

## BED – 8005 Innovation and Sustainability Transition ([course page](#))

Location: School of Business and Economics , Auditorium 01.202, Breivangvegen 23, 9010 Tromsø ([Map](#))



UiT / THE ARCTIC UNIVERSITY OF NORWAY

**Administrative coordinator:** [Prof. Lene Foss](#), [lene.foss@uit.no](mailto:lene.foss@uit.no), Tel:+4748000291

### Course faculty:

[Prof. Lars Coenen](#) (LC), Melbourne Sustainable Society Institute, University of Melbourne

[Prof. Anna Bergek](#) (AB), Department of Technology Management and Economics, Chalmers University of Technology, Sweden

[Dr. Teis Hansen](#) (TH), Department of Human Geography & CIRCLE Lund University, Sweden

[Prof. Bernhard Truffer](#) (BT), Department of Environmental Social Sciences, EAWAG, Switzerland & Copernicus Institute of Sustainable Development, Utrecht University, the Netherlands

[Dr. Allan Dahl Andersen](#) (AA), TIK Centre for Technology, Innovation and Culture, University of Oslo, Norway

Prof. Lene Foss (LF) School of Business and Economics, UiT The Arctic University of Norway

### Schedule

Monday 25 June	11.00-11.45 <b>Opening session: Presentation of faculty and participants (LC)</b> 11.45-13.00 <b>Introduction to Innovation and Sustainability Transitions (LC)</b> <i>13.00-14.00 Lunch</i> 14.00-15.00 <b>Introduction cont. (LC)</b> <i>15.00-15.15 Coffee</i> 15.15-18.15 <b>Technological Innovation Systems: analytical framework, critical choices and key challenges (AB)</b>
Tuesday 26 June	9.00-12.00 <b>Sustainability Transitions and Incumbents – Opening the Black box of the Firm (TH)</b> <i>12.00-13.00 Lunch</i> 13.00-16.00 <b>Globalization and Sustainability Transitions (BT)</b>
Wednesday 27 June	9.00-12.00 <b>Urban and Regional Sustainability Transitions (LC)</b> <i>12.00-13.00 Lunch</i> <b>13.00-17.00 Preparation time for students</b>
Thursday 28 June	<b>9.00-12.00 Industrial aspects of sustainability transitions: empirical illustrations from the Nordic Countries (AA)</b> <i>12.00-13.00 Lunch</i> <b>13.00-17.00 Student presentations</b>
Friday 29 June	<b>9.00-12.00 Student presentations</b> <b>12.15-13.00 Wrap up, term paper info and evaluation (LF)</b> <i>13.00-14.00 Lunch</i> <i>Farewell and departure</i>

### **Lars Coenen: Introduction to Innovation and Sustainability Transitions**

- Smith, A., Voß, J. P., & Grin, J. (2010). Innovation studies and sustainability transitions: The allure of the multi-level perspective and its challenges. *Research policy*, 39(4), 435-448.
- Coenen, L., & López, F. J. D. (2010). Comparing systems approaches to innovation and technological change for sustainable and competitive economies: an explorative study into conceptual commonalities, differences and complementarities. *Journal of Cleaner Production*, 18(12), 1149-1160.
- Markard, J., Raven, R., & Truffer, B. (2012). Sustainability transitions: An emerging field of research and its prospects. *Research Policy*, 41(6), 955-967.

### **Anna Bergek: Technological Innovation Systems: analytical framework, critical choices and key challenges (AB)**

- Bergek, A. (2018). Technological innovation systems: a review of recent findings and suggestions for future research. Forthcoming in: Boons, F. & McMeekin, A. (Eds): *Handbook of Sustainable Innovation* (Edward Elgar) (oformaterad version bifogas).
- Bergek, A., Jacobsson, S., Carlsson, B., Lindmark, S., & Rickne, A. (2008). Analyzing the functional dynamics of technological innovation systems: A scheme of analysis. *Research Policy*, 37(3), 407-429.
- Markard, J., Hekkert, M., & Jacobsson, S. (2016). The technological innovation systems framework: Response to six criticism. *Environmental Innovation and Societal Transitions*, 16, 76-86.
- Weber, K.M. & Rohracher, H. (2012). Legitimizing research, technology and innovation policies for transformative change: Combining insights from innovation systems and multi-level perspective in a comprehensive 'failures' framework. *Research Policy*, 41(6), 1037-1047.

### **Teis Hansen: Sustainability Transitions and Incumbents – Opening the Black box of the Firm**

- van Mossel, A., van Rijnsoever, F.J. and Hekkert, M.P. (2018) Navigators through the storm: A review of organization theories and the behavior of incumbent firms during transitions. *Environmental Innovation and Societal Transitions*, 26: 44-63.
- Dewald, U. and Achternbosch, M. (2015) Why did more sustainable cements failed so far? Disruptive innovations and their barriers in a basic industry. *Environmental Innovation and Societal Transitions*. doi:10.1016/j.eist.2015.10.001
- Hansen, T. and Coenen, L. (2017) Unpacking resource mobilisation by incumbents for biorefineries: The role of micro-level factors for technological innovation system weaknesses. *Technology Analysis & Strategic Management*, 29: 500-513.

### **Bernhard Truffer: Globalization and Sustainability Transitions**

- Binz, C., Truffer, B., & Coenen, L. (2015). Path Creation as a Process of Resource Alignment and Anchoring: Industry Formation for On-Site Water Recycling in Beijing. *Economic Geography*, 1-29.
- Quitzow, R. (2015). Dynamics of a policy-driven market: The co-evolution of technological innovation systems for solar photovoltaics in China and Germany. *Environmental Innovation and Societal Transitions*, 17, 126-148.
- Binz, C., Truffer, B. (2017). Global Innovation Systems – towards a conceptual framework for systemic innovation conditions in transnational contexts. *Research Policy* 46, 1284 – 1298.
- Boschma, R., Coenen, L., Frenken, K., Truffer, B. (2017). Towards a theory of regional diversification. *Regional Studies* 51 (1) , 31–45.

### **Lars Coenen: Urban and Regional Sustainability Transitions**

- Coenen, L., Benneworth, P., & Truffer, B. (2012). Toward a spatial perspective on sustainability transitions. *Research policy*, 41(6), 968-979.
- Coenen, L., Moodysson, J., & Martin, H. (2015). Path renewal in old industrial regions: Possibilities and limitations for regional innovation policy. *Regional Studies*, 49(5), 850-865.
- Wolfram, M., & Frantzeskaki, N. (2016). Cities and systemic change for sustainability: prevailing epistemologies and an emerging research agenda. *Sustainability*, 8(2), 144.
- Bulkeley, H., Castán Broto, V., Maassen, A. (2014). Low-carbon transitions and the reconfiguration of urban infrastructure. *Urban Studies* 51, no. 7 (2014): 1471-1486.

**Allan Dahl Andersen: Industrial aspects of sustainability transitions: empirical illustrations from the Nordic Countries**

- Mäkitie, T., et al. (2018). "Established sectors expediting clean technology industries? The Norwegian oil and gas sector's influence on offshore wind power." *Journal of Cleaner Production* 177: 813-823.
- Steen, M. and T. Weaver (2017). "Incumbents' diversification and cross-sectorial energy industry dynamics." *Research Policy* 46(6): 1071-1086.
- Stephan, A., et al. (2017). "The sectoral configuration of technological innovation systems: Patterns of knowledge development and diffusion in the lithium-ion battery technology in Japan." *Research Policy* 46(4): 709-723.