

# Education Program Partnership between USC and ITB

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6 March 2014

Center for Geothermal Studies  
Induced Seismicity Consortium  
University of Southern California



- Strives to promote excellence in geothermal research
- Collaboration with many different facets of USC and DOE
- Development of more efficient technologies in the industry
- Ex. Geomechanical modeling for Geysers Geothermal Field
- Future: Brawley Geothermal Field

**USC** Viterbi

USC | DANA and DAVID  
DORNSIFE  
COLLEGE  
of LETTERS, ARTS and SCIENCES



USC University of  
Southern California

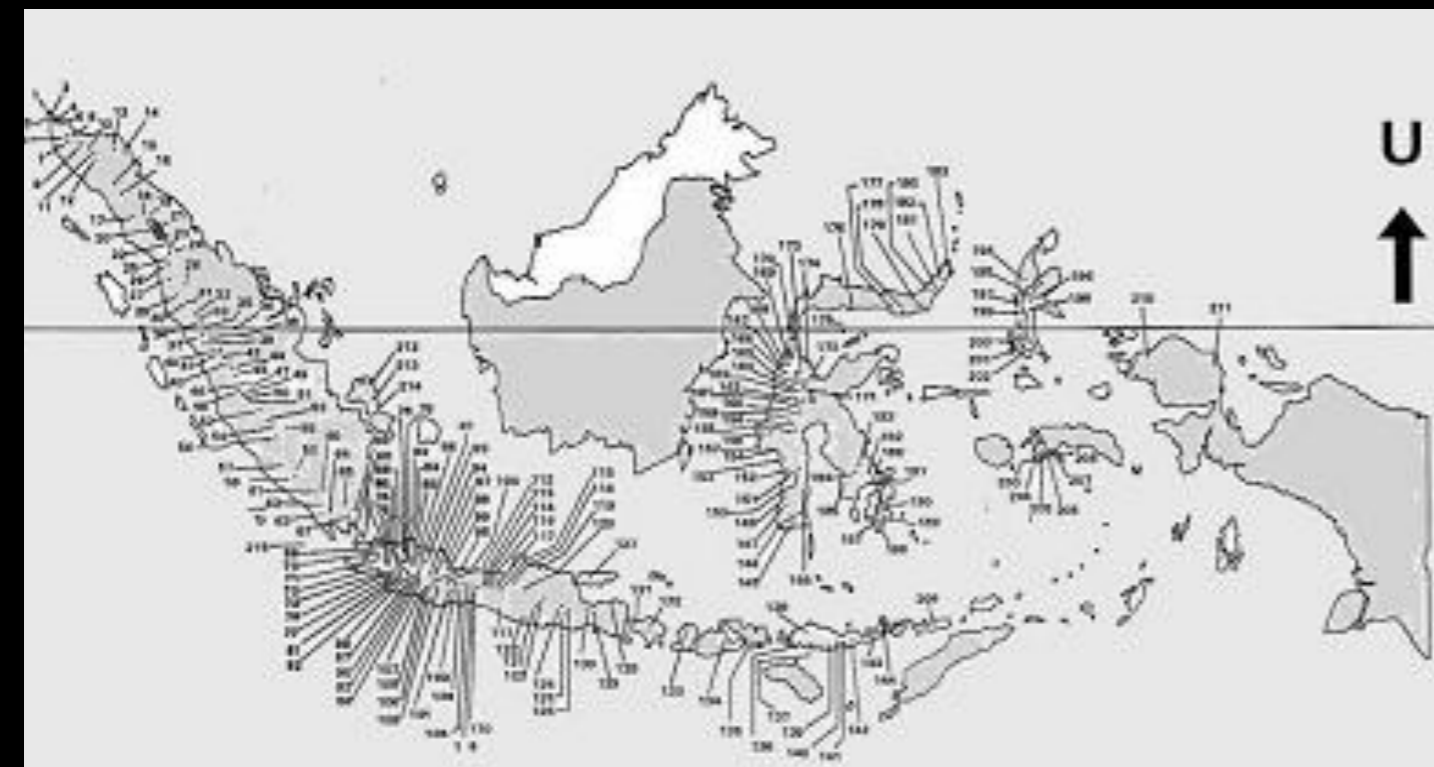
*CiSoft Center for Interactive  
Smart Oilfield Technologies*

