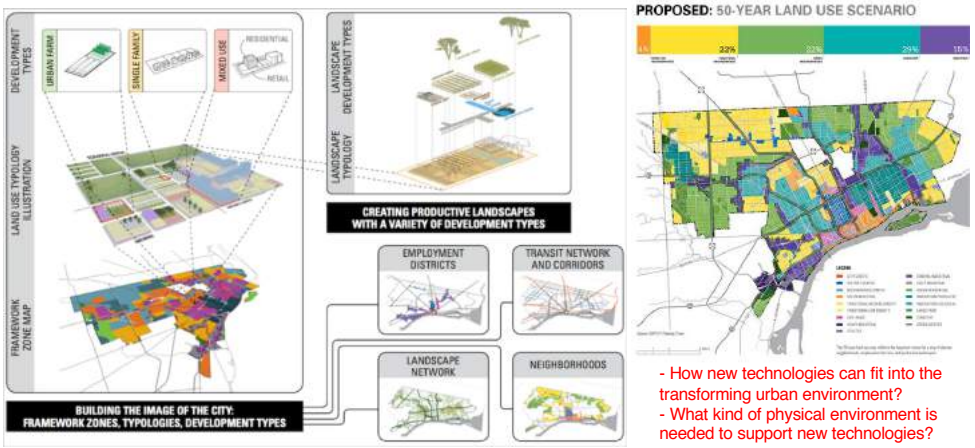
URBAN PLANNING AND GREEN/SMART INFRASTRUCTURE:

FROM THE URBAN PLANNER'S PERSPECTIVE

Akito Murayama, Ph.D.
Associate Professor, Urban Land Use Planning Unit,
Department of Urban Engineering,
School of Engineering, The University of Tokyo
murayama@up.t.u-tokyo.ac.jp

Urban Planning: Development, Land Use and Infrastructure



- How new technologies can fit into the transforming urban environment?
- What kind of physical environment is needed to support new technologies?

Detroit, USA - Reorganizing urban structure from site/district scale up

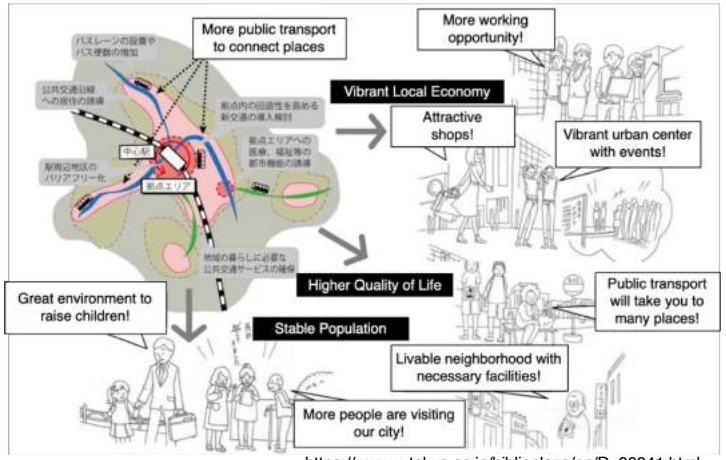
Compact City + Network Concept: Solution for Shrinking Cities?

The compact city and the "concentrated urban model" were upheld as normative urban design concepts.

Urban planners have sought to make cities smaller (or more compact) to cope with depopulation. This strategy offers potential advantages; when the community lives closer together.

However, this strategy might also generate new problems; for example, it might be costly to make the city more compact, and it might prove difficult to manage a space that has ceased to be a city.

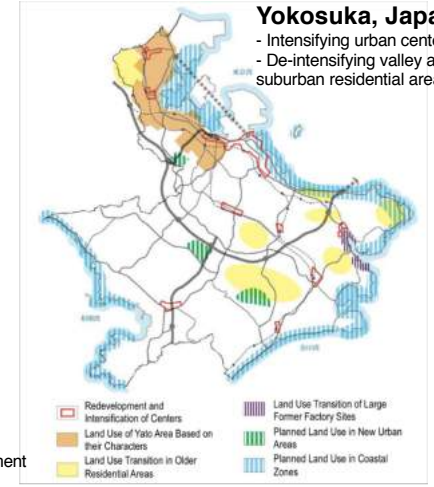
Old-fashioned concept without the consideration of new technologies



https://www.u-tokyo.ac.jp/biblioplaza/en/D_00041.html

Compact City + Network Concept: Solution for Shrinking Cities?

