



Delft University of Technology

## Cities of the Future Towards Sustainable City Economies

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**Publication date**  
2023

**Document Version**  
Final published version

**Published in**  
City of the Future Graduation Lab

### Citation (APA)

Heurkens, E. W. T. M. (2023). Cities of the Future: Towards Sustainable City Economies. In R. Cavallo, J. Kuijper, M. Hartevelt, M. Carreiro Matias, M. Ulk , & S. Draškovi  (Eds.), *City of the Future Graduation Lab: Experiences in Multidisciplinary Education* (pp. 126-127). TU Delft OPEN Publishing.

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# City of the Future Graduation Lab

Experiences in Multidisciplinary Education

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*Joran Kuijper*

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## Colophon

City of the Future Graduation Lab: Experiences in Multidisciplinary Education

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## Keywords

City, Future, Multidisciplinary, Multidisciplinarity, Design, Education, Engineering, Graduation Lab, Built Environment, Architecture, Urban Design, Management, Geomatics, Transport, Infrastructure, Logistics, Collaboration

## Published by

TU Delft OPEN Publishing, Delft University of Technology, The Netherlands

ISBN: 978-94-6366-686-2

DOI: <https://doi.org/10.59490/mg.66>



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## Design and cover design

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## Supported by

Delft Deltas, Infrastructures & Mobility Initiative (DIMI)

## Special thanks to:

Xiaodong Luo, Architectural Designer



# Cities of the Future: Towards Sustainable City Economies

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126

It goes without saying that cities of tomorrow face numerous challenges that will change their appearance drastically. We only now begin to notice a gradual change towards climate-adaptive cities, inner-city renewable energy production, and more healthy urban environments by re-naturing our public realm and buildings as well as accommodating societal initiatives within urban neighbourhoods. Such sustainability transitions within the built environment unfold in front of our eyes and are as appealing as urgently needed to make our cities liveable and thrive. Nonetheless, the physical transformations that come with such changes are also driven by economic factors and conditioned by financial aspects less visible and tangible. Yet, unquestionably, they help drive and support such sustainability transitions and built environment transformations. So how can we conceive of the economic factors shaping the city of the future?

It is paramount for any city to be economically resilient. This means that it can bounce back from shocks and hazards such as climate change impacts. This can best be established by betting on different horses, allowing cities to be economically diverse by accommodating a variety of economic sectors within

the urban fabric and city regions. Detroit and Liverpool have shown that overreliance on a single economic sector has devastating effects on the social and environmental resilience of cities, such as increased unemployment and poverty and 'ghost neighbourhoods' with boarded-up homes. This entails that city policy-makers must carefully consider what type of economic clusters and expertise are present and which ones are needed to improve the economic DNA of their cities.

By attracting 'new economies' that build on existing economic strengths, cities can become more resilient. Diversifying city economies, however, also comes with physical changes. 'Innovation' for instance is not reserved for out-of-town high-tech campuses but requires physical space within our inner city as it is the place where people from all sorts of life mingle and interact. Therefore, displacing business or industrial and manufacturing activities from cities to the periphery in favour of housing is an unsustainable choice. We need city planners, architects, developers, businesses and citizens to develop ideas for spatial functional co-existence, and mixed-use places with room for living, work, and leisure. However, from a financial perspective, this is easier said than done.

Public policy ambitions for more sustainable cities nowadays focus on intensifying infrastructure use and development and, foremost, densifying cities through urban transformations. This comes at a financial price though. It is far more complex and costly to develop inner-city brownfield sites than greenfields. Land must be acquired from landowners, polluted soil must be remediated, and (opposing) interests of citizens must be taken aboard in lengthy participation trajectories. It is not uncommon that inner-city developments are financially unfeasible, the costs transcend the benefits, and that housing becomes unaffordable as a result.

For such occasions, the Pavlov reaction from involved stakeholders is to call on governments for financial subsidies to improve the project's balance sheet and realise plans, or to lobby for greenfield developments. Although such subsidies can be justified by governments as they might assist in fulfilling urgent housing and sustainability needs, they can be considered low-hanging fruit in terms of financial innovation.

Currently, financial arrangements for urban transformations that seek to combine public values with private returns have come to fruition, such as Area Improvement

Districts (AIDs). AIDs are built upon a collective designated area fund, filled by (proportional) fees from existing real estate owners and tenants as well as financial contributions from developers or collectives that initiate new developments, to be invested in 'hard' and 'soft' public realm improvements such as climate-adaptive urban plazas and community-led place-making initiatives. Ultimately, such arrangements on the one hand enable existing stakeholders to become more economically and socially engaged with the places they live, work or leisure in, and on the other hand encourage newcomers to co-invest in the area rather than making a one-time profit.

In brief, it is therefore my belief that future sustainable cities require experimenting and studying the redevelopment of urban transformation sites as continuous dynamic (economic) endeavours aimed at mixing physical functions, integrating actor needs, and coupling various financial investment streams. Only then can future cities become more economically sustainable and resilient.



The Cross Domain City of the Future Graduation Lab, situated in the Faculty of Architecture and the Built Environment at TU Delft, has been a pioneer in experimenting with a multidisciplinary approach to education on the built environment. Drawing upon this expertise over the past years, this book reflects on multidisciplinary in the built environment and its implementation in education on the built environment. How should one approach multidisciplinary in education and practice? What encompasses its core elements, benefits, and challenges?

By addressing these questions, the book aims to inform students and practitioners within the realm of the built environment by sharing insights from experiences in multidisciplinary education. It presents eight conclusions regarding the future of multidisciplinary education and, thereby, seeks to contribute to a more humane and sustainable future for cities:

- I Process is central to multidisciplinary collaboration. Negotiating positions, ensuring an environment of respect, balance and open-mindedness, and setting a common vocabulary.
- II Multidisciplinary can be a way to foster innovation. It triggers complementarity and confrontation. As with any innovation, there is potential for greater outcomes, but, at the same time, extra risks emerge. These need to be managed.
- III Multidisciplinary could be better integrated into organisational structures.
- IV Disciplinarity and multidisciplinary are in mutual coexistence. They are inseparable. They can complement and contradict each other.
- V Problem precedes solution, not the opposite. Framing the problem, or 'problematizing', is a considerable share of the actual solution. This is particularly applicable to multidisciplinary.
- VI Multidisciplinary is by nature composed of fluid boundaries. Navigating through an enormous diversity of perspectives requires agility, flexibility, independence, spirit of adventure and embracing uncertainty.
- VII Professionals should be trained as 'T-shape': grounded in their field while able to dialogue with other fields.
- VIII Both generalists and specialists are needed. Education should provide opportunities for both.

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