

Center for Industry and Sustainability (ZIN)

**Think and do tank for a sustainable industry
Headquarters at industrial park Höchst**

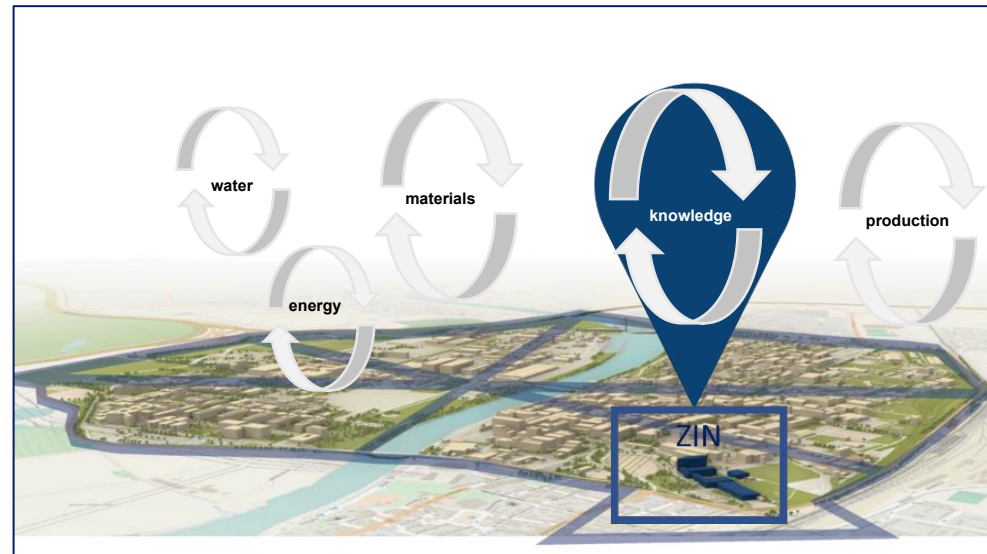
**Publications since 2013
(Status as of October 2024)**

We support the industry in its sustainable development

For 150 years, industrial park Höchst has been a symbol of innovation and change. But how do you design a sustainable industry? We see ourselves as a think and do tank for a sustainable, future-proof industry. We develop new knowledge, organise knowledge cycles and create a platform for knowledge exchange.

In our innovative research and education projects, we develop practical solutions for the sustainable development of companies. We empower people to integrate sustainability into their business strategy and to transform their organisations. However, in order to achieve profound change and address the major challenges of our time, such as climate change, a supportive ecosystem is required. With the vision of a CO₂-neutral process industry in Hesse, we founded the Process4Sustainability cluster with companies at industrial park Höchst. We believe that a sustainable industry can only be achieved by working together, which is why our activities are based on close cooperation with national and international partners from science, business, and the public sector. Therefore, in addition to companies, research institutes and social innovation partners are also part of our cluster.

We believe that the power of well-ordered markets, interdisciplinary collaboration and a long breath will make sustainability work.



We are embedded in the Provadis School of International Management and Technology, an University of Applied Sciences and industrial park Höchst.

Want to know more about us? Watch our ZIN videos:



Introduction ZIN



Introduction Cluster



Transformation as a task
for society as a whole



Services Cluster



Transformation at industrial park
Höchst

Topics and outcomes

Transforming Industries	Key Facts since 2016	Selected Projects
 We are supporting the industry to become more sustainable, reduce CO₂ emissions and benefit from digitalization. Through our projects we identify options for industry defossilization and new business development.	 Cooperations with 50+ companies	CO₂-Neutrality: Cluster Process4Sustainability  Process4Sustainability 
 We conceptualized the EIT Climate-KIC cleantech accelerator and managed it both regionally and internationally. We offer start-ups mentorship and support with sustainable business model development. For organizations we develop business creation and matchmaking formats.	 350+ start-ups in 13 countries supported	Management of European Cleantech Accelerator 
 We create learning opportunities for national and international change makers. Our formats (e.g., workshops, trainings, summer schools) focus on real-life challenges and bring latest knowledge in effect. We make knowledge work!	 2.500+ participants in our education formats	Sustainable Industrial Area (SIA) Management Courses with GIZ  
20+ high-impact projects on regional, national and global scale with partners from academia, industry and public authority.	 Activities with a funding of 18 million euros	 Projects with impact in 30+ countries

