



EIFast Workshop for the European X-FEL Project

10.05.2006

Surface Buildings

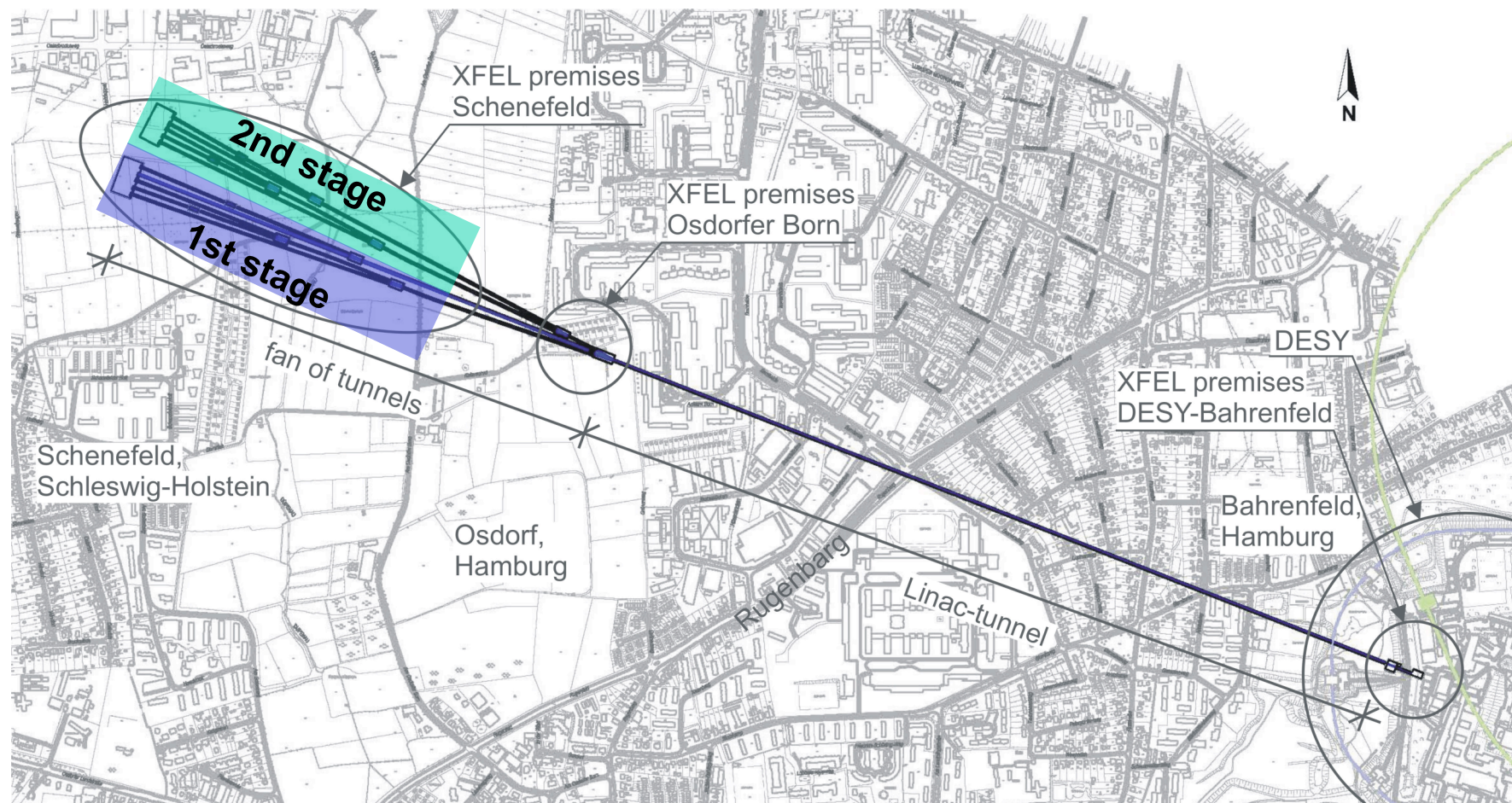
Per Dost, IG WTM-Amberg



index

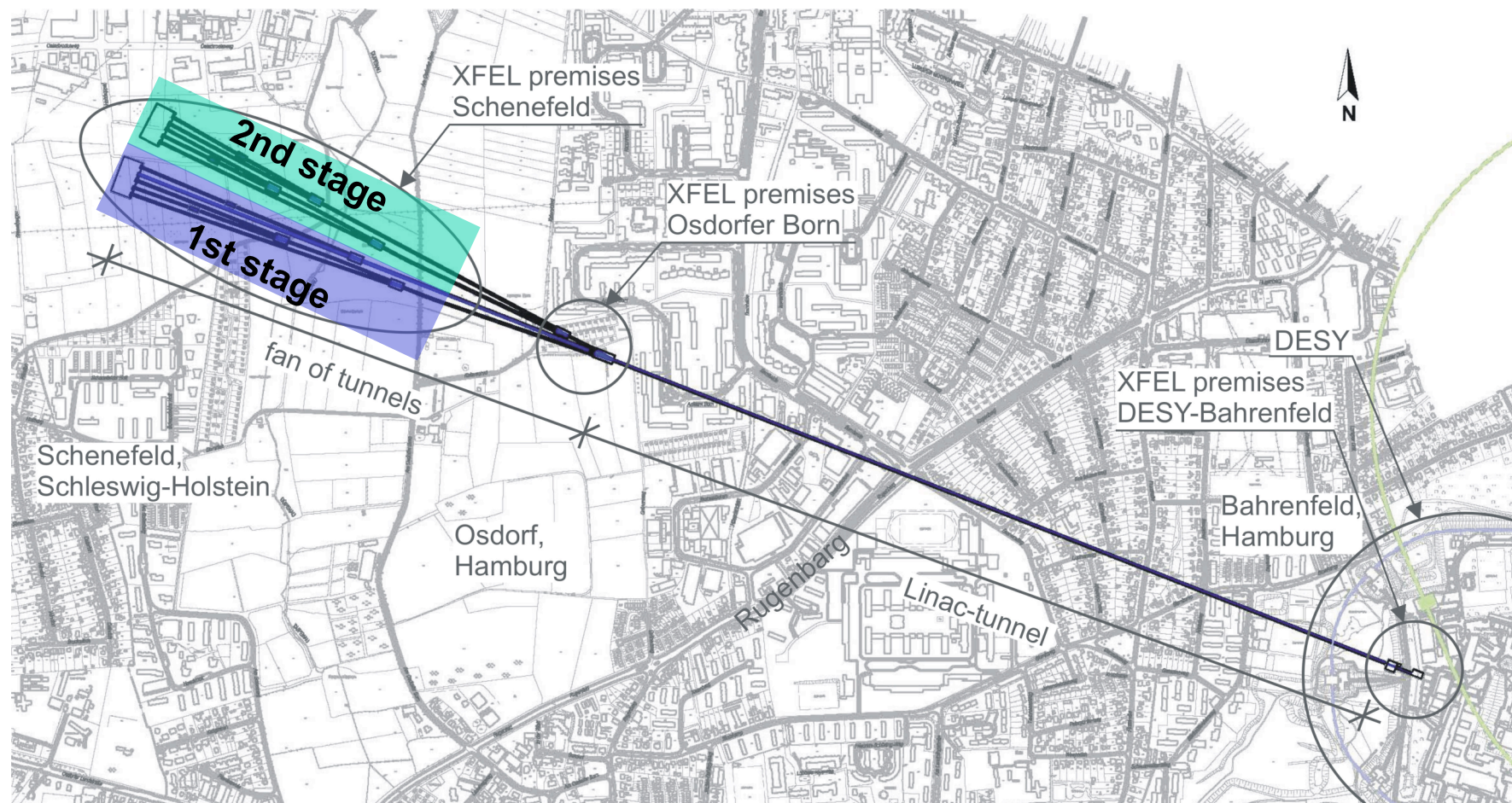
- 1. introduction**
- 2. tentative schedule/ contract lots/ award procedure**
- 3. description**
 - 3.1 entrance halls**
 - 3.2 supply halls**
 - 3.3 office and social buildings**