**SC/EC**  
an NSF + USGS center



# Program Goals

- Partnership: ITB and Star Energy
- Increase number of geothermal graduates to 50 in 5 years
- Equip to operate and produce 5000 MW of energy by 2015
- Platform to collaborate/develop geothermal education



265 identified geothermal areas in Indonesia

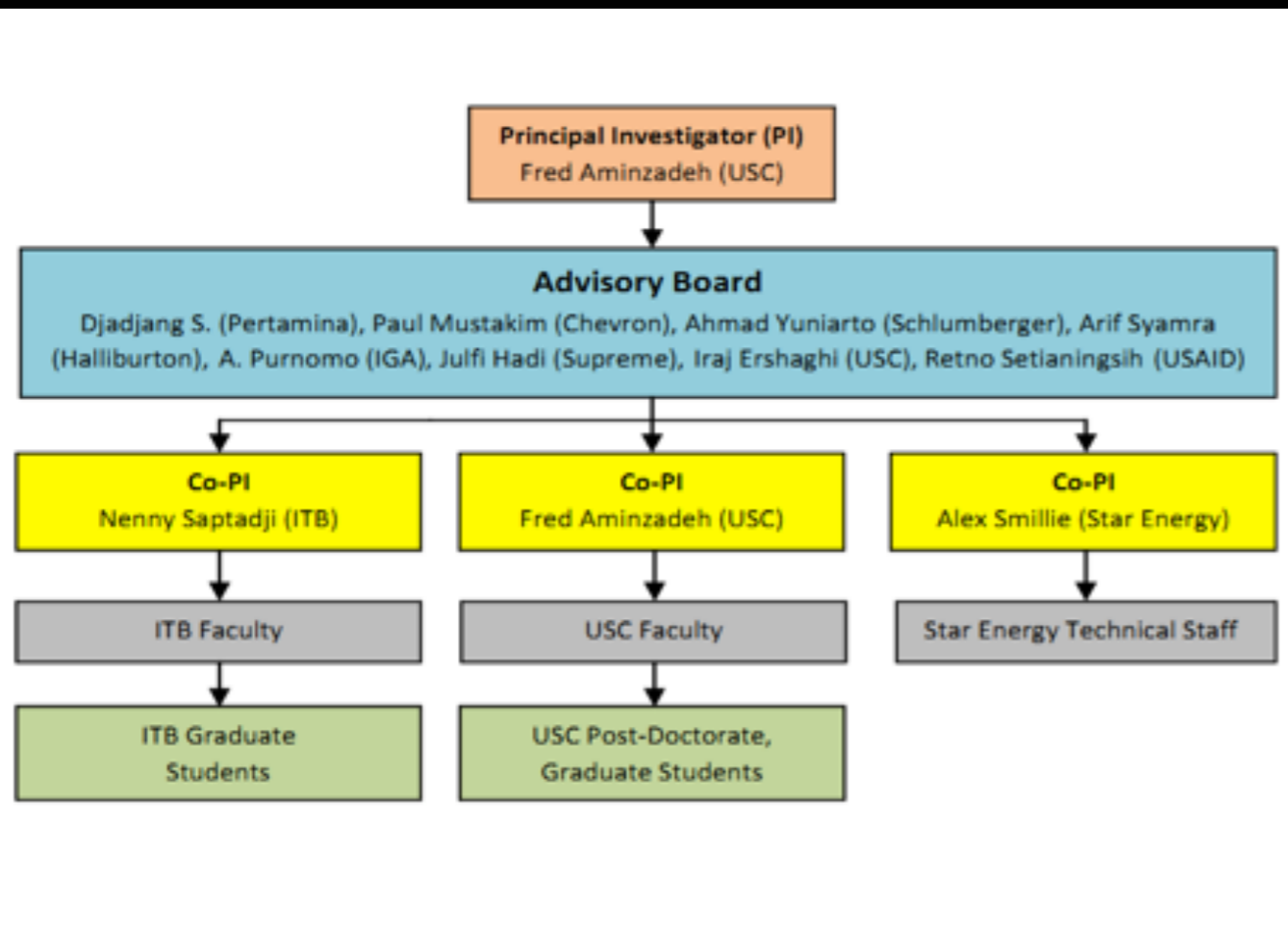
Island	Resources		Reserve			Installed (MWe)
	Speculative (MWe)	Hipotetical (MWe)	Probable (MWe)	Possible (MWe)	Proven (MWe)	
Sumatra	4975	2121	5845	15	380	12
Jawa	1960	1771	3265	885	1815	1117
Bali	70	-	226	-	-	-
Nusa Tenggara	340	359	747	-	15	-
Kalimantan	45	-	-	-	-	-
Sulawesi	1000	92	982	150	78	60
Maluku	595	37	327	-	-	-
Papua	75	-	-	-	-	-
Total 265 locations	9060	4380	11392	1050	2288	1189
	13440		14730			
	28170					

