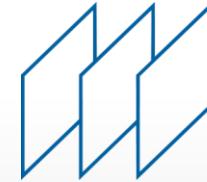


Excellence  
Lab  
Bavaria  Ethiopia



Bavarian  
Research Alliance

# Excellence Lab: Boosting Research and Innovation Cooperation between Ethiopia and Bavaria in the Energy Sector

February 16, 2020

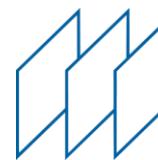
Online Workshop

09:00 – 11:30 hrs (CET), 11:00 – 13:30 (EAT)

Moderation: Rahel Belete (Kilimanjaro Innovation Hub), Thomas Ammerl (BayFOR)

@WKSBayernAfrika  
#ExcellenceLab

## Welcome addresses, workshop introduction and objectives



Bavarian  
Research Alliance



Bavarian Office for Africa  
Bayerisches Afrikabüro in Addis Abeba



<https://kilimanjarohub.com/>



[@WKSBayernAfrika](#)



[Scientific Coordination Office](#)  
[Bavaria-Africa](#)

# Horizon Europe and rules of participation

Melanie Schulte (BayFOR)

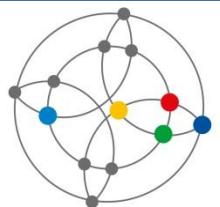
## What is Horizon Europe?

EU's key funding programme for research and innovation  
with a budget of **€95.5 billion**



## Horizon Europe's key objectives

- **green** Europe shall become a climate-neutral continent with support of Horizon Europe
- **digital** Digitalization shall be advanced with support of Horizon Europe
- **innovative** Horizon Europe invests in new knowledge and transfer into industry
- **open** Horizon Europe is open for international participation
- **resilient** Research and Innovation will contribute to the resilience of the economy and society
- **participative** (Civil) Society will be more involved and participating than before



#### Horizon Europe Framework Programme (HORIZON)

Call

[Sustainable, secure and competitive energy supply \(HORIZON-CL5-2022-D3-02\)](#)

See budget overview

## International p:

### 1. General op

### 2. Calls flagge

### 3. Calls flagge

Type of action  
**HORIZON-RIA HORIZON Research and Innovation Actions**

Type of MGA  
**HORIZON Action Grant Budget-Based [HORIZON-AG]**

Forthcoming

Deadline model  
**single-stage**

Planned opening date  
**26 May 2022**

Deadline date  
**27 October 2022 17:00:00 Brussels time**

#### Topic description

##### ExpectedOutcome:

Project results are expected to contribute to all of the following expected outcomes:

- Reinforce the activities in the long term the AU-EU HLPD CCSE Partnership.
- Provide knowledge and scientific energy system modelling as evidence base including the environmental, social and economic trade-offs to contribute to R&I strategy and policy making.
- Increase clean energy generation in the African energy systems.
- A permanent network of African experts and expertise in this area.

##### Scope:

The topic is contributing to the activities of the AU-EU High Level Policy Dialog (HLPD) Climate Change and Sustainable Energy (CCSE) partnership. Current models are based on developed country standard and usage. The development of energy system models tailored to the specific African social, economic and regulatory environment is crucial for energy generation system planning and for energy policy development. Today African countries are relying heavily on developed country models and expertise.

Therefore, the proposal should develop and test models for decision makers and planners to design and evaluate energy system(s) with a high penetration of renewable energy generation in African countries through a regional approach. Considerations are to be given to climate neutrality of cities and industries, using no fossil fuels. A focus should be made on the introduction of clean energy technologies. The tests should be done for at least two base cases.

Proposals should include activities to coordinate with the project(s) to be selected under the topic HORIZON-CL5-2021-D3-03-01.

Actions should promote the highest standards of transparency in model adoption, including assumptions, architecture, code and data. The outcome of the project should be widely disseminated and all the source codes of the whole model to be open source and open access to stimulate future development. To ensure future uses, African experts in energy and in models development should be full partners in the project. The project should identify further local training needs.

The project should make use of existing European activities to create synergies and cross-fertilisation.

The project will contribute to the work of the AU-EU HLPD CCSE partnership through networking activities with existing projects.

