

in cooperation with
RWTHAACHEN
UNIVERSITY



INTERNATIONAL JOINT MARKET AND TECHNOLOGY STUDY ENERGY STORAGE SYSTEMS

- Markets and market potentials
- Technologies and their readiness
- System configurations, components, materials
- Applications and use cases, supply chains, player
- Business models



“In terms of megawatt-hours, the U.S. market grew 284 percent in 2016 alone and deployment of energy storage systems through 2017 looks set for exponential growth again.”

Energy Storage Association



Prognosis: France will triple Energy Storage Capacity until 2020.

www.iwr.de, 2017

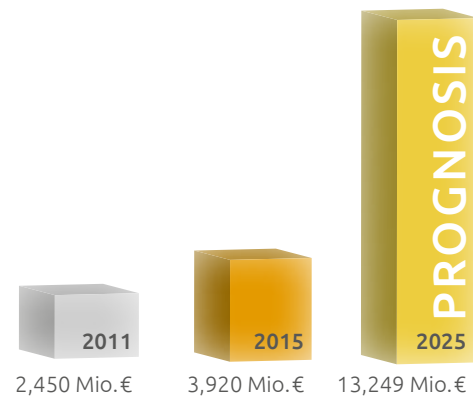
“We’re only seeing the very beginnings of what the energy storage market is going to look like. Important issues surrounding how energy storage participates in electricity markets [haven’t] even begun to take shape in most places.”

Navigant Research, 2016

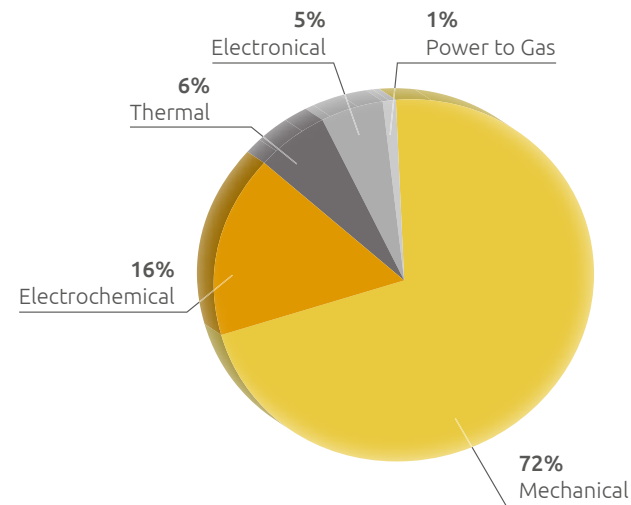
MOTIVATION

ENERGY STORAGE SYSTEMS will be one of the most attractive growth markets

Market Volume in Germany*



Distribution of Global Market Volume*



*Source: www.statista.com (2015)

Industrial demand for knowledge regarding

- Markets and market potentials
- Technologies and their readiness
- System configurations
- Components, materials
- Applications and use cases
- Supply chains, player
- New business models
- General business opportunities



PROJECT OBJECTIVES

Basis for Business Development



Technology and Market Knowledge

- For a target-orientated development and in order to open up new business areas a well-founded **basis for strategic decisions** is required
- In order to benefit from booming markets, it is necessary to build up a **technical expertise**, accompanied by a well-grounded **knowledge of market specific information**

Target Groups

- Material supplier
- System producer
- Service provider
- End users

Addressed Questions

- What kinds of **technologies** exist and what **readiness level** do they have?
- Which different types of **system configurations** are used today for each storage technology?
- What **materials** are processed?
- What are the enabling key-technologies?
- What are the **use cases** and **application criteria**?
- How big are the **economic potentials**?
- Who are the **key-players** and how are the **value chains** structured?

