



Train the Trainers –

How to adapt the training activities to the industrial context – the HSD Way!

Martin Schlösser & Claudia Fussenecker

2nd Training in Saltillo, Mexico
17th until 20th of December 2018



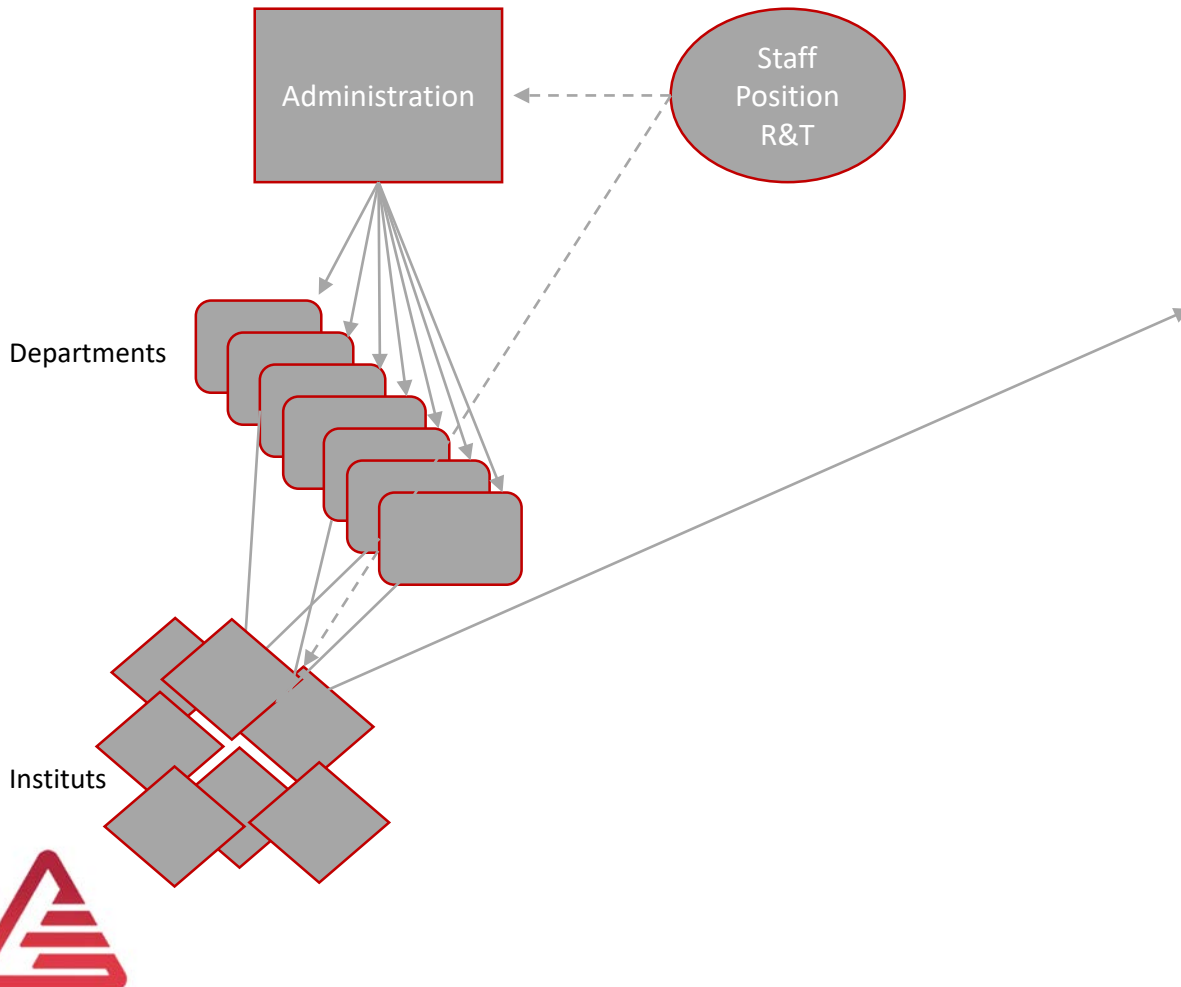
Co-funded by the
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Düsseldorf University of Applied Sciences- HSD



