Training Need and Demand Assessment for sustainability in the textile manufacturing

Promotion of Sustainability in the Textile and Garment Industry in Asia-FABRIC

giz — Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

FABRIC Asia

Training Need and Demand Assessment for sustainability in the textile manufacturing

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on behalf of giz FABRIC and adelphi consult GmbH Berlin

giz

Training Need and Demand Assessment

i. Introduction / Questionnaires for Demand assessment

ii. Example 1: for Training Need and Demand Assessment

iii. Evaluations / TNA / Teaching Formats (Presence / Blended / Online)

iv. Training Subjects – Preferences by Industry

v. Regional Studies / Ranking Studies

vi. Example 2: Training Need Assessment and Demand Survey

Intro: Training Need and Demand Assessment

It is essential to assess the training needs and demand of the industry for new topics and/or qualified professional human resources.

Planning, as always, plays a vital role in a management process. A sound basis for curriculum planning and development is Training Needs Assessments (TNAs) and market or demand-site studies.

With the results of the training and the demand assessment, the work of the curriculum commission can be enriched and can be directed towards a more demand-driven design.

and not driven by the interests of an internal circle of professors (as it often happens).

Intro: Training Need and Demand Assessment

Before a new curriculum or a new study program is set up, the training needs and the demand for new topics and/or qualified professional staff (engineers) have to be assessed.

Here are examples of how the training need and demand were assessed by the Institute of Distance Education of the University of Applied Sciences in Berlin.

With this training and the demand assessment, the work of the curriculum commission was enriched and, based on the data, the importance and credits were given to the different subjects.

Marktstudie
zum Studiengang
„Erneuerbare Energien"

01.12.2008 - 31.03.2009

Nadine Schönfeld

Mike Pias

Training Need Assessment (TNA)

- The especially designed international questionnaire was sent to selected professionals working in field emerging into renewable energies and energy efficiency. 383 persons responded to the questionnaire. The distribution was 203 persons from Asia, 86 from South America, 43 from Africa and 31 from Central America. Out of them 296 were male and 77 female with ten persons not mentioning their sex.

- The survey participants who responded were working in different organisations and held different positions in their working environment.

Example 1: Training Need and Demand Assessment

- Training Need Assessment (TNA)
- selected professionals working in field emerging into renewable energies and energy efficiency
- 383 persons responded to the questionnaire.

Operational Area

Operational Area	Percentage
Research	24,2%
Management	22,8%
Top Management	16,1%
Other	11,6%
Development	11,6%
Services	4,8%
Administration	3,0%
Production	2,4%
Distribution/Sales	2,4%
Legal &...	0,8%
Purchase	0,3%
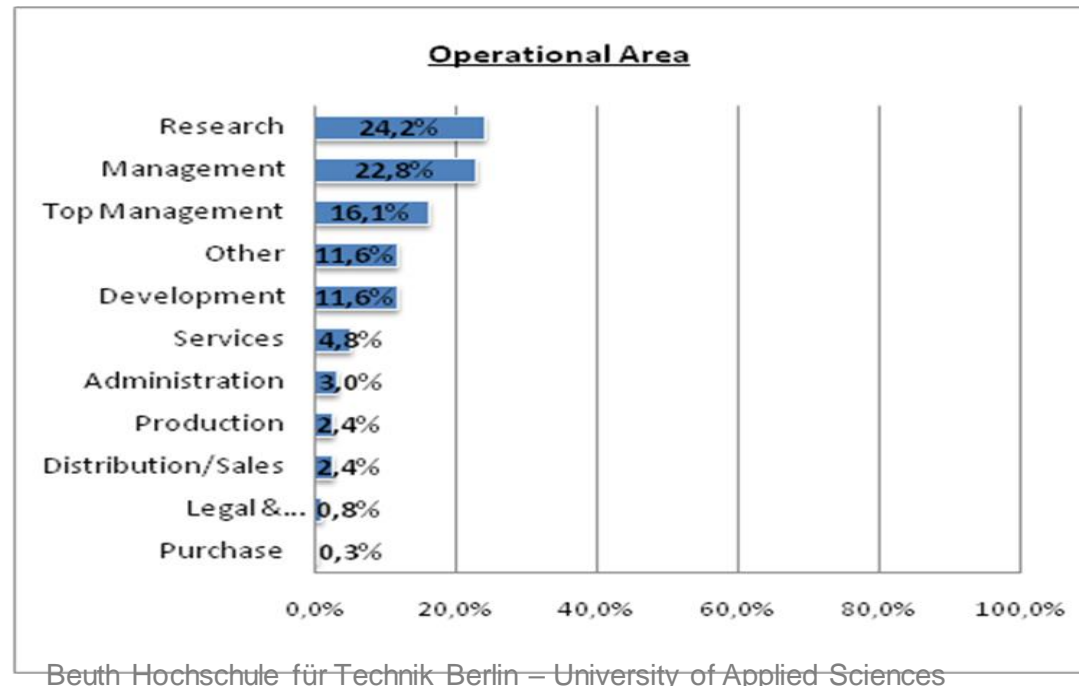
Organisational background of the survey participants