1. introduction

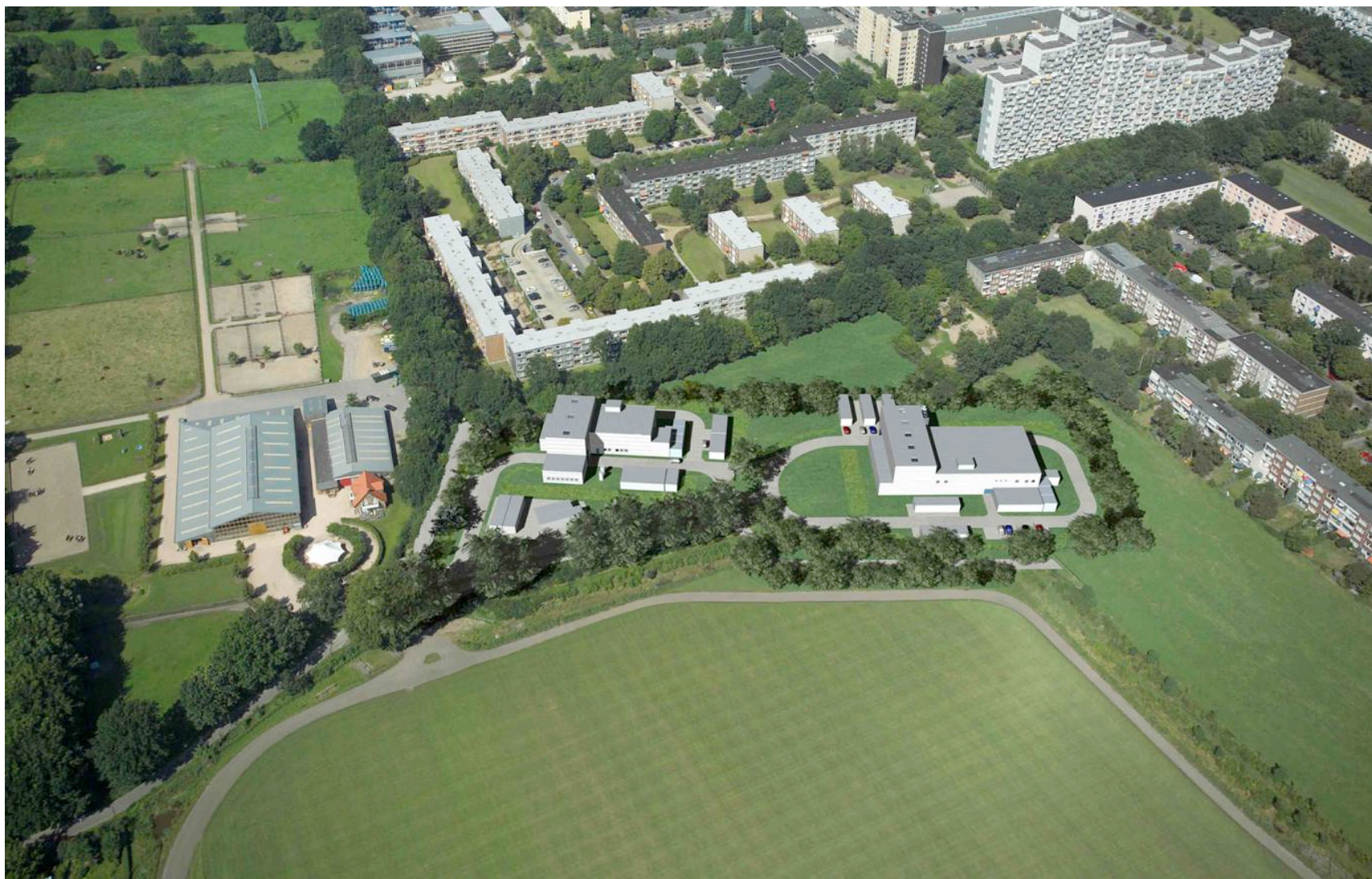


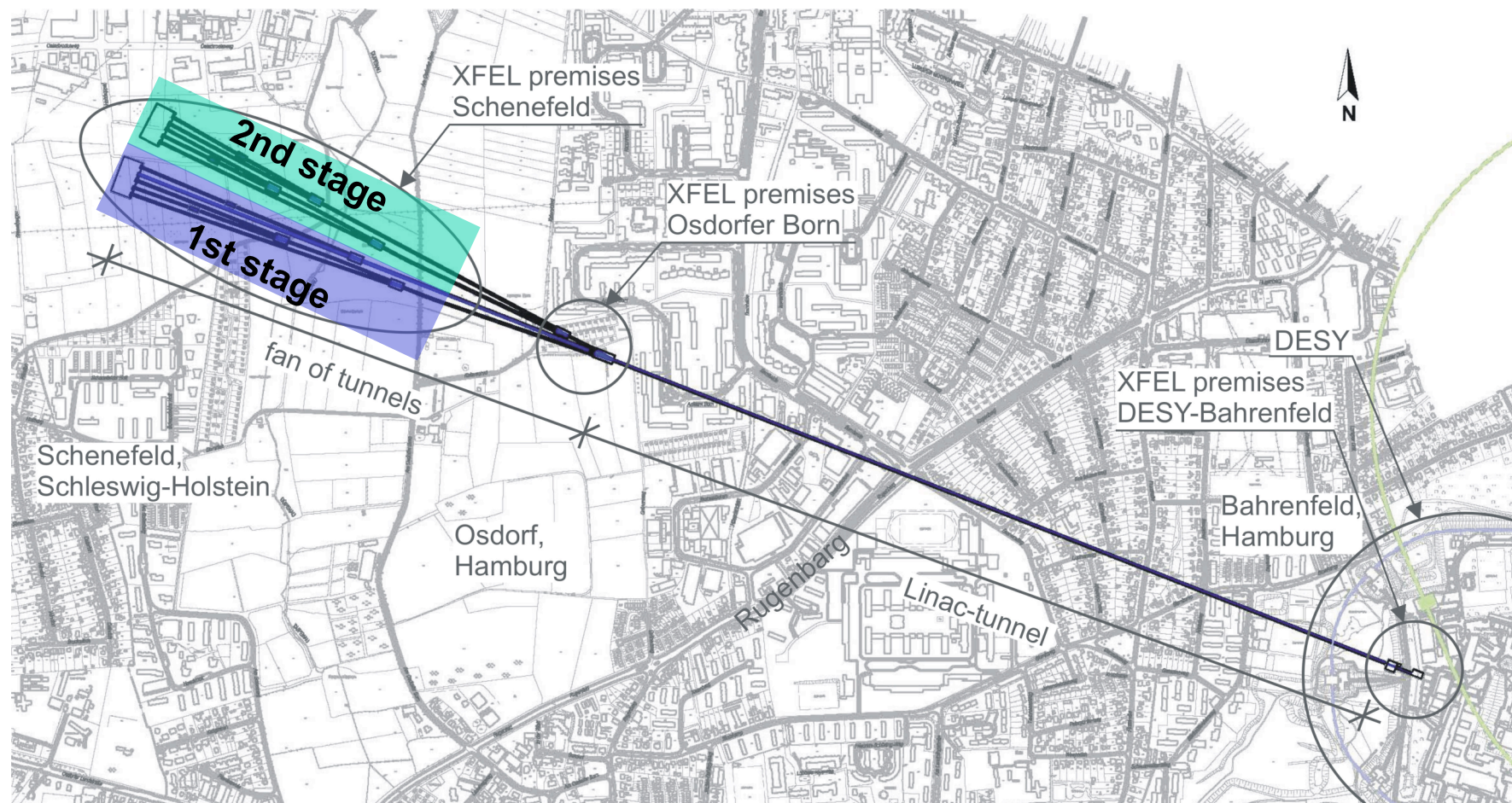






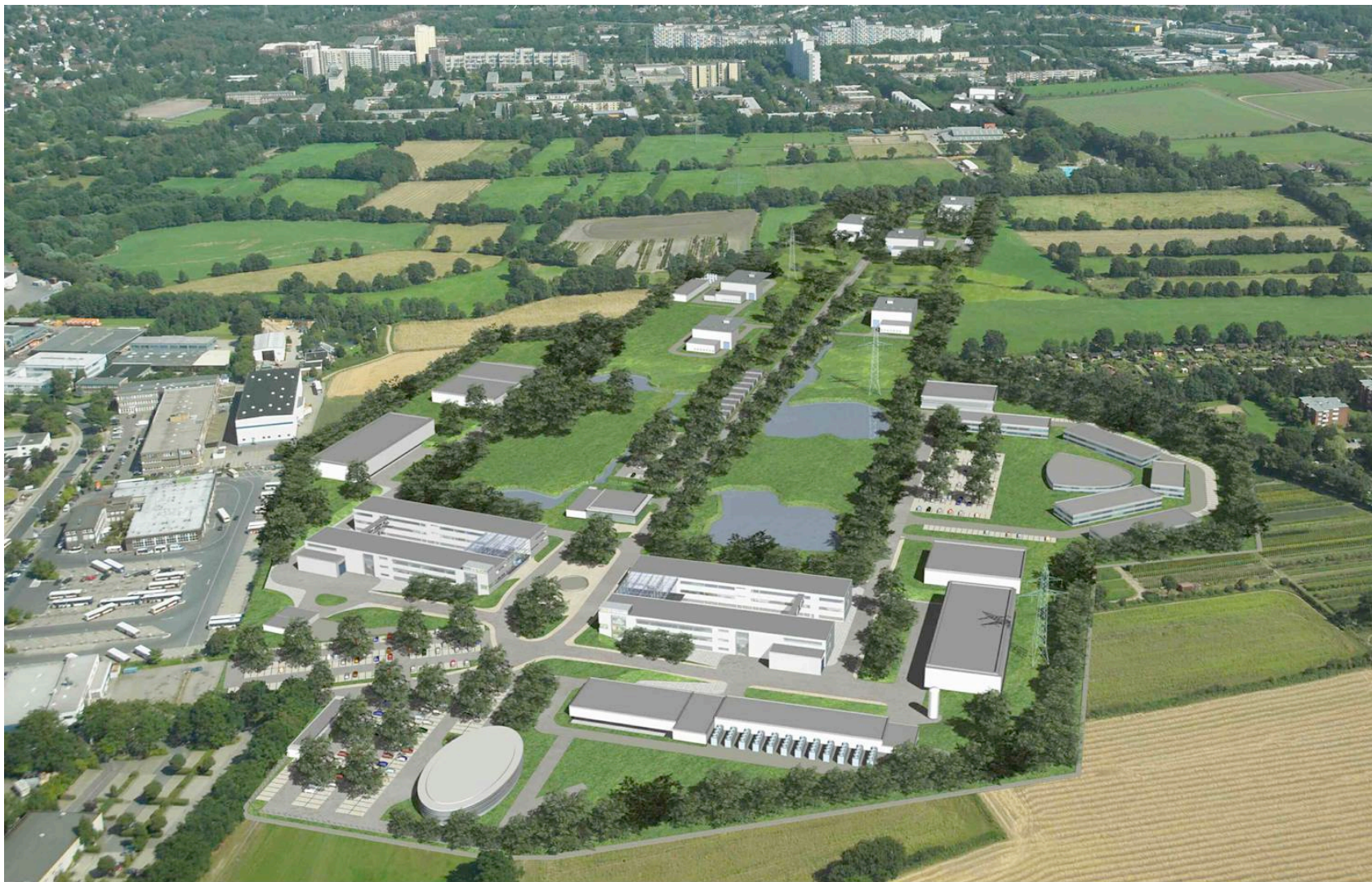




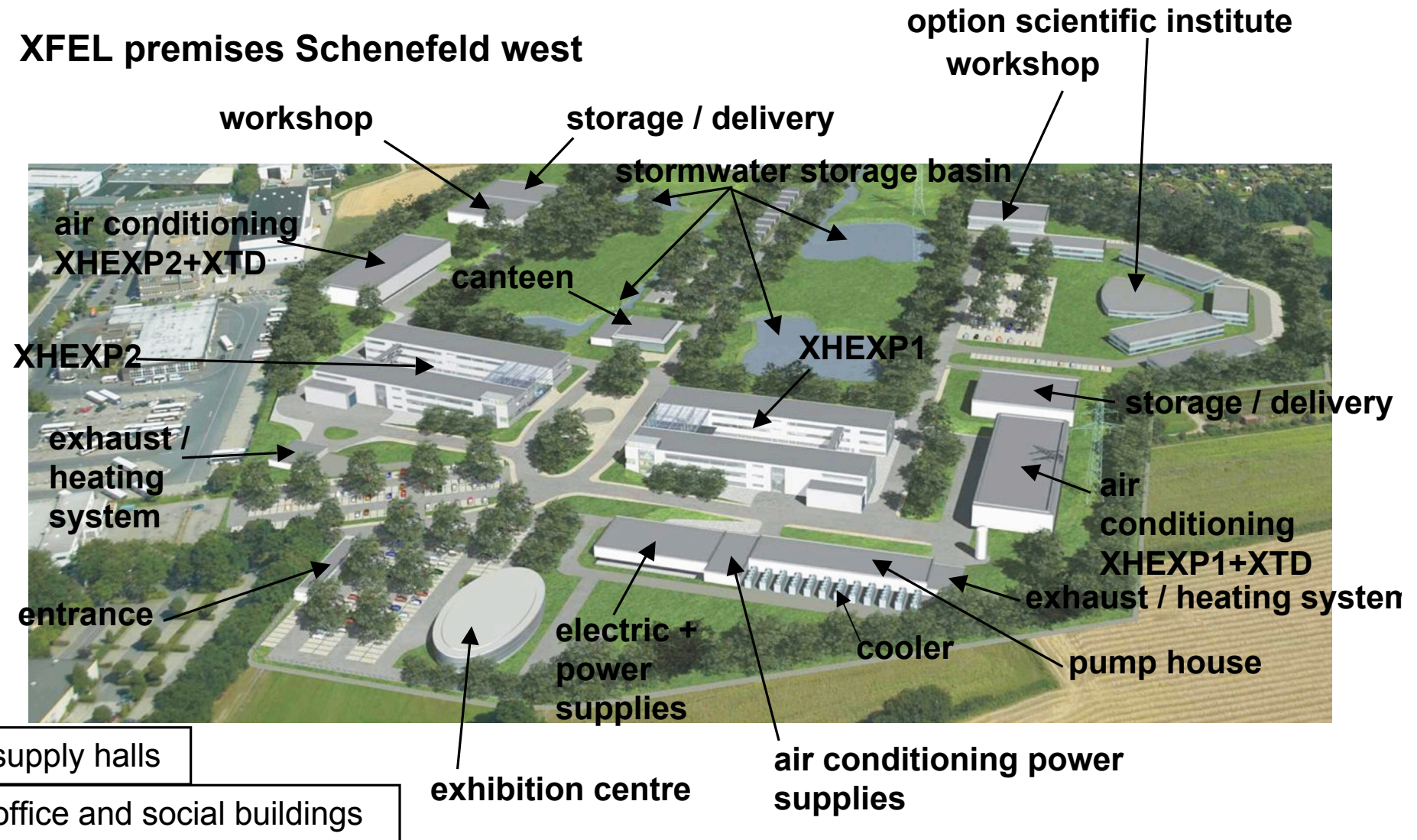




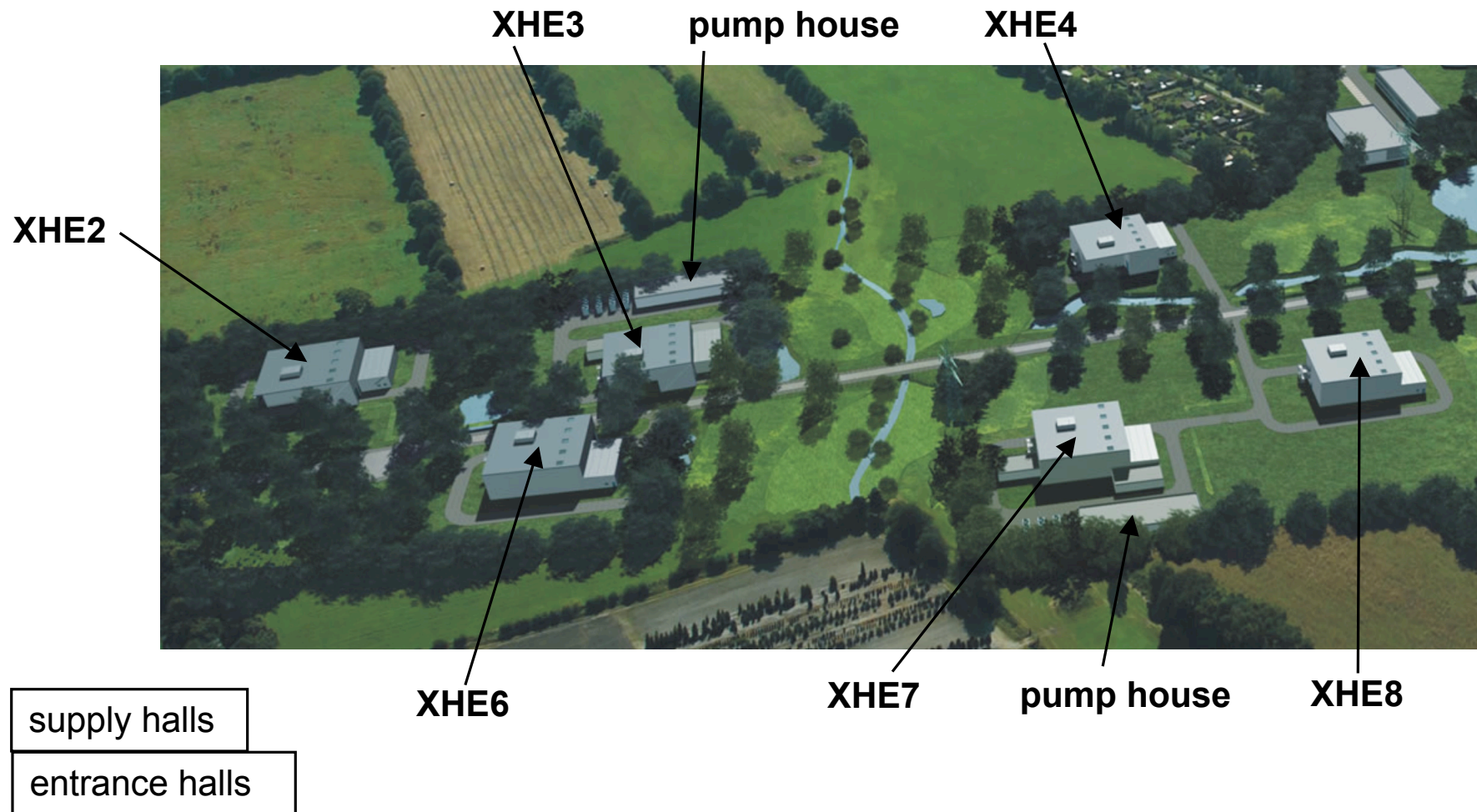