# Program Implementation 2012

Task	ACTIVITY	Month											
		1	2	3	4	5	6	7	8	9	10	11	12
1	Advisory Board												
2	Scholarship for Masters Students												
3	ITB Geothermal Seminar												
4	Conferences, Seminars or Workshops												
5	Sabatical Program												
6	Selecting a test site for Geothermal resources course development												
7	Environmental impact and risk assessment course development.												

*Sabatical Program will be carry over to the 2014's program*

# Collaboration

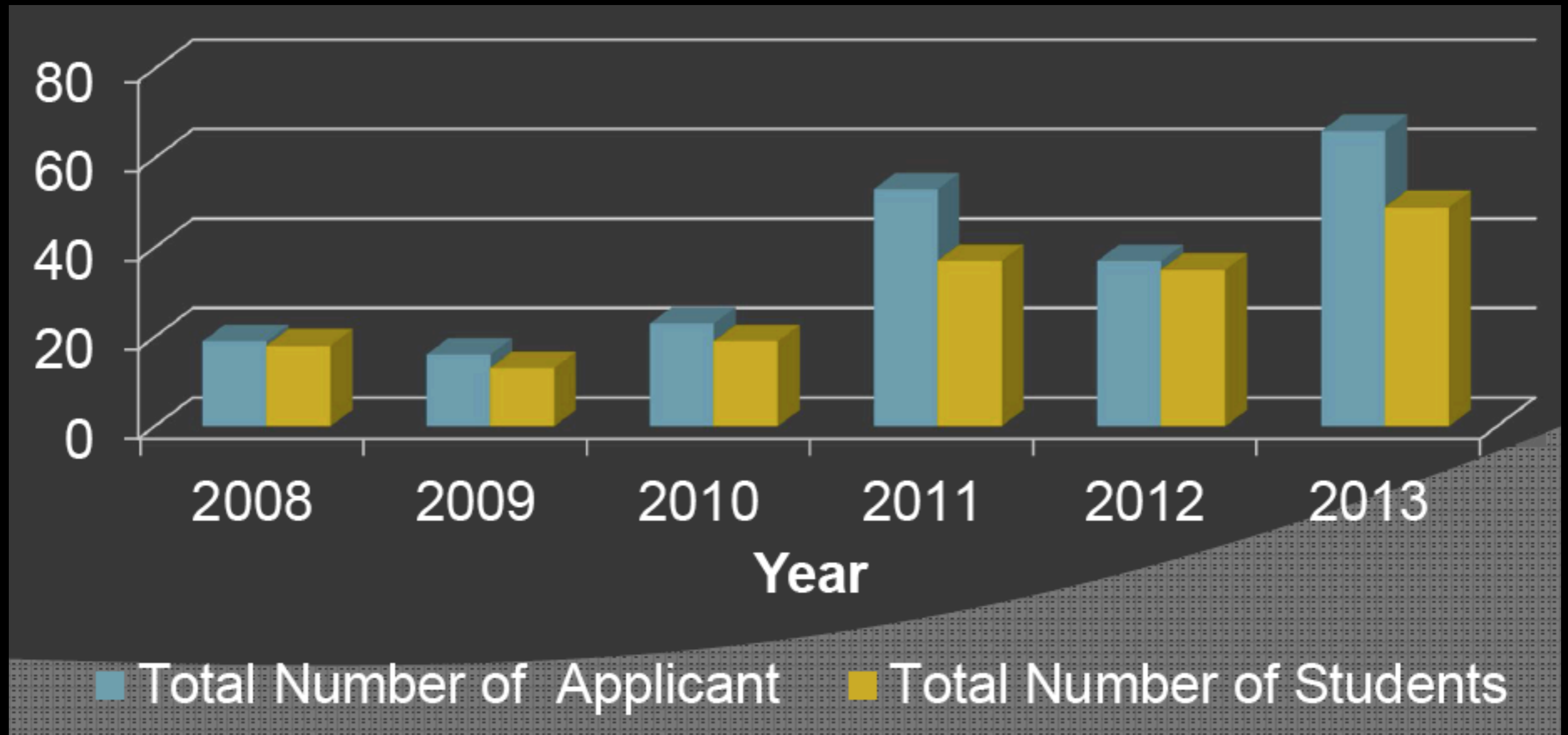


Human Resources Structure (Task 1)

GRC 2012  
Reno, NV

# Project Outcomes: Task 2

- Increase competitiveness: ITB's geothermal masters program
- Large increase in students and participation
- Indonesia: increased understanding of geothermal energy potential



# Roadshow to six universities in Java

## Discuss knowledge, ITB program, scholarships



# Task 3: 1st ITB Geothermal Seminar November 28, 2013





# Project Outcomes: Task 3

## 2nd Geothermal Seminar

## 3rd Geothermal Seminar



Build communication among universities, developers/ industries, local government, and interested public

75% participants are students - info passed to family

# Project Outcomes: Task 4

ITB students and lecturers attended:

- ITB Geothermal Workshop – IGW 2013 (March 3-6, 2013)
- Indonesian Geothermal Association Conference and Exhibition – IIGCE 2013 (June 12-14, 2013)
- New Zealand Geothermal Workshop (November 18-22, 2013)