#### Cross-cutting Priorities:

International Cooperation  
Africa

## Horizon Europe's Africa Initiative\*



### Public Health



#### General information

Programme  
[Horizon Europe Framework Programme \(HORIZON\)](#)

See budget overview



Call  
[Sustainable, secure and competitive energy supply \(HORIZON-CL5-2022-D3-02\)](#)

Forthcoming



Type of action  
[HORIZON-RIA HORIZON Research and Innovation Actions](#)

Type of MGA  
[HORIZON Action Grant Budget-Based \[HORIZON-AG\]](#)



Deadline model  
single-stage

Planned opening date  
26 May 2022

Deadline date  
27 October 2022 17:00:00 Brussels time

\*[Horizon Europe Africa Initiative Calls](#)

## HORIZON-CL5-2022-D3-02-02: AU-EU Energy System Modelling\*

Expected outcome:

- Reinforce activities in the [AU-EU CCSE Partnership](#)
- Provide knowledge & scientific energy system modelling as evidence base (incl. Environmental, social, economic trade-offs) to contribute to the R&I strategy and policy-making
- Increase clean energy generation in the African energy systems
- Permanent network of African experts and expertise in this area

\*[HORIZON-CL5-2022-D3-02-02 on Funding and Tenders Portal](#)

## HORIZON-CL5-2022-D3-02-02: AU-EU Energy System Modelling\*

Scope:

- Current energy system models are based on developed country standard & usage
- Tailoring to specific social, economic, regulatory environment is needed for energy system planning and energy policy development

\*[HORIZON-CL5-2022-D3-02-02 on Funding and Tenders Portal](#)

## HORIZON-CL5-2022-D3-02-02: AU-EU Energy System Modelling\*

The proposal should:

- develop and test models for decision-makers and planners to design and evaluate energy systems with high share of RE in a regional approach
- Coordinate activities with projects of the topic [HORIZON-CL5-2021-D3-01](#)
- Highest standards of transparency in model adoption
- Project outcomes should be widely disseminated
- The source codes of the model must be open source and accessible
- Ensure future use of results by African energy experts as full project partners
- Identify further local training needs
- Make use of existing EU activities to create synergies and cross-fertilization

\*[HORIZON-CL5-2022-D3-02-02 on Funding and Tenders Portal](#)

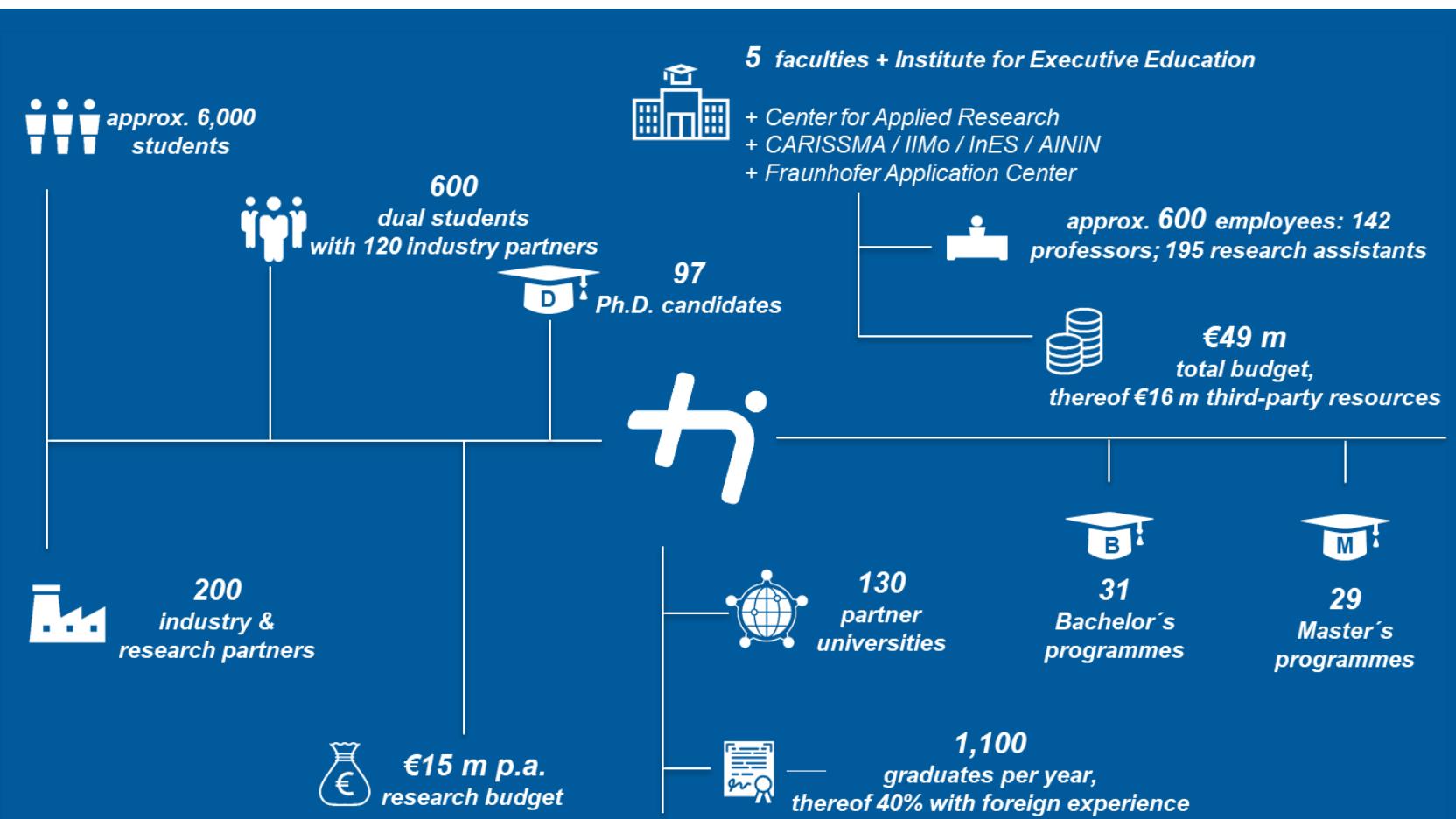
## Horizon Europe's synergies with other funding programmes

