

The Energy & Strategy Think Tank (ESTT) at the Institute for Strategic Management (ISM) at WU invites applications for a master thesis.

Topic: *Promising Vertical Farming Business Models from the Perspective of Urban Energy Providers*

Scope, Aims, Methods, and Initial Literature: Vertical farming refers to personal vegetable and herb growing as well as vast skyscrapers for commercial production of crops (Al-Chalabi, 2015; Beacham et al., 2019; van Delden et al., 2021). A key promise of this decentralized approach to farming is the promise to provide a greater crop yield per square meter of land, especially within urban areas. Taking the perspective of urban energy providers, this thesis aims to:

- map the application domains of vertical farming (including pros and cons as well as use cases)
- systematically assess which applications domains are most promising for urban utilities
- develop business models for utilities for most promising domains (Chesbrough & Rosenbloom, 2002; Zott et al., 2011)

Insights from 1) current scientific literature, 2) grey literature (Adams et al., 2017), as well as 3) national and international expert interviews (Cassell, 2009) should be combined.

Thesis Language: English

Expectations and Support: Constant feedback and regular meetings with faculty will facilitate a high-quality thesis that is completed in a timely fashion. You will be provided with a comprehensive guideline with details on the supervision and writing process, expected deliverables, and grading.

Targeted Students: Excellent and ambitious students of all MSc and MBA programs at WU Vienna University of Economics and Business are eligible and encouraged to apply.

Interested? Send CV and grade certificates of all your studies to georg.reischauer@wu.ac.at

Initial References:

- Adams, R. J., Smart, P., & Huff, A. S. (2017). Shades of grey: Guidelines for working with the grey literature in systematic reviews for management and organizational studies. *International Journal of Management Reviews*, 19(4), 432-454.
- Al-Chalabi, M. (2015). Vertical farming: Skyscraper sustainability? *Sustainable Cities and Society*, 18, 74-77.
- Beacham, A. M., Vickers, L. H., & Monaghan, J. M. (2019). Vertical farming: A summary of approaches to growing skywards. *The Journal of Horticultural Science and Biotechnology*, 94(3), 277-283.
- Cassell, C. (2009). Interviews in organizational research. In D. A. Buchanan, & A. Bryman (Eds.), *The sage handbook of organizational research methods*: 500-515. Thousand Oaks: Sage.
- Chesbrough, H., & Rosenbloom, R. S. (2002). The role of the business model in capturing value from innovation: Evidence from xerox corporation's technology spin-off companies. *Industrial and Corporate Change*, 11(3), 529-555.
- van Delden, S. H., SharathKumar, M., Butturini, M., Graamans, L. J. A., Heuvelink, E., Kacira, M., Kaiser, E., Klamer, R. S., Klerkx, L., Kootstra, G., Loeber, A., Schouten, R. E., Stanghellini, C., van Ieperen, W., Verdonk, J. C., Vialet-Chabrand, S., Woltering, E. J., van de Zedde, R., Zhang, Y., & Marcelis, L. F. M. (2021). Current status and future challenges in implementing and upscaling vertical farming systems. *Nature Food*.
- Zott, C., Amit, R., & Massa, L. (2011). The business model: Recent developments and future research. *Journal of Management*, 37(4), 1019-1042.