

**PRME** Principles for Responsible  
Management Education



**Sharing Information on Progress  
3rd PRME Report**

Good to know:  
You'll find the related principles at the top of each article.

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## UN Principles for Responsible Management Education

Principle 1 **Purpose** | Principle 2 **Value** | Principle 3 **Method** | Principle 4 **Research** |  
Principle 5 **Partnership** | Principle 6 **Dialogue**

### 1 Preface

As one of the first 100 participants Pforzheim University committed to the UN Principles for Responsible Management Education (PRME) in March 2008. Since then, we have made significant progress. New study programs have been implemented, and the number of students, employees and colleagues involved in responsible management education has grown.

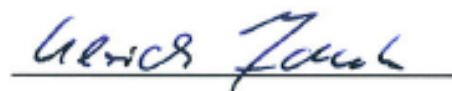
Our participation in PRME was initially being led by our Business School. Today, there are activities underway throughout the University which promote the principles of sustainability, responsible leadership, and ethical practice central to PRME. Baden-Wuerttemberg's statewide certificate "Ethikum" is awarded by a state agency to students with outstanding engagement and competencies in ethics and sustainability. In this field, we have achieved a strong leading position: 40% of all Certificates in the entire state have been awarded to Pforzheim University students, notably to students of our Business School. However, since 2012, also increasing numbers of Ethics Certificates have been awarded to graduates of the School of Engineering. Finally this year, the first student of the School of Design has been awarded.

The principles have inspired many colleagues and students, and we want to thank all of them for their high level contributions. A very special role has been played by Kerstin Anstaett and Dr. Juergen Volkert with their outstanding commitment to PRME, and in writing this report.

We will continue to deepen and extend our activities according to the PRME principles. We welcome this opportunity to outline the recent progress we have made and to restate our commitment to promoting responsible leadership and engaging with the international PRME community.



Prof. Dr. Martin Erhardt  
Rector of Pforzheim University



Prof. Dr. Ulrich Jautz  
Dean of Business School



Prof. Dr. Matthias Weyer  
Dean of School of Engineering



Prof. Michael Throm  
Dean of School of Design



## 2 Executive Summary

Since our commitment to the UN Principles for Responsible Management Education (PRME) in 2009 we have already reported twice about our main activities in the field of CSR, ethics and sustainable development and the objectives in advancing these topics at Pforzheim University. In this 3<sup>rd</sup> PRME Sharing Information on Progress (SIP) we report on the main progress in implementing PRME and especially on our recently initiated activities at Pforzheim University. Furthermore we use this report to describe first experiences and advancements of already implemented activities. The SIP contains information on our engagement in taking on social responsibility and our activities in integrating ethics, sustainable development and CSR topics in teaching, research and transfer. To get an overall insight into the engagement of implementing a responsible management education at Pforzheim University, we recommend the former SIP as well.

We developed a new structure of the SIP to make it more reader-friendly. This time there are no single chapters for each principle, but the report is structured according to our main activities, like strategic developments and advancements in teaching and research. Thus redundancies in each chapter can be avoided as different activities can be attached to several principles. At the beginning of each chapter, we refer to the related principles.

In the chapter **“Responsible Management Education – our strategic commitments in promoting PRME”** we highlight our overall strategic commitment to responsible management education. PRME is important for the Business School, as well as for the School of

Engineering and the School of Design. All students will be confronted with questions from the field of CSR, ethics and sustainable development in their future positions. In the last reports we focused on the PRME developments in the Business School. Since the last SIP there has been remarkable progress and we want to emphasize that also in the School of Engineering and the School of Design where PRME topics have been increasingly picked up.

We underline the importance of responsible management education at Pforzheim University and the sincerity of further implementing PRME through active commitment in different networks and initiatives like our participation in the PRME Champions Leadership Group, the co-initiation of the PRME D-A-CH-Chapter and the Rio+20 Voluntary Commitment.

We achieved the certification as family-friendly university that supports a reasonable work / life balance for students, staff and professors contributing to our social responsibility for all members of Pforzheim University.

An important step in implementing PRME was the adoption of sustainability aspects in the mission of the Business School.

The chapter **“Our Academic Activities and Curriculum Change”** provides an insight in recent steps of implementing ethics, CSR and sustainable development issues in the curricula of the degree programs. At Pforzheim Business School we further developed the strategy of integrating PRME topics in the curricula based on in-depth analysis of the degree programs. We also report on the first experiences of the new Bachelor degree program “Resource Efficiency Management” and its development. New courses and sustainability aspects have advanced the curriculum at the

School of Engineering. Waste of resources, up-cycling and eco-fashion are only some aspects that are picked up as sustainability aspects in the degree programs of the School of Design.

We are convinced that it is necessary to enable our students to make practical learning experiences in addition to the classroom teaching of the degree programs. Thus, we offer various curricular add-ons like field trips, transfer projects with companies and practical insights by guest lectures. We motivate students to look beyond their own noses and to gain additional experiences beyond the obligatory study contents. Therefore we emphasize the engagement of our students in transfer projects, service learning projects and student initiatives. We want to provide a basis by supporting and offering different engagement opportunities for our students. In the chapter "**Student Engagement and Learning Experi-**

**ences**" we highlight some of the projects and the learning experiences made by Pforzheim University students.

Finally, the chapter "**Applied Research on Ethics, CSR and Sustainability**" shows our research activities that contribute to the implementation of PRME in teaching, transfer and research. The results and experiences from research projects are used in courses. This makes our education up-to-date.

Additional information on publication activities and degree theses can be found in the Appendix.

The following figure illustrates the structure of the SIP with its main chapters.

