### 2iE

# An international Center of Excellence in Africa

#### **Historical Overview**

1968

Creation of EIER Engineering School 2001

Creation of Groupe EIER-ETSHER 2006

Groupe EIER-ETSHER renamed 2iE 2008

Headquarters
Agreement
between
Burkina Faso &
2iE Foundation
Public utility
status obtained

2011

1,230 students

2iE Foundation covers 95% of its operating costs

International recognition

1970

Creation of ETSHER, advanced school for senior technicians

2005

Fusion and restructuration of Groupe EIER-ETSHER

2007

Creation of 2iE Foundation

**Rising Student Population** 

2005

100 % financed by public funds

24,000€/student

covered by States +

**Donors** 

2011 1,850

students

including 620 Distance learners

**Decreasing** student Fees

2005

240

students

Costs:

3,000 € covered by the student (40% of students hold scholarships)

2,000 € covered through 2iE's

activities

2011

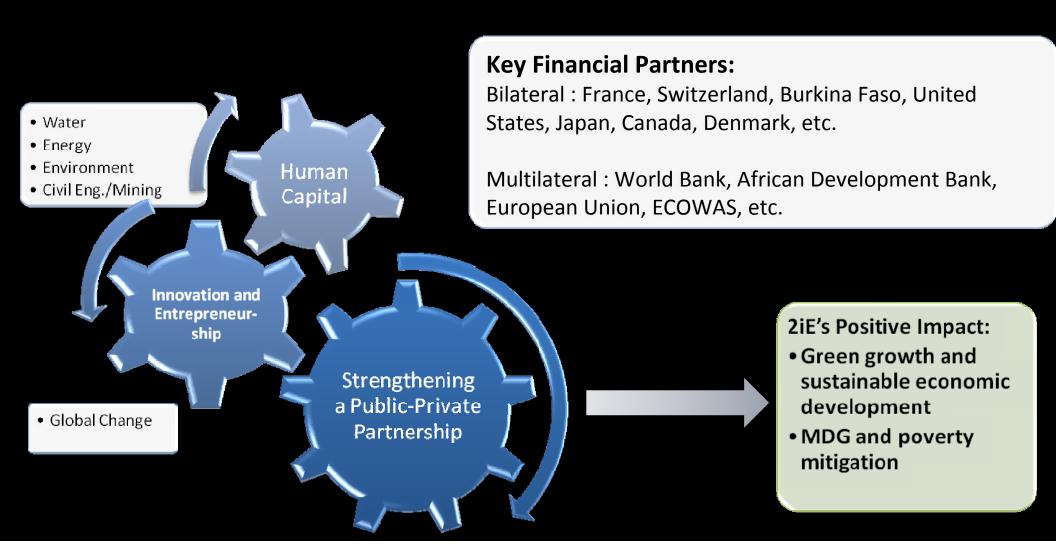
5% budget support

5,000€/student

Budget/Year: 8 million €

#### **A Common Vision**

2iE is committed to training highly-skilled staff, equipped with innovative and entrepreneurial skills for the development of the African continent, and able to take into account all gender, linguistic and cultural differences. 2iE, for the sake of complementarity and subsidiarity, has networked with other African higher education and research centers.



#### Qualified Human resources

#### 2iE's International Team:

- 55 permanent lecturers and researchers of 18 nationalities from the four continents
- 12 Visiting Professors
- 62 temporary lecturers
- 21 research engineers
- 34 PhD students and 9 post-docs

#### A Scientific Council that sets orientations:

- Includes over 20 eminent professors from all over the world: Burkina Faso, France, United States, Switzerland,...
- Chaired since April 2011 by Professor Ramata Bakayoko-Ly, University of Cocody (Cote d'Ivoire). She replaced Professor Basile Guissou (Burkina Faso), who chaired the council for 6 years and who remains a honorary President