Training Need and Demand Assessment Example

Training Need and Demand Assessment Example

Operational Area
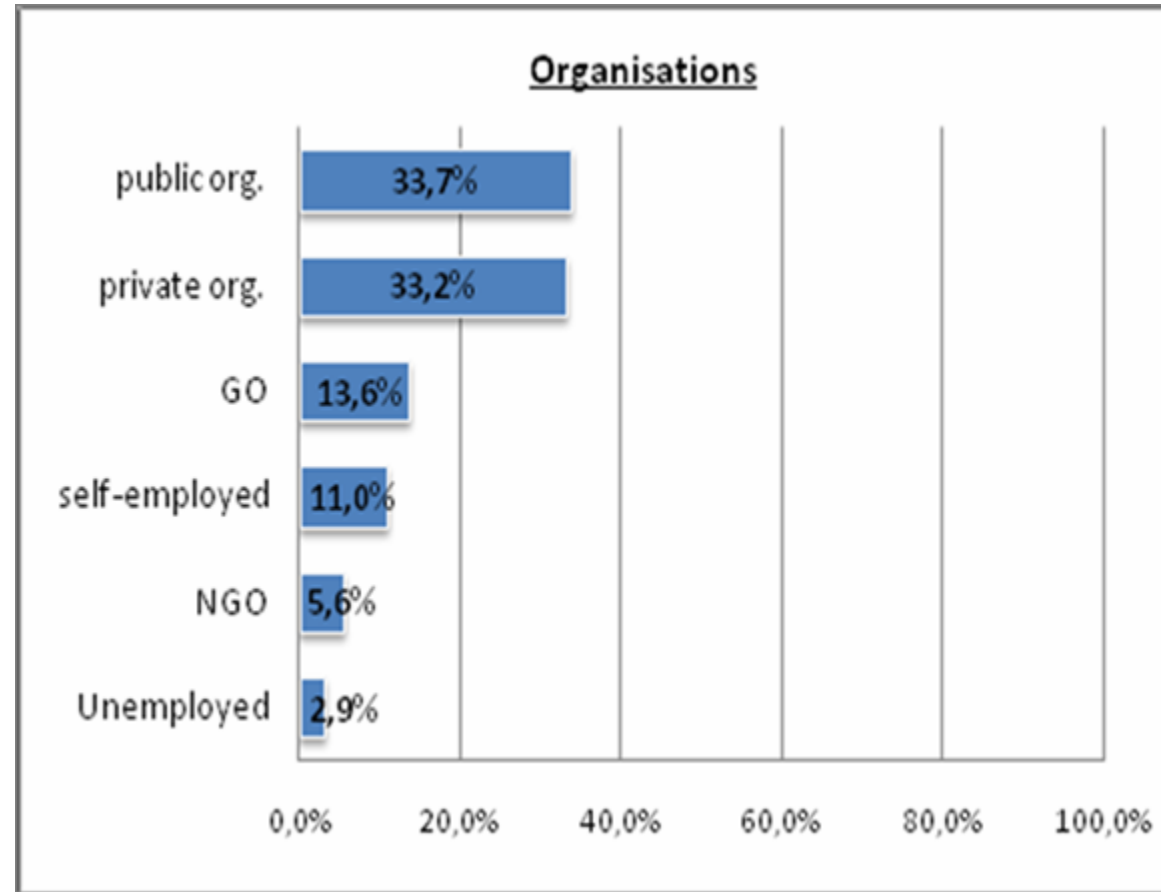
Professional Background	Percentage
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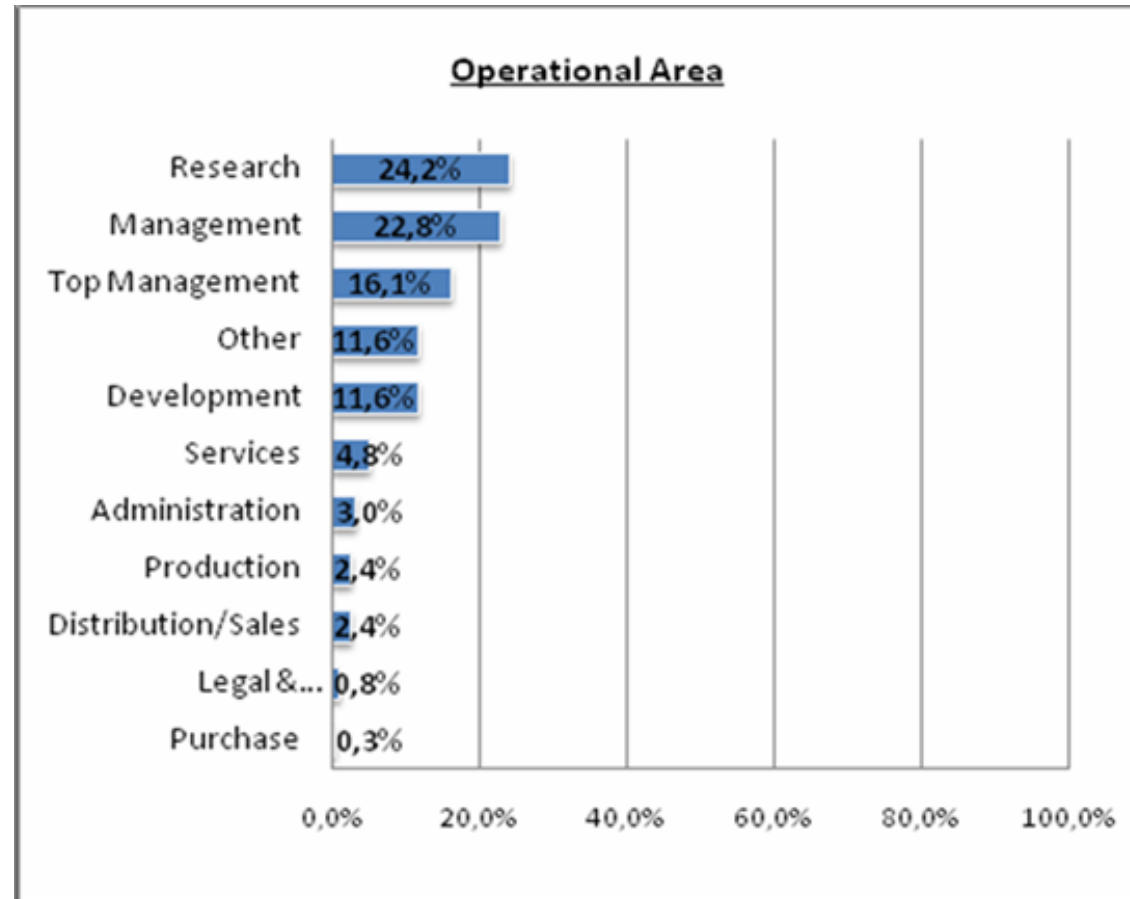
Training subjects – Fields of Interest