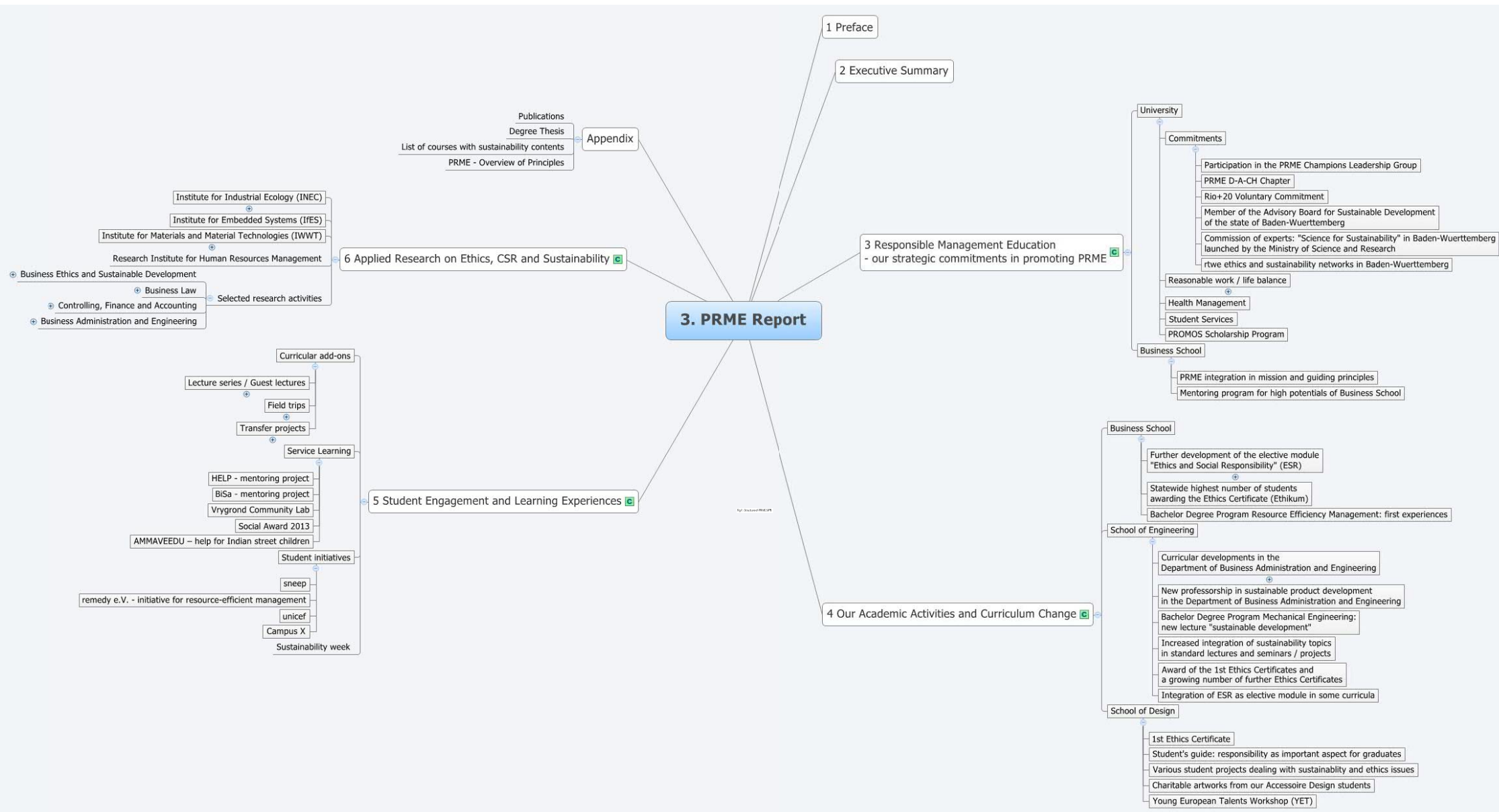


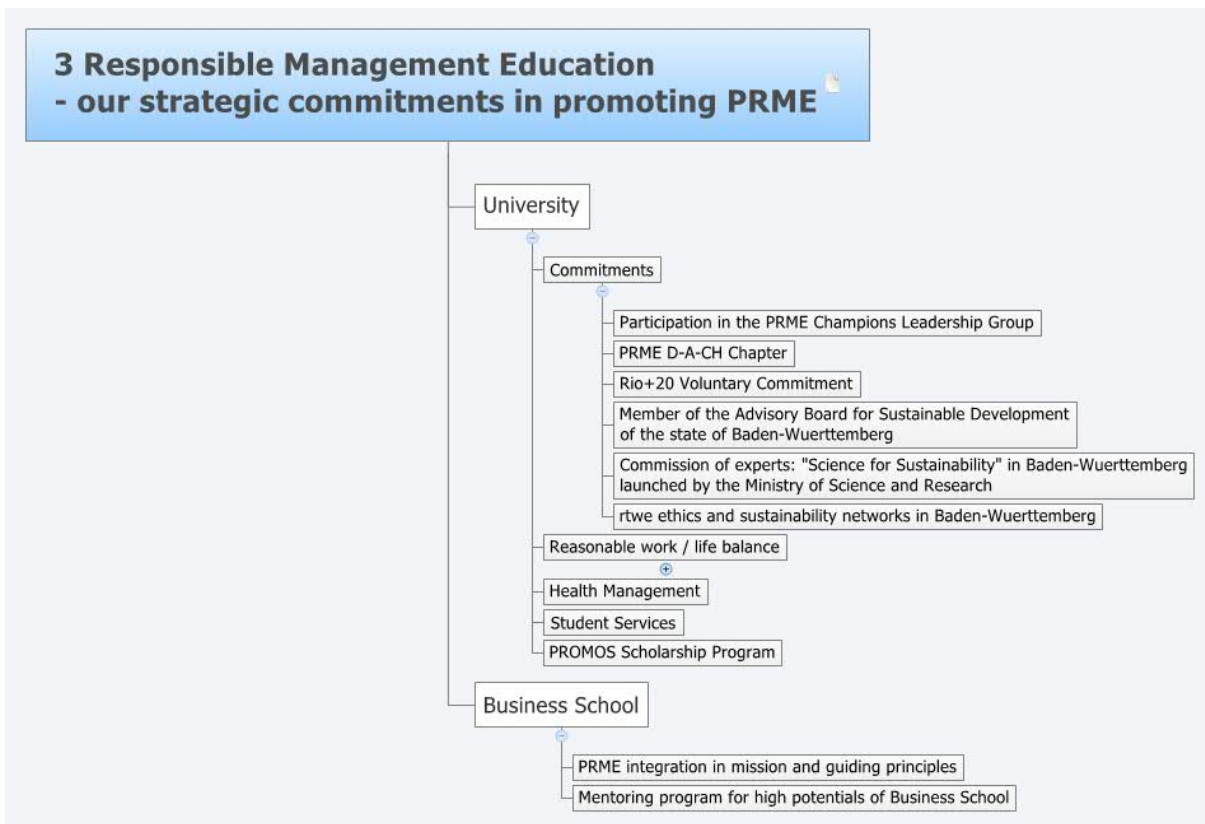
Figure 1: Structure of SIP - overview of PRME activities

## UN Principles for Responsible Management Education

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Principle 6 **Dialogue**

### 3 Responsible Management Education – Our Strategic Commitments in Promoting PRME

What are the main strategic commitments and steps of Pforzheim University to promote a responsible study environment and education at Pforzheim University? The following chapter highlights our main initiatives and activities as described in the following figure.



### Our engagement in promoting a responsible study environment and education



By signing the UN PRME Pforzheim University has emphasized its strategic mission and effort in integrating aspects of sustainable development, ethics and CSR in teaching, research and transfer. We aim to sensitize and to prepare students for future challenges and to encourage them to make and reflect their own decisions critically.

### ***Our participation in the PRME Champions Leadership Group***

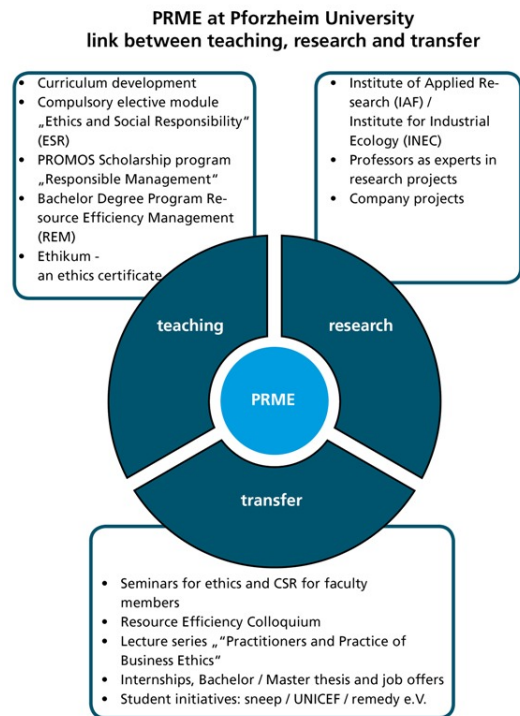
Pforzheim University was invited to take part in the “PRME Champions Leadership Group: Unlocking the next level of responsible management education and leadership”. The PRME Champions Group “will lead the efforts of the PRME community to foster a vibrant learning community that encourages wider and more holistic implementation of responsible management education”<sup>1</sup>. Since October 2013 Pforzheim University is official member of the PRME Champions. We engage in the thematic working sub-groups research, faculty and curriculum development. We are keen on the cooperation in the group and its results.

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### ***Our engagement in the PRME community: PRME D-A-CH***

In addition to the international PRME Champions group, our participation at



PRME meetings gives us important insights in the activities of other PRME members. Regional PRME chapters promote the cooperation of PRME partners in a specific region in order to better consider different regional characteristics in the higher education area. A regionalchapter in German speaking countries is still missing. Thus, we launched a first meeting of German-speaking PRME-members in order to initiate the foundation of a German speaking PRME chapter together with Prof. Dr. Lutz E. Schlange from the University of Applied Sciences HTW Chur.

<sup>1</sup> See: UN PRME: PRME Champions: Unlocking the next level of responsible management education and leadership, Guidelines and Recommendations, February 2013.



Representatives of 14 universities from Germany, Austria and Switzerland met at Pforzheim University on 28th / 29th January 2013 and discussed the possibilities of a closer cooperation. The participants of the meeting supported the foundation of a regional D-A-CH Chapter. The members of the D-A-CH chapter will concentrate their cooperation on the integration of Business Ethics and Sustainable Development in the Curricula of the universities and on strengthening business contacts.

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By *our contribution to the Rio+20 Voluntary Commitments* we support the Higher Education Sustainability Initiative and underline the importance and sincerity of our engagement to implement a responsible education at our university. See more: <http://www.uncsd2012.org/commit>.



*We support  
the Higher Education  
Sustainability Initiative!*

***Our statewide engagement: Professor of Pforzheim University is member of the Advisory Board for Sustainable Development***

In 2012 Prof. Mario Schmidt, Head of the Institute for Industrial Ecology, has been appointed to the Advisory Board for Sustainable Development of the government of Baden-Wuerttemberg by its

Premier Winfried Kretschmann. Members of the board are academics and representatives of different areas of society. In the following two years, the Advisory Board deals with the turnaround in energy policy and its conflicts - e.g. conflicts between nature protection and renewable energy projects - with sustainable education, especially in schools, and with the renewal of sustainable development goals of Baden-Wuerttemberg and consults the government in these fields. Prof. Mario Schmidt accompanied Premier Winfried Kretschmann on its delegation to Japan and South-Korea together with ministers, academics and representatives of business. The Turnaround in energy policy and nature protection are important topics of the travel abroad.



Prof. Mario Schmidt is often consulted as expert in the field of resource efficiency and ecological business management. Thus, he was also involved in the development of the new guidelines VDI 4597 "Resource Efficiency" and VDI 4599 "Cumulative Material Demand" of the Association of German Engineers (VDI) and he was member of the program advisory board of the first Resource Efficiency Congress 2012 of the government of Baden-Wuerttemberg.

Contact:

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***Our involvement in the development of a "Science for Sustainability" in Baden-Wuerttemberg***



The Ministry of Science and Research of Baden-Wuerttemberg aims at setting standards and giving a lead in the integration of sustainability in the higher education area. Thus the Ministry initiated a commission of experts to

work out recommendations for the strengthening of sustainability in teaching, research and transfer of universities in a continuous dialog with society. Pforzheim University actively takes part in the sustainability debate. Its implementation of the UN PRME is even included in the recommendation paper of the commission of experts as an example of integrating sustainability in teaching and research.<sup>2</sup>

***Our participation in the ethics and sustainability networks in Baden-Wuerttemberg***



The "Department of Ethics in Technology and Science"

(Referat fuer Technik und Wissenschaftsethik rtwe) supports a continuous dialog between Universities of Applied Sciences in the State of Baden-Wuerttemberg with respect to ethics and sustainable development. It has initiated the "network of higher education institutions for a sustainable development" and an ethics network. Pforzheim University actively takes part in both networks. In order to foster a close contact between the institutions the rtwe regularly organizes sustainability and ethics conferences of the sustainability / ethics agents of the Universities of Applied Sciences in Baden-Wuerttemberg.

The 14th conference of sustainability agents in the State of Baden-Wuerttemberg took place at Pforzheim University on 22nd March 2013. Pforzheim University has benefited from the opportunity to present its activities in the field of sustainable development, especially related to their experiences in implementing PRME. The networks aim at working out opportunities for an education of sustainable development and recommendations for politics and higher education institutions to advance their education regarding sustainability and ethics aspects.

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<sup>2</sup> Ministerium für Wissenschaft, Forschung und Kunst Baden-Württemberg (Hrsg.): Wissenschaft für Nachhaltigkeit: Herausforderungen und Chancen für das baden-württembergische Wissenschaftssystem, Stuttgart, Juni 2013, p. 23. (Download: [http://mwk.baden-wuerttemberg.de/fileadmin/pdf/hochschulen/Wissenschaft\\_f%C3%BCr\\_Nachhaltigkeit/RZ\\_MWK\\_Broschure\\_Nachhaltigkeit\\_Web.pdf](http://mwk.baden-wuerttemberg.de/fileadmin/pdf/hochschulen/Wissenschaft_f%C3%BCr_Nachhaltigkeit/RZ_MWK_Broschure_Nachhaltigkeit_Web.pdf)).

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### ***Offering a reasonable work / family life balance***

In March 2012 Pforzheim University has been certified as **family-friendly university** by the berufundfamilie gGmbH.



Pforzheim University has recognized the reconciliation of work and family life as important topic for its students and staff.

Various activities have been implemented to support parents with children to complete their degree successfully:

- Individual contact persons support studying parents in planning their study.
- An individual study agreement offers high flexibility to organize the study according to individual concerns.
- A parents network offers opportunities to get relevant information and exchange of experiences among parents.

In addition to supporting of parents the **care of family members** is realized as an important topic in view of the age structure of our staff. In order to support staff with caring responsibility a variety of events were arranged and substantial information was published in the intranet. Different offers of flexible working hours should facilitate the care of family members.

The concept of a family-friendly university is supported by the University's administration and its major boards. In order to emphasize its importance the reconciliation of work and family life is integrated in our mission statement:

“Core issues that we continuously work on are diversity-oriented acting, compatibility of study, work and family life as well as gender equality” (Mission Statement)

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Further information: <http://www.hs-pforzheim.de/De-de/Hochschule/FamiliengerechteHochschule>

A newly initiated **Health Management** enables employees and staff of Pforzheim University to participate in different health courses in cooperation with the health insurance AOK Pforzheim and prevention measures, e.g. back therapy training, Yoga, running training, Nordic Walking, cooking courses, checks with pharmacies and eye-sight tests.

Our employees and staff show remarkable interest in these courses and ask for the continuation of the program. The program also helps to initiate further privately organized sportive activities.

