Cities of Things—7 years later
2-pager as background for expert interviews

In this document, I give a short overview of Cities of Things' path since 2017 (page 1), and an overview of the Cities of Things manifesto as formulated around the start of the foundation in 2021, and my thoughts on the current state. This can serve as a starting point for the interview..

Iskander Smit, November 2025

Six Stages in Seven Years of Cities of Things

I divide our activities into six stages. Some occurred simultaneously; others have concluded. Here are brief explanations.

Stage 1: Foundational Research (2018–2021)

Cities of Things began as a research topic, “partnerships in cities of things (PACT),” proposed by Professor Elisa Giaccardi, who was then leading the Connected Everyday Lab at Delft University of Technology's Faculty of Industrial Design Engineering. Iskander Smit was invited that year to serve as a 4TU Visiting Professor, and together we developed the research program. Two postdocs were appointed through collaboration with the AMS Institute: Maria Luce Lupetti and Nazli Cila (part-time). By the end of 2018, this resulted in a NordiCHI paper, “Near Future Cities of Things: Addressing Dilemmas through Design Fiction.” We also created a workshop method tested at multiple conferences, documented in “Envisioning and Questioning Near Future Urban Robotics."

Stage 2: Delft Design Lab (2019–2021)

To deepen and diversify research and application, the Delft Design Lab was launched in 2019, consolidating master’s graduation projects under the Cities of Things framework. Approximately fourteen students completed projects over three years. An overview is available on the Cities of Things website. Additionally, we commissioned projects for minor courses at TU Delft, Rotterdam University of Applied Sciences, and Amsterdam University of Applied Sciences.

Stage 3: Applied Projects: Collect/ Connect (2021–2023)

In 2021, we concluded the Delft Design Lab and established the Cities of Things Foundation. Our goal was to continue research and develop insights through living labs. The first was a collaboration between Amsterdam and Munich. Together with Springtime Industrial Design, we developed the Connect/Collect Hub concept to engage neighborhood social fabric via orchestrations of autonomous objects. This is connected to a RAAK research program focused on neighborhood logistics. We were unable to secure a sponsor for a neighborhood hub, so the concept remains a learning experience.

Stage 4: Civic Prototyping (2022–present)

Alongside the Amsterdam living lab initiative, we launched Cities of Things LAB010. Supported by the Municipality of Rotterdam and in collaboration with Rotterdam UAS and the Civic Prototyping Lectorate, we began practice-oriented research. The Wijkbot (Hoodbot) platform was developed to test citizen relations with city robots, in a two-year partnership with Afrikaander Wijkcoöperatie and various student projects and conference workshops. It resulted in a dedicated chapter in the NADR book (2024) and has been featured in other papers. Wijkbot was included in Handboek Publiekwijs (tools to help journalists amplify citizens' voices) and the Ministry of Interior Affairs’ Living Labs portfolio.

Stage 5: Speculative Design and Generative Things (2024–present)

In 2024, in partnership with ThingsCon and the Master Digital Design program at HvA, supported by Amsterdam750, we developed a vision of “generative things”—the merging of physical objects with generative AI. “Things with agency” has been part of Cities of Things since the beginning, but LLMs made it more practical and understandable. We organized an exhibition and a speculative design workshop, delivered from Dutch Design Week to ThingsCon.

Stage 6: Things as Systems (Immersive AI) and Design for Collectivity (2024–ongoing)

The concept of “things as citizens” remains central. As generative, agentic AI becomes integrated everywhere, we anticipate it will inhabit the physical environment, leading to more immersive AI within Cities of Things. Initial ideas were shared at the ThingsCon RIOT publication and conference presentations. The idea of things as citizens also inspires our research into Civic Protocol Economies with the Amsterdam UAS Civic Interaction Design research group.

These fluid assemblages raise new questions about human-technology relations, particularly embodied interactions—key themes in our upcoming research roadmaps.

Manifesto of Cities of Things

When we started the Cities of Things Foundation in 2021, we published a manifesto. We have since revisited it and added brief explanations to its key points.

https://citiesofthings.nl/about/cities-of-things-manifesto/

Intelligence is defined by the assemblage of objects

The core belief of Cities of Things is that connected objects, machine intelligence, IoT, and AI have their largest impact at the ecosystem level. The impact arises not from single objects but from the systems that shape urban life. A city's distinctiveness comes from the creative connections among its people and the serendipity those connections enable; the same resourcefulness emerges when humans and things are connected.

Cities of Things are defined by interactions and systems of things

Connections drive the creative intelligence that emerges and feeds back into the ecosystem. A city of things is not made up of separate nodes but of systems of nodes. Cities of Things captures interactions and both emerging and existing systems, and offers tools to map these infrastructures and make them actionable for understanding and design.

With our Robo-perspective kit and living labs, Cities of Things provides tangible ways to build a dialogue with citizens about the interactions they seek with agentic things as fellow citizens in their neighborhoods.

Relations shape the new infrastructure; relations over nodes

To make sense of objects, things, and humans, we need sensing elements. Data flows from nodes into pictures of systems, activities, responses, and interactions. The Cities of Things infrastructure is shaped less by individual nodes than by the activities and, above all, the relations that define the character of the infrastructure and the ecosystem.

Relations also characterize the actors in the network. Raw, static data exists, but it is not sufficient to understand or leverage Cities of Things. We need new ways to describe cities: capture relations and design for them. Consider how DAOs are built.

