Prof. Dr. Nils Urbach
Professorship of Information Systems
and Strategic IT Management

Strategic Information Management (V7-7)

- Managing the IT Function in the Digital Age -

Course Profile

Type	Lecture + Tutorial
Lecture No.	33515 / 33516
Lecturer	Prof. Dr. Nils Urbach
Hours per Week	2 + 1 SWS
ECTS	6
Language	English
Start date	October 15th, 2019

Course Description

The lecture "Strategic Information Management" is designed to make students familiar with contemporary topics and challenges related to the strategic management of information technology (IT) and information systems (IS). The lecture will emphasize the current technological, managerial and social disruptions of the digitalization and shed light upon their implications for companies. It stresses the strategic aspects of the topics introduced and shows how they are leveraged to generate sustainable business value. Upon completion of this module, students are acquainted with the most important concepts, methods, and techniques for a business-oriented management of IT organizations. Furthermore, participants will be able to identify the principal constituents of IT strategies and have a sound understanding of how the various domains of IT management contribute to the overall value creation of the business.

To achieve the learning objectives, the lecture will familiarize students with the various decision domains that IT strategy needs to incorporate and align, structured along a reference framework for strategic IT/IS management. The lecture introduces fundamental concepts of IT infrastructure and enterprise applications that will enable the students to understand the "IT world" as well as to communicate with IT experts in business settings. Building on these foundations, general principles of IT organizations as well as different models of IT value generation will be introduced and contrasted. An introduction to the principles and particularities of project and project portfolio management will allow students to understand both the running and changing of business IT. Finally, the internal perspective of the IT organization will be complemented by investigating the value chain interfaces of IT. This includes the sourcing and delivery of IT services, IT/IS controlling, as well as the alignment of IT and business strategies.

Learning Objectives

- Overview of contemporary topics and challenges related to the strategic management of information technology (IT) and information systems (IS) in the digital age
- Understanding of the most important concepts, methods, and techniques for a business-oriented management of IT organizations
- Knowledge of how IT management contributes to the value creation of the business

Course Outline

Section	Date / Time	Topics	Readings
#01	Tuesday, 15 Oct 2019, 10:00 – 12:00	**Welcome and Introduction** • Administrative topics • Motivation • Basic concepts • Session overview	(Carr 2003; Riempp et al. 2008; Stewart et al. 2003)
#02	Monday, 21 Oct 2019, 12:00 – 14:00	**IT Infrastructure** • Clients and mobile computing • Servers and datacenters • Cloud computing • Management challenges	(Weinhardt et al. 2009)
#03	Tuesday, 22 Oct 2019, 10:00 – 12:00	**Enterprise Applications** • Enterprise applications • Enterprise architecture management • Service-oriented architectures	(Ahlemann et al. 2012; Müller et al. 2010)
	Monday, 05 Nov 2019, 12:00 – 14:00	*Tutorial #1: Fundamentals*	
#04	Monday, 11 Nov 2019, 12:00 – 14:00	**IT Sourcing** • Foundations • Drivers of IT outsourcing • IT outsourcing management • IT sourcing trends	(Carmel 2005; Urbach and Würz 2012)
#05	Tuesday, 12 Nov 2019, 10:00 – 12:00	**IT Organization** • The paradigm-shift in IT • IT organizational types • Inside the IT organization • Bimodal IT	(Kaarst-Brown 2008; Zarnekow et al. 2006)
#06	Tuesday, 19 Nov 2019, 10:00 – 12:00	**Project and Project Portfolio Management** • Foundations • Project planning and execution • Evaluation approaches	(Meredith and Mantel 2008; Morris and Pinto 2007)
#07	Monday, 25 Nov 2019, 12:00 – 14:00	**IT Innovation Management** • Role of IT for innovation nowadays • Innovation types and processes Management of IT innovation	(Rothwell 1994; Tidd and Bessant 2013)
#08	Tuesday, 26 Nov 2019, 10:00 – 12:00	**IT Service Management** • IT services • IT infrastructure library (ITIL)	(van Bon et al. 2005)
	Monday, 02 Dec 2019, 12:00 – 14:00	*Group Presentations*	

	Tuesday, *03 Dec 2019,* *10:00 – 12:00*	*Group Presentations (cont'd)*	
	Monday, *09 Dec 2019,* *12:00 – 14:00*	*Group Presentations (cont'd)*	
	Tuesday, *10 Dec 2019,* *10:00 – 12:00*	*Group Presentations (cont'd)*	
	Monday, *16 Dec 2019,* *12:00 – 14:00*	*Tutorial #2: IT Organization*	
	Monday, *13 Jan 2019,* *12:00 – 14:00*	*Tutorial #3: Project & Portfolio Management*	
#09	Tuesday, 14 Jan 2020, 10:00 – 12:00	**IT Controlling** • Foundations • Total cost of ownership (TCO) • KPIs for IT management • IT benchmarking • IT balanced scorecard	(Gadatsch 2009)
	Monday, *20 Jan 2020,* *12:00 – 14:00*	*Tutorial #4: IT Value Chain*	
#10	Tuesday, 21 Jan 2020, 10:00 – 12:00	**IT Strategy and Governance** • Business/IT alignment • IT strategy • IT governance	(Henderson and Venkatraman 1993)
	Monday, *27 Jan 2020,* *12:00 – 14:00*	*Tutorial #5: IT Strategy*	
	Tuesday, *28 Jan 2020,* *10:00 – 12:00*	**Guest Lecture Rehau** A practical perspective on contemporary issues of Strategic IT Management and the digital transformation	
#11	Tuesday, 04 Feb 2020 10:00 – 12:00	**Summary and Conclusion** • Q&A • Exam preparation	n/a

Rooms

- Monday, 12:00 – 14:00: S 64 (RW I)
- Tuesday, 10:00 – 12:00: S 61 (RW I)

Reading Materials

The reading materials to be used in this class provide students with both content and background for the topics introduced and discussed in the course. Students must prepare for sessions by reading the mandatory material to allow for an efficient classroom experience. Readings are available through the university library: http://www.ub.uni-bayreuth.de/

Optional readings are introduced as part of the lecture and provide students with the opportunity to extend their understanding beyond the discussed material. Further details for preparation will be provided to students in class.