### Contact:

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**Student Services – our special support for academic success**

In the last SIP we reported about the establishment of the Student Services as important contact point for students with difficulties. According to the counselors of the Student Services the offer is very well received by our students. The mentoring services go beyond typical academic questions and comprise all kinds of private problems



and questions. In latter case the Student Service arranges consultations with the psycho-

therapeutic counseling center Pforzheim that offers professional support for all kind of private and academic problems.

The concept of the Student Services is transferred to the School of Engineering and the School of Design because of the successful implementation and excellent experiences in the Business School. Thus, in all faculties Student Services are built up and offering support for academic success.

Contact:

Business School: Natascha Kappler, email: [Natascha.kappler@hs-pforzheim.de](mailto:Natascha.kappler@hs-pforzheim.de)

School of Engineering: Dorothee Schmid, and Karin Joensson, email: [student-services-technik@hs-pforzheim.de](mailto:student-services-technik@hs-pforzheim.de)

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**Scholarship program - PROMOS „Responsible Management“**

The PROMOS „Responsible Management Education“ scholarship program encourages our students to acquire competencies with respect to CSR and sustainable development during their study abroad in developing or emerging market countries. The scholarship program has turned out to be highly attractive for our students. Since 2011 62 students qualified for the PROMOS scholarship program. The below standing table gives an overview on relevant PROMOS courses of the partner universities.

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**PROMOS Scholarship program - Course examples:**

Country	University	Courses
Brazil	Fundação Getulia Vargas FGV	Business Ethics: Value Management in Organizations
Columbia	Universidad ICESI	Responsabilidad Empresarial / Etica y Organizaciones
Ecuador	Universidad del Pacifico	Ética y Responsabilidad Social Corporativa / Ética en los Negocios
Indonesia	Gadjah Mada University	Business Environment / Business Ethics
Mexico	Tec de Monterrey	Ethics, Profession and Citizenship / Ethics, Self and Society
Uruguay	Universidad Católica de Uruguay	Responsabilidad Social de la Empresa / Ética en las Empresas y Organizaciones

After having described the strategic commitment of Pforzheim University we report on the main strategic activities at Pforzheim Business School.

### *Our new Guiding Principle of Pforzheim Business School*

*“With view to the practical requirements our students are prepared to face challenges of an economically, socially and ecologically sustainable development in a global environment. (sustainable development)”*

### ***Sustainable Development is now integral part of the mission of Pforzheim Business School***

The participation in PRME requires a clear strategic commitment to underline its importance for the University. As recommended in the last SIP Report aspects of sustainable development and the related responsibilities are now integrated in the mission and the guiding principles of Pforzheim Business School.<sup>3</sup> Thus we confirm the importance of sustainability aspects for the Business School and underline our effort in integrating PRME in teaching, research and transfer.

### **Our mission of Pforzheim Business School**

*“To provide a high level of academic education in applied business to prepare our students for sustainable and successful professional and managerial careers in a dynamic global environment and to know how to deal with the associated responsibilities.”*

### **On the way to the top: our individual career support for high-potentials**

In summer semester 2013 Pforzheim Business School launched a new mentoring program for excellent Bachelor students. The mentoring program is part of the project „target group oriented academic counseling and care concept“ funded by the German Ministry of Education and Research.

“The opportunity to discuss about the prospective career with experts and to get individual ideas” does not only inspire our Mentee Yannik Hessel.

<sup>3</sup> See: <http://www.hs-pforzheim.de/en-US/Business-School/faculty/Mission/Seiten/OurMission.aspx> [07/12/2013].

The mentoring program aims to support high-potential Bachelor students (mentees) on their career path by external mentors. Counseling during their study and a targeted promotion on their way to employment are supposed to help our mentees to find

very promising jobs. Our mentors are mostly Alumni of our University and work in executive positions.

Management executives of the following companies could be attracted as mentors:

<b>Involved Companies</b>	<b>Position of the mentor</b>
1&1 Internet AG	Market Intelligence Manager Campaigns & New Markets
Action Europe Duesseldorf GmbH	CEO
Adolf Würth GmbH & Co. KG	Spokesperson of the concern leadership
Adolf Würth GmbH & Co. KG	Head of concern controlling
Adolf Würth GmbH & Co. KG	Human Resources
Adolf Würth GmbH & Co. KG	Press and Public Relations
Allianz Beratungs- und Vertriebs AG	Specialist in Provision and Investment
attempto GmbH & Co. KG	Managing Director
Beiersdorf Shared Services GmbH	Senior Consultant Finance
Bosch Thermotechnik GmbH	Advisor of Market Research
CONNECT HR Consulting GmbH	CEO
Daimler AG	Team leader of Human Resources Development
Daimler AG	Team leader of Human Resources Planning and Compensation
DHL Solutions GmbH	Vice President Operations Excellence
Drees & Sommer AG	Vice Marketing Manager
FERRERO MSC GmbH & Co. KG	Vice Director and Head of Media
Fiducia IT AG	Member of the Managing Board
Glibo Consulting GmbH / Astrium GmbH	Owner / Human Resources Manager
GV Management GmbH	CEO
Hofkammer des Hauses Württemberg	Director of the Hofkammer
IBM Germany Research & Development GmbH	Manager
ITML GmbH	Associate und CEO
Jung von Matt/Neckar	Associate und CEO
Lebenshilfe Bruchsal-Bretten	Human Resources Manager
Lenovo GmbH	Manager Communications
MANN + HUMMEL GmbH	CEO
MANN+HUMMEL GmbH	Group Vice President Human Resources
MANN+HUMMEL GmbH	Group Vice President Finance & Controlling, Member of the Extended Group Management
MANN+HUMMEL GmbH	Vice President Human Resources
Moderator	Freelancer
Mondelēz Germany Professional GmbH	Key Account Manager
Sparkasse Pforzheim Calw	Divisional Director Human Resources Management
Sparkasse Pforzheim Calw	Divisional Director Distribution Management
Voith Industrial Services Holding GmbH & Co. KG	Senior Vice President Human Resources
Weitclick GmbH	Teamleader Counseling & Project Management
ZF Friedrichshafen AG	Head of Human Resources Marketing and Media

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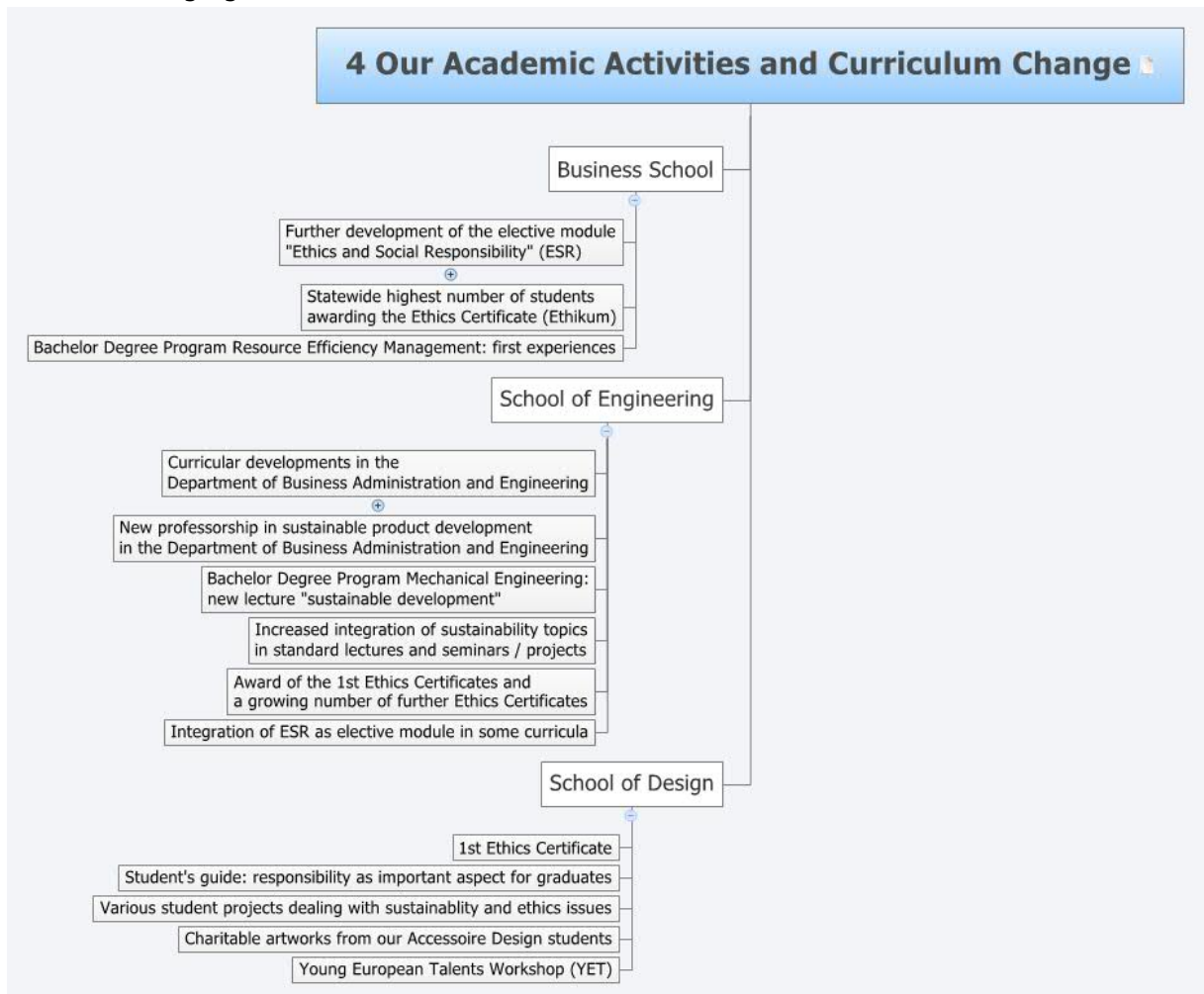
The program also offers interesting advantages for the involved mentors: “They can familiarize highly-qualified junior managers with their companies. They get insights in up-to-date research and gain new ideas and impulses”, according to project manager Stephanie Henig.

**Our key objectives**

- Further implementation of the new mission and guiding principle of Pforzheim Business School.
- Active contribution to PRME Champions group and strengthening of the cooperation, if possible linked to the regional PRME D-A-CH chapter.
- Participation in the sustainability debate of the Ministry for Science and Research of Baden-Wuerttemberg.
- Further implementation of the planned measures to promote a reasonable work / life balance for students, employees and staff at Pforzheim University.

## 4 Our Academic Activities and Curriculum Change

Preparing students for future challenges is one of our core responsibilities. In the next chapter, we illustrate the efforts in further developing the curriculum and academic activities as described in the following figure.