Torino, Italy
- Intervention to brownfields
- Recovering natural environment



Yokosuka, Japan
- Intensifying urban centers
- De-intensifying valley and suburban residential areas

Planning for the Non-Compact City: Suzuka City, Mie Prefecture

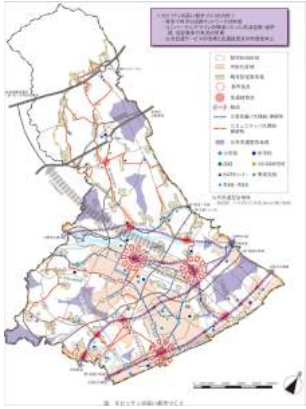
Vibrant City - Supporting Commercial and Manufacturing Industries

Resilient City - Mitigating Disasters (Earthquake, Tsunami, Flood, etc.)

Green City - Conserving Landscape, Water and Green (including Farmlands)

Planning for the Non-Compact City: Suzuka City, Mie Prefecture

Livable City - Forming Compact and livable Settlements



Mobile City - Building Road Network and Public Transport System

Land Use Concept - Compiling the 5 City Concepts

Building Ecodistricts: Millvale, Pennsylvania, USA

MILLVALE
ECODISTRICT PIVOT 2.0

with support from
Henry L. Hillman Foundation
April 2016

Urban regeneration plan focusing on:
ENERGY, WATER, FOOD, AIR, MOBILITY & EQUITY

The pioneer of the EcoDistricts initative
https://ecodistricts.org

コミュニティは，エコディストリクトの計画を通じて，環境影響を低減し，経済の活性化に貢献し，全ての人々に利益をもたらす場所をつくるというトリプル・ボトム・ライン目標を達成するような街を創造することができる。環境・建築のコンサルタントevolveEAは，2012年以降，米国ペンシルベニア州ミルベール地区でエコディストリクトの計画に携わり，同地区は住みやすさや積極的な取り組みで注目を浴びるようになった。2013年に完了したピボット1.0は，エコディストリクトの可能性を「見える化」するプロジェクトを構想，地区の方向性を明らかにした。その後の2年間で計画の目標が80%以上達成された。2016年に完了したピボット2.0は，ピボット1.0を発展させ，エネルギー，食料，水，モビリティ，大気環境，社会的公正の課題領域を総合的に分析し，既に始まっていた取り組みを評価し，さらに実施可能な戦略やプロジェクトを提案した。

分析を通じて驚くべき課題や可能性が明らかになった。ミルベールの住民は食料よりも自動車に多くのお金を使い，モビリティが健康・土地利用・経済開発との関係で地区の成功の鍵であった。関連して，同地区はフードデザートとして認識され，街の中心に食料拠点をつくる提案が実現しつつある。エネルギー自給自足への欲求は，太陽光発電所の提案につながった。また，地区に流れる川は汚水の源因から場づくりの資産へと転換されつつある。リバー・ディストリクトの開発にはアフォーダブル住宅や「きれいな空気の公園」バッファー・ゾーンも盛り込まれている。

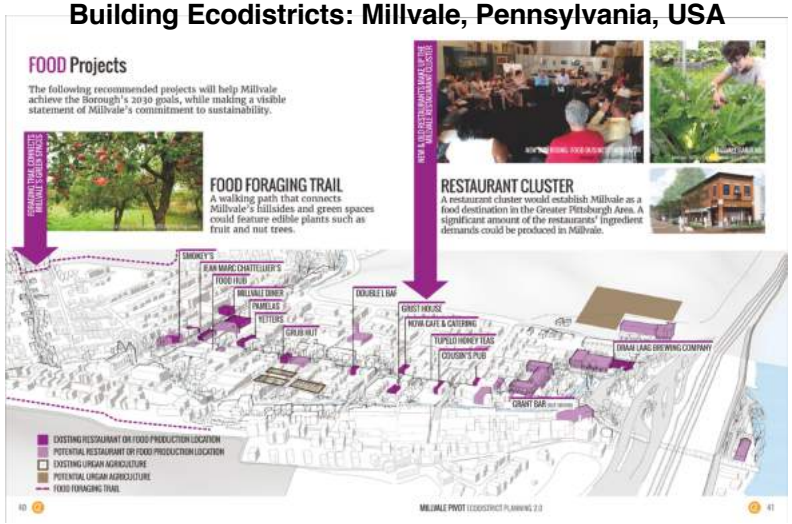
コミュニティ参加は，デザイナーが住民に情報を提供するだけでなく，デザイナーと住民の共創を伴うもので，既成市街地を対象とするこの計画のプロセスに不可欠であった。

