

Fehmarnbelt Fixed Link

Project Presentation

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Communications**



In the heart of Northern Europe



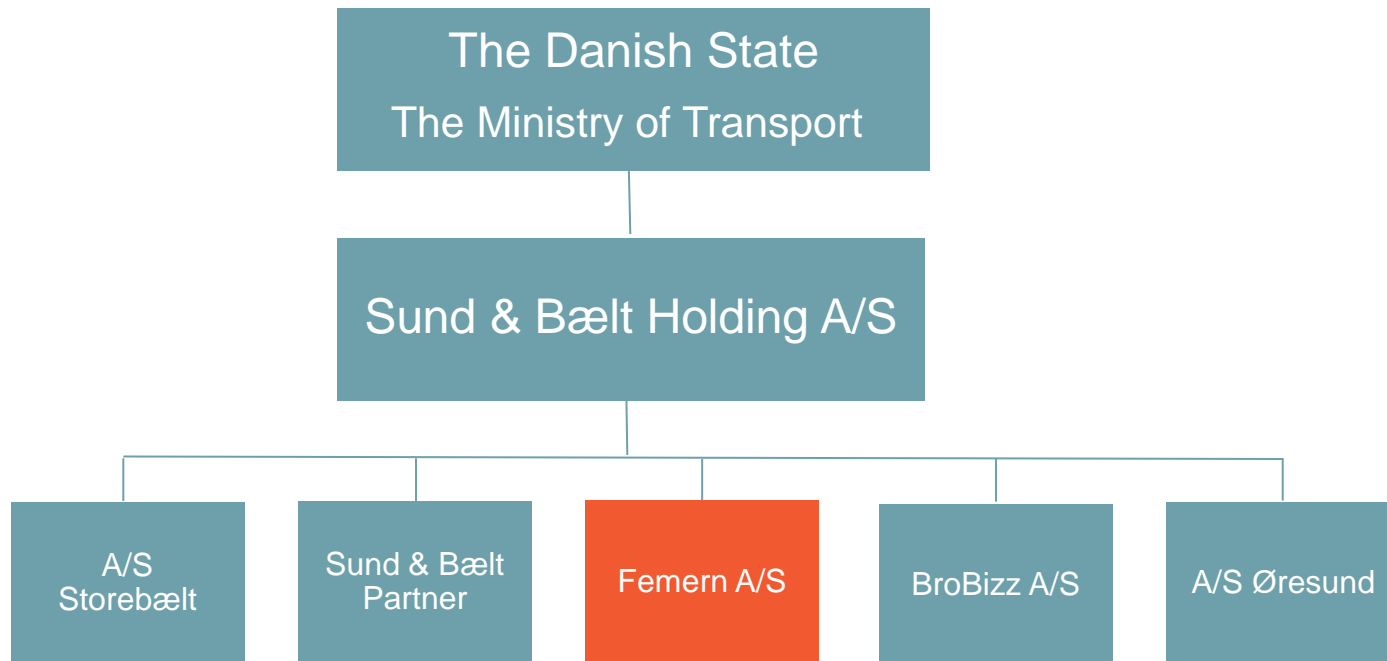
A European Project – TEN-Corridor



Who...

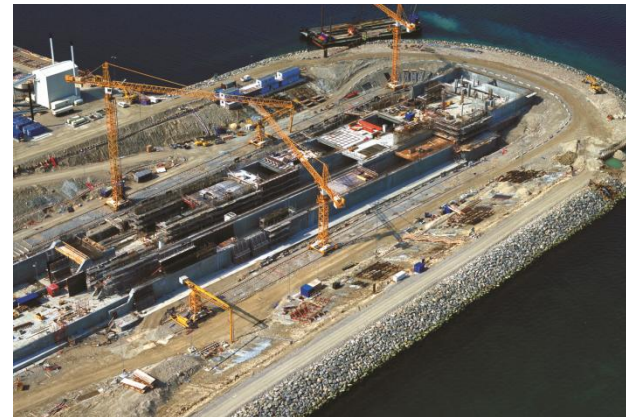
... is planning the project?

