Constructing an Urban Future: The sustainability and resilience of cities – infrastructures, communities, buildings and housing.

• Paper / Proposal Title:

• Format(s):
  In-person presentation / Written paper

• Author(s) Name:
  Tanvi Maheshwari

• University or Company Affiliation:
  ETH Zurich

• Abstract (300 words):
  Flows of people, goods, energy, water, and waste course through the urban infrastructure and constantly shape urban form. This paper addresses the shifting relationship between urban forms and transportation flows in the context of rapid developments in technologies of automation.

  Historically, innovations in transportation have fundamentally altered urban form. Today the emergence of so-called ‘driverless cars’ or ‘autonomous vehicles’ is poised to transform transport flows in cities. Some scholars suggest that this amounts to an ‘urban revolution’ where automation will restructure the relationship of transport flows to urban forms.

  This paper aims to understand how urban form and transport flows might change as a result of high automation. It does this through two lenses – environmental scanning of
current trends; and speculations on alternative futures drawing upon the case of Singapore.

Historically, innovations in transportation flows have inspired grand urban visions. The most prominent among these was the automobile and highway based cities (Burgess, 2004; Corbusier, 1967; Wright, 1932). With hindsight of over 50 years, we can see how these visions translate in present day cities. In the past decade or so there has been a resurgence in urban visioning and futuristic imagery production for automated vehicles. The first part of the paper examines these visions and imagery to investigate the effects of automation on future urban form.

The second section searches for new and appropriate methods to conduct urban design in this shifting technological context through the case of Singapore. In order to mediate the technological transition in urban transportation flows, this paper proposes a strategy of collective scenario based thinking with multi-disciplinary experts. This strategy is demonstrated through an example case in Singapore, where through a series of trans-disciplinary multi-stakeholder workshops, possible future scenarios for automated vehicle implementation are being developed and assessed.

Bibliography


Corbusier, L. (1967). The radiant city: Elements of a doctrine of urbanism to be used as the basis of our machine-age civilization. Orion Press.


• Author(s) Biography (200 words each):

Tanvi Maheshwari is an architect, urban designer and researcher. Prior to joining the Future Cities Laboratory, she was helping develop UrbanCanvas, a visualization and analysis tools for urban planning, urban design, real estate, and transportation professionals. She co-founded arch i Platform, a non profit for sustainable design and architecture in Delhi in 2009. With arch i Platform, she led an international multi-disciplinary collaboration, Delhi 2050, to fundamentally rethink long term planning and development for the Indian capital. She also presented her work at the International Architecture Biennale in Rotterdam in 2012. She writes regularly for popular media and has authored 'Life of an Afghan Hammam', a book about the restoration and culture of Hammam in an Afghan community.
Tanvi trained as an architect in School of Planning and Architecture in Delhi, before obtaining her Masters degree in urban design from University of California, Berkeley.