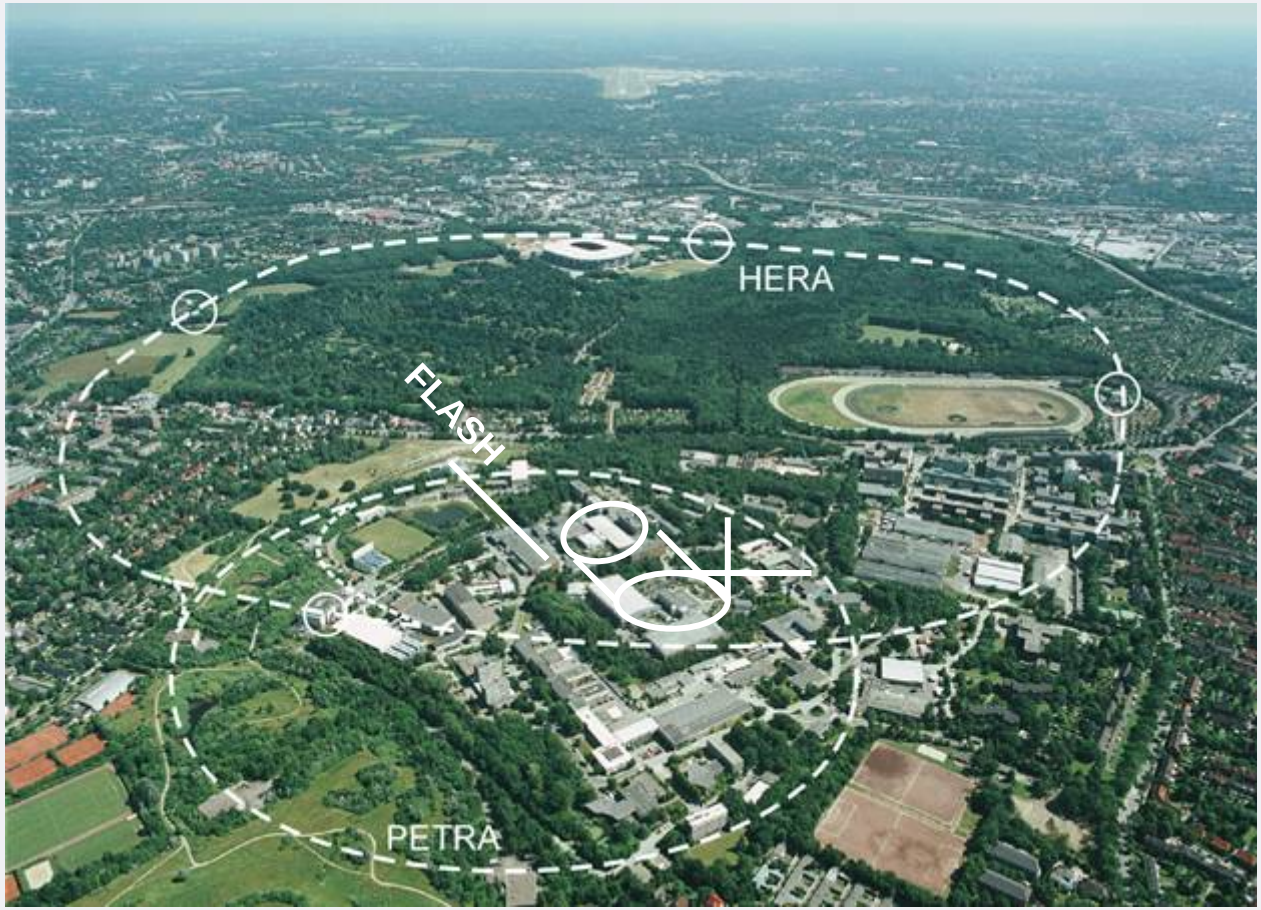
Communication the European XFEL project in the neighborhood

Petra Folkerts, XFEL Communication (PR/FEL)
Frank Poppe, XFEL Communication (PR/FEL)