HSD – Organisational Structure

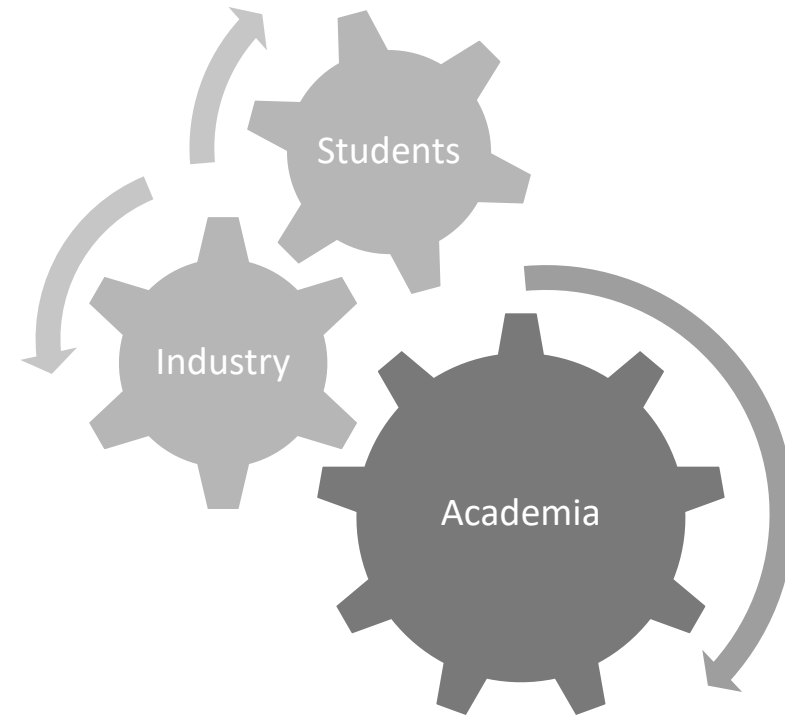


FLiX FORSCHUNGSSTELLE
LIFE
CYCLE
EXCELLENCE

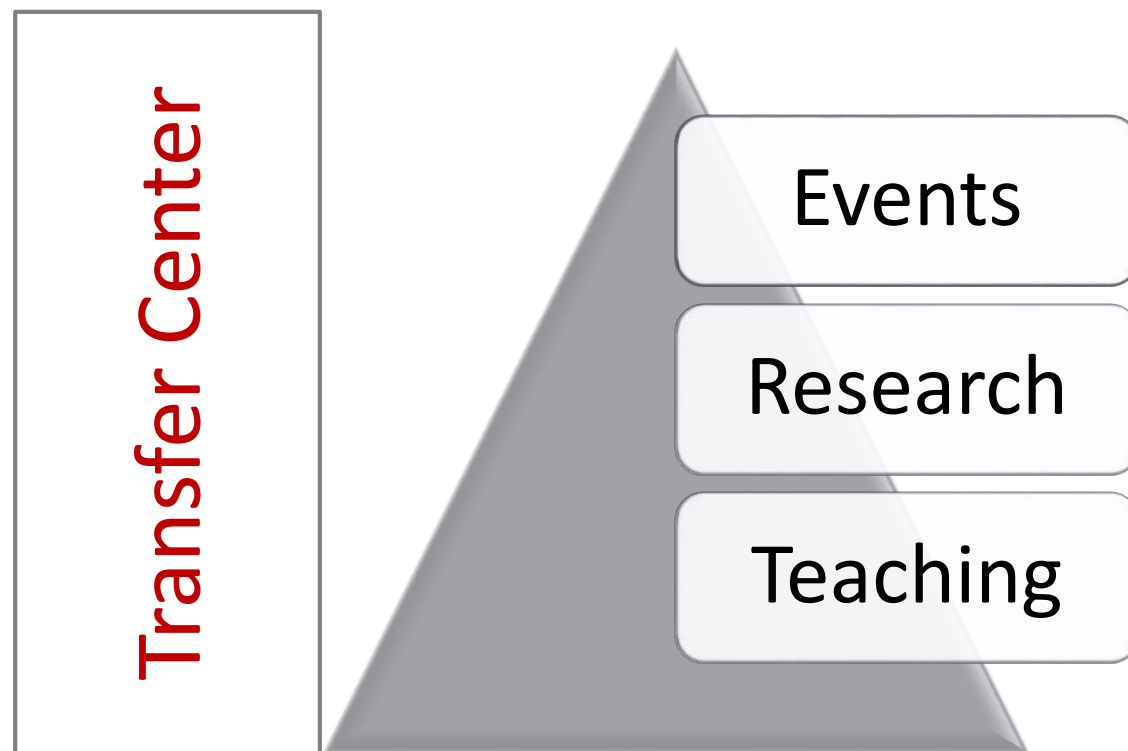


