

Urban Manufacturing: Planning Issues and Case Studies

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„Industrial Internet, Industry 4.0 and digital manufacturing as transformers of spaces of production and consumption“

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Recent trends

- increasing service sector (e.g., care work, communication) → from a post-industrial society to a post-industrial city
- social inequality
- right-wing populism (e.g., President Trump's protectionist trade position)
- climate change → increased awareness through "Fridays for Future" demo's
- Individualism & demographic change (e.g. individualized products)
- Digitalisation, technological innovation (e.g. additive fabrication / 3D-printing), industry 4.0
- Financial investment on real estate
- Reshoring (Fine 2013)
- Work-Life-Balance, New Work
- Smart & Sustainable Cities



New Discussion about Urban Manufacturing

Sassen (2006) describes Urban Manufacturing in large cities like LA, NY depending on **cultural industries** and the creative class

Mistry, Byron (2011) show that industry in the US changed from **large enterprises to smaller ones** between 1972-1992 (91,4 % of the companies employ less than 100 employees)

Berg (2012) sees a '**vertical**' Future for the Urban Factory

Läpple (2013) supports a new urban economy that **stabilizes social structures** in cities and strengthens **local circular and resilient economies** against the turbulences on the global market

Spath (2014) and Lentes (2015) focus on new ways of production through **Industry 4.0 and logistics** to improve sustainability, urban production

Friedman (2016) outlights urban manufacturing as **high-quality sector** with a high **value-added share**

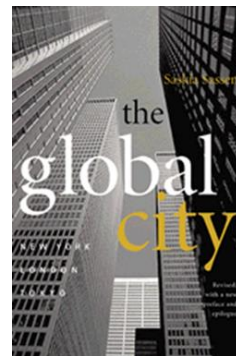
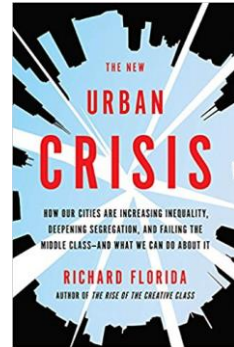
Gärtner, Stegman (2015), Brandt et al. (2017) see a potential of urban manufacturing in **urban quarters**

Scheelhaase, Zinke (2016) speak about '**nearshoring**' through 3D-printing

Herrmann, Juraschek (2017) look at customized or even personalized products, close to customers, **Positive Impact Factory**