計画全編は，https://issuu.com/evolveea/docs/millvale_pivot_2_final_report_high/1で閲覧することができる。

（訳：村山顕人）

Christine Mondor and Anna Rosenblum（著），村山顕人（訳）：
ミルベール・エコディストリクト・ピボット2.0（地図の中の風景-79），
都市計画，Vol.66，No.4，表紙裏，2017

Building Ecodistricts: Millvale, Pennsylvania, USA



Building Ecodistricts: Millvale, Pennsylvania, USA

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Challenges for Urban Planning and Urban Design

Designing

BUILDINGS
PUBLIC SPACE
MOBILITY

Supported by

SMART
Infrastructure
GREEN
Infrastructure
GREY
Infrastructure

http://dandyhorsemagazine.com/blog/2012/03/26/dandyarchive-you-complete-me/

Challenges for Urban Planning and Urban Design

Urban System Design
Research and Studio

Georgia Institute of Technology

National Institute for Environmental Studies

GLOBAL CARBON project

東京大学
THE UNIVERSITY OF TOKYO

自動運転技術は、公共空間用途を再考する機会を提供

自動車にとっては小さく使いづらいスペースでも、
人や植物そしてサービスにとっては有効な空間に
なりえる

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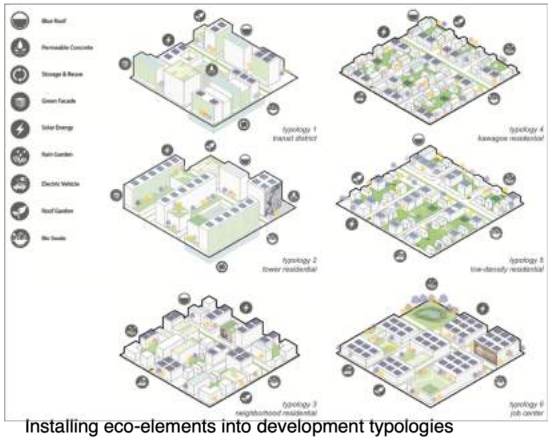

Installing eco-elements into development typologies and measuring their performances

Challenges for Urban Planning and Urban Design

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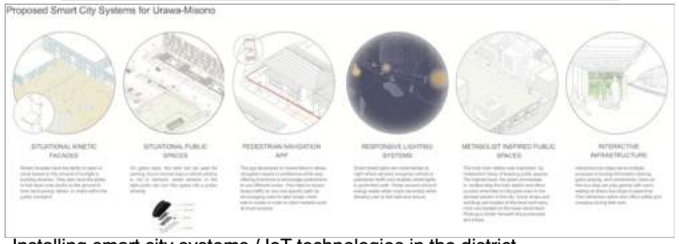
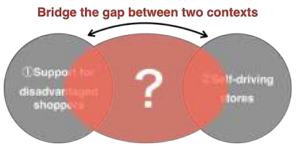


Installing smart city systems / IoT technologies in the district

Challenges for Urban Planning and Urban Design



Bridging the gap between the current status of mobile retailers and the conceptions of self-driving stores, and to make the technology more realistic

What kind of spaces in communities are used for its services?

"Temporary Places" in Communities Formed by Mobile Retailers: A Case of COOP Associations in Japan

Yuri AKIZUKI
Graduate Student, Department of Urban Engineering, School of Engineering, The University of Tokyo

Akito MURAYAMA
Associate Professor, Department of Urban Engineering, School of Engineering, The University of Tokyo, Ph.D.

Rikutaro MANABE
Assistant Professor, Department of Urban Engineering, School of Engineering, The University of Tokyo, Ph.D.

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Challenges for Urban Planning and Urban Design

Introduction to Magokoro-bin

- Magokoro-bin is a mobile retailer program operated as a joint project between **Noda City (public) and Palsystem Chiba in Nakane** (one of COOP association's supermarket, private company) in Noda City
- There are 3 courses in the program and mobile retailer is traveling around a total of **37 stops**.

http://www.palsystem-chiba.coop/syokutaku/shop/magokoro

Lack of space for the temporary place.

The group of elderly holds lunch gathering in this greenhouse after buying food from the mobile retailer.

People use various vehicles to come to the place.

Well-designed space is need for the mobile retailers to operate in Japanese urban conditions. Temporary places are formed and human communication will occur