Define the size!

A crash course in
basic data collecting for storage planning

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Preliminaries

This presentation is available as a handout
for download @ www.prevart.ch/download

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Define the size!

Sometimes it is difficult to define the space needed
to store your collection adequately

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Define the size!

Sometimes it is difficult to define the space needed
to store your collection adequately

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Some basics

You need to know what kind of storage equipment is available in order to be able to collect the relevant data for future planning.

Get information from commercial companies.

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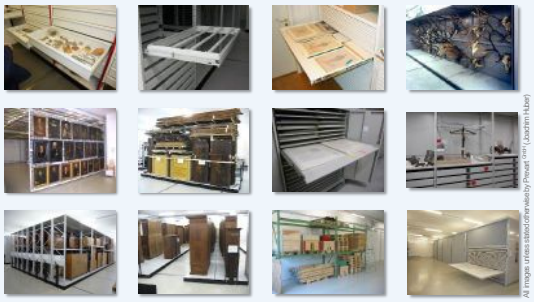
Storage equipment



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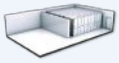
Different ways to store

fixed | mobile | free standing

100%

Up to 200%



without storage equipment

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Different ways to store

Almost everything that works as a fixed system, works also as a mobile system.

fixed | mobile

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Types of storage equipment

standard shelves | undivided shelves

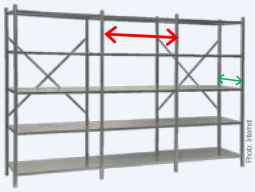

Photo: Internet

Width: **800**, 900, **1'000**, **1'100**, **1'200**, **1300 mm**
Depth: 250, 300, **400**, 500, **600**, 700, **800 mm**

Width: variable
Depth: 600, **800**, 900 **mm**

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Types of storage equipment

long span | pallet rack

Photo: Internet

Width: **1'800**, 2'200, **2'700**, 3'200, **3'600 mm**
Depth: 600, **800**, 1'000, **1'200 mm**

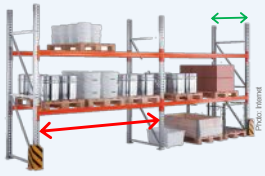

Photo: Internet

Width: **1'800**, 2'200, **2'700**, 3'200, **3'600 mm**
Depth: 600, **800**, 1'000, **1'200 mm**

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Types of storage equipment

cantilever | mobile plattform

Photo: Internet

Depth: **400**, **600**, **800 mm**

Width: up to 12'000 mm
Depth: 600, **800**, 1'000, **1'200 mm**

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Types of storage equipment

fixed mesh | sliding mesh

Hight: up to 6000mm, Length up to 7'000 mm
Axial distance from the neighboring mesh
250 - 500 mm,

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Types of storage equipment

cabinet

Photo: Internet

Depth: 300, **400**, 500, **600mm**

glazed cabinets

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Types of storage equipment

grafic drawer

Photo: Internet

Format A1, **A0**, A0+

flag cabinet

up to 3'000 x 3'000 mm

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Storage equipment I

standard shelving

standard shelving

hanging costumes

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Storage equipment II

extension shelf

drawer

Photo: Bruynzeel

drawer for rolls

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Storage equipment III

tablets, angle bracket

costume boxes

boxes, angle bracket

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Storage equipment IV

undivided shelves

double decker

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Storage equipment V

graphic cabinet | standard cabinet | drawer for flags

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Storage equipment VI

pallet rack | longspan rack | divided longspan

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Storage equipment VII

longspan (halberds) | longspan (doors, beds) | longspan (puppets)

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Storage equipment VIII

cantilever | cantilever for rolls | cantilever for spears

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Storage equipment IX

mobile platform | hanging candelabra | "pater noster", carpet

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Storage equipment X

fixed mesh | sliding mesh | mesh on mobile platform

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Other ways to store I

free standing | free standing | "mannequin parking"

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Other ways to store II

mobile stake frame | mobile corlette® | mobile platform

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Other ways to store III

cardboard boxes | polystyrene boxes | stacking container

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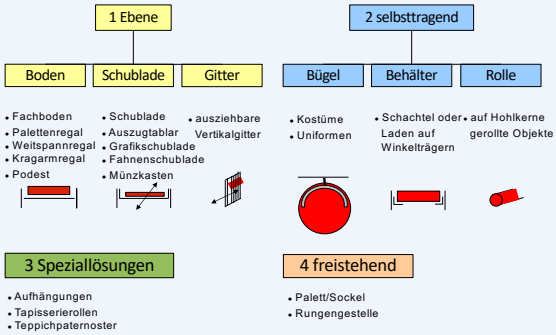
Lagerausstattung



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Where does data come from?