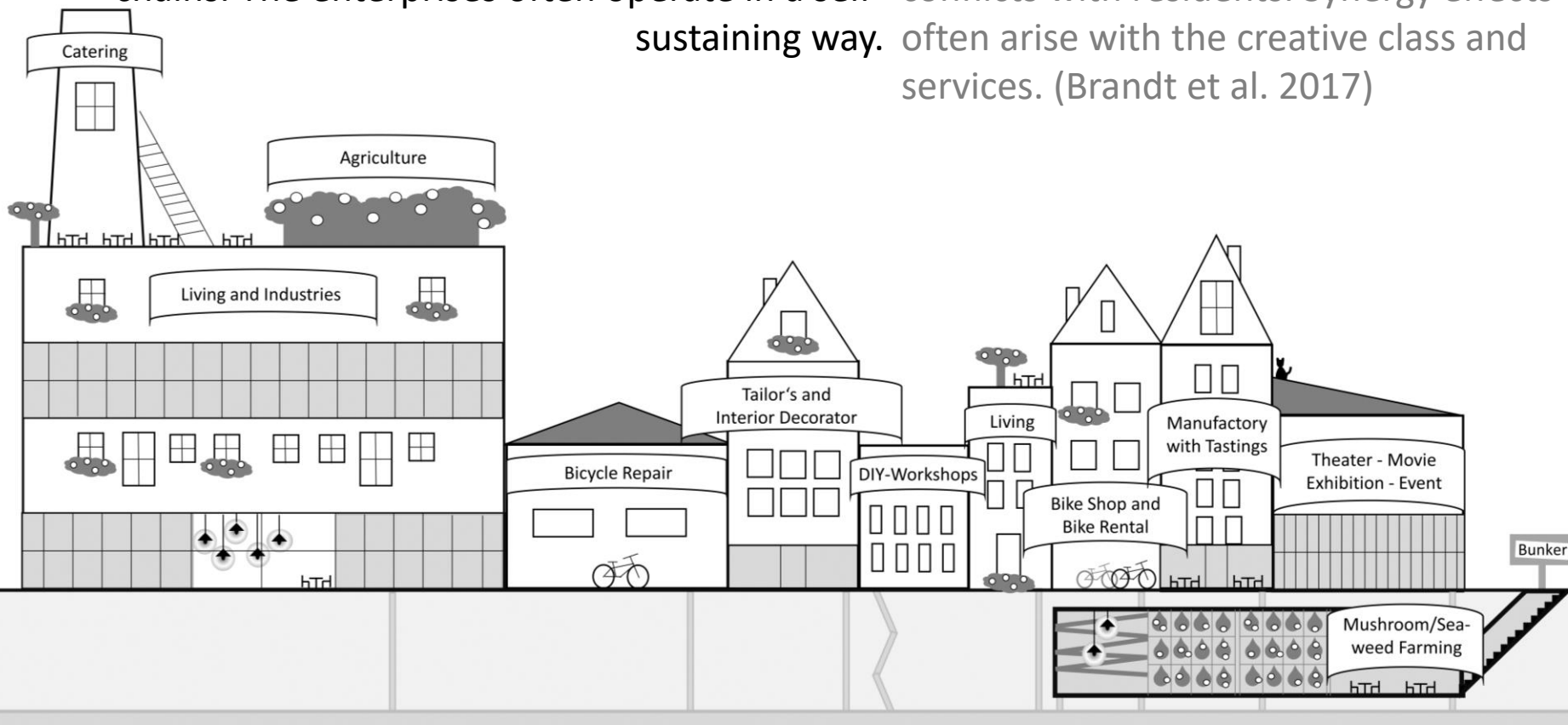
Stiehm (2017) looks at traditional urban manufacturing with high batch size and new urban manufacturing with **small production batch**

