

# KTH LIVE-IN LAB

## TESTBEDS FOR ACCELERATED INNOVATION



### Platform handling multiple Testbeds

Testbed KTH is designed with flexibility and adaptability in mind. It is designed so as to be able to incorporate almost any product or service imaginable, and together with other solutions make one integrated real-life trial system. All the KTH Live-In Lab testbeds are open for all who wish to conduct research and tests on products, services or processes within an area that has bearing on the real estate and construction sectors. Research on new business models and collaboration structures are also possible.

### Testbed KTH

Testbed KTH is located in a building permit free residence area in one of Einar Mattsson's three plus-energy buildings at KTH Campus Valhallavägen. The premises are a total of 305 sqm distributed on approximately 120 sqm living space, 150 sqm service space and a project office of about 20kvm. Within Testbed KTH, different apartment configurations will be rebuilt on an annual basis, and KTH will rent these out to students who apply to stay in the test apartments. The testbeds are extremely flexible in terms of geometry and installations. The testbeds also have their own solar cells, their own boreholes with the possibility of replacing the collector and soon also their own wind turbines. **Read more on the separate Poster Testbed KTH**

### Testbed EM (Einar Mattsson)

Testbed EM consists of 305 student apartments and is located at KTH Campus Valhallavägen. The testbed consists of three buildings with concrete exterior wall elements. The size of standard apartments is 19.5 sqm and all apartments have their own kitchen and shower room. The buildings have a shared laundry room and a post room. The buildings are heated by preheated supply air. Hot water and heat are generated via heat pumps connected to 12 boreholes with a total length of 3600m, and several boreholes have fiberoptics installed for temperature measurement longitudinally. The roof surfaces are covered by 1150 sqm of photovoltaic panels. There are a total of 50 sewage heat exchangers installed, both vertical and horizontal. Extract and supply air can be adjusted in all apartments. Hot water, electricity, CO2 and light are measured in all apartments. Regulation and control systems are possible to influence for research purposes. The buildings are plus energy buildings.

### Testbed AH (Akademiska Hus)

Testbed AH is the new Educational Building at KTH Campus Valhallavägen. The building is equipped with hundreds of sensors, measuring everything from relatively common values such as electricity, water, airflow and CO2, but also moisture content and movements in different parts of the building. The building is in operation and generates a great amount of data that can be used by KTH Live-In Lab.

### Testbed NCH (Nordic Choice Hotels)

Testbed NCH consists mainly of hotel rooms at Hotel Hobo at Brunkebergstorg in Stockholm, but also includes the possibility of accessing conference facilities and the restaurant. The building is flexibly structured for instrumentation depending on which research and development projects are desired. Thanks to the fact that the building is operated as a hotel and thus has a high rate of tenant turnover, Testbed NCH enables a high test frequency.

### TESTBED KTH



### TESTBED EM



### TESTBED AH



### TESTBED NCH



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