

21. May 2010

OPENING ADDRESS

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Chairman of the board



Utilization of geothermal areas



THE UTILIZATION REQUIRES INTERDISCIPLINARY APPROACH

- Professions
 - Geology
 - Geophysics
 - Geochemistry
 - Chemical Engineering
 - Mechanical Engineering
 - Environmental Engineering
 - Technicians and others.....
- UNIVERSITIES AND TRAINING CENTRES
 - Education and academic research
- RESEARCH ORGANISATIONS
 - Fundamental research and consultancy
- ENGINEERING FIRMS
 - Design and consultancy
- ENERGY COMPANIES
 - Utilization and sale

IDEALIZATION – INNOVATION – ENTREPRENEURSHIP

Using “excess heat”, utilization of “excess products”, tourism, fuel production...

THE CREATION OF THE GEOTHERMAL RESEARCH GROUP



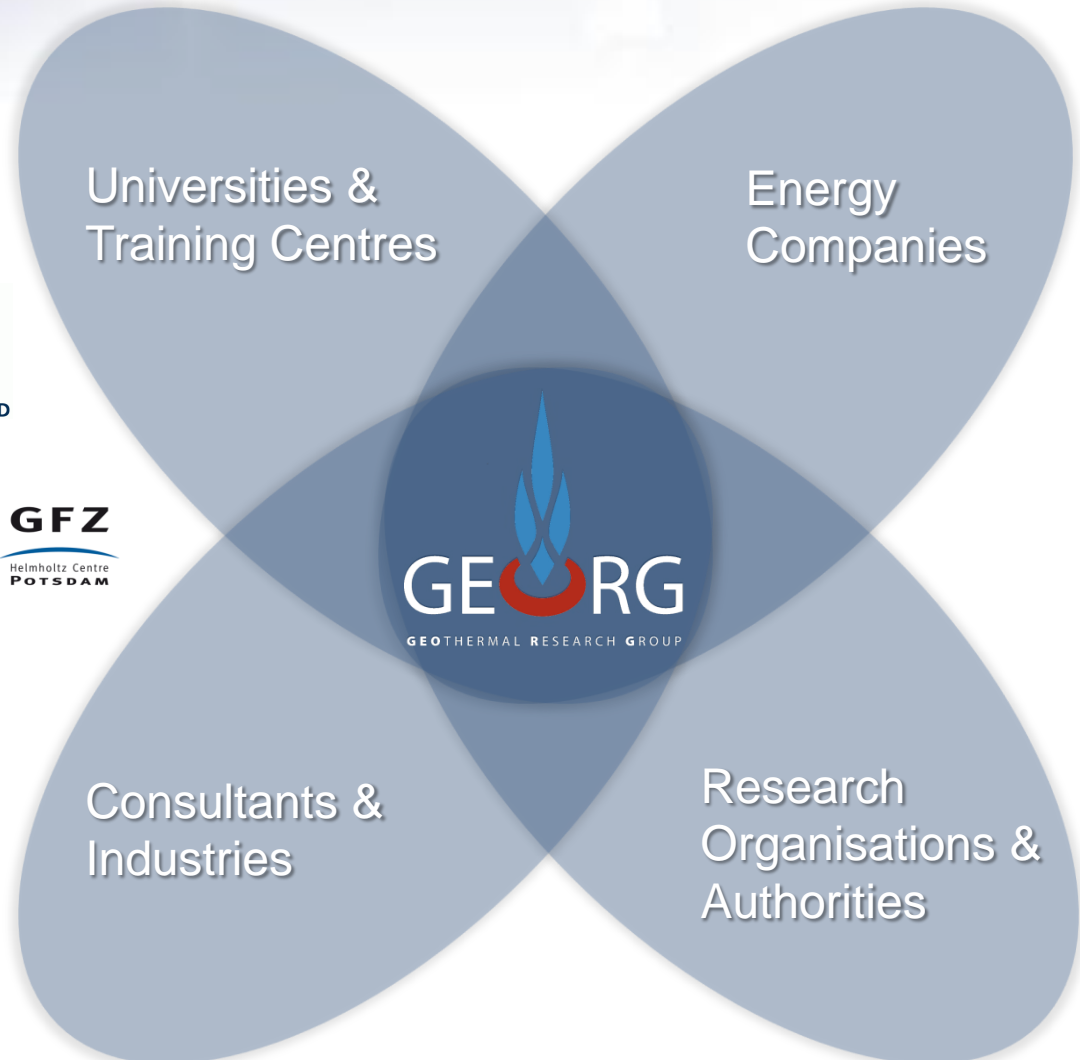
GEORG

was founded early 2009 with the support of the
Science and Technology Policy Council in Iceland
through their
Centers of Excellence and Research Clusters – program