Who we are



Femern A/S – A Danish owned organisation

- **Until 2015 Femern A/S is responsible for:**
 - Economy
 - Planning
 - Approval of the project
- **It is assumed that Femern A/S will become responsible for:**
 - Construction of the fixed link (2015-2021)
 - Operation and maintenance (from 2021)



The treaty of 3 September 2008

Denmark will

- ... **own** the fixed link and **collect** the revenues that finances it
- ... **reserve** the rights to finance the Danish landworks from the revenues
- ... **provide** guarantees for the financing of the project
- ... **determine** the ticket prices

Germany will

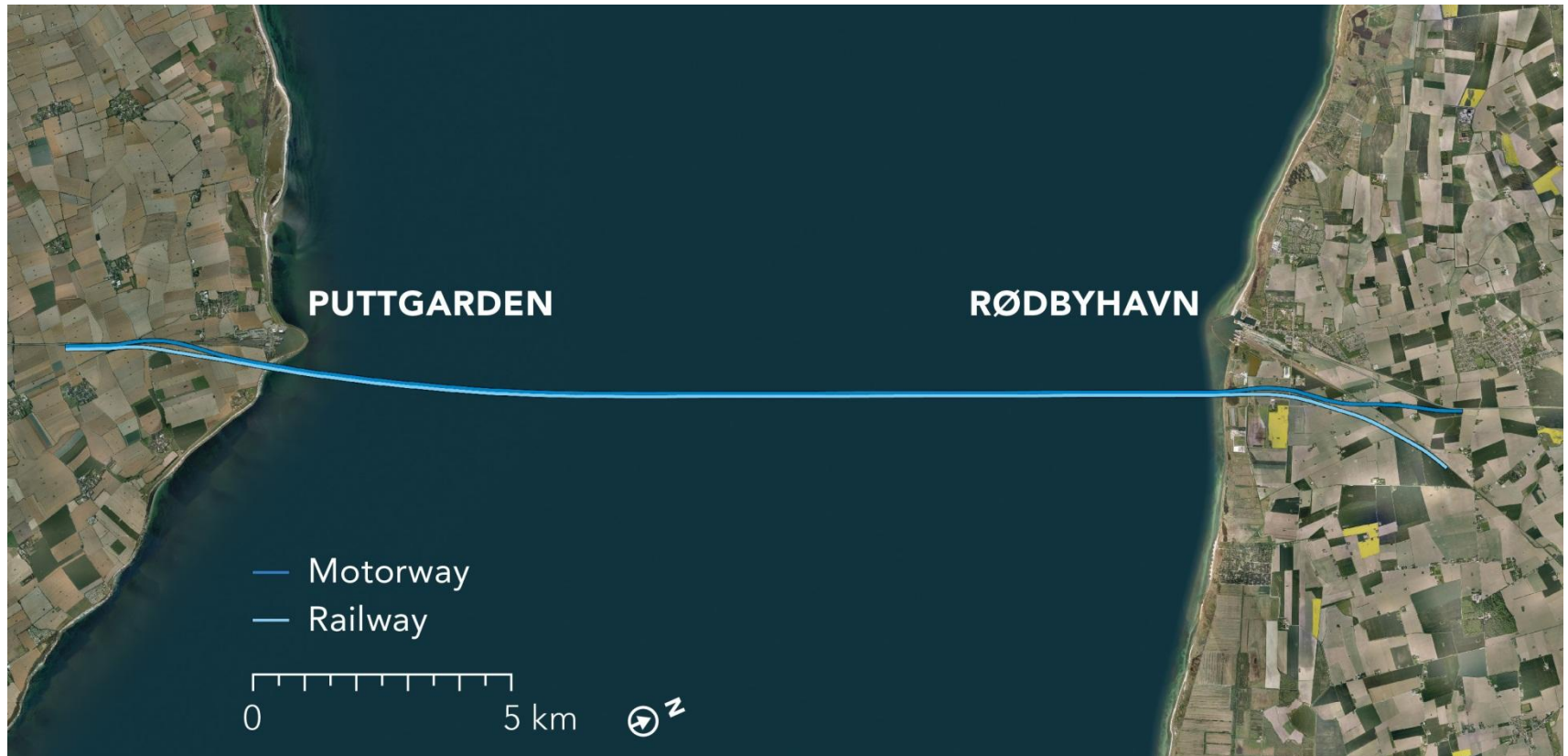
- ... **finance** the extension of the German landworks



What...

... are we planning to build?

