

<b>APPLICANT</b>
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<b>GENERAL INFORMATION</b>
<b>Course level</b> bachelor's
<b>Course number:</b> 4068
<b>Semester:</b> Summer term 2019
<b>ECTS credits:</b> 4
<b>Course title:</b> E&I Project 2: Scenario Planning: Anticipate Disruption
<b>Number of students in the course:</b>
<b>Further information on the course:</b> (e.g. prior knowledge of students, position in the curriculum/program)
<b>Links to the course's online environment:</b> Here you can provide the jury with links to the contents of your course's online environment for review. <a href="https://www.mentimeter.com/">https://www.mentimeter.com/</a> → tool to generate live, in-class surveys

<sup>1</sup> Courses held during the 2019 calendar year (summer semester 2019, winter semester 2019/20) are eligible for the 2020 Innovative Teaching Award. Courses held over two semesters (WS 2018/19–SS 2019) can also be nominated.

<sup>2</sup> Please name all the people involved in the development of the course design. The people named in this field will also receive the award in case of a successful application.

<https://www.trendexplorer.com> → trendexplorer, used by students in the initial trend exploration phase of the course

<https://www.canva.com/> → online tool recommended to design infographics for the visualizations of the scenarios

List of podcasts that are recommended to stay informed about trends and driving forces:

- <https://www.flashforwardpod.com/>
- <https://www.abc.net.au/radionational/programs/futuretense/>
- <https://www.bbc.co.uk/programmes/b04gyx0t>
- <https://mitvergnuegen.com/heute-in-5-jahren-der-zukunftspodcast/>

**Included additional Material:**

- Course Evaluation of last semester
- Scenario Magazine designed by students in WiSe 2019/20
- Scenario Infographics designed by students in SoSe 2019

References of cited sources are available upon request

**Application Form**  
**Innovative Teaching Award 2020<sup>1</sup>**

### Information on application

Please use the template on the following pages to describe your course. Provide a brief description (up to 180 words) of your course design under item 1. If your course is selected for an award, this text will be published on the WU website along with the submitted application form.

The more detailed description of your course design (item 2 below) is structured into three parts:

- Section 2a provides the jury with an initial overview of your course.
- In section 2b, please provide detailed information on teaching methods and the media-based didactic elements used.
- The innovative character of your course as based on this year's topic is described in section 2c.

The questions mentioned in each section are intended as support for the description of your course design.

Please complete the template directly in word and send it as a .doc or .pdf file to [lehrenundlernen@wu.ac.at](mailto:lehrenundlernen@wu.ac.at) by **09 February 2020**.

#### 1. SHORT DESCRIPTION OF THE COURSE DESIGN (max. 180 words)

If your course is selected for an award, this text will be published on the WU website along with the submitted application form.

Scenario planning is a method of growing relevance in times of perceived increasing uncertainty (see Toner et al, 2015; Rigby and Bilodeau, 2018). It provides valuable insights for the top management in multinational corporations and policy makers that need to make decisions of national and international significance. With the "Scenario Planning: Anticipate Disruption" course, students are offered the unique chance to work together with project partners on a real business challenges that require student teams to apply a wide variety of soft and hard skills in a new and practically relevant way. In this interactive course, students learn to effectively collect and filter online market data using different online databases and to collect primary data, to analyze the target-ecosystem professionally and identify relevant future trends. This information is used to create sophisticated scenarios with the help of scenario planning techniques and appropriate analytical tools, to visualize scenarios using digital infographics, and to draw strategic implications for the project partner.

## 2. DETAILED DESCRIPTION OF THE COURSE DESIGN

### 2a.) Overview

- What are the learning outcomes to be achieved by the students?
- What are the content elements of the course and how is it structured?
- What are the elements on which the final grade is based?

### Introduction

Digitalization is changing the way companies create and capture value across different industries. In the media and entertainment industry, Netflix and Spotify disrupted the market with new digital products and strategies. Furthermore, the manufacturing sector, as exemplified by the automotive industry, is experiencing disruptive technology induced shocks, which make cooperation within a larger ecosystem indispensable. However, digitalization is just one megatrend that is affecting current business models. Today, organizations face a variety of trends and uncertainties (e.g. protectionism, new political and societal movements, climate activists, rise of South East Asia) that may not affect their competitive advantages in the short-run but will have severe and disruptive effects in the medium or long run. While many frequently used tools and methods in innovation management (e.g. Design Thinking, Customer Journey, Empathy Map, Personas, Lean Start-up Method) focus on innovation based on today's customer needs, the questions of how the world will develop within the next ten or twenty years and how this might affect current business models and business strategies is more important than ever.