The support amount to
70MISK (~\$500.000) per year for seven years



The partnership



21 international partners
Joint Research Venture

Industry axis

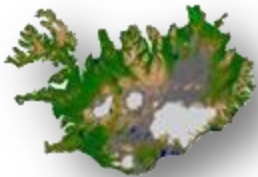
Scientific axis

Main objectives



WORLDWIDE REDUCTION OF GHG EMISSIONS

By contributing to significant increase in sustainable energy production and utilization from geothermal sources



MAKE ICELAND A CASE STUDY

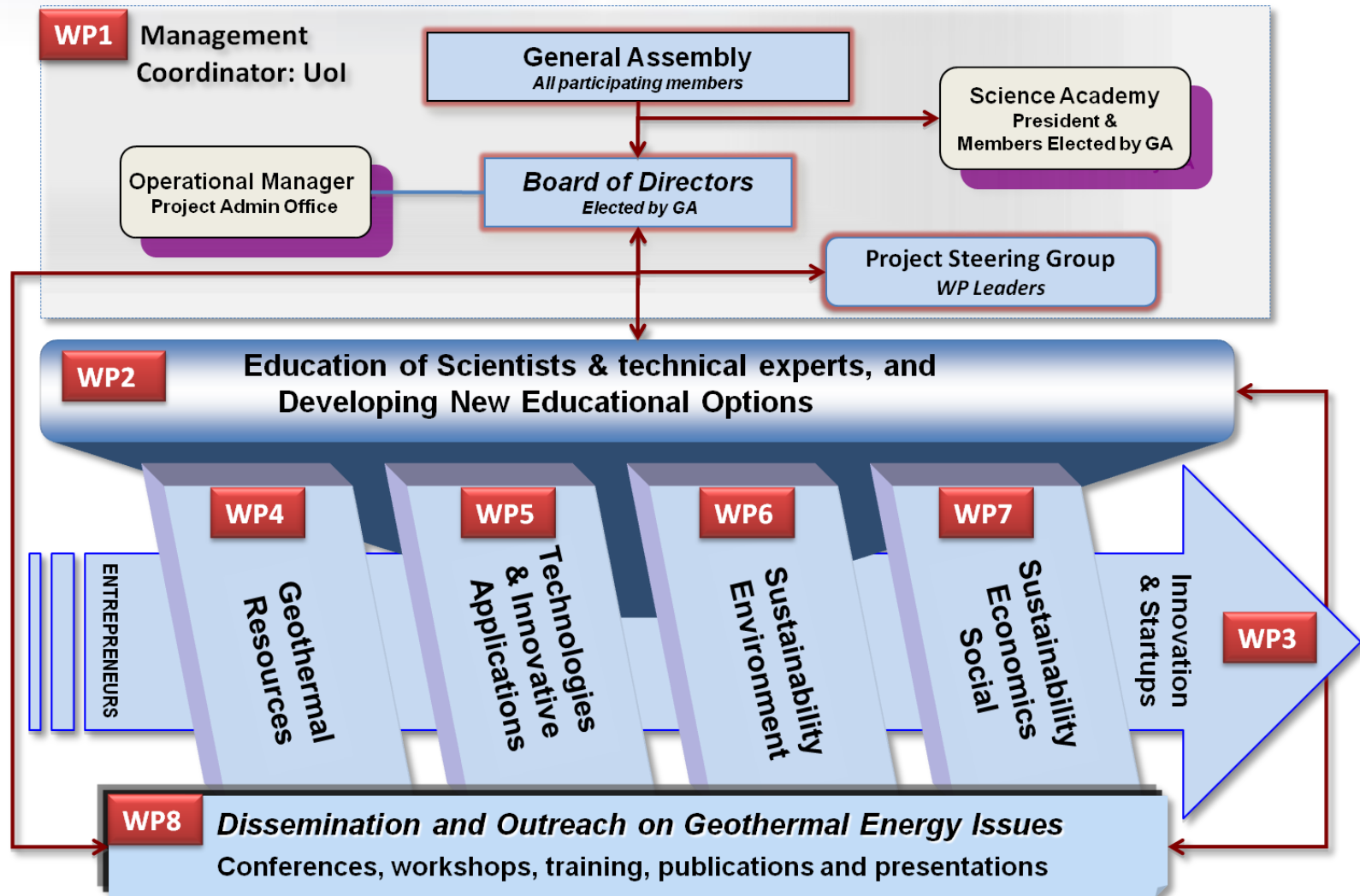
for near energy independent and a carbon neutral society



