

INTERNATIONAL INSTITUTE FOR WATER AND ENVIRONMENTAL ENGINEERING



Centre of Excellence:



THE WORLD BANK
IBRD • IDA

March 2019

■ ■ ■ ■ BUILDING OUR
WORLD

Missions of 2iE

- To train **skillful and innovative engineers-entrepreneurs** in Africa, who will be able to address the continent's development challenges
- To provide **sustained professional training programs** to the executives and technicians of the private and public sectors
- To conduct **research/development programs** for the private and public sectors and contribute to the development of scientific knowledge

Water & Sanitation
Energy & Electricity
Environment & Sustainable Development
Civil Engineering & Mining
Management & Entrepreneurship

Some Key Numbers

More than 7000
Graduates



More than 95% of
graduates work in
Africa



100
Business partners
around the world



500
Learners in
continuing education



1200
Onsite students



27%
of female students



500
Interns in continuing
continuing education



30
Nationalities

Multi-types business partners



2iE in images



■ ■ ■ ■ A PLACE OF
MEETING AND
INTERNATIONAL
CONFERENCES

1st International Conference on Water – Energy – Food – Habitat Nexus



Sustain**E**ng 2018

December 12 – 14, 2018, Ouagadougou – BURKINA FASO

Topics

- Climate and Hydrological Cycle
- Pollution, Water Quality and Ecosystems
- Ecomaterials for Construction and Sustainability of Structures
- Renewable Energy and Smart Systems

Publication

African Journal of Science, Technology, Innovation and Development

Important dates

Deadline for abstracts submission: 15 July 2018

Notification of abstract acceptance: 30 September 2018

Deadline for full text submission: 30 October 2018

Kindly submit a one-page summary to edem.ntsoukpoe@2ie-edu.org

Scientific Committee

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Dr Felix ABAGALE (Ghana)
Pr Edmond ADJOVI (Benin)
Pr Kodjo AGBOSSOU (Canada)
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BUSINESS DAYS



More than 100 companies and 1 000 participants every year.

LES ENTRETIENS EURAFRICAINS



300 participants, coming from many West-African and European countries among which business owners and managers, countries representatives, NGOs and Institutions Senior managers, young students and women from the rural areas.

February 3rd and 4th 2016 – Ouagadougou



ORGANISATION And MANAGEMENT

A model of innovative management

- Public-Private partnership
- 2iE, an international association for public utility