XFEL premises Schenefeld west



XFEL premises Schenefeld west





2. tentative schedule/ contract lots/ award procedure

tentative schedule

design and tender documents

autumn 2006 to autumn 2007

tender

spring 2008

start of work

autumn 2008

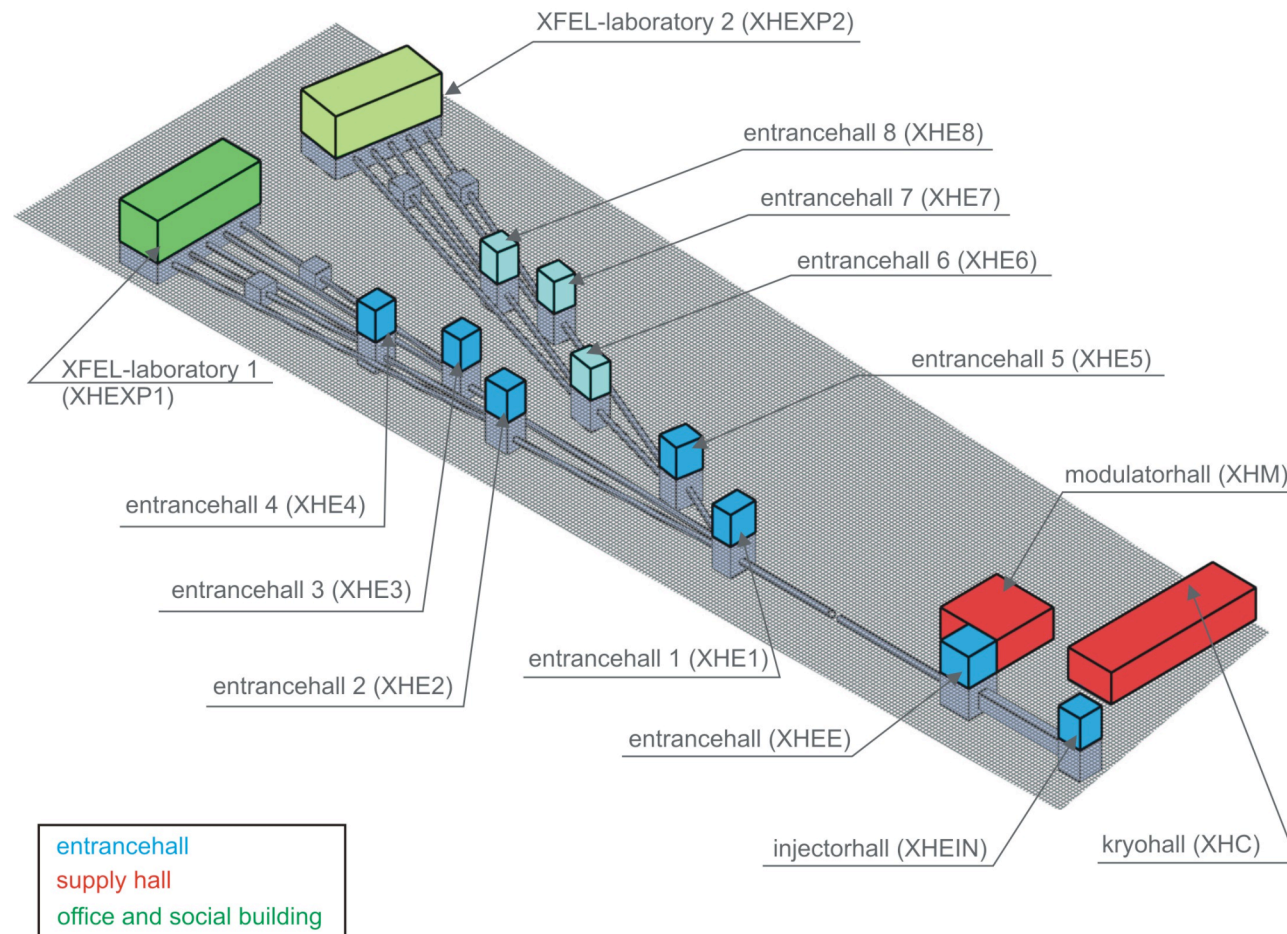
contract lots

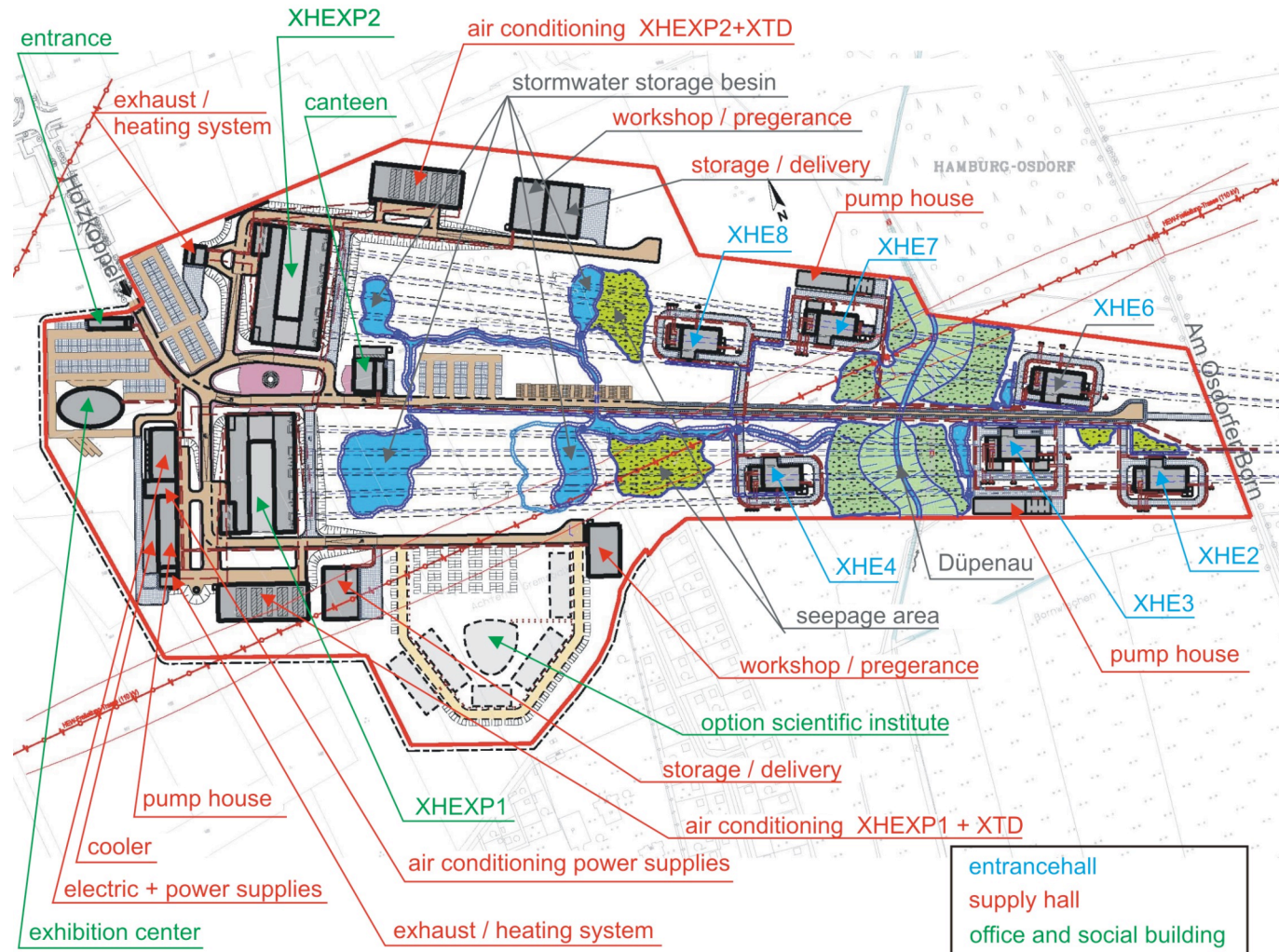
tendering for building contains the building and building services
