

WEMESURF – Networking in a Marie Curie Research Training Network

Agnieszka Bogus¹, Davide Bianchi², Ille C. Gebeshuber^{1,2}

¹ Institut für Allgemeine Physik, Technische Universität Wien, A-1040 Vienna, Austria, EU

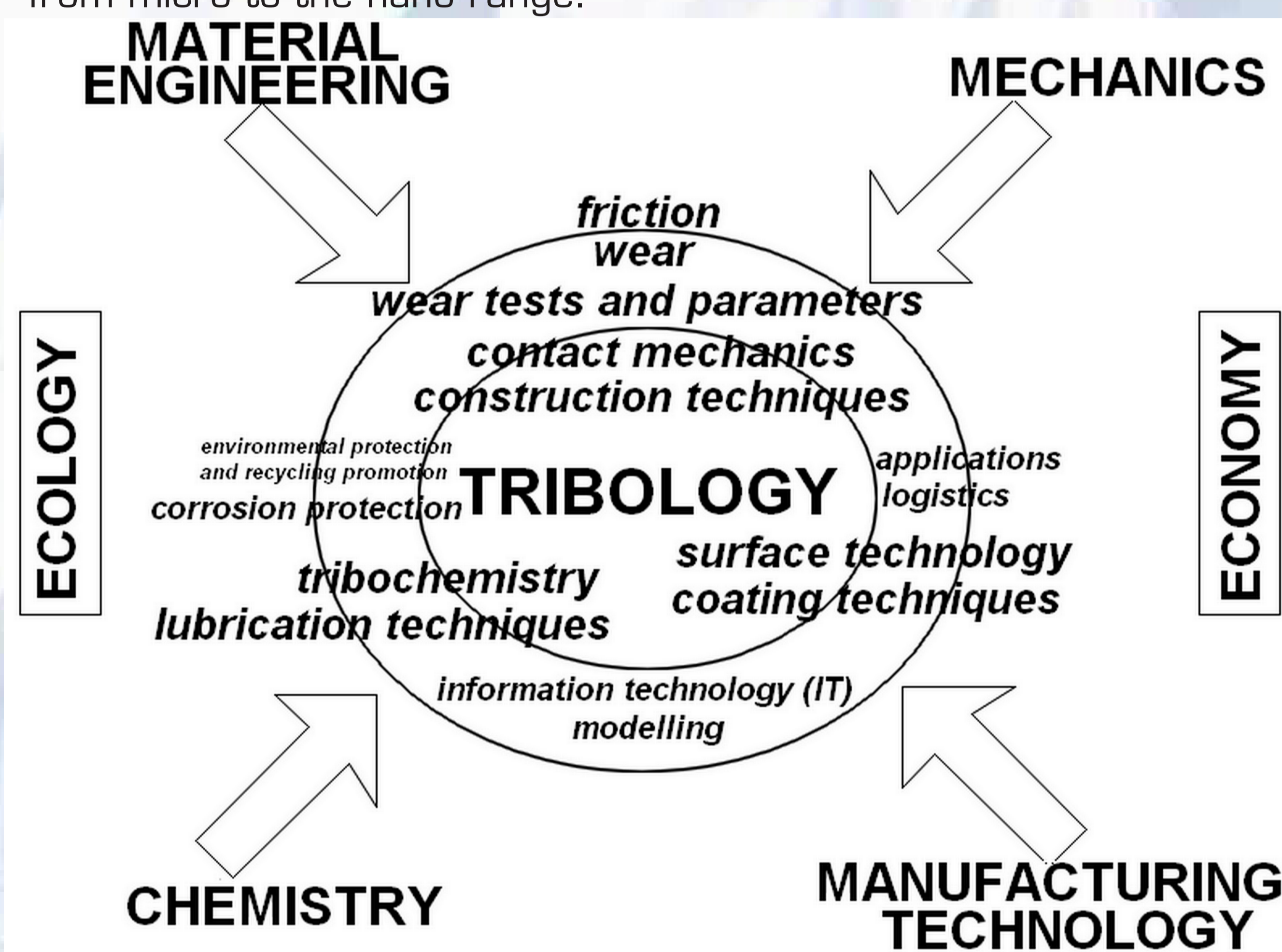
² Austrian Competence Center for Tribology – AC²T, Viktor Kaplan-Strasse 2, 2700 Wiener Neustadt, Austria

