*Disclaimer: This is an invite-only version of the RealEstateCore ontology. It is work-in-progress. Improvements and comments are most welcome.*

**RealEstateCore introduction**

Ever increasing amount of data is being generated by and within buildings. Several different systems exist to control climate, lighting, access control, etc. not to mention all the new data sources that emerge from IoT-devices. This gives us vast amounts of heterogeneous data that we need to organize in order to get cost efficiency and enable large scale operation.

We use semantic web technologies combined with a business-usefulness-approach and the result is the RealEstateCore.

Read more about the RealEstateCore ontology here [clickable link to Core].

**Modules to make it customizable**

The RealEstateCore consist of a set of modules and controlled vocabularies. The modules developed in current version are:

* Core (with common terms and properties, e.g. time, units, agent)
* Building (e.g. building type specific vocabularies)
* Device (e.g. communication-tech specific vocabularies and classes).

The Core can be seen as an upper ontology for the domain ontologies. This makes it flexible and easy to add more domain ontologies in order to expand the usefulness of the RealEstateCore.

*During Q2-2018, the modules AccessControl (door locks, etc. ) and Energy (consumers, producers, storage, prioritizations, etc.) are expected to be added.*

The purpose of using different domain ontologies (Modules) is to facilitate customization for each user, e.g. a fictitious *RetailPropertyOwner* uses the Core and Device as they are, takes the Building and modifies it to reflect the type of business that they do (e.g. a customized version for a specific use in a building of ModBusTCP communication).

**What is the Decive ontology used for?**

The Device ontology is a module that complements the Core ontology with vocabularies for different types of communication systems and can be extended or modified to suite individual needs.

The current version of the Device ontology module consists of communication types for ModbusTCP/RTU, KNX, LoRa etc. Users of the RealEstateCore are encouraged to add your own customization of communication specifications.

Use the Device ontology module to describe things related to the buildings machine-to-machine communication.

[image: modules\_highlite\_device]

*Note for this version: The mappings to other standards are expressed as property annotations (e.g. "comparableIFC") and will be better expressed in this documentation in upcoming revisions.*