Good morning ladies and gentlemen.
May name is Tanja Kimmel. I'll be guiding you through this presentation and tell you a few things about the brand new central art depository of the Kunsthistorisches Museum Wien.

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outline of talk

- Introduction
- Initial situation of storage depositories
- Project Teams „Building & Relocation“
- Project goals and milestones
- Central Art Depository (backround information, building components, air conditioning)
- Relocation of the collections (planning, preparation, implementing)
- Storage and technical equipment
- Current operations

Today we will be looking at the different stages of the project noteably the contrusction and storage requirements, the advancement of the different steps, how we managed to transfer the items and how they are stored now.

Then I will go into further detail on the specific subject of current operations and the work of a conservator/restorer.

The Kunsthistorisches Museum Wien is one of the largest fine arts collections worldwide, comprising the Kunsthistorisches museum itself, the Austrian Theatre Museum as well as the Museum of Ethnology (Welt Museum Wien), all placed in Vienna.

The Museum was the first in Vienna with an Integrated Pest Management (IPM) concept and a nitrogen chamber (since 1998).

In some collections there is a monitoring over 10 years.

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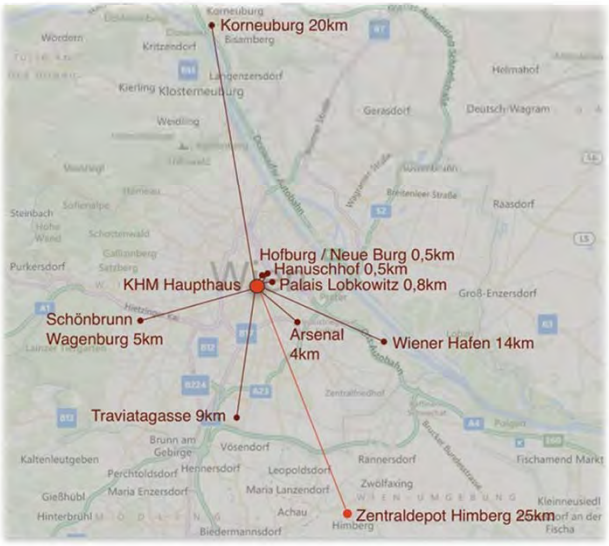
initial situation



- 9 different storage sites in and around Vienna
- Relocation of ca. 1 million art objects
- From 8 collections and 3 archives

In September 2009 the bord decided that it was time to inventory and centralize the more than 1 million art objects dispersed over 9 different locations in and around Vienna.

The main drive of this decision was to achieve savings and better stock control of the 8 collections and 3 archives involved.

Most of the rented storage space used until then was in entire need of renovation or other updating.

The Kunsthistorisches Museum wanted to create a comprehensive state-of-the-art location suitable for all objects in its collections.

We initiated the project in 2009 and we are now coming to an end in 2013.

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project goals

- To store objects in one central art depository according to the latest state-of-the-art
  (climatic condition, fire safety, security, hygiene, IPM, logistics, storage techniques)
- To meet storage needs over the next 30 years
- Decommission of all rented storage units by 31 December 2011
- Relocation of local storage units until 30 June 2013
- Optimized financial investments (max. project volume € 14 million)
- Optimized operating expences.

The new depot should meet the storage needs of the Kunsthistorisches Museum Wien over the next 30 years.

The project goals were noteably a single location with latest standards to get rid of rental obligations and to optimize the costs.

In the difficult economical context we did not only bear in mind the initial investment but also the subsequent running costs.

For the project we had a budget of 14 million Euro including the purchase of land and relocation costs, which is considerably low for a project of this amplitude.

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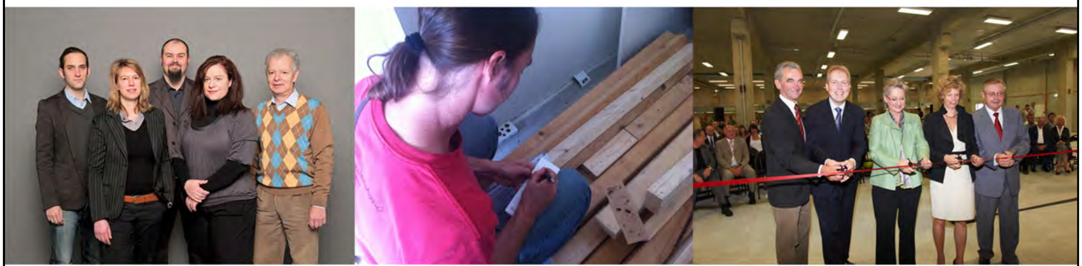
project teams

BUILDING:
- Project manager, representatives of curators/conservators
- external museum consultant, architect

RELOCATION:
- Project manager, representatives of curators/conservators
- 1 contact person of each collection/departements involved
- external museum consultant, external supervisor



In order to get where we are now 2 project teams were created,

1 for the conception and construction of the building consisting of 5 members

and the second one for all relocation aspects consisting of 6 to 15 members according to requirements.

We confided the special area of pest control to a specialised external consultant Mr. Pascal Querner.