#### **Results-Based Management System**

A Strategic Orientation Plan for 2011-2015

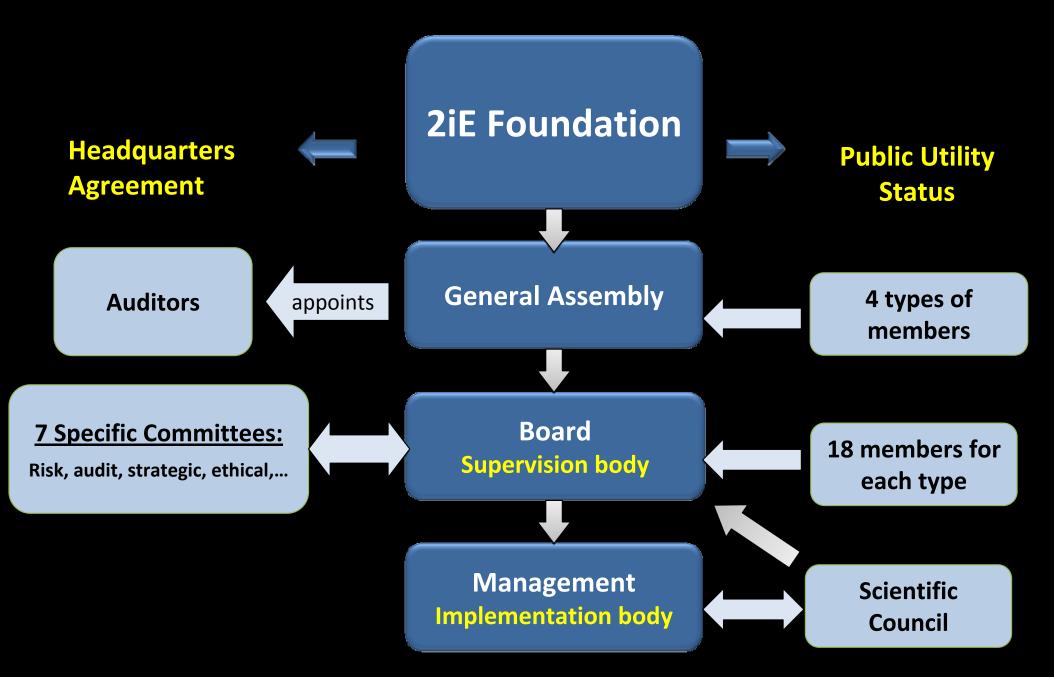
A General Goal

8 Specific Goals

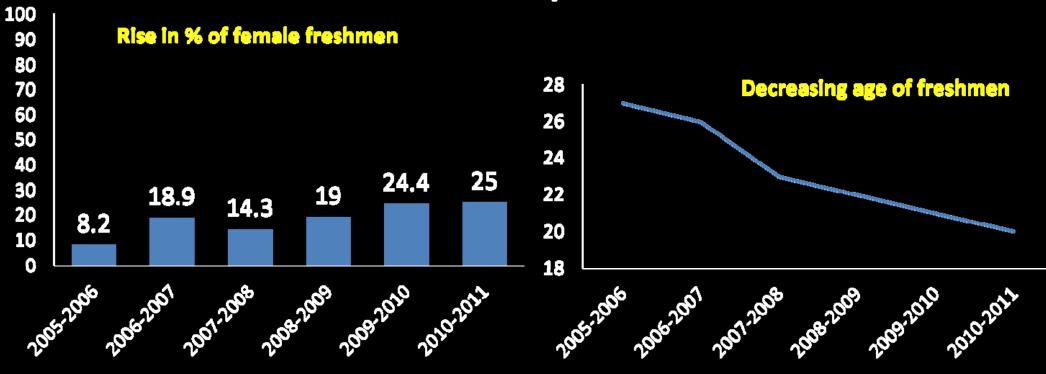
20 Monitoring Indicators

80 Result Indicators

### An Original System of Governance A Public-Private Partnership



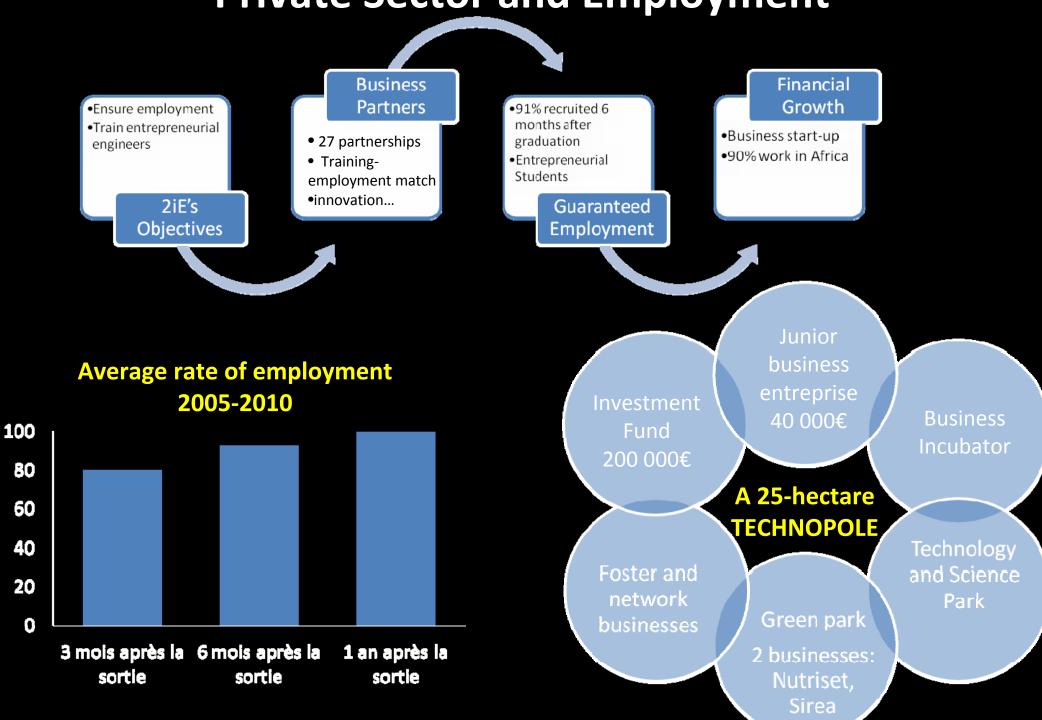
### A Young, International and increasingly Female Student Population



