



Capacity building in the water sector : creating and developing training centers for water professionals

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The International Network of Water Training Centers was created in 2008 with the following main goals :



- => **develop experience sharing** between centers
- => **raise awareness** about the importance of vocational training in the field of water and wastewater treatment
- => **advocate** the necessity for training programs towards national institutions and donors
- => promote the **creation of new water training centers**



Funding members in 16 countries

Algeria

ADE



Benin

SONEB



Burkina Faso

ONEA



Burkina Faso

2iE



France

OIEAU



Kenya

KEWI



Laos

CFME



Lebanon

CIFME



Mali

EDM SA



Morocco

IEA/ ONEP



Mexico

CONAGUA



Uzbekistan

SIC ICWC



Poland

GFW



Togo

TDE



Tunisia

CITET



Vietnam

CNEE



WATER PROFESSIONALS

The best staff structure in the water sector is estimated at :

- 500 to 700 staff members

- * for 1,000,000 inhabitants covered by a water supply service
- * for 1,000,000 inhabitants connected to a sewerage network

- 5 to 8 staff members

- * per 1.000.000 m³ used in the other sectors
(*hydropower, industry, irrigation...*)








- 80 % of workers and technicians

15 % of middle managers-foremen
5 % of engineers and senior executives



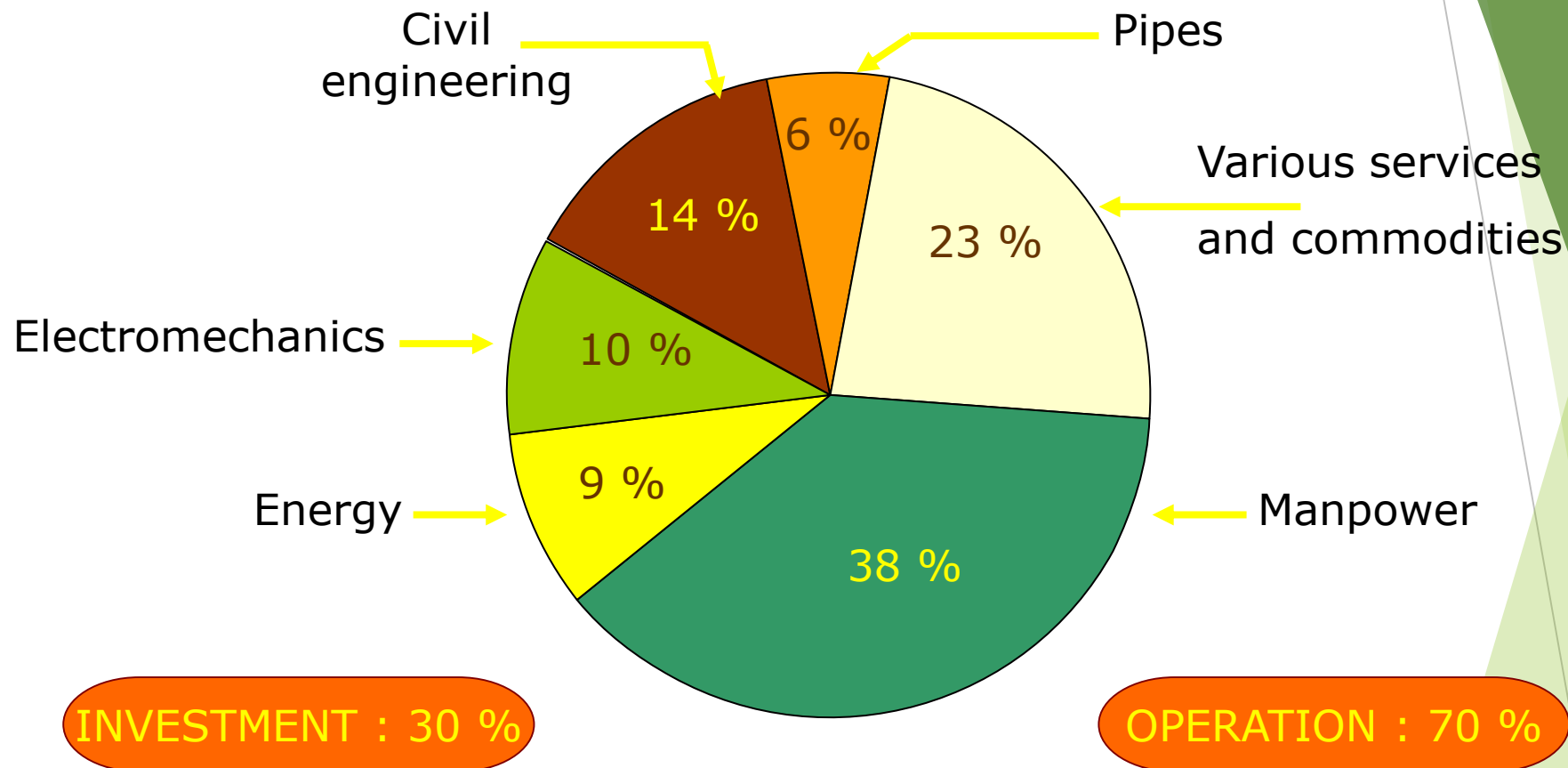
TRAINING FOR WATER PROFESSIONALS

VARIOUS SPECIALIZATIONS

-  Administration - organization
-  Financial and economic management
-  Project studies - Operation management - Planning
-  Operation and maintenance of facilities
-  Organization of information systems
-  Environmental protection
 - Environmental impact assessment
 - Ecological balances
-  Relations with the users and the public



