

About ABBY-Net

ABBY-Net is an interdisciplinary network of researchers from universities in the Canadian province of Alberta and the German province of Bavaria, collaborating on topics related to the sustainable development of resources under changing environmental conditions. ABBY-Net scientists work in various fields related to environment, energy, and computing science, and strive to create interdisciplinary approaches that further our understanding of energy systems and ecosystem functioning. Key topics include:

- Cleaner energy production, transportation, and storage
- Impact of energy infrastructure on ecosystem processes
- Effects of changing environmental conditions on energy systems

ABBY Net Summer Schools have been alternating between Alberta and Bavaria since 2012, when the first summer school was held in Kananaskis Country, Alberta. 2018 will be the sixth edition of our program, where will be retreating to "Burg Trausnitz" picturesque and historic site in Northern Bavaria.

Course Description

The purpose of the 6th ABBY-Net Summer School is to train young scientists in interdisciplinary approaches to energy and ecosystem research. The course will focus on energy-management issues in the free-state of Bavaria, and the impact of the "Energiewende" on natural ecosystem functioning. Students will attend seminars on key extra-disciplinary topics (hydrology, energy systems, environmental monitoring, data mining, and data analysis), and participate in field excursions designed to educate participants on local energy-management issues. In the later stages, participants will be challenged to develop inter-disciplinary research proposals designed to solve practical problems related to energy-management in Bavaria.

For more details and applications, please visit:

<http://www.abby-net.org>



Participation and Registration

Attendance is limited and subject to selection by the ABBY-Net Organizing Committee. Selected Bavarian students are requested to pay a participation fee of €150 by June 1. Canadian students are requested to provide documentation of flight bookings by June 1. Participation fee for in the Summer School includes accommodation, meals, transfers from Munich/ Frankfurt to the Burg Trausnitz in Bavaria and field tours.

Find further information on the summer school online at: <http://www.abby-net.org/>. For registration send email to kldi@tum.de. Deadline for applications is April 30th, 2018.

Venue and Directions

The Youth Hostel Burg Trausnitz is located on the edge of Trausnitz and has a spectacular view of the Pfreimad valley. It offers us 50 beds in rooms with three to eight beds each and separate rooms with en-suite shower and toilet for group leaders. We'll be residing in the The Castle, which contains the "Rittersaal" (Great Hall), "Kemenate" (Bower), teachers' or group leaders' room, bicycle room, barbecue area, bonfire site, table tennis. Technical equipment includes TV, video, slide and overhead projectors, moderator's kit, CD player, DVD player, flip chart, Metaplan board, Piano, electronic piano. More information on the Burg Trausnitz, including a description of facilities, natural history, and an overview research projects underway can be found at <http://trausnitz.jugendherberge.de>



Canadian participants can travel to Trausnitz via Frankfurt (FRA) airport (direct connection from Calgary), or via Munich airport (MUC) with a possible domestic connection to Nuremberg (NUE).

Program Committee

Prof. Dr. Greg McDermid, University of Calgary
Prof. Dr. Joule Bergerson, University of Calgary
Prof. Dr. Sven Anders, University of Alberta
Prof. Dr. Ralf Ludwig, Ludwig-Maximilians University München
Prof. Dr. Klaus Diepold, Technical University of Munich
Prof. Dr. Jürgen Karl, Friedrich-Alexander University, Erlangen
With kindly acknowledged support of Innotech Alberta, the Bavarian Research Alliance, and participating universities.



ABBY-Net

Albertan - Bavarian Research Network

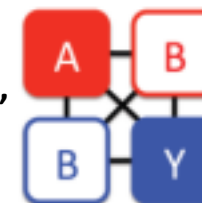


Announcement for the Sixth ABBY-Net Summer School

Natural Resource Management and Energy Systems Under Changing Environmental Conditions