DESY's accelerators today

10 accelerators – in total ~17km



e-Linac

p-Linac

PIA

DESY-II

DESY-III

DORIS

PETRA

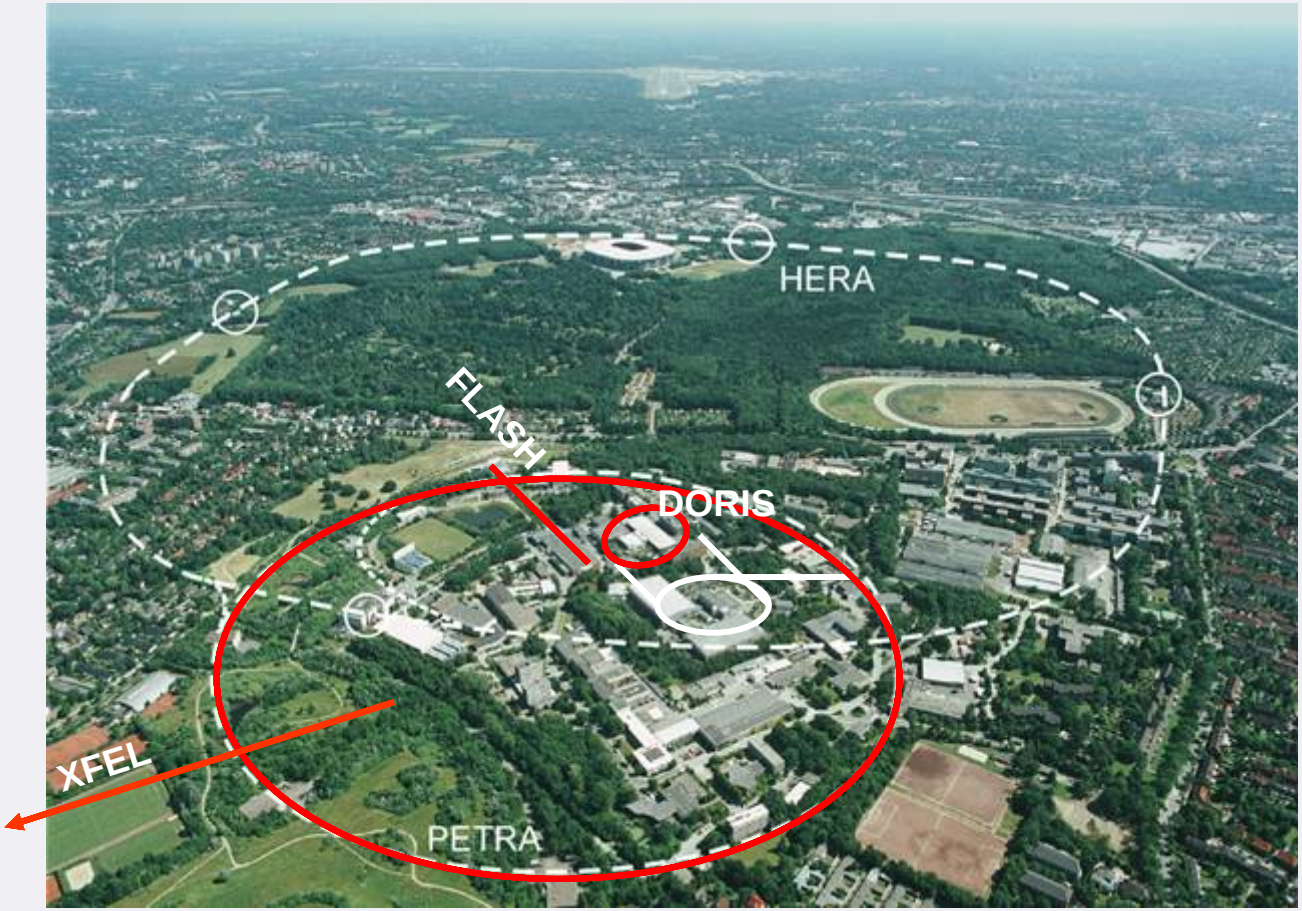
HERA-e

HERA-p

FLASH

In future: active accelerators (starting) @ DESY

4 light sources – in total ~6.5km



e-Linac

PIA

DESY-II

DORIS / HASYLAB

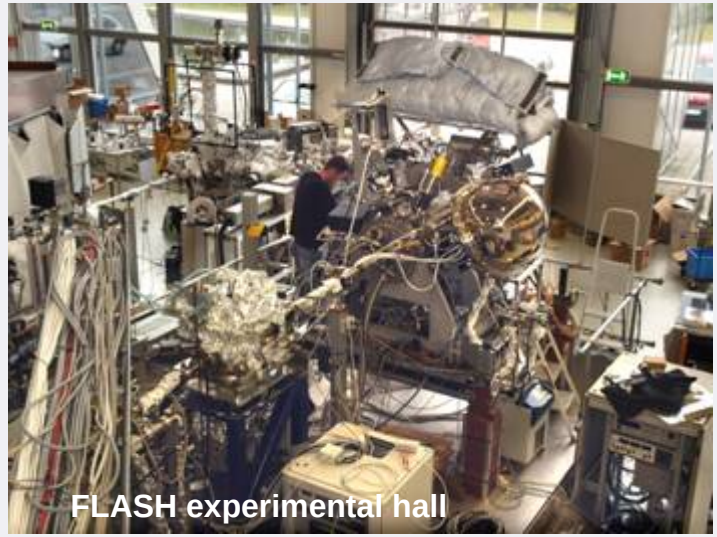
PETRA III (2009)

FLASH

Europ. XFEL (2013)

FLASH @ DESY

since 2005: research at the Free-electron LASer in Hamburg FLASH
until 2009: the only FEL for soft x-ray radiation in the world, pilot facility for XFELs


FLASH experimental hall

- ~300 m long (XFEL: 3,4 km long)
- electron linac: superconducting TESLA technology
- wavelength region: 30 bis 6 nanometer (XFEL: 6 bis 0.085 nm)
- pulses: 50 bis 10 femtoseconds long

