



GRMF KfW-AUC Funding Program

Dr. Horst Kreuter, CEO GeoT

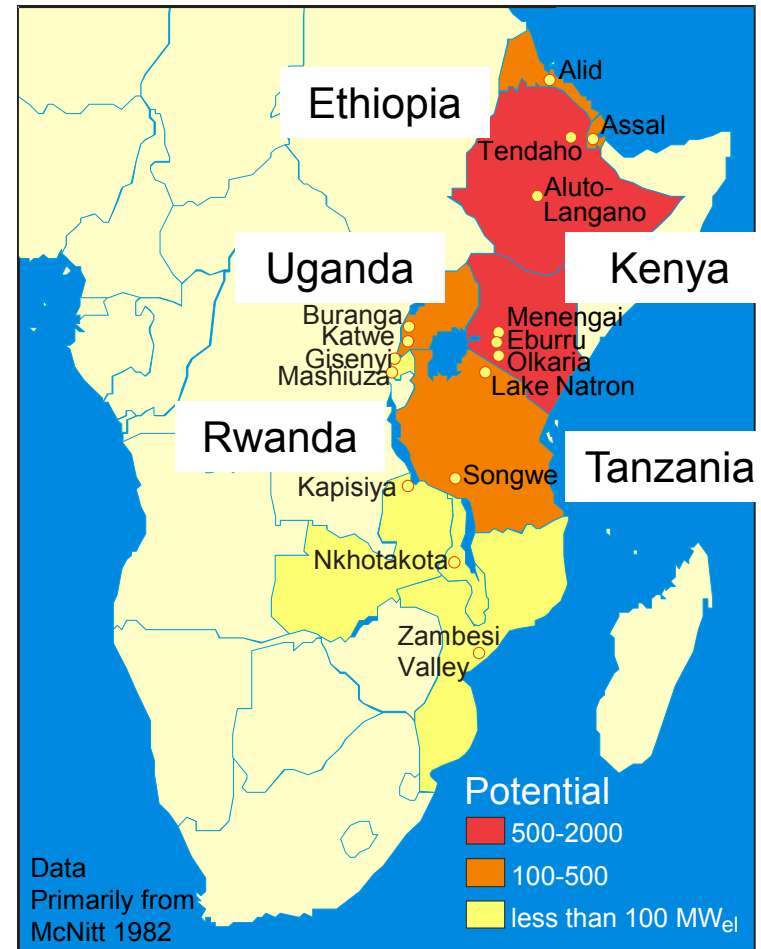


GeoThermal
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State of Geothermal Development in Region

- **Potential of 7,000 MW across region**
- **But only few operating plants:**
 - 200 MW Olkaria, Kenya
 - 7 MW Aluto Langano, Ethiopia (4MW online)
- **~ 75 prospects across five target countries**
- **View is that only Kenya has prospects ready for drilling**
- **Majority of prospects not ready for drilling**



Geothermal specific investment barriers



- Up to 15 million EUR for a set of 2 exploration wells
- Risk of failure about 30% internationally
 - in Eastern Africa maybe even higher
- Geothermal specific investment barriers:
 - High upfront capital costs, much equity needed
 - Limited availability of human/technical resources
 - Limited information and coordination



- Kenya: (Co)- Financing of Olkaria I-IV
- Indonesia: Financing of Exploration wells at Seulawah Agam
- Chile: Geothermal Exploration Programme

Objective:

To encourage public & private investors to mobilize financing for development of geothermal power plants in East Africa

Pilot Countries: Ethiopia, Kenya, Tanzania, Uganda, Rwanda

Instruments

1

Direct grants for drilling programmes

- 80 % of:
 - surface exploration costs &
 - preparatory studies
- 40 % of Drilling cost
- 20% of costs for infrastructure