August 11-18, 2018

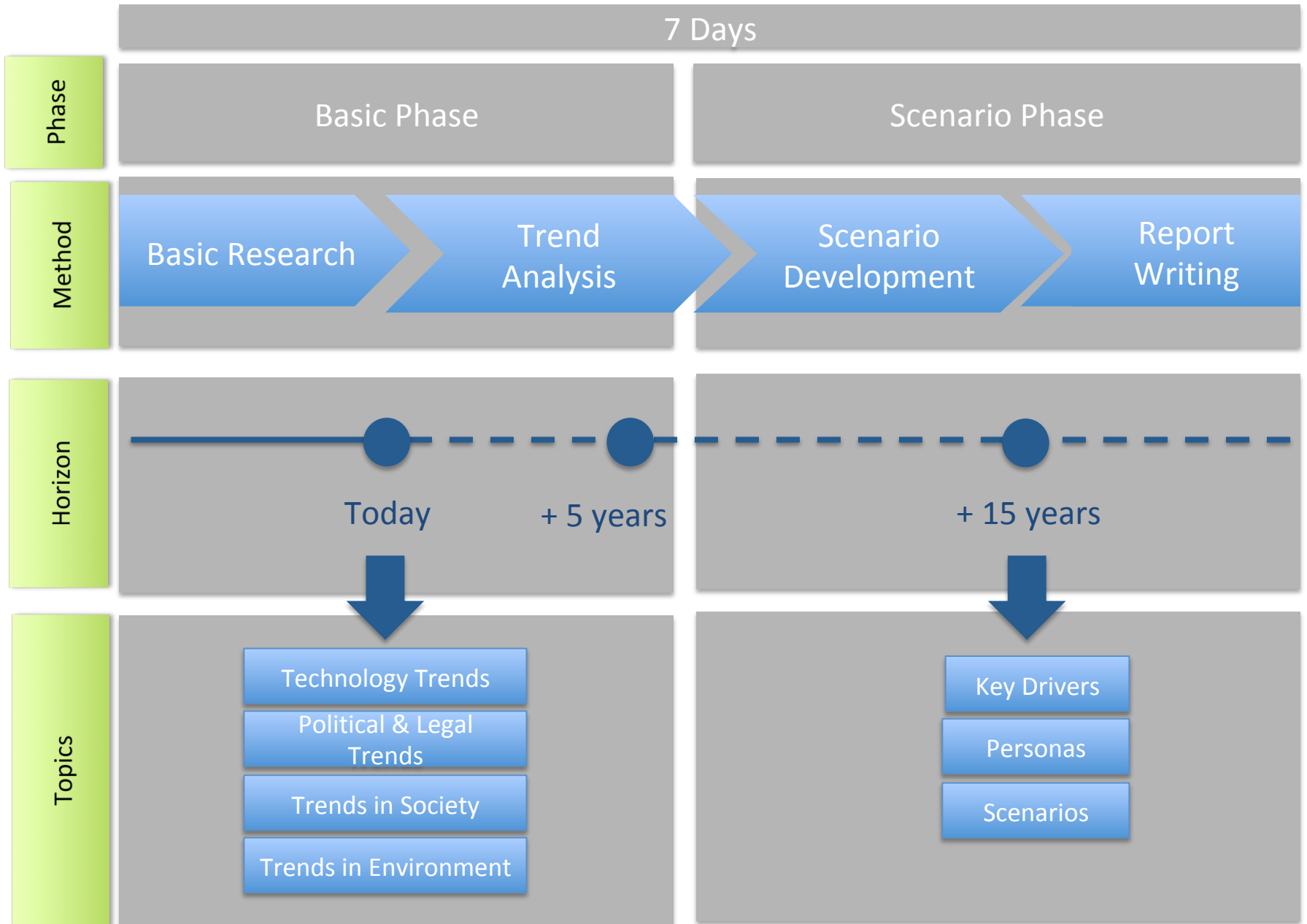
Burg Trausnitz, Trausnitz, Bavaria, Germany



Trend Seminar

ABBY-Net Summer School 2018

Methodology Trend Seminar



For a given topic that is highly impacted by digital technologies, the Trend Seminar pursues two main goals:

- To analyze the status quo, recent developments and to identify important trends
- To develop extreme scenarios of the future, in order to be prepared for upcoming challenges

These goals are represented by the two phases of the trend seminar, the Basic Phase and the Scenario Phase. Approx. 30 students, supervised by two experts, pursue the Trend Seminar in seven days of intensive full-time work. In each phase, interdisciplinary sub-teams are formed including students from technology, natural sciences, life sciences and business backgrounds.

The **Basic Phase** yields a holistic overview on recent developments and trends in the environment of the overall topic. Based on the commonly used STEP approach, the status quo and trends in the fields society & customer needs, technology, corporate education & lifelong learning, politics & law, as well as emerging business models are analyzed. Knowledge is gathered by literature research, preceded by a series of input presentations by experts on the topic.