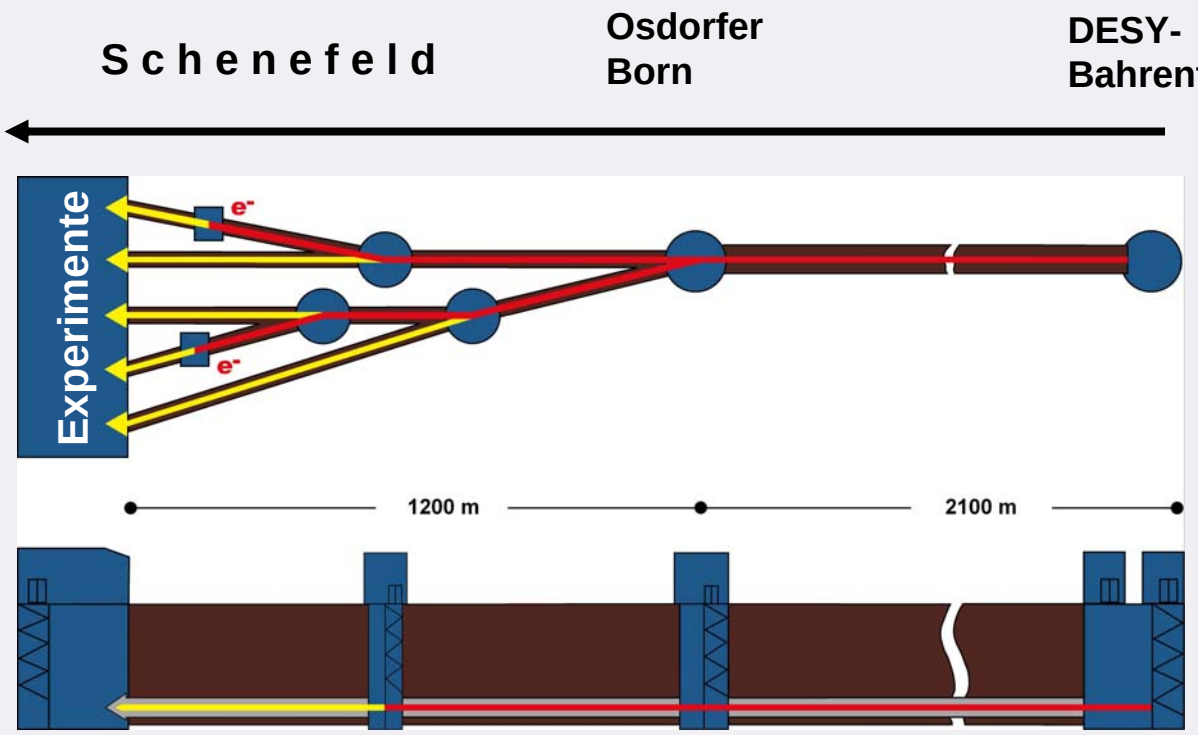
FLASH @ DESY

5 August, 2005: Bundeskanzler Gerhard Schröder

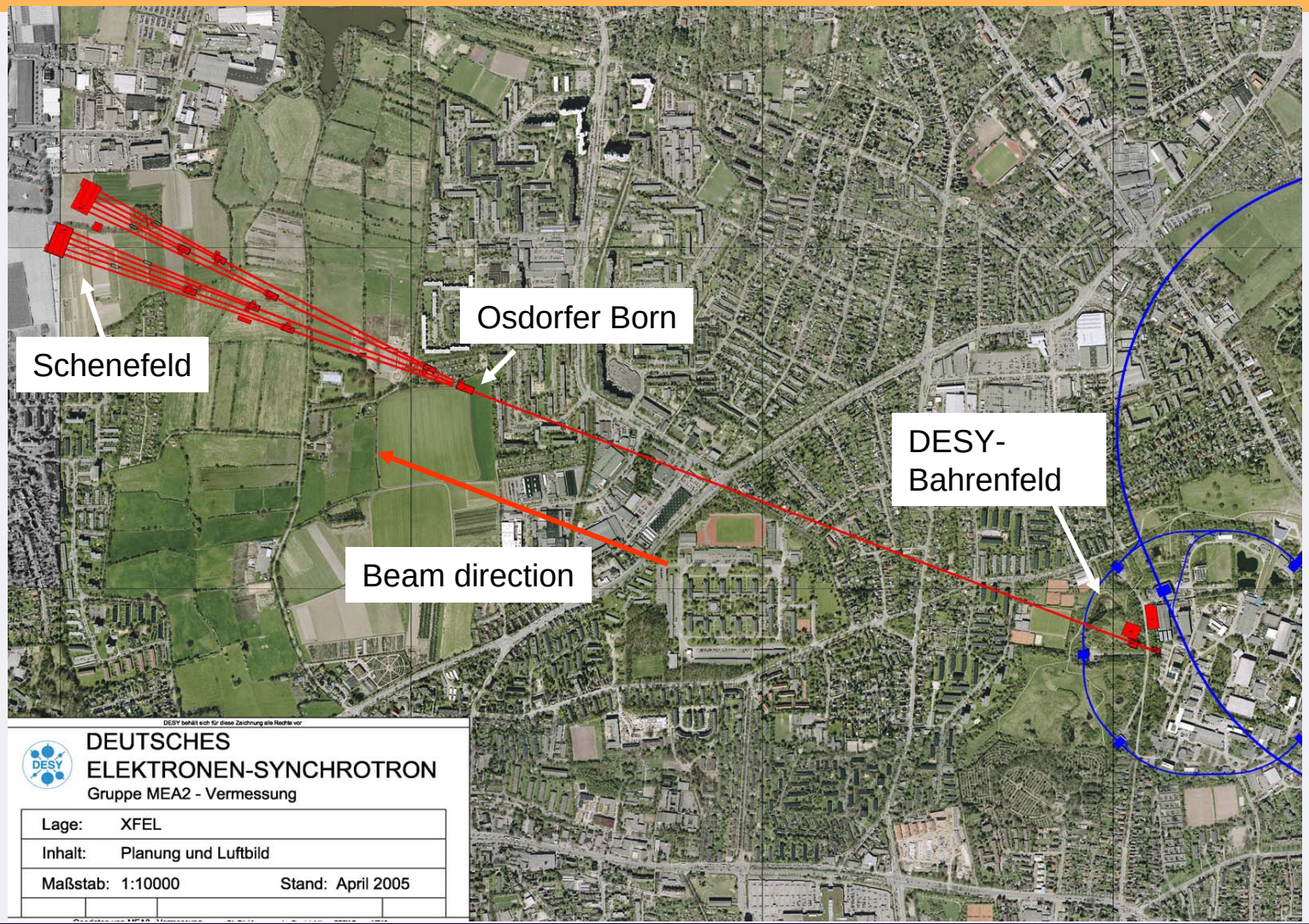
FLASH @ DESY

23 August, 2006 Bundespräsident Horst Köhler

3 XFEL sites with connection to the XFEL underground