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mile stones

BUILDING:	Ca. 20 months of palning and construction
September 2009:	Debut of project
October 2009 – February 2010:	Inventory and definition of requirements
November 2009:	Tender for architect
December 2009 – May 2010:	Search for building lot
June 2010:	Planing and building permission
June – September 2010:	Tender for contractors
October 2010:	**Start of construction**
October – December 2010:	Tender for storage equipment
End of May 2011:	**End of construction**
June – July 2011:	Building and storage equipment
6 July 2011:	**Grand opening**
By 31 December 2011:	Decommission of rented storage space

After an extensive period of planning and all necessary preparatory administrative steps, the construction of the building started on October 2010.

Despite the difficult weather conditions the building construction was finished after only 8 months.

On 6 July 2011 the Austrian Minister of Education, Arts and Culture - Claudia Schmied - together with the management and staff of the museum inaugurated the new central art depository in Himberg close to Vienna.

Then the really difficult part started - moving the objects.

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building

BACKGROUND INFORMATION:

Construction phase:	October 2010 – May 2011 (8 months)
Costs:	€ 8 million (building), € 1.7 million (furnishing)
Building area:	2,800 m^2
Effective depot area:	12,000 m^2 on 4 floors
Total area:	14,000 m^2 with 4 multi-functional restoration studios, a photo studio, areas fo packing/ unpacking of objects, quarantine and mould rooms, nitrogen chamber, delivery rooms

We had a total of 12.000 m2 on 4 floors to fill.

We are very proud to have the facilities to do everything for and around our art objects in one place.

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building

USE OF INDUSTRIALLY PRE-FABRICATED BUILDING COMPONENTS:

Facade segments:	Amoured concrete, including all openings (windows, doors, gates); concrete sandwich elements with cavity insulation (thickness 35 cm, k-value = 0,3)
Floor panels:	Pipe coils were inserted on location for concrete core activation– all floor panels can be used for heating and cooling – this leads to constant and stable temperatures /target value 20°C

To keep costs low we used prefabricated building components meeting all our needs, functionality was crucial in this construction.

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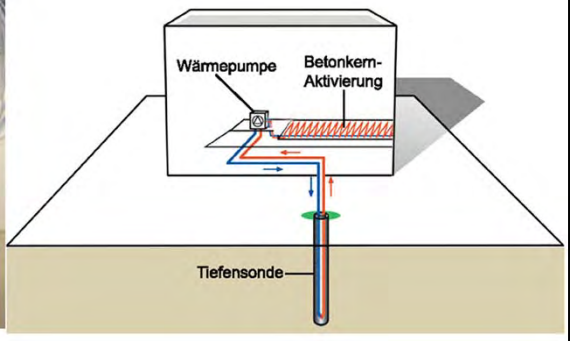
building

AIR CONDITIONING PLAN:
Recirculated-air operation

32 deep probes (each with a length of 100 m) were inserted until the strata of groundwater to use the geothermal energy keeping stable climatic conditions of 20°C and 50 %RH, delivery rooms



Instead of a fully climatised building it was decided to go with geothermal energy, offering the advantage of being more cost effective and less prone to disfunction.

As you all know art objects require a stable climatic environment.

For the new storage area we chose an average of 20 degrees Celsius and 50 per cent relative humidity suiting most objects.

The few items requiring specific storage climatic conditions, such as metal coins and bronze statues, are stored in seperat boxes providing less humidity of 40 %.

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climate

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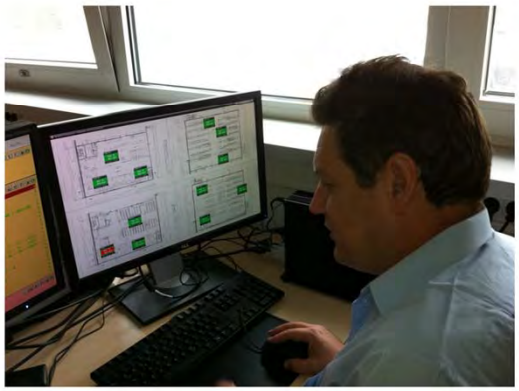

The climate is constantly monitored and any disruption is alerted by email and sms.

After a trial year with adjustments the climate conditions inside the building are now fully automated providing stable 20˚ degrees and 50% relative humidity.

