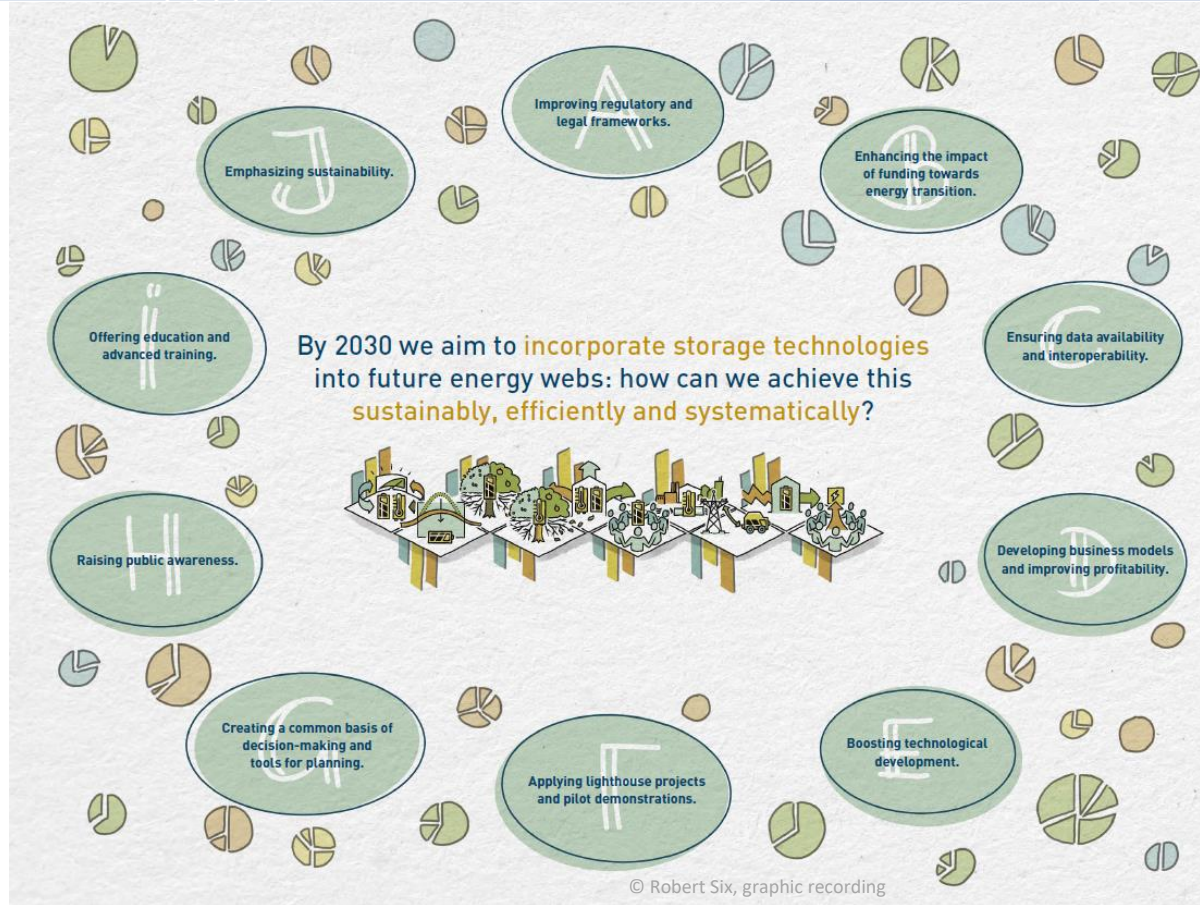


- (new) legal/regulatory framework

- Technology assessments
- Ecological balancing
- Social shares



By 2030 we aim to **incorporate storage technologies** into future energy webs: how can we achieve this **sustainably, efficiently and systematically?**





Implementation measures

improving regulatory and
legal frameworks.



Improving legal and regulatory frameworks

Why?

- the existing legal framework cannot keep up with accelerated technological progress

What?

- Reducing complexity – ease applications!
- Creating new rules for the use of storage systems as part of the energy system (e.g. regulatory sandboxes)

Who?

- Legislation / ministries: reorganization / redesign of “problematic” legal / regulatory framework conditions
- R&D Community: developing alternative legal frameworks (“regulatory sandboxes”)



Implementation measures

Improving regulatory and
legal frameworks.

Enhancing the impact
of funding towards
energy transition.



Enhancing the impact of funding towards energy transition

Why?

- Individual aspects (e.g. private consumption share) most relevant for funding
- economic aspects are often neglected (e.g. network stability) in the field of funding energy storages

What?