### Aim of the course and learning outcomes

Due to the current political, economic and societal developments and organizations' increased need to anticipate disruption, the idea for the course "E&I Project: Scenario Planning: Anticipate Disruption" was born. With this course, we want to prepare students with fundamental elements of **trend analysis and scenario planning** in order to foster understanding of not only organizations but also the context in which they operate, to stimulate their **analytical and creative thinking**, and to let them learn about the importance of strategic foresight. While (bachelor) students of business administration are usually trained to find optimal and quantifiable answers to specific questions, this course challenges students toward **creating their own creative but logical solution** for real world project partners. In the past semesters, partners included, for example, Austrian Airlines AG, ÖBB-Technische Services AG, and Österreichische Post AG.

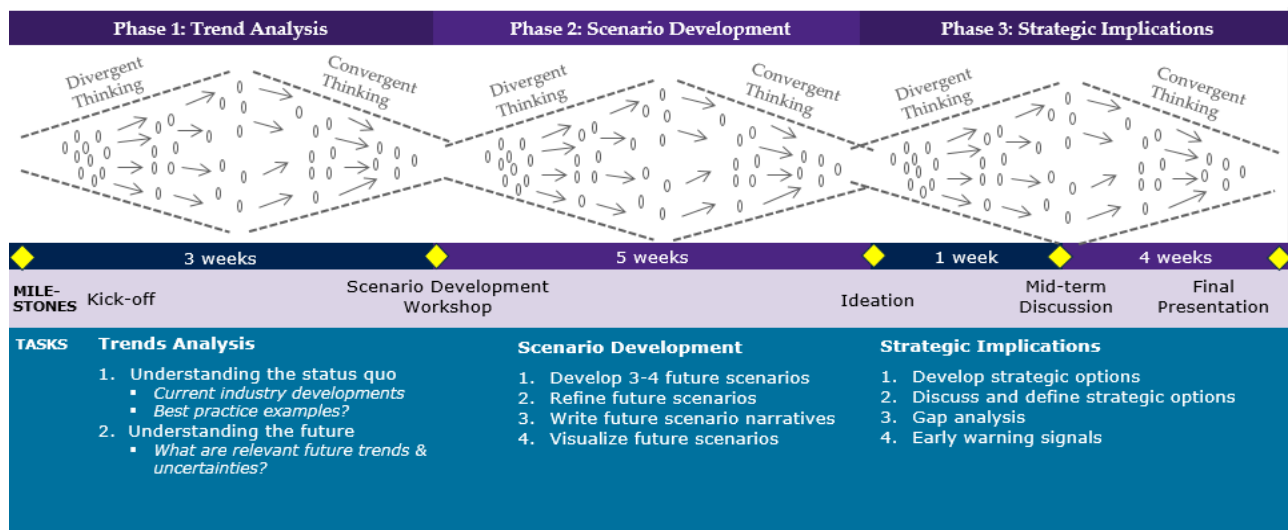
More specifically, students in our course learn **to effectively collect and filter online market data using different online databases** and **to collect primary data (mainly qualitative) following scientific standards** and analyse them diligently. Furthermore, they learn how to **analyze the target-ecosystem professionally** and **identify relevant future trends**. Based on the trend analysis, students learn how **to create sophisticated scenarios** with the help of scenario planning techniques and appropriate additional analytical tools **and to visualize scenarios using digital infographics**. Finally, students learn how to use their own results **to draw up strategic implications** for the project partner.

Concerning project management and communication skills, our students learn how **to structure complex problems independently** and how **to set-up and manage strategy and innovation projects**. They also learn **how to use online tools to manage their group work** and to share and discuss preliminary results with the project partner. Students need to manage their team and harness the strengths of every team member in their project. Moreover, the students learn about **digital communication tools** that facilitate team coordination. After completing the course, the students are able to communicate effectively with team members, partner companies, and stakeholders. They will also be able to communicate the results professionally in written reports, oral presentations, and in form of **sophisticated digital visualizations**.