General Assembly

1. Board of State members

2. Institutional and financial partners

3. Academic and scientific partners

4. Companies

5 Committees

- Strategic
- Audit
- Risks
- Ethics
- Student Life

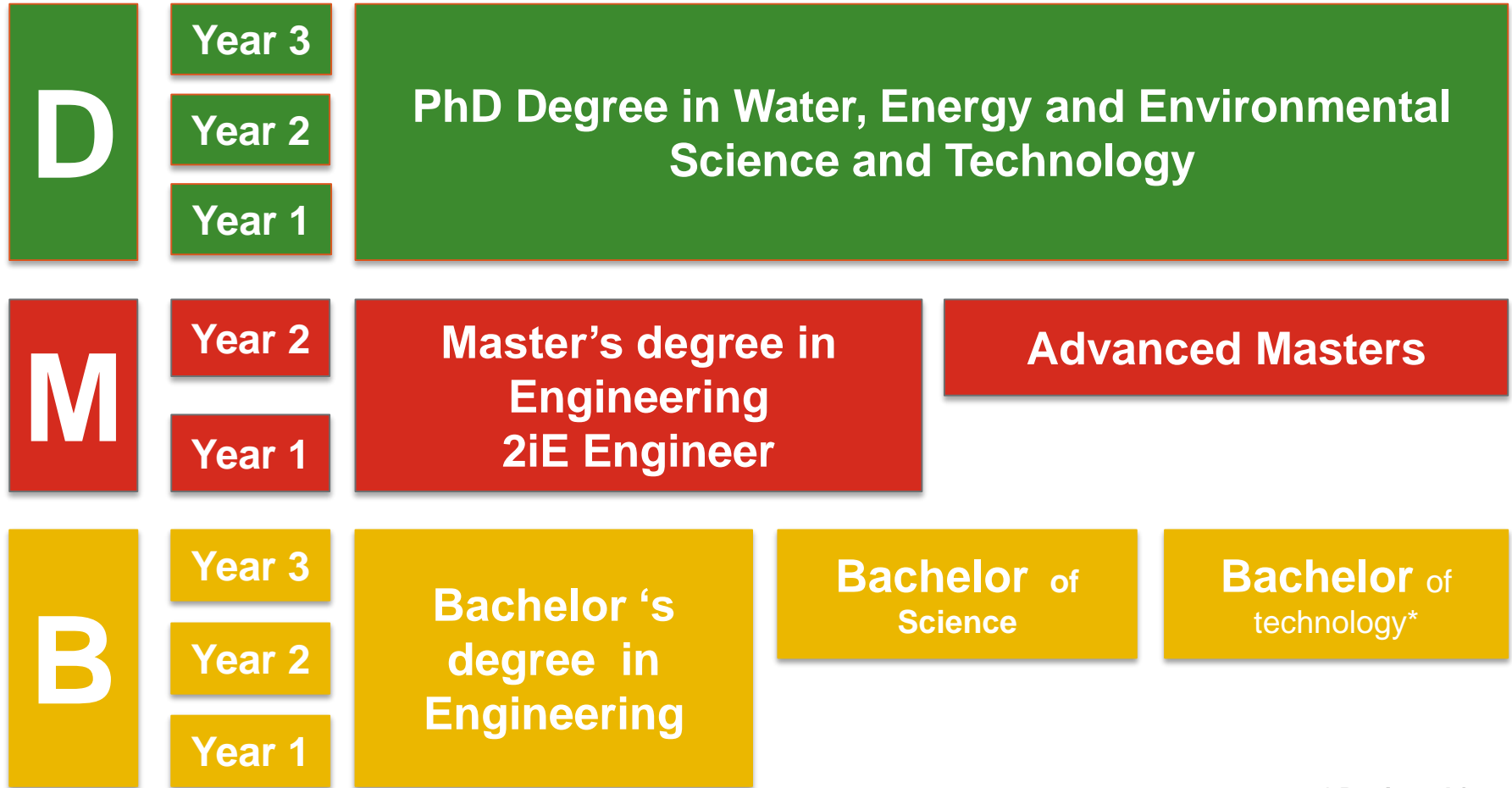
Governing Board

General Director

Scientific Advisory Board

■ ■ ■ ■ TRAINING

A training program in accordance with the Bologna agreement : BMD/LMD



* Designed for professionals

Training Programs that Comply with International Standards

ONSITE EDUCATION

2 academic starts per year to meet the needs of all students

3 YEAR COURSES

after GCE/O-Level/
A-Level/WAEC/SSSCE
or equivalent diplomas

BACHELOR'S DEGREES

IN WATER AND ENVIRONMENTAL ENGINEERING with three Majors

- Water and Sanitation
- Civil Engineering and Hydraulics
- Electric and Energetic Engineering

Prerequisites: GCE-O-Level/A-Level/WAEC/SSSCE or equivalents with credits in Mathematics, Physics and Science/Integrated Science

Length of studies: 3 years

IN WATER AND ENVIRONMENTAL SCIENCES

Prerequisites: University degree after a two-year course, Bachelor's degree, or if you are in 2nd year at university level

Length of studies: 1 year

BACHELOR OF TECHNOLOGY^[1]

- MAINTENANCE, MANAGEMENT AND REPAIR OF CIVIL ENGINEERING EQUIPMENT

- MINING AND QUARRIES

- QUALITY, HYGIENE, SECURITY AND ENVIRONMENT

- TOPO-GIS – REMOTE SENSING

Prerequisites: Two-year undergraduate degree, a prep course to enter French Grandes Ecoles, or if you are a year 2 student at university level