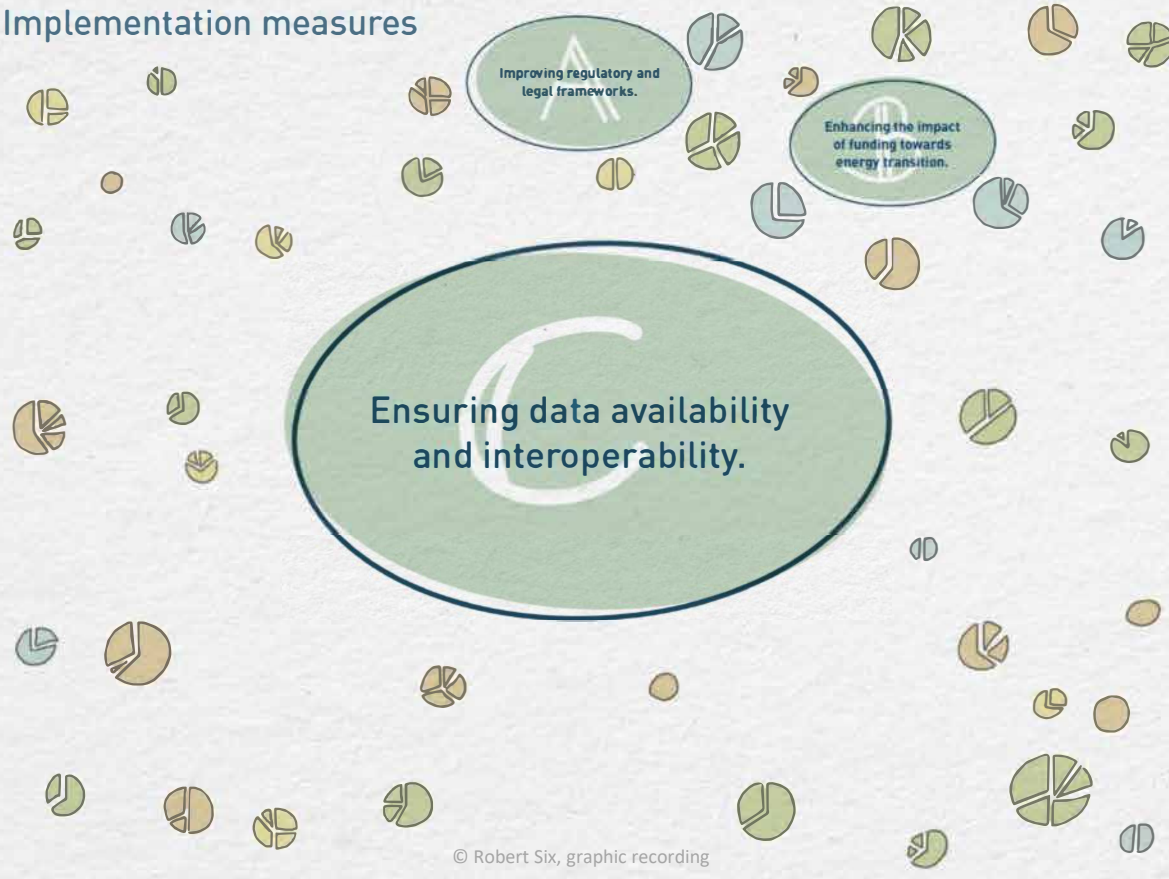
- Introduce new target-oriented funding mechanisms

Who?

- Funding agencies: elaborate new funding schemes



Implementation measures





Ensuring data availability and interoperability

Why?

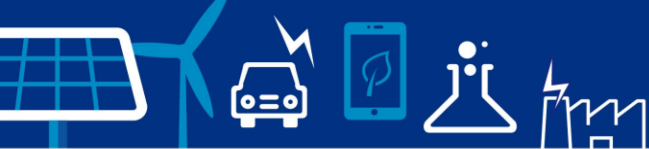
- Progressive digitalization in the energy sector

What?