ABSTRACT

The main aspect of a Research Training Network is the networking between the several participants. In our WEMESURF Research Training Network (Characterisation of WEAR MECHANISMS and SURFACE functionalities with regard to life time prediction and quality criteria - from micro to the nano range) this is demonstrated by sharing samples, equipment and knowledge between the organizations in charge, submitting joint publications and presenting results at national and international conferences, in this way also representing the network. Every three months group meetings take place to discuss obtained results, to plan future research and to check the growth of the single Early Stage Researchers. Active communication via an online forum created solely for the purpose of communication within the Wemesurf project and also videoconferences shall take place. Every Early Stage Researcher has the possibility to choose up to three organizations to visit in order to increase the transfer of knowledge.

Networking in Tribology

Tribology is the science and technology of interacting surfaces in relative motion. It includes the study and application of the principles of friction, lubrication and wear with regard to life time prediction and quality criteria - from micro to the nano range.



Tribology incorporates a number of scientific fields, including friction, wear, lubrication, materials science, and various branches of surface physics and surface chemistry. It forms a vital part of engineering science. The interacting surfaces may be on machinery or engine parts, moving joints, bearings, on tools and on machines and the parts on which they work.

What is Wemesurf ?

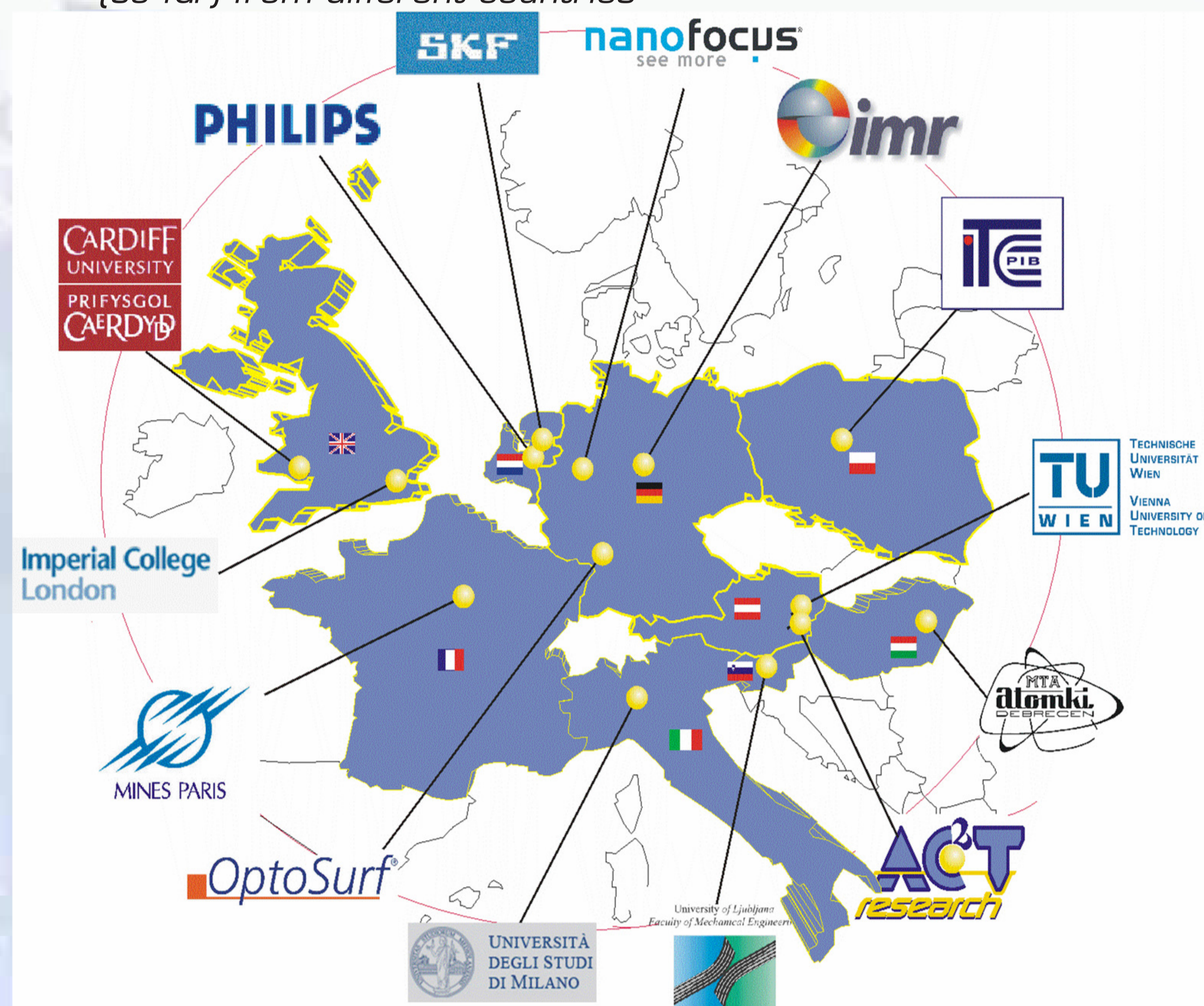
The Wemesurf network was set up in November 2006 to offer training opportunities to *early stage researchers (ESRs)* and *experienced researchers (ERs)* in an international/European "training by research" program in the field of Tribology.