Tutorials

The tutorials will be used to apply the knowledge conveyed in the lecture (e.g., by discussing case studies), to discuss review questions, to clarify students' questions on course content as well as to discuss suggested readings.

Presentations

Students may opt to hold a group presentation on a voluntary base. Each group is exclusively assigned to one contemporary topic within the domain of strategic information management. Available topics will be announced in the first lecture.

Course Requirements

This course is offered as module V7-7 to all Master students enrolled in the Business Administration (BWL) or Business Engineering (WIng) programs of the University of Bayreuth. The module can be part of the *Technology, Operations & Processes* (TOP) major, the *Wirtschaftsinformatik* major, or the supplementary module area ("Ergänzungsmodul"). There are no prerequisites for attending this course. Exchange students are welcome.

Course Grading

The course will be graded on the basis of a written exam (60 minutes duration) covering the learning objectives of the lecture. The exam can be taken in English or German. In case a student opted to hold a voluntary presentation, up to six (6) bonus points will be added to the result of the final exam.

Workload

180h total student's workload, thereof:

- Active in-class participation   30h
- Active participation in tutorials   15h
- Preparation, revision and exam preparation   135h

References

Ahlemann, F., Stettiner, E., Messerschmidt, M., Legner, C., and Arbi, F. E. 2012. "An EAM navigator," in *Strategic Enterprise Architecture Management*, F. Ahlemann, E. Stettiner, M. Messerschmidt and C. Legner (eds.), Berlin, Heidelberg: Springer, pp. 35–53.

Carmel, E. 2005. *Offshoring information technology*: *sourcing and outsourcing to a global workforce*, Cambridge: Cambridge University Press.

Carr, N. 2003. "IT doesn't matter," *Harvard Business Review* (May, 2003), pp. 41–49.

Gadatsch, A. 2009. "IT Controlling – Concepts and Transformation into Practice," *Business & Information Systems Engineering* (1:3), pp. 254–262.

Henderson, J. C., and Venkatraman, H. 1993. "Strategic alignment: Leveraging information technology for transforming organizations," *IBM Systems Journal* (32:1), pp. 472–484.

Kaarst-Brown, M. L. 2008. "Understanding an Organization's View of the CIO: The Role of Assumptions about IT," in *Global Information Systems: The Implications of Culture for IS Management*, D. E. Leidner and T. R. Kayworth (eds.), Oxford: Elsevier/Butterworth-Heinemann, pp. 454–478.

Meredith, S., and Mantel, J. 2008. *Project Management*: *A Managerial Approach*, Hoboken, N. J.: J. Wiley & Sons.

Morris, P. W. G., and Pinto, J. K. 2007. *The Wiley guide to project, program & portfolio management*, Hoboken, N.J.: J. Wiley & Sons.

Müller, B., Viering, G., Legner, C., and Riempp, G. 2010. "Understanding the Economic Potential of Service-Oriented Architectures," *Journal of Management Information Systems* (26:4), pp. 147–182.

Riempp, G., Müller, B., and Ahlemann, F. 2008. "Towards a Framework to Structure and Assess Strategic IT/IS Management," in *Proceedings of the 16th European Conference on Information Systems (ECIS 2008),* Galway, Ireland, pp. 2484–2495.

Rothwell, R. 1994. "Towards the Fifth-generation Innovation Process," *International Marketing Review* (11:1), pp. 7–31.

Stewart, T., Brown, J., Hagel, J., McFarlan, F., Nolan, R., Hittleman, J., Strassmann, P., Broadbent, M., McDonald, M., Hunter, R., Skaistis, B., Zwass, V., Lewis, M., Pisello, T., Pike, R., Gurbaxani, V., Alter, S., Hyatt, C., Schlueter Langdon, C., and Carr, N. 2003. "Does IT matter?: An HBR debate," *Harvard Business Review* (June), pp. 1–17.

Tidd, J., and Bessant, J. 2013. *Managing Innovation*: *Integrating Technological, Market and Organizational Change:* Wiley.

Urbach, N., and Würz, T. 2012. "How to Steer the IT Outsourcing Provider - Development and Validation of a Reference Framework of IT Outsourcing Steering Processes," *Business & Information Systems Engineering* (4:5).

van Bon, J., Pieper, M., van der Veen, Annelies, and Verheijen, T. 2005. *Foundations of IT Service Management based on ITIL*, Zaltbommel: Van Haren.

Weinhardt, C., Anandasivam, A., Blau, B., Borissov, N., Meinl, T., Michalk, W., and Stößer, J. 2009. "Cloud Computing – A Classification, Business Models, and Research Directions," *Business & Information Systems Engineering* (1:5), pp. 391–399.

Zarnekow, R., Brenner, W., and Pilgram, U. 2006. *Integrated information management*: *Applying successful industrial concepts in IT*, Berlin: Springer.