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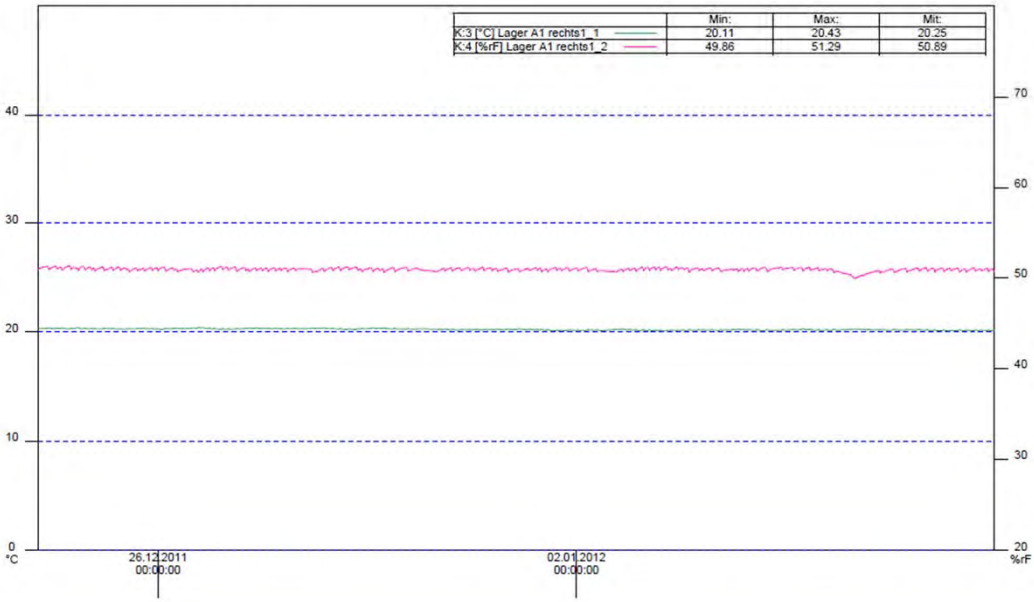
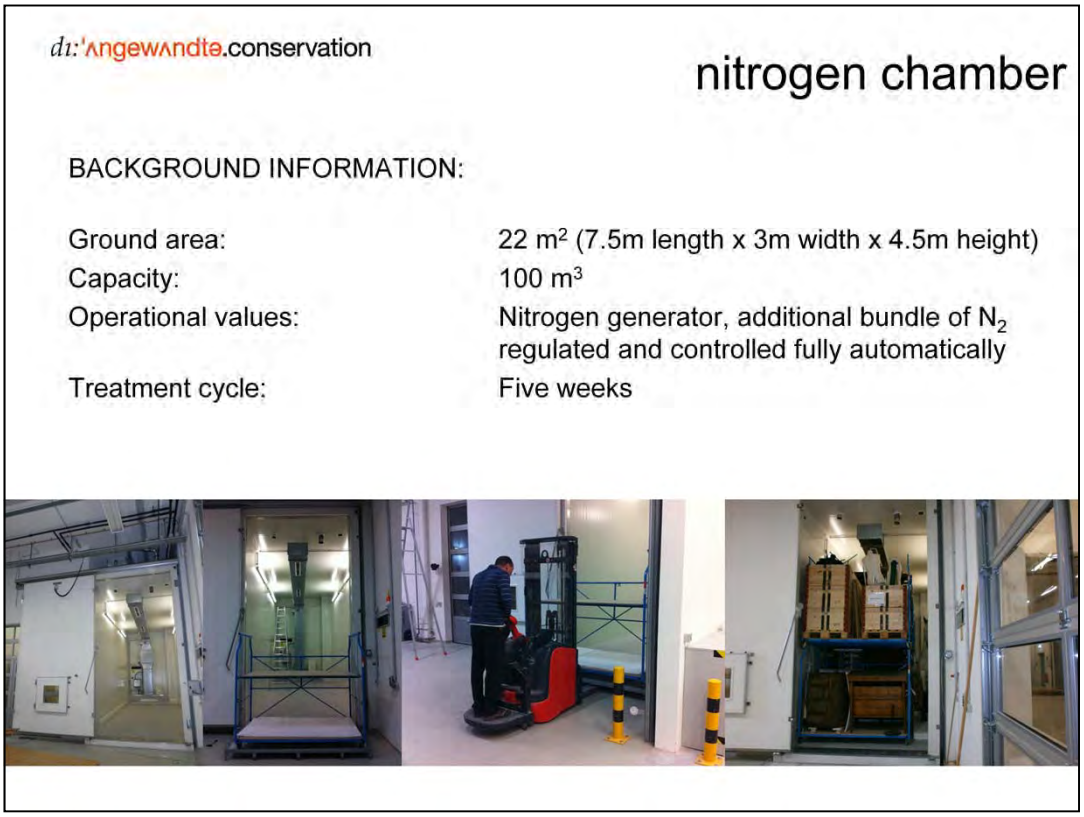
climate

CLIMATIC CURVE:



Just to illustrate the stability we were able to achieve you can see here a monitoring diagram for temperature and relative humidity. As you can see 2 beautiful almost entirely straight lines.



As part of pest control we have a new nitrogen chamber with a ground area of about 22m2 (7.5m length x 3m width x 4.5m height) and a capacity of about 100m3.

When new acquisitions come into the new facility they have to go through the nitrogen chamber.

For preventative aspects also all works of art which return from special exhibitions are treated.