19 km between Rødbyhavn and Puttgarden



An immersed tunnel



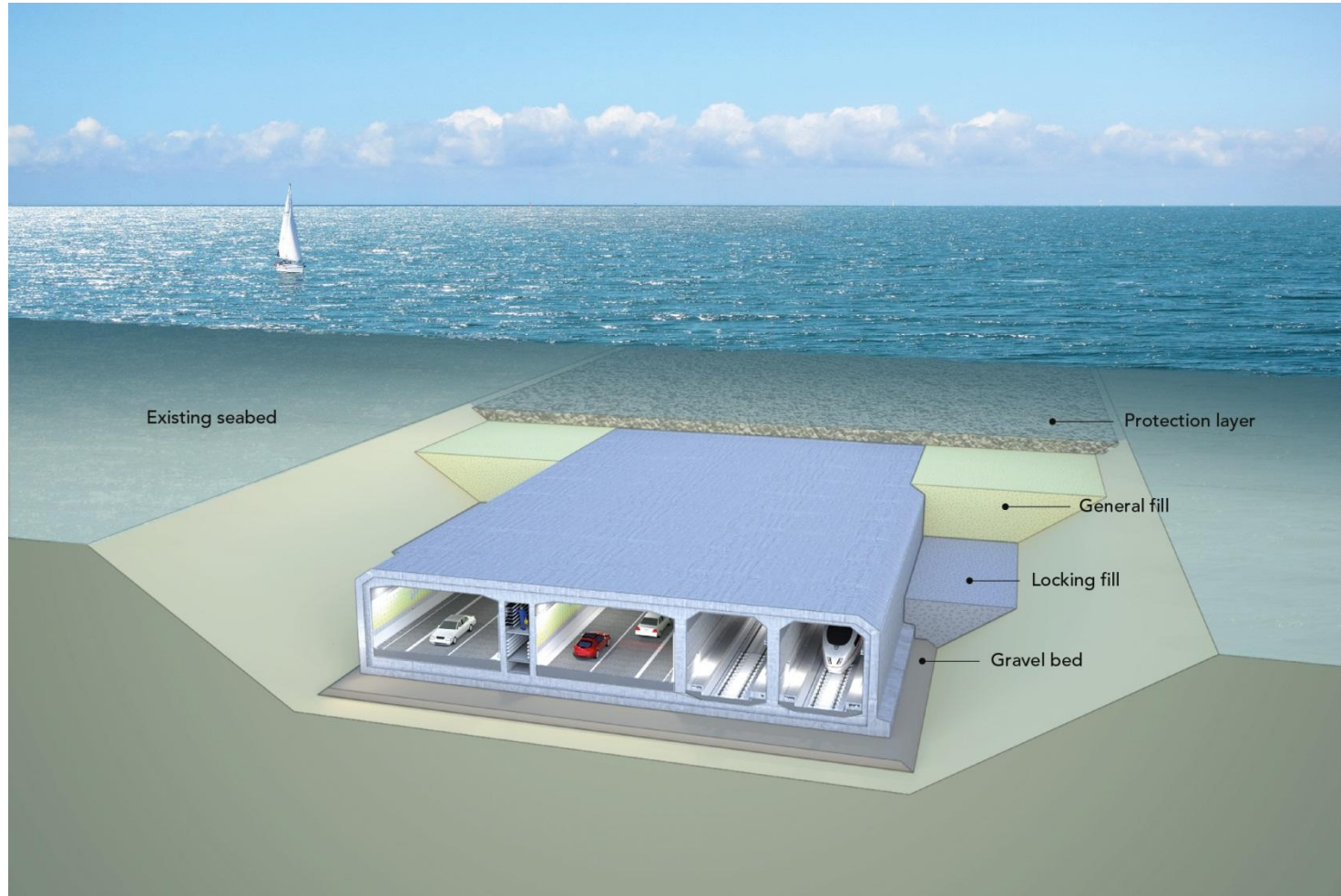


ABA





Safely under the seabed



How...

... do we plan to build the world's
longest immersed tunnel?

Construction of the immersed tunnel

FEHMARNBELT FIXED LINK

Immersed Tunnel

Femern
Sund ≈ Bælt



05/06/2013



ABA

05/06/2013



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Safe navigation in the Fehmarnbelt

- VTS system (Vessel Tracking System) for monitoring and guiding shipping in the Fehmarnbelt will be set up
- Guard vessels that will warn ships of offshore activities
- Limiting offshore activities to give vessels the greatest possible leeway in the area