To reach these learning outcomes, this E&I project course applies a **problem-based learning approach**. Working on an ill-structured, real business problem, the students take on the role of consultants and develop strategic recommendations for organizations that may be facing disruption in the near future. To ensure an optimal learning outcome, two to four **project partners** are carefully selected each semester. Bachelor students work in **project teams of 4-6 students** and self-select onto a project. The main outcome includes

a project report of 40-50 pages, digital infographics and visualizations of the scenarios, as well as a presentation of the final results.

## Course structure



The course is structured in **three phases** to teach students how a solution for an ill-structured problem can be developed when using a systematic, well-structured approach. Furthermore, each phase consists of a first sub-phase in which students apply **divergent thinking** in order to foster creativity and to search for multiple perspectives, followed by a second sub-phase in which students apply **convergent thinking** to arrive at a pre-defined goal.

The course starts with a **literature test** to ensure that students are sufficiently informed on the basic theoretical concepts and methods of Scenario and Strategic Planning. This is followed by a **two-day kick-off**, during which the two course instructors teach the students course-specific content and project partners introduce their projects to the project teams. An innovation consultant is also invited as guest speaker to talk about how innovation consultants handle similar Scenario Planning projects, thereby emphasizing the practical relevance of the methods and tools used in this course.

After the kick-off, students enter **phase 1** of the project (**trend analysis**), in which they systematically analyse the organization's business ecosystem and identify and prioritize relevant future trends and uncertainties using primary and secondary data. In this phase, a secondary research workshop is offered, informing students on how to use different online databases offered by WU for their projects.

**Phase 2 (scenario development)** starts with a scenario development workshop that is held by the two lecturers and a leading strategic foresight expert as guest lecturer. During the workshop, the lecturers guide the students through the scenario development process while students work on their project in teams. After the workshop, student teams have around 4-5 weeks to refine their scenarios, develop scenario narratives, and create digital scenario visualizations in the form infographics.

**Phase 3 (strategic implications)** starts with an ideation workshop held by the two lecturers, during which students derive strategic implications for each scenario and develop ideas on how the partner organization should organize for each scenario using different creativity techniques. In a second workshop (mid-term discussion), students prepare and lead a workshop with employees of the partner organization, under supervision and with the assistance of the two lecturers, during which they present their scenarios and discuss strategic implications. After the workshop, student teams have around 4 weeks to further refine their strategic implications. In this phase, students also have a workshop on presentation techniques with an external coach to prepare them for the final presentation. Results are presented at the end of the semester in front of the project partner and the lecturers.

Throughout the semester, the two course instructors are in close contact with the student teams to answer questions and to provide assistance. The instructors offer weekly team coachings for the project teams as well as provide weekly emails to remind about next steps. Moreover, students are in close contact with the partner organizations to inform about their project progress and ask questions.

### **Grading**

To ensure learning success, the learning progress as well as the students' performance is tracked using a mix of grading methods. At the beginning of the semester, the **literature test (10%)** ensures that students know the basic theoretical concepts and methods. The successful completion of the group work is measured by grading a **mid-term report (10%)**, a **mid-term presentation (10%)**, the **final report (15%)**, the **final presentation (10%)**, and the **E&I end-semester pitch (5%)**. Students receive in-depth feedback (revise and resubmit) from the lecturers on each submission to ensure a optimal learning outcomes. Furthermore, students' **individual engagement** in the project (attendance, contribution to classes, coachings, and workshops) **accounts for 30%** of the final grade. An **individual reflection paper (10%)** is also part of the overall evaluation to ensure students can reflect critically on the entire project.

## 2b.) Teaching methods

- **Which teaching methods and media-based didactic methods** do you use to help your students achieve the intended learning outcomes? What role does online support play in this regard?
- **Why did you choose** these specific methods? What do you hope to achieve with them? Which particular advantages do these methods have for you?
- **How do you address** these media-based didactic concepts during the course?
- **How do students profit** from the media-based didactic methods used in the course?