Idea

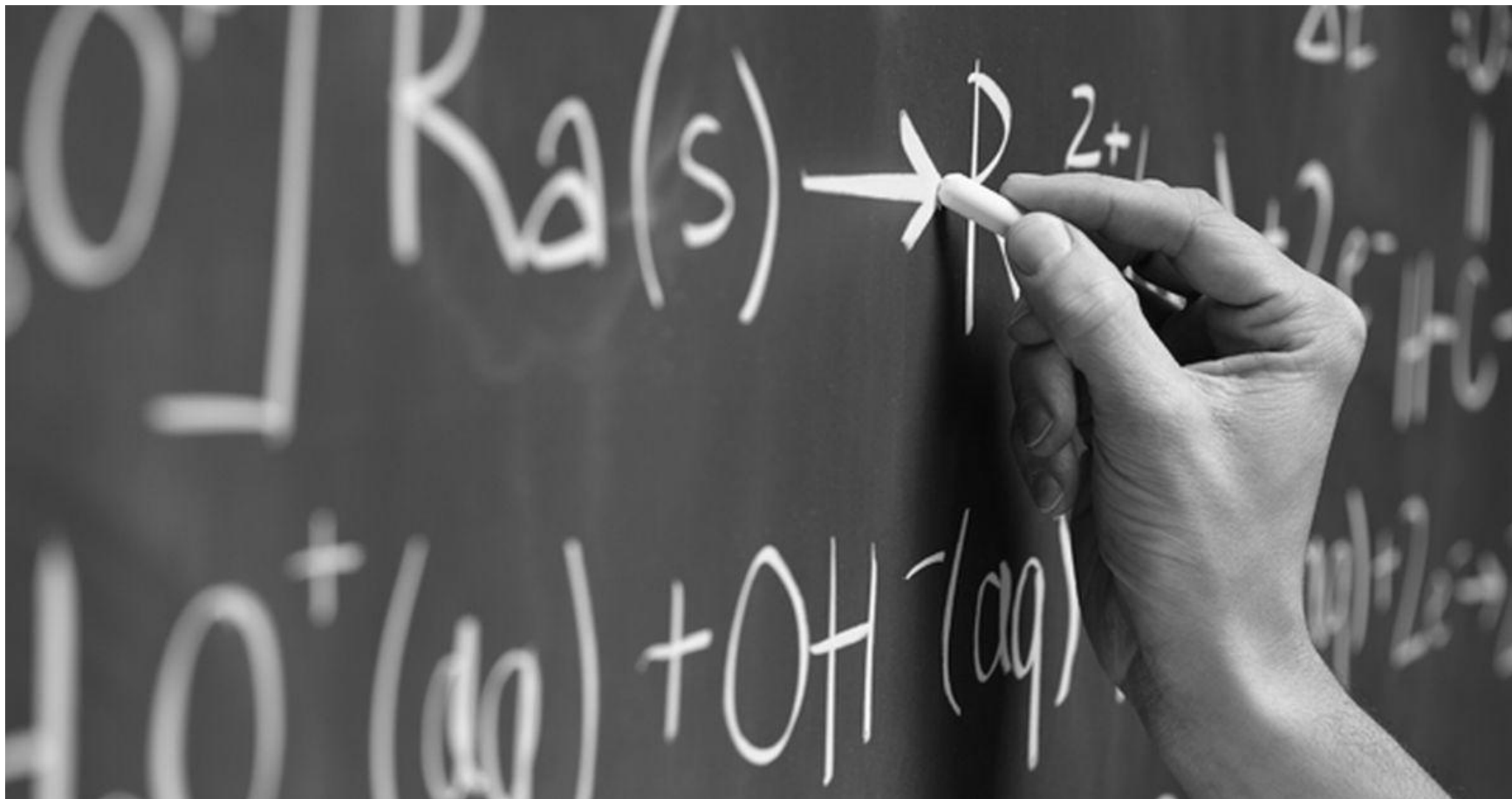
Create a Win-Win-Situation for all three parties by using the advantages and synergies of all participating entities.