Figure 3 - Fields of interest of the survey participants
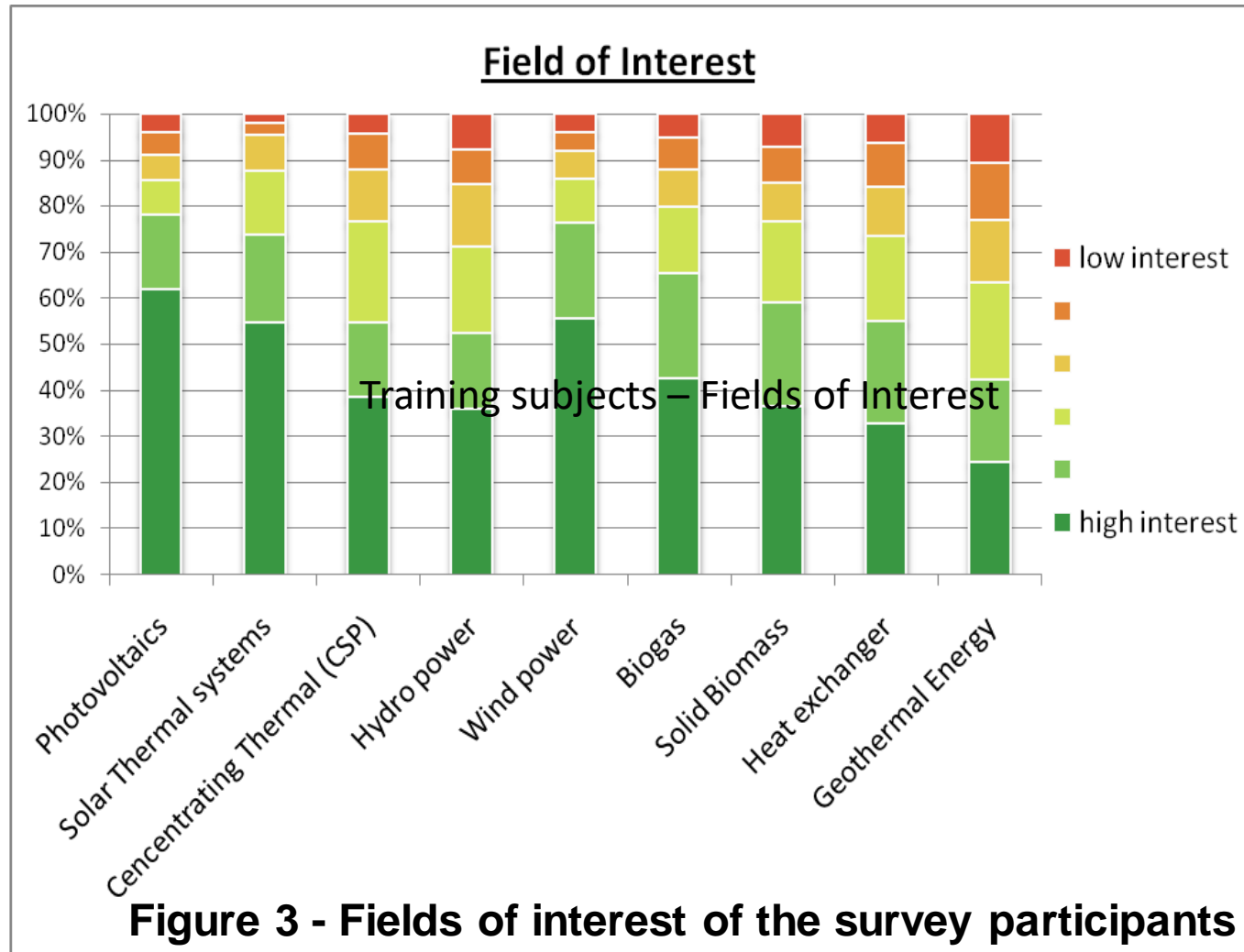
Presence or Blended Learning Formate
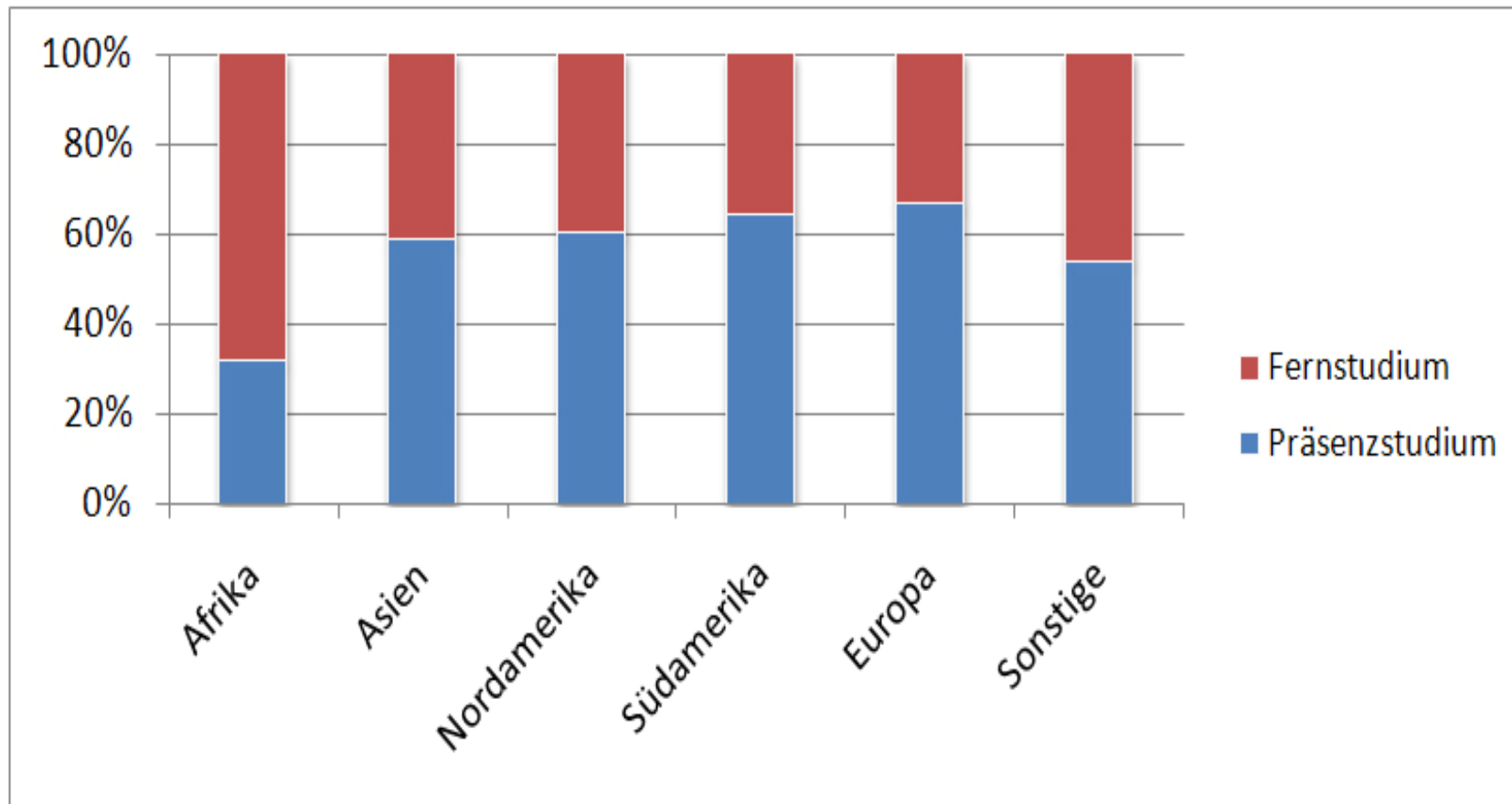
Online Courses - Blended Learning Concept

Access to online lectures which already took place

Video Podcasts

Software — **Softwarelizences (T-Sol, Renewable Energy Software)**

Students can upload data for sharing, e.g., sample solutions.

Web-Uploads

Students can download additional tutorials for offline use

Web-Downloads

Online Course Unit Represents the basic course content: up to date, didactical suited for self study

On Campus Time — **Face to face classes in lab environment**

Learning Management System — **Virtual classroom as base for all learning activity**

One email adress for ALL Inquiries –first level support will dispatch to the right place

Central Help Desk

E-Lectures

Course Forums — **platform for all inquiries an information between students and professors**

High performance system for life e-lectures and distance conferences

Preference of industrial sectors by the survey participants

Training subjects – Industrial Sectors

Level of Interest by Industries

Legend:
- Power generation (Electricity)
- Utility Industry (Electricity, Gas and Water supply)
- Buildings
- Private households
- Agro-Industry
- Electronic / Electrical Industry
- Transport and Mobility
- Commerce
- Construction and Materials
- Mechanical Industry (Motors, Pumps and mechanical parts)
- Food and beverage Industry
- Health Care Industry
- Petrol Industry
- Automotive Industry
- Metal Industry (aluminium, copper, steel, zinc)
- Chemical Industry
- Pulp and Paper Industry
- Electroplating Industry
- Textile Industry
- Ceramic Industry
- Pharmaceutics Industry

low interest → high interest

Regional Distribution

Who is doing what and in which region, area, and city?

- important/strong "competitor„
- Weak Competitor

University, either public or private

Tuition fees (yes/no)

- Technical Expertise
- Management Expertise
- Study Formats

9 Anhang

9.1 Visualisierung der Wettbewerberbeschreibung

Legend der Google-Pins:

- sehr wichtiger Wettbewerber
- wichtiger Wettbewerber
- schwacher Wettbewerber
- kein Wettbewerber
- Fernstudieninstitut Berlin

„Allgemeine Wettbewerber" des Fernstudieninstituts Berlin

Quelle: http://maps.google.de/maps?hl=de&tab=wl

50

Ranking Studies over the whole Country / Region

- Ranking of Universities with respect to the planned study programme / curriculum

- Bachelor / Master or Postgraduate Diploma or Certificate Course

- Presence / blended Learning or Online Learning Formats

Die „Allgemeinen Wettbewerber" wurden durch die Eingabe des Suchbegriffs "Fernstudium" bei Google ermittelt. Die anschließende Kategorisierung erfolgt anhand von Vergleichen des Angebots und des Bekanntheitsgrads.