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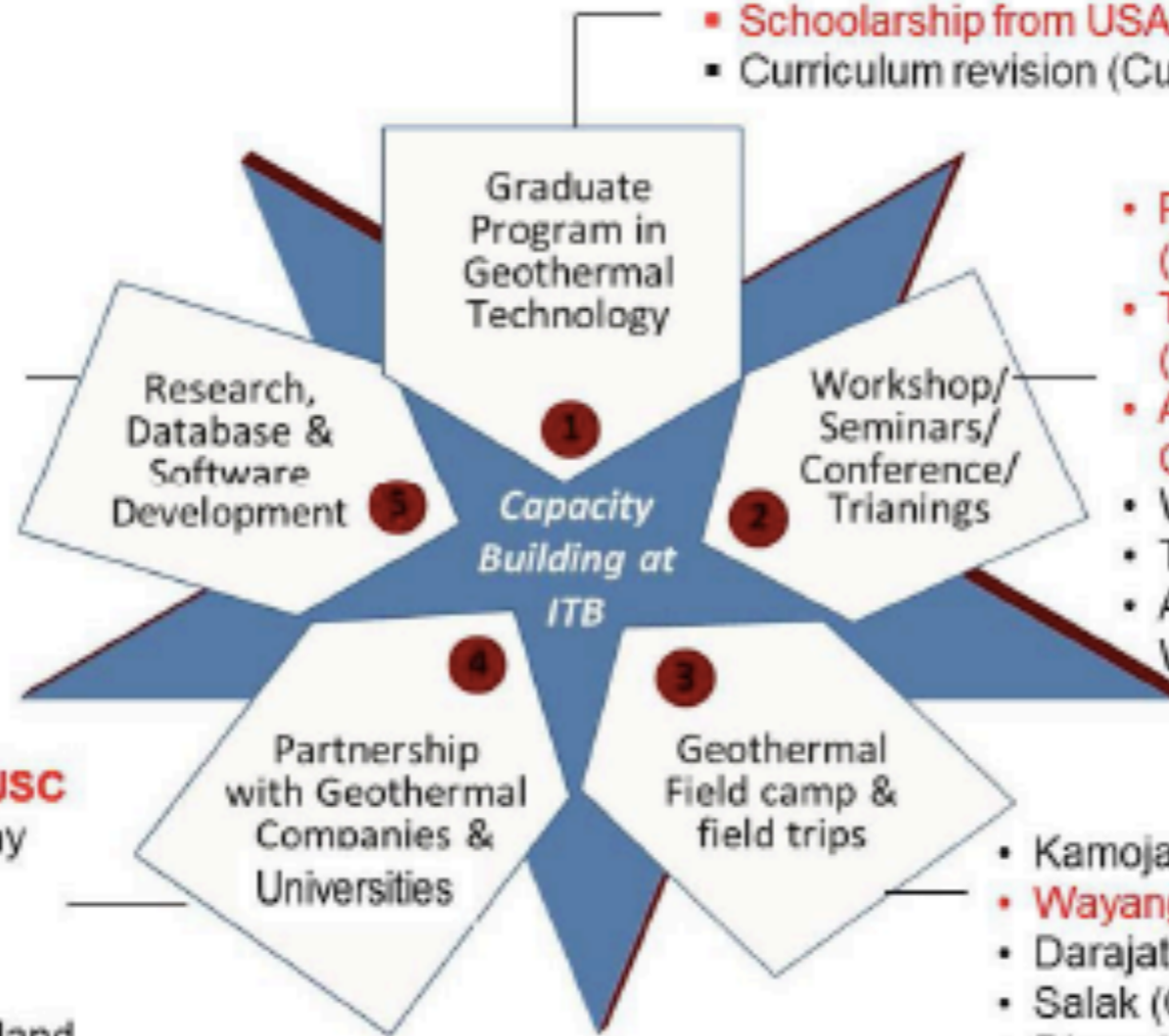
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- Increased competitiveness in ITB geothermal master's program
- Increased public knowledge of geothermal energy

# Impact

## ITB GEOTHERMAL

- Softwares:
  - GES
  - MIS
  - SAR
  - IRIS
  - GETools
  - Interface TOUGH2
- Establish a research consortium (2014)

- PERTAMINA/PGE
- **USAID -Star Energy-USC**
- GFZ Potsdam, Germany
- UPP Chevron
- Univ of Manado.
- Univ of Auckland, NZ
- Univ of Twente, Netherland
- Univ of Kyushu, Japan
- **University of Syah Kuala, Aceh (Result of ToT USAID)**



- ITB Advisory Board
- **Advisory Board for USAID-SE University Partnership Program**
- Scholarship from BPKLN Ministry of National Education
- **Scholarship from USAID and Star Energy**
- Curriculum revision (Curriculum 2013-2018)

- **Public Awareness Program (USAID and SE)**
- **Train the Trainers Program (USAID & SE)**
- **Attending seminars and Conference (USAID & SE)**
- Weekly Geothermal Forum
- Trainings for Industries
- Annual ITB's Geothermal Workshop

- Kamojang (Pertamina/PGE)
- **Wayang Windy (Star Energy)**
- Darajat (Chevron Geothermal)
- Salak (Chevron Geothermal)
- Dieng (GeoDipa)
- Patuha (GeoDipa)
- Tangkuban Perahu



# Thank You!