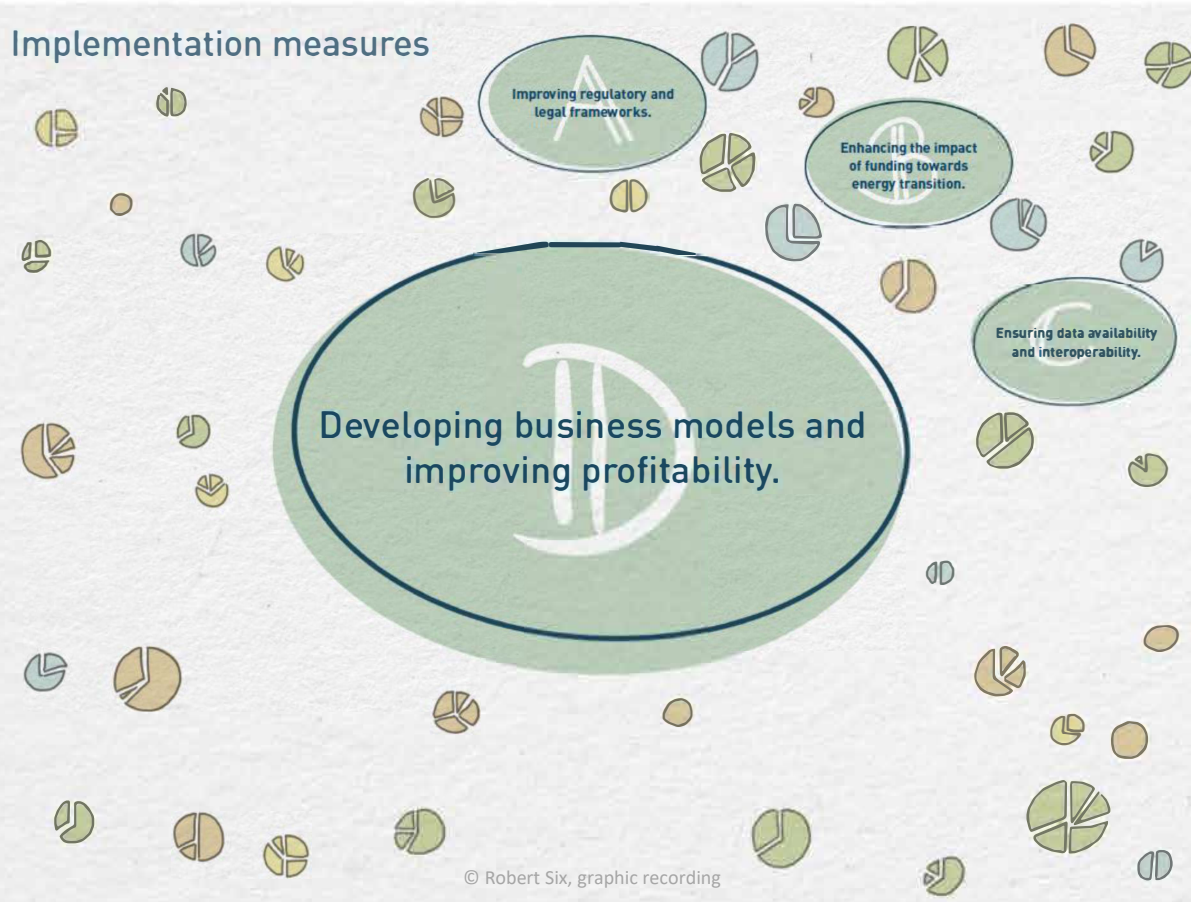
- Need for a fully digitized data exchange platform (machine-readable, freely accessible, prompt)

Who?

- All relevant stakeholders are asked to ensure interoperability not only in Austria, but across Europe



Implementation measures





Developing business models and improving profitability

Why?

- we need a competitive alternative to conventional (fossil) storage technologies

What?

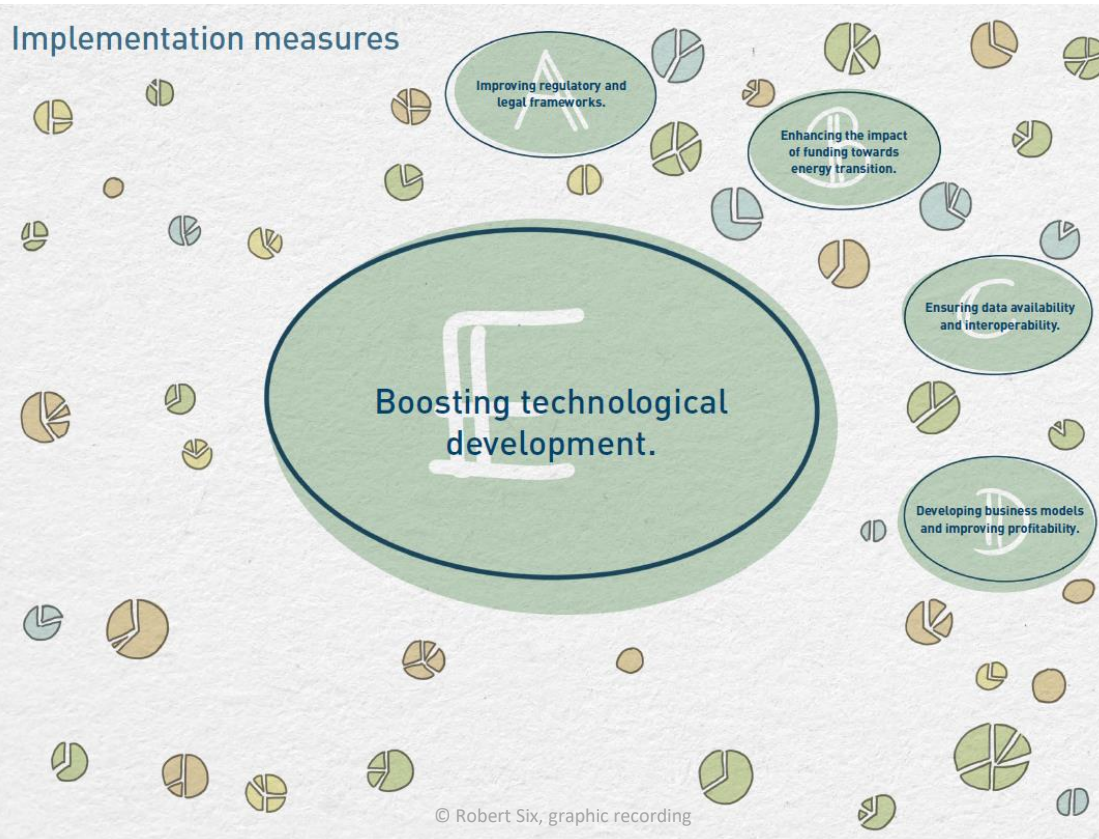
- In order to reduce investment and operating costs, new (cost-effective) materials and a high durability are required

Who?