#### **An International Dimension**

- Students: 35 nationalities
- Faculty: 18 nationalities / 4 continents
- Research: 15 university partners / 7 countries / 4 continents

#### **Private Sector and Employment**



#### **Accredited Onsite and Distance Learning Programs**

**ISO** 9001

#### **Bachelor**

- Bachelor
- Internet and Computer Proficiency
- 7 B. of technology

CTI EUR-ACE

## Master's Degree in Engineering

- TOEFL
- Engineering Degree
- 5 majors

**AUF** 

# Specialized Master's Degrees

- 10 master's programs
- MBA to be open in 2012

PhD

International and Interuniversity
Doctoral School

Founding
Member of the
Université
Virtuelle
des Ecoles
Doctorales

Research and Training Programs Tailored to Meet Development Needs

5 Laboratories

#### **LEDES**

Water, decontamination, ecosystems and health

#### **LEAH**

Hydrology and water resources

#### **LBEB**

Biomass, Energy and biofuels

#### **LESEE**

Solar Energy and Energy Savings

#### **LEMC**

Building Eco Materials

#### **Multiple Partnerships**

#### Universities

- American: Princeton, Tuskegee, Duke
- <u>European</u>: Groupe INSA, ENTPE, EPFL, UMPC, Montpellier II, Perpignan, UTC, Rennes I, Strasbourg, IHE Delft
- <u>African</u>: U. of Ouagadougou, KNUST Kumasi (Ghana),
   AUST Abuja (Nigeria) and AIST Arusha (Tanzania)
- Asian: U. Hokkaido

#### Research Centers

CIRAD, DRI, IHE, CEA/INES, IWMI

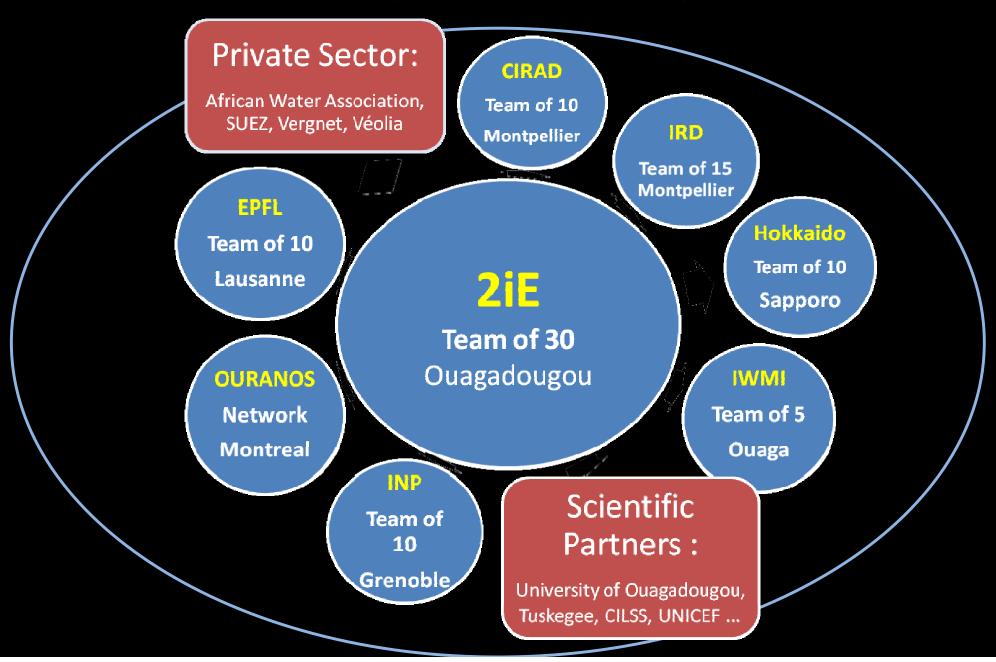
#### **Private Sector**

Total SA, Vergnet, VEOLIA, SUEZ, AAE, Nutriset, Bertin, SIREA, SOGEA, ...