Berends, Haeffs (2018) **efficiency and innovation** through urban manufacturing

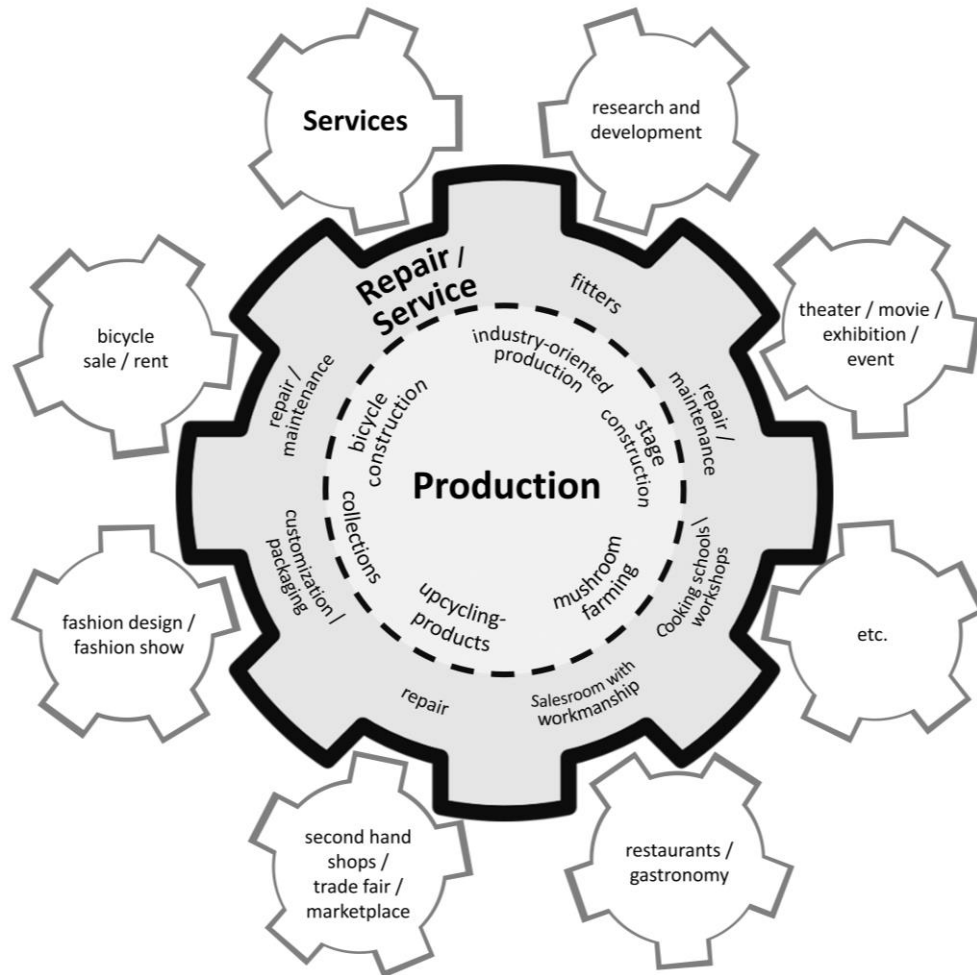


Urban Manufacturing (dt.: Urbane Produktion)...

... means making and converting **tangible goods** in densely populated areas, often making use of local resources and local value chains. The enterprises often operate in a self-sustaining way. The proximity to living spaces demands resource efficiency as well as low-emission modes of production to avoid conflicts with residents. Synergy effects often arise with the creative class and services. (Brandt et al. 2017)



Fields of Value Creation in Urban Manufacturing



Already in 2002, the San Francisco Planning Department has described the importance of this sector in a city in its report “Industrial Land in San Francisco: Understanding Production, Distribution, and Repair” (PDR).

Gärtner et al. 2017



URBAN MANUFACTURING



Urban
Industries



Small Urban
Manufacturing
(SUMS)
and Repair



Urban
Agriculture



Tech



Craft



Food



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Manner – Urban Industry back to the city