Industrial Involvement



Teaching



Business Plan

ECTS	5
Study Programm	- Industrial Engineering
Semester	- 3rd Semester
Workload (students)	- 4 (semester hour / week)
Students	- Approx. 160 (per semester)
Content	Development of a business plan for a new product in a group
Industrial Involvement	- middle

Advantages Industry

- Find new businesses/ideas
- Venture capital
- PR

Benefits Students

- Real industry feedback
- Capital
- Find partners
- Places for practical semester



Life cycle and services management

ECTS	6
Study Programm	- Industrial Engineering (Master course)
Semester	- 2th Semester
Workload (students)	- 4 (semester hour / week)
Students	- Approx. 20 (per semester)
Content	Importance and benefits of life cycle services for multinational enterprises
Industrial Involvement	- middle

Advantages Industry

- First contact to students
- Free advertising
- Free presentation of his company

Benefits Students

- The possibility to talk to the industry
- Learn in a more practical way with real practical examples



Methods for production optimization

ECTS	6
Study Programm	- Industrial Engineering (Master course)
Semester	- 1th Semester
Workload (students)	- 4 (semester hour / week)
Students	- Approx. 20 (per semester)
Content	Fundamentals of Lean Management and production, strategies of production
Industrial Involvement	- middle

Advantages Industry

- First contact to students
- Free advertising
- Free presentation of his company

Benefits Students

- The possibility to talk to the industry
- Learn in a more practical way with real practical examples



Ringprojekt - Project work

ECTS	5
Study Programm	- Industrial Engineering - Mechanical Engineering
Semester	- 6th Semester
Workload (students)	- 3 (semester hour / week)
Students	- Approx. 200 (per semester)
Content	Softwarebased development of a product in mixed teams
Industrial Involvement	- middle

Advantages Industry

- First contact to the students
- PR
- Educate students with their software (future user)

Benefits Students

- Work with industry ERP and PDM software
- Benefit of being honored by the industry
- Interdisciplinary approach



Praxissemester – Practical semester

ECTS	30
Study Programm	<ul style="list-style-type: none">- Industrial Engineering- Mechanical Engineering- Process Engineering- Energy and environmental Engineering
Semester	- 5th Semester
Workload (students)	- 40 (hour / week)
Students	- Approx. 300 (per semester)
Content	One Semester full-time Job in the industry
Industrial Involvement	- high

Advantages Industry

- Finding future employees on during a test phase
- PR

Benefits Students

- Get insight of the company
- Test out companies and branches
- First real working experience



Thesis

ECTS	15
Study Programm	<ul style="list-style-type: none">- Industrial Engineering- Mechanical Engineering- Process Engineering- Energy and environmental Engineering
Semester	- 7th Semester
Workload (students)	- 15 (hour / week)
Students	- Approx. 100 (per semester)
Content	Thesis and colloquium about industrial projects
Industrial Involvement	- high

Advantages Industry

- Tackle new projects
- Free worker for this project
- Find future employees

Benefits Students

- Find jobs
- Insight into interesting and real projects



Research



Research Projects

- Contract Research
- National / EU-Projects
- Study Projects
- Thesis
- Transfer Center



