

Knowing the future citizen: Applying foresight in user- centric city development

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Future cities face opportunities and challenges

Driving
energy
transition

Building
economic and
environmen-
tal resilience

Managing
pandemic
uncertainty

Orchestrating
multi-
stakeholder
networks

Limiting traffic
and logistics
volumes

Ensuring
technology
ethics

Developing
digital
governance

Increasing
automation
and
connectivity

Enabling
inclusion and
access

Foresight helps navigating uncertainty and shaping preferable futures

“Foresight is the discipline of exploring, anticipating and shaping the future.

Strategic foresight is **not about predicting the future**; it explores different possible futures, alongside the opportunities and challenges they might present.

Ultimately, it will **help us act in the present to shape the future we want.**”

(European Commission)




The future is present in our current behaviour

Navigation into the future is **a core organizing principle** of human behaviour. (Seligman et al., 2013)

→ *It is critical to understand ordinary citizens' ideas, plans and hopes about their futures.*



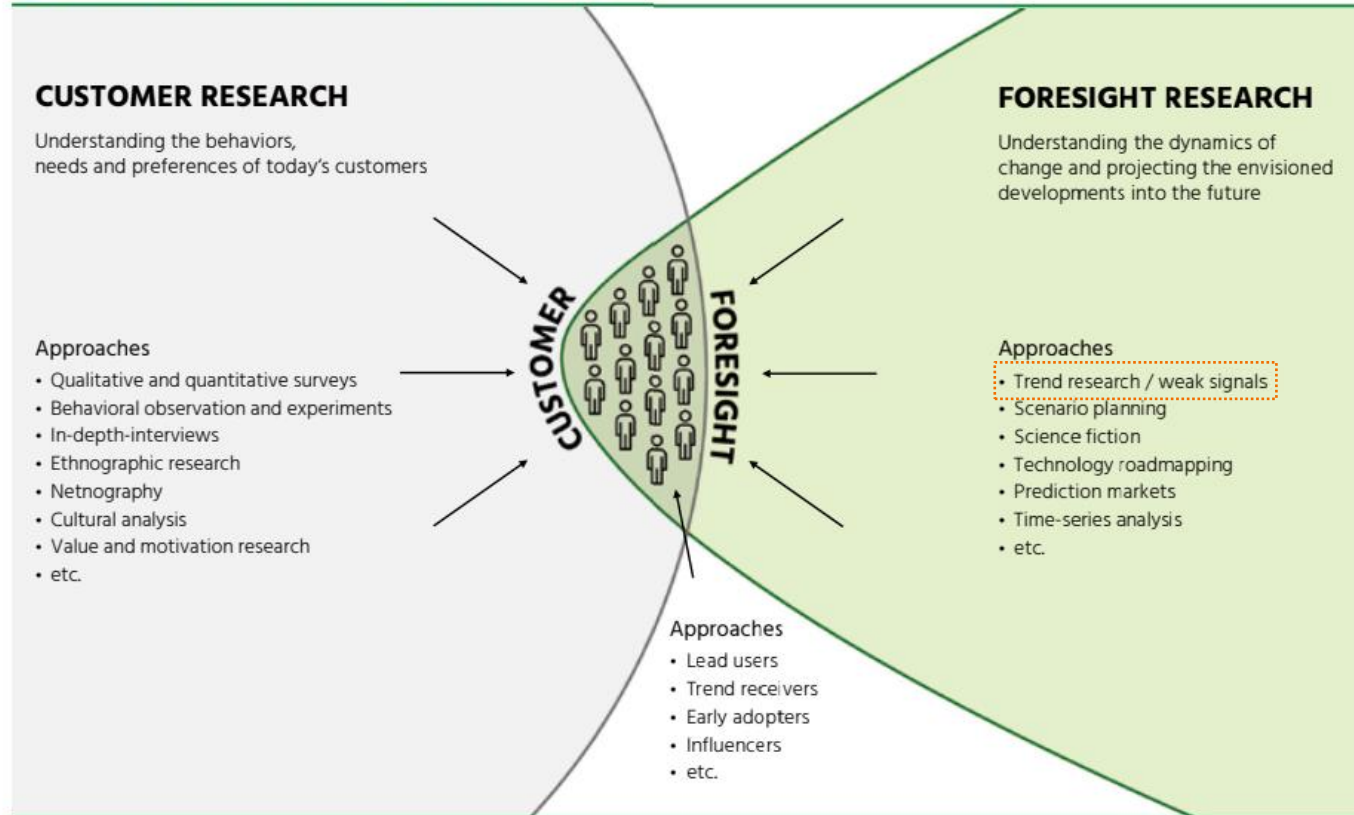
An aerial, high-angle photograph of a busy pedestrian plaza. The ground is paved with grey rectangular stones, interspersed with darker grey rectangular strips that form a grid-like pattern. Numerous people are walking in various directions across the plaza. In the center, a woman wearing an orange hijab and a light-colored dress is walking towards the camera, carrying a white shopping bag. To her left, a group of three people (two women and one man) are walking away from the camera. To her right, a man in a white t-shirt and light blue jeans is walking towards the camera. In the bottom left, a man in a grey t-shirt and dark shorts is walking away from the camera. In the bottom right, a man in a brown jacket and grey pants is walking away from the camera. The overall scene is a busy, everyday urban environment.