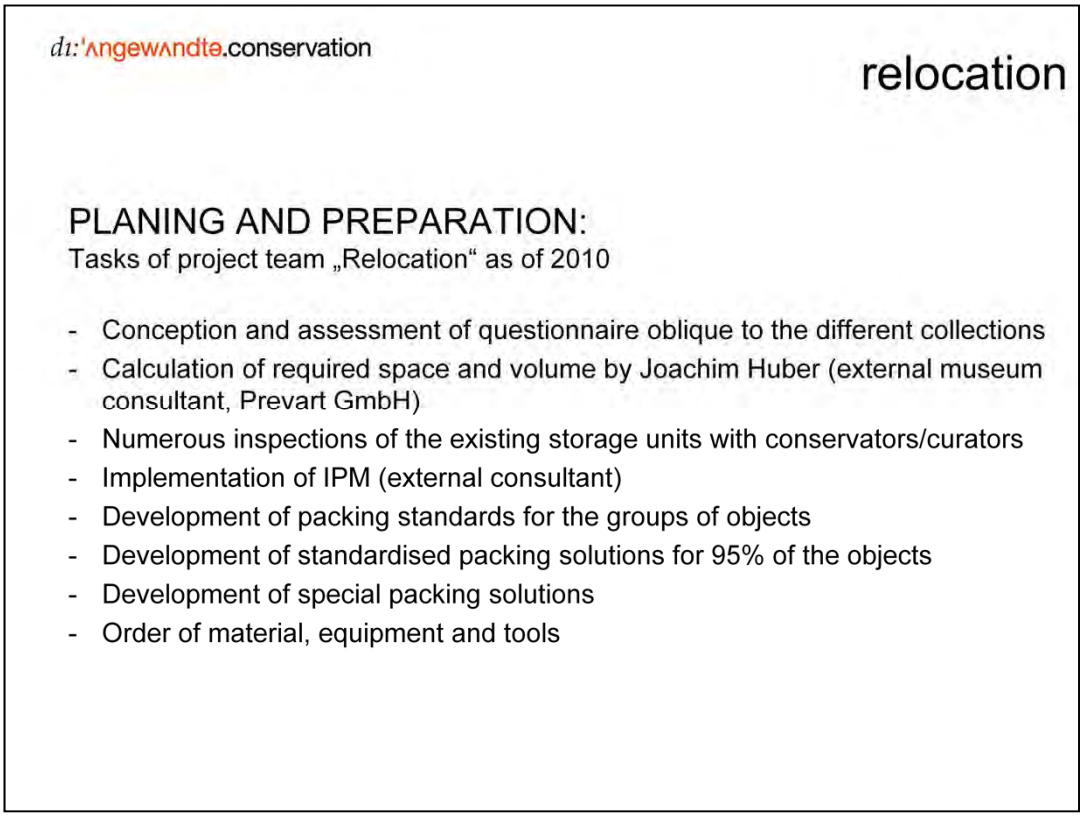
The nitrogen chamber is housed on the ground floor near the unpacking area, in other words in the immediate vicinity of where deliveries arrive.

In this way the possible transfer of harmful insects to other areas of the storage can be prevented.

Unlike the old one, the chamber is now fully automated and therefore easy to handle and to manipulate.

The humidity and temperature are regulated via a heating register or via a humidifying and de-humidifying unit.

The overall treatment process is documented with the help of a specific computer software.



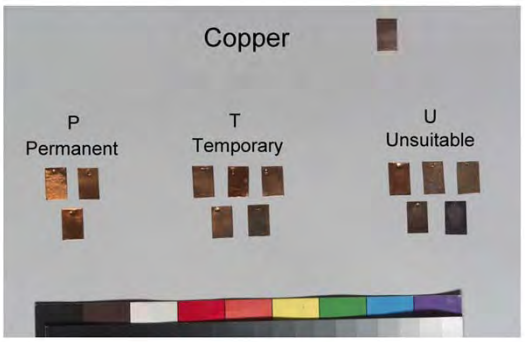
Before we were moving my team started planning the details of logistics and scheduling.

The most important parts consisted of establishing a comprehensive inventory and determining the artifacts' conditions.

Depending on the state and type of possible infestation specific treatments were necessary before we could actually move the items.

One of our tasks also was to develop standardized packing solutions for 95% of the objects moved as well as special solutions for outsize or particularly fragile artefacts.
This was a great achievment considering that the collection comprises objects as diverse as delicate textiles, bronzes and even coaches.

Oddy test



All materials used were additionally subjected to the so-called Oddy test and - with the exception of wooden Europalettes for heavy stone objects – only those without demonstrable damage potential for objects were used.

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mile stones

RELOCATION:	Ca. 16 months of palning and preparation
February 2011:	Start of relocation preparations
August – November 2011:	Relocation I (rented storage units)
Until 30 June 2013 :	Relocation II (local storage units)

We started with the conception of steps in early 2010 and the concrete relocation preparations in 2011, which not only included packing, but also:

- demolding
- treatments of infested objects
- securing and
- cleaning

To give you a few impresive numbers. We moved:

- stone objects with a total weight of 450 tonnes
- more than 5000 thousands paintings
- around 800 tapestries
- 4000 Costumes
- 1000 stage design models
- over 100 historic musical instruments

And much more.

All in all approximately 1000 million objects from the late Middle Ages to Modern and Contemporary Art.

By transferring vehicles and riding accessories, the storage of the Museum of Carriages regained some space again.

By the end of November 2011 the first transfer phase was sucessfully completed ahead of time after 345 truck tours without any problems or incidents.