Transfer-Center - Guideline

1. First Steps

- Define Profile
- Find matching partner

2. Framework

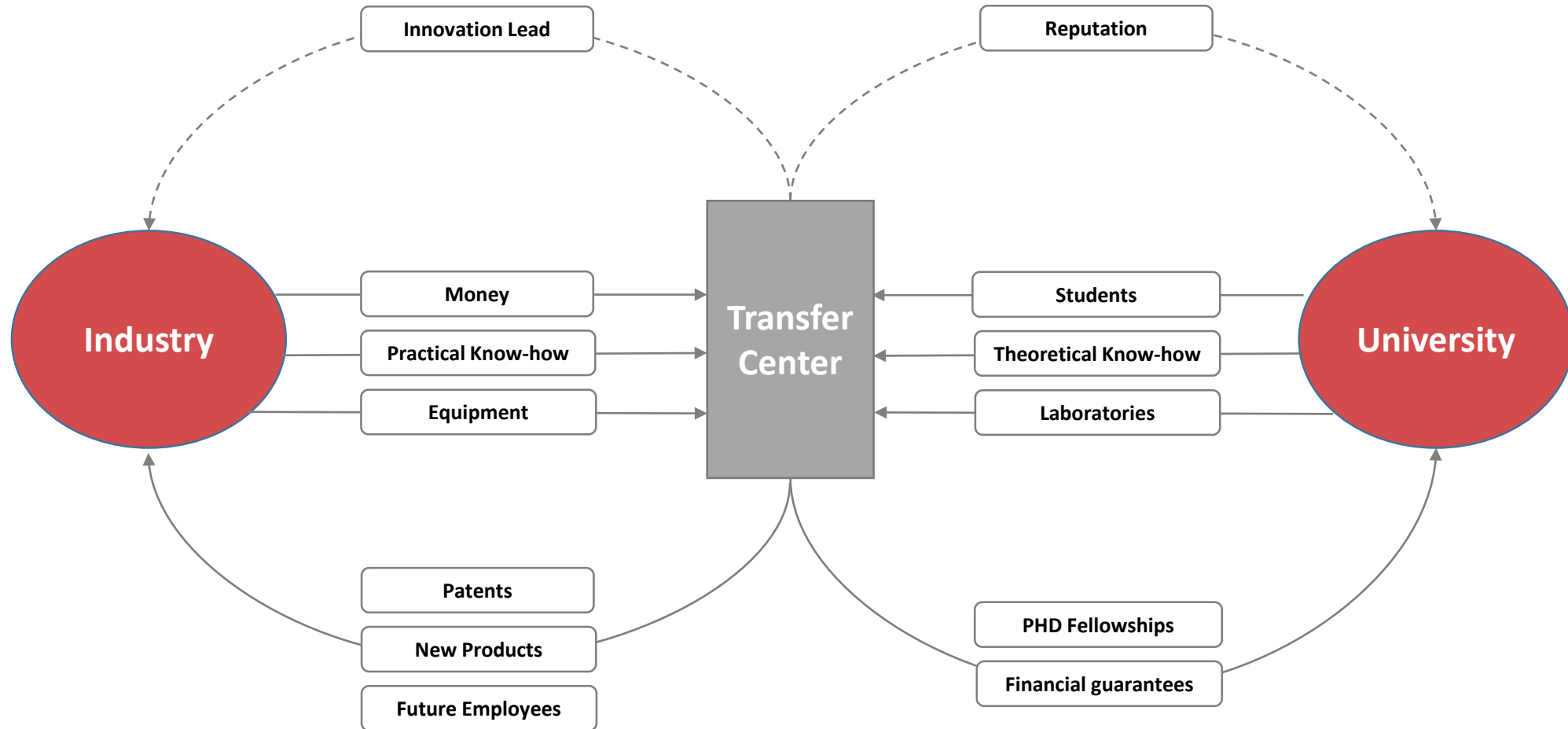
- Legal framework
- Research guidelines (publications etc.)

3. Quality Management

- EDM (Engineering Data Management)
- Regular meetings



Process/Benefits of a Transfer Center



Industrialpartner

DMG MORI

TMG
TOYOTA MOTORSPORT GMBH

SICK
Sensor Intelligence.

Doppelmayr
Doppelmayr Cable Car

 **UNIVERSITY OF MALAYA**

 Hitachi Data Systems

DAIMLER

Continental

vallourec

S

UNIVERSITEIT
STELLENBOSCH
UNIVERSITY

SMS group

i-tec
Simplify Your Service

AFSM
international
German Chapter e.V.

HELLA

LANG

TT

RHEINGETRIEBE

ABB

Doppelmayr
Doppelmayr Cable Car

**UNIVERSITATEA TEHNICĂ
DIN CLUJ-NAPOCA**

Tesch

ORMAZABAL
velatia

 Cape
Peninsula
University
of Technology

Fraunhofer
IPA

Universität
Stuttgart **iF**
Institut für Industrielle
Fortigung und Fabrikbetrieb

st w **Steinbeis**

Events



E-Traxx

ECTS	
Study Programm	<ul style="list-style-type: none">- Industrial Engineering- Mechanical Engineering- Process Engineering- Energy and environmental Engineering
Content	Study project to build a racing car (international Project = Formula Student)
Industrial Involvement	- high

