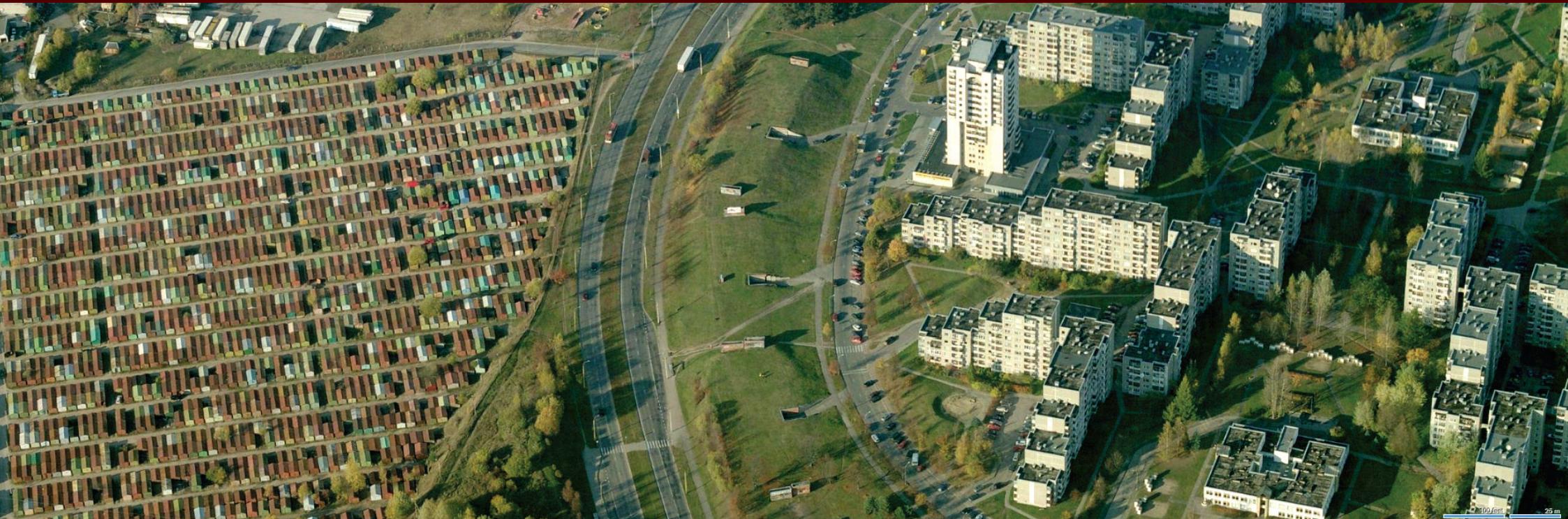


# garage against the machine



to empower communities through software  
transforming garage cooperative sites  
into self-organized districts  
animated by adaptive digital architecture...

to reveal and preserve  
their unintentionally  
revolutionary  
urban essence

Vilnius, 1986...

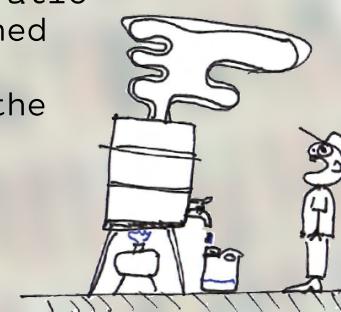
The first major wave of expansion of garage co-operatives takes place in Pašilaičiai district, Vilnius, Lithuania.

1986



Despite the original temporary plan for them, garage sites served as havens for people and their idiosyncratic predilections. Garage sites are far more than abandoned car sheds. They host a variety of emergent creative, entrepreneurial and social activities, ranging from the illicit to the mundane.

The generic garage sites survived like cockroaches... clinging to life in localised pockets of the urban fabric - a residual legacy of Soviet-era planning.