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relocation II, 2012

LOCAL STORAGE UNITS:

Time period:	16 April - 6 July 2012, 10 - 14 Setember 2012
Stocks:	From 3 collections, photo studio, archive, library
Object types :	Coins, court uniforms, theatre costumes and graphics, stage design models, puppets, lantern slides, books, etc.
Logistics:	54 truck loads within 13 weeks

While phase I was rather straight forward phase II was more difficult.

The local storage areas that we wanted to clean out were basically basements and attics or other remote rooms spread over different storage facilities.

There was no or only little room to pack and bring the objects from their previous the storage to the truck, which was a journey in its own.

That‘s why we had by far less truck tours but needed almost the same time in comparison to the first phase.

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relocation II, 2013

LOCAL STORAGE UNITS:

Time period:	13 May – 24 May 2013, ongoing
Stocks:	From 3 collections
Object types :	Animal mummies, archological textiles, wax patterns, sculptures, paintings, etc.
Logistics:	14 truck loads within 2 weeks, ongoing

Everything around has already been cleared out and we are on our last stage.

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shelves

We spent one million Euros on relocation and this is what it looks like nicely organised and stored today.

By making an investment of 1.7 million Euro in shelves, cupboards, compactors, hoisting walls and special constructions it was possible to ensure the best housing for the objects in the collections.

The shelving system is adapted to the objects.

There are archiving shelves.
Huge or heavy items are stored on special shelves.
And there are shelving units that can be rolled together to save space.

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shelves

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cupboards

We also have multipurpose modular cupboards.

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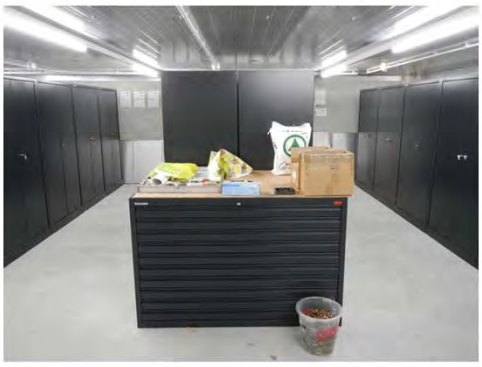
cupboards



Among our modular cupboards we have some for coins and other sensible objects preventing corrosion.

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hoisting walls

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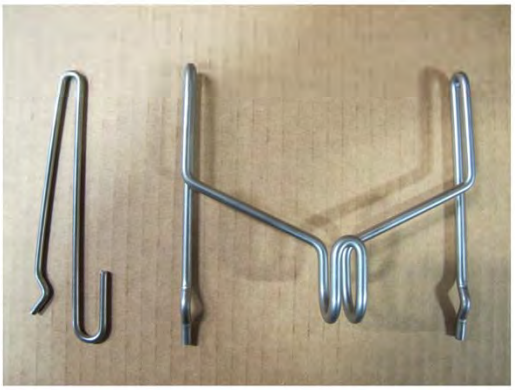
hoisting walls



Special hooks

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free standing

Some objects don‘t fit anywhere so they are left free standing in open space. For example antique sculptures …

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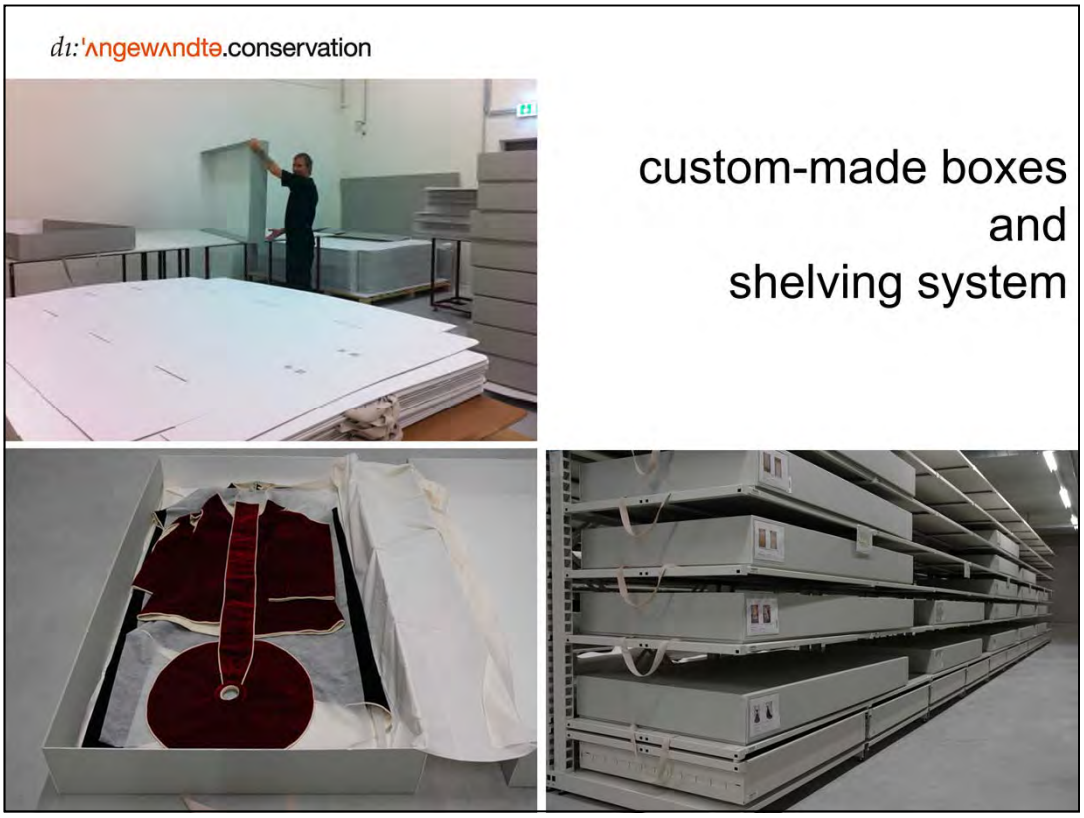
free standing