Bei der konkreten Wettbewerberbeschreibung für die drei Masterstudiengänge wurde zusätzlich zu der gängigen Recherche mit Google auch mit der Suchmaschine für Studiengänge (www.studieren.de) gearbeitet, um eine möglichst hohe Vergleichbarkeit der Angebote zu erzielen.

Eine Erläuterung zu den analysierten Wettbewerbern wurde aufgrund der Angebotskomplexität nur bei den „Allgemeinen Wettbewerbern" vorgenommen. Ein eindeutiger Überblick über die momentane Wettbewerbersituation für die drei Master-Studiengänge wird durch eine Visualisierung mit Google erstellt. Im Anhang befinden sich die Visualisierungen der Wettbewerberbeschreibungn.

Top 10-Ranking „Allgemeine Wettbewerber"

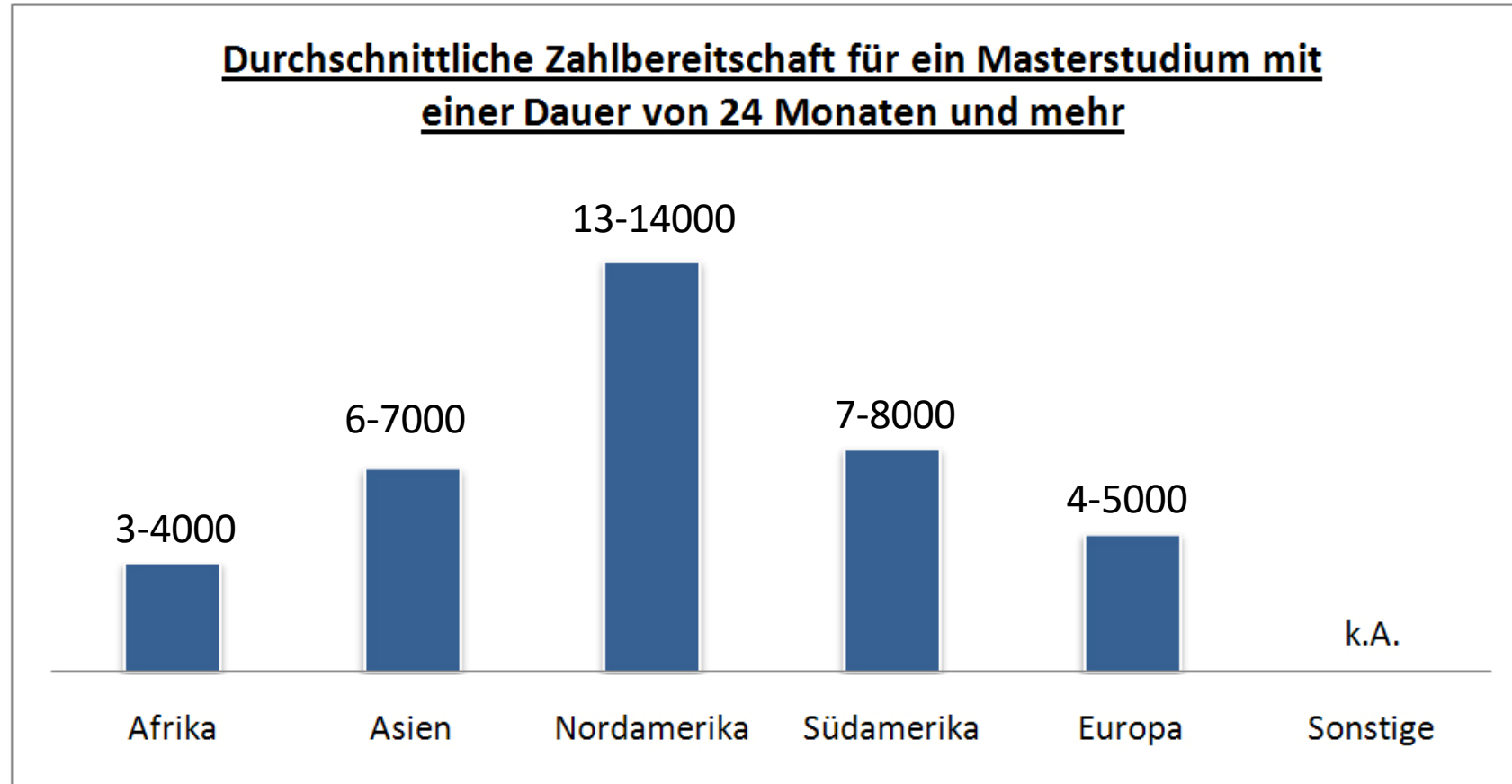|	Wettbewerber	Fern-studium	Studienangebot	Abschluss
1.	FernUniversität Hagen	x	Breites Spektrum	Diplom / Bachelor / Master
2.	Institut für Lernsysteme (ILS)	x	Breites Spektrum	interne, staatl. Abschlüsse
3.	Studiengemeinschaft Darmstadt (SGD)	x	Breites Spektrum	Zertifikate, IHK-Abschlüsse etc.
4.	AKAD	x	BWL, Ingenieurwissenschaften, Finanzmanagement	Diplom / Bachelor / Master
5.	Fachhochschule Nord-hessen	x	Breites Spektrum	Diplom / Bachelor / Master
6.	Akademie für Fernstu-dien	x	Breites Spektrum	Zertifikat
7.	Allfinanz Akademie	x	Management, Finanz-management	Master
8.	Europäische Fernhoch-schule Hamburg	x	Europäische BWL, Wirtschaftsrecht	Diplom / Bachelor / Master
9.	Fernakademie Klett	x	BWL, Wirtschaftsrecht, Intern. Management	Diplom / Bachelor
10.	Wilhelm-Büchner-Hochschule	x	Informatik, Mechatronik, Elektrotechnik	Diplom / Bachelor

Top 10-Ranking Wettbewerber „Industrial Engineering"

	Wettbewerber	Fernstu-dium	Präsenz-studium	Abschluss
1.	Fachhochschule Kiel	x		Master
2.	Fachhochschule Lübeck	x		Master
3.	Virtuelle Hochschule Bayern	x		Master
4.	Fachhochschule Regensburg		x	Master
5.	Fachhochschule Trier		x	Master
6.	Hochschule Ulm		x	Master
7.	Rheinische Fachhochschule Köln		x	Master
8.	Universität Stuttgart		x	Zertifikat
9.	REFA Nordwest e.V.		x	Urkunde
10.	Fachhochschule Bremen		x	Diplom

Top 10-Ranking Wettbewerber „Computational Engineering"