Center for Industry and Sustainability – Publications since 2013

	Transforming Industries
2024	Heck, J., Utikal, H., and Leker, J. (2024): Industrial symbiosis as enabler and barrier for defossilisation: The case of Höchst industrial park, in: Environmental Technology & Innovation, Oktober 2024, https://doi.org/10.1016/j.eti.2024.103850
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	Utikal, H.: Kolumne - Der Wirtschaftschemiker: Transformationspfade benötigen ein Update. In: Nachrichten aus der Chemie, Mai 2024, https://doi.org/10.1002/nadc.20244138938
	Utikal, H.: Kolumne - Der Wirtschaftschemiker: Gemeinsam stärker. In: Nachrichten aus der Chemie, Januar 2024, https://doi.org/10.1002/nadc.20244138936
2023	Utikal, H.: Kolumne - Der Wirtschaftschemiker: Nachhaltigkeitsberichte als Chance. In: Nachrichten aus der Chemie, November 2023, https://doi.org/10.1002/nadc.20234137217
	Utikal, H.; Loewert, M.: CO ₂ -neutrale Industrieparks - Cluster Process4Sustainability entwickelt Empfehlungen zur ökonomisch erfolgreichen Transformation. In: CHEManager, 9/2023
	Utikal, H.: Kolumne - Der Wirtschaftschemiker: Nationale Ambitionen – und globaler Wettbewerb. In: Nachrichten aus der Chemie, Juli 2023, https://doi.org/10.1002/nadc.20234137215
	Winters, B.: Sustainable industrial area management: Using the materiality analysis at a multi-stakeholder industrial park to align activities. In: Journal of Business Chemistry. 20(2), June 2023, p. 129-135, DOI: 10.17879/30069520281
	Loewert, M.; Utikal, H.; Heck, J.: Transform the European process industries: A multi-level perspective (extended editorial), In: Journal of Business Chemistry, 20(2), June 2023, p. 75-86, DOI: 10.17879/30069520775
	Utikal, H.: Kolumne - Der Wirtschaftschemiker: Was ein Radar erfassen muss. In: Nachrichten aus der Chemie, März 2023, https://doi.org/10.1002/nadc.20234133286
2022	Utikal, H.: Innovation Campus: Vorstellung des Clusters Process4Sustainability in der IHK-Zeitschrift FRM
	Utikal, H.; Heck, J.; Loewert, M.: Grüne Innovationsoffensive, Handelsblatt Journal, November 2022
	Utikal, H.: Kolumne - Der Wirtschaftschemiker: Zum Umgang mit Widersprüchen. In Nachrichten aus der Chemie, GDCh, Oktober 2022, https://onlinelibrary.wiley.com/doi/10.1002/nadc.20224123749
	Utikal, H.: Kolumne - Der Wirtschaftschemiker: Umorientieren oder untergehen. In Nachrichten aus der Chemie, GDCh, Juli 2022, DOI: 10.1002/nadc.20224123748
	Utikal, H.; Heck, J.: Transform the European Process Industries: Summary of the 4 th International Workshop on Innovation and Production Management in the Process Industries, Booklet
	Utikal, H.; Loewert, M.: Transition Pathways towards CO ₂ Neutrality, CHEManager International, 3/2022