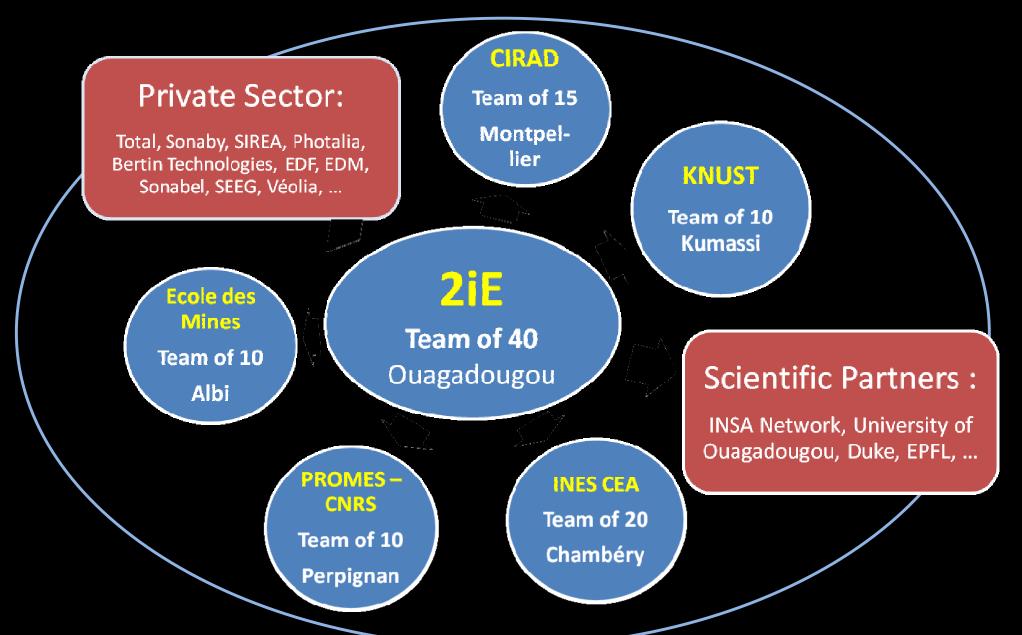
# Organizing 2iE as Common and Open Centers

- 1. Research Center on Water and Climate
- 2. Research Center on Sustainable Energy and Habitat
- 3. Center on Innovation and Social Entrepreneurship
- 4.E-Center
- 5.International Doctoral Program

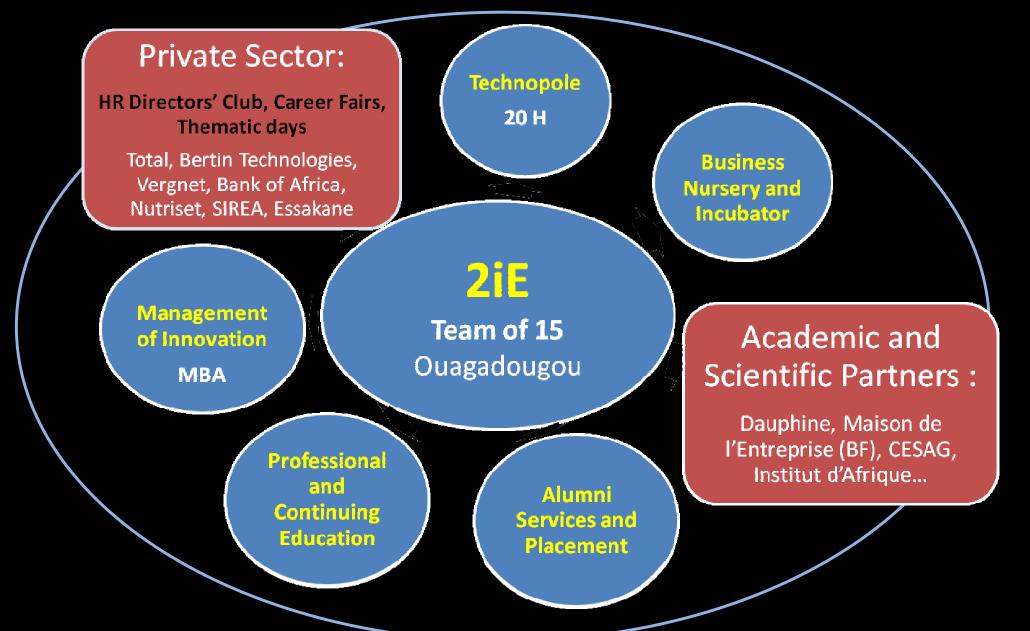
### 1. Building a Common Research Center on Water and Climate