- Legislation / ministries: Creation of appropriate (energy policy) framework conditions to enable or establish new business models (at an early stage)



Implementation measures





Boosting technological development

Why?

- In addition to improving economic efficiency, there is still a lot of potential in the area of technological progress

What?

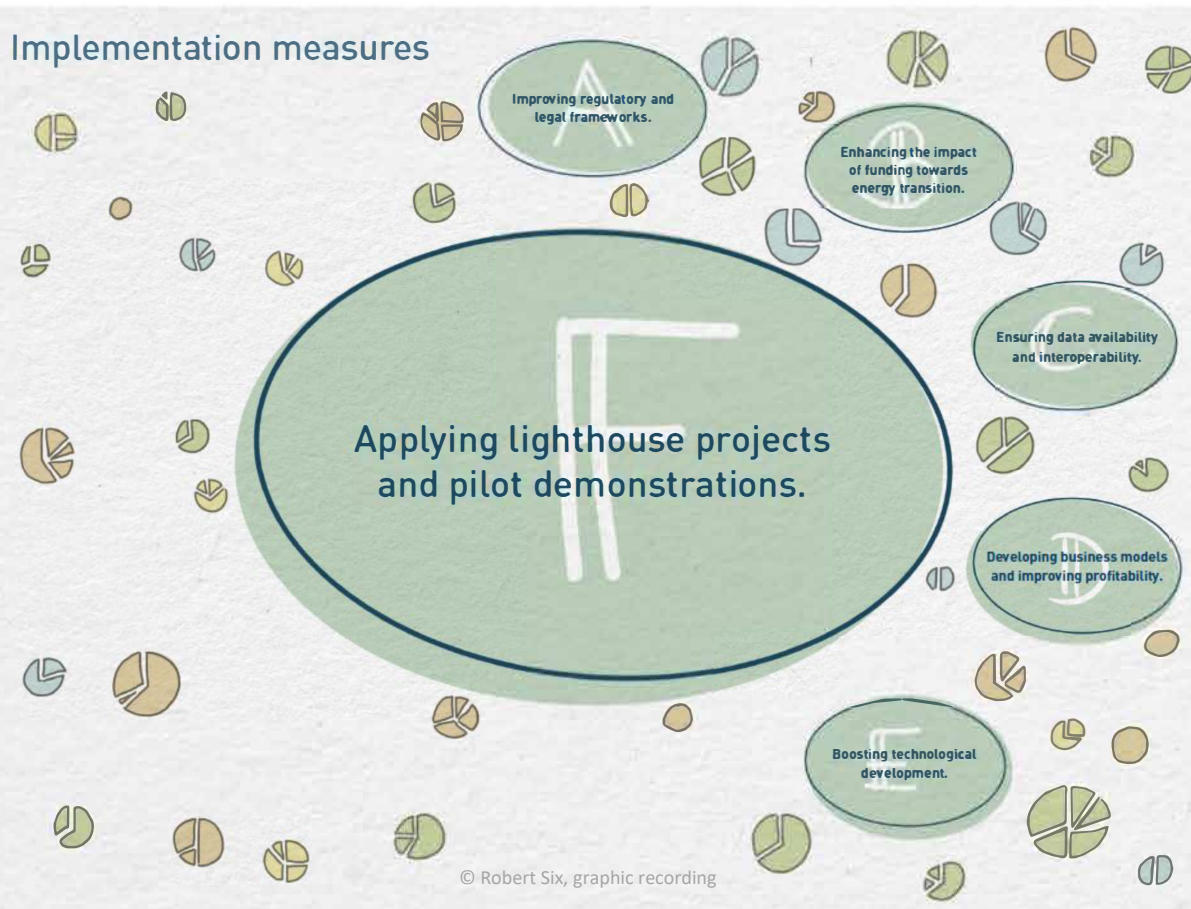
- improvement of technical performance parameters (e.g. power density; recharging cycles) and ecological parameters (e.g. circular economy, eco design, avoid toxic components)

Who?

- Increased research required in the field of holistic approaches (technically, economically, ecologically)



Implementation measures





Applying pilot projects and demonstrations

Why?

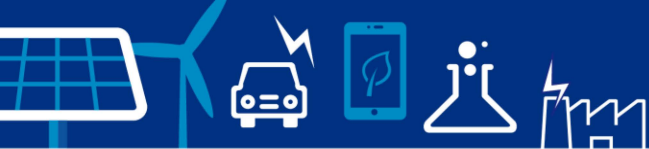
- real-life demonstrations are required to accelerate the implementation of new technologies / components

What?