CREATE A PLATFORM FOR ENTREPRENEURSHIP

and export for geothermal energy resources and education, both for partners in the group and in the ensuing creative environment established through its national and international operations.

ORGANIZATIONAL CHART



PROJECT SUPPORTED BY GEORG

1st Call June 2009 - 33 Proposals received

- Requested funds: 420 million ISK
- Total cost: 1.093 million ISK
- 10 projects awarded
 - Grants awarded 117 million ISK for up to three years
 - 10 Ph.D. students supported
 - 2 MS students supported

2nd Call December 2009 – 22 Proposals received

- Requested funds: 276 million ISK
- Total cost: 1.267 million ISK (one project with over 400 MISK)
- 5 projects awarded
 - Grants awarded 66 million ISK for up to three years

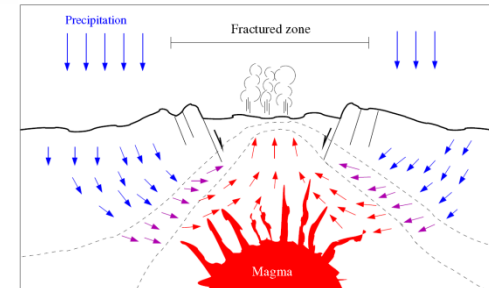
GRANTS ARE AWARDED ON A COMPETITIVE BASIS WITHIN GEORG

PROJECTS SUPPORTED BY GEORG



- **8 Projects in the field of reservoir modelling and simulation**

- Development of software and algorithms
- Mapping and exploration of subsurface systems (3D)
- Development of methods to assess sustainability of systems
- Research on surface data from geothermal field and the correlation to the subsurface systems.

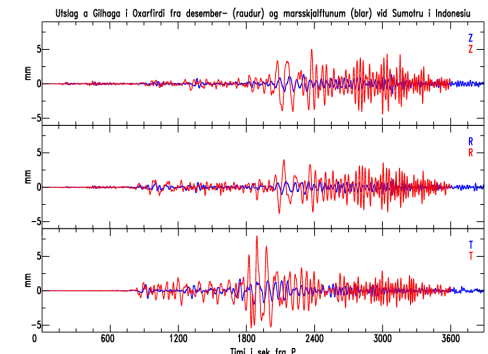


- **2 Projects on the handling of super critical fluids**

- Research on two phase flow and utilization of super critical fluids

- **5 Projects in other fields**

- Analysis on seismic activities
- Research on carbon sequestration with in geothermal fields
- Reduction of emissions using biochemical substances
- Research on new materials for borehole grouts
- Analysis of the economic impact of geothermal utilization



OTHER ACTIVITIES OF GEORG



PhD day in Potsdam,

February 2010 GEORG supported 8 graduate students from Iceland to go and take part in a PhD day in Potsdam Germany.



Support to BEST Reykjavik (Board of European Students of Technology)



Support of 120.000 ISK to host a seminar on Geothermal utilization.
Over 20 participants from universities all around Europe

Workshop on Geothermal Reservoir Science, March 4th 2010.

Held in cooperation with IPGT (*International Partnership for Geothermal Technology*).
Over 50 participants and fruitful discussions.
Web streams of the lectures are available at GEORG website.

SUMMARY



- **GEOHERMAL AREAS ARE DIVERSE**
 - That requires interdisciplinary approach
 - GEORG holds a significant experience, among its partners, in utilizing geothermal energy
 - Large opportunities in the utilization of geothermal energy
- **GEOHERMAL ENERGY CAN OFFER**
 - Reduction in Green House Gases
 - Improved quality of life
 - Cleaner environment
 - Saving of oil/gas resources

**GEOHERMAL IS A SUSTAINABLE RENEWABLE ENERGY SOURCE
IF THE RESERVOIR IS MANAGED PROPERLY**