	Utikal, H.: Kolumne - Der Wirtschaftschemiker: Net Zero - was bedeutet das? In: Nachrichten aus der Chemie, GDCh, Februar 2022, https://doi.org/10.1002/nadc.20224122467
2021	Utikal, H.: Kolumne - Der Wirtschaftschemiker: Transformationspfade: Modelle und Realitäten. In: Nachrichten aus der Chemie, Dezember 2021, S. 61, https://doi.org/10.1002/nadc.20214111849
	Utikal, H.: Kolumne - Der Wirtschaftschemiker: Einen verlässlichen politischen Rahmen setzen. In Nachrichten aus der Chemie, Oktober 2021, https://doi.org/10.1002/nadc.20214111848
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	Utikal, H.; von Heimburg, J.: A Marathon at Sprint Speed, CHEManager International, 1/2021
2020	Utikal, H.; Heck, J.: Die ökologische Transformation – eine Gemeinschaftsaufgabe für Wirtschaft, Politik und Gesellschaft oder was antworten Sie, wenn morgen Fridays for future vor Ihrem Werkstor steht? In: VAA-Jahrbuch 2020: Marktwirtschaft und ökologische Transformation p.123-128
	Utikal, H.; Hendrys, C.: Zukunftsfähige Industrie in Hessen gestalten In: "CSR in Hessen", p. 117- 130, Springer Gabler, https://link.springer.com/book/10.1007/978-3-662-63004-4
2019	Bergmann, T.; Völler, D.; Lehr, D.; Utikal, H. (2020): A CO ₂ -neutral chemical industry in 2050 – A roadmap for the future? An analysis about perception and use of technologies fostering a CO ₂ - neutral chemical industry within the industrial park Höchst, 2019
	Kircher, M.; Bayer, T.; Utikal, H.; Lehr, D.; Hendrys, C.: innovation. space. bioeconomy.
	Guyot-Phung, C.; Atoniucci, D.; Bergmann, T. (2019): How digital tools make circular economy operational in industrial areas: The example of BE CIRCLE. In: Journal of Business Chemistry 16(2), p. 91-105, DOI: 10.17879/64159703680
2018	Utikal, H.; Leker, J. (2018): Re-inventing chemistry – an industry in transition. In: Journal of Business Chemistry, 15(1), p. 1-7, DOI: 10.17879/19149572771
	Utikal, H.; Leker, J. (2018): Management Challenges in the Chemical Industry. In: Leker, J.; Gelhardt, C.; von Delft, S.: Business Chemistry: How to Build Thriving Businesses in the Chemical Industry, Wiley, p. 3-28.
	Vormann, J.; Utikal, H. (Ed.): Future. Chemistry. Glimpses into the world of tomorrow. Frankfurt, 2018 (reprint; first print in 2013)
	Utikal, H. (2018): The road ahead: Cooperation is key to the future of chemistry. In: Vormann, J.; Utikal, H. (Ed.): Future. Chemistry. Glimpses into the world of tomorrow. Frankfurt, p. 244-248.
	Zeitschrift - Industrie 2030 – Nachhaltigkeit als Veränderungstreiber Der Zukunftsdialog für Entscheider aus Wissenschaft und Wirtschaft.
	Zeitschrift - Industrie 2030 – Industrie im Wandel Der Zukunftsdialog für Entscheider aus Wissenschaft und Wirtschaft.
	Zeitschrift - Industrie 2030 – Eine Innovationsoffensive für Rhein-Main

	Der Zukunftsdialog für Entscheider aus Wissenschaft und Wirtschaft. Zeitschrift - Industrie 2030 – Die digitale Transformation der Industrie Der Zukunftsdialog für Entscheider aus Wissenschaft und Wirtschaft.
2015	Bäumler, M.; Gelhard, C.; Golembiewski, B.; Utikal, H.; Leker, J.; Nickel, J.; von Delft, S.; Woth, J. (2015): Von den Megatrends zum Geschäftserfolg: Was bedeuten Megatrends für das Management in der chemischen und pharmazeutischen Industrie in Deutschland? Weinheim (Wiley-VCH).
2013	Mohr, R.; Utikal, H. (2013): Zukunft Chemie: Perspektiven auf die Welt von morgen. Frankfurt am Main (F.A.Z. Institut). Sonderdruck für InfraserV Höchst.

