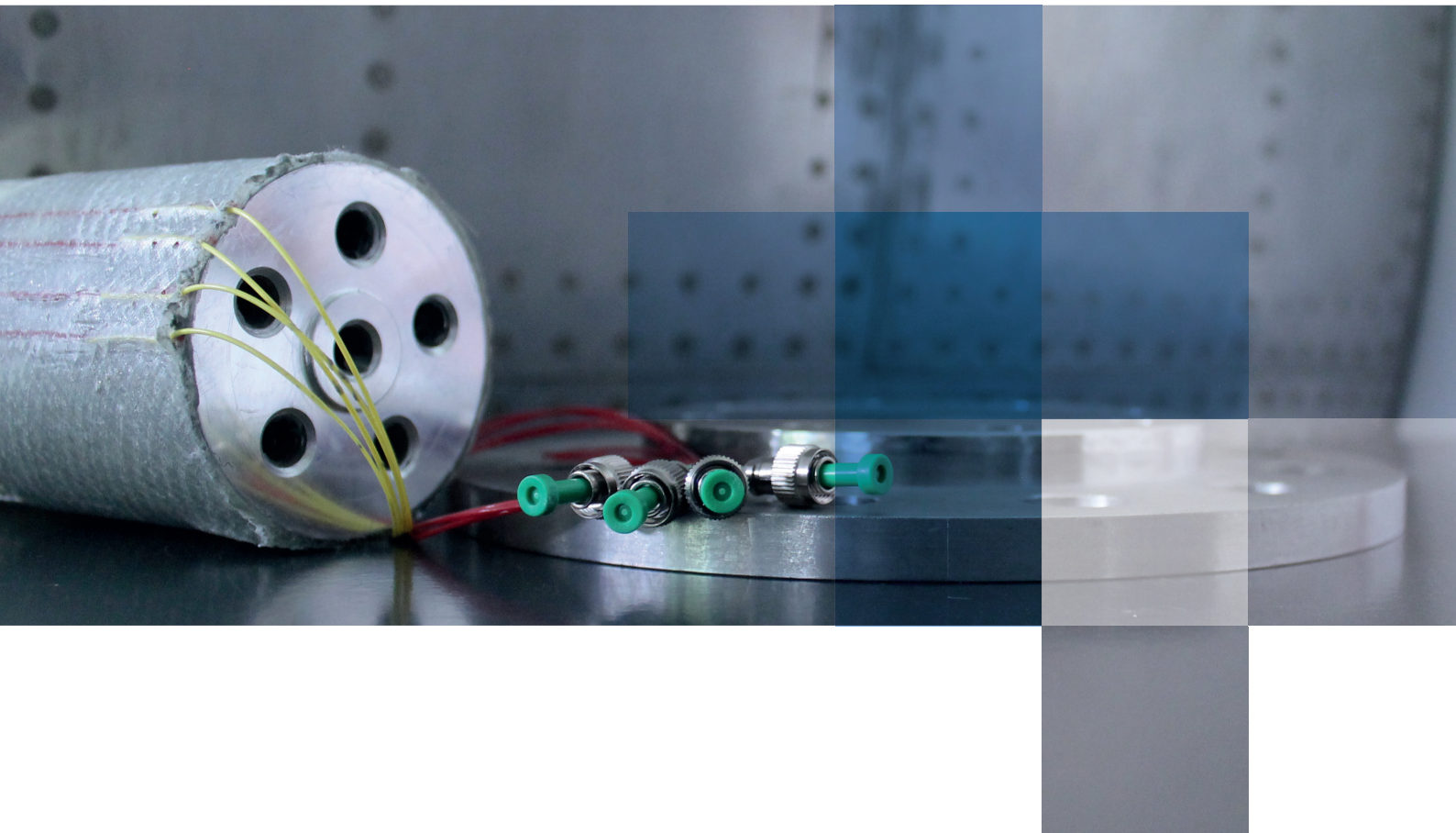




**SMART  
SENSING  
SYSTEMS**



Consortium Project

# 5G and Energy Systems for Smart Sensing Systems

# Communication Systems (including 5G) and Energy Systems for Smart Sensing Systems

Utterly important for the use and creation of smart sensing systems is sensing the actual state of the structure at important points within the structure. In order to specifically meet the communication and energy supply demands of smart sensing system structures, a broad overview over applicable communication standards including 5G as well as energy supply options in wired and wireless applications will be discussed in this study.