Length of studies: 1 year

PREP COURSE TO ENTER GRANDES ECOLES

In partnership with EPF – Ecole d'Ingénieurs française

Prerequisites: GCE- O-Level/A-Level/WAEC/SSSCE or equivalents with credits in Mathematics, Physics and Science/Integrated Science

5/6 YEAR COURSES

after GCE/O-Level/
A-Level/WAEC/SSSCE
or equivalent diplomas



MASTER OF ENGINEERING / 2iE'S ENGINEERING DEGREE

ENGINEERING DEGREE with three Majors:

- Water and Sanitation
- Civil Engineering and Hydraulics
- Electric and Energetic Engineering

Prerequisites: Bachelor of Engineering in Water Environment, Degree in Civil Engineering, Master of Science or if you are a university-fourth year student^[2]

Length of studies: 2 years

ADVANCED MASTER'S DEGREE

WATER, SANITATION AND HYGIENE (HUMANITARIAN WASH)

Prerequisites: 4-5 year university course with relevant professional experience^[2]

Length of studies: 1 year

INTERNATIONAL MBA MANAGEMENT ECO-INNOVATION

In partnership with University Paris-Dauphine

Prerequisites: 4-5 year university course with relevant professional experience^[2]

Length of studies: 16 months alternately (8 sessions of 12 day trainings every other month)



**IngénieurEs*
in Africa**

8 YEAR COURSES

PHD DEGREE IN WATER, ENERGY AND ENVIRONMENTAL SCIENCE AND TECHNOLOGY

Prerequisites: 5 year university course / Master's degree

Online Professional Training

Training program

INFRASTRUCTURE AND SERVICE MANAGEMENT

BACHELOR'S DEGREES

Infrastructure and Service Management (Civil Engineering- Energy - Hydraulics)

Prerequisites: 1-2 year university course after GCE/WAEC/SSSCE*

Length of studies: 12 months

MASTER'S DEGREES

Infrastructure and Service Management

Prerequisites Year 1: 2-3 year university course after GCE/WAEC/SSSCE*

Length of studies: 24 months

Prerequisites Year 2: 3-5 year university course after GCE/WAEC/SSSCE*

Length of studies: 12 months

MAJORS:

- **Water and Sanitation**
- **Renewable Energies**
- **Project Management**
- **Road Networks and Transport**

Sustainable Management of Mines

Prerequisites Year 2: 4 4 or 5 year university course after GCE O level or A level, WAEC, SSSCE*

Length of studies: 12 months

MANAGEMENT AND INNOVATION

MASTER'S DEGREES

Business and Organization Management

Prerequisites Year 1: 3-year or 2-year course after GCE/WAEC/SSSCE*

Length of studies: 24 months

Prerequisites Year 2: 4/5 or 3-year course after GCE/WAEC/SSSCE*

Length of studies: 12 months

MAJORS:

- **Innovation and Development of Societies**
- **Strategic and Operational Management**
- **Management of Crises and Humanitarian Actions**
- **Quality, Hygiene, Security and Environment**

IT CERTIFICATE

IT Certificate of Proficiency (Level 1 of C2i)

* Accreditation of prior and experiential learning

Continuing Education (Short training)

Benefit from short training sessions of **one to two weeks**

Businesses, Institutions, Organizations : benefit from our expertise (Training needs assessment, elaboration of training plans, evaluation of training devices, implementation of trainings)