- from analogue data (lists)
- from electronic data (data base, excel file)
- from individual objects
- from floor plans

from the actual storage situation
(volume, vertical surface)

✓ easiest way to go

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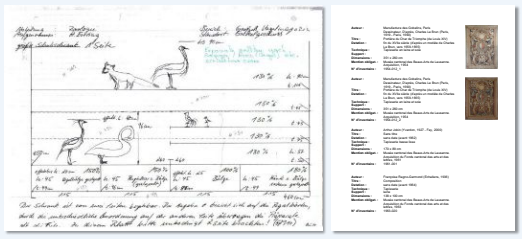
Using analog data (paper based documents, lists)



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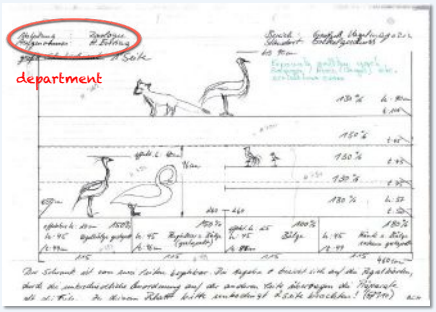
Hand written data



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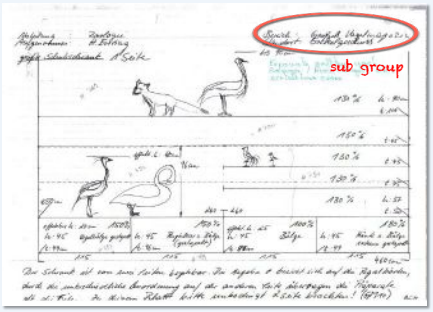
Hand written data



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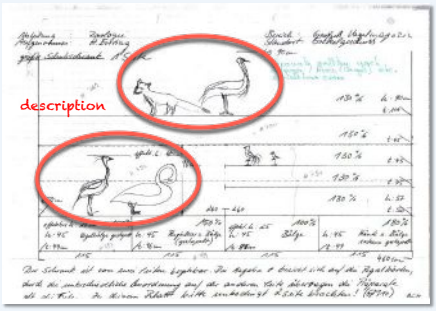

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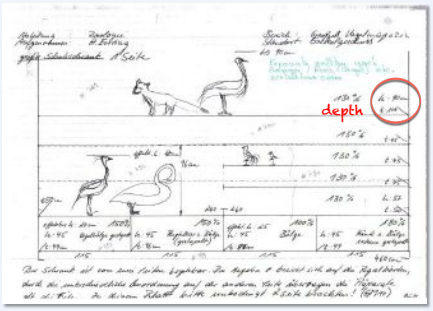
Hand written data



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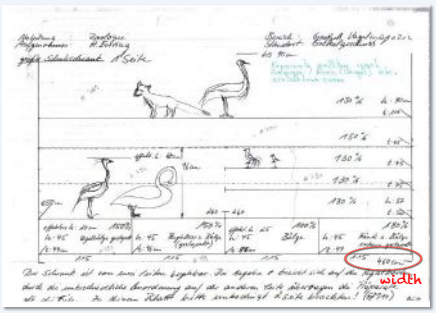
Hand written data