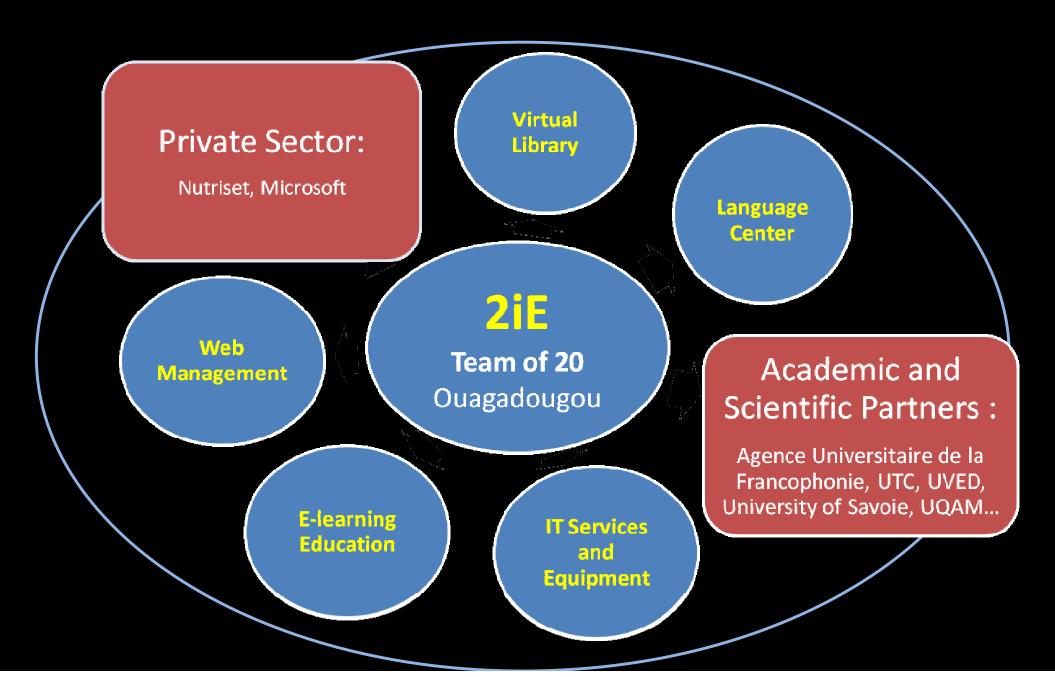
# 2. Building a Common Research Center on Sustainable Energy and Habitat



# 3. Building a Center on Innovation and Social Entrepreneurship



#### 4. Building an e-Center



#### 5. The International PhD Program

Created in 2009, it is developing an international and interuniversity PhD program in Water, Energy and Environmental Sciences and Technologies

#### Jointly supervised PhD Theses

34 PhD students in 2010-2011 with 50% financed by external sponsors

#### Targets:

- 50 PhD students in 20<u>12-2013</u>
- 100 PhD students in 2015-2016
- 80% of PhD students self-funded by 2015

Courses relevant to engineering sciences, entrepreneurship and human sciences

The Doctoral School awarded its first PhD degree on June 27, 2011

#### Budget allocated to research

#### About 500 million Fcfa

i.e. 10 % of operating budget excluding lecturers' salaries

Own funds raised in addition to funds raised from partners

#### Innovation at 2iE

#### Technical innovations with nternational impact:

- > Invention of Pump Vergnet in 1970
- > Adaptation of Ventifraicheur (air cooler) in 1988
- Development of Compressed Earth Blocks (BTC)
- ➤ Development of Collective Water Supply 2009 Grand Prize Suez Environnement
- Development of Flexy-Energy concept 2010

#### Challenges and Constraints

1. Maintaining a secure Campus with on-site housing for all taking into account gender and promoting diversity: 2iE international village spirit

2. Scaling up world-class education based on research findings, fostering entrepreneurship and developing language skills

#### Thank you for your attention

www.2ie-edu.org

www.ies-africa.org