WATER PROFESSIONALS



Workforce costs represent :

- 38 % of the total water cost
- 55 % of operating costs

Benefits of training

Example of leakages detection and repairing

- ▶ Low training cost (1400 €) / intervention cost on network (1000€)
- ▶ Positive return on investment, if 1 session allows to be more efficient during at least 2 interventions
- ▶ Finding and limitation of big leakages more rapidly
- ▶ Correct intervention and then no further malfunctions as a consequence of a bad intervention





Benefits of training

Example of wastewater treatment

- ▶ A collective training session of 4 days (6 500 Euros) can result in significant reduction of operation costs : 50 000 Euros / year
 - ▶ Energy consumption
 - ▶ Reagents consumption
 - ▶ Treated water quality
 - ▶ Sludge quality and quantity
 - ▶ Staff motivation measurement period.





At the international scale, necessity to reinforce training investments and facilities

- ▶ Alarming current situation for WASH issues in many countries
- ▶ Many investment projects miss their objective : considerable waste of funds
 - ▶ because of the lack of operating skills
 - ▶ Unsufficient concern about operation and maintenance
 - ▶ Lack of well trained staff for day to day operations
 - ▶ Degradation of infrastructures
- ▶ Necessity to train all levels of staff

	Managers	Technicians/ Supervisors	Workers
Developing countries	1 - 5 %	10 - 15 %	80 - 89 %
Developed countries	5 - 15 %	25 - 30 %	55 - 70 %

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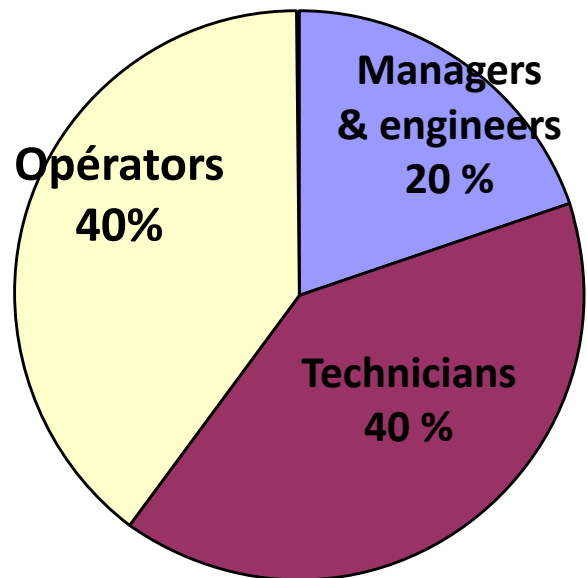
IOW's experience in operating the French national water training center

- ▶ Since 1977
- ▶ 6 000 trainees /year
- ▶ 700 training sessions / year
- ▶ 35 permanent training staff
- ▶ Water treatment, waste water treatment, networks, solid wastes
- ▶ Pedagogical technical facilities





Profile of trainees



- ▶ Training of professionals
- ▶ Skills mapping & engineering
- ▶ Creation and development of training centers :
 - ▶ feasibility studies,
 - ▶ training of trainers,
 - ▶ pedagogical kits,
 - ▶ economic and commercial optimization