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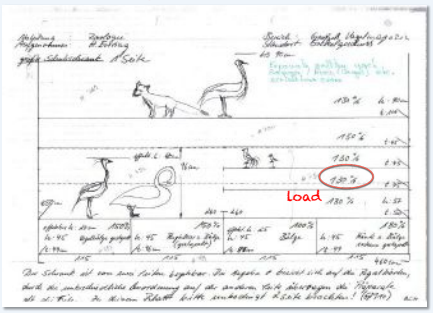
Hand written data



all information needed is available but not computable

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Printed data from data base

Auteur :	~~Manufacture des Gobelins, Paris~~ ~~Dessinateur, D'après, Charles Le Brun (Paris, 1619 - Paris, 1690)~~
Titre :	Portière du Char de Triomphe (de Louis XIV)
Datation :	~~fin du XVIIe siècle (d'après un modèle de Charles Le Brun, vers 1659-1665)~~
Technique :	Tapisserie ~~en laine et soie~~
Support :	
Dimensions :	(351 x 260 cm) Dimension of tapestry roll is missing!
Mention obligat. :	Musée cantonal des Beaux-Arts de Lausanne. ~~Acquisition, 1954~~
N° d'inventaire :	1954-012_2

- Information is often not very helpful
- ~~there is irrelevant information for storage planning~~
- relevant information is missing
- as a printed document it is not computable

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Measuring individual objects

does not really help . . .

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Measuring individual objects

does not really help . . .

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Measuring individual objects

except in some cases

Photo: Martin Trachsel

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Measuring individual objects

- what is measured? painting, frame, crate ?
- object mesaures often don't reflect the real volume needed
- which is the relevant information on storage equipment?

Photo: Internet

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Electronic data
(data base, excel)

no.	designer	producer	description	date (design)	material	measures	quantity	information
6	Bruno Paul	Vereinigte Werkstätten für Kunst im Handwerk, München	Garderobenspiegel, Mod.-Nr. 2608	Um 1903	pinewood (?) mirror (new)	195 x 125 x 35 cm		part of a whole interior

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Electronic data
(data base, excel)

no.	designer	producer	description	date (design)	material	measures	quantity	information
6	Bruno Paul	Vereinigte Werkstätten für Kunst im Handwerk, München	Garderobens piegel, Mod. - Nr. 2909	Um 1903	pinewood (?), mirror (new)	195 x 125 x 35 cm		part of a whole interior

Photo: Wien, Kunsthistorisches Museum

One informtaion per data field – no multiple Information in one data field
Numeric fields for numbers – no text in data fields (unless this is a formatted suffix like cm)

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Electronic data
(data base, excel)

no.	designer	producer	description	date (design)	material	measures	quantity	information
6	Bruno Paul	Vereinigte Werkstätten für Kunst im Handwerk, München	Garderobens piegel, Mod. - Nr. 2909	Um 1903	pinewood (?), mirror (new)	195 x 125 x 35 cm	1	part of a whole interior

field is formatted

no.	designer	producer	description	date (design)	material	measures	hight	width	depth	quantity	information
6	Bruno Paul	Vereinigte Werkstätten für Kunst im Handwerk, München	Garderobens piegel, Mod. - Nr. 2909	Um 1903	pinewood (?), mirror (new)	195 x 125 x 35 cm	195 cm	125 cm	35 cm	1	part of a whole interior

- do produce useful and computable data (one information per data field!)
- data in museum data bases and excel is usually „single object data“
- Do always use the same table structure (number and position of columns)

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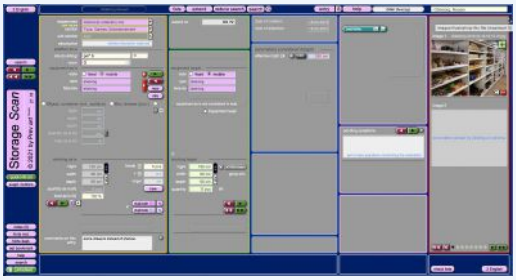
Latest database



real situation „as it is“ including load | future situation | future system hight growth factor | additional information | documentation

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Floor plan

- surface gives an idea of the space (if measures available)
- no information on quality (hights, obstacles, etc.)
- no information on percentage of surface or volume used
- no information on storage equipment (unless mentioned)
- no information on objects stored and load

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Space actually occupied

Restaurant equippememnt

The only collection object

farmers equippement

to what extent is the surface used?
by whom is the surface used?

card board for boxes

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Think in modules!

Photo: Internet

1m3

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Think in modules!

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Think in modules!

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Think in modules!

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Think in modules!

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Think in modules!