	Wettbewerber	Fernstu-dium	Präsenz-studium	Abschluss
1.	Fachhochschule Landshut		x	Master
2.	Friedrich-Alexander-Universität-Erlangen-Nürnberg		x	Master
3.	Leibniz Universität Hannover		x	Master
4.	Ruhr Universität Bochum		x	Master
5.	Technische Universität Darmstadt		x	Master
6.	Technische Universität Dresden		x	Master
7.	Universität Rostock		x	Master
8.	Hochschule Furtwangen		x	Bachelor
9.	Rheinisch-Westfälische Technische Hochschule Aachen		x	Bachelor
10.	Steinbeis – Transferzentrum Stuhr		x	Zertifikat

Durchschnittliche Zahlbereitschaft für ein Masterstudium mit einer Dauer von 24 Monaten und mehr

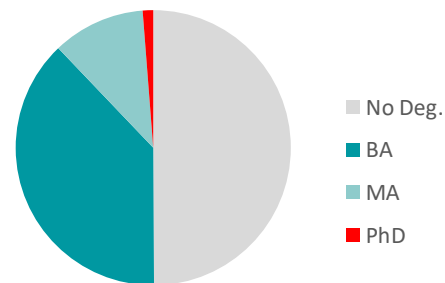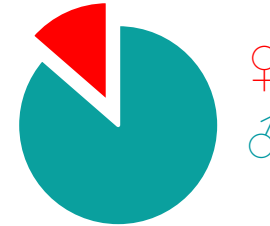# Example 2: Training Need Assessment and Demand Survey

- **General purpose of the survey**

What are the market needs for a Master Graduate in the field of RE/EE?

- Perspectives of different status groups
  - Students.
  - University staff.
  - Employers.

- Technical Expertise
- Management Expertise
- Study Formats
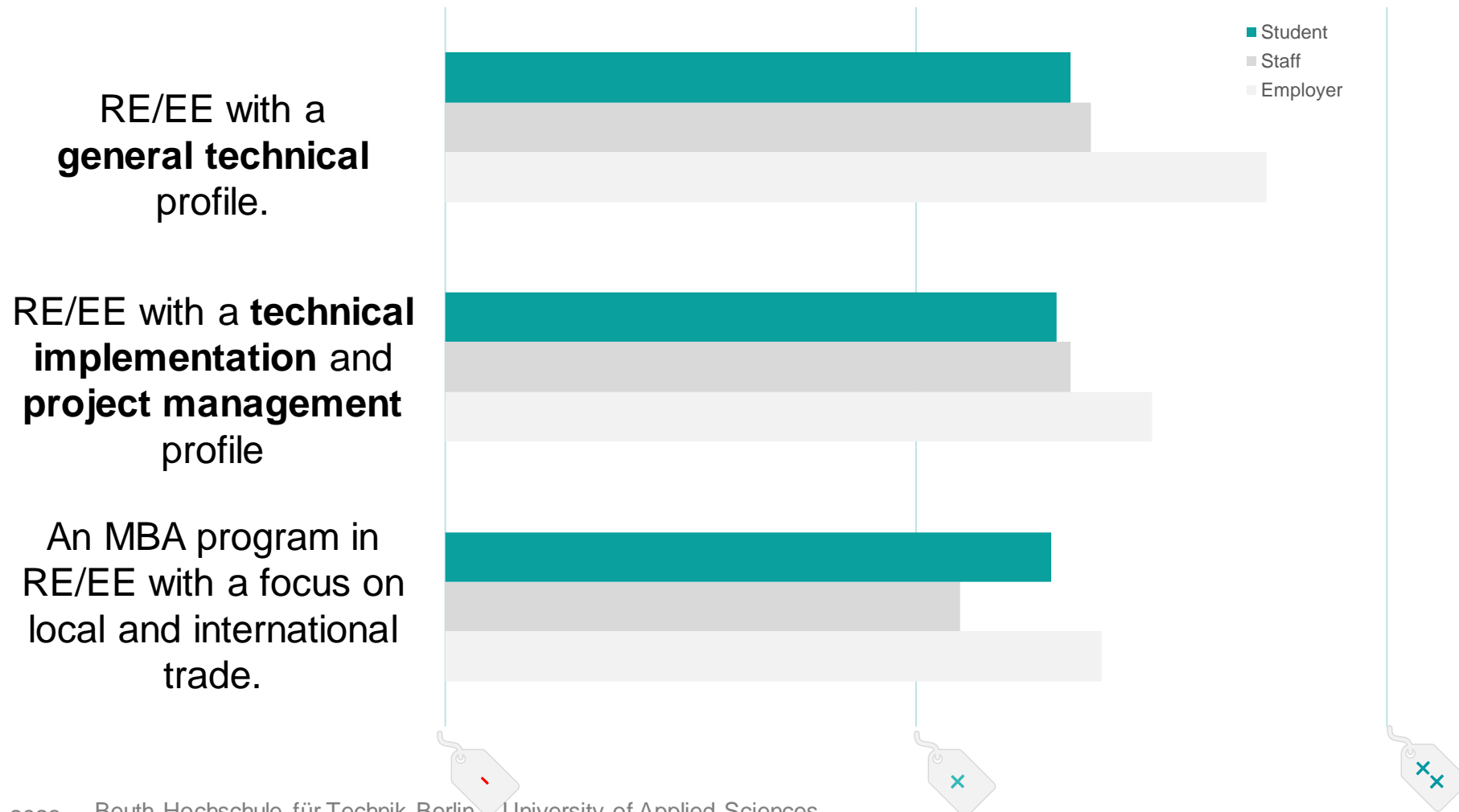
Participants and sample

- **573 participants** took part in the survey.
  - 440 students
  - 83 university employees
  - 50 employers

- We sampled different
  - Universities and Provinces.
  - Levels of education.
  - Levels of technical expertise.

Expert Knowledge in RE

Legend:
- Students
- Staff
- Employer

Pie chart legend:
- No Deg.
- BA
- MA
- PhD

Top 3 Programs in RE/EE– Student View

RE/EE with a **general technical** profile.

RE/EE with a **technical implementation** and **project management** profile

An MBA program in RE/EE with a focus on local and international trade.