Objectives / Results

- Providing of detailed **market insights**
- Detailed explanation of **technological state of the art** solutions
- Information about **emerging technologies** and **trends**
- Examples and impact of **new business models**
- Basis for **evaluating new business opportunities**
- **Networking** within project meetings and additional workshops with external experts
- New **cooperation opportunities** with study participants

BENEFITS FOR STUDY PARTICIPANTS

Structured Technology Overview

- Electrochemical
- Mechanical
- Thermal
- Electronical
- Power-to-Gas (P2G)

Energy Storage Systems

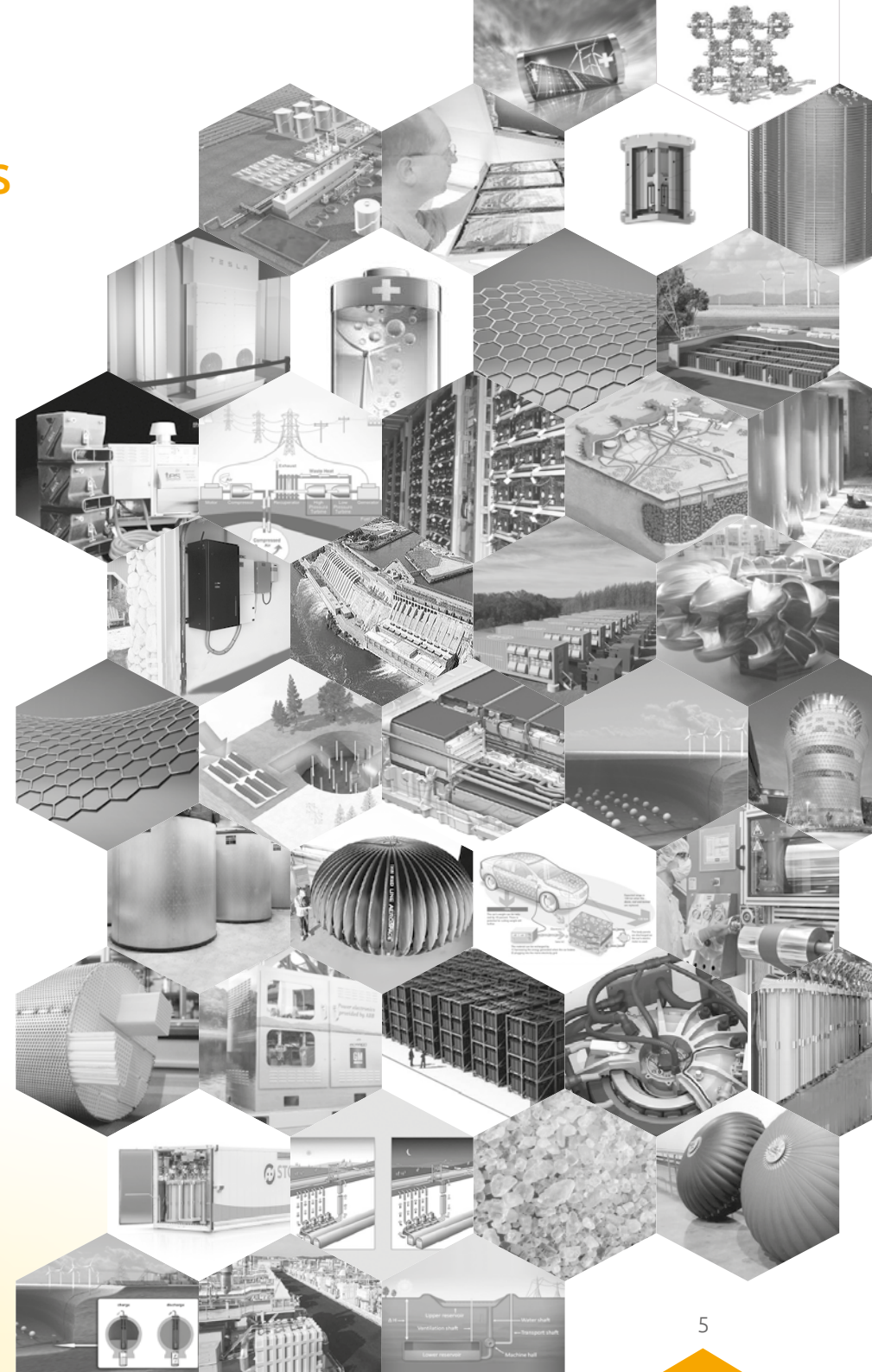
Including **existing, emerging** and **early-stage** storage and transfer technologies

Market Overview and new Business Potentials

- Evaluating and structuring of broad available international market intelligence regarding **technologies** and **applications**
- Evaluation of promising technologies regarding different applications and use cases -> Rating of promising technologies regarding different applications and **use cases** (e.g. *storage of solar and wind power, decentralized energy storage in private houses, E-Mobility, etc.*)
- Basis for **evaluating new opportunities** for business development