How can we combine the human perspective with strategic foresight?

The common ground of user insight and foresight

Fig. 1: The Customer Foresight Territory

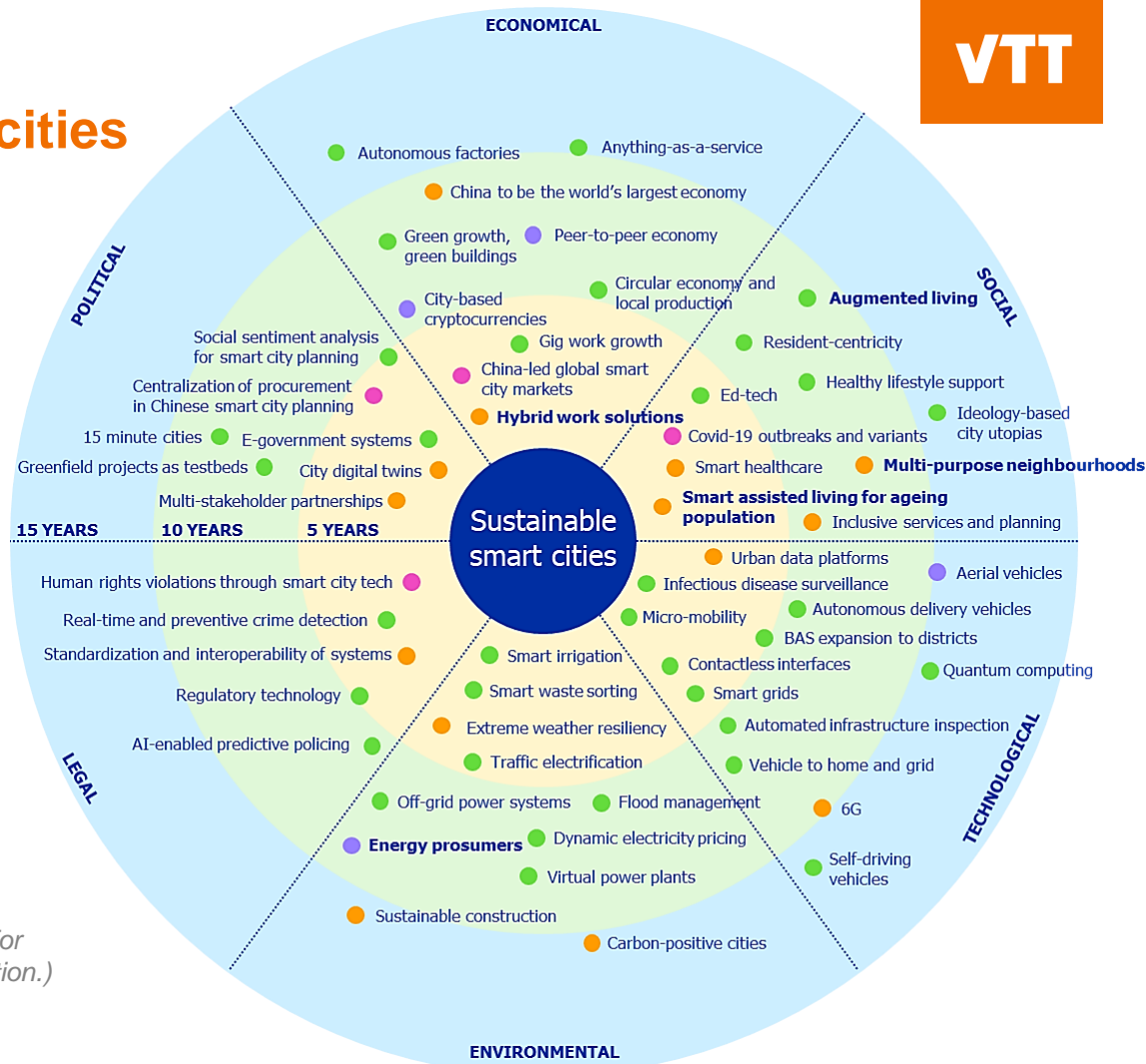
*Could also be
user/citizen
research!* →