- [African Research Initiative for Scientific Excellence \(ARISE\)](#)
- [ACP Innovation Fund](#)
- [ERASMUS+](#)
- [INTPA Grants](#)

# Successful AU-EU energy research projects

Stefan Schneider / Carina Fromm (THI)

# Technische Hochschule Ingolstadt: An Overview



**Name of organisation:** Technische Hochschule Ingolstadt

**City/Country:** Ingolstadt / Germany

**Research Areas:** Renewable energy technologies, applied science

**Existing Partnerships:** In Sub-Saharan Africa



Technische Hochschule  
Ingolstadt  
Institute of  
New Energy Systems

## Contact

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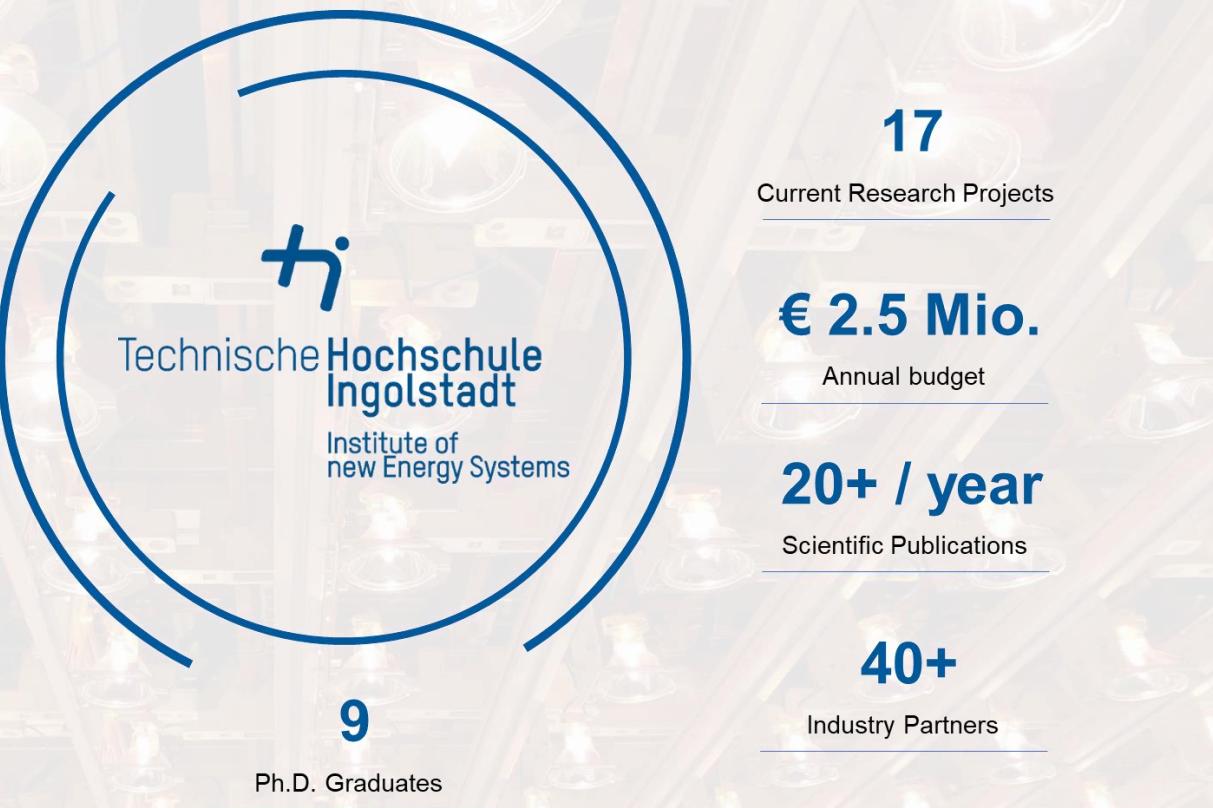
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Website: [www.thi.de/go/energy](http://www.thi.de/go/energy)

# Institute of new Energy Systems: An Overview

## Institute of new Energy Systems Facts and Figures

<b>2001</b>	Founding of the Institute
<b>4</b>	Working Fields
<b>5</b>	Professors
<b>40</b>	Researchers



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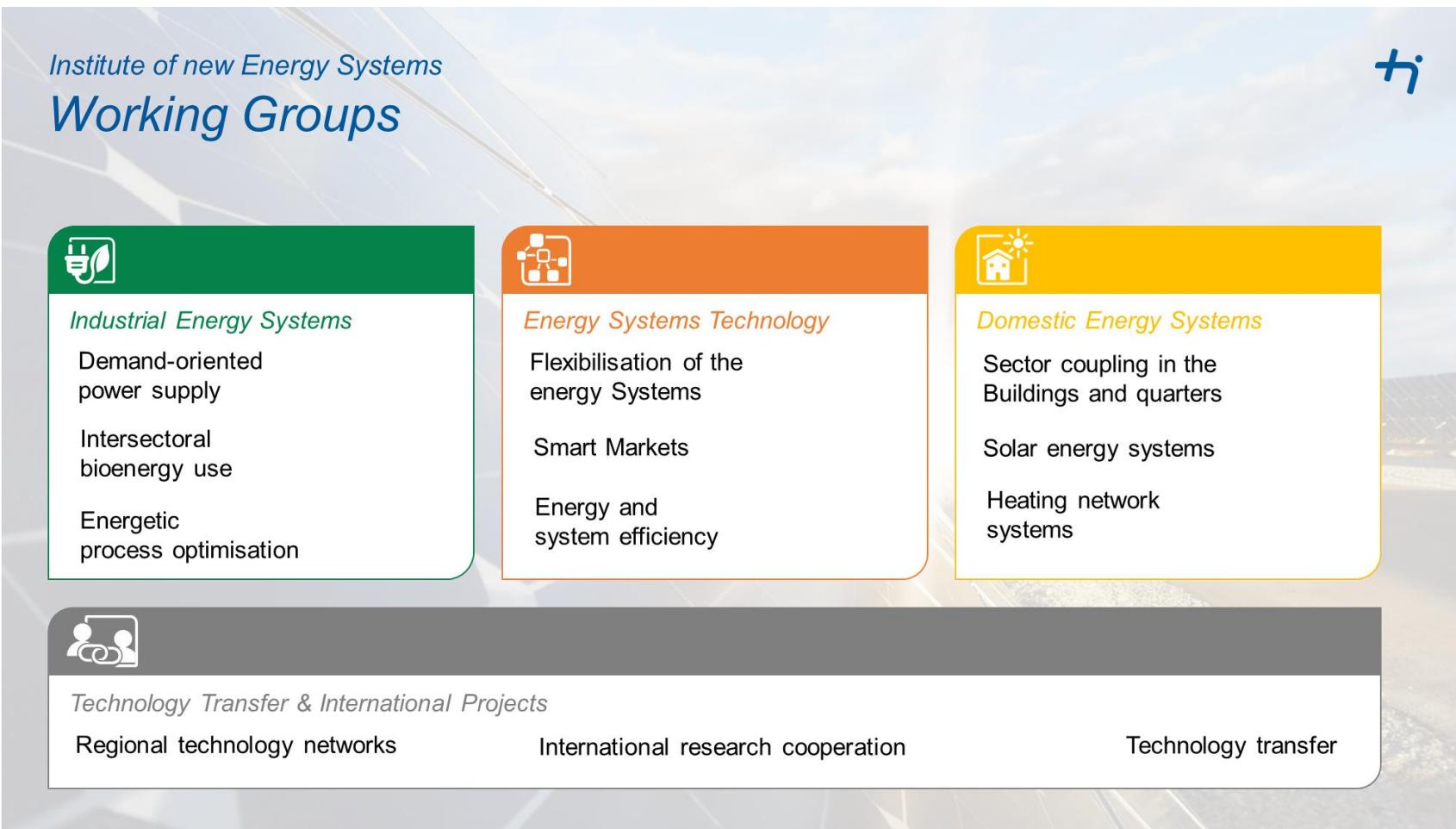
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# Institute of new Energy Systems: Working Groups