2

Grant premium for successful wells

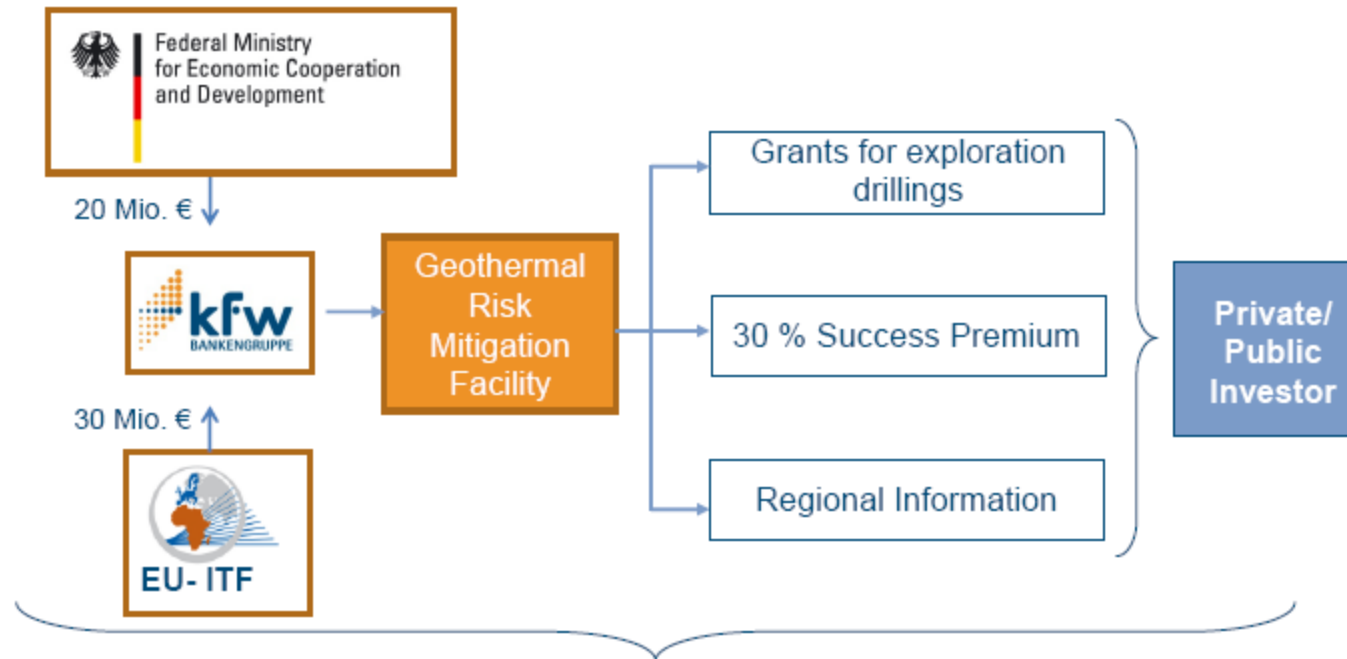
30 % of the Drilling costs if developers ensure financing of subsequent development steps within a certain period of time