… carriages or mannequins.



The size of the facility now allows for large scale textiles to be examined, documented and photographed for the first time.

For the collections numerous clothing, special boxes were developed and manufactured as the current market didn‘t offer anything adequate.

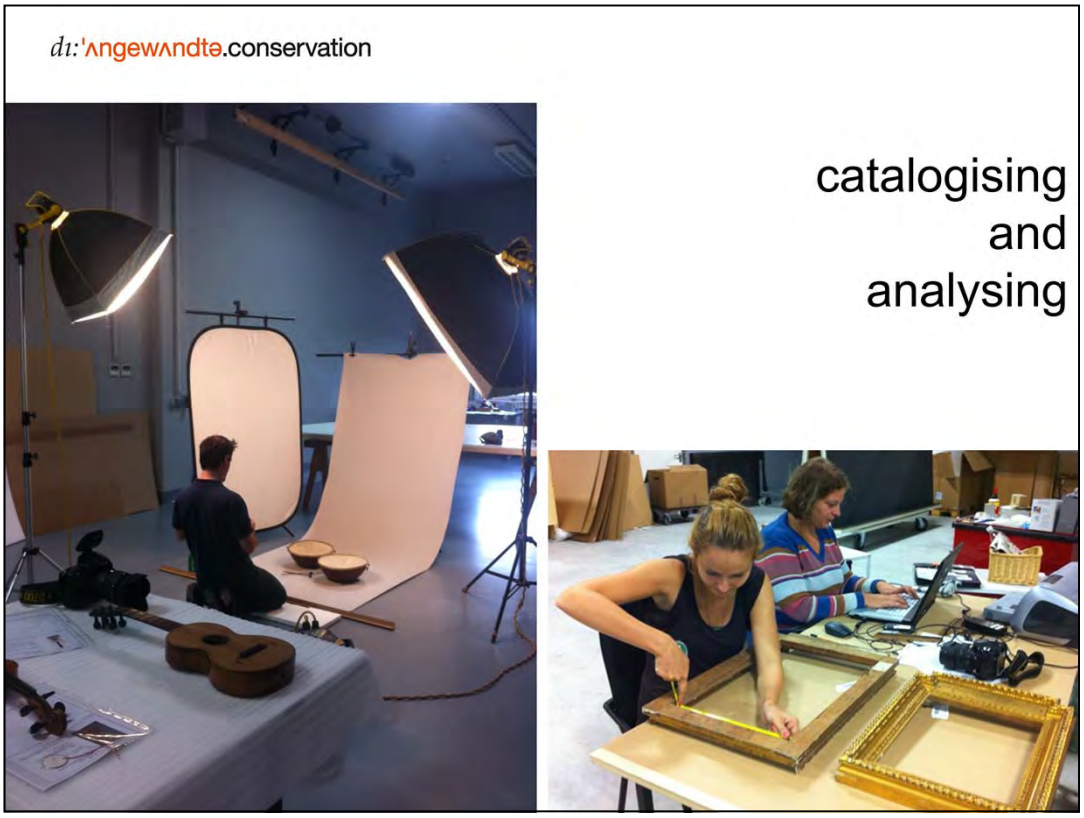
To reduce costs for transport the boxes were assembled on location by a qualified staff of the manufacturing company.

Also for the storage of the boxes themselves a special shelving system was developed. Here again the current market didn‘t offer anything adequate.

The system of rolling large textiles is not new to our buisness. However concerning size and weight of the tapestries we had to develop a special system.

The challange will be to cover the plain metall rolls with a polyethylene wrap

and to move the tapestries from their current form - being folded in boxes - to the new place.