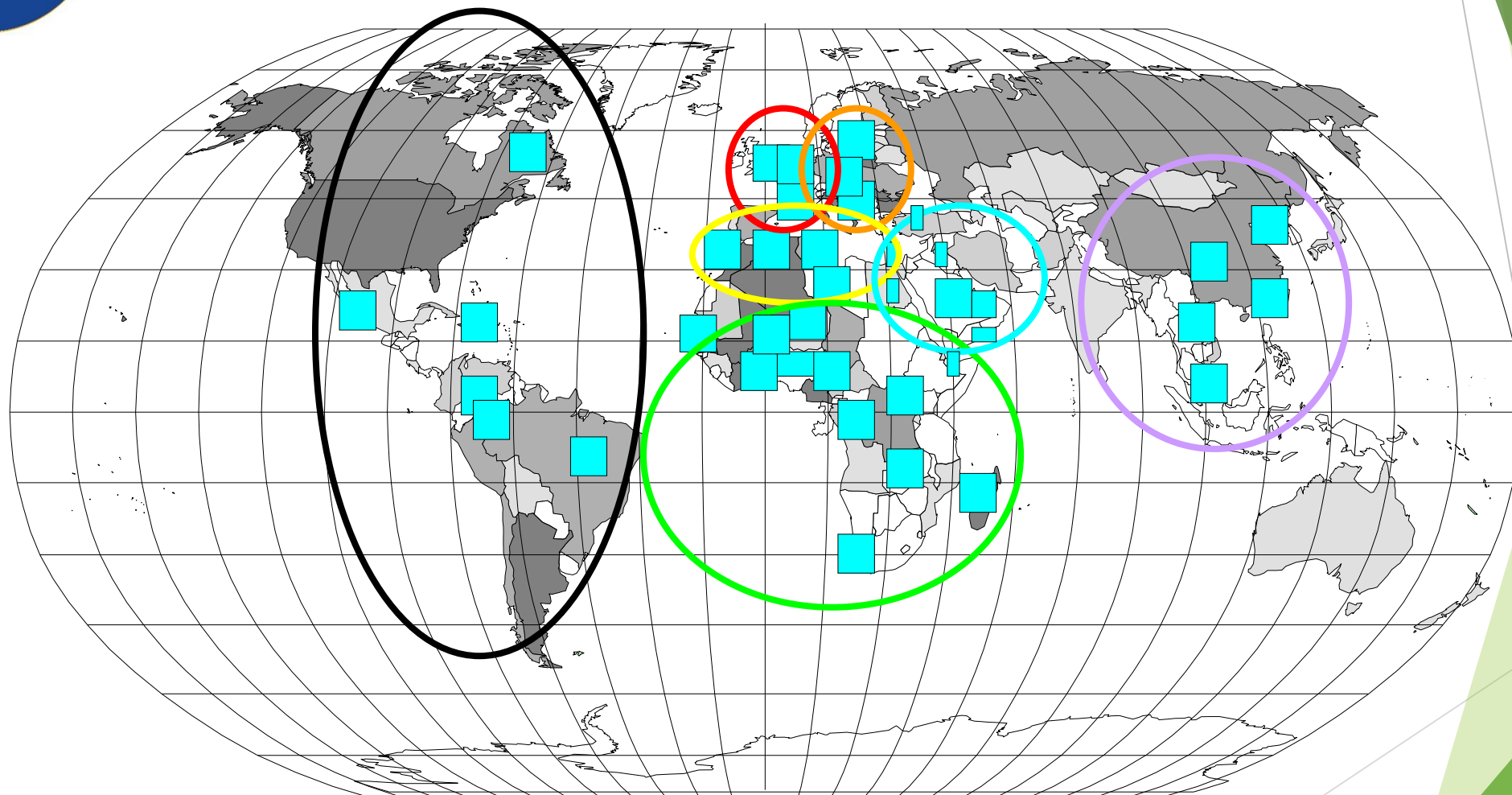


Need for new training centers over the world





IOW's training experience





Gdansk Fondation - Poland



- ▶ Design and implementation of 2 training programs of training
 - ▶ Head of electrical maintenance
 - ▶ WWTP chief operator
- ▶ Skills evaluation

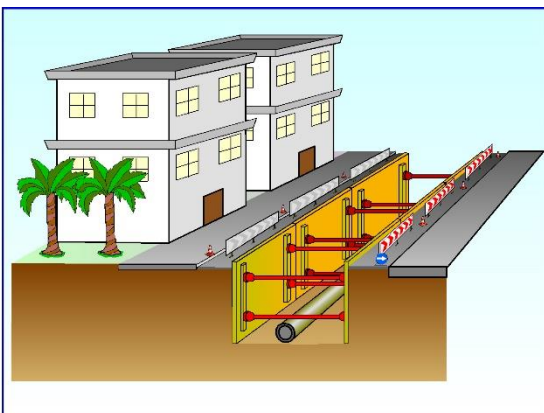




Saoudi Arabia



- 40 pedagogical kits adapted to local context



- ▶ Overall design of training centers
- ▶ Detailed specifications of pedagogical facilities
- ▶ Training of trainers





Training platforms South Africa



- ▶ Training platforms for water networks building





Training platforms Kenya



- ▶ Training platforms for water networks building



CEMCAS - Mexico

???





Recomendations

- ▶ Capacity building and development of vocational training in the water sector:
 - ▶ Reinforce awareness of the importance of vocational water training in development strategies and programmes.
 - ▶ Integrate vocational training into investments.
 - ▶ Encourage the widespread use of good practices and innovative, appropriate solutions in vocational training.
 - ▶ Support the creation of new water training centres throughout the world and strengthen existing ones.
 - ▶ Design common training tools and improve educational practices.
 - ▶ Develop skills and increase the number of resource persons in the fields of water supply and sanitation.



Recomendations

- ▶ Support training with sustainable financial mechanisms:
 - ▶ Create “Earmarked Funds” at national level for developing vocational training; this could be funded by taxes, by contributions proportional to companies’ total wage bill, or by a percentage of the water sale price.
 - ▶ Include staff training in water companies’ budgeting (public and private) at a minimum of 1% of the total wage bill.
- ▶ Mainstream training in Official Development Aid, both bilateral and multilateral, and international cooperation organizations’ water-based programmesVocational training is a productive investment and should be considered as such within development projects.
- ▶ Incorporate vocational training into human resource development strategies:
 - ▶ Consider training as an essential component of Human Resource Management
 - ▶ Develop skills in line with career progression
 - ▶ Draw up long-term Training Plans both nationally and within water companies



Thank you for your attention

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