Community

- **Cost-sharing** of study efforts
- **Networking** with other industrial project participants from different branches and market sectors
- **Exchange** with external experts regarding different energy storage technologies
- **Entry into a long-term strategy community**, meeting regularly even after the study to evaluate cooperation opportunities





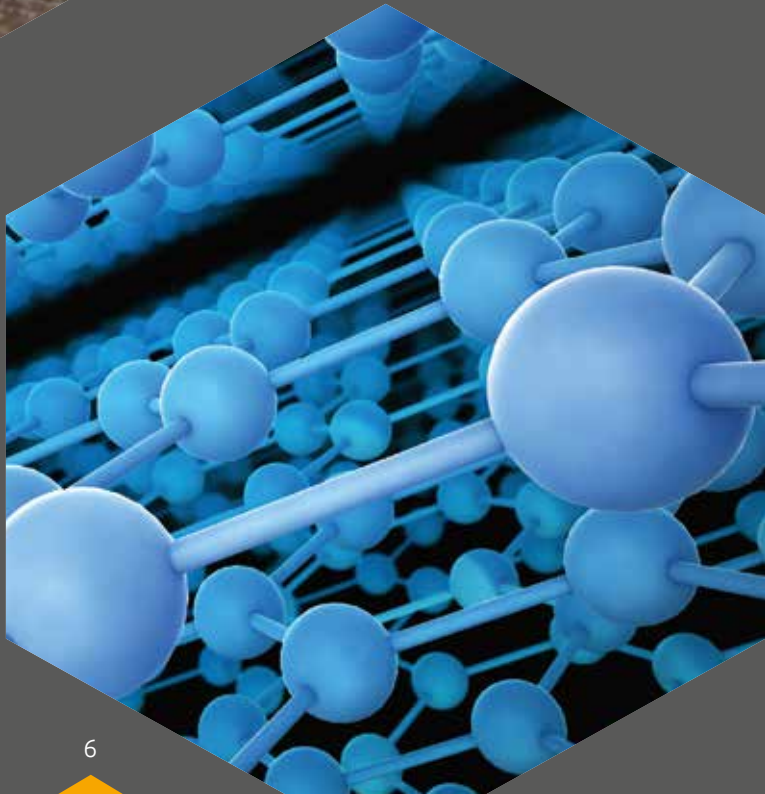
PROJECT CONTRIBUTION FOR PARTICIPANTS

Start November 2017

Contribution 8 months

Project Contribution 16,000€ per participant*

*Payment: 50% in 2017, 50% in 2018



TIMELINE



Markets

Content Stage 1

- Kick-off questionnaire
- Market segmentation
- Use cases and applications
- Market sizes and growth potentials
- Players (end users and system provider)

Technologies

Content Stage 2

- Detailed technology studies including:
 - technologies and their readiness
 - system configurations,
 - components
 - materials