3

Regional geothermal database

To reduce risks of future wells

Geothermal Risk Mitigation Facility The Design



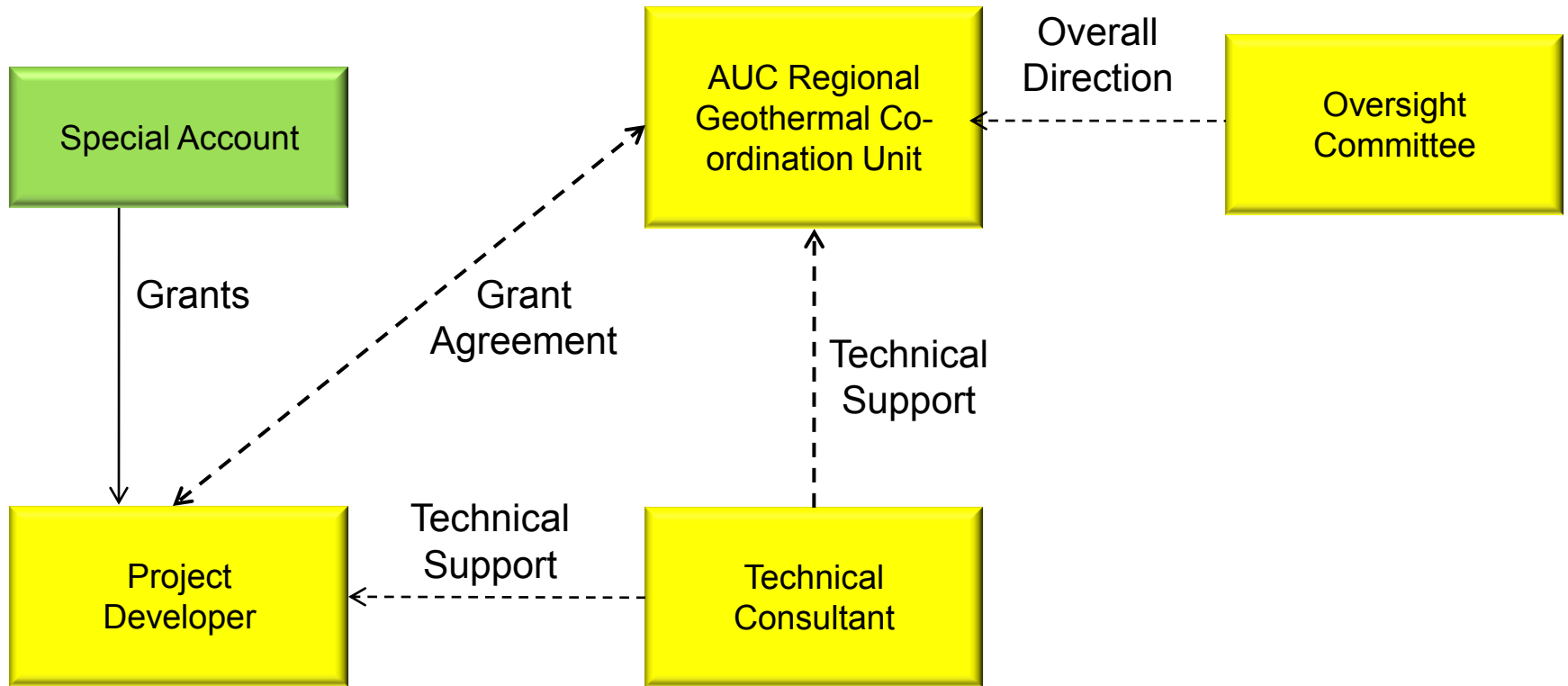
Regional Geothermal Coordination Unit (RGCU)