 Accelerating Sustainable Businesses	
2021	Bergmann, T.; Utikal, H.: How to Support Start-Ups in Developing a Sustainable Business Model: The Case of an European Social Impact Accelerator In: Sustainability 2021, 13(6), 3337; https://doi.org/10.3390/su13063337
2020	Sustainability works #fokus: European Start-up stories & successes 2018 - 2020, Dezember 2020
	Bergmann, T.; Rothausen, T. (2020): Supporting start-ups in the process industries with accelerator programs: Types, Design elements and success measurement. In: Journal of Business Chemistry 17(3), p. 81-109, DOI: 10.17879/60119499532
2019	Kopel, T.; Utikal, H. (2019): Zirkuläre Wirtschaft. Eine reale Geschäftschance. In: Nachrichten aus der Chemie 67, p. 27-29.
	Utikal, H. (2019): Die Zukunft der Verpackung: Wertschöpfungskette Kunststoffverpackung. Neue Geschäftsmodelle für die zirkuläre Wirtschaft. https://www.chemanager-online.com/printausgabe/chemanager-112019
2018	Sustainability works #fokus: Nachhaltiges Unternehmertum, Juni 2018
	Zeitschrift - Industrie 2030 – Startups meet Corporate Der Zukunftsdialog für Entscheider aus Wissenschaft und Wirtschaft.
	Zeitschrift - Industrie 2030 – Matchmaking Der Zukunftsdialog für Entscheider aus Wissenschaft und Wirtschaft
2017	Utikal, H.; Auch, C. (2017): Nachhaltige Wachstumschancen durch systemische Geschäftsmodellinnovationen, perspectives InfraserV
	Utikal, H.; Woth, J. (2017): Raus aus dem Silo, perspectives InfraserV
	Rams, W.; Winters, B. (2017): Warum das Silicon Valley kein geeignetes Vorbild ist, perspectives InfraserV

	Educating Change Makers
2021	Peiró, J., Martínez-Tur, V., Nagorny-Koring, N., & Auch, C., (2021): A Framework of Professional Transferable Competences for System Innovation: Enabling Leadership and Agency for Sustainable Development, In: Sustainability 13(4), 1737, https://doi.org/10.3390/su13041737
2020	Leveraging circular economy innovation (2020): Selected case studies from EIT-Climate-KICs City Loops Circular Innovation Programme Hendrys, C., Utikal, H.; Geier, B.: Creating Clusters of Change - How cluster managers drive innovation and increase impact
2019	Nagorny-Koring, N. (2019): The power-knowledge of best practice: governing climate change in German municipalities. In: The politics of urban sustainability transitions. Edited by Jens Stissing Jenssen et al. Routledge, pp.67-86 Utikal, H.; Nauruschat, M.; Ebers, B. (2019): Industry 4.0 in Sustainable Industrial Areas in Emerging and Developing Countries: Applicability of Technologies and the Role of the Park Management. published by GIZ Ruiz-Molina, M., Gil-Saura, I., Berenguer-Contró, G. and Auch, C. (2019): Determinants of behavioral intentions towards professional certification scheme at European level. In: European Journal of Training and Development, 43 (7/8), pp. 719-735. https://doi.org/10.1108/EJTD-01-2019-0001
2018	Nagorny-Koring, N. (2018): Leading the way with examples and ideas? Governing climate change in German municipalities through best practices. In: Journal of Environmental Policy & Planning https://doi.org/10.1080/1523908X.2018.1461083 Zeitschrift - Sustainability works #fokus: Kompetenz für eine nachhaltige Zukunft, Dezember 2018
2017	Utikal, H. (2017): Nachhaltigkeit gestalten – Die große Transformation erfordert neue Kompetenzen. In: Weyland et al. Energieeffizienz. Wiesbaden (Springer Fachmedien), S. 37-49. Nagorny-Koring, N.; Nohta, T. (2017): Managing Urban Transitions in Theory and Practice - The Case of the Pioneer Cities and Transition Cities Projects. In: Journal of Cleaner Production: http://www.sciencedirect.com/science/article/pii/S0959652617327300 Lehr, D.; Auch, C. (2017): Novel approaches in professional education to foster innovation in the chemical industry. In: Journal of Business Chemistry 14(1), pp. 2-10. Nagorny-Koring, N.; Boulanger, S. (2017): Replication vs Mentoring: Accelerating the Spread of Good Practices for the Low-Carbon Transition. In: International Journal of Sustainable Development and Planning: https://www.witpress.com/elibrary/sdp-volumes/13/2/1904 WIT Conference Sustainable Development and Planning



Contact



Prof. Dr. Hannes Utikal

**Head of Center for Industry and
Sustainability**

hannes.utikal@provadis-hochschule.de

+49 160 9737071

**Center for Industry and Sustainability (ZIN),
Provadis School of International Management and Technology AG,
Industriepark Höchst, Building B835, 65926 Frankfurt am Main**