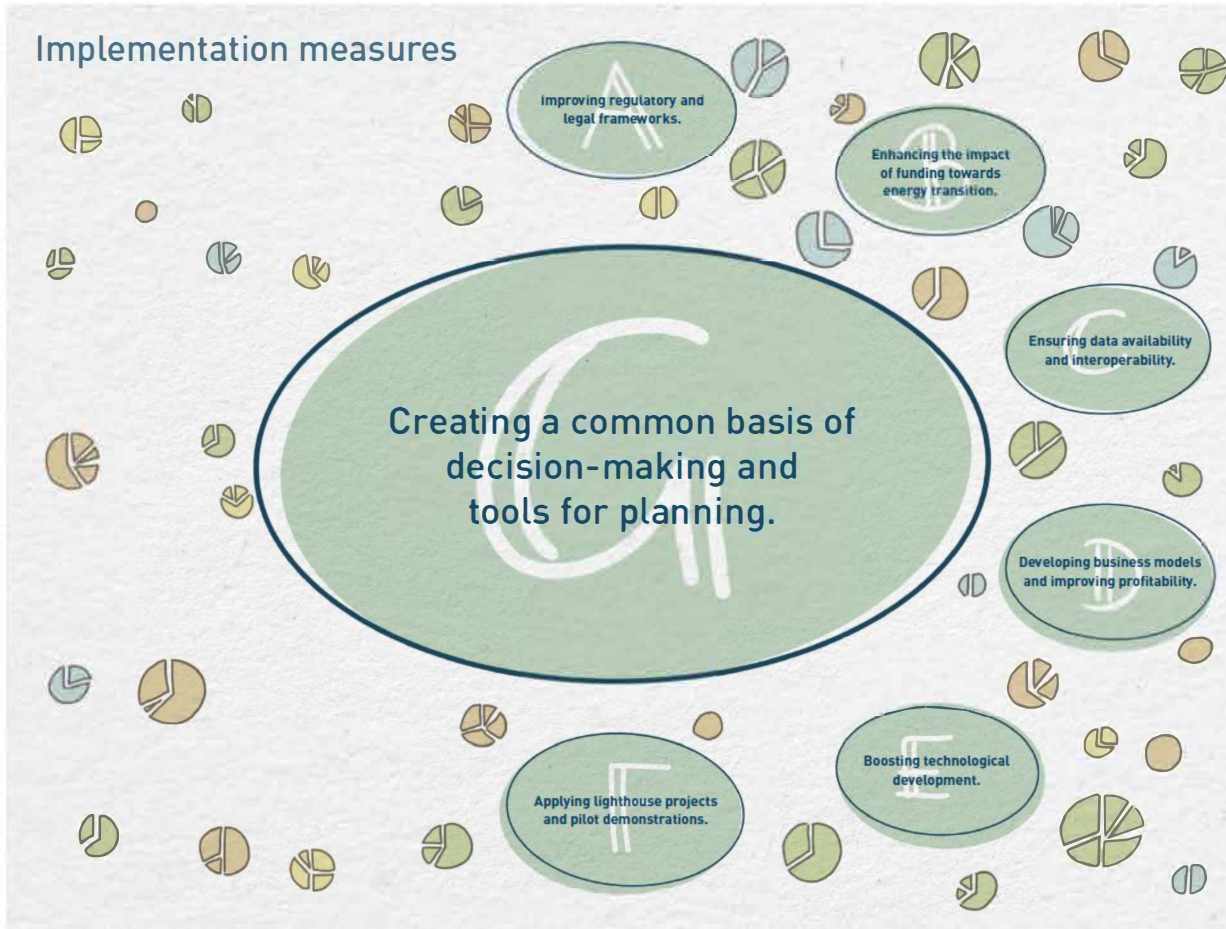
- Creation of innovative approaches (e.g. tax benefits, investment subsidies) in order to implement innovative technologies and systems on a real scale and to demonstrate their feasibility

Who?

- R&D Community / Ministries: Supporting corporate partners in the conception and submission of corresponding demonstration and pilot projects as well as accompanying research



Implementation measures





Creating a common basis of decision-making and tools for planning

Why?

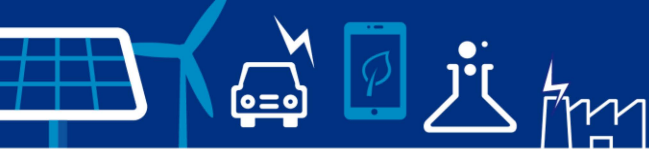
- The energy transition is becoming increasingly complex

What?