Legend:
- Student
- Staff
- Employer

Top 3 Programs in RE/EE– Staff View

RE/EE with a **general technical** profile

RE/EE with a **technical implementation** and **project management** profile

RE/EE with an **economic** profile

Staff
Student
Employer

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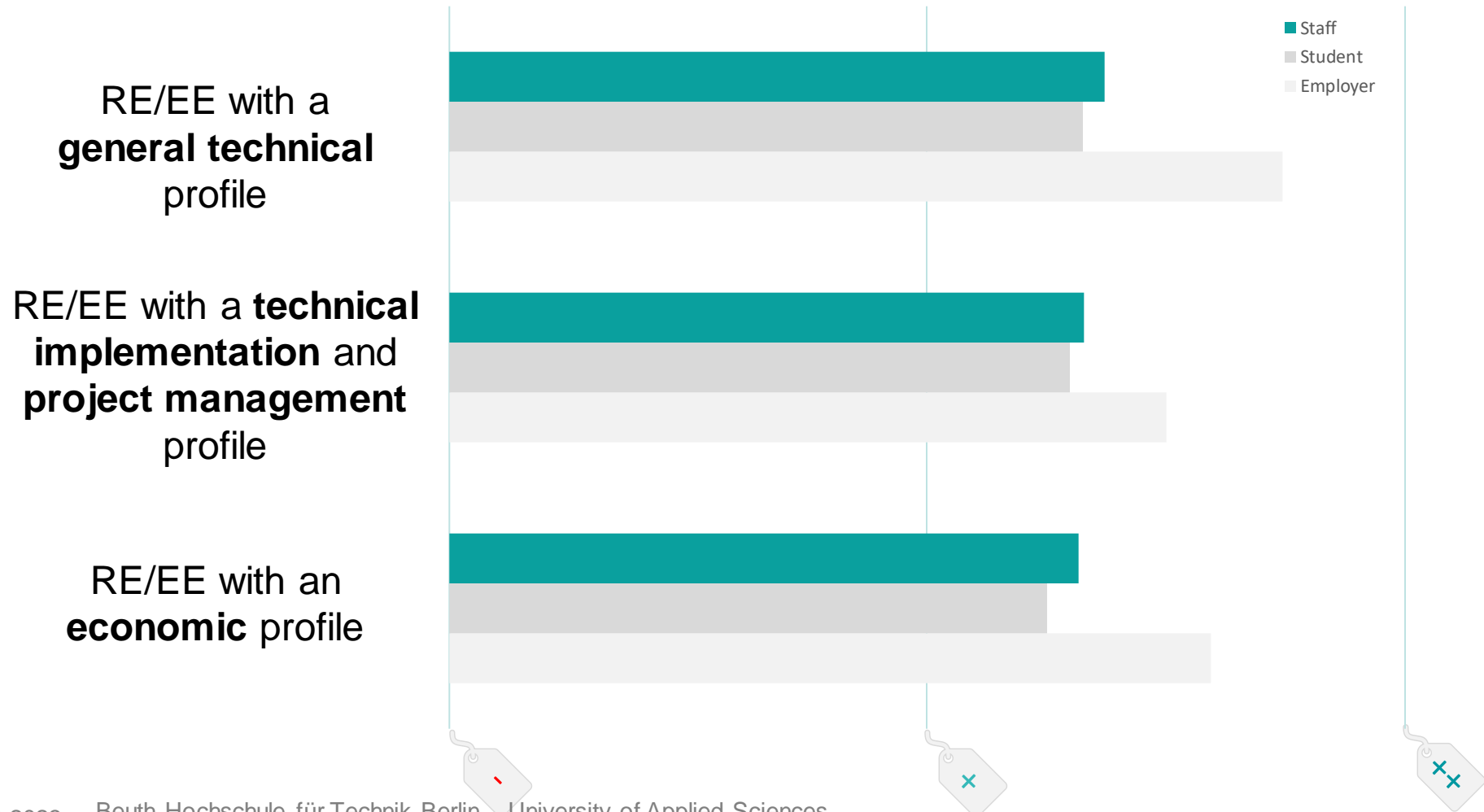
Top 3 Programs in RE/EE– Employer View

RE/EE with a **general technical** profile.

RE/EE with an **economic** profile.

RE/EE with a **technical implementation** and **project management** profile.

Legend:
- Employer
- Staff
- Student
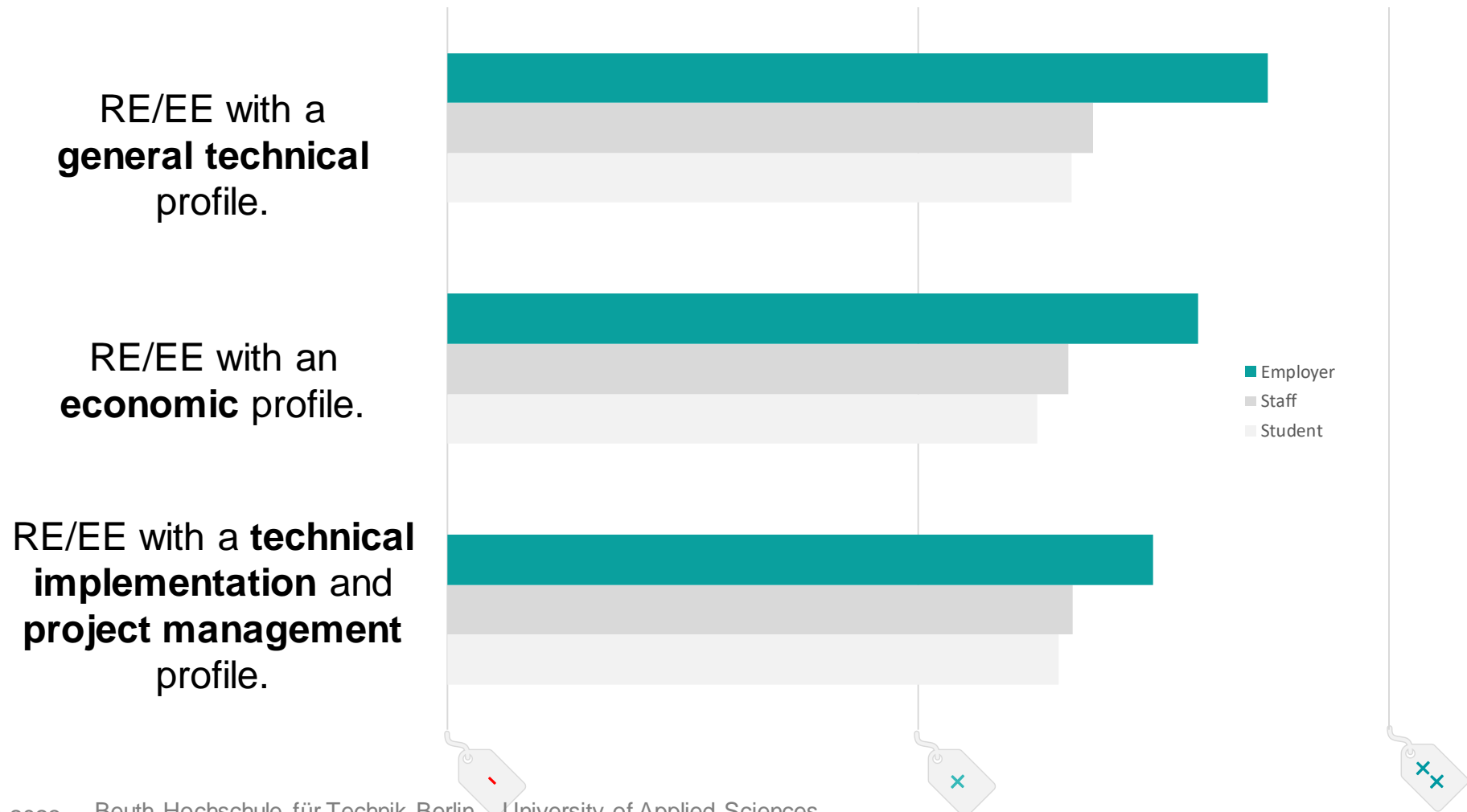
Program Focus
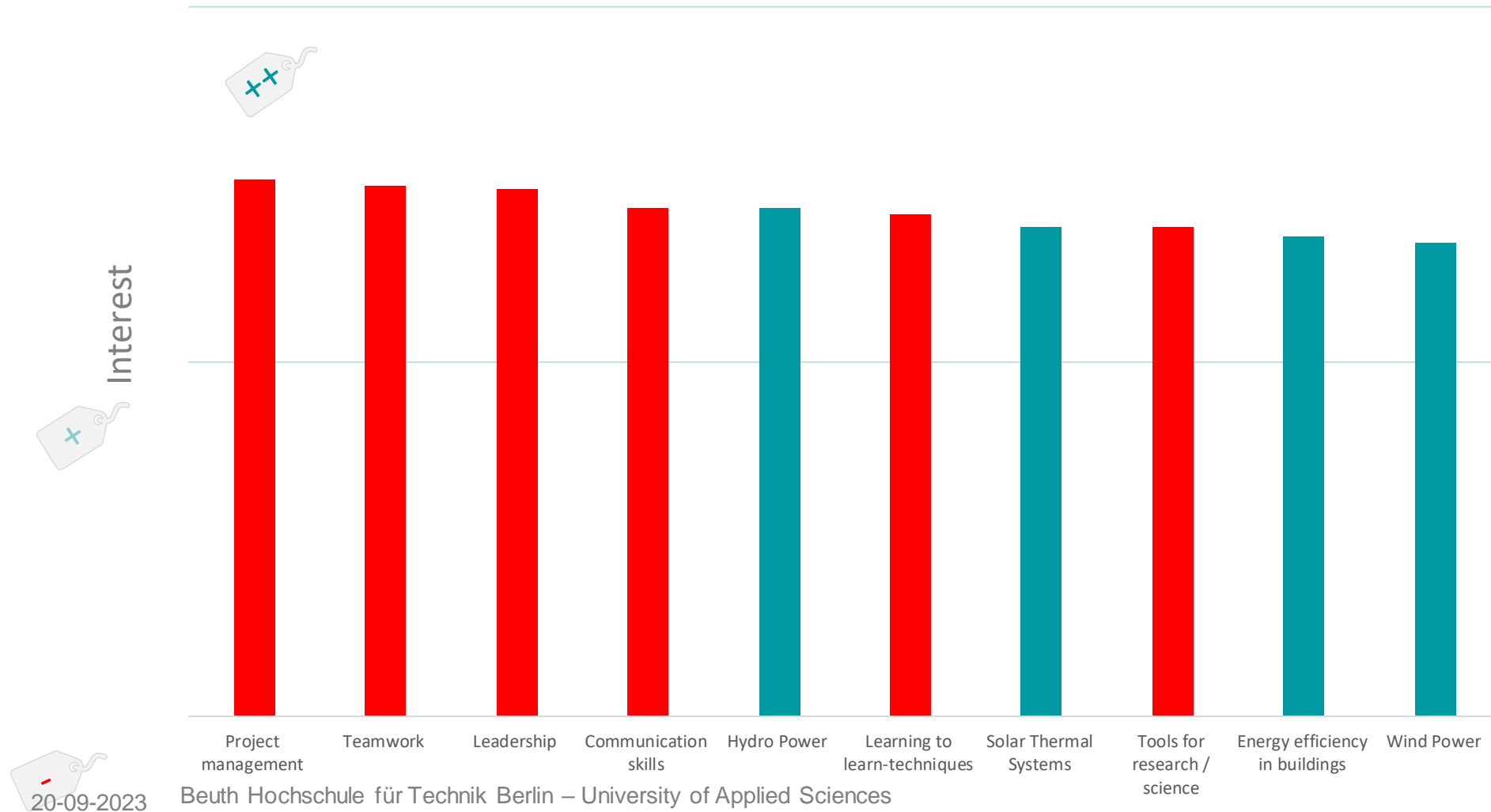
All status groups agree on two favorite programs.