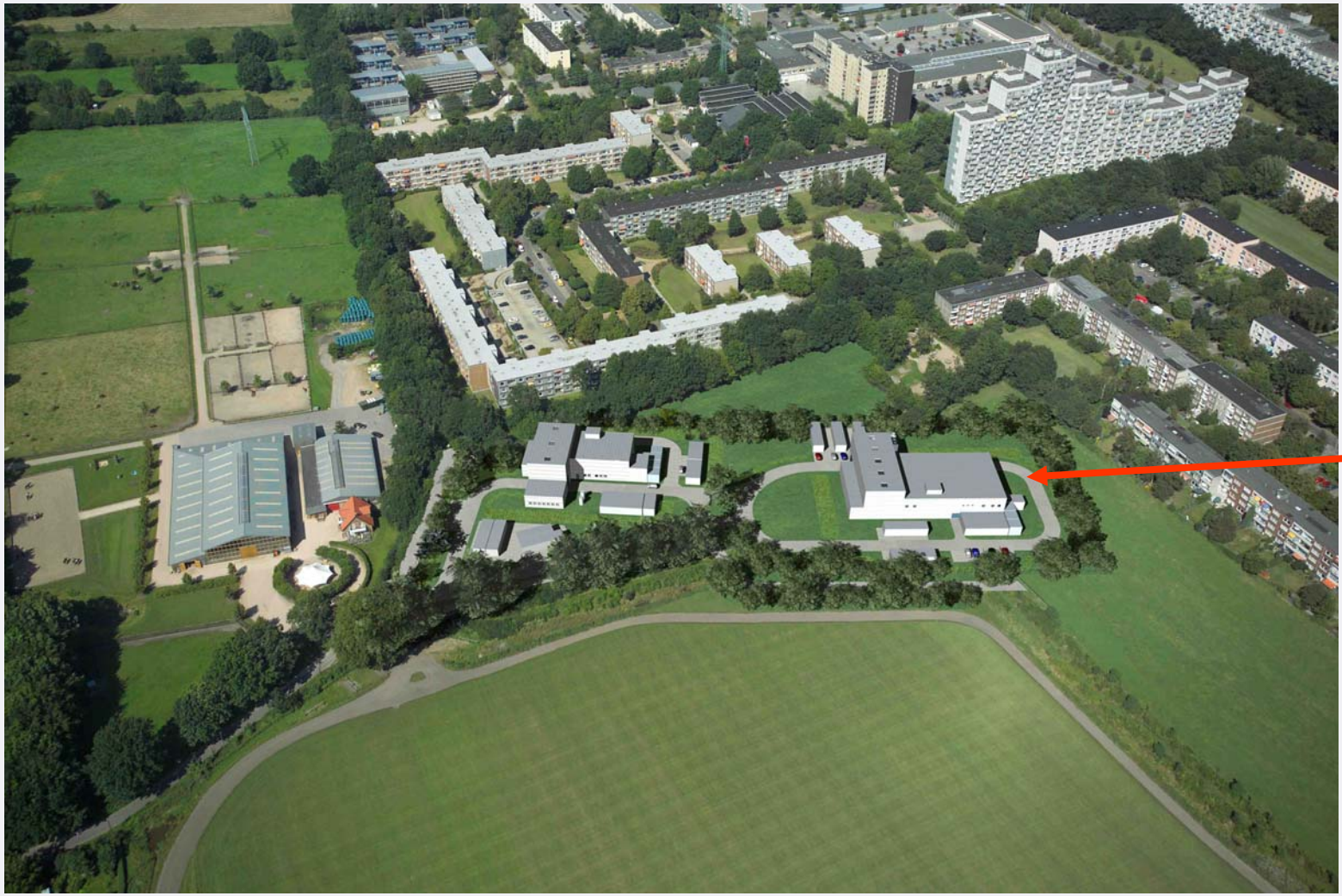
The European XFEL Facility



XFEL site DESY-Bahrenfeld

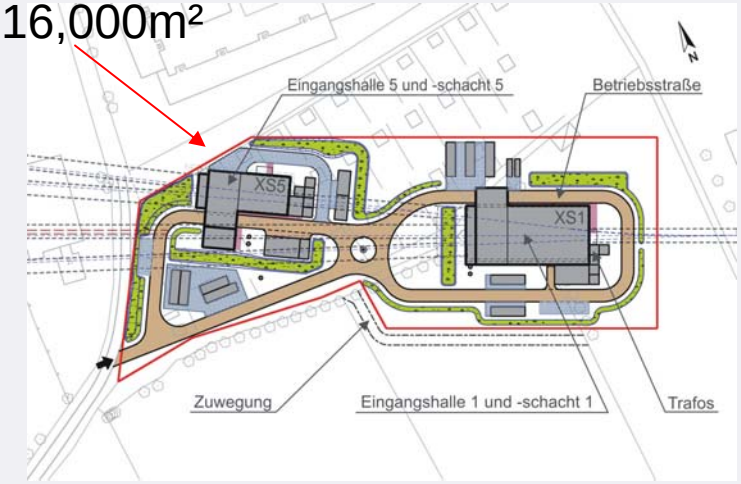
XFEL site Osdorfer Born – 2006

XFEL site Osdorfer Born – 2011



XFEL site Osdorfer Born – 2007-11

16,000m²

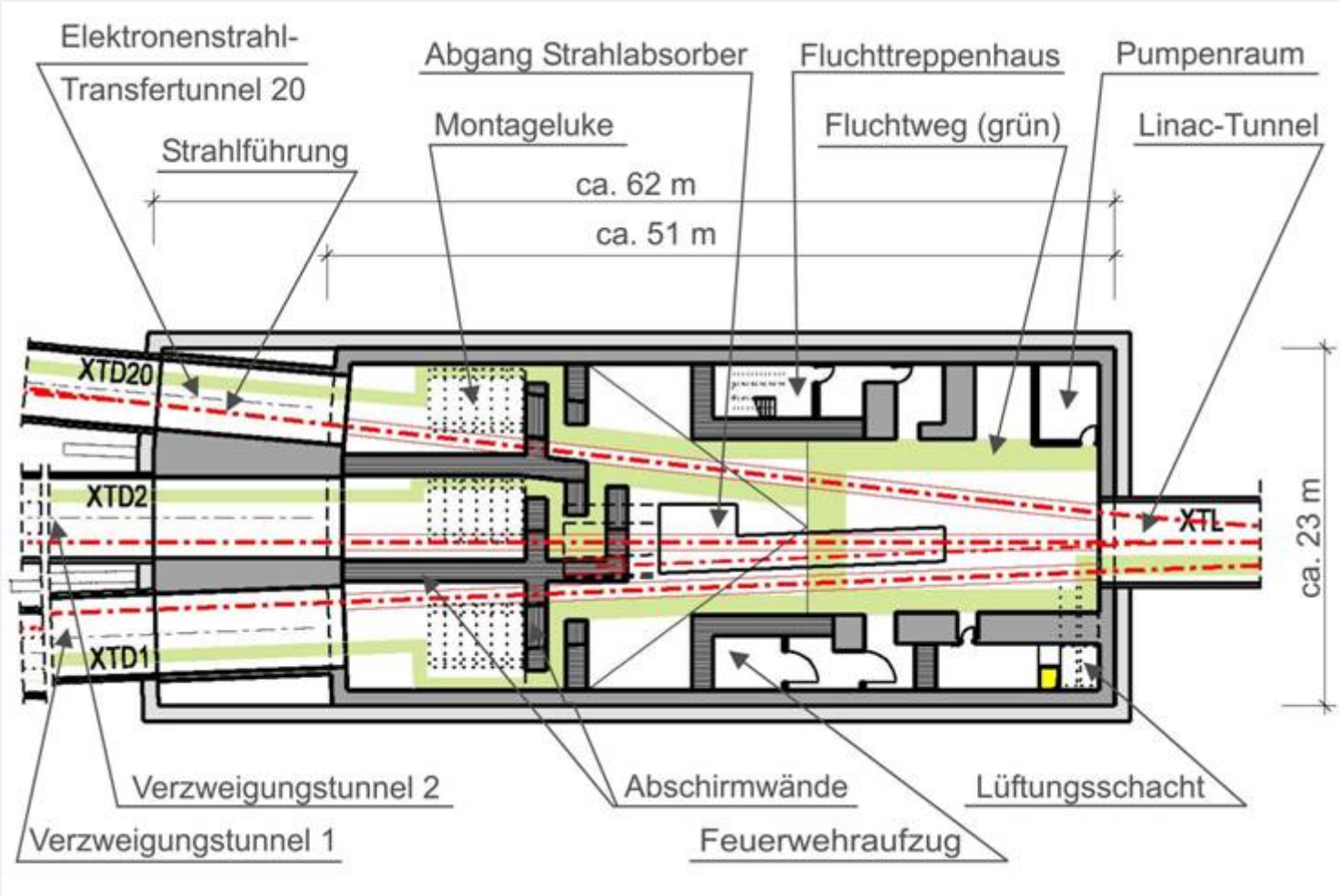


Construction site

- ~ 4 years
- 7 a.m. – 8 p.m.: 6 days / week
- 3 excavation pits: 60m x 30m
  60m x 6m
  40m x 20m
  25m deep
- allowed truck traffic:
  8 month: 20 trucks / h
  the rest of the time: 10 trucks / h
  plus 3 10-days-long periods of round-the-clock truck traffic