Respect the non-human contributions, design for humans

"Things as citizens" is a provocation—and a useful one—if we want to leverage relations as the building blocks of Cities of Things. Actor-network theory inspires us, but we speak of "things" rather than "objects" to understand nonhuman actors: things carry meaning and context and possess a form of agency.

At the same time, we center human perspectives. We are not proposing systems of self-organizing things that outrank humans. We respect things as active partners and value their unique characteristics.

Share goals with non-humans; co-perform to reach them

Regardless of the framing—objects, things, products—we must move beyond treating things solely as tools for human benefit. Real partnership means shared goals that maximize collective outcomes. Co-performance guides Cities of Things toward inclusive design, where things are stakeholders too.

Predictive knowledge is part of the interplay of human and non-human collaborators

Data flowing through human–nonhuman urban ecosystems describes relations. It should not merely mirror the present. Interactions draw on knowledge from the past and anticipations of the future. Predictive knowledge—generated by comparing similar situations across places and contexts—becomes part of the interplay, shaping contexts and even the ingredients of services.

Empower the citizens, commit to societal impact

Cities of Things aims to help make cities more liveable, sustainable, inclusive, and vibrant.

Find all about Cities of Things

citiesofthings.org
hoodbot.net / wijkbot.nl
YouTube
Instagram
LinkedIn

Publications

Lupetti, M. L., Smit, I., & Cila, N. (2018, September). Near future cities of things: addressing dilemmas through design fiction. In *Proceedings of the 10th Nordic Conference on Human-Computer Interaction* (pp. 787-800). https://dl.acm.org/doi/abs/10.1145/3240167.3240273

Lupetti, Maria & Cila, Nazli. (2019). Envisioning and Questioning Near Future Urban Robotics. https://www.researchgate.net/publication/336463003_Envisioning_and_Questioning_Near_Future_Urban_Robotics

Jaskiewicz, Tomasz & Smit, Iskander (2024). Between Experiments Leveraging Prototypes to Trigger, Articulate, and Share Informal Knowledge https://www.taylorfrancis.com/chapters/oa-edit/10.1201/9781003491484-13/experiments-leveraging-prototypes-trigger-articulate-share-informal-knowledge-tomasz-ja%C5%9Bkiewicz-iskander-smit

Scaffolds of Imagination: Partnering with AI-image generation in Civic Prototyping (Tomasz Jaśkiewicz, Iskander Smit, Peter van Waart, Manon Mostert van der Sar, Evin Wijninga), 2025 https://nadr.nl/publications/utopian-or-dystopian-futures/

Smit, Iskander, The Alienating Consequences of Things That Predict, State of Responsible IoT (2019) https://thingscon.org/wp-content/uploads/2019/12/RIOT19_Small-Escapes.pdf

Guo, P., Smit, I. (2022). Towards an Active Predictive Relation by Reconceptualizing a Vacuum Robot: Research on the Transparency and Acceptance of the Predictive Behaviors. Springer, Cham. https://doi.org/10.1007/978-3-031-17618-0_18

Smit, I. (2025). Ubiquitous immersive relations with generative things. In RIOT 2025, State of Responsible Tech – Generative Things (pp. 31-35). Stichting ThingsCon Amsterdam https://thingscon.org/publications/riot-2025/riot-2025-ubiquitous-immersive-relations-with-generative-things/

https://citiesofthings.substack.com/

Videos/animations:

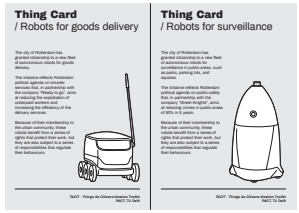
Introduction to Cities of Things for Living Lab Creative Embassy Amsterdam-Munich - October 2021
https://www.youtube.com/watch?v=8YAFgjU81qs

Hackathon Cities of Things LAB010 - April 2022
https://www.youtube.com/watch?v=3hlQxjEmfqk

Exhibition Generative Things - animation explainer June 2024
https://www.youtube.com/watch?v=3sg8ypgVie8

Near future Cities of Things, illustration Maria Luce Lupetti

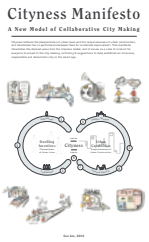
cities of things hood bot

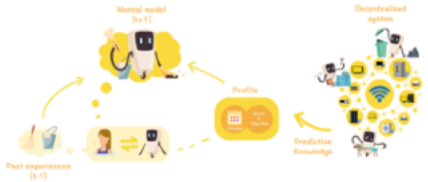


Workshop canvas TaCIT,

Hackathon Cities of Things LAB010

Co-design Afrikaanderwijk

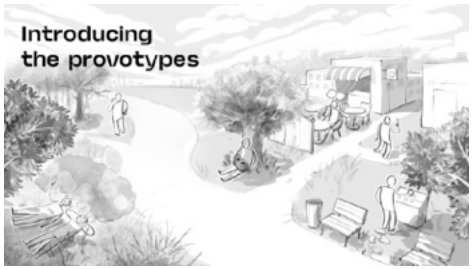




Graduation projects Sen Lin, Peicheng Guo

Workshop canvas Cities of Things Hoodbot

Fieldlab Cities of Things AMS-MUC, rendering by Springtime



Animation Exhibition Generative Things, by Lisa Laverman

Proposal interactive installation swarming hootbots