- An RE/EE postgraduate program with a...
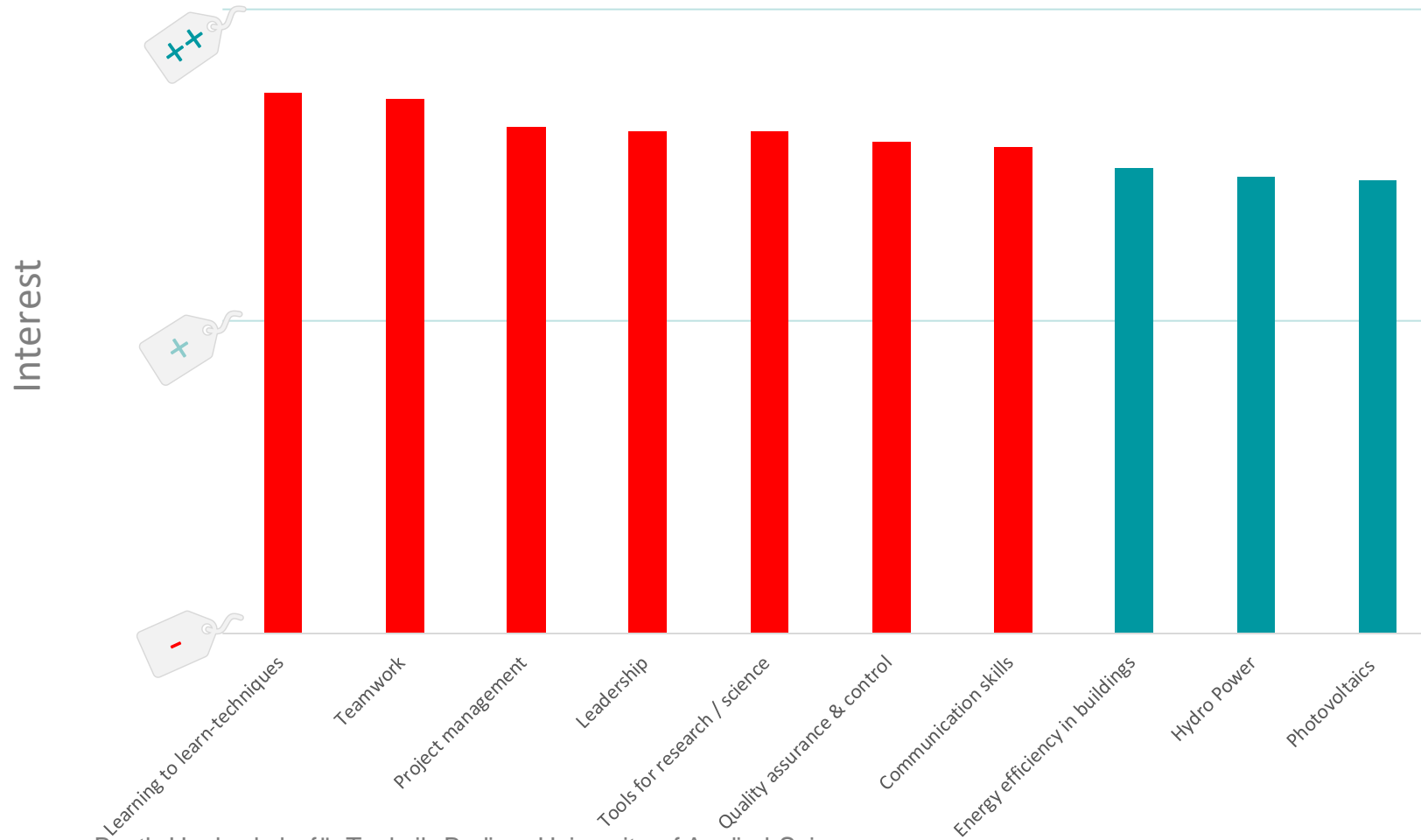 - Technical engineering
  - and a Project Management Profile