Advantages Industry

- Bring their products closer to the students
- Show how interesting it could be to work in that field

Benefits Students

- Work with industry products
- Get donations for the car
- Find easier Jobs



Excursion

ECTS	0
Study Programm	<ul style="list-style-type: none">- Industrial Engineering- Mechanical Engineering- Process Engineering- Energy and environmental Engineering
Semester	- 1-7th Semester
Students	- Approx. 900
Content	Visit one Company
Industrial Involvement	- high

Advantages Industry

- Show their products
- Introduce themselves, future job possibilities

Benefits Students

- See interesting and different industries
- Often the first contact to the industry and future Employer



On Tour



Zusatzkurse – Additional courses

ECTS	0
Study Programm	<ul style="list-style-type: none">- Industrial Engineering- Mechanical Engineering- Process Engineering- Energy and environmental Engineering
Semester	- 1-7th Semester
Students	- optional
Content	Different additional courses e.g. Six Sigma Yellow Belt
Industrial Involvement	- high

Advantages Industry

- Gets better educated students
- Save training costs

Benefits Students

- Improve skills
- To stand out against the „normal“ student
- Highlight in job applications



European Certification &
Qualification Association



Events

ECTS	0
Study Programm	<ul style="list-style-type: none">- Industrial Engineering- Mechanical Engineering- Process Engineering- Energy and environmental Engineering
Semester	<ul style="list-style-type: none">- 1-7th Semester
Students	<ul style="list-style-type: none">- optional
Content	Different events in cooperation with the industry
Industrial Involvement	<ul style="list-style-type: none">- middle

Advantages Industry

- Present their products
- PR

Benefits Students

- Motivational event
- Networking



Startup-Event

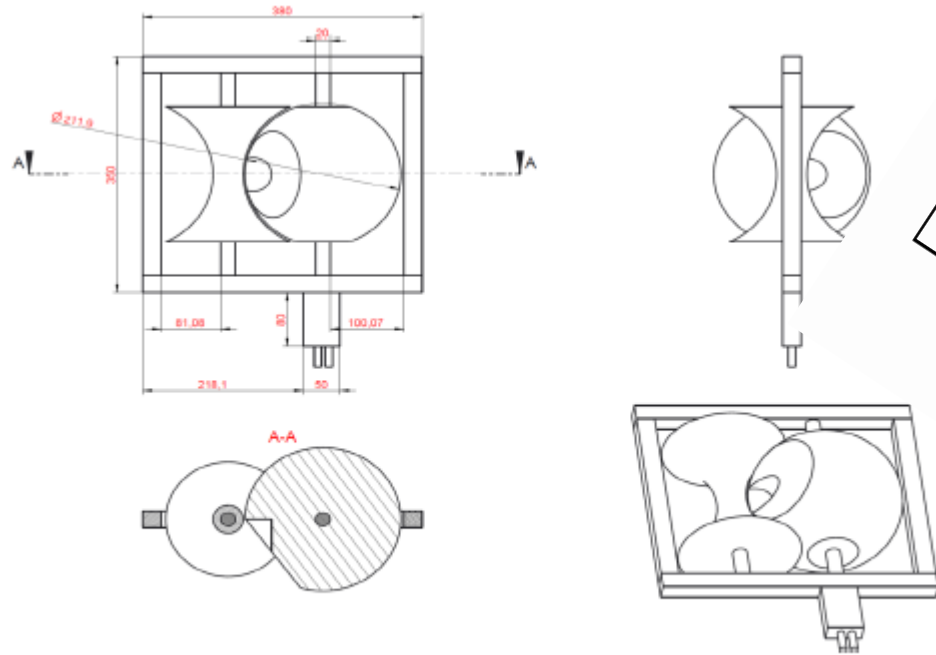


Abbildung 1: Detailsicht Press-PET



Prof. Dr. Jörg Niemann bei der Begrüßung der Teilnehmerinnen und Teilnehmer.



Discussion

- Current Activities with industry / industrial involvement
- Difficulties in working and involving industry
- How to ensure sustainability and the quality of university-industry cooperations / transfer-center
- Lesson learned – new ideas for your university



Questions

- Martin Schlösser – martin.schloesser@hs-duesseldorf.de
- Claudia Fussenecker – claudia.fussenecker@hs-duesseldorf.de

