

# What our different IT-systems do and how they interact

Emanuel Bergsten, 2011-01-12

## The Big Picture

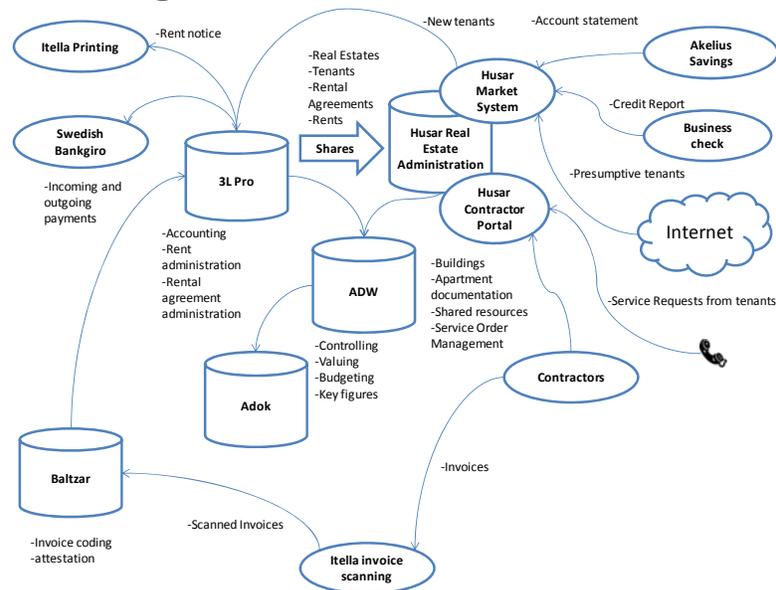


Figure 1, interaction map of Akelius IT. It shows how our different systems are connected

## Main Business Information System – 3L Pro

The base of all operations in Sweden and our main business information system is 3L Pro. 3L Pro is specialized in real estate administration including rent administration. At Akelius we use three modules in 3L Pro; rent administration, customer invoicing and accounting.

Rent administration manages all incoming rent and keeps track of all missing payments.

Customer invoices

With the customer invoice module all customer invoices are managed. These are all printed manually and sent from the Danderyd office.

Rent Administration

Rent notices are produced quarterly and sent by manual integration to the company Itella that prints and mails them.

Accounting

All accounting is performed by the accounting department in 3L Pro.

3L Pro is the base of the whole Akelius IT environment in Sweden. Quite a few systems are dependent on 3L to be able to function. Closest and tightest integrated of them is Baltzar, the in-coming invoice system.

### **Baltzar – incoming invoices**

Baltzar is used throughout the organization for coding and attestation of suppliers invoices. All invoices are first scanned and tagged with object number by the company Itella. After Scanning, all invoices are sent to Baltzar where each one is coded and attested according to Akelius rules. After completion in Baltzar all invoices are transferred to 3L Pro. The invoice's coding is imported to the ledger, and payments are set up for execution. Finally all payments are exported to a Swedish bank central, Bank girot.

### **Husar – Property Management**

Husar is our main real estate management system. This system manages all our apartments' maintenance and order management. Through this system our asset managers manage their properties. Husar is integrated with 3L Pro through a one way integration that supplies Husar with data from 3L Pro. Data regarding all apartments, parking spaces, commercial areas and other products is transmitted every night. All new, changed or cancelled agreements are sent immediately as they occur, together with related customers.

In the near future we will launch the next step evolution in this portal, this is that all work orders are made through this system. Then the asset manager can order a brand new bathroom or kitchen just by a simple order in Husar. The work order is then distributed directly to the entrepreneurs by the system.

Husar is the foundation of series of sub-systems; the main two are Husar entrepreneur portal and Husar market system.