2023



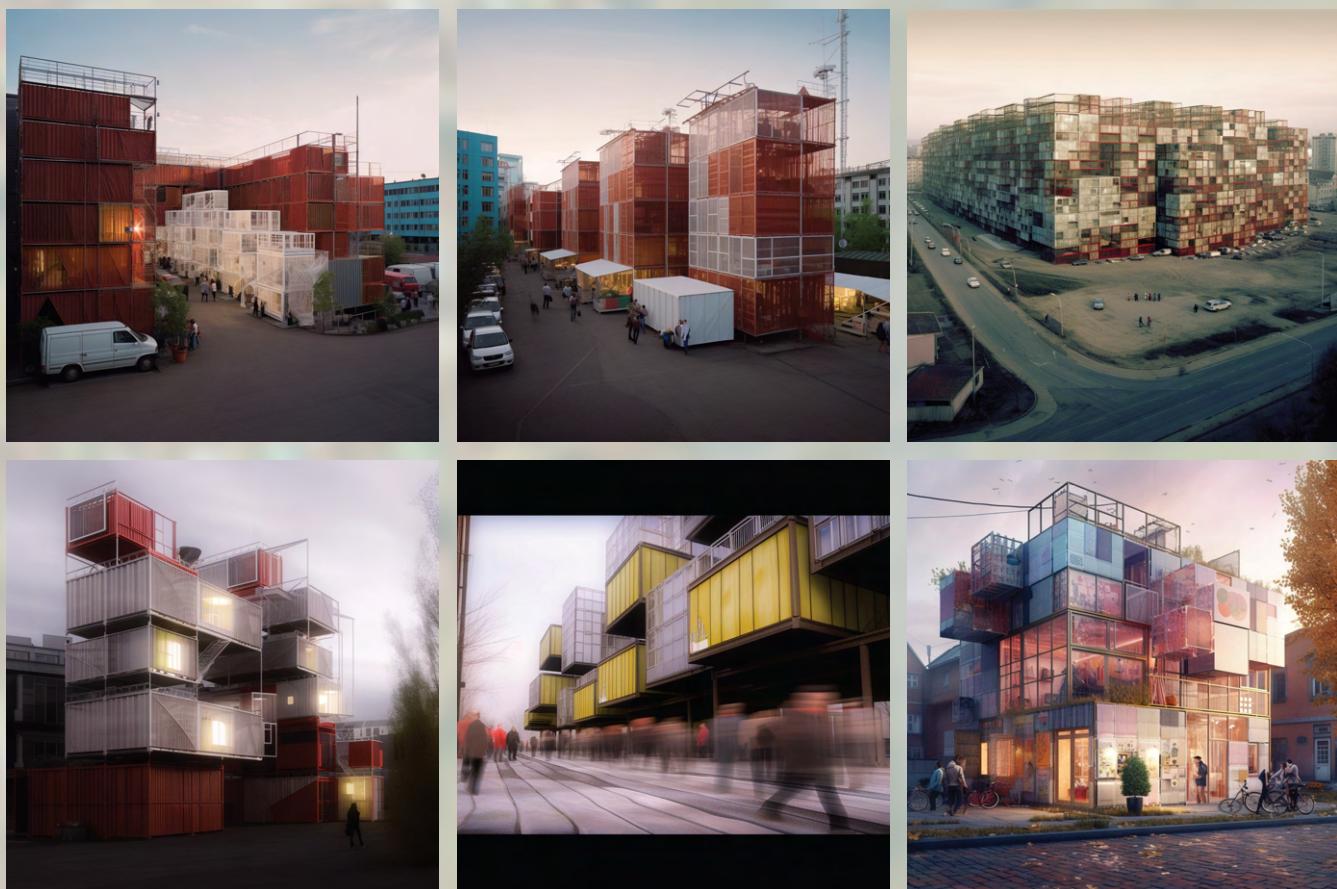
Time marches on... and by 2023, the capitalist urban planning machine threatens the complete removal of garage sites and their cooperatives in Vilnius; an emergent form of life that never quite reached its potential. By 2025, Vilnius' garages will be gone.

# proposal

Give life to a self-provisioning autonomous commons entity (SPACE) – an adaptive system which manages common-pool land allocations using EIP-6551: Non-fungible Token Bound Accounts (TBA).

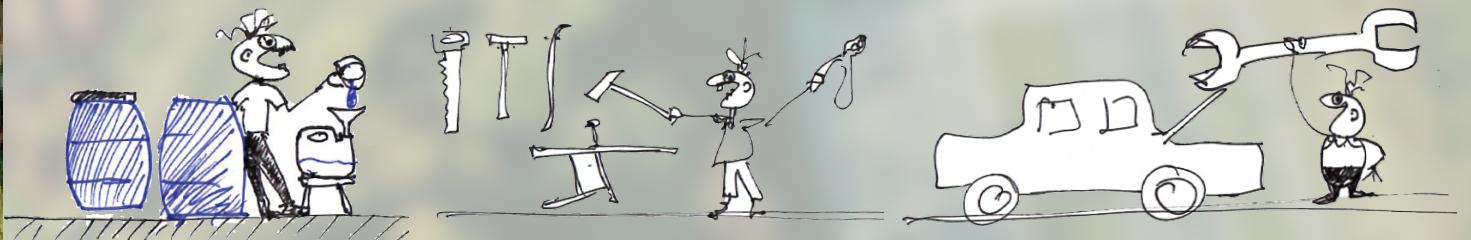
- TBAs are used to represent unique garage sites, enabling them to act as autonomous agents with their own intent.
- TBAs are also used to provide account abstraction for human tenants (commoners) who inhabit and steward the sites.