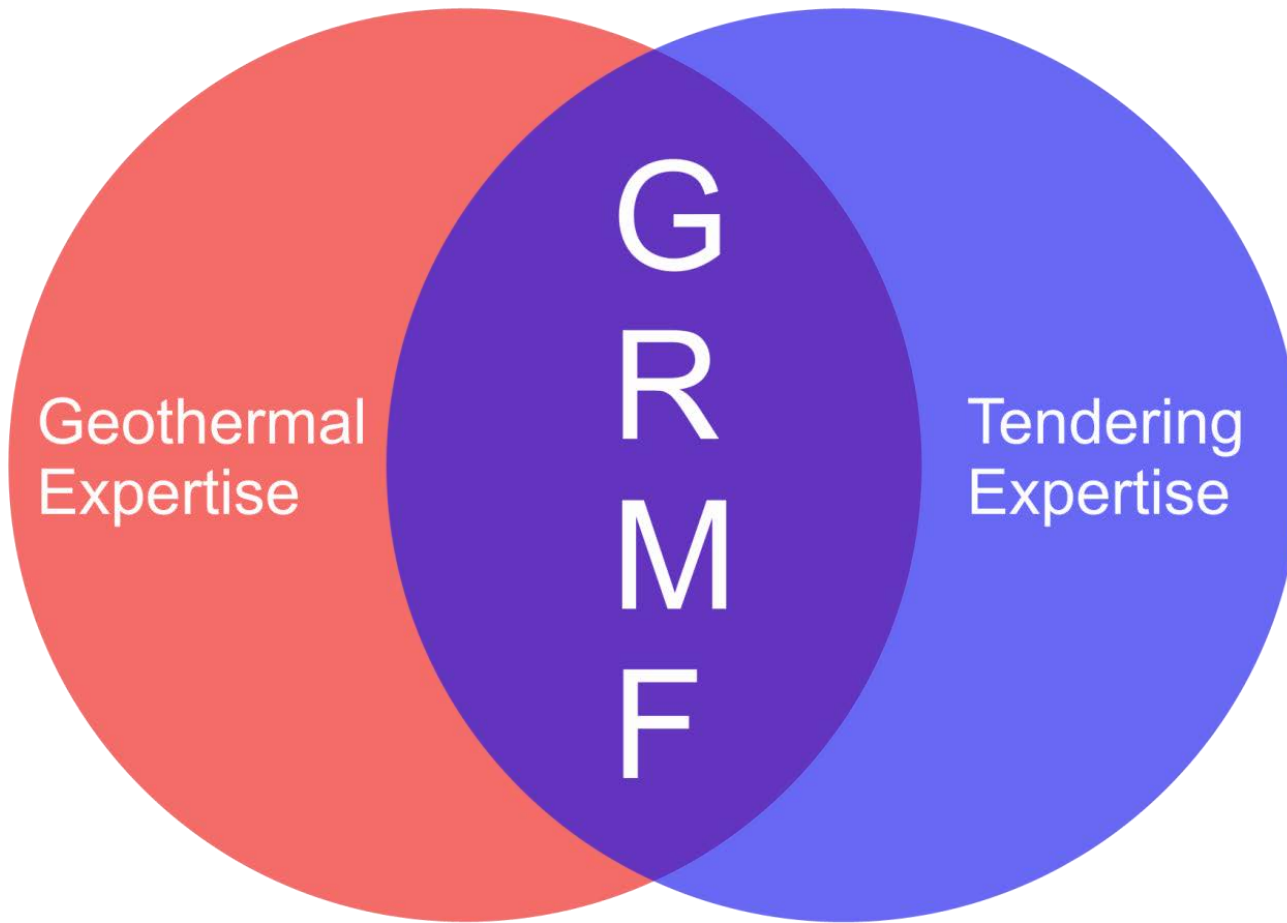
- Information and Coordination of Developers, Donors etc.
- Evaluation of Geothermal Projects (especially for GRMF)