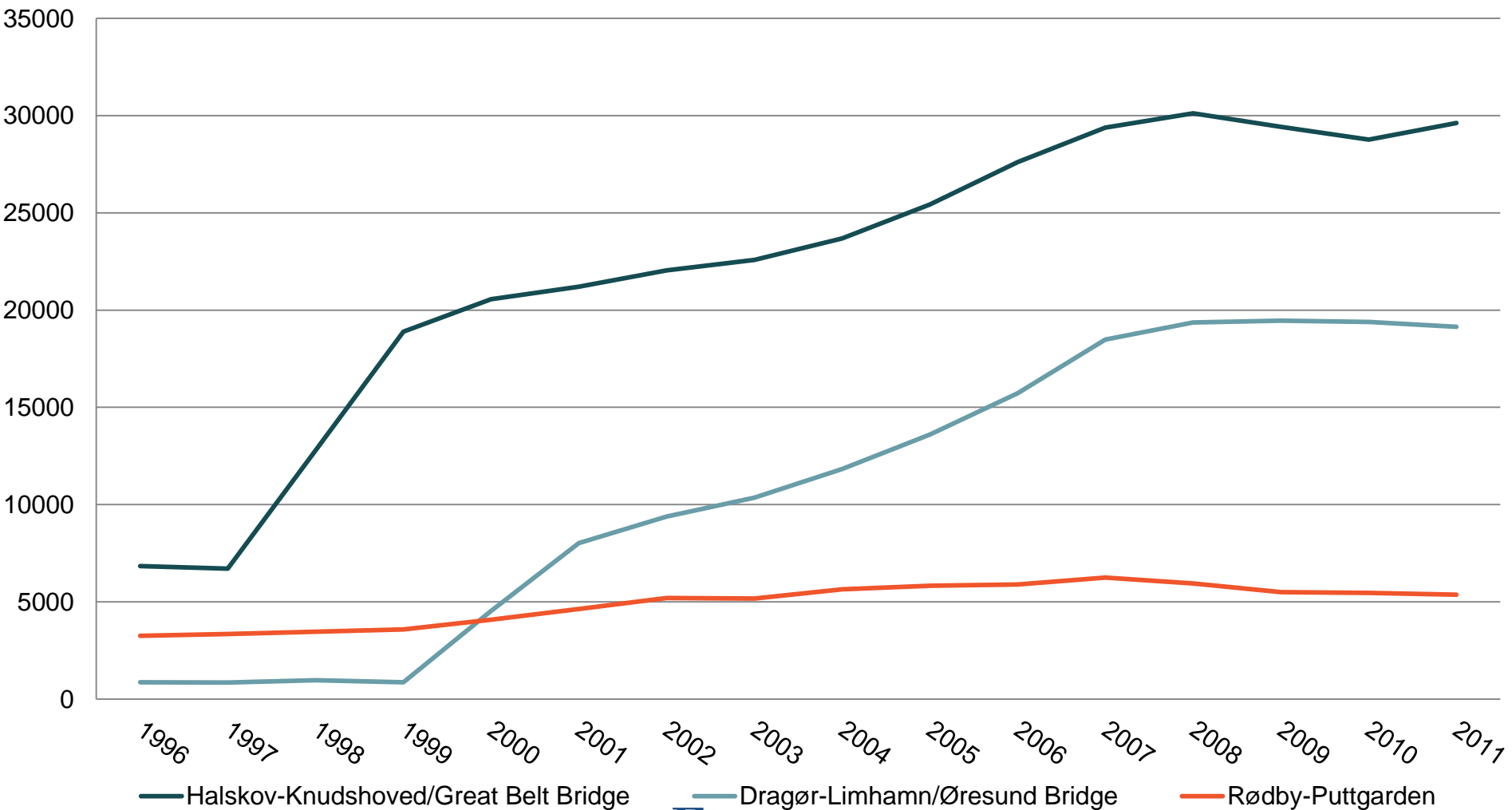
Refinanced by the future users

Repayment time	Immersed tunnel
Coast-to-coast section + Danish landworks	39 years
Assumptions <ul style="list-style-type: none">• Total gross costs for coast-to-coast section• Construction costs for landworks• Growth rate for road traffic – first 25 years	<ul style="list-style-type: none">• 5.5 billion EUR• 1.1-1.2 billion EUR• 1.7 % p.a.

Why...

... do we need a fixed link at all?

When you remove a bottle neck...