The overall objective of the Wemesurf is to foster the development of a pool of interdisciplinary researchers on the crossroad between chemistry, physics, mathematics (modelling and simulation), material science, mechanical engineering (with special focus in micro/nanotechnology), ecology and economy, and with a gigantic spectrum of applications like in electrical and mechanical engineering, medicine, vehicle industry, computer technology, household devices, etc. (implemented by partners from industry and associated partners from AC²T, ITEE, etc.). Objectives of Wemesurf are interrelated with each other, that the results of different characterising technologies based on geometrical, physical or chemical effects lead to an optimal surface related wear detection and further on to the development of theoretical wear mechanism modelling and simulation tools, accompanied by the investigation of the economical and ecological impact of wear prevention.

Networking in Wemesurf

Wemesurf is Marie Curie Research Training Network consists of:

- consortium of teams located in 8 different countries
- 14 institutes/companies involved
- 11 Early Stage Researchers and 3 Experienced Researchers (so far) from different countries



The most important issues in Wemesurf are communication and collaboration between contractors: scientist in charge & institutions central administration, coordinator & project officer, and essentially among ESRs, ERs and throughout the whole network. In Wemesurf this is demonstrated by:

- Networks meetings, where all researchers are invited, are organized every three months, additionally parallel session for ESR/ER takes place to discuss encouraged problems in their work, experiments;
 - Electronic networking via the active use of Internet WebPage: www.wemesurf.net, group Emails and video conferencing;
 - Sharing samples and equipment between the organizations in charge;
 - Visits and secondments between participants for the purpose of exchanging knowledge;
 - Submitting joint publications and presentation of achievements at international events and attendance at national training schools, in this way also representing the network;
 - Invitation of external experts for specialist inputs into the joint research-training programme;
- Above I pointed issues which have been already reached and which are in daily use in our network. We are conscious of that there is still many things to do to improve our networking e.g.:
- A dynamic web page (including research section) can be good "public outreach" for dissemination to the general public and useful tool for the network (recruitments, report preparation, on-line tutorials...);
 - Collaboration with other RTNs in similar or complementary fields is also encouraged for exchange of "best practice", and ToK
 - Organisation of a final network conference which would be widely publicised and showcase the achievements of the network.

CONCLUSION

To fulfill objectives of Wemesurf it has to be provided in various scientific disciplines that cannot be covered by a smaller number/group of partners. Networking between them is the main aspect of project. There are many ways of active communication and collaboration, we showed only some of them as a good solution for our network.