In other words, all agents (human and autonomous) are represented by EIP-6551: Non-fungible Token Bound Accounts, and they work together with their differing motives to negotiate the survival and thriving activity of the commons inside the market-driven urban environment. Garage co-operatives remade as SPACEs... born to outlive the machine.



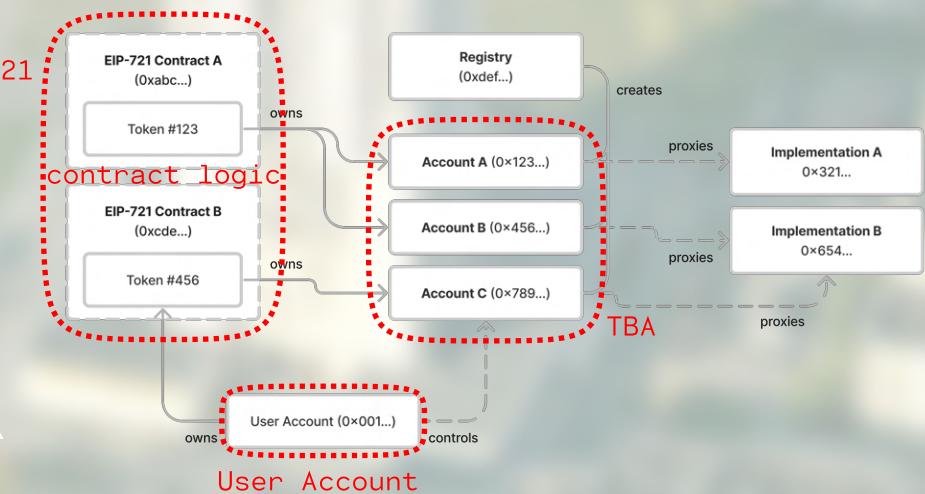
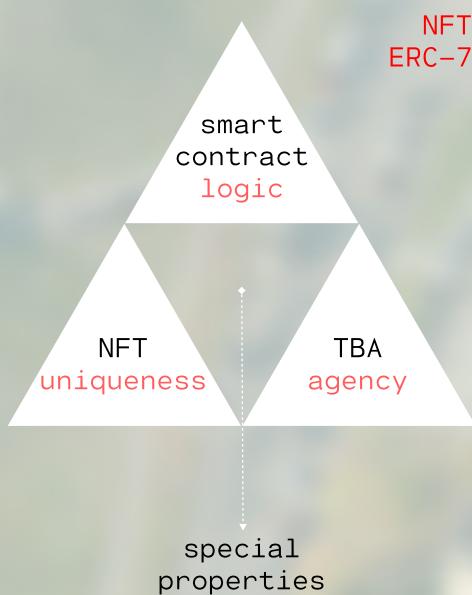
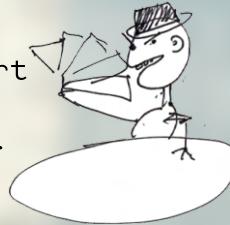
Participate in HackFS over the coming 2.5 weeks June 2 - 21, 2023.

Develop an EIP-6551 implementation to represent real-world garage units and human tenants, enabling a collection of co-operatively held garages to manage itself by delegating units to tenants via a commons-oriented economic framework. Use Unity and MUD as an interface to engage with the SPACE via the OpenStreetMap Overpass API