### Our engagement in changing the curriculum





### ***Further development of our Business School Bachelor Curricula***

Curriculum change and the integration of topics related to business ethics, sustainable development and CSR in the curricula of our study-programs are one of our main goals in implementing PRME. The analysis of the overview of course contents revealed room for improvement. We identified some need for consolidation and mutual reconciliation. Therefore the task of PRME is to reveal redundancies and to optimize the knowledge

*In the Bachelor program Purchasing and Logistics a special chapter "Sustainability in the logistic sector" is integrated in the course "Logistic functions and systems" (PAL 1021) in order to explain logistic functions associated with environmental impacts.*

transfer in the field of ethics, CSR and sustainable development.

One major activity we plan is to integrate a course in one of the first study semesters of our Bachelor programs

that provides **foundations in ethics, CSR and sustainable development**. Building on the acquired basic knowledge, the courses of the **elective module "Ethics and Social Responsibility"** (ESR) and further courses will deepen the knowledge in the field of ethics, CSR and sustainable development.

In recent years the relevance of CSR and sustainability aspects is increasing in our study programs and more and more topics are being integrated, e.g. seminar topics

related to ethics, CSR and sustainable development like green and sustainable HRM, compliance, green and sustainable procurement.

From our own experience the number of students that choose sustainability / ethics topics for their seminars and/or degree theses is growing. We provide a list of selected degree theses in the Appendix.

*The course "project work / case studies" of the degree program International Business regularly deals with CSR, Ethics and Sustainability topics, e.g.:*

- *The Waste Management Industry - What are the opportunities/threats in the future*
- *The Oil (petrol) Industry - What are the opportunities/threats in the future*
- *Gene Technology - GMO (crops): Has it fulfilled its promises? Who are the major companies and what has been their involvement/success in GT?*

*Contact: Prof. Dr. Howard Sutton*

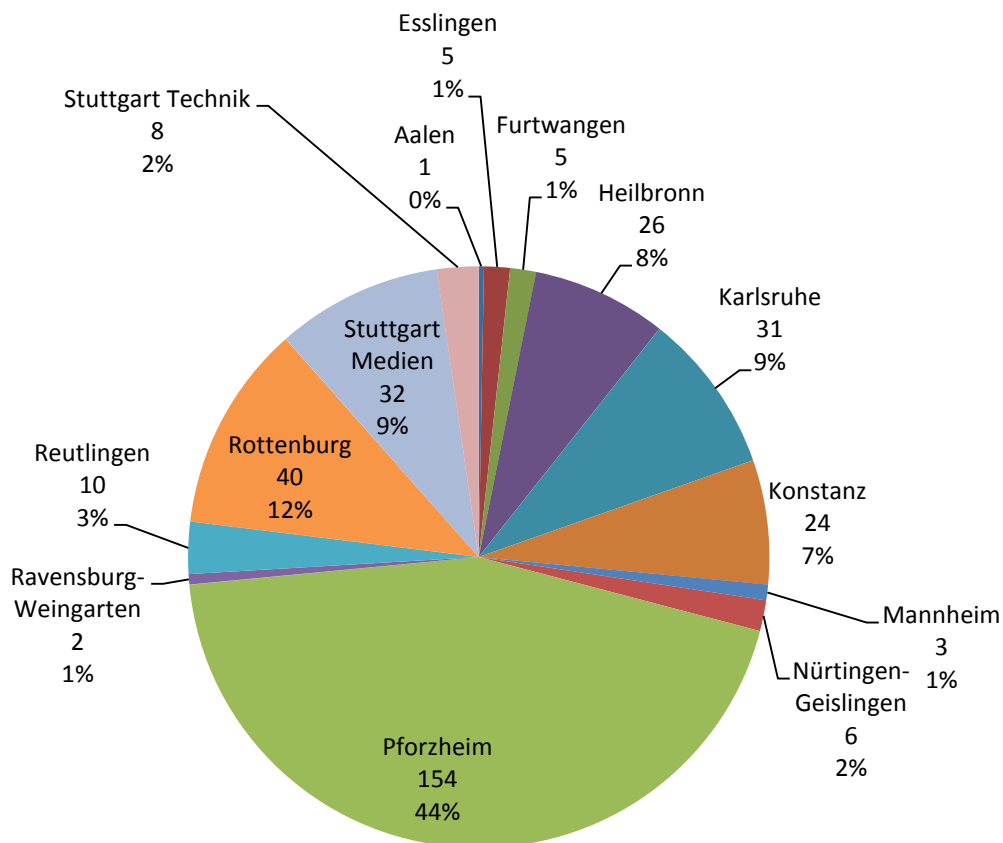
Furthermore we extend the provision of courses in the **elective module "Ethics and Social Responsibility" (ESR)** by an additional course in English "Ethics, Business and Society" starting in summer semester 2014. This enables our international students to participate in an additional ESR course (besides the already existing course "Sustainable Development") together with German students. The courses of the elec-

tive module ESR can be attended by students of all schools. Students of the School of Engineering and the School of Design are increasingly interested and participate in the ESR courses.

**Our long-lasting success in awarding the *Ethics Certificate (Ethikum)*** is a significant characteristic for the variety of ethics and sustainability relevant courses. We have already reported about the Ethics

Certificate that is awarded by the "Department of Ethics in Technology and Science" (Referat fuer Technik und Wissenschaftsethik rtwe). Main task of the rtwe is to support the offer and long-term integration of ethics and sustainable development at Universities of Applied Sciences in Baden-Wuerttemberg. Pforzheim University still holds a leading position in the award of the Certificates (see figure "Distribution of Ethics Certificates at

Distribution of Ethics Certificates at Universities of Applied Sciences in Baden-Wuerttemberg



source: rtwe, date: 07/10/2013

Universities of Applied Sciences in Baden-Wuerttemberg"). The Ethics Certificate is an additional motivation for our most engaged and interested students to focus more on these issues. It also highly contributes to the fulfillment of the PRME principles.

**Successful start of the new Bachelor degree Program "Resource Efficiency Management"**

Our new Bachelor Program Resource Efficiency Management started in winter semester 2011/ 2012 and fulfilled all our expectations so far. In SS 2013 the Bachelor Program was accredited successfully by the AQAS accreditation agency.

In order to strengthen the professional competence in the field of resource efficiency two new specialized professors could be engaged. Dr. Nikolaus Thissen could be won for the professorship in Process Systems Engineering and Quantitative Methods and Dr. Tobias Viere for the professorship in Energy and Material Flow Analysis. Both have a long-lasting professional and research experience and can enrich the teaching and research competence at the Business School. Additionally we are able to appoint further two endowed professorships sponsored by the PSD Bank for the new study program. A further professorship is going to be appointed in 2014.

"As a student and a graduate holder of the Pforzheim University, I got in touch with the "Ethikum" by an article on the university homepage. I signed up for the courses of sustainable development I & II and therefore it was only logical that I became interested in the "Ethikum".

I successfully completed the "Ethikum" by the end of my studies of Business Administration and Engineering/ International Management. It was interesting that during job interviews the companies asked me about the "Ethikum". Their questions showed me that topics like business ethics and sustainability are more considered in their working culture.

I can only recommend every student to deal with this topic because it will be increasingly important in our society. Therefore, the "Ethikum" at the Pforzheim University is a good entry.

(Daniel Petschauer, Business Administration and Engineering / International Management)

We are in a permanent dialogue both with politicians and practitioners from different companies, e.g. at the Resource Efficiency Congress 2012 in Karlsruhe or at our Resource Efficiency Colloquia. Thus, we are able to incorporate the most recent developments in the field of resource efficiency and to offer a high quality and application-oriented study program. We have received very encouraging feedback on the content of the study program and on the program objectives. All our students could find adequate internships in the first internship semester in WS 2013 / 2014 which shows the

relevance and demand of companies in this field.

The highly relevant topic and the need of experts with business, technical and ecological knowledge resulted in the application of a new Master program "Life Cycle & Sustainability".

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***PRME as an overall topic for Pforzheim University***

In the last reports we have massively reported about the PRME developments in the Business School as main institution for management education at Pforzheim University. However, responsible management education is a relevant issue for all our graduates and is therefore increasingly integrated in all three schools, also in the School of Engineering and in the School of Design.

***Curriculum Development in the School of Engineering***

Since the last report the **Business Administration and Engineering department** of our School of Engineering has made significant progress in integrating sustainability aspects in its degree programs. As already announced in the last SIP the new module "Sustainable Product Development" has started for all Business Administration and Engineering programs. In this module students gain basic knowledge in two consecutive courses about the sustainability concept, the allocation of environmental impacts during the product life cycle and

*First Business Engineering students awarded by the Ethics Certificate. (SS 2012)*

about issues as eco-balance, recycling, etc. Experimental learning in specialized labs is included. An additional elec-

tive course "Sustainable Product Development 3" offers the possibility to deepen the achieved knowledge and to get practical insights in an exemplary development of sustainable products in cooperation with company partners. The range of courses in this module is extended in WS 2013/2014 by the course "Energy Management". The department of Business Administration and Engineering established a new professorship in Sustainable Product Development and strengthened its team and its know-how in sustainability by appointing the new professor Dr. Joerg Woidasky in WS 2012/2013. Prof. Woidasky is specialized in the field of environmental engineering and sustainable product development. He is very active in implementing research and transfer projects in cooperation with regional companies.

The ***Bachelor Program "Mechanical Engineering"*** has also introduced a new lecture "Sustainable Development" in its curriculum. The students get an introduction into the sustainability concept, different valuation methods and insights in some practical examples.

In addition to these specialized lectures sustainable development issues have been increasingly integrated as **seminar topics** (e.g. green IT, green logistics, sustainable mobility). Furthermore, Business Ethics and intercultural aspects of a social, economic and ecologic sustainable development have

been integrated in different standard lectures of the degree programs.

A higher number of Ethics Certificates awarded to graduates of the School of Engineering indicate these improvements and continuous curriculum changes related to a more responsible management education.



### Relevance of ethics, CSR and sustainability issues in the *School of Design*



In SS 2013 we could award the first Ethics Certificate to a student of our **School of Design**. In its student guide our School of Design explicitly refers to the students' responsibility related to the product culture, the economic success, the identity and acceptance of the company and the aesthetic understanding and communication of our society.<sup>4</sup>

Our design graduates do have the possibility to influence the above mentioned aspects by their design propositions.

The relevance of ethical, sustainable and CSR aspects in the design degree programs and for our students is reflected in the provision of students' projects and theses dealing e.g. with green/sustainable and reasonable fashion.