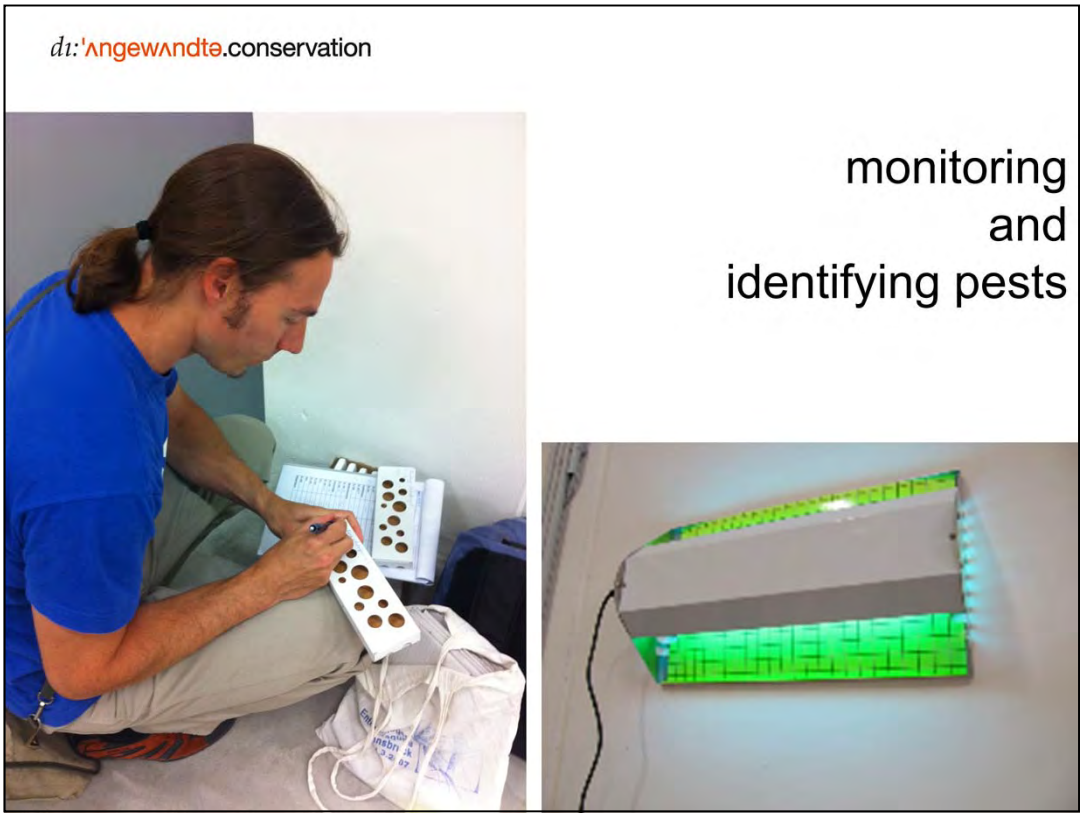
As in every collection of this size we also have objects that had never actually been catalogised.

These items will now be treated with the same daunting as there prominent counter parts so that they can be appropriately taken up in the computerised database.

Traditionally inventory was kept with handwritten tacks to each item.

Now with the move to the new facility we bring inventory to modern age by using barcode.

This allows the simple scan of the barcode.

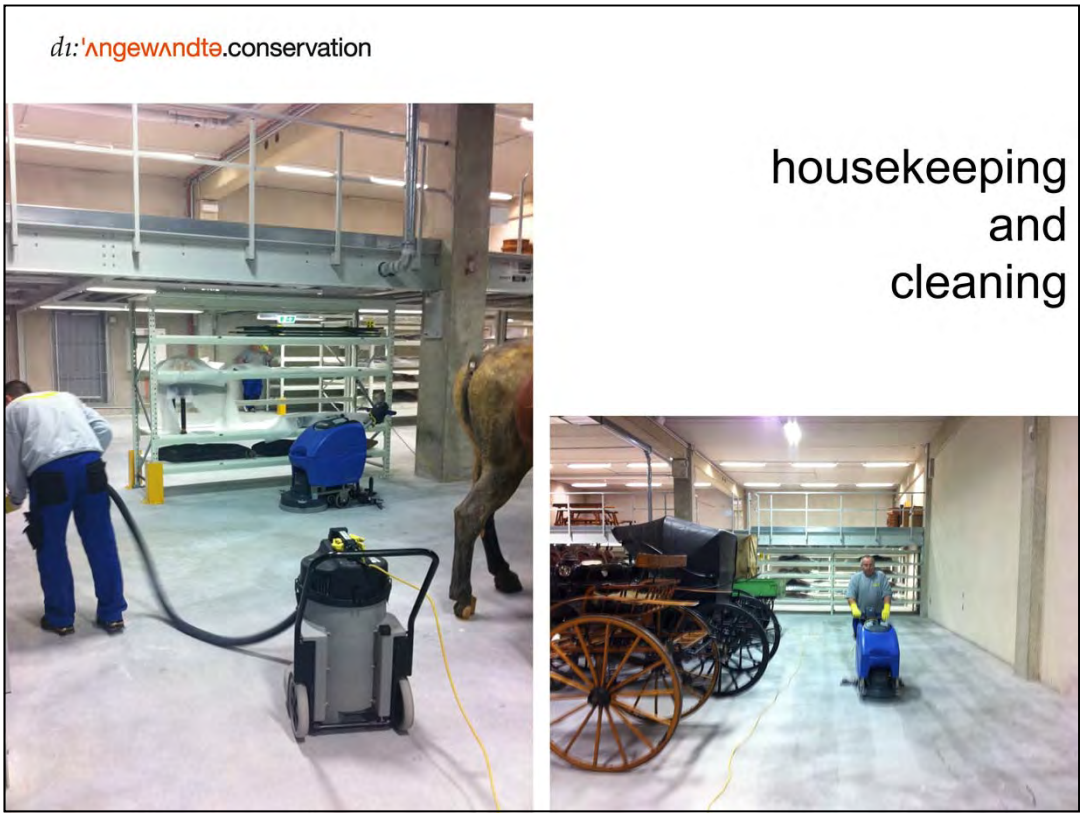


Our beautiful new facility would be useless if we did not also take care of the bugs and mushrooms, that potentially life in or on the objects.