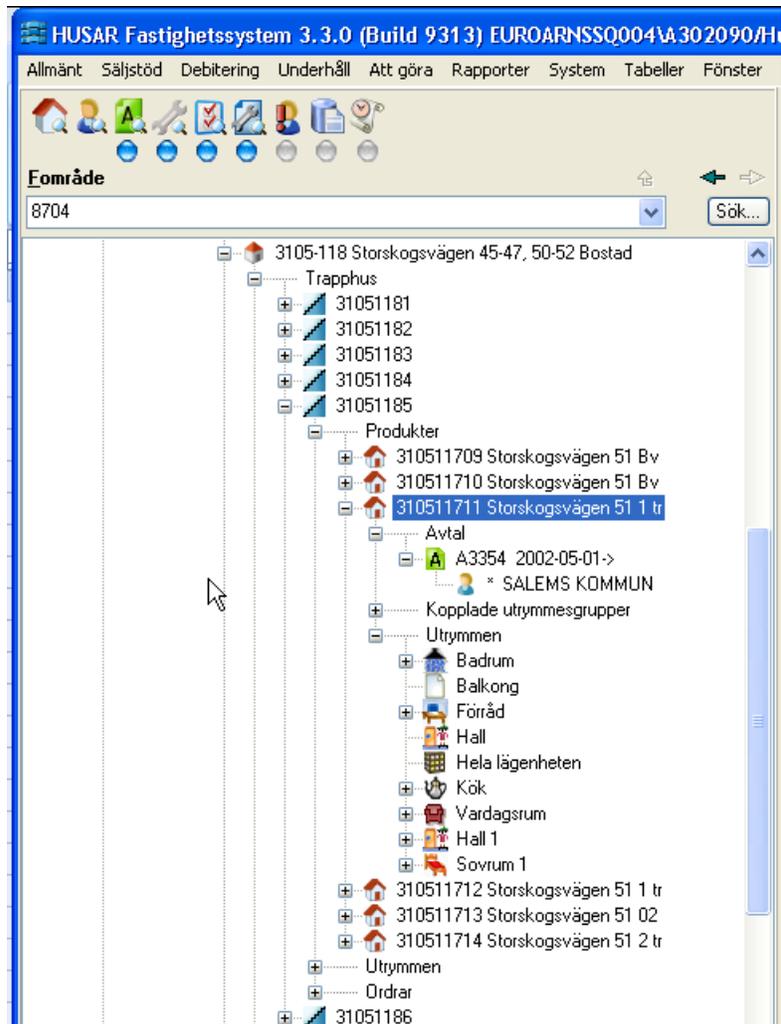


Figure 2, The Navigator of Husar Property Management System 3105-118 is one 31 apartment buildings on the property 3105 Storskogen 5. *Trapphus* means Stairwell, *Utrymmen* means spaces. All icons under *utrymmen* are different rooms in this apartment. *Avtal* is agreement and underneath is the customer.

## Husar entrepreneur Portal

This is the interface the external personnel use when working with our properties. At this interface our external contractors pick up orders and report back when completed. This interface is also used by external service desks that manage incoming fault reports from our tenants. Today we operate three different service desks provided by different companies.

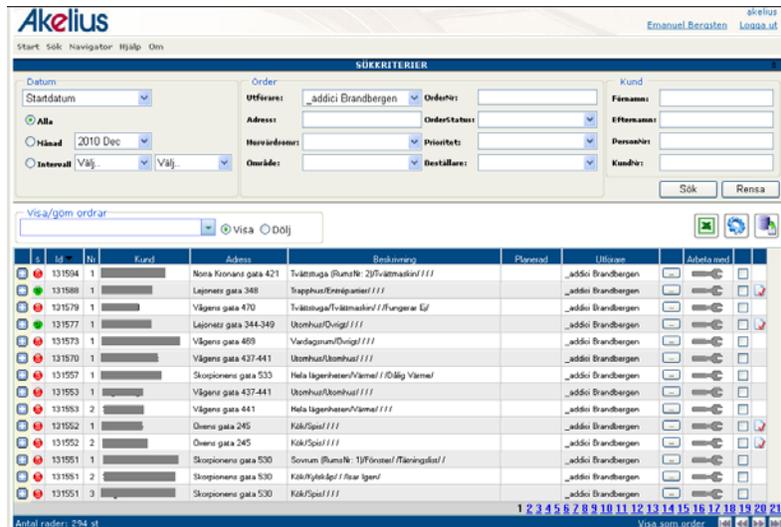


Figure 3, Husar Entrepreneur Portal

## Husar market system

Husar market system manages all the presentation of available apartments on Akelius.se. This is highly automated and supplies information around every published object, such as images from the house or surroundings. It automatically shows data such as the rent level, the size and type of apartment. The rent level is imported live from 3L Pro so that a change in the rate in 3L makes the rent change immediately in the market system. The only thing our personnel needs to add is a brief text describing what is unique regarding this apartment and if new pictures of the apartment exist.

Presumptive customers can register at akelius.se and set up a search profile and every time an apartment is published that corresponds to their search profile they receive an e-mail alert. They can then apply for the apartment via this system. Afterwards our personnel receive a list of all applications sorted in order by our rental policy. Applicants are also checked up by two integrated sub-systems, presented below; MegaSol and Business Check.