The activation of our students starts **before the first lecture**. In addition to the preparation for the literature test, each student is assigned a future trend that may disrupt the economy and society (examples include cube satellites, neural interfaces, nootropics, gene editing). They are expected to use online databases and resources at their disposal before the 2 day kick-off event to: (1) assess the uncertainty of a positive or negative development trajectory, (2) assess the impact of the trend on the wider society, (3) and to find 5 further trends that may be connected, as a cause of or antecedent to, the trend they were assigned. The goal is to make students aware of the fact that they are expected **to engage in wide ranging individual online research** to get a picture of what the future will be influenced by.

Throughout the **kick-off event**, which is organized as a combination of in-class lectures and group work, we employ "Mentimeter", an **online real-time surveying tool**, to engage students during the lecture. From experience as a lecturer as well as a student, it was clear to us that cold calls or urges to participate voluntarily tend to favor extroverted students over individuals who, while not lacking in intellectual capabilities, may be shy or introverted.

The bulk of the effort in this course is undertaken in the form of **group work**, as 60% of the entire grade is based on deliverables or presentations that are submitted or held as a team. Without a clear project management plan, students would quickly lose sight of priorities and struggle to meet the grading criteria set out by the lecturers. Therefore, we ask our students to **adopt agile project management**, which has been growing in significance in industry and academia (for more information on agile project management see Sliger, 2011; Hornstein, 2015). By adopting project management via **digital scrum boards**, deliverables can be compartmentalized into working packages and assigned to individual team members. It is expected of our students to keep the scrum boards updated and share them with their project partners if they are interested in tracking students' progress.

In the **first project phase**, students are expected to undertake an extensive trend research to get an overview of what drivers may shape possible future scenarios. After analyzing a number of online platforms that collect and aggregate the myriad of trends, emergent from global news and social media platforms, **trendone.com** was identified as a suitable tool that offers students the perfect starting point. Students are expected to use the **trendexplorer** as a jumping off point by exploring so called megatrends and microtrends that may be relevant to the focal question they are working on. Using the trendexplorer, they can decide which trends to focus their attention on.

Once students successfully completed their trend analysis in the first portion of the course and they developed the first rough versions of their scenarios in a dedicated workshop led by an external expert in the beginning of the **second project phase**, they are expected to create narratives and visualizations. These have to be completed in time for the midterm workshop, held in cooperation with stakeholders of the project partner organization. For this, students have to develop convincing narratives to make their scenarios believable and interesting, as well as informative visual representations that convey their narratives in a sleek and professional manner. **Digital infographics** were chosen as the best option to combine text, images and data visualizations in the midterm workshop. The introduction to the preferred tool, **canva.com**, is given during the kick-off, while personal coaching is provided by the lecturers after the rough scenarios are developed.

In summary, lecture style teaching methods only take up a small part of the entire course. The aim of the course is to **equip students with the necessary tools** and information in order for **them to self-organize** and deliver on the course milestones early on, while lecturers and external coaches act as guardrails throughout the semester. Thus, the course resembles a professional consulting engagement, including regular contact with their project partners.

### 2c.) Innovative character of the course

- To which of the categories listed under item 2 of the call for applications does your submission belong?
- Which of your concept's didactic elements do you consider to be particularly innovative with regard to this year's topic "Supporting learning processes online"?
- **Transferability:** To what extent is your course design transferable to other courses? Which of your concept's teaching methods and media-based didactic elements could be applied to other courses at WU?
- Which of your concept's teaching methods and media-based didactic elements have room for improvement or need to be reconsidered the next time you offer this course?

Our submission belongs to the **following categories:**

- (1) Course designs which use interactive, multimedia-based methods of knowledge transfer:
  - a. Online real-time surveying tool to keep students' attention and help them concentrate on the course material
  - b. Online tool to manage trend research and analysis
  - c. Digital infographics as novel deliverable format – students learn to synthesize information and to harmonize text, images, and data in one digital visualization
  - d. Include relevant podcast episodes to keep students' attention and interest
- (2) Course designs which use media-based approaches to encourage peer interaction:
  - a. Digital scrum board that allows interaction between team members, lecturers, and project partners

### Innovative character

As we had the opportunity to create this course from scratch, we tried to include a number of new and innovative approaches to teaching in order to remain true to the name of the specialization. Among other things, applying **online methods to support students in their development** throughout the semester played a central role in our course. Below we outline some of the key changes to traditional course designs we decided to make:

- By **polling via an online survey** throughout the kick-off, we receive the opinions of every student, thereby fostering engagement and allowing us to ask more pointed questions based on the results of the surveys.
- After the kickoff, students are required to immediately self-organize for a complex, non-linear and creative project that requires the clear assignment of working packages and team roles. It was therefore necessary for us as lecturers to provide students with the adequate planning tools and methodology to succeed. While courses traditionally tend to demand GANTT chart of students, outlining the entire project from start to finish, we recommend **agile project management practices**, aided by the freely accessible **online Trello software**.
- By giving students the opportunity to interact with a **cutting edge trend research tool**, the **Trendone trendexplorer**, the ramp up period for collecting an initial set of trends is significantly reduced. The innovation herein lies in making students aware of relevant sources of information employed by multinational companies that go beyond well-known search engines and databases.
- One of the most important parts of the scenario planning process is to achieve buy in by stakeholders into the scenario process, without engaging in a lengthy explanation of the underlying trend research process. It was therefore essential to come up with non-traditional deliverable formats that allow listeners and readers to be transported into unknown and potentially uncomfortable futures. **Combining creative narratives with engaging digital infographics** designed in an easy-to-use web environment, as provided by **Canva**, emerged as both an adequate and achievable solution for bachelor students of the E&I specialization.
- Beyond the aforementioned resources and tools, we keep our students up to date with **weekly e-mails**, in which we **share resources** as well as **podcast episodes** relevant to the project stage they



are in (see Sources for examples of podcasts shared). This way we can make sure that our students remain engaged and are informed about current trends and developments in technology, society and politics.

### **Transferability**

The transferability of our teaching methods and incorporation of **online tools** and methods is given by the fact that they are all **freely available** to any interested party. **We have spent considerable time on the vetting of live surveying solutions, trend research platforms, design services** and information for students that go beyond journal articles (podcasts, newsletters and magazines for example). We are confident that the more lecturers adopt any or all of the solutions we outlined above, the likelier it will be that either similar tools will be developed in-house or that the WU will negotiate for access to broader functionality. This in turn will boost the WU's standing as a leading business university in the years to come.

Beyond the transferability of our teaching approach to other courses, we believe that **students will be able to transfer the skills** acquired throughout our course to their continued academic education and future career. As the importance of data collection and analysis as well as the available sources of data are constantly growing, **familiarity with online tools** that aggregate and supply information in a structured manner is **of high practical value**. Furthermore, trends in digitization requiring the creation and delivery of value across multiple electronic devices increases planning complexity and requires future management personnel to deliver timely results by multidisciplinary teams. Thus, organizing their coursework via **scrum boards** forces students to engage critically with current trends in project and product management and reinforces skills that are in high demand (see Petrone, 2019). Finally, given the ubiquity of large amounts of data in various forms in combination with powerful algorithms being developed to process and transform data into information, the **importance of creativity and analytical reasoning** skills are constantly rising (see Petrone, 2019). Encouraging our students to present their results in visually appealing **infographics and scenario booklets** using Canva, thereby **going beyond standard reports and PowerPoint** presentations, nurtures valuable competences.

There are a number of aspects we are currently trying to improve, based on our own experience as well as feedback by students:

1. Infographic implementation varies in terms of quality, based on the background knowledge of students / time they want to invest.
  - a. Potential solution: Offer separate info-graphic design coachings by external experts for students
2. All of the software used is currently only available as trial version, which means functionality is limited to free trial period or free trial restrictions.
  - a. Potential solution: Assess whether university-wide arrangements with companies offering the service can be brokered. E.g. offering accounts of Mentimeter for teaching assistants and professors or negotiating longer trial periods for students of WU university for trendexplorer and Canva (or software vendors that offers similar functionality)

In summary, current technological affordances and business-realities force managers as well as university lecturers to stay informed about new forms of sourcing, aggregating and communicating information. By employing innovative online learning methods and tools in a challenging but highly rewarding course format provides students with benefits for their academic life as well as for their future career. The ambiguous and strategically relevant problems posed by project partners forces the student teams to stretch their cognitive and creative abilities and produce outcomes that they are proud to present. Therefore, we believe that making our course design accessible to an audience beyond students of the E&I specialization by being awarded the innovative teaching award will not only be a humbling reward for us, but also provide value to our colleagues as well as their students.

**Attachment:** Please attach evaluation results, if available.