Supply Chains, Business Models

Content Stage 3

- Analyses of supply chains
- Examples and impact of new business models



Kick-off questionnaire



Workshops with partners/experts



Final meeting

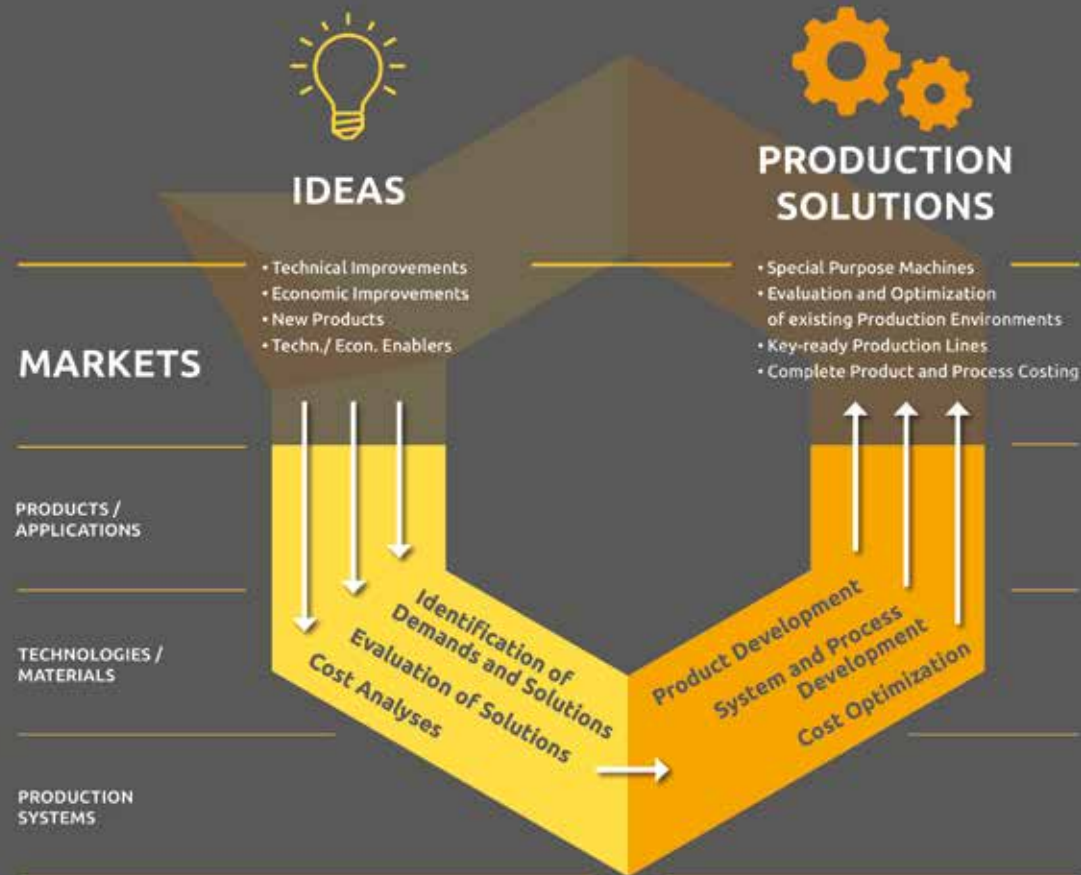


ABOUT CONBILITY®

We are convinced that great ideas for new products arise every day that could improve the lives of many people. Unfortunately a majority of these ideas never come into existence just because of missing knowhow about market opportunities, materials, production technologies, or holistic costing evaluation to inspire new ideas and make them economically producible.

That is exactly what we want to change. We are Conbility®, the first Idea to Production solution provider. We combine market and technology knowledge along the entire value chain, as well as high expertise and a large network in terms of technologies.

HOLISTIC APPROACH: FROM IDEAS TO PRODUCTION



AACHEN POOL OF INGENUITY

CONBILITY® is located in Aachen, Germany, at the border triangle of Germany, Belgium and the Netherlands. We are using our strong network at the RWTH Campus, which is one of the biggest research landscapes in Europe for enterprises and research institutions. Here, 260 research institutes and more than 4,500 scientists develop the most advanced applications, materials and production methods on over 800,000 m². The close connection and involvement in research and development projects guarantees continuous improvement of our products and to offer a wide range of services.

Within the Joint Market- and Technology Study on “Energy Storage Systems” we will involve the relevant experts from this network to provide cutting-edge results with our well proven approach and methodology for market driven technology analyses.



REPLY FORM

Please answer at the latest by October 15th 2017
by fax: +49 241 8904-6150 or by email: info@conbility.com



Company

Name

Email



We are interested in participating in the study and would like to receive a detailed project offer.



Please contact us: We would like to discuss the details in person.

PURCHASE



We are already convinced and will participate in the Market and Technology Study "Energy Storage Systems".

Hereby we order the participation in the study bindingly.

PROJECT CONTRIBUTION: 16,000€ (EXCL. VAT)

Payment: 50% in advance after receipt of order (Nov. 2017), 50% at the end of the project (2018). Note: All payments are due within 30 days of receipt of the invoice without deduction. The purchase tax, according to the applicable statutory tax rates is to be added to the fees (currently 19%).

Customer-specific purchase order number: _____

*VAT number only for customers
within the EU (except for Germany)*

VAT number: _____

Date

Name, Signature

**The project will start in Nov. 2017,
if a minimum of 20 companies
place an order.**

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