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Status	Produktnr	Tillträde	Område	Produkttyp	Adress	Boyta m2	Hyra	Sista anm.dag	Anmälda	Marknadsplats	Publ.vy
Inför Publicering	11531310	2011-01-01	Trelleborg	2 Rum och kök	Klostergränden 3	65	5394		0	Torget	<a href="#">Visa</a> <a href="#">Ändra</a>
Avslutad	11531213	2011-01-01	Trelleborg	3 RUM OCH KÖK	Klostergränden 5	82	7242	2010-12-29	18	Avslutad	<a href="#">Visa</a> <a href="#">Ändra</a>
Förslag	11541103	2011-01-01	Trelleborg	3 RUM OCH KÖK	Strandgatan 64	87	7484	2010-12-27	0	Torget	<a href="#">Visa</a> <a href="#">Ändra</a>
Inför Publicering	11541418	2011-02-01	Trelleborg	3 RUM OCH KÖK	Strandgatan 64	82	7112		0	Torget	<a href="#">Visa</a> <a href="#">Ändra</a>
Inför Publicering	11541232	2011-02-01	Trelleborg	2 Rum och kök	Östersjögatan 2	74	5854		0	Torget	<a href="#">Visa</a> <a href="#">Ändra</a>
Erbj. behandlas	11541357	2011-02-01	Trelleborg	2 Rum och kök	Östersjögatan 4	69	5780	2010-12-19	22	Torget	<a href="#">Visa</a> <a href="#">Ändra</a>
Erbj. behandlas	11541169	2011-02-01	Trelleborg	2 Rum och kök	Västerbrogränd 5	71	5357	2010-12-16	39	Torget	<a href="#">Visa</a> <a href="#">Ändra</a>
Inför Publicering	11541170	2011-03-01	Trelleborg	2 Rum och kök	Västerbrogränd 5	60	4633		0	Torget	<a href="#">Visa</a> <a href="#">Ändra</a>
Inför Publicering	11851002	2011-02-01	Västra Sorgenfri	1 Rum och kök	Rönnebygatan 24 A	51	4198		0	Torget	<a href="#">Visa</a> <a href="#">Ändra</a>
Erbj. behandlas	12051207	2011-02-01	Trelleborg	2 Rum och kök	Västergatan 14 C	76	7117	2010-12-19	8	Torget	<a href="#">Visa</a> <a href="#">Ändra</a>
Intresse	12051208	2011-02-01	Trelleborg	2 Rum och kök	Västergatan 14 C	76	7117	2010-12-27	3	Torget	<a href="#">Visa</a> <a href="#">Ändra</a>
Inför Publicering	12051305	2011-01-01	Trelleborg	3 RUM OCH KÖK	Västergatan 14 C	93	6920		0	Torget	<a href="#">Visa</a> <a href="#">Ändra</a>
Avslutad	12051307	2011-01-01	Trelleborg	2 Rum och kök	Västergatan 14 C	75	6001	2010-12-31	19	Avslutad	<a href="#">Visa</a> <a href="#">Ändra</a>
Avslutad	22251102	2011-02-01	Trelleborg	2 Rum och kök	Västergatan 24	67	5488	2011-01-10	25	Avslutad	<a href="#">Visa</a> <a href="#">Ändra</a>
Inför Publicering	22251103	2011-03-01	Trelleborg	2 Rum och kök	Västergatan 24	65	6016		0	Torget	<a href="#">Visa</a> <a href="#">Ändra</a>

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Figure 4, Husar Market System. This is a list of all the apartments in the publishing process. Status is where in the publishing process every apartment is, Område, Area is town and area in town, Anmälda is Applicants.

At our website we publish around 6,000 apartments every year with an average of around 44 applicants per apartment. After being published the person responsible for letting can choose, according to our letting policy, which applicant to offer the apartment. The system automatically grades the applicants by: 1. Credit report, 2, if they have a deposit at Akelius Spar, 3. whether they are currently customers, and finally salary. Of course our personnel do other checks as well. For example Previous landlords, employer or other references.

Användar-ID Personnr	Efternamn Förnamn	Prio. Kategori	Via	Kredit- upplysning	Årslösn	Intresse Mottogs	Ge Erbjudande	Erbjudande Skickat	
██████████	██████████	Brons Extern	E: post	Till BC	338.000 kr	2010-12-08 17:51:58	2010-12-15 08:23:34	2010-12-15	<input type="button" value="Ja"/> <a href="#">Till Åtval</a>
██████████	██████████	Brons Extern	E: post	Till BC	228.000 kr	2010-12-08 21:20:15	2010-12-15 08:23:25	2010-12-15	<input type="button" value="Ja"/> <a href="#">Till Åtval</a>
██████████	██████████	Brons Extern	E: post	Till BC	216.000 kr	2010-12-10 10:46:50	2010-12-15 08:23:19	2010-12-15	<input type="button" value="Ja"/> <a href="#">Till Åtval</a>
██████████	██████████	Brons Extern	E: post	Till BC	211.200 kr	2010-12-08 19:14:02	2010-12-15 08:23:13	2010-12-16	<input type="button" value="Nej"/> <a href="#">Till Åtval</a>
██████████	██████████	Inget sparande Extern	E: post	Till BC	300.000 kr	2010-12-09 13:07:06	2010-12-15 08:23:40	2010-12-16	<input type="button" value="Ja"/> <a href="#">Till Åtval</a>
██████████	██████████	Inget sparande Extern	E: post	Till BC	240.000 kr	2010-12-13 07:00:16	2010-12-15 08:23:29	2010-12-15	<input type="button" value="Ja"/> <a href="#">Till Åtval</a>