They trusted us



Recognition and International Accreditation

AFRICA



LA BANQUE MONDIALE
BIRD • IDA



Label Center of Excellence

Degrees credited

EUROPE



Degrees credited in the European area

Development of
training programs

UNITED STATES AND WORLD



RESCIF
Réseau d'excellence
des sciences de l'ingénieur
de la Francophonie



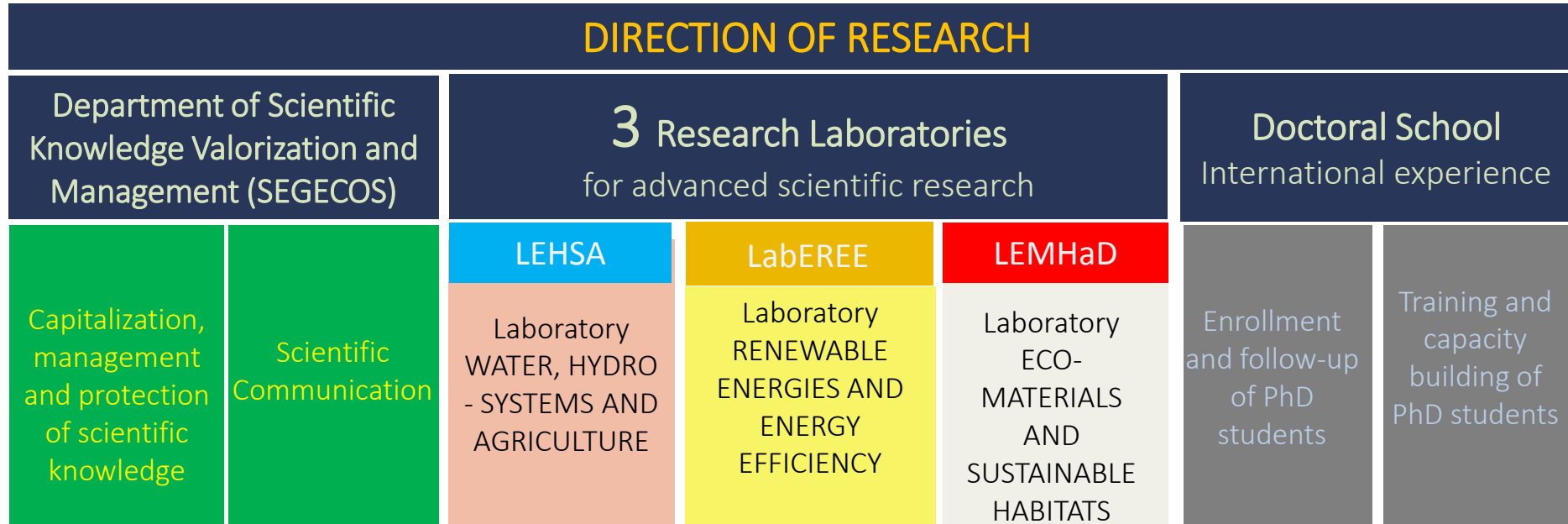
Networks of academic collaboration

■ ■ ■ ■ RESEARCH

RESEARCH

2iE - Research

A reform for greater scientific competitiveness and impact on socio-economic development



➔ NEW ORGANIZATION

Faced with the current challenges of scientific competitiveness and socio-economic development of African countries, the Research Direction has recently been restructured to create critical masses of scientists able to provide strong responses to development issues while ensuring consistent display and identity.

➔ MISSIONS

- Develop and implement the research strategy and mobilize the necessary resources
- Supervise laboratory research and innovation activities
- Capitalize and value results and knowledge from research and innovation
- Development of partnerships especially with the private and public sectors
- Scientific and strategic screening

Research Axes

WATER AND CLIMATE	ENERGY AND SUSTANABLE SETTLEMENT
WATER CYCLE	SOLAR SYSTEMS
WATER QUALITY	BIO-ENERGIES
RISK MANAGEMENT AND GLOBAL CHANGE	ECO-SETTLEMENT AND ENERGY EFFECTIVNESS