We will highlight the relevance by describing examples how the topics have been picked up by students of our School of Design:

- In winter semester 2012/2013 students of the degree program "Visual Communication" dealt with the topic "domestic abuse" and organized

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<sup>4</sup> Qualität und Verantwortungsbewusstsein stehen dabei im Mittelpunkt des Denkens und Handelns, denn nicht zuletzt werden unsere Absolventen entscheidenden Einfluss auf die Produktkultur, den wirtschaftlichen Erfolg, die Identität und Akzeptanz von Unternehmen, das ästhetische Verständnis und die Kommunikation in unserer Gesellschaft nehmen. Fakultät Gestaltung der HS Pforzheim (Hrsg.): Studienführer 2013, p. 6. ([http://www.hs-pforzheim.de/De/De/Gestaltung/pruefungsamt/studienfuehrer/Documents/DESIGNPF\\_Studienfuehrer2013.pdf](http://www.hs-pforzheim.de/De/De/Gestaltung/pruefungsamt/studienfuehrer/Documents/DESIGNPF_Studienfuehrer2013.pdf).)

an exhibition in cooperation with the refuge for battered women of the community of Calw in order to call attention to this problematic topic.

- Stefanie Stohwasser, fashion student of the School of Design, was nominated for the Humanity in Fashion Award by hessnatur. The Contest theme was “authenticity” and called for vision and innovations for tomorrow’s eco fashion.



### ***Charitable artworks from “Accessoire Design” students***

The School of Design took part in the charity art project of the SWR, a radio and television service agency. In this charity project different artists, institutions, towns and companies were asked to design artworks from wooden chairs that were auctioned afterwards. The revenues were donated to the project “Herzenssache”, mainly for regional care projects for children. Prof. Pekny designed a chair in cooperation with students of the degree program “Accessoire Design”.



### ***Young European Talents Workshop (YET) at Pforzheim School of Design***

In winter semester 2013/2014 the 5th Young European Talents Workshop (YET) is organized by Pforzheim University and the municipal undertaking Business and City Marketing Pforzheim (WSP). The title – from no.where to now.here – requests the students to work with raw materials, rejected goods or remaining material from regional companies that should form the basis for creative ideas. From 4th to 8th November 2013, students from the Canadian NSCAD University, the Danish Designskolen Kolding, and the London College of Fashion as well as from Parsons Paris together with young designers from Pforzheim have jointly developed outfits and accessories out of these materials. The project aims at a sustainable implementation: in future, designers will have access to resources that companies do not need anymore. At the same time students from the study program Intermedial Design have developed a virtual platform. This networking platform bundles the remaining material from the region and makes them available for designers. Companies are highly motivated to participate in this future creative cycle. Certifications, positive eco-balances, sustainable product development as well as a changing buying

behavior make high-quality recycling of remaining material very interesting for companies. Background knowledge has been provided by the study program Resource Efficiency Management, which students

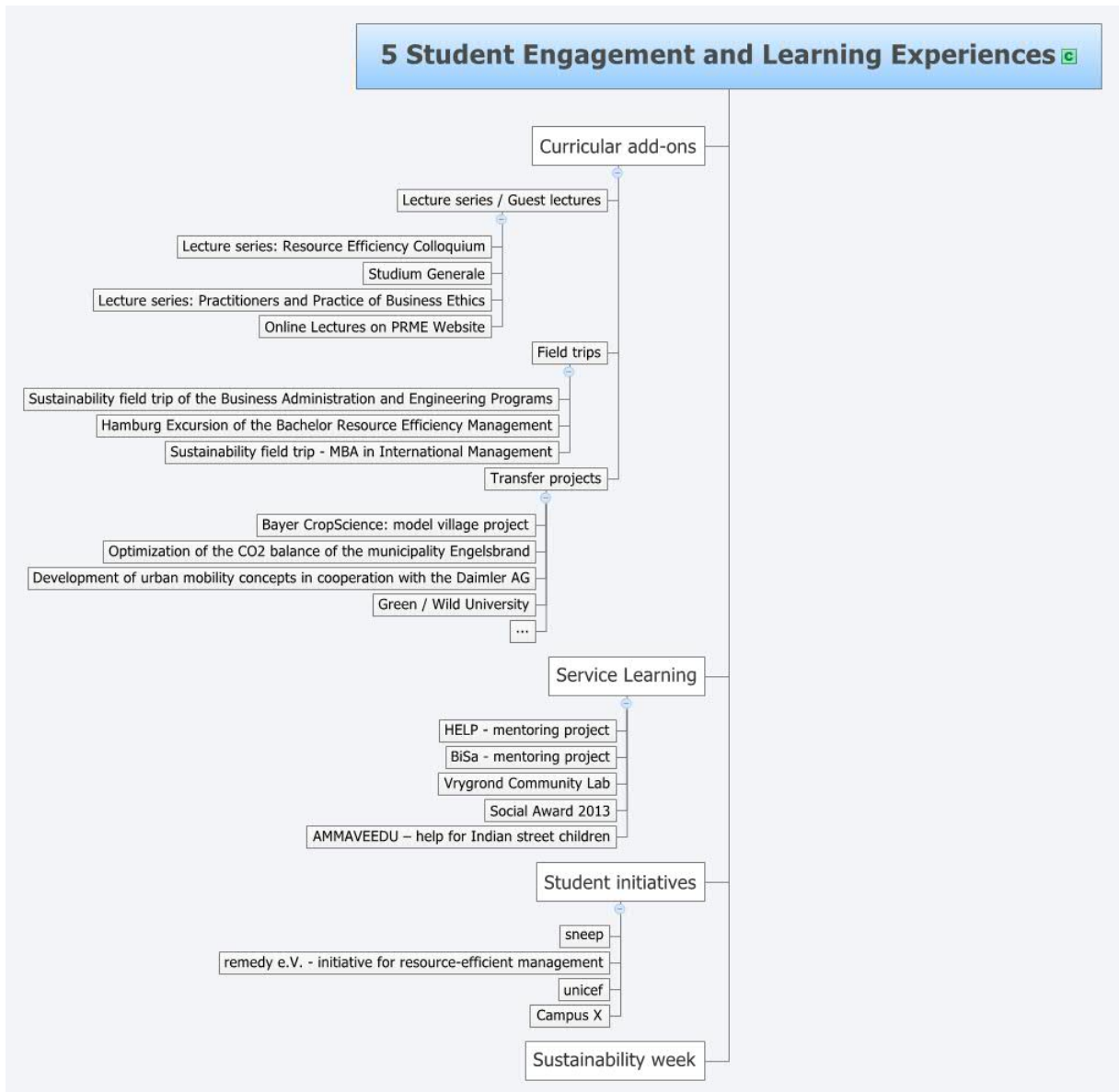
have prepared exemplarily the materials cycle and eco-balances for the international designer workshop.

#### **Our key objectives**

- Continuous curriculum changes of the degree programs for a more responsible management education.
- Development and start of the new master program "Life Cycle & Sustainability".
- Incorporation of ethics, sustainable development and CSR issues in special courses in our planned Master study program "Corporate Communication Management".

## 5 Student Engagement and Learning Experience

In addition to our study programs students have the opportunity to participate and engage in a variety of special offers, e.g. lecture series, transfer and service learning projects or student initiatives as listed in the following figure.





## Our opportunities for student engagement and learning experiences



An integrated teaching of ethics, sustainable development and CSR is an important step to reach a more responsible management education. A continuous curriculum development is required to guarantee reliable know-how of students in this field. However, in addition to this mostly theoretical knowledge acquired in the classroom, it is important to provide opportunities for students to look beyond horizons and to collect practical learning experiences and insights into real life scenarios. Therefore, we are very interested in offering diverse learning experiences and opportunities to provide know-how transfer to our students, e.g. in service learning and company projects. Furthermore, we support them in implementing own initiatives and projects. The students cooperate with such **transfer projects** partly integrated in their standard study program but also in addition to their standard curriculum. We will give an example how transfer projects can have mutual advantages for the companies and the university, especially for our students.

### How do *transfer projects* support learning experiences – the Bayer CropScience: Model Village Project

The Bayer CropScience Model Village Project contributes to our PRME strategy with numerous mutually beneficial forms of cooperation. This and a variety of other initiatives within our PRME-strategy allow us to continuously develop and improve the education of students. In just two years the cooperation has included five internships of our students at Bayer CropScience including fieldwork in India, three company and interdisciplinary projects, two company visits with students, various thesis projects, five presentations of German and Indian Bayer CropScience representatives complementing the sustainability courses and the activities of our student initiative sneep. These and a further presentation of BELAKU, an Indian NGO, involved in the project were also of interest for Pforzheim University's evaluation of the project.

#### Contact:

Prof. Dr. Juergen Volkert,  
email: [juergen.volkert@hs-pforzheim.de](mailto:juergen.volkert@hs-pforzheim.de)

**Some further examples of transfer projects:**

<b>Name of the project</b>	<b>Goals and overview</b>	<b>Results / learning experiences</b>	<b>Contact</b>
Optimization of the CO <sub>2</sub> balance of the municipality Engelsbrand	Students of the Business Administration and Engineering program worked out different possibilities for the optimization of the communal CO <sub>2</sub> balance in cooperation with the municipality of Engelsbrand	The results of the students helps to push forward future energy projects of the municipality Engelsbrand. The project was part of the standard curriculum (4 <sup>th</sup> semester).	Prof. Dr. Guy Fournier
Urban mobility concepts	Cooperation project between the Master program Business Administration and Engineering of Pforzheim University and of the Reims Management School in cooperation with the Daimler AG: the goal was to work out efficient solutions for urban mobility concepts in international teams.	50 students from Germany and France worked together in this promising project for the future. The students had the possibility to broaden their horizon and to collect useful experiences in international project management and learn more about alternative mobility concepts.	Prof. Dr. Guy Fournier
Sustainability in youth associations	An interdisciplinary team of students worked out a concept for the implementation of sustainability in a youth association.	The students dealt intensively with the concept of sustainable development and learned to apply it to a concrete example.	Prof. Dr. Joerg Woidasky
Green University / Wild University	The project Green University dealt with sustainable management and resource conservation. Wild University was a cooperation project between Wildpark Pforzheim and Pforzheim University. The students developed new concept ideas, e.g. pedagogic reasonable experimental points for children or the distribution of bio-meat products.	Students of the Business Administration and Engineering programs applied their theoretical knowledge of the lecture "Project Management" in transfer projects.	Prof. Dr. Ansgar Kühn
Voluntary seminar "respect and treatment"	The participation in the seminar is a voluntary and additional engagement. Main goal of the seminar is to establish sensitivity for	The students critically deal with ethical aspects and its challenges in cooperation with others.	Prof. Dr. Kai Alexander Saldsieder

Name of the project	Goals and overview	Results / learning experiences	Contact
	ethical behaviour in day-to-day contacts. The students have to work out the meaning of respect in our world, and with which challenges we have to cope. The seminar is organized in cooperation with the Rotaract Pforzheim and Rotary Club Pforzheim Schwarzwald.		