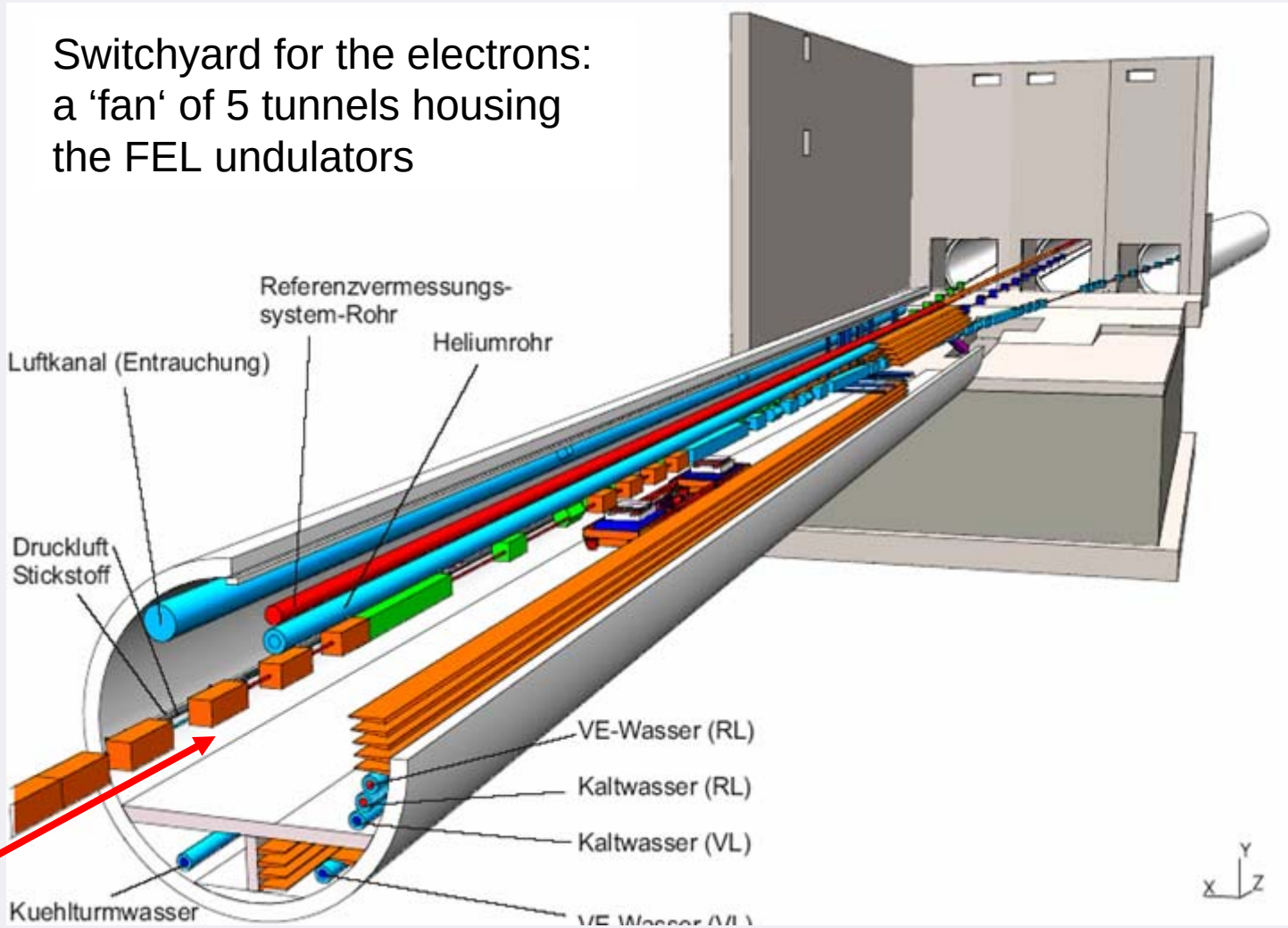
XFEL site Osdorfer Born

Underground tunnel construction



XFEL site Osdorfer Born

Switchyard for the electrons:
a ‘fan‘ of 5 tunnels housing
the FEL undulators

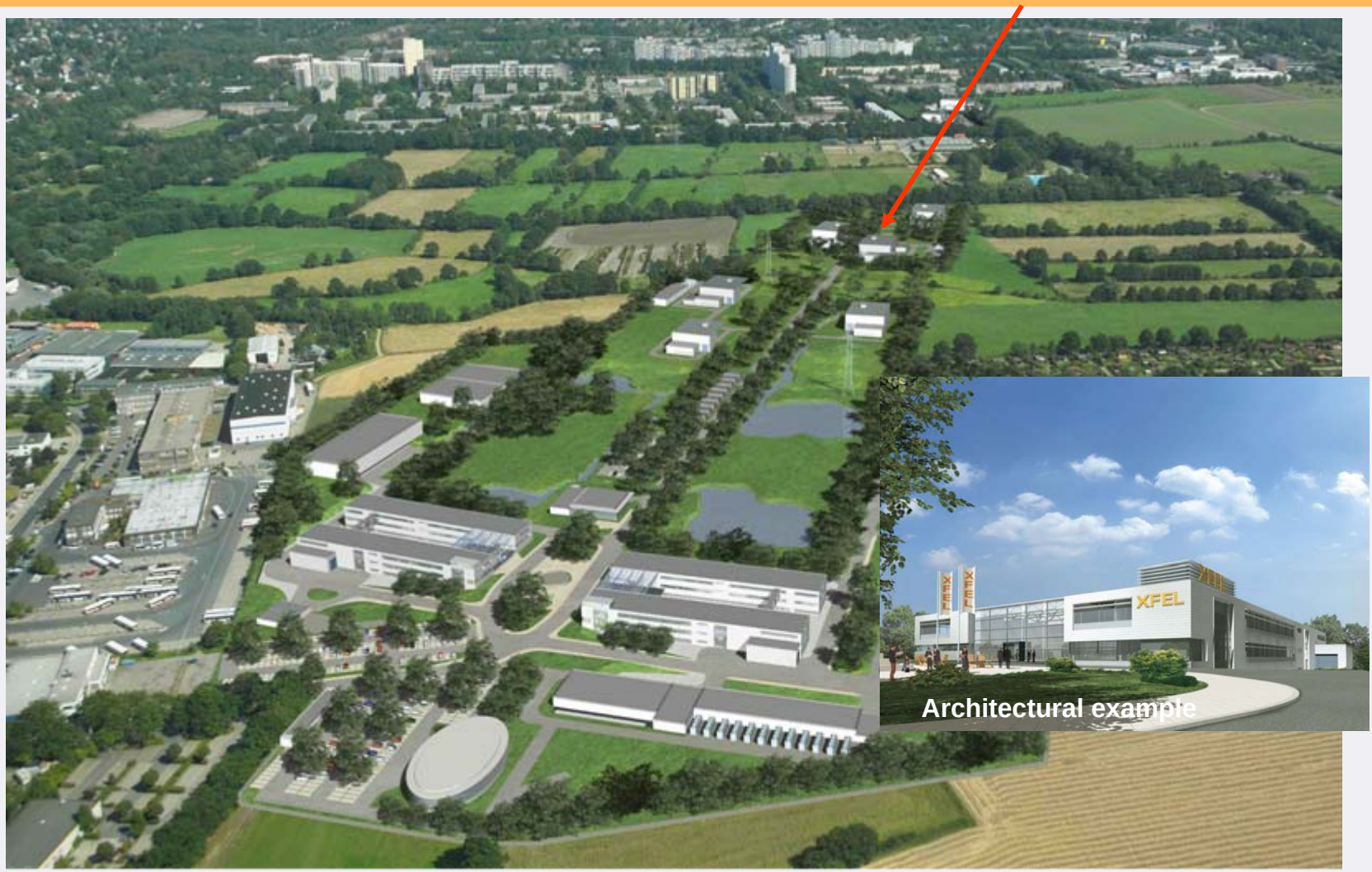


XFEL site Schenefeld – 2006

XFEL site Schenefeld – 2012

XFEL site Schenefeld – later

XFEL site Schenefeld – later



Forschung an der XFEL-Anlage

Architectural example

Architectural example

Main building

U-shaped, 3 floors
offices, workshops,
seminarrooms,
library, …

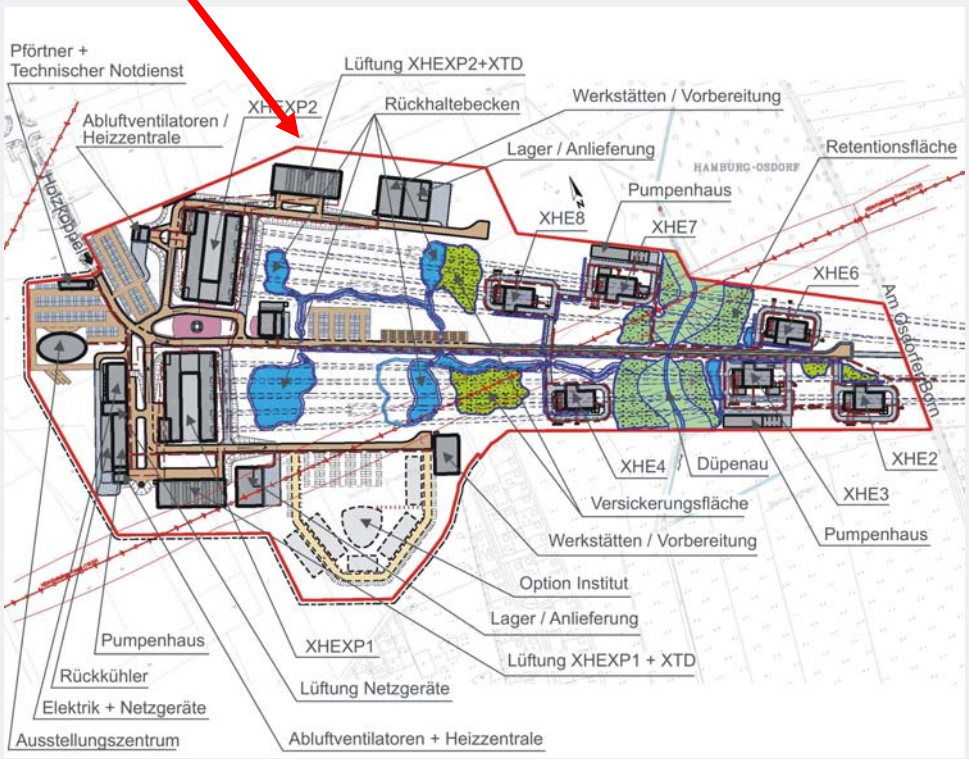
Underground experimental hall

90m x 50m
14m deep

5 beamlines for
10 exp. stations

XFEL site Schenefeld

250,000 m²



Construction site

~ 4-5 years
7 a.m. – 11 p.m.: 6 days / week

several excavation pits

allowed truck traffic:
max. 54 trucks / h (few month)

the rest of the time: 30 trucks / h
plus 3 10-days-long periods of
round-the-clock traffic

Public Planning Approval Procedure

April, 2005:
Initiating the public planning approval procedure for the construction and operation of the XFEL

10 files, filled with >1000 pages with detailed description of the facility, ~ 90 plans, the environmental compatibility survey, several expertises, etc.

Public Planning Approval Procedure

This is a fixed legal procedure, in which the construction and operation of a big project is inspected in all of its facets – including possible negative effects on the environment – by an independent state authority. In a public procedure, everybody concerned – including authorities, private persons, environmental associations and so on – can put forward their objections against the project during a well-defined period of time. They have to submit it in a written form to the authority to get the status of an accepted objector. Then all objectors and the submitter DESY are invited to a public hearing where the arguments and objections are discussed. As a result, it normally happens that the plans have to be changed in some points and includes some conditions, respectively. This procedure, which for the XFEL project took almost 1 and a half year (that's short), results in an official approval statement which has to be published again. And within the 6 weeks beginning at the 1st day of the publication, those who have the status of an objector are allowed to initiate an Administration Court action against this statement, but only those. So, if you miss the deadline for objections---because you didn't recognize that you are affected by the project---you have no other chance. After the Court's decisions on the actions the approval statement is something like a law.