*Institute of new Energy Systems*

## Working Groups

 <b>Industrial Energy Systems</b> Demand-oriented power supply Intersectoral bioenergy use Energetic process optimisation	 <b>Energy Systems Technology</b> Flexibilisation of the energy Systems Smart Markets Energy and system efficiency	 <b>Domestic Energy Systems</b> Sector coupling in the Buildings and quarters Solar energy systems Heating network systems
--	---	---

 <b>Technology Transfer &amp; International Projects</b> Regional technology networks	<b>International research cooperation</b>	<b>Technology transfer</b>
--	---	----------------------------

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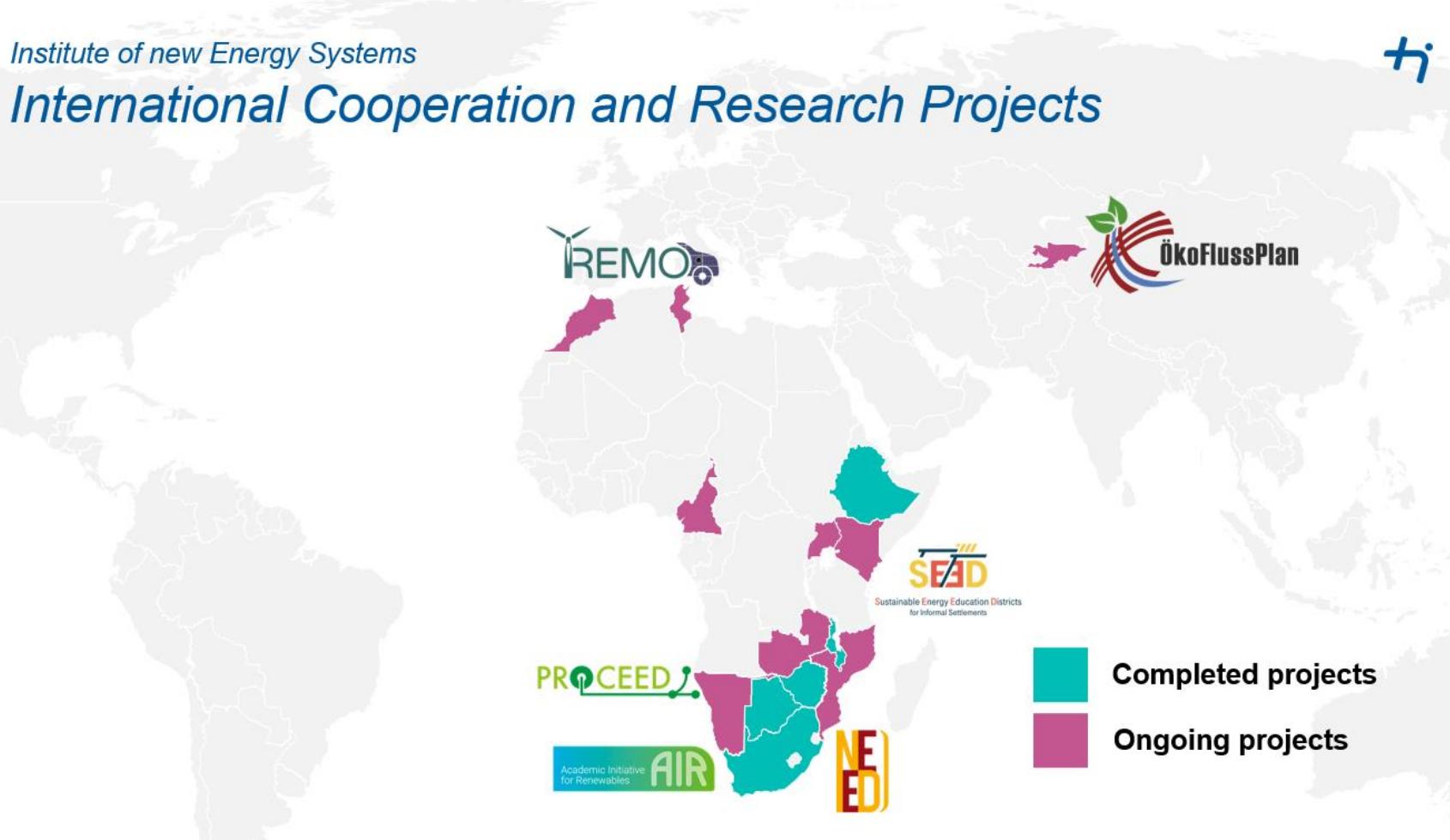
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Website: [www.thi.de/go/energy](http://www.thi.de/go/energy)

# Institute of new Energy Systems: International projects

*Institute of new Energy Systems*

## *International Cooperation and Research Projects*



**Name of organisation:** Technische Hochschule Ingolstadt

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Technische Hochschule  
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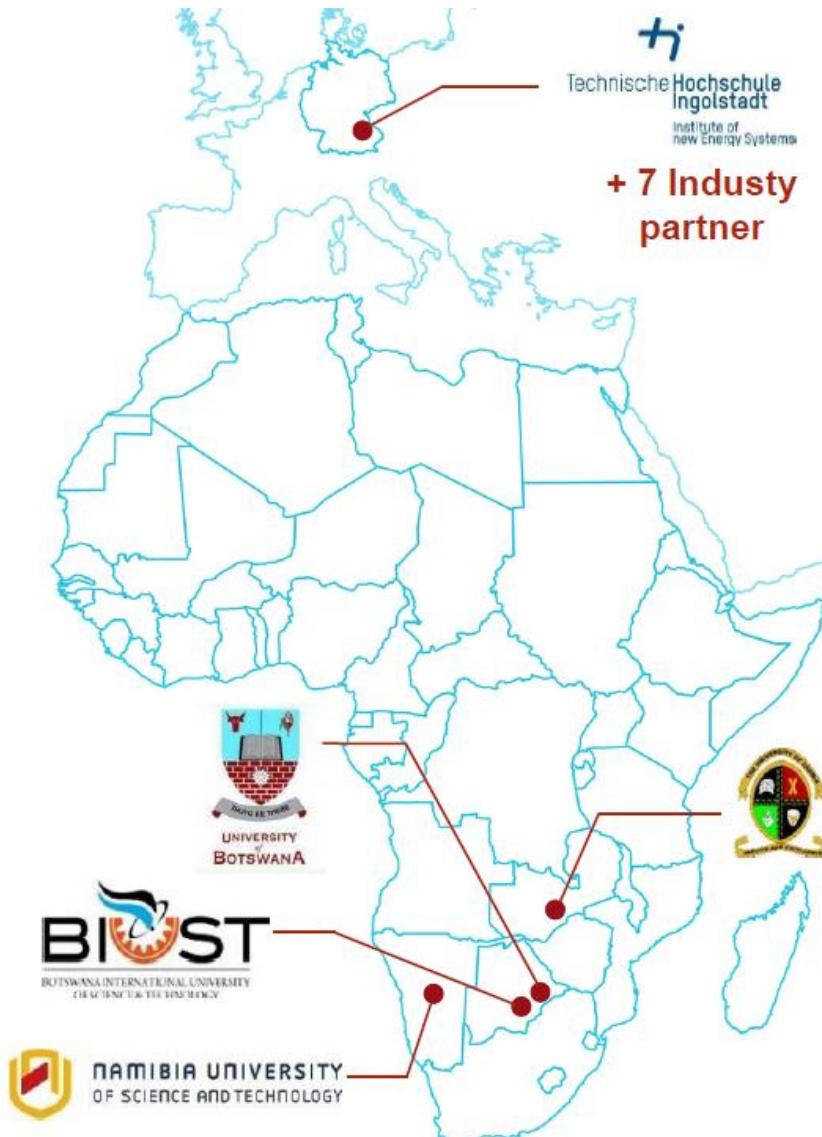
# NEED Project