- And a **RE/EE postgraduate program** with a…
  - Focus on (green) business and finance
  - Mangement profile
  - Including legal and political RE/EE aspects (framework, support mechanisms)

Skills needed for a RE/EE Master – Student View

Interest

| Project management | Teamwork | Leadership | Communication skills | Hydro Power | Learning to learn-techniques | Solar Thermal Systems | Tools for research / science | Energy efficiency in buildings | Wind Power |

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20-09-2023

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Skills needed for a RE/EE Master – Staff View

Interest

Learning to learn-techniques
Teamwork
Project management
Leadership
Tools for research / science
Quality assurance & control
Communication skills
Energy efficiency in buildings
Hydro Power
Photovoltaics

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Skills needed for a RE/EE Master – Employer View

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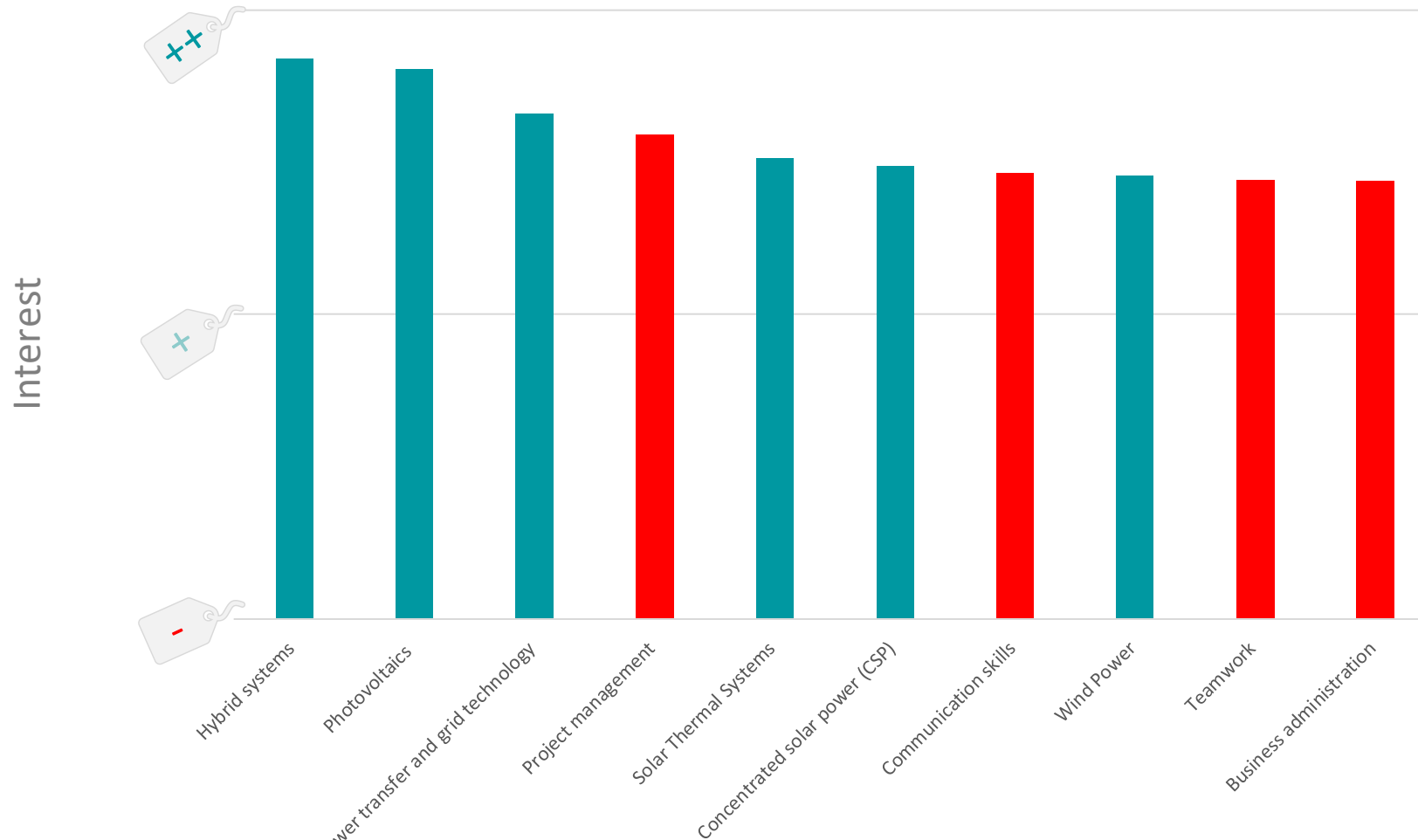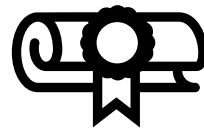
Two RE / EE Competence Clusters

Technical and engineering skills for RE/EE infrastructure installation
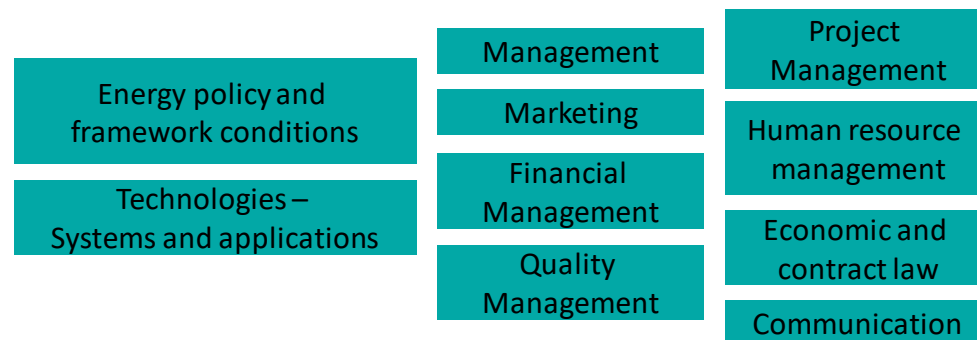
RE/EE

Master

**Framework, finance and business skills for the management of RE/EE**

Master of Business Administration Rewewable Energies

- cooperation with the department of business administration and social sciences.

- It is designed for participants with a bachelor's degree and at least one year of relevant work experience.

- delivering the skills and knowledge necessary for successful future business leaders in the field of renewable energy and energy efficiency.

- Start of the MBA Renewable Energy: October 2011.

Energy policy and framework conditions	Management	Project Management
	Marketing	Human resource management
Technologies – Systems and applications	Financial Management	Economic and contract law
	Quality Management	Communication

Results

- Demand oriented training through the results of training need survey (TNA)

- Worldwide high demand in renewable energy and energy efficiency training

- Online based training units as efficient engineering education worldwide

- Training programme as success story for modern engineering education

- Training programme continues expanding on up to 200 countries

- Master Study Program
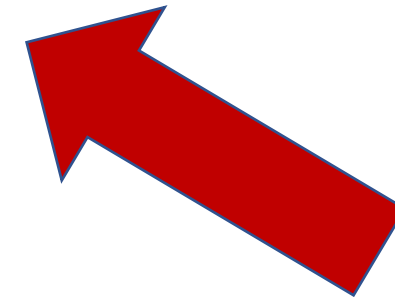
Training needs and demands were assessed!

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Internationale Zusammenarbeit (GIZ) GmbH

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