Additional *guest lectures* and *lecture series* as the “Resource Efficiency Colloquium”, the “Studium Generale” and the lecture series “Practitioners and Practice of Business Ethics” give, e.g. practical insights

*Guest lectures are important and practical supplements in our study programs, e.g. Jan Market gave an input in the “compliance and integrity at Daimler AG”*

into the relevance and implementation of sustainability and ethics issues in business and science. Guest lectures related to sustainability / ethics issues are regularly integrated in standard lectures of different study programs. As an additional opportunity to get further insights in sustainability and ethics, we supplement additional

*19 Students of the Business Administration and Engineering program combined their excursion to the Zajons Zerkleinerungs GmbHs with a further study project to find innovative solutions for the recovering of waste material of rotor blades from wind power plants. Contact: Prof. Dr. Joerg Woidasky*

online courses on our PRME Website (see: [http://www.hs-pforzheim.de/DE-DE/WIRTSCHAFT-UND-RECHT/FAKULTAET/PRME/NE\\_ONLINE\\_LEHR\\_ANGEBOTE/Seiten/Inhaltseite.aspx](http://www.hs-pforzheim.de/DE-DE/WIRTSCHAFT-UND-RECHT/FAKULTAET/PRME/NE_ONLINE_LEHR_ANGEBOTE/Seiten/Inhaltseite.aspx) ).

***Field trips offer practical insights into real life working environments***

During the summer semester each degree program can organize a one-week-field trip to visit different companies and to show its students practical examples. In SS 2013 the Bachelor programs Resource Efficiency Management, the Business Administration and Engineering programs and the Master program “International Management (MBA)” organized field trips focusing on sustainability and resource efficiency topics. The related company visits did not only give practical insights but also enabled students

to collect useful contacts for other projects, internships or thesis.

***Our focus on Service Learning to enable remarkable learning experiences***

As described in our last report a new mentoring project **HELP** started in WS 2011/2012. Students of Pforzheim Business School mentor students of two schools in Pforzheim (Insel-Werkrealschule Pforzheim and Nordstadtschule Pforzheim) for at least one year to support them in their professional orientation. In preparation of the



mentoring of the pupils our students have to participate in a psychological training. Different activities were implemented to foster the mentoring of the pupils and to motivate students and pupils (e.g. visit at Pforzheim University). Since the project has started 21 pupils could be mentored by our

*"I get much help – in all fields of interest!"*

*Worakan Luangnuan  
(mentored student of HELP)*

students. At the moment 16 pupils are mentored. The feedback of our students and the pupils about their experiences is very positive.

Contact:

Natascha Kappler, email: [Natascha.kappler@hs-pforzheim.de](mailto:Natascha.kappler@hs-pforzheim.de)

Within the **mentoring program BiSa** (in German: Buerger in der Schule aktiv) over 50 students from all faculties mentor pupils from several schools. Because of the very positive experiences more and more teachers ask for support by BiSa. The participating students report very positively



about their experiences and are proud to help the pupils.

Contact: Lilli Gros,  
Bisa - Bürger in der Schule aktiv e.V.

***Vrygrond Community Lab – a community in transition***

Professors and students of Pforzheim University build up a Community Computer Center in the south-African Township Vrygrond in cooperation with the University of Cape Town. Since February 2012 ten volunteers of Pforzheim University were in charge of the needed technical, organizational and educational preparations. The Center has been opened in March 2013. In summer semester 2013 four of our students cooperated with students of the University of Cape Town in this project. The volunteers stay for 6 months in the township to support children and young adults in the Community Center. The project is supported by the student initiative "initiAID e.V." (see page 30).



Main goal of the Community Computer Center is to offer numerous training and educational measures to kids and young adults in order to improve their living and working opportunities in the long run.

This project is a good example of how teaching and practical transfer can be combined to achieve excellent solutions in both fields.

Practical level: the participating students gain practical experience by directly support-

*Prof. Dr. Fritz Gairing was fascinated by the chance to combine concrete help and the possibility to investigate intercultural and social learning of students of both universities in a cooperative research study by an educational project with young adults in a township.*

ing children and young adults. Furthermore, they drive forward the community development in Vrygrond in cooperation with the Community Computer Center and with other local non-profit/non-government organizations and German aid projects (buildupkids e.V. and Butterfly Art Project, Cape Town). An evaluation of the results is planned in 2014.

Teaching level: students of Pforzheim University and of University of Cape Town work as volunteers in a practical project and make social learning experiences. Such learning

*"The insight in the problems and possibilities in South-Africa is a unique experience. I will come back!" Jan Fölsing, Volunteer in 2012, MBA HRM&C.*

experiences together with social and ethical reflection are an important contribution to a socially responsible education of future managers. First evaluations of the learning experiences are done by students of the Business Administration and Engineering program / International Management in the context of the PIPE research project (**Portfolio International Profile in Engineering**)

Contact:

Prof. Dr. Fritz Gairing,

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Prof. Dr. Joachim Schuler,

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### ***AMMAVEEDU – help for Indian street children***

A student of the degree program Purchasing and Logistics supported the children's home Ammaveedu in South India during his stay abroad. Objective of the children's home is to provide all possible care for the infants who are discarded and abandoned. The children receive medical and educational support in order to enable them a better life. Education is seen as a most important factor to help these children to live an inde-

pendent life in dignity. At the moment there are 43 children. Ammaveedu offers students of Pforzheim University the possibility to gain new experiences by supporting the children's home in education and financial affairs.



Contact: Timo Muench (Purchasing and Logistics student), email: [muetim@hs-pforzheim.de](mailto:muetim@hs-pforzheim.de)

### ***Student Initiatives – an important part of our University live***

As already reported in our last SIP we have a number of students' initiatives that are engaged in the field of sustainable development / ethics / CSR.

The student initiatives **sneep and UNICEF** supported different projects. In 2012 UNICEF e.g. took part in the "Pforzheimer Cultural Night" with special events like portrait painting by students to raise awareness for the work of UNICEF in the Sahel-Zone in West and Central Africa. Furthermore the UNICEF initiative organizes regularly different charitable donation activities and infor-



mation desks, e.g. at the World-Aids-Day. The UNICEF members of Pforzheim University took part in a general training organized by UNICEF.

The initiative sneep started e.g. a movie opening night and showed the movie "we feed the world" to critically question nutrition, globalization and the production of our alimentation. Sneep members did fund-



raisings for Build up Kids Cape Town and their projects in a township in South Africa (see Vryground Community Lab) and an Indian children's home (see Ammaveedu).

Furthermore, the initiative aims at extending contacts to experts in order to deepen insights into the relevance of ethics in business. Therefore, in cooperation with the ethics agent they organized an open discussion with the head of the CSR department of Bayer CropScience on the relevance of CSR.



In the last SIP we reported about the research project on the capabilities of children in Pforzheim in cooperation with the city of Pforzheim and the Family Centre North (Familienzentrum Nord). By request of the children sneep members, the ethics agent of Pforzheim University and the children of the family centre north designed an own book in order to make a note of the children's ideas and impressions what for them is most valuable for a good life. The children developed wonderful drawings, photo stories, short stories or questionnaires. Sneep members supported the children not only in creating the book, but also in doing their school homework, playing with them, etc. The project was a great success for our students and the children, which is document-



ed in the book that has now been published.

Beyond the already existing initiatives two new initiatives, namely remedy e.V. and initiAID e.V. were founded.



The initiative *remedy e.V.* (initiative for resource-efficient management) was founded by seven students of the Bachelor Program Resource Efficiency Management in March 2013. Main goal of the initiative is to complement the theoretical knowledge with

practical experience. Thus, the initiative plans to organize factory visits focusing on resource efficiency to gain insights into potential technical solutions. Furthermore the initiative plans to consult manufacturing companies in the field of resource and energy efficiency. (contact: [remedy.ev@gmail.com](mailto:remedy.ev@gmail.com)).



initiAID was officially founded at the beginning of the winter semester 2013/2014. The initiative supports primarily the cause of socially disadvantaged areas to provide their people with perspectives and ensure a sustainable improvement of life. In this context, the potential for success lies within the balance of education and reasonable leisure-time activities. Under these conditions there are currently two projects in the township Vrygrond of Cape Town, South Africa in progress (see also Vrygrond Community Lab, p. 27): here, the emphasis has been placed on such aspects as the training of IT-skills and the creation of leisure-time activities with building a soccer field. All this is only possible because of the groundwork before and during the projects by the members of initiAID in Germany; is it either in the organization, the financing, the communication or the information.

Each semester *Campus X*, our long-established student initiative, implements one social responsibility project as already reported in the last SIP. In this reporting period they implemented in SS2013 a very special project with elderly people in

cooperation with the retirement home “Walter – Geiger Haus” in Pforzheim “Tanz verbindet Generationen! – Dancing unites generations”. In cooperation with the dancing school IWONA, Campus X organized dancing lessons for the inhabitants of the Walter-Geiger Haus. About 15 students and 10-15 seniors met 6 times for dancing. As elderly people used to be not that agile the dancing lessons were organised especially for them. For instance they danced with colorful draperies while sitting. This project enabled new and valuable experiences for students and for the elderly participants. The students were very stoked for the project. From the team’s point of view the biggest success is that some students want to foster the friendships to the inhabitants. As such, the project was an important learning experience for all participants.



In WS 2012/2013 Campus X organised swimming lessons for handicapped children of the Gustav-Heinemann School. For this project and for its long-lasting social activities for handicapped people since 2008, Campus X gained the first **Social Award 2013** of the EC4U expert consulting. 14 groups and initiatives of our university applied for this Award. It awards the social engagement of students of Pforzheim

Business School. Main goal of the award is to encourage and activate more students to engage socially.

Contact:

Campus X, eMail: [info@campusx.org](mailto:info@campusx.org)

### *Sustainability Week*



In April 2012 a team of students and the PRME coordinator organized a “sustainability week”. Main goal of the event was to give

*“We are astonished about the variety of social engagement at Pforzheim University”, so Sarah Bruenig of the consulting agency EC4U expert consulting AG.*

an insight into the relevance of sustainability topics and

the already available offer for students to learn about sustainable development in courses and different practical and research projects at Pforzheim University. The program included lectures of academics and business experts and gave insights into sustainability projects at Pforzheim University from a students’ point of view. Accompanying the lecture program an information bazaar of various initiatives and projects provided an interesting insight in existing activities at Pforzheim University to all our students, staff and professors. It is an excellent example for the engagement of our students in the field of sustainability. Without the students’ engagement, it would have not been possible to organize the sustainability week. The students were in charge of designing the program and especially for the public relations of the event.



The project aimed at promoting our sustainability/ethics projects and at activating more supporters for these topics.

The sustainability week was a contribution to the sustainability days of Baden-Wuerttemberg 2012.