Public Planning Approval Procedure

The one side of the coin is:

At the end you have the ‘approval-statement-law’ for construction and operation in your pocket. That means you don’t need any other single approval and you can go straight forward without any interruption caused by a future Court action.

The other side of the coin:

As a communicator, you have to wear a *corset with screw cramps one year* before and during this planning approval procedure.

As a communicator, during this long period you have to do just the opposite of that you are convinced to be absolutely necessary to do: To inform the neighbors as early and as broad as you can to provide confidence and a good neighbourhood.

After the end of the planning approval procedure you have to start your work at the bottom of the mountain.

Communication strategy during this procedure

DESY decided to act in principle in the following way

- Information as early as possible
  and as broad as possible
- But: Information only about the official planning – that means: details (trafic, number and hight of buildungs, …)
  not before May 2005
  that means: 1.5 y after we published the XFEL location
- Only the owners of land we need for the sites and the owners of houses on the tunnel route will be informed directly by DESY
- Questions are always answered

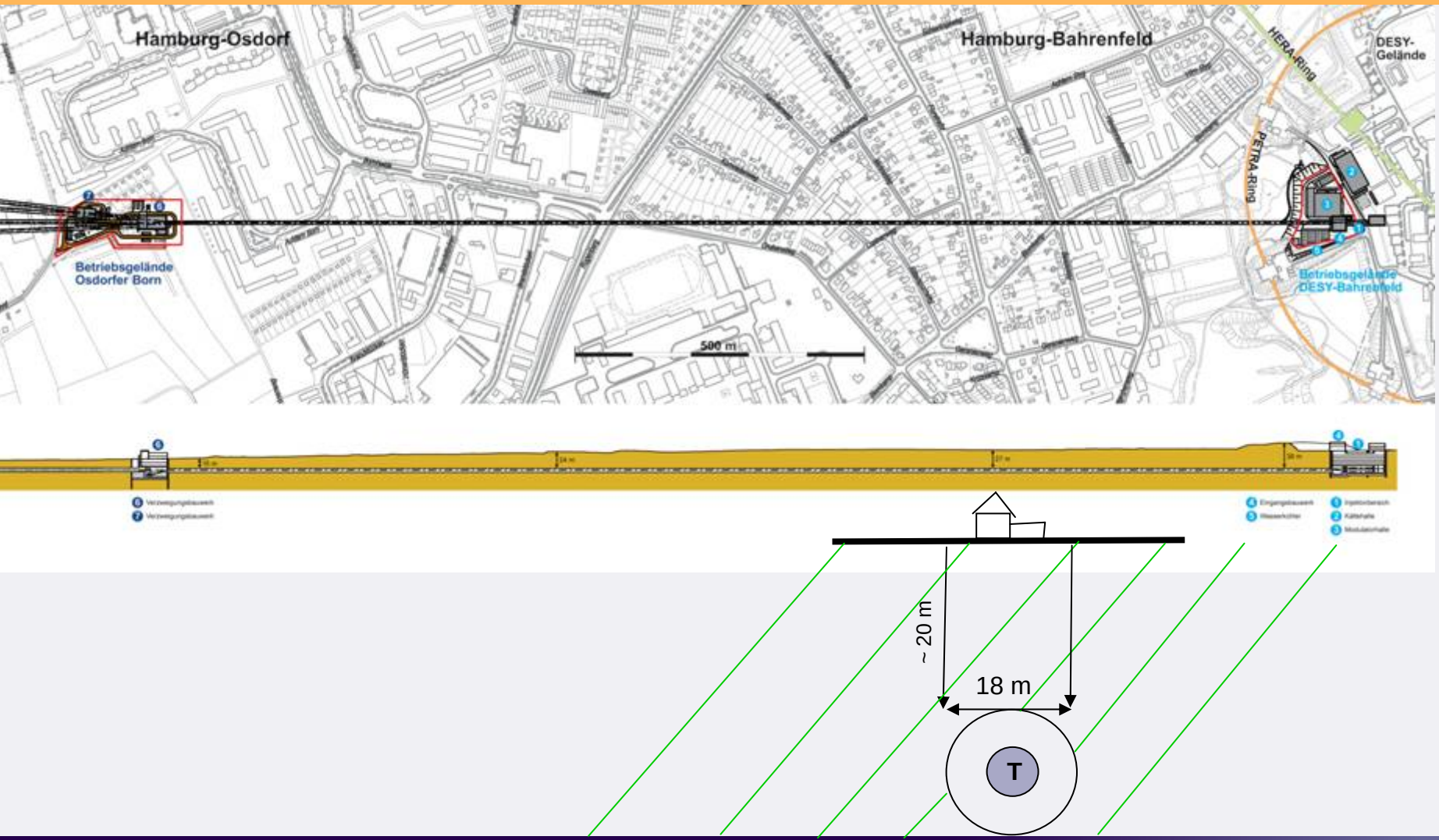
  (But: How can a neighbor know what sort of question he or she has to ask ?)

XFEL Contact Office

xfel-kontakt@desy.de

Tel 8998 1919
Fax 8998 2020

About 60 easements along the XFEL tunnel route



The XFEL contact data bank

Since 2003, each contact (letter, e-mail, phone, fax, visit, …) with each single individual (neighbor, authority, member of parliament, environment association, …) is documented

XFEL contact data bank →→→→→→ Frank

In total: 915 individuals

1700 single contacts

Quite small street ‘Flottbeker Drift‘

200,000m³ soil:

160 trucks / day
(7am - 8pm, 6 days/week)
9 months

The rest of the time
(3 years in total):

130 trucks / day

plus 3 10-days-long periods of round-the-clock traffic

www.flottbekerdrift.de