The storage is not a hermetically sealed facility. It is used daily by many people.

So we also have to tackle the risk of different kinds of infestations. For instance the fly coming through an open window laying its eggs on Sisi's ballroom dress.

To take care of all this we are using different types of traps.



And of course there is dust. So once a year we dust, everything and everywhere.

Every year a large cleaning campaign is performed in all areas of the storage to prevent the accumulation of dust.

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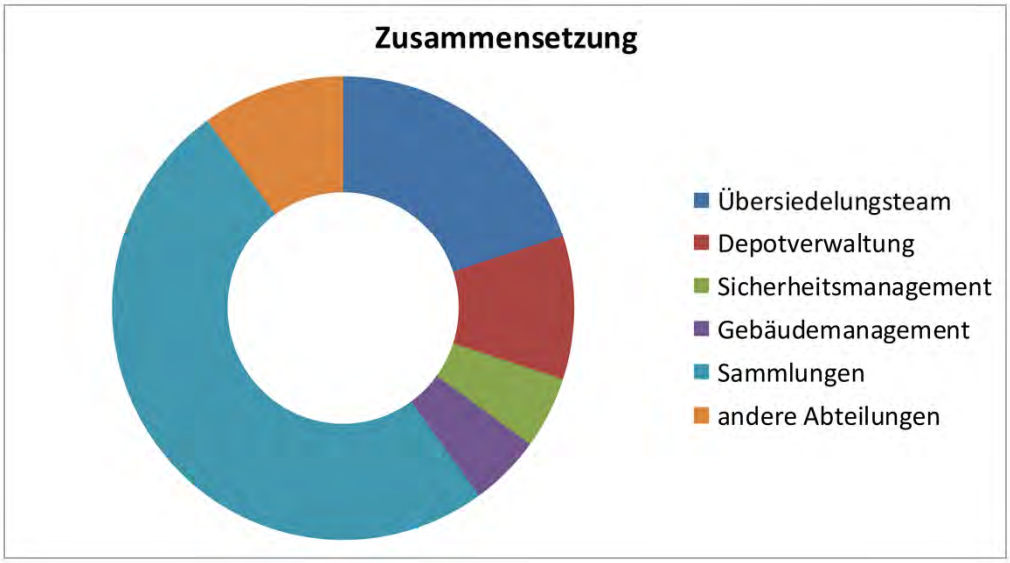
working group



To keep operations smooth the „depot working group“ meets every two month.

The „depot working group“ comprises staff from various conservation departements and works with Administration and Management.

We discuss any issue that may arise in any aspect possible to make decisions and set priorities.

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nitrogen chamber

KHM mit MVK und ÖTM
Wissenschaftliche Anstalt öffentlichen Rechts

OBJEKTANLIEFERUNG ZENTRALDEPOT

Sammlung	
Verpackung	
Maße in cm	
Gewicht in kg	
Inv.-Nr.	
Objekt/Objektteile	
Datum Anlieferung	
spätestens benötigt am	
zuständiger Restaurator/Registrar	
Annahme im ZD von	
Grund N_2-Behandlung	

Rot	Gelb	Grün			
☐	☐	☐	☐	☐	☐
aktiver Befall	Verdacht auf Befall / präventive N_2-Behandlung	kein Befall	darf nur in Anwesenheit eines Sammlungs-mitarbeiters manipuliert werden	kann von Service-Team / Depot-verwaltung manipuliert werden	mikrobieller Befall / auffälliger Geruch

Sonstiges:	

„traffic light system“:
Red: Active infestation
Yellow: Possible infestation/ preventive treatment
-->Quarantine
Green: free from infestation
-->Normal storage

Black or white marking:
Black: May only be handled in presence of conservator
White: May be handled by storage personnel

Skull and crossbones:
Microbial infestation or suspicious odor

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reference

T. Kimmel; C. Schaaf-Fundneider; S. Fleck: Himberg – The New Central Art Depository of the Kunsthistorisches Museum, Vienna. In: Expotime!, Autumn Issue, 2012, 39-46

We are particularly proud and thankful to all people involved about the fact that this project as a whole was executed even below the available budget within given time and alltogether very smoothly.
We still talk to each other, nobody killed anyone and every now and then we also go for a drink.

If you are interested in more details of the project I would refer you to an article in the journal called Expotime!:

Himberg – The New Central Art Depository of the Kunsthistorisches Museum, Vienna, in: ExpoTime! Autumn Issue, 2012, 39-46.

For any questions you might have I am available now.

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Universität für angewandte Kunst Wien
University of Applied Arts Vienna

THANK YOU FOR LISTENING!

MA **Tanja** Kimmel

Textile-Workshop, Bogd Khan Palace Museum, Feb. 24-28, 2014

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