A network of international Scientific Partners

高知工科大学
KOCHI UNIVERSITY OF TECHNOLOGY

IRD
Institut de recherche
pour le développement



THE UNIVERSITY of
MISSISSIPPI

 **cirad**
LA RECHERCHE AGRONOMIQUE
POUR LE DÉVELOPPEMENT




ÉCOLE POLYTECHNIQUE
FÉDÉRALE DE LAUSANNE

UNESCO-IHE
Institute for Water Education



KNUST

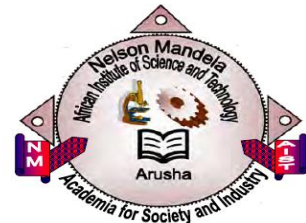
 **AUST**



PENNSSTATE



UPMC
SORBONNE UNIVERSITÉS



**GROUPE
INSA**
Institut National
des Sciences Appliquées

um2
UNIVERSITÉ MONTPELLIER 2
SCIENCES ET TECHNIQUES



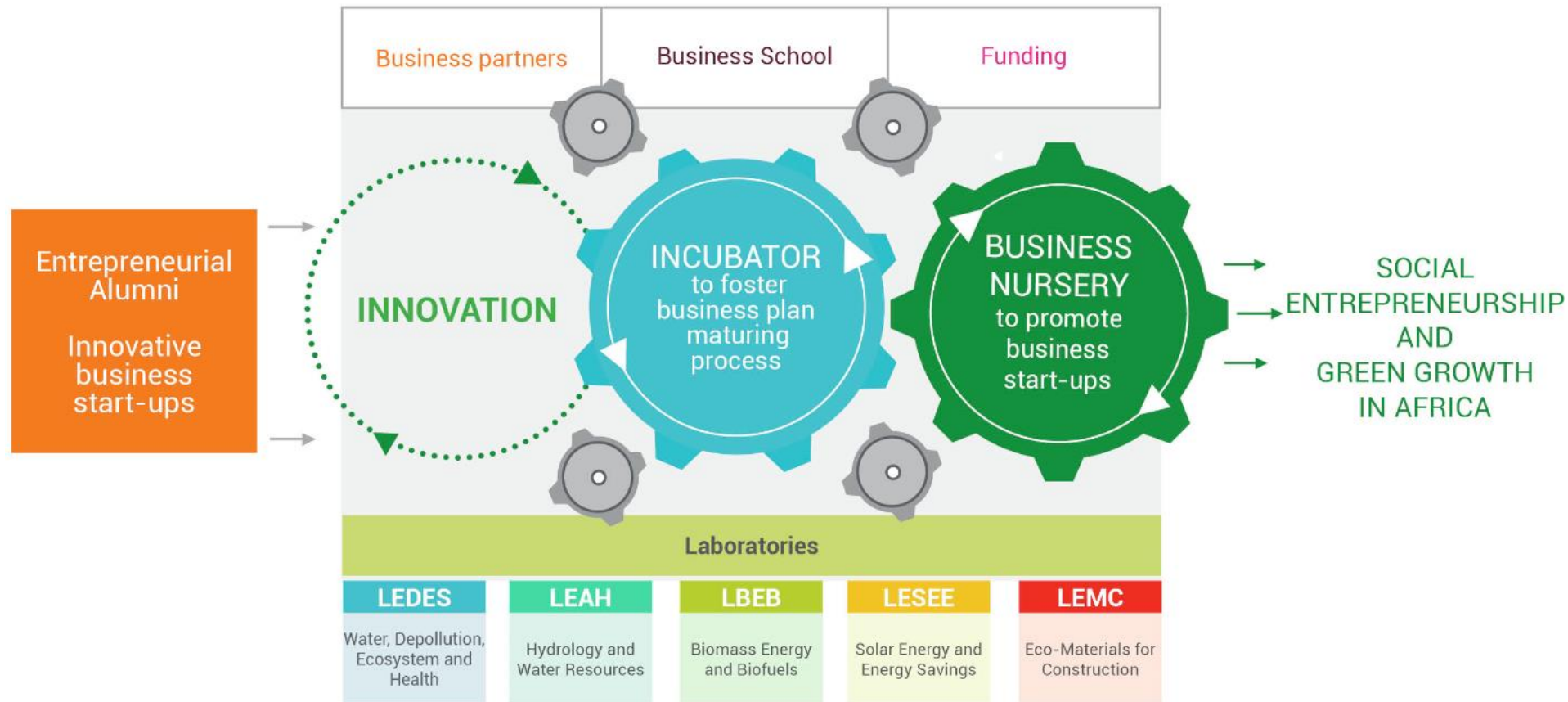
北海道大学
HOKKAIDO UNIVERSITY

eawag
aquatic research

■ ■ ■ ■ ENTREPRENEURSHIP

Training Entrepreneurial Engineers

Boost Creation of Innovative and Green Growth- Oriented Businesses



The incubator

Provide tailored solutions

ENGINEERING

- Coaching
- Laboratories and special equipment
- Network of scientific and academic partners
- Financing of a prototype

ENTREPRENEURSHIP

- Managerial (building business plan) and legal (intellectual property) support
- Network of private partners
- Fundraising support

OTHER SOLUTIONS

- Financing of mobility
- Provision of workspaces
- Vocational training and international conferences

The incubator

Winners of the Green Start Up Challenge 2014, a competition for green growth, innovation and social entrepreneurship in Africa

**Killien
de Renty**



Cameroun

UpOwa

Killien propose un produit qui développe, installe et assure la maintenance de systèmes solaires intelligents. Les

familles et micro-entrepreneurs d'Afrique rurale ont désormais une solution accessible et durable pour s'éclairer et recharger leurs téléphones portables, simplement en achetant des crédits prépayés des commerçants locaux.

**Maximilien
Kungana**



République
Démocratique du Congo

Compost Congo

Maximilien propose un amendement organique pour les sols, le compost, issu de la revalorisation de la partie biodégradable des

