



# The Inspektoren Residential Area

Work Package 4.1

Kalmarhem Ltd

## IT System

– Report –



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Kalmarhem Ltd - Scandiaconsult Sverige AB



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## **1. GENERAL**

The Inspektoren area constitutes a rather typical residential area from the post-war era. The area, now under the administration of Kalmarhem AB, was completed in 1956 and consists of five three-storey buildings containing in total 159 flats with a living area of approximately 7000 m<sup>2</sup>. The total land area amounts to some 15 700 m<sup>2</sup>. Kalmarhem AB has carried out a total renovation of the residential area.

All the basic consumption parameters and their respective environmental factors were measured within the framework of a particular measurement group with the aim of evaluating conditions in the area.

## **2. CONDITIONS**

### **2.1 Goals for the IT system**

In the planning stage of the refurbishment of the Inspektoren area it was decided that the IT system for the flats would be adapted to future connection to a broadband provider.

The goal was to install a system that was as flexible as possible so that it would not be limited to one provider or operating system.

## **3. INTERIOR ENVIRONMENT**

### **3.1 IT systems in the Inspektoren area**

#### **3.1.1 Earlier IT Systems in the Inspektoren area**

Existing installations in the Inspektoren area were very traditional.

A telephone system was installed with Telia as the network operator. One socket was located in the hall of the flats in the original standard when the flats were built.

The central aerial for TV and radio had one socket per flat, and originally had roof-mounted aeri-als. These were removed when the area was connected to cable television. Kabelvisionen was the network operator.

No systems for automation in the buildings existed.

#### **3.1.2 IT Systems in the Inspektoren area after refurbishment**

During the planning phase the decision was taken to update the buildings with the most flexible systems available. Flats should be able to be connected to a future broadband provider with an IP telephone system and Internet.

This resulted in a Kat 3 network for national telephone/broadband and a star network for aerial systems was installed.

The systems were connected in special telecommunication rooms in the basements in order to have sufficient space for future broadband equipment.

A new system was installed in the buildings with computerized operating and monitoring systems, surveillance system, alarm system, consumption statistics etc and with a connection to the main office at Kalmarhem.

Individual measurement of the temperature in flats as well as hot and cold water consumption are monitored through a separate comfort accounting system.

Junction boxes were installed in the flats for connection to future IT equipment.

Security for the tenants was improved by installing a new locking system for the entrance doors.

### 3.2 State-of-the-art flats

A Lexel IHC Control and monitoring system was installed in one of the state-of-the-art flats to show different levels of refurbishment.

The system was later installed in the other three state-of-the-art flats where a number of other new technical solutions were also installed.

The system is programmable and provides almost unlimited control of lighting, heating, ventilation and alarm systems. Lexel IHC has a smart infrastructure and it enables control, adjustment and adaptation as and when the need arises.

Control takes place using a low voltage system (24V) and all parts of the electricity network that are not in operation are inactivated. This provides a healthy electrical environment and improved safety, especially for children.

Here are some of the functions that have been installed:

- Isolators for cooker and certain sockets in the kitchen
- Night lighting in the bathroom and toilet
- Relay control of lighting in plant areas





## 4. DISCUSSION

The selection of installation systems in a refurbishment of the type in the Inspektoren area must be thoroughly discussed at the planning stage.

The development of the IT system was rapid and there was no real uniform standard or co-ordination, for example the broadband solution was not available.

The installation of the BUS system in the show flats and the state-of-the-art flats shows that change can take place easily but the cost of the system cannot yet be kept within the limits of a reasonable refurbishment budget.

Further studies and investigations should be carried out in order to follow up how the broadband solution, for example, is used by the tenants.

## 5. SUMMARY

IT systems will become an important part of communication: in this case between Kalmarhem and the flats but perhaps more importantly between the tenants and Kalmarhem. It will be possible to send information quickly to the tenants and the tenants can perhaps report faults, pay the rent and so on using this system.

IT systems will also enable improved security and safety with fire alarms and burglary alarms in the flats. The installation of security alarms will give older tenants the opportunity of staying in their flats for longer.

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