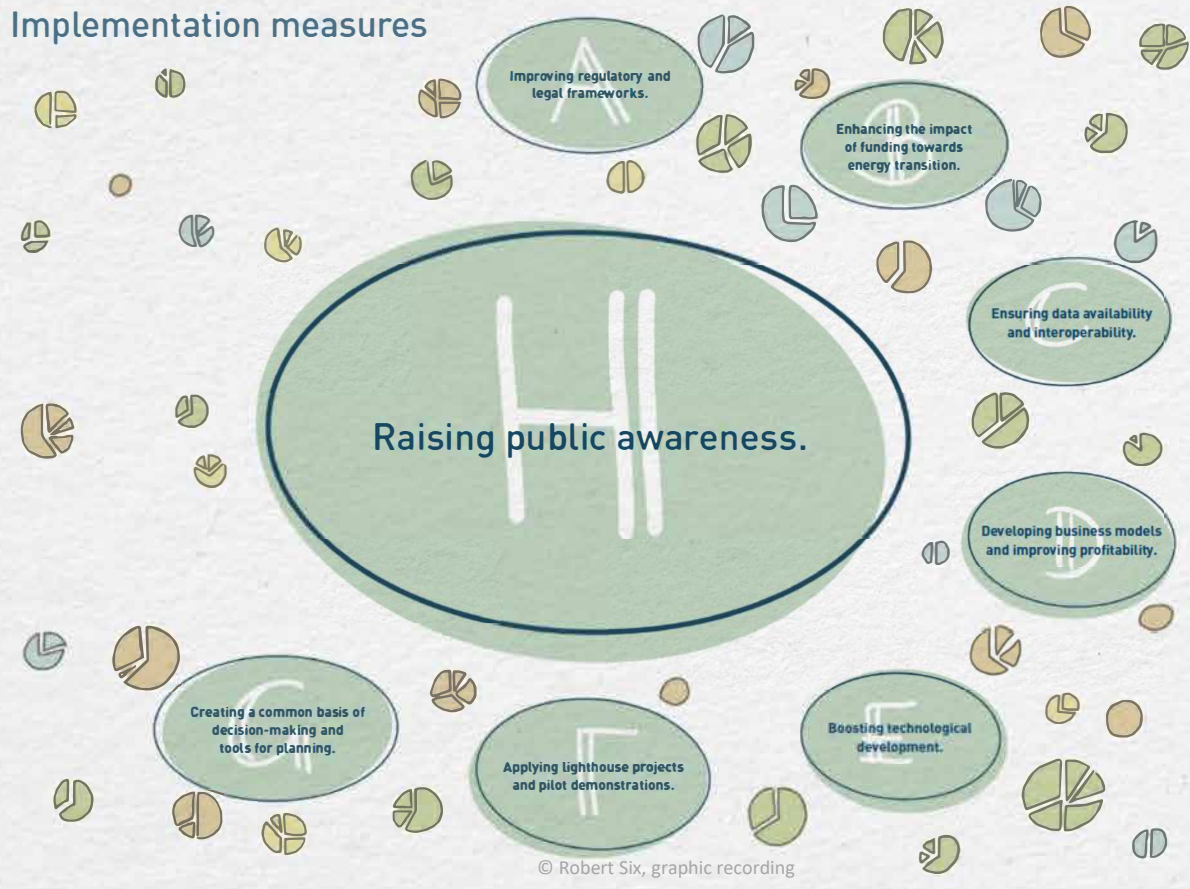
- There is a need for planning tools that can be used on different levels (building, district, settlement, region, ...) and provide a comprehensible basis for decision-making for the use of storage systems

Who?

- Funding agencies: Design of corresponding R&D tenders in order to develop planning tools based on the storage requirement assessment and operational planning



Implementation measures





Raising public awareness

Why?

- it takes a broad public to achieve the goals of the energy transition

What?

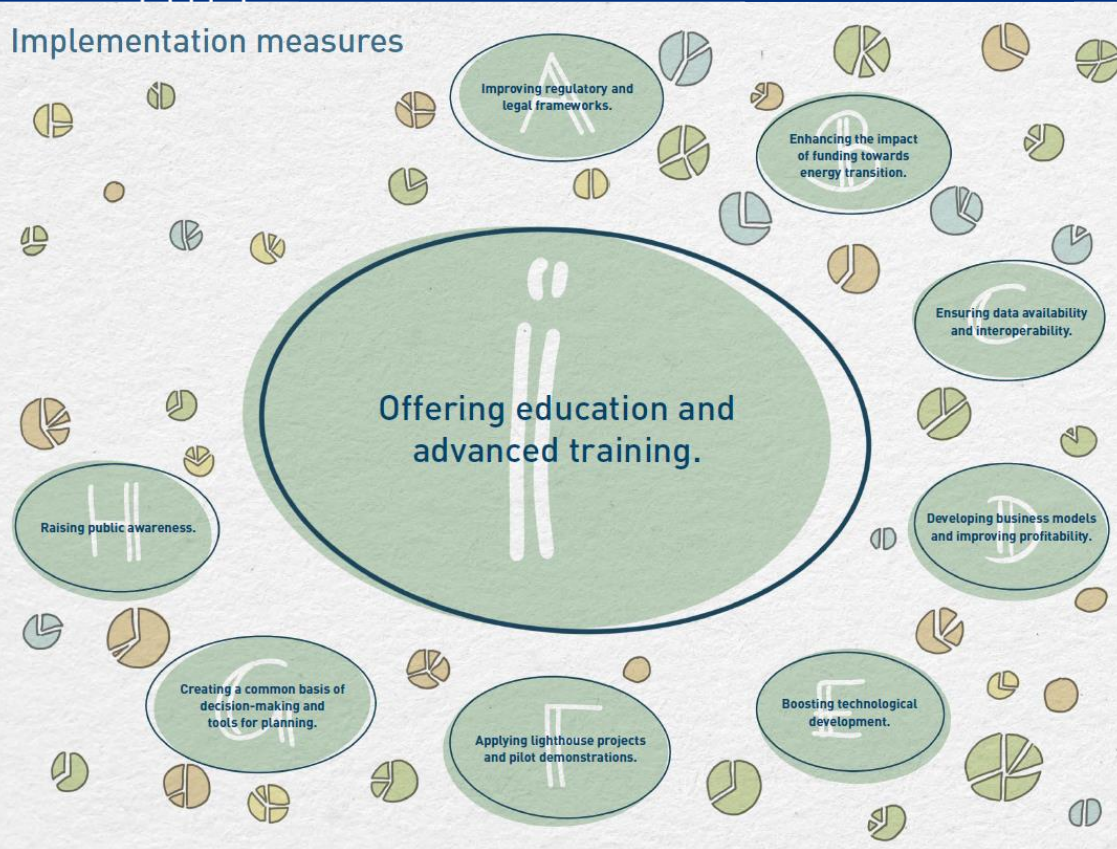
- Specialists are required at the interface to the customers
- Obligation to involve users in research projects (e.g. by means of co-creative workshops) as well as broad-based dissemination activities