(crane and lift technology, sanitary engineering)

award procedure

open award procedure

3. description





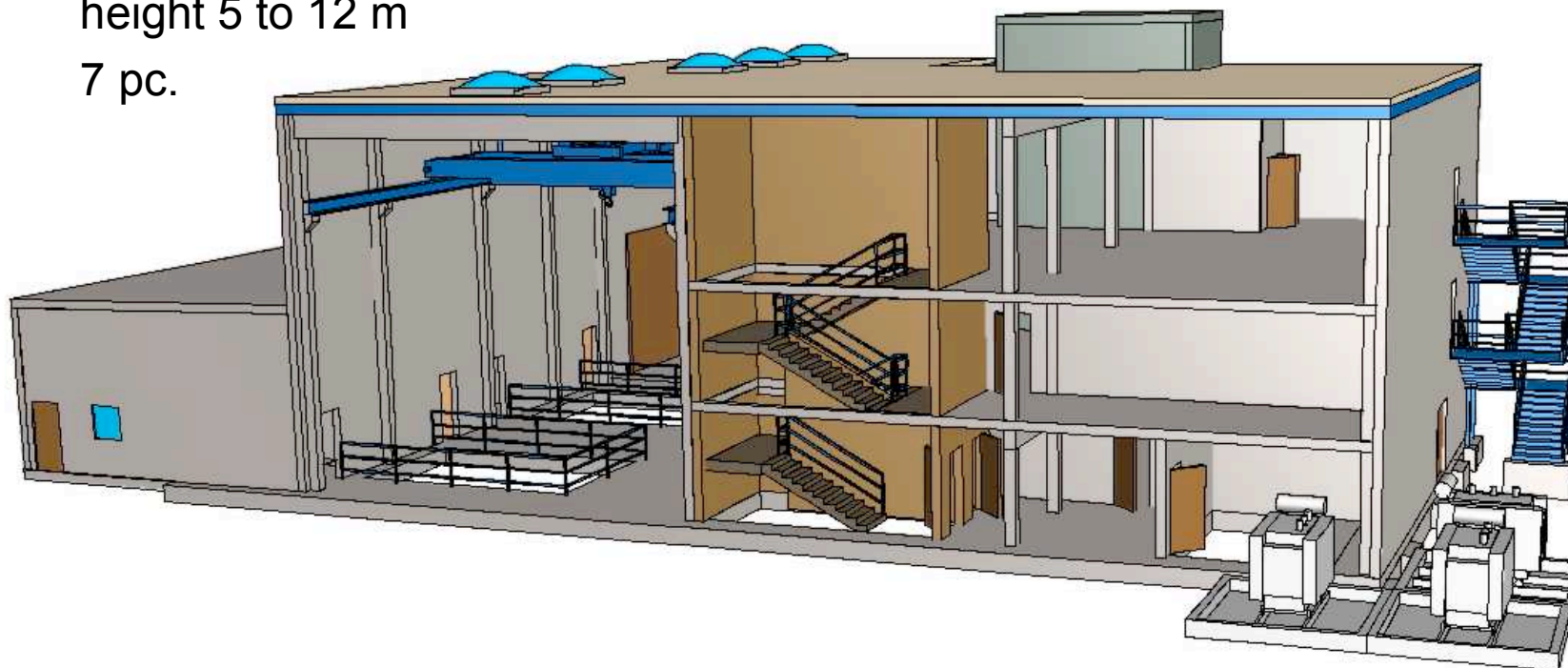
3.1. entrance halls

3.1.1. dimension

base area 400 to 1.200 m²

height 5 to 12 m

7 pc.