déchets. Une solution rentable et nouvelle à Kinshasa pour favoriser l'assainissement urbain et l'agriculture biologique, et ainsi contribuer à la meilleure santé des populations.

**Christian
Toé**



Burkina Faso

Sac Frigorifique

Christian propose la conception d'un sac permettant le transport et la conservation des produits pharmaceutique et alimentaires.

Adaptée aux climats tropicaux, cette innovation valorise la ressource solaire pour favoriser un temps de conservation et une autonomie compétitive.

The nursery

A new enterprise created in 2014



FASOPRO



Nom de l'entrepreneur : Kahitouo Hien

Nationalité : Burkinabè

Entrée dans l'incubateur : juillet 2012

Date prévue de lancement : 2014

Mots clés : agroalimentaire, malnutrition, chenilles

5 millions
d'enfants
malnutris au
Sahel

55% des enfants
Burkinabè
atteints de
malnutrition

63% de
protéines dans
une chenille

Des milliers de
tonnes de
chenilles non
exploitées par
an

Des centaines
de femmes
mobilisables
pour collecter

International Competitions: Total Startupper 2016



- 3 projects supported by 2iE for 2 years
- 2 graduates of 2iE
 - Paper recycling
 - Biofuels
 - Fish farming



International competitions

2iE students on the front of the scene



Business plan competition organized by the Islamic Development Bank (IDB) in Morocco - December 4, 2014

International competitions

2iE students on the front of the scene



Défi Bouygues Construction 2012

Bertrand and Patrick Antonin, two 2iE students of "Wolf's gang" team ranked in 3rd place



Défi Bouygues Construction 2013

Abel Tchonguéla et Justin Nabaguédja, 2iE students are awarded the 2nd prize

International competitions

2iE students on the front of the scene



Global Social Venture Competition 2013

*Faso SOAP won the 1st prize (\$ 25,000) and the Audience Award (\$ 1 500)
For the first time in the history of the GSVC, a non-issue in the Americas team
won this prestigious award.*



www.2ie-edu.org