Source: Eller, Hofmann, & Schwarz, 2020.

VTT Future Radar detecting trends in sustainable smart cities

- High-priority opportunity area
- Opportunity area
- Low-priority opportunity area
- Risk



Business Finland (2022): Sustainable Smart Cities

(Business Finland is the Finnish government organization for innovation funding and trade, travel and investment promotion.)



Five key user-centric trends from the Future Radar

Multi-purpose neighbourhoods

Multi-purpose neighbourhoods bring zones for working, living and entertainment within the distance reached by a few minutes of walking, cycling or public transport. The pandemic has brought an additional dimension to this trend: “5-minute neighbourhoods” ensure that urban residents can continue with their primary activities, including cultural ones, to guarantee that cities remain resilient and liveable in the short and long term. Besides neighbourhoods, buildings are increasingly multi-functional.



Augmented living

Virtual and augmented reality technologies have the potential to play a huge part in cities as a tool for reaching various smart city targets, including sustainability. Solutions for virtually visiting museums, supporting navigation and outdoor games have already been adopted. The virtual real estate market has seen a boost caused by the pandemic. The term Augmented City has been introduced and refers to an increasingly technological, resilient, and sustainable city. However, the technology can also be applied for political targets.



Smart assisted living for ageing population

Ageing population is one of the biggest challenges tried to tackle with smart city solutions. By 2030, more than a billion people will be over 65 estimated by MIT. Many technologically oriented cities, including Singapore and Fukuoka, are innovating ways to support independent living and quality care for growing elderly population. Typical solutions enable monitoring, protecting and supporting the elderly in daily life. In addition, the elderly's agency in human-machine interaction has to be understood.