3.1.2 fundamental configuration

a.) entrance area

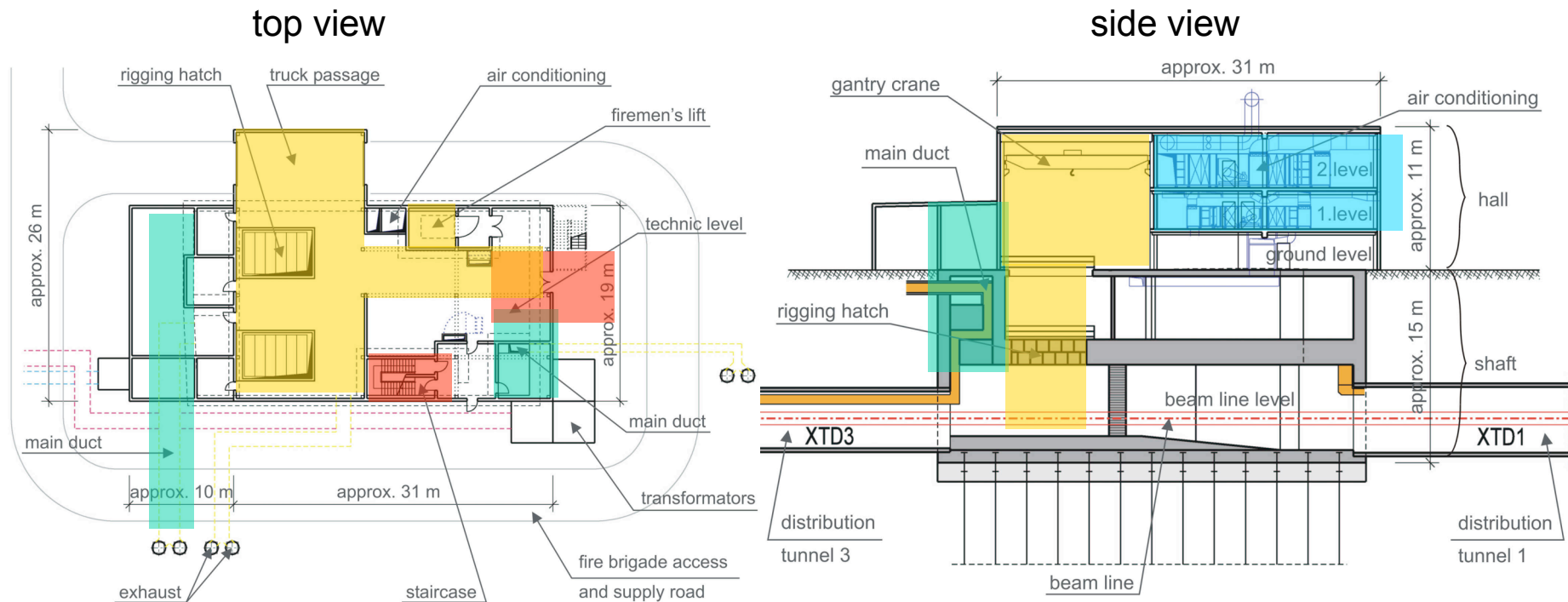
c.) mains duct

e.) sanitary works

b.) transport area (transportation hatch, truck passage, goods lift)