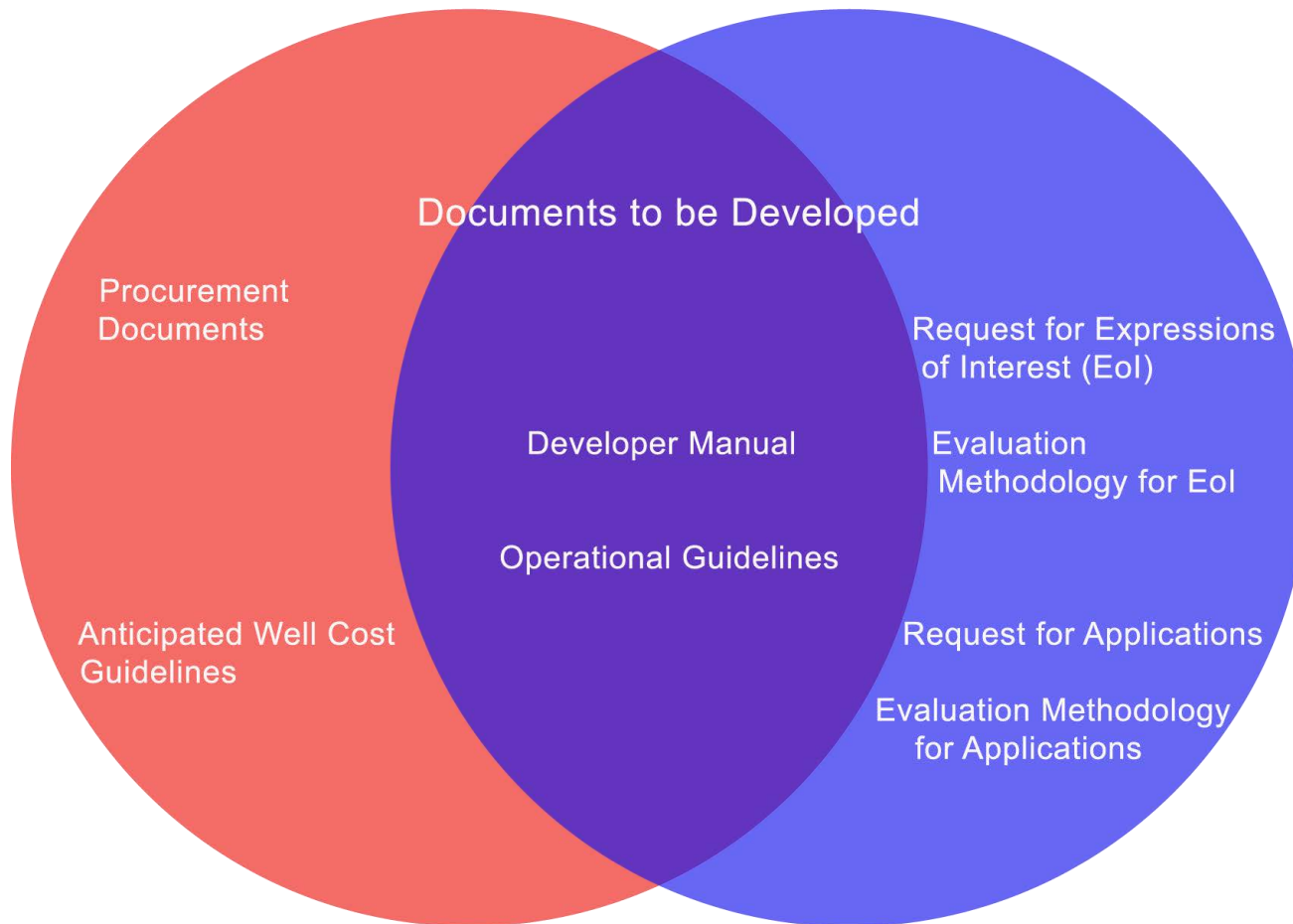


- **Oversight Committee** ensures that the project meets its overall objectives. Decisions taken by consensus
Representatives from:
 - **African Union (3),**
 - **Donors (2) and**
 - **Target countries (1)):**
- **Host (AUC-DIE):** raises additional finance, encourages partnerships, organises meetings, approves documentation prepared by the Executing Team, enters into grant agreements and authorises payment of grants.
- **Executing Team (consulting team of technical experts, auditors and legal advisers):** day-to-day management of the Facility on behalf of AUC, including preparation of documentation and reports, training of potential applicants, running pre-qualification and application rounds, evaluating applications negotiating grant agreements, creating a website.

Facility Structure





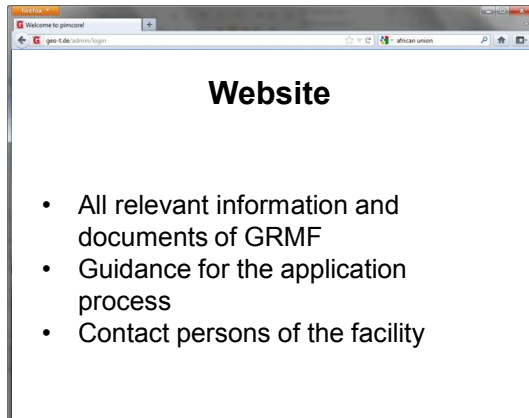


<http://www.grmf-eastafrika.org>

Public

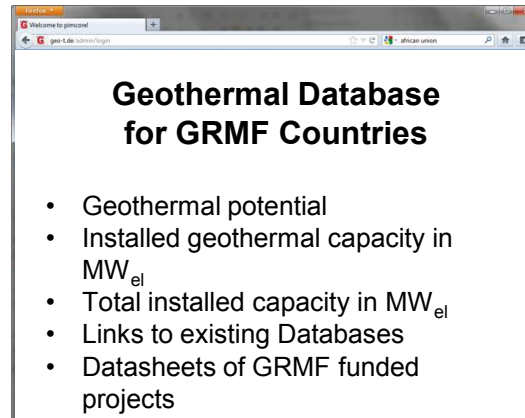
Public

GRMF Technical
Consultant



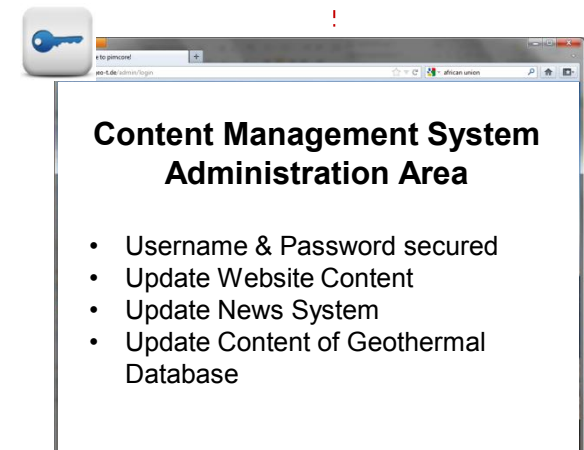
Website

- All relevant information and documents of GRMF
- Guidance for the application process
- Contact persons of the facility