For my application:

**What is the best communication standard?**

- Data rate
- Latency
- Number of clients
- Interoperability
- Covering range
- Radio environment
- Temperature
- Energy demand
- Size
- Cost (initial & running)

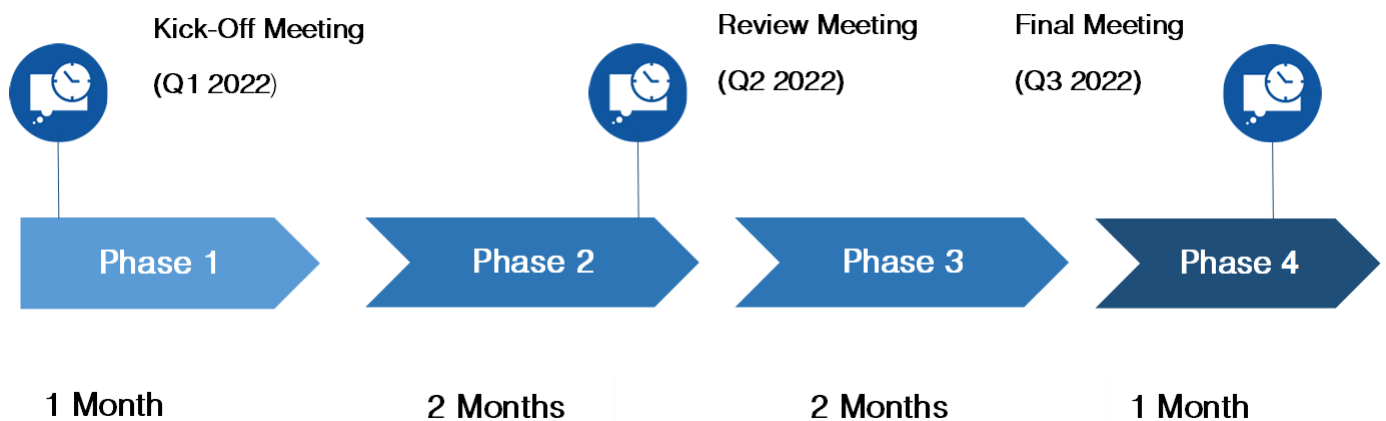
**What is the best energy supply option?**

- Power per size and weight
- Power per cost
- Necessary maintenance intervals

➔ Choose the 'right' and best Communication and Energy solution for your application!



# Project content and process



## Phase 1: Detailed definition of Contents

- Which communication and energy standards are interesting and suitable in the context of Smart Sensing Systems?
- What other standards should definitely be covered?

## Phase 2: Analysis of Communication Standards

- What communication method is suitable for which application?
- Clear portrayal of suitable communication methods depending on the overall conditions

## Phase 3: Analysis of Energy Supply Systems

- What energy supply system is suitable for which application?
- Clear portrayal of suitable energy supply systems depending on the overall conditions

## Phase 4: Writing and Summary

- Preparation of the study results in one combined document
- Format and portrayal will be chosen with the participants

# Project Summary



Participation fee per partner:  
6500\* €

Center members receive discount

\* (excluding the travel costs)



**Kick-Off Meeting:** Q1 2022 in Aachen  
Duration: 6 Months



## Challenges:

- High number of communication standards and solutions
- Continuous standardization and subsequent development



## Project Goals:

- Communication and energy system handbook for Smart Sensing Systems
- Overview of suitable standards depending on the application
- Exemplary requirement case and solution

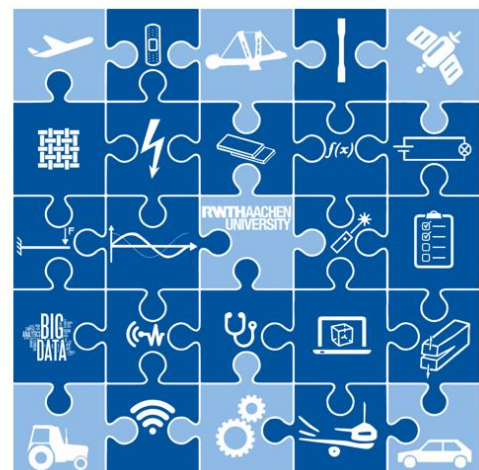


## Benefit for the partners:

- Communications-Matrix and Energy Supply Matrix
- Participation in shaping the study's contents and portrayal
- Three meetings (digital or in person) about suitable communication standards and energy supply solutions

## Why to be a partner by Consortium projects of Center Smart Sensing Systems?

Our action	Your benefit
<ul style="list-style-type: none"> <li>▪ Providing innovative and short-term projects in the field of Smart Sensing Systems</li> </ul>	<ul style="list-style-type: none"> <li>▪ Cooperation in the formation of the consortium projects based on the need of your company</li> </ul>
<ul style="list-style-type: none"> <li>▪ Considering the focal points of the joint partners in the projects</li> </ul>	<ul style="list-style-type: none"> <li>▪ The multifaceted impact on partners occurring during a collaborative effort</li> </ul>
<ul style="list-style-type: none"> <li>▪ Organising and implementing the projects by the Center Smart Sensing Systems experts</li> </ul>	<ul style="list-style-type: none"> <li>▪ Cost sharing of the projects</li> </ul>
<ul style="list-style-type: none"> <li>▪ Providing review process at different phases of the project</li> </ul>	



## Contacts



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