# information systems service design

a course prepared by yves pigneur

Service Design helps to innovate (create new) or improve (existing) services to make them more useful, usable, desirable for clients and efficient as well as effective for organizations. It is a new holistic, multi-disciplinary, integrative field.

----- Stefan Moritz. Service Design - Practical access to an evolving field. lulu.com, 2005: 245 p.

# About the course

The importance of the service economy is widely recognized. New information technology, Internet, the social networks and web 2.0, have redefined the ways of conducting business, providing new eservices, new customer experiences, new work practices, and new business models competing in the global market place.

The course integrates principles suggested by the design thinking, applied to business service design. The course introduces concepts, frameworks, and tools for designing new "front stage" services, "back stage" processes, and business models. Learning will be accomplished through lectures, readings, case studies, and group co-design sessions.

Upon completion this course, the participants will have a general understanding of the current state and trends in service design, and be aware of design tools (scenario, storytelling, task analysis, hand-sketching, brainstorming and ideation, mind mapping, cognitive walkthrough, and others).

More specifically, the participants will be able to use theses design techniques for (a) designing services, (b) re-engineering business processes, and (c) co-creating business models for innovation.

The first part presents the "front stage" view of services, and explores techniques for designing services, analyzing the customer tasks, defining use cases and scenarios, prototyping e-services, and defining service quality.

The second part deals with the "back stage", and presents tools and models for re-engineering business processes and taking care of service productivity.

The third part illustrates and examines the co-design of business models for improving innovation.

#### Evaluation

For grading purpose, activities will be issued based on the following scheme: (a) 20% for the class participation, *Moodle* posting, and mini-projects, and (c) 80% for a three-hour written closed-book exam (same conditions for retake).

#### Group projects

During the semester, student will conduct three group mini-projects, and prepare an abstract, comments and questions for nine assigned papers. The deliverables have to be uploaded on the moodle platform on due dates (no later than 6pm the day before the next class session). Further details on the objectives and contents will be presented during the course.

#### Plagiarism

Copying work form the Internet or other sources without reference or acknowledgement is considered plagiarism and subject to disciplinary action, as enforced by the University of Lausanne.

Web site http://www.hec.unil.ch/yp/SI

## Contents

## **BUSINESS SERVICE**

- 1. service design and storytelling
- 2. task design and use case modeling
- 3. prototyping and usability
- 4. first mini-project (service)

## **BUSINESS PROCESS**

- 5. service blueprinting and visual storyboard
- 6. business process design and workflow modeling
- 7. productivity and simulation
- 8. second mini-project (process)

## **BUSINESS MODEL**

- 9. business model canvas
- 10. business strategy and environment assessment
- 11. innovation and business patterns
- 12. third mini-project (ideaplay)
- 13. business beyond profit

# **Bibliography**

[1] M. Bitner, A. Ostrom, and F. Morgan. Service blueprinting: A practical technique for service innovation. *California Management Review*, 50(3):66–94, 2008.

[2] R. Boland, F. Collopy, K. Lyytinen, and Y. Yoo. Managing as designing: Lessons for organization leaders from the design practice of Frank Gehry. *Design Issues*, 24(1):10–25, 2008.

[3] H. Chesbrough. Why companies should have open business models. *MIT Sloan Management Review*, Winter:22–28, 2007.

[4] B. Demil, X. Lecocq, Business Model Evolution: In Search of Dynamic Consistency. *Long Range Planning*, 43:227-246, 2010.

[5] K. Goodwin, Designing for the Digital Age: How to Create Human-Centered Products and Services. Wiley, 2009

[6] K. Han, J. Kang, M. Song, Two-stage process analysis using the process-based performance measurement framework and business process simulation, *Expert Systems with Applications*, 36:7080–7086, 2009.

[7] C. Kim and R. Mauborgne. Charting your company's future. *Harvard Business Review*, 80(6):5-11, June 2002.

[8] Y. Lim, E. Stolterman, and J. Tenenberg. The anatomy of prototypes: Prototypes as filters, prototypes as manifestations of design ideas. *ACM Trans. on Computer-Human Interaction*, 15(2):7–27, 2008. [9] S. Moritz. *Service Design - Practical access to an evolving field.* lulu.com, 2005.

[10] A. Osterwalder and Y. Pigneur. Business model generation. A handbook for visionaries, game changers & challengers. Wiley, 2010.

[11] K. Phalp, J. Vincent, and K. Cox. Assessing the quality of use case descriptions. *Software Quality Journal*, 15:69–97, 2007.

[12] L. Rasmussen. The narrative aspect of scenario building - How story telling may give people a memory of the future. *Al & society*, 19:229-249, 2005.

[13] K. Vergidis, C. Turner, and A. Tiwari.
Business process perspectives:
Theoretical developments vs. real-world practice. *Int. J. Production Economics*, 114:91–104, 2008.

[14] M. Yunus, B. Moingeon, and L. Lehmann-Ortega. Building Social Business Models: Lessons from the Grameen Experience, *Long Range Planning*, 43:308-325, 2010.

1

<sup>&</sup>lt;sup>1</sup> The students can access the BCU digital library (http://www.unii.ch/codul/page26769.html) for consulting many useful databases (ABI/Inform, Business Source Premier, ScienceDirect, Blackwell, Ingenta, Kluwer, JSTOR, ...).