Network of  
Energy Excellence  
for Development

## Project overview:

Duration	March 2014 - August 2017
Budget	1,2 Mio. €
Grant	~ 1 Mio. €
Funding institution	  



Name of organisation: Technische Hochschule Ingolstadt

City/Country: Ingolstadt / Germany

Research Areas: Renewable energy technologies, applied science

Existing Partnerships: In Sub-Saharan Africa



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# Objectives of the NEED Project



Networking of stakeholders from politics,  
academia and the private sector

Development of a dual study programme in  
the field of Renewable Energies (RE)

Cross-regional standardization of RE  
industry standards

Consensus building regarding RE research  
politics & bundling of RE research activities

Development of two model regions to promote  
sustainable energy and rural development policies

**Name of organisation:** Technische Hochschule Ingolstadt

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Technische Hochschule  
Ingolstadt  
Institute of  
new Energy Systems

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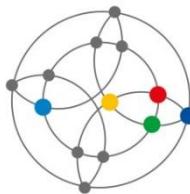
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Website: [www.thi.de/go/energy](http://www.thi.de/go/energy)



# *Thank you for your kind attention*



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International Projects  
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**Prof Wilfried Zörner Ph.D.**  
Head of Institute  
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## *Our Project Websites:*



[www.need-project.org](http://www.need-project.org)



[www.air-project.org](http://www.air-project.org)



[www.waerme-wohnen.org](http://www.waerme-wohnen.org)



[www.bmbf-client.de/projekte/OekoFlussPlan](http://www.bmbf-client.de/projekte/OekoFlussPlan)



[www.bmbf-client.de/projekte/proceed](http://www.bmbf-client.de/projekte/proceed)

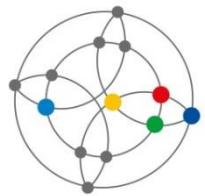


[www.seed-initiative.org](http://www.seed-initiative.org)

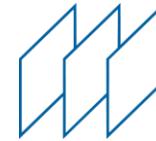
For more information: [www.thi.de/go/energy](http://www.thi.de/go/energy)

# Successful AU-EU energy research projects

Katharina Habersrunner (WECF)



Excellence  
Lab  
Bavaria Ethiopia



Bavarian  
Research Alliance

## Women Engage for a Common Future WECF International Network



Katharina Habersbrunner  
Head of Energy & Climate



Name of organisation: WECF e.V.

City/Country: Germany / Munich

Research Areas: energy communities,  
decentralized energy concepts,  
energy2business

Existing Partnerships: OCFU, GIZ Ethiopia



### Contact

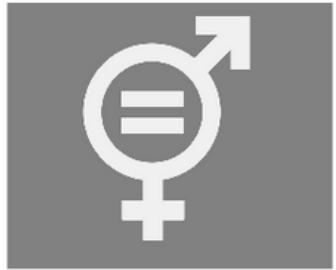
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GENDER  
EQUALITY