Who?

- More open innovation & participation needed



Implementation measures





Offering education and advanced training

Why?

- Difficult to find highly trained specialists, especially for smaller companies
- There are too few university places offers from technical colleges and universities
- Particularly in the secondary level and in teaching: create offers, revise training content

What?

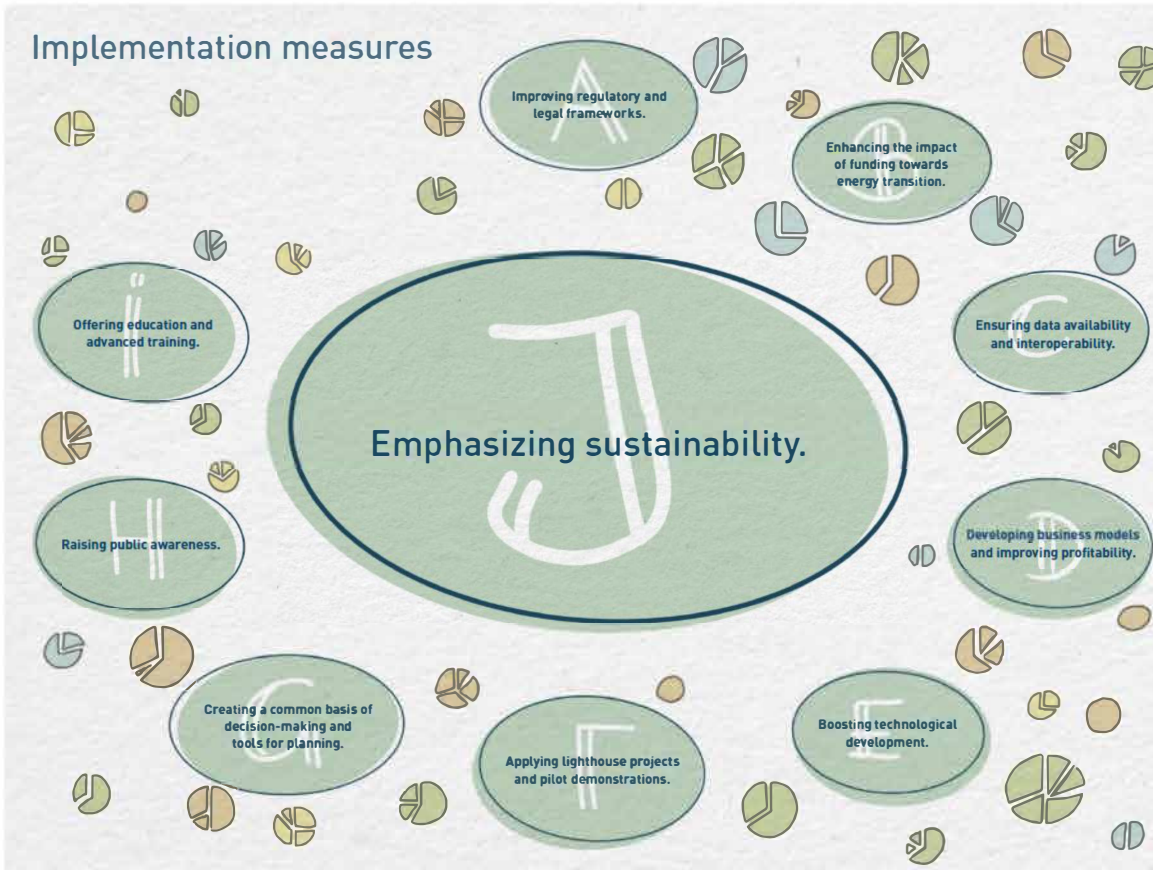
- Increasing the number of places available in the field of renewable energy at universities of applied sciences in order to be able to provide sufficient skilled workers

Who?