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Separate present from future

Present

Future

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4 steps in collecting data

1st step — record what you actually see
type of storage furniture, measures, photo

2nd step — define the actual load of the system (%)

3rd step — define what you want to change
dimension, system (can be added later)

4th step — define space for future growth (%)
per group (can be added later)

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Measuring and system load

present		future
Hight		Hight
Width		Width
Depth	optional change of dimension →	Depth
Storage furniture	optional change of system →	Storage furniture
Load %		Load %

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How do we measure ?

- Measuring of the actual situation means always the usable volume or surface over all
- Keep in mind that your first shelf is always 10-15 cm above floor level

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How do we measure ?

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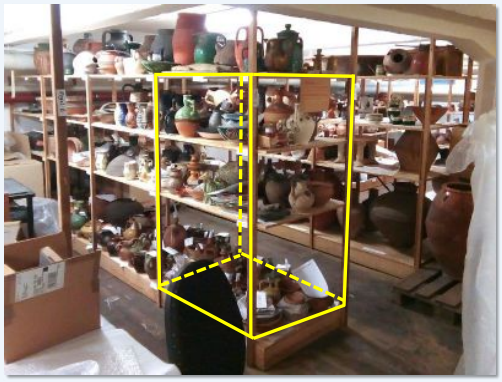

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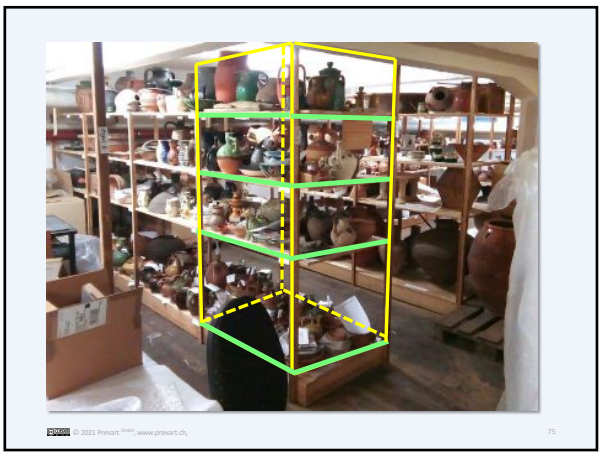

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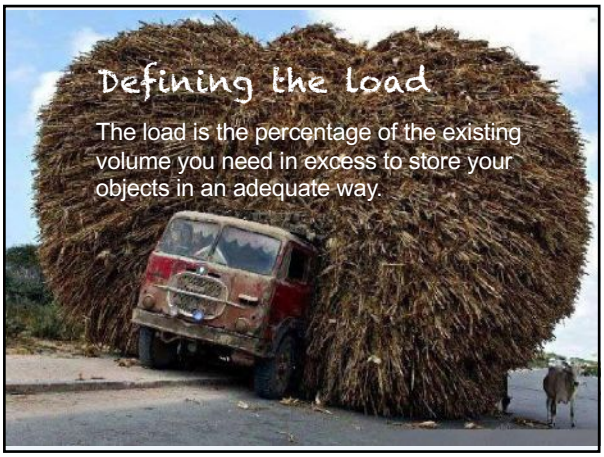

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Think in virtual modules

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Reserve for future growth

actual situation + load + growth

do not mix up load and growth!

(Sub-) Standard situation

Accurate storage (careful safekeeping)

Accurate storage with space for future collection development

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Reserve for future growth

actual situation + load = 100%

growth

5 10 15 20 25 30 35 40

10% easy

20% good argument

25% very good argument

up to 29.99% exceptional

≧ 30% impossible *

Nobody in museums knows how long the reserve space will last.