Contact:

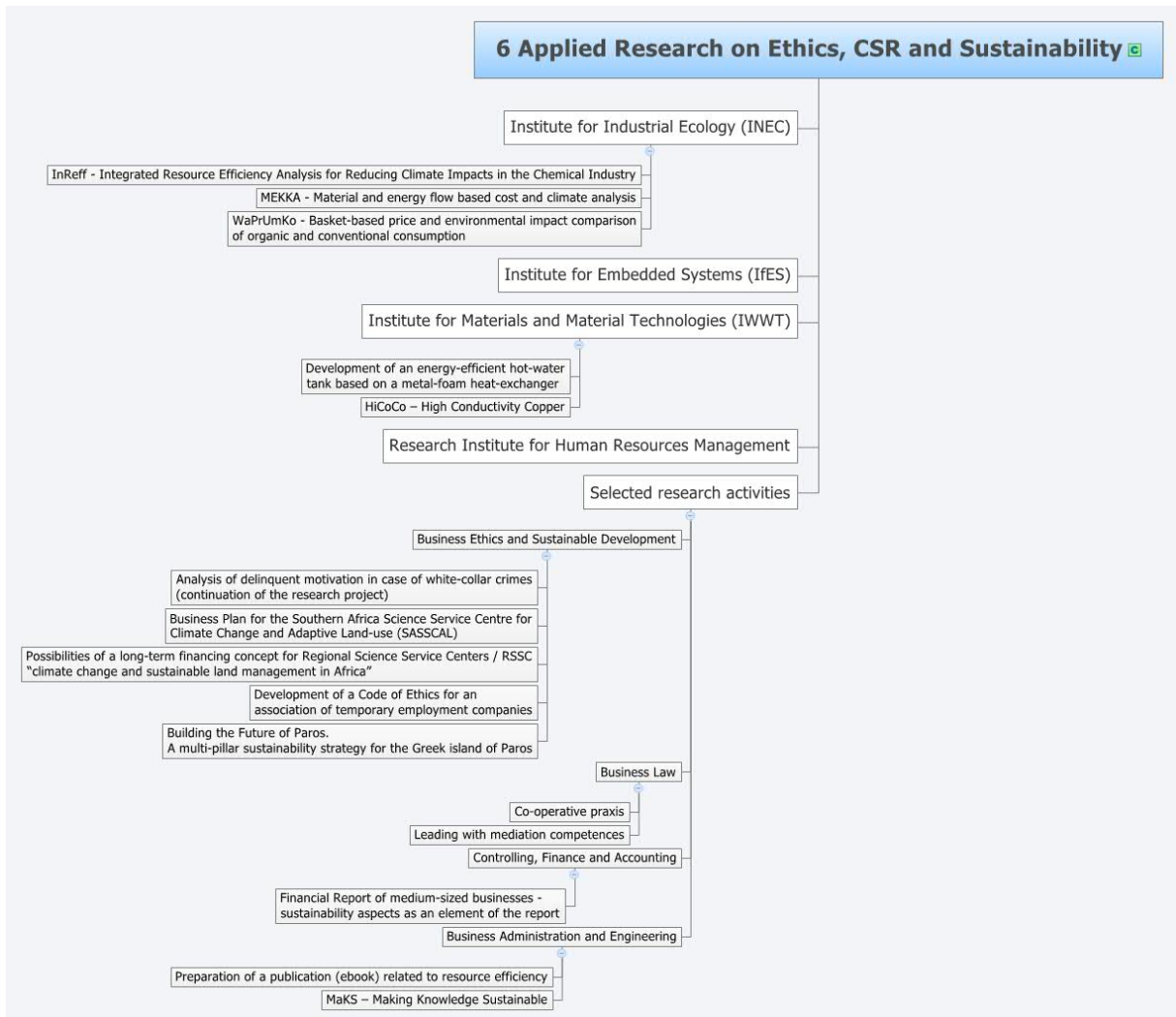
Kerstin Anstatt, eMail: [Kerstin.anstaett@hs-pforzheim.de](mailto:Kerstin.anstaett@hs-pforzheim.de)

**Our key objectives**

- To support further the engagement of our students in Service Learning projects.
- To establish a continuous offer of transfer projects for our students.
- To support our student initiatives in implementing new projects and attracting more students and motivate them to continue their work.

## 6 Applied Research on Ethics, CSR and Sustainability

Pforzheim University sets high value on applied research in order to provide its students up-to-date and applied knowledge. Various research projects focus on ethics, CSR and sustainable development described in more detail in the following chapter.

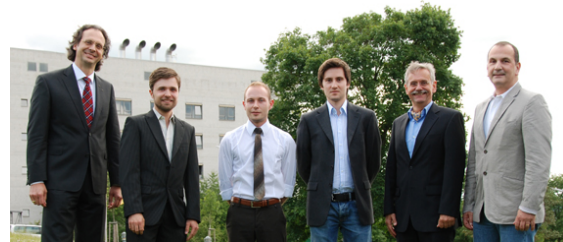


## Our research activities in the field of ethics, CSR and sustainability and its influences on teaching



Research at Pforzheim University is established in different institutes, especially in our Institute for Applied Research (IAF). There exist other more specialized institutes which are part of the IAF, as the Institute for Industrial Ecology (INEC), Institute for Embedded Systems (IfES), Research Institute for Human Resources Management or the recently founded Institute for Materials and Material Technologies (IWWT) (former: Material Science Laboratory and Testing). Research projects of these institutes regularly deal with sustainability topics. The results of the projects are as far as possible integrated in the corresponding courses of our degree programs. The IAF regularly awards a research price for excellent research activities. In

summer semester 2012 Patrick Kraus, research assistant of the Master degree program "Controlling, Finance and Accounting" was awarded for his research in the field of CSR and sustainability in business.



We will give an insight into research activities of the different institutes and the variety of research activities dealing with responsible management by highlighting selected project examples in the following:

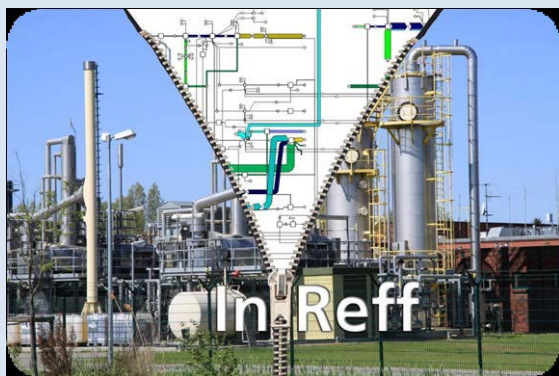


***Integrated Resource Efficiency  
Analysis for Reducing Climate Im-  
pacts on the Chemical Industry  
(InReff)***

The integrated analysis and optimization of complex production systems – including

material and energy use, resulting costs as well as environmental and climate impacts – is necessary to reduce effectively greenhouse gas emissions in the chemicals sector. When production systems are considered in such an integrated way eco-balancing, process engineering and optimization aspects refer to each other. In practice, their systematic consideration is non-trivial as appropriate instruments and holistic approaches are missing. Such instruments and

approaches are expected to increase the degree of acceptance and diffusion regarding measures that aim at climate protection and resource efficiency and, in consequence, contribute to sustainable development. The InReff project does not seek innovative but singular technical solutions, but enables companies to systematically identify efficiency potentials instead. This helps companies to derive and assess various (technical) measures and solutions. In the joint project three business and two academic partners work together to elaborate a platform that integrates different methods of modeling and assessment. The partners will furthermore develop a prototype and test it in practice. The desired holistic approach of this project is rather challenging and requires methodological and technological innovation. In addition, the project results will be incorporated in concrete measures of the involved business partners that are likely to foster technological innovations for existing production processes. Apart from the project partners, further partners from the chemical industry, particularly SMEs will be involved in this R&D project. This project is funded by the Federal Ministry for Education and Research.



Project Manager: Prof. Dr. Hendrik Lambrecht, email: [hendrik.lambrecht@hs-pforzheim.de](mailto:hendrik.lambrecht@hs-pforzheim.de)

### ***Material and energy flow based cost and climate analysis (MEKKA)***

The focus of this project is the material flow cost analysis (MFCA) and in particular the ISO 14051, which has been created as a special evaluation of material and energy flows and their monetary value. However, the project lacks a methodological integration into a comprehensive approach for the modeling of the material and energy flows related to a production system, which is able to connect various extensions, e.g. in the direction of an inter-company analysis of the supply chain, or economic and ecological assessments. In particular, such a methodological embedding is required to develop IT policies and IT products, which are practicable and have the necessary flexibility for the operational use. In this context, extensive consultation with colleagues from Japan, as in the meeting Ecobalance 2012 in Yokohama, has taken place. The project is funded by the Federal state of Baden Wuerttemberg.

Project Manager: Prof. Dr. Mario Schmidt, email: [Mario.schmidt@hs-pforzheim.de](mailto:Mario.schmidt@hs-pforzheim.de)

### ***Basket-based price and environmental impact comparison of organic and conventional consumption (WaPrUmKo)***

Within the research project WaPrUmKo prices and environmental impacts of conventional and organic products are compared. Thereby, the statistical basket of the consumer price index forms the basis. In comparing the price and environmental impact the relative difference between conventional and organic basket shall be determined and converted into an eco-economic analysis. For the first time empirical ecological variations in consumption patterns for statistical market basket analysis would be available, which could make the market transparent for consumers. Essential

parts of the project are empirical price surveys. Therefore, criteria for the evaluation of environmental product and service alternatives are determined, according to which the organic products are to be selected for the basket. Selection- and weighting criteria are developed for mapping a possible real market situation. Price-statistical methods, with involvement of the Federal Statistical Office, are further developed. The current state of the environmental assessment for product groups of the commodity basket is assorted. A particular challenge is to determine the environmental impacts of considered product quality. The environmental impact of consumption is assessed and the cost effects of a greener consumption are examined. To map not only the relative price and environmental impact of average consumers, the absolute differences at different



levels of consumption and production patterns shall be determined exemplarily. The project is funded by Federal Ministry for Education and Research - Programme FHprofUnt.

Project Manager: Prof. Dr. Mario Schmidt,  
email: [Mario.schmidt@hs-pforzheim.de](mailto:Mario.schmidt@hs-pforzheim.de)

The results of the INEC research projects are integrated in the Bachelor degree program Resource Efficiency Management. Further information on the projects of the Institute of Industrial Ecology can be found on the following website: <http://umwelt.hs-pforzheim.de/en/research/>.

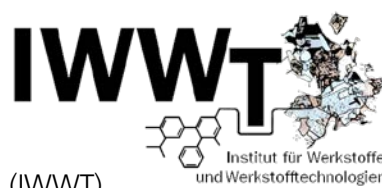
Contact: Prof. Dr. Mario Schmidt,  
email: [Mario.schmidt@hs-pforzheim.de](mailto:Mario.schmidt@hs-pforzheim.de)

### *Institute for Embedded Systems (IfES)*

An important research focus of the Institute for Embedded Systems is electronic displays. Energy efficiency is an important indicator for Electronic Displays. Prof. Dr. Blankenbach of Pforzheim University is Chairman of the electronic displays conference that takes place annually. At the last conference the topic of "Resource efficiency – what are critical metals and how scarce are they?" was picked up by Prof. Dr. Mario Schmidt (Pforzheim University) as an important topic at the conference. For more information about the research activities of the IfES, see: [www.hs-pforzheim.de/ifes](http://www.hs-pforzheim.de/ifes).