- Federal guild, education sector, ministries, enterprises, R&D



Implementation measures





Emphasizing sustainability

Why?

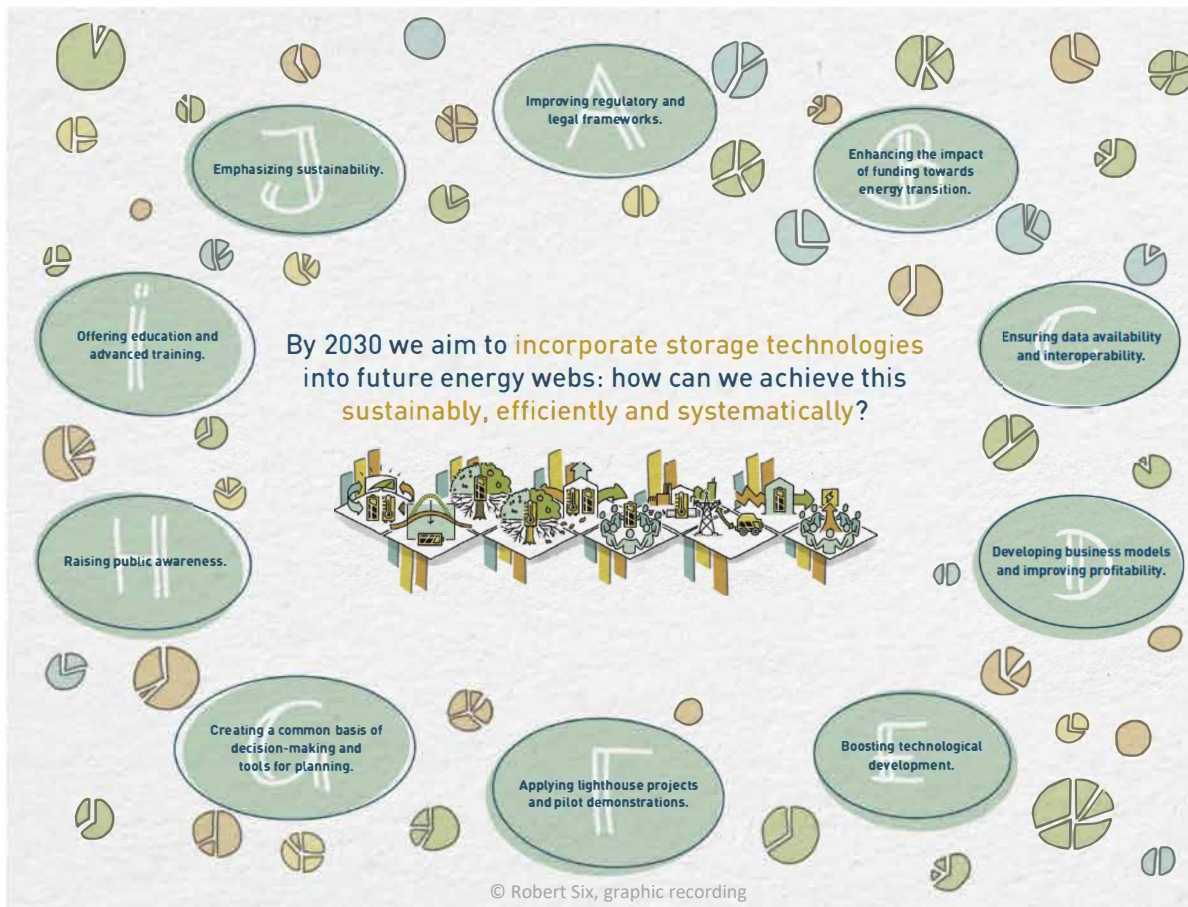
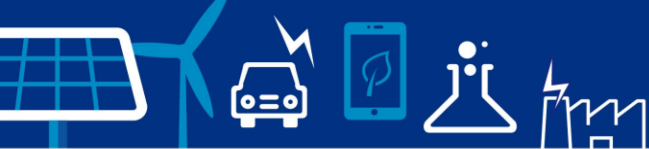
- energy storage systems are not inherently sustainable
- Especially social and ecological aspects are often neglected, but extremely relevant for broad implementation

What?

- Assessment of the contribution of technologies to sustainable development is necessary (e.g. via LCA, technology assessment) recognizing social impacts/aspects)

Who?

- Design of corresponding interdisciplinary research activities e.g. to develop assessment methods with social and ecological criteria too





contact:

Mag. Heinz Buschmann MSc. (Klima- und Energiefonds)

Leopold-Ungar-Platz 2/ Stiege 4. OG / 1190 Wien

Tel.: +43 1 585 03 90-32

E-Mail: Heinz.Buschmann@klimafonds.gv.at

Web: www.klimafonds.gv.at