CLIMATE  
JUSTICE



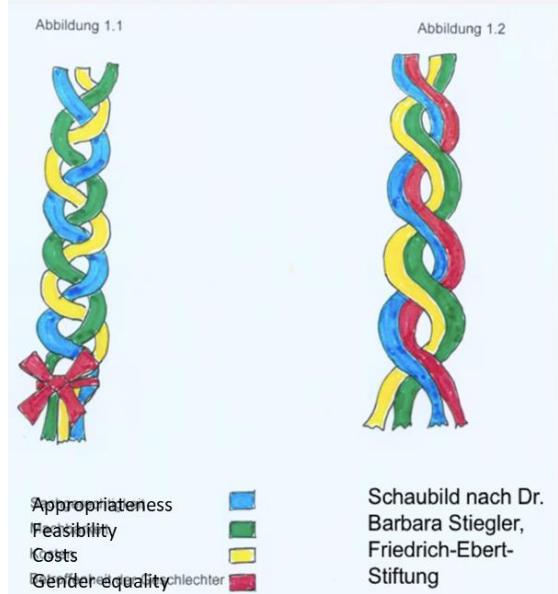
DECENTRALISED  
ENERGY



WATER &  
SANITATION



HEALTH &  
CHEMICALS



Research &  
Development

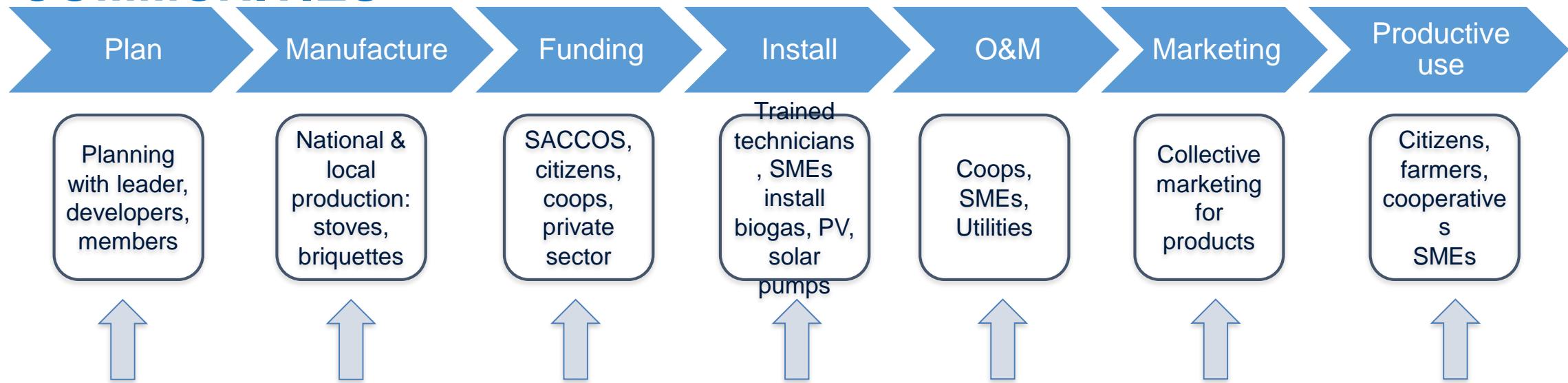
Project  
Implementation

Capacity  
Building &  
Outreach

Policy &  
Advocacy



# PROJECT IDEA: ENERGY2BUSINESS WITH ENERGY COMMUNITIES



- Empowered (energy) cooperatives take over different roles in the energy value chain
  - Using existing structures allows trustful cooperation
  - Keep know-how, social and economic benefits in the community
    - Women's empowerment
  - Socio-economic impact: resilience, market access, jobs, better health, sharing economy

# RELEVANT EXPERTISE AND IDEAS: EMPOWERING LOCAL COMMUNITIES

## Activities

- Needs assessment
- Qualification
- Renewable energy concepts
- Decentralized business concepts
- Networking and cooperation
- Advocacy
- Gender tools

## Applying Gender Tools

- |   |  |
|---|--|
|    | Gender analysis, impact assessment, data |
|    | Gender Action Plan, Monitoring           |
|    | Targets and indicators                   |
|   | Awareness, expertise and empowerment     |
|  | Gender-responsive communication          |



wecf



## Thank you for your attention!



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Kilimanjaro Innovation Hub



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