Figure 5, Husar Market System, with this interface our personnel selects who to offer the apartment

## MegaSol

MegaSol is the banking system used by Akelius Spar. At Akelius Spar you may deposit up to 50,000 SEK. By depositing money here you gain priority when applying for an apartment at Akelius Sweden. MegaSol is integrated with our market system by an integration built around the Swedish personal number<sup>1</sup>. Every time you log on to our market system it sends a request consisting of your personal number to MegaSol, which responds

by giving a number between zero and three. Zero translates to a person without any deposits. Three is person with the highest level of deposits.

### **Business Check**

Business check is a supplier of credit reports. They supply information about whether there are any complaints about the individuals or business' punctuality in paying bills. This concerns both private bills and government taxes. They also have information about your declared income, official postal address, if you own any properties and if you are engaged in the Board of any kind of business or organization. This service is fully automatic and integrated in our market system so that our personnel gets "a green light" if the applicants credit status is good. Also this service is built around the personal number.  
Akelius Data Warehouse – ADW

### **Predator**

Predator is a system what handles debt collection. It is integrated to 3L Pro.

### **ADW – Akelius Data Warehouse**

ADW is a internally created system used in mainly three roles: Controlling, budgeting and valuing properties. Controlling is done by several reports made out of harvested data from 3L Pro. The system consists of a wide range of reports extruded from 3L. But today work is being conducted aimed at ADW to start harvesting data from more systems. In first place is Husar with sub-systems. One goal is to get the number of applicants of every published apartment into our property valuing reports

### **Adok**

Adok keeps the corporate formalities like annual reports of all our subsidiaries. Today it is only integrated with ADW to get our legal and organizational structure. In the future we might address documents from this system from all over the environment.

## **Stand alone systems**

### **Kapell**

Kapell is a system that produces company corporate formalities for all subsidiaries in the Akelius group in Sweden.

### **HyperDoc**

HyperDoc is a drawing database utility that manages digital drawings. This system is able to integrate very tightly into all

the Husar programs. With this software our personnel could access the right plans and drawings whenever requested from Husar. Furthermore, this system can present plans for all apartments in the Husar market system at the same time as entrepreneurs can access plans and drawing of all houses through the Husar entrepreneur portal. This program also supplies including a complete version history, for all the plans and drawings contained within it.

### **Hogia Personnel**

Hogia is our personnel system in Sweden used to keep track of salaries, overtime, vacation days and so on. This will be able to integrate with the different main business information systems in the future, but is not today.

### **CRM**

CRM is a treasury management system used at the financial department.

### **Property Controlling Systems**

We have a few systems all aimed at controlling ventilation systems, heating systems. They basically are all very alike, but it depends on which system is installed at the property.

The three different systems we use today are: Bastec, T.A.C and Diana.

### **Access and reservation systems**

Today we have three different access and reservation systems. Also these systems are very similar to each other and are bound to the equipment installed at our houses. These systems are in line for integration with our “my pages”, probably during 2012. With this integration it will be possible for tenants to reserve time in shared laundry rooms while logged in to our website. The three systems we have today are: MultiAccess, RCO and QT-systems.

### **Key management**

At most offices today we keep track of our apartment keys using binders filled with papers about who has signed out every key. But in a couple of cities we have two different systems to keep track of all keys: Assa Performer and Key Control

### **Base platform**

Our base platform consists of Microsoft Office including Outlook. These do not have official integration with other systems, but of course widely used to produce different calculations and reports, often based on extracted data from others systems. In the Base Platform of course Mail and Internet Explorer are included.

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<sup>i</sup> Personal number

In Sweden everybody is assigned with unique ten-digit number by birth or when gaining residence. The first six digits are the birthday, second two used to represent in which hospital or region the birth took place, the ninth is even for women and odd for men. The tenth and final digit is a checksum that is used to check whether it is a correct personal number. This is a very strong identity used by all Swedish authorities and found on almost every agreement, and sometimes even on receipts from shops.