Contact: Prof. Dr. Thomas Greiner,  
email: [Thomas.greiner@hs-pforzheim.de](mailto:Thomas.greiner@hs-pforzheim.de)

### *Institute for Materials and Material Technologies (IWWT)*



The Institute for Materials and Material Technologies is mainly

(IWWT)

engaged in material development and material optimization, validation, examination and analysis of metallic and polymer materials and the optimization of production processes, especially in the field of pressing and stamping techniques. In our last SIP-Report we have already given insights into the research activities of the former named "WEP" and their contribution to a sustainable development. The team of the IWWT is continuously engaged in implementing new research projects.

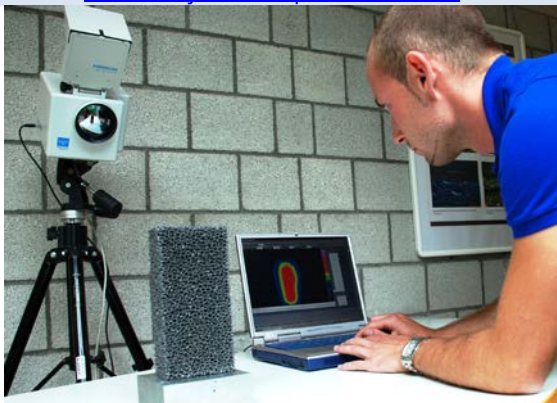
Further information: [www.hs-pforzheim.de/iwwt](http://www.hs-pforzheim.de/iwwt)

Contact: Prof. Dr. Norbert Jost, eMail: [norbert.jost@hs-pforzheim.de](mailto:norbert.jost@hs-pforzheim.de)

### ***Development of an energy-efficient hot-water tank based on a metal-foam heat-exchanger***

The project aims at a more effective storage of heat by using innovative concepts for the thermal energy storage and –transfer. The use of open-pored metal structures has high potential for an on demand and effective use of energy in comparison to conventional facilities.

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### ***HiCoCo – High Conductivity Copper Construction and optimization of the characteristics of innovative high-conductive CuMgP alloys and the utilization for industrial applications***

The project aims to optimize the alloy system CuMgP and to utilize the alloy for industrial applications. CuMgP has a highly improved strength in comparison to copper and parallel to this a high conductivity. Thus CuMgP could be a perfect substitute for copper and some alloys of it in diverse applications (e.g. the overhead power lines for express train routes). The project is imple-

mented in cooperation with two SMEs and is funded by the Federal state of Baden-Wuerttemberg / EU (EFRE) - technology transfer.



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### ***Business Ethics and Sustainable Development***

Continuation of the Research Project: ***Analysis of delinquent motivation in case of white-collar crimes*** - Commissioned by: PricewaterhouseCoopers AG WPG Frankfurt/Main. Main goal of the study is to investigate how the willingness and motivation of white-collar crimes and the social, organizational and moral factors in companies are determined.

The research project and its results are used to call the students' attention to white-collar crime in the lectures "Business Ethics", "psychological-qualitative market research II, and "Corporate Responsibility and Sustainability Management".

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### ***Business Plan for the Southern Africa Science Service Centre for Climate Change and Adaptive Land-use (SASSCAL)***

The SASSCAL has grown out of previous science initiatives in Southern Africa and is actively supported by a broad range of stakeholders. The aim is to establish SASSCAL as the REGIONAL driver for innovation and knowledge exchange to enhance adaptive land use and sustainable economic development in Southern Africa under global change conditions. Thus SASSCAL will operate mainly as an organization offering knowledge-intensive services and training products with a particular emphasis placed upon the enhancement of the research capacities in the SADC region. These services and products will be based on on-going demand articulation from users and practitioners, centered on core areas namely; Information Support, Advisory Services, Networking, and Innovation Management. This project is funded by the Federal Ministry for Education and Research.

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### ***Possibilities of a long-term financing concept for Regional Science Service Centers / RSSC "climate change and sustainable land management in Africa"***

The current climate changes are expected to encompass important challenges to the future land-management in Africa. Thus, adequate measures for the protection of livelihood are considered to be of utmost importance for a sustainable land-use. In light of this background, the German Ministry for Education and Research intended to support so-called Regional Science Service Centres designed at facilitating knowledge exchange with Northern countries and between different African states. This projects aims at

defining funding options for these institutions under the auspices of KfW.

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### ***Study: migration of specialists in the health sector***

The study investigates the question, if and how the deficit of specialists can be limited or even eliminated by a controlled migration from developing countries to Germany. Main goal is to discuss how the migration of specialists could be achieved in an ethical correct way without weakening the health systems of the developing countries, but instead by even generating a benefit for the improvement of the situation in these countries. The paper identifies legal, organizational and political possibilities to implement such an ethically correct migration. It presents a pilot approach for a twinning-model between the Rhein-Main area and an area in Indonesia that has approximately the same population. The project was initiated by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, financed by the KfW and implemented by the German Healthcare Partnership.

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### ***GeNECA - Fair sustainable development based on the capability approach (04/2010-05/2013)***

Funded by the German Federal Ministry of Education and Research, the research project on fair sustainable development based on the capability approach (Gerechte Nachhaltige Entwicklung auf Grundlage des Capability-Ansatzes - GeNECA), already mentioned in our second SIP has been finished. GeNECA's aim has been to conceptualize sustainable development on the basis of the Capability Approach so as to combine

the issues of inter- and intragenerational justice drawing on an integrated understanding of social, economic and environmental development. However, still more papers on how to establish a foundation of intra- and intergenerational justice, are being published. For Pforzheim University, Kerstin Anstätt und Jürgen Volkert focus on corporate core business and CSR impacts on sustainable human development as well as on sustainability governance from a Public Choice and Capability Approach Perspective.

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#### ***Bayer CropScience Model Village Project Evaluation in South India***

As mentioned in the last SIP Bayer CropScience conducts a model village project to improve sustainable human development of farmers in rural Karnataka (India) as well as productivity and value-added of these farmers who are seed suppliers of Bayer CropScience. Following the quantitative survey covering almost 1000 households and 6000 persons in two model and two control villages in 2011, qualitative focus group discussions have been carried out in 2012 with 200 villagers, including men and women of all castes, scheduled tribes and scheduled castes. The aim was to identify what people value most and in which domains they feel most restricted; also reasons for these perceptions were discussed along with solutions to overcome restrictions. In 2013, with the start of Bayer CropScience's school initiatives, quantitative baseline tests of learning outcome were carried out that will help to see whether these corporate activities in model villages make a difference in comparison to learning outcome developments in control villages. Furthermore, issues of health and hygiene as well as the performance of Bayer CropScience's agricultural performance were assessed.

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#### ***Development of a Code of Ethics for an association of temporary employment companies***

In cooperation with the association of temporary employment companies the project aims to develop a conception for a code of ethics and for the establishment of a contact and conciliation committee. The analysis of the developed code of ethics is used as case study in our courses. An evaluation of the contact and conciliation committee by students is planned.

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#### ***Building the Future of Paros. A multi-pillar sustainability strategy for the Greek island of Paros***

A partnership of inhabitants of the Greek island of Paros is convinced to contribute with a modern, sustainable thinking and acting to a beneficial development of our life. The partnership aims to develop a sustainable life on Paros. They focus especially on small and handy projects which will be realized pragmatically together with the people of Paros. The partnership is convinced that it is the responsibility of each of us to realize our future economic development with consideration of ecological and social issues. The management of the interrelationship of economy, ecology and society will be the key for the future. The project is in its very initial phase. Kick-off was end of May 2013.



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## ***Business Law***

### ***Co-operative praxis***

The project aims to investigate the relevance for business lawyers to find solutions of legal conflicts in cooperation with lawyers but without official court proceedings.

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### ***Leading with mediation competences***

The project aims to find out possibilities and barriers of the use of mediation elements as management tools. The project is implemented in cooperation with the project partner Eidos Projekt Mediation e.V. The project partners organize seminars with business leaders with mediation trainings in order to learn from their findings and experiences for their management.

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## ***Controlling, Finance and Accounting***

### ***Financial Report of medium-sized businesses - sustainability aspects as an element of the report***

The management report is an important instrument to review the economic situation

of companies. The management report can inform in detail about the prospects of the company. The study aimed to analyze the quality of management reports for SMEs as the management report is mostly used for capital market oriented companies. The study also analyzed sustainability aspects as part of the report.

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## ***Business Administration and Engineering***

### ***Preparation of a publication (ebook) related to resource efficiency***

Preparation and coordination of a final documentation of the r2-funding program for the topic resource efficiency of the German Ministry of Education and Research – on behalf of the Fraunhofer Institute for Chemical Technology.

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### ***European Symposium on Aircraft Recycling***

More than 25% of the current civilian aircraft fleet will be decommissioned in the coming 15 years, offering both business options and challenges. Technically speaking, a total potential of about half a million tons of valuable materials will become available. But even more added value can be expected from equipment and parts extraction before the aircraft is finally taken out of service.

On the other hand, the interface between the airworthiness requirements and the waste management laws in the end of life operations creates legal and technological challenges for all stakeholders. Not only the companies' sizes, but also their policies and strategies for future business development

are manifold and sometimes divergent. To provide sustainable business operations on a European or even a worldwide scale, amongst others technical requirements, quality assurance both for parts and processes as well as materials flow and recycling option issues will have to be addressed, monitored, and developed.

This first European Symposium on Aircraft recycling on December 12 and 13, 2013! will bring together aircraft manufacturers, dismantlers, recyclers, and also researchers. It provides a neutral platform for exchanging and discussing the current status and the potential of technology, and policies in aircraft end of life operations and recycling.

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**AIRCRAFT  
RECYCLING  
SYMPOSIUM**

### ***Making Knowledge Sustainable (MaKS)***

The project focuses on the mostly unexplored topic of a cultural sustainability in international companies. Intercultural management aims at overcoming first cultural differences so far. But it is mostly not defined which intercultural centre is aspired in the case of a long-term company integration. The project MaKS analyzes a globally-linked production of a global market leader of the technical industry. The aim is to find out how the knowledge-based and globally-linked company processes could be integrated in an intercultural sustainable way. It is assumed that companies need a long-term intercultural competence management and an adaption of existing organizational structures instead of static structures.

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In the Appendix of our Report we have listed selected publications in the field of CSR, ethics and sustainability that give an additional insight into relevant applied research topics at Pforzheim University.

#### **Our key objectives**

- Implementation of more interdisciplinary and inter-departmental research projects to allow for more integrated project analyses and insights.



Issued by Pforzheim University  
Pforzheim, December 2013,  
update: January 2015

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