d.) room for technical components

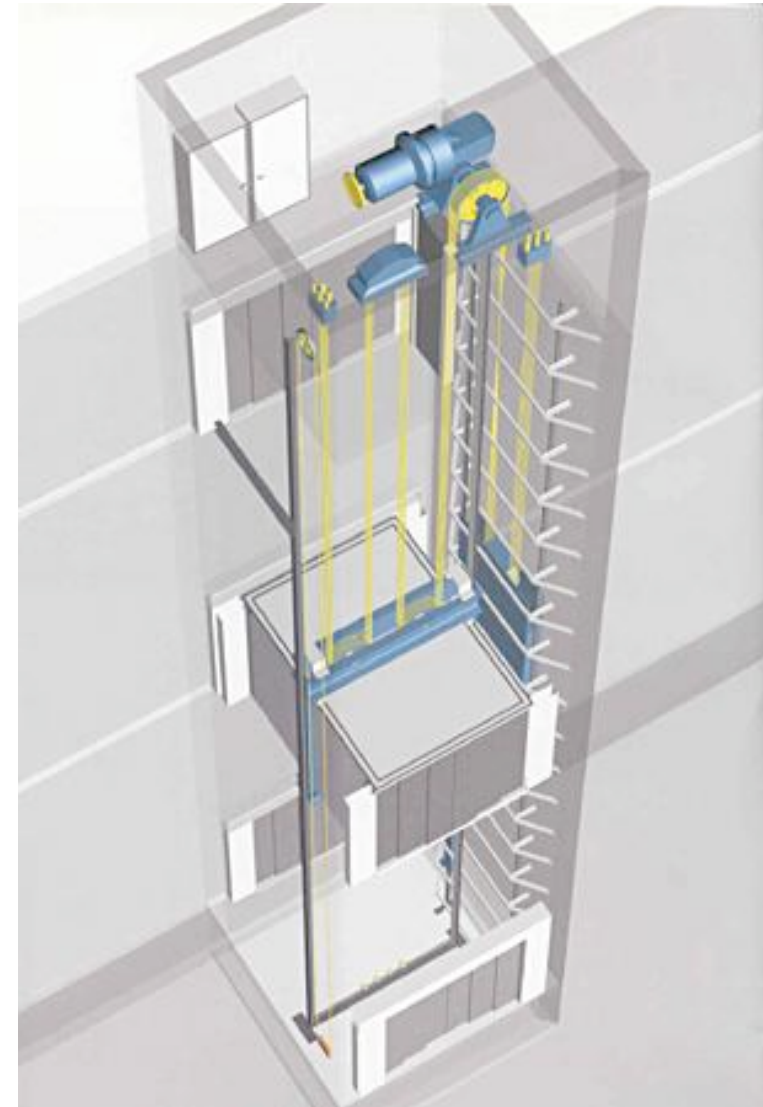
f.) structural fire protection



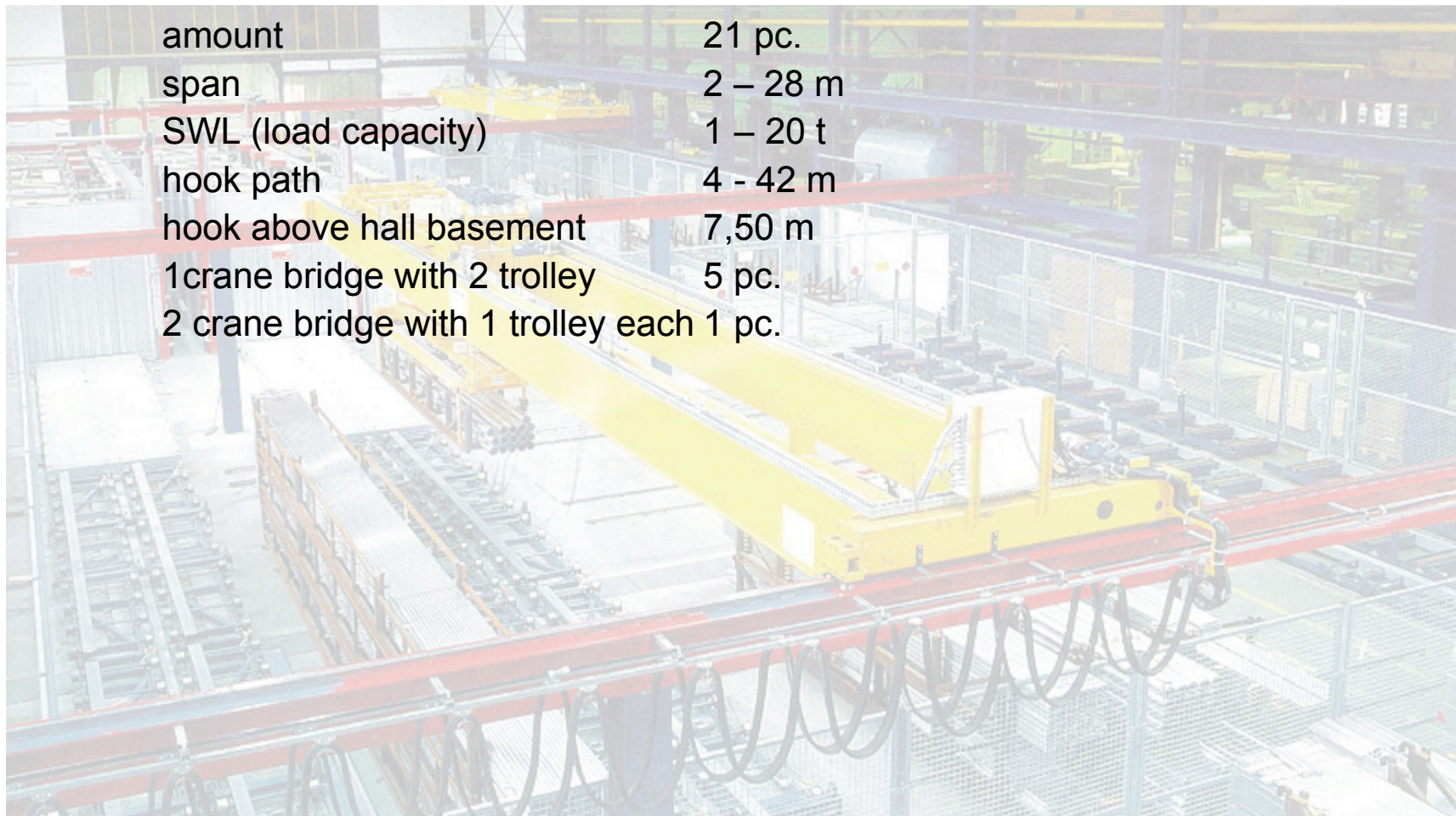
- goods lift

(9 building)

amount	10 pc.
firemen's lift	7 of 9
width	1,10 – 2,10 m
depth	2,40 - 4,00 m
height	2,30 – 3,10 m
load height	5,80 – 37,41 m
load capacity	600 – 3500 kg
speed	0,50 – 1,00 m/s



- gantry crane



e.) sanitary works

- 180 permanent workstation men
- 180 permanent workstation women
- 9 tea kitchen
- 4 common room
- 37 toilets men
- 37 urinal men
- 49 toilets women
- 9 toilets for handicapped people
- 4 shower men
- 2 shower women
- 20 changing room men
- 10 changing room women
- 30 tap
- 36 sanitary gullies

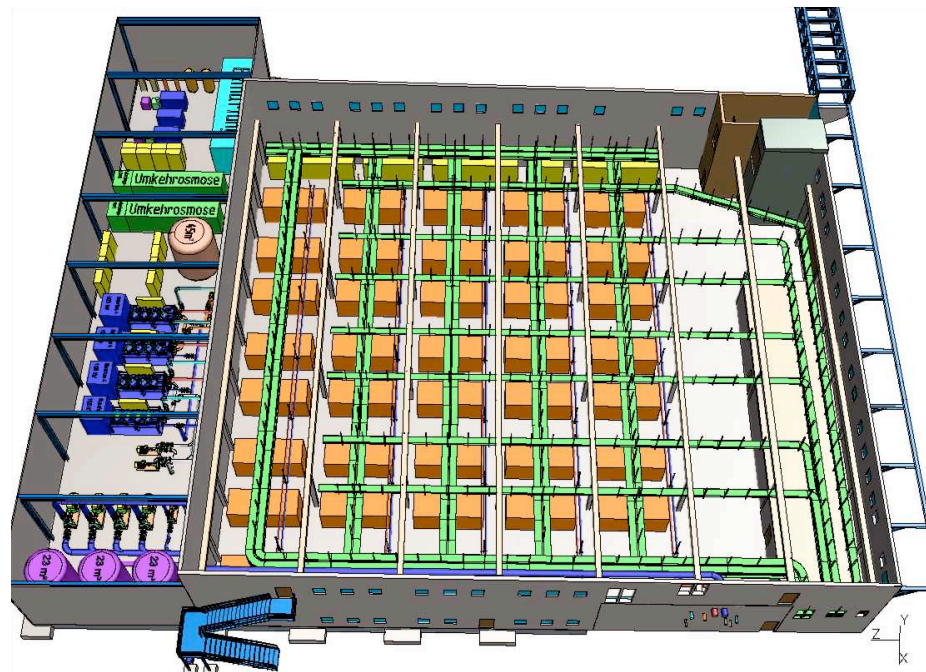


3.2. supply halls

3.2.1. dimension

cryogenic hall	$l \times w \times h = 32 \times 65 \times 14 \text{ m}$
cryogenic hall extension	$l \times w \times h = 23 \times 7 \times 10 \text{ m}$
modulator hall	$l \times w \times h = 41 \times 45 \times 10 \text{ m}$