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Food

Newcombe 2011; Byron, Mistry 2011

Cluster: Urban Manufacturing



WUPPERTAL



Lichtbogen Wohn- und Objektbeleuchtung



- Association / Management
- Urban Manufacturing
- Distribution



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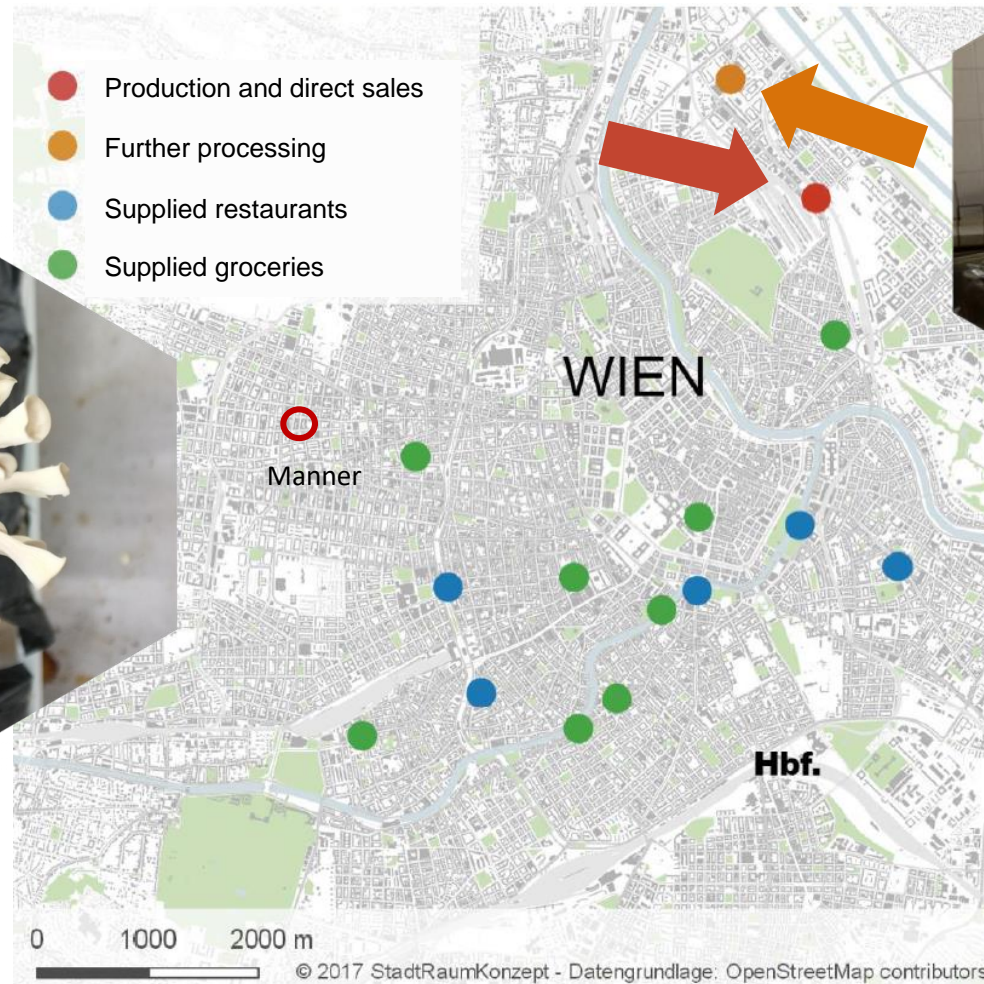


Craft



Food

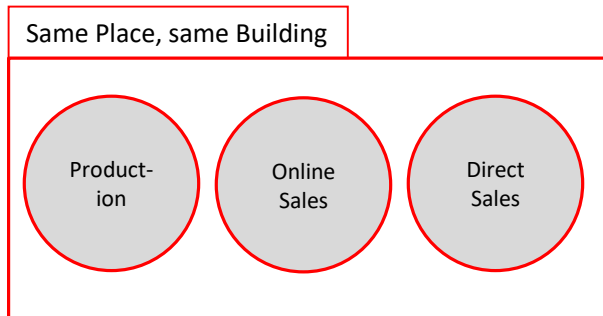
Hut&Stiel – showcasing Circular Economy



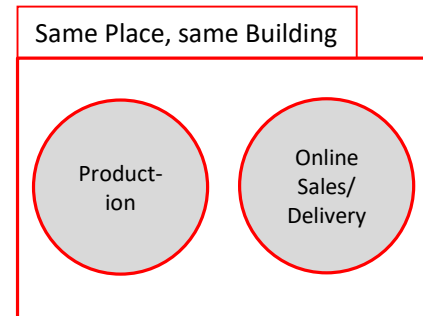
Findings of the Case studies

Characteristics:

- There is a great variety of Urban Manufacturing
- Location in mixed areas
- Often tight linkages within the quarter (differentiated by supply and sales market)
- Relocation of production close to skilled workers → short distances
→ but little job effects so far
- Production and retail within the same building