Geothermal Database for GRMF Countries

- Geothermal potential
- Installed geothermal capacity in MW_{el}
- Total installed capacity in MW_{el}
- Links to existing Databases
- Datasheets of GRMF funded projects



Content Management System Administration Area

- Username & Password secured
- Update Website Content
- Update News System
- Update Content of Geothermal Database



Facility Concept - Objective

- The Facility will initially focus on geothermal prospects in Ethiopia, Kenya, Rwanda, Tanzania and Uganda but may be **expanded to other countries in the East African Rift System.**
- The Facility is launched in early 2012 and is hosted by the African Union Commission in Addis with the support of **GeoThermal Engineering GmbH** and **PÖYRY** as technical consultants
- The **Facility is open** to cooperation and funding by other interested banks, institutions,...

Regional Benefits of Fund

- **Attracts ‘best’ geothermal prospects & developers**
- **Not picking winners**
- **Supports EAPP objectives – regional diversification**
- **Regional information reduces exploration risks due to the similar geological setting in the East African Rift.**
- **Drilling rigs can be used successively**
- **Capabilities developed across region**

Contact

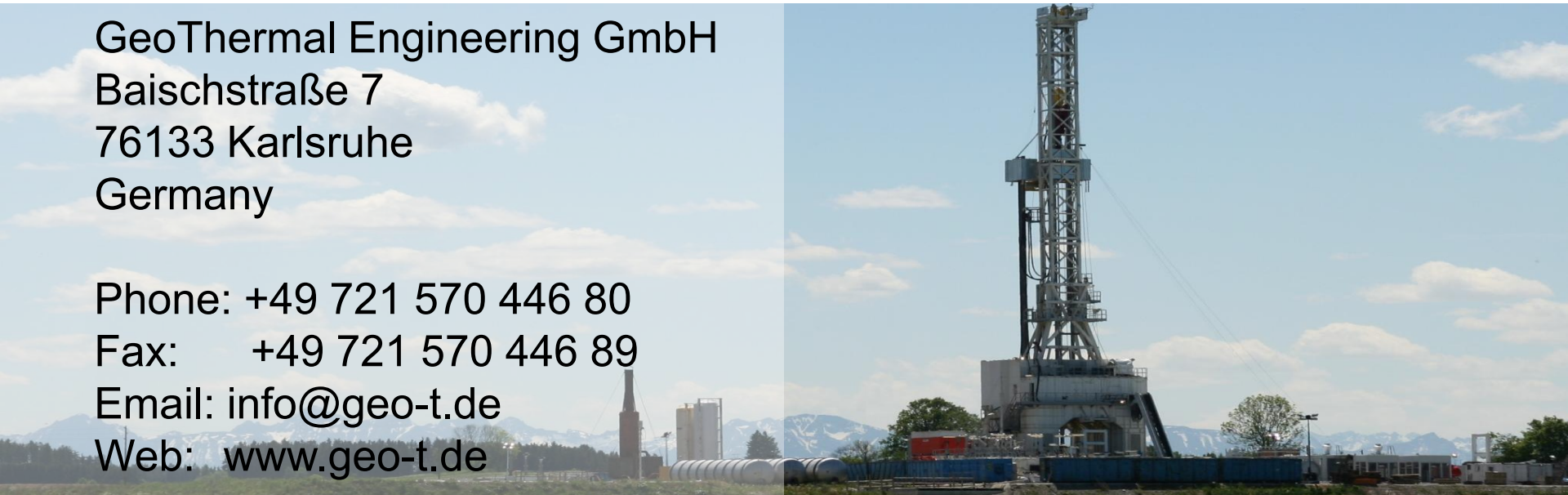
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**Thank you for your
attention!**

Dr. Horst Kreuter, CEO GeoT



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 **PÖYRY**
Engineering balanced sustainability™