example: modulator hall



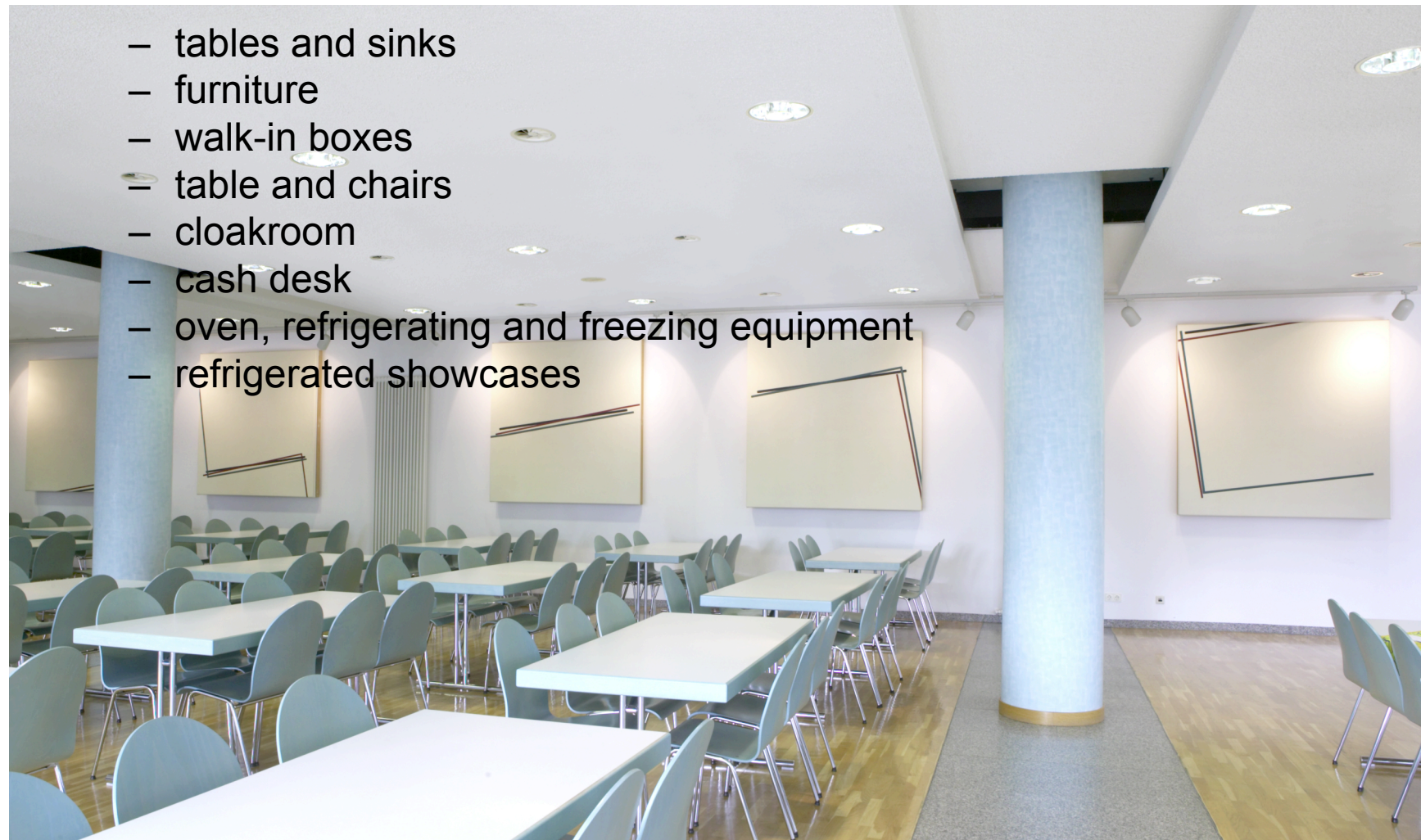


3.3. office and social buildings

3.3.1. examples

- | | |
|-------------------------------|--|
| a) canteen | base area 800 m ² ; 300 meals per day |
| b) exhibition centre | base area 1000 m ² |
| c) XFEL-laboratory 1 (XHEXP1) | l x w x h = 92 x 52 x 9-12 m; |

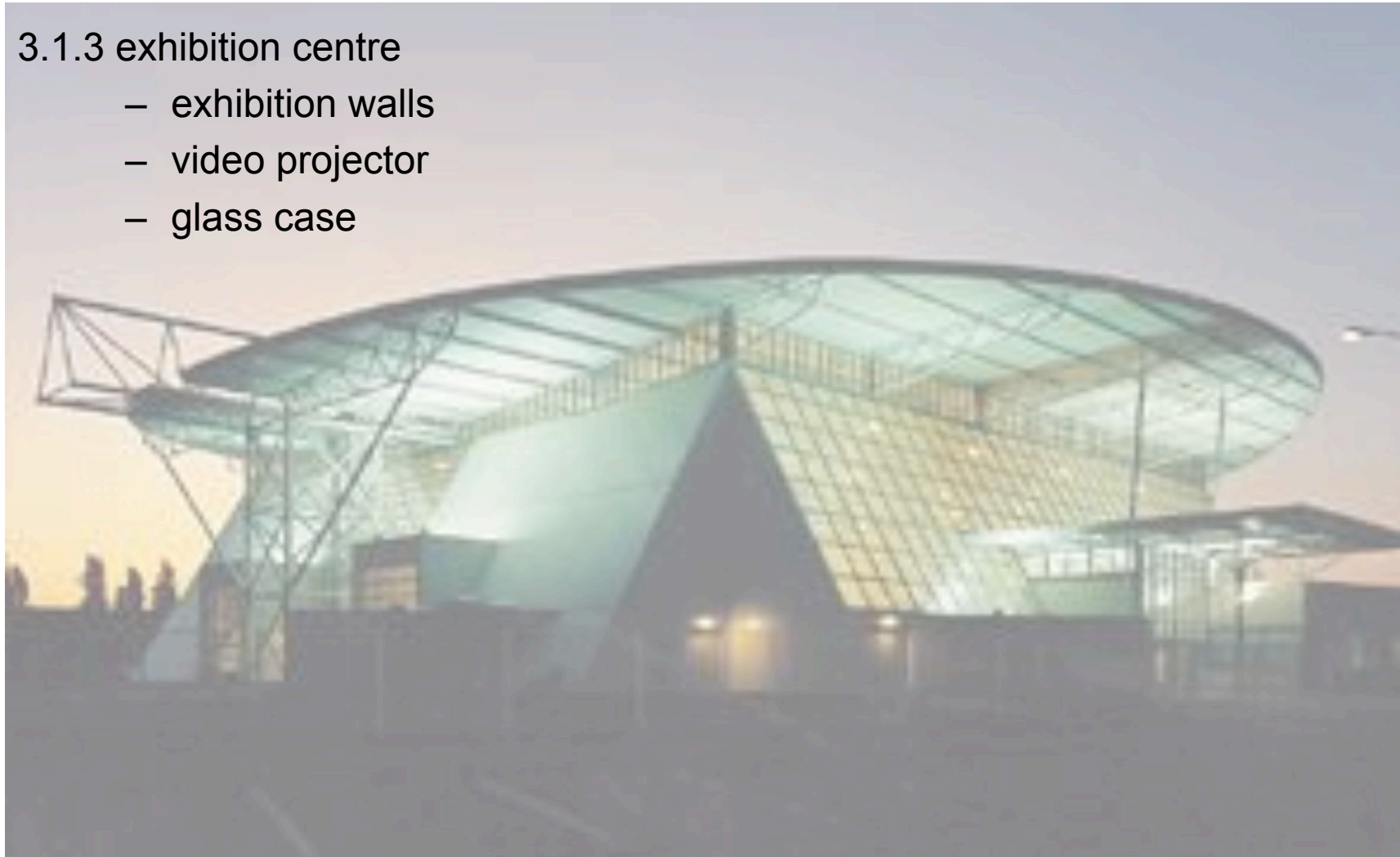
3.1.2 canteen



- tables and sinks
- furniture
- walk-in boxes
- table and chairs
- cloakroom
- cash desk
- oven, refrigerating and freezing equipment
- refrigerated showcases

3.1.3 exhibition centre

- exhibition walls
- video projector
- glass case



3.3.3 XHEXP1

configuration:

- offices
- laboratories
- auditorium (for 200 people)
- conference room
- library

- Foyer
- cafeteria
- common rooms
- tea kitchens
- sanitary works
- halls

for 350 people

equipment:

- cafeteria
- furniture
- beamer
- loudspeakers and microphones
- silver screen
- laboratory equipment

Thank you for your attention



Bildmontage mit Architekturbeispiel für das Hauptgebäude, Planungsstand April 2005, © DESY