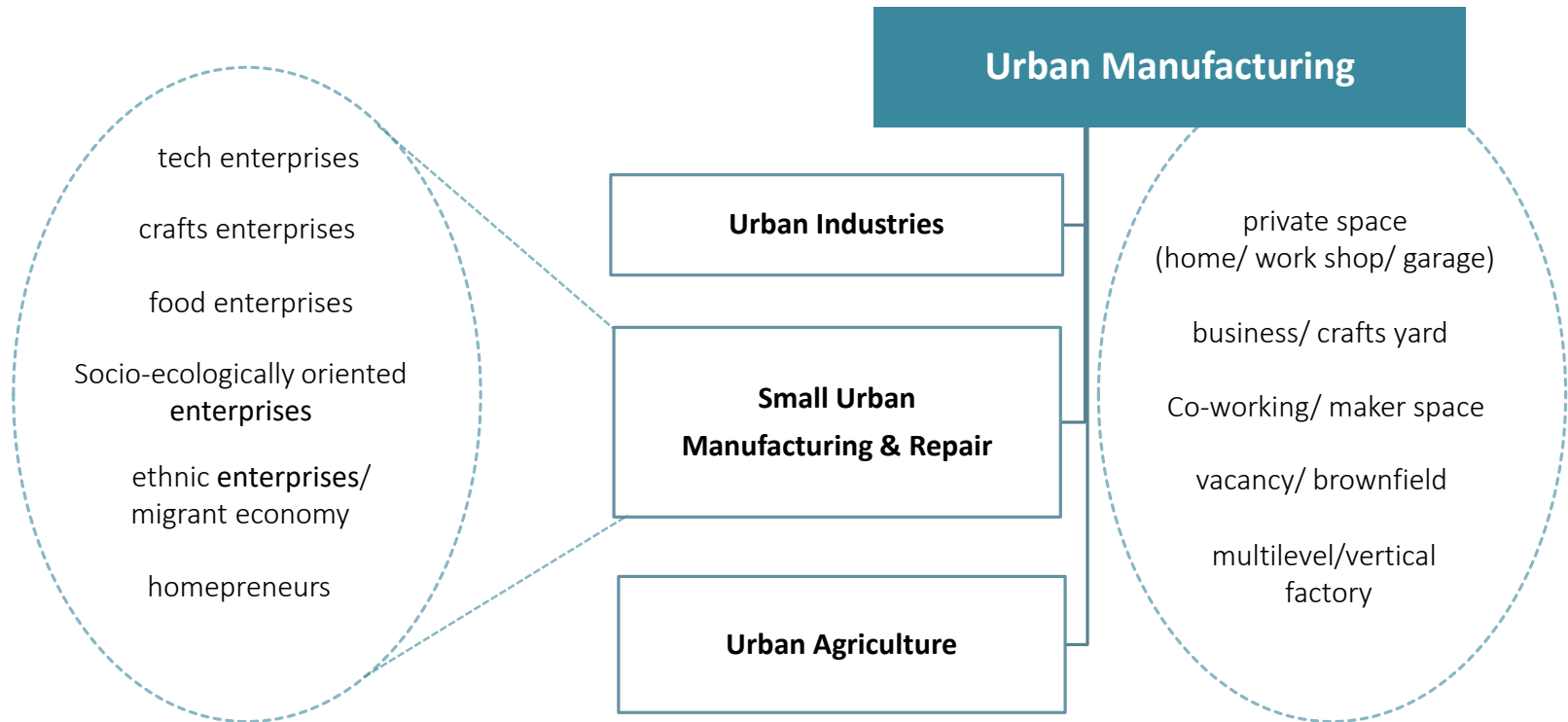


eg. Hut & Stiel, Confectionary, Marmeladenmanufaktur, Bridge & Tunnel, Adidas Factory Store, Mädelaskramladen



eg. Manner, WITTENSTEIN bastian, Ilhill

Urban Manufacturing



Measures to prevent further displacement of manufacturing:

1. Strategy for Urban Manufacturing in the City
2. Check for preservation and protection statutes
3. Check necessity of rededication of commercial to residential areas
4. Purchase of commercial properties/ areas by the municipality
→ allocation with building lease
5. Mobilize owners of vacant real estate
6. Development of craft/ production yards
7. Creation of flagship projects in quarters, e.g. district festivals, “Made In” - Campaigns etc.
8. Determination of areas for manufacturing in urban development contracts
9. Adapt a local business development on the level of city quarters
10. Support SMEs, Urban Manufacturing, Urban Agriculture, cooperatives in the production sector



Thanks for your attention.

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