# Schematic

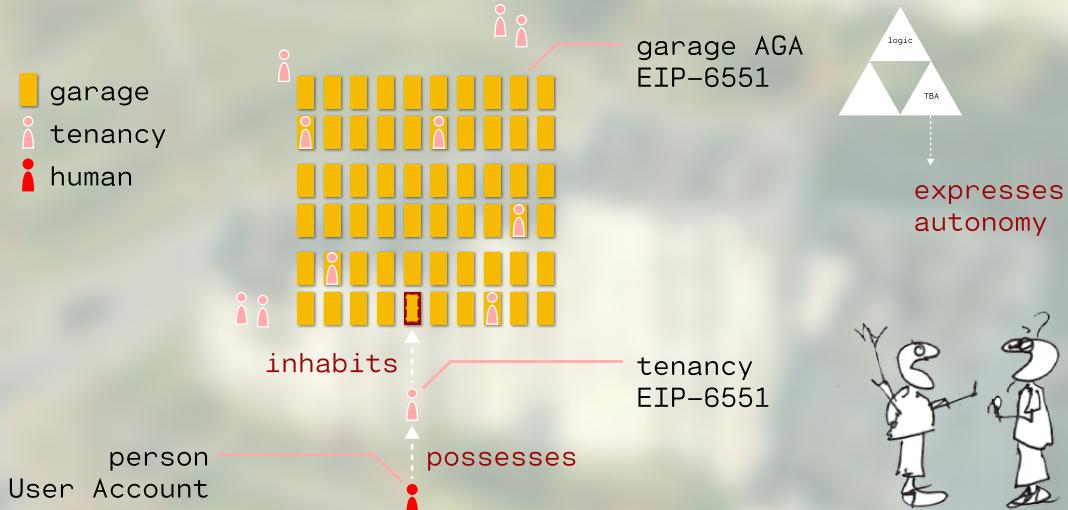
It is the relationship between ERC-721 tokens (NFTs), their smart contract logic, and the token-bound accounts (TBAs) which the NFTs possess that give EIP-6551 its special combined properties. I.e. they are able to represent unique assets, which possess logic, and which express their agency to act on that logic



EIP-6551 relationship between ERC-721 tokens, ERC-721 token owners, token bound accounts, and the Registry

As mentioned, there are two main use-cases for EIP-6551 TBAs in this project. We will use them to represent:

- Autonomous Garage Agents (AGA)
- Tenancy



## 1. Autonomous Garage Agents (AGA)

- Within each AGA's EIP-6551, the ERC-721 (NFT) represents a unique garage unit, and the TBA it possesses enables it to act autonomously towards its intentions. In this case, the AGA EIP-6551 is not owned by a User Account but by a Tenancy.

## 2. Tenancy

- Before any humans arrive, the AGA's are owned by vacant Tenancy EIP-6551's. You might think of these as empty chairs which hold space for a human to later inhabit. For Tenancy EIP-6551's, the ERC-721 (NFT) represents a Tenancy, and the TBA it possesses has permissions but remains dormant until a real human with a User Account takes possession of the Tenancy.
- By possessing (or being delegated) the Tenancy, the User Account inherits allocation of its possessed AGA and thus the human inhabits the garage.

# implications

TBA's grant affordances to a SPACE, yielding some important outcomes:

- TBA's enable Autonomous Garage Agents (AGA) to represent themselves and the needs/interest of the commons itself. This could include maintenance, management of tenants, or more advanced logic
- A SPACE can be imbued with self-provisioning logic to dynamically adjust itself towards more valuable spatial relationships between units and tenants, and to pursue other ecosystem objectives for the SPACE as a whole – imagine expansion of the housing supply into volumetric space for example... or acquisition of more common land
- Easy onboarding for human agents to a legible pre-existing shell structure via account abstraction. Tenancies exist independently of tenants who ultimately inhabit them. They can possess attributes and permissions. In essence, the org structure of the commons can be set up with identities, roles, responsibilities before anybody comes to inhabit and animate the SPACE
- A SPACE can delegate allocation rights rather than private property rights (ownership) over its units to human agents and return allocation rights back to the commons
- Since Tenancies own the land (like a community land trust); even if tenants come and go, the common pool assets remain in the commons
- Commoners can therefore steward or leave the SPACE dynamically, without exposing the commons to private property enclosure, rent-seeking, misallocation, nor systemic upward price pressure prevalent in capitalist market economies for land
- Moreover, and significantly, by encapsulating a SPACE or commons with a careful interface, the commons itself is immune to such deleterious phenomena, which are the direct result of market forces acting on private property. A commons may interface with a market economy, without being corrupted by it, yielding the potential to nucleate an alternative macro-economy within the prevailing one (ask author for details).
- SPACES may prove a tenable avenue towards structurally affordable housing. This implies a fundamental shift for political economy.