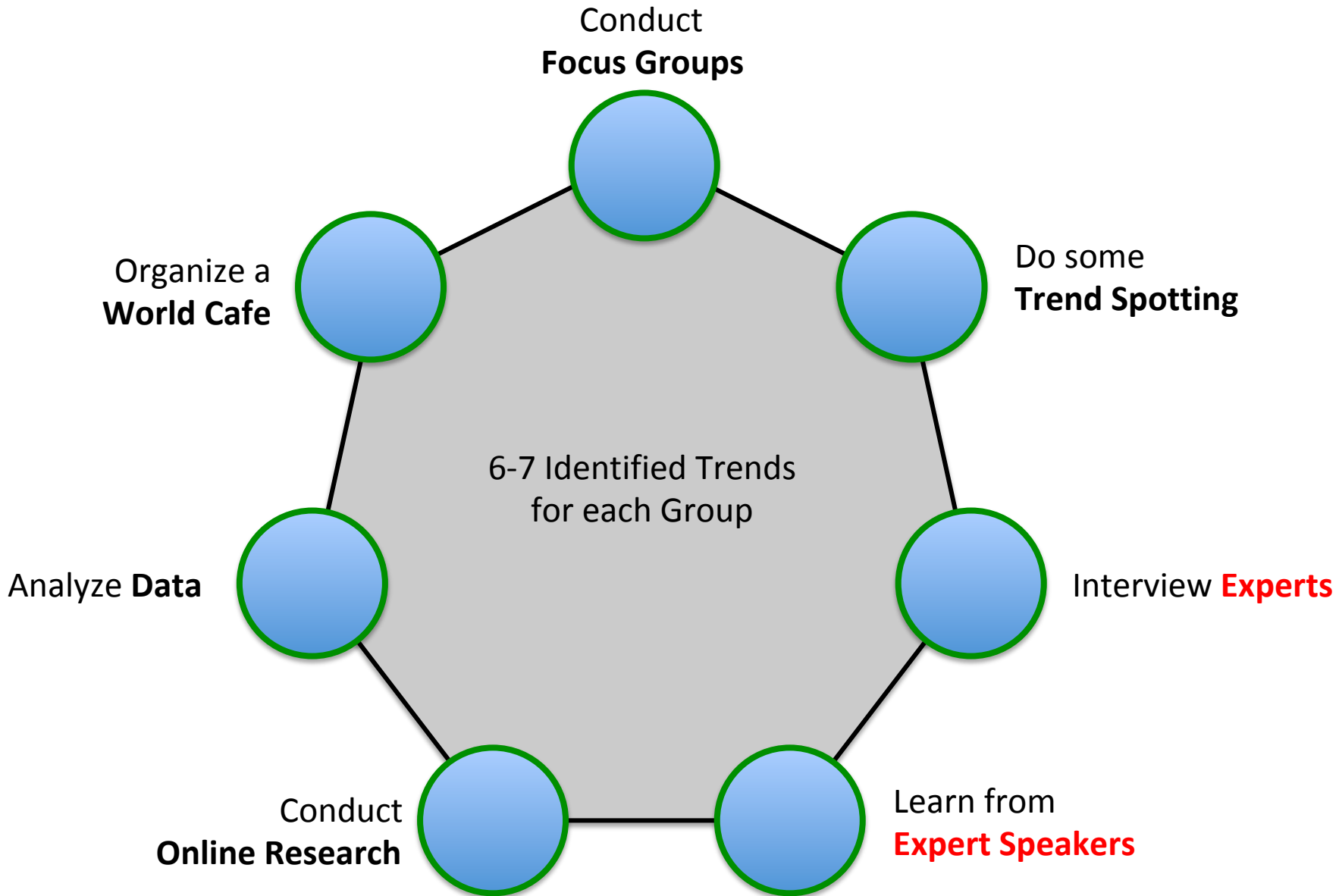
The class is split into five teams, each working on one of the thematic scopes. At the end of the Basic Phase, teams present their key findings to each other in order for everyone to get a holistic view on the topic to build upon in the following phases.

The **Scenario Phase** builds upon the analyzed trends in order to create four extreme scenarios of different futures in fifteen years ahead. Driving forces behind developments are identified and specified as drivers with bipolar extreme outcomes. Once specified, all drivers are ranked according to their respective impact on the overall topic and the perceived degree of uncertainty regarding their outcome. Two key drivers that are independent from each other and have both a high impact and a high degree of uncertainty are chosen and, with their bipolar outcomes, span a scenario matrix of four extreme scenarios. A timeline for each of the scenarios is created and the scenarios are sketched out using personae descriptions and visualizations.

The Scenario Phase starts with a half-day workshop followed by group work in four teams. Teams are newly formed in order to include experts from each subtopic of the Basic Phase in each new Scenario Team.

At the end of the seminar, the scenarios are presented to the teams, the instructors and guests.

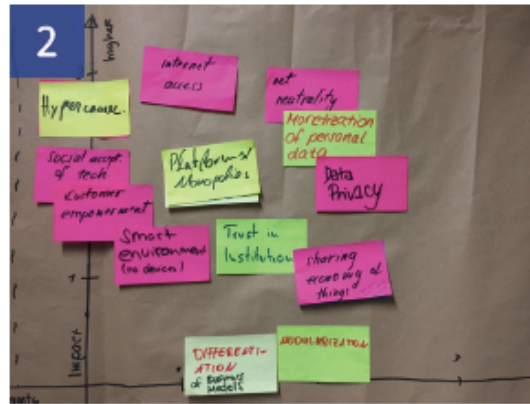
Research Methodology to identify Trends



Pictures of the Future in 2037



EXTENSIVE WORKSHOP ON SCENARIO PLANNING



IDENTIFICATION OF MOST IMPORTANT DRIVERS



FOUR DIFFERENT DAYS IN 2037