* except for pioneer institutions

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Summary – 10 aspects to keep in mind

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7 basic informations you need

1. object group, **denomination** (with reasonable accuracy)
2. **location** of the actual store (where data comes from)
3. **dimensions** of actual storage equipment or module
   (hight, width, depth) volumes or surface occupied (m^2, m^3) are calculated from this data
4. system **load** as a percentage
   (too dense, superposed, affecting other objects)
5. **growth** for future collection development
6. actual **storage equipment** (ok, or to be changed)
7. an **image** of the situation (for every entry)

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3 supplementary informations

1. environment
   (temperature, humidity, air pollution, light)
2. risks
   (bad condition or instable structure of object)
3. potential hazards
   (pests, contamination, toxic substances, radioactivity, heavy object, difficult to handle)

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From data to reality

Plenty of raw information

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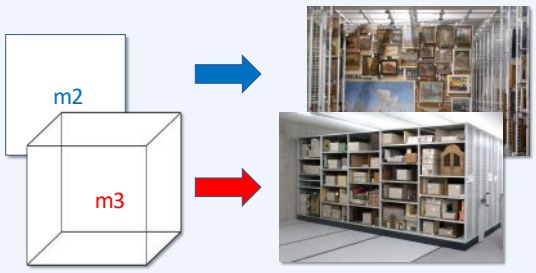
From data to reality



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From data to reality

- With all the collected data (volume, surface, type of equipment, dimensions) and the future room hight you can define now your storage equipment. …
- You can define now linear meters of a certain storage equipment type and dimension as well as its footprint.
- Finally you have to place your storage equipment in the available space

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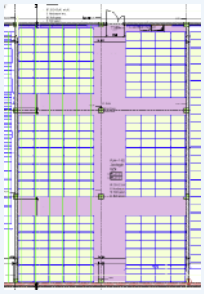
What surface is needed?



- What is the ratio between the projecting surface of the storage equipment (yellow) and the access corridors (purple) ?
- The ratio is depending on:
  - the kind of equipment (fixed or mobile)
  - The type of equipment (shelves, racks, cantilever, mesh, platforms etc.)
  - The dimensions of the equipment

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But what do architects and politicians really want to know?

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m^2 x cost per m^2 = investment

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Architect

m^2 x cost per m^2 = investment

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Architect

m^2 x cost per m^2 = investment

Politician / Administration

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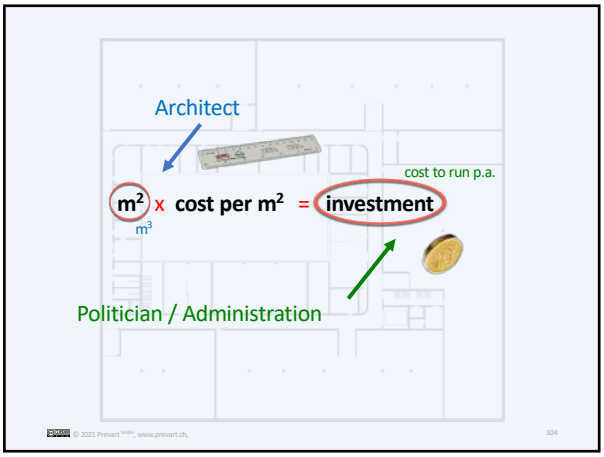

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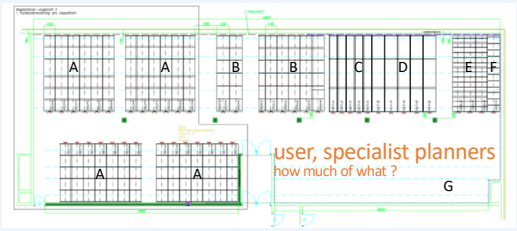
From data to reality



- linear meters of a type of storage equipment at a defined hight, depth and structure
- m^2 of (sliding) mesh
- m^2 of floor space (unequipped)

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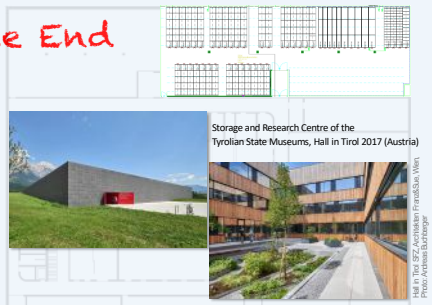
The End



Storage and Research Centre of the Tyrolian State Museums, Hall in Tirol 2017 (Austria)

Hall in Tirol, SFC Architekten Pranckh&Six, Wien, Photo: Andreas Buchberger

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some ressources

- https://www.prevart.ch/download (for this presentation)
- http://stashc.com/
- https://www.museumsassociation.org/museum-practice
- https://www.culturalheritage.org/resources/collections-care

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