The regional project: making the region flourish



New business clusters and cooperations across borders

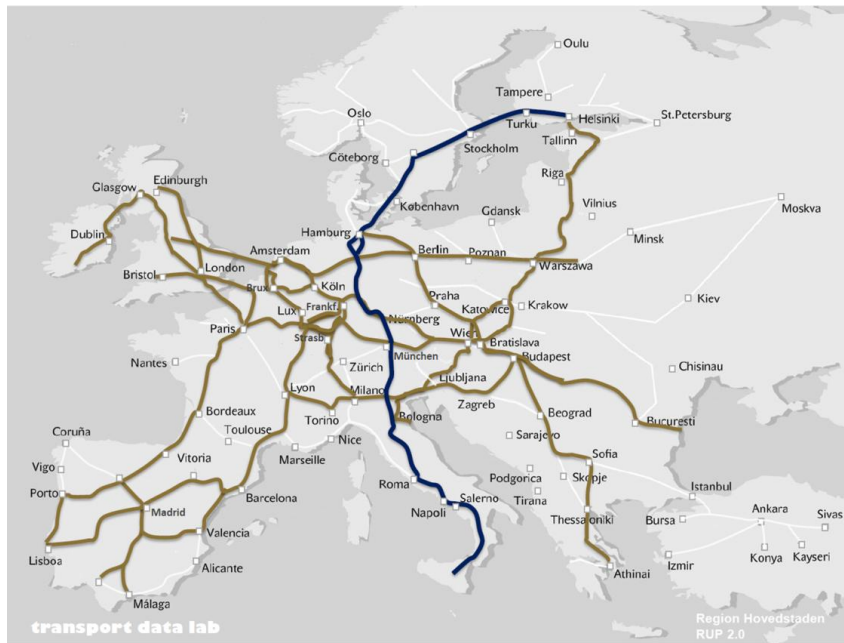
Industries present in all regions:

- Life science/health
- Food industry
- Information technology and media
- Logistics (especially maritime)
- Wind energy/green technology
- Tourism

Industries present in some regions:

- Financial sector (with business services)
- Cultural sector (media)
- Airport related activities, civil aviation
- Nanotechnology
- Maritime industries

The european project: towards a stronger Europe



- **Strengthening**
the competitiveness of the common market
- **Creating**
CO2 efficiency of rail transport
- **Connecting**
the periphery regions with the central regions
- **Removing**
bottlenecks
- **Improving**
the quality of infrastructure and the transport operation
- **Establishing**
a main transport corridor between Continental Europe and Scandinavia

Regional development is already in full swing

FEHMARNBELT
DAYS2012
26TH - 28TH
SEPTEMBER
HAMBURG AND LÜBECK



When...

... is the tunnel ready?

What has happened

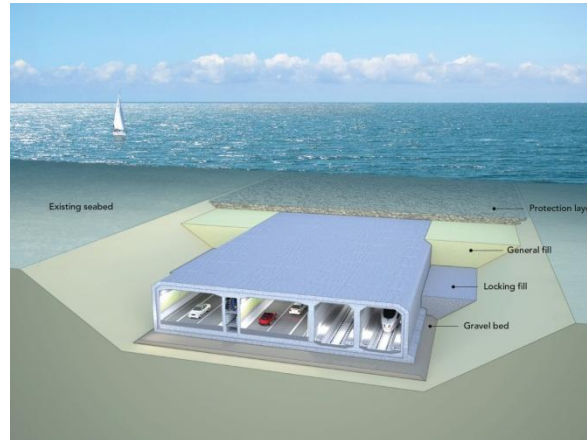
■ 2008

Signing of state treaty between Denmark and Germany



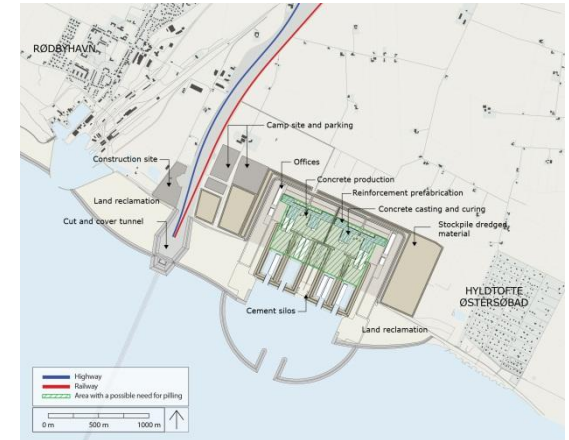
■ 2011

The immersed tunnel declared to be the preferred technical solution



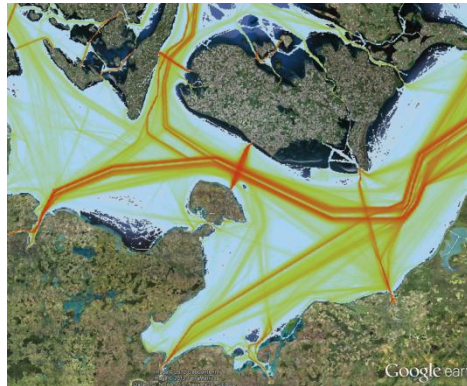
■ 2012

The approval process begins