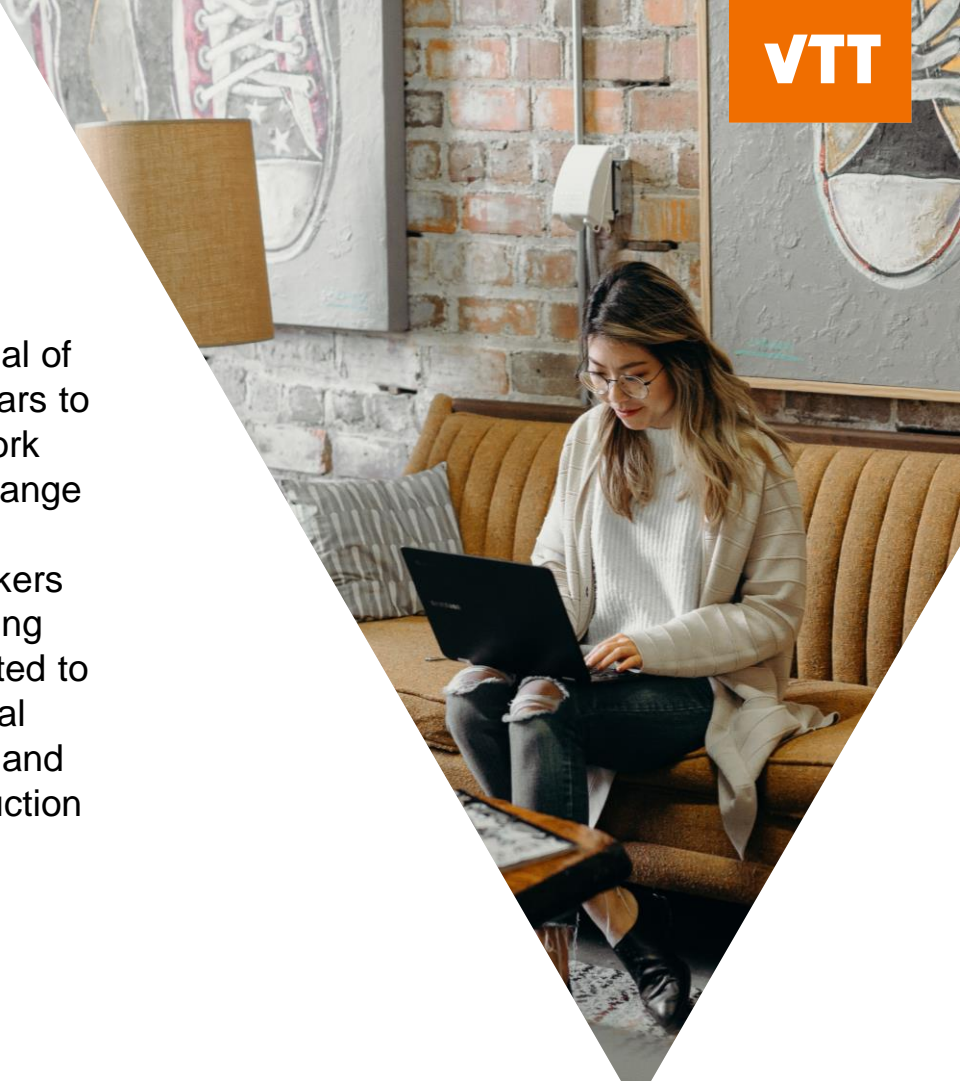
Energy prosumers

“Prosumption” merges production and consumption. Energy prosumers both consume and produce energy, and thus consumers are stated to become partners in business. Simultaneously, consumers start to expect systems and processes that enable this transition. This will require seamless grid integration (e.g. weather models, automated grid scale energy storage systems), reliability improvements in power supply (e.g. predictive analytics, augmented reality), cost efficiencies and consumer centricity (e.g. smart payment solutions).



Hybrid work solutions

In the late period of the pandemic, “the new normal of work” is emerging. The most likely scenario appears to be hybrid work, a flexible combination of office work and remote work. Buildings and areas need to change to meet the evolving needs of the workforce and society in general. The expectations of office workers have changed based on their experience of working from home. However, this opportunity is also related to the on-going changes in a wide variety of industrial work enabled by remote connections, operations and shared digital tools in new areas, such as construction industry.



Recommendations for using foresight in user-centric city development

- 1) **Identify the lead users of your city**, those who adopt new behaviours first. Co-develop solutions with them and understand their perspective.
- 2) **Build a systematic and continuous foresight model** for detecting signals, trends and risks related to cities.
- 3) **Bring together a broad range of stakeholders** in networked foresight work.
- 4) **Communicate the results in an engaging way**, both internally and externally.
- 5) **Ensure that the foresight work contributes to decision-making** by creating a relevant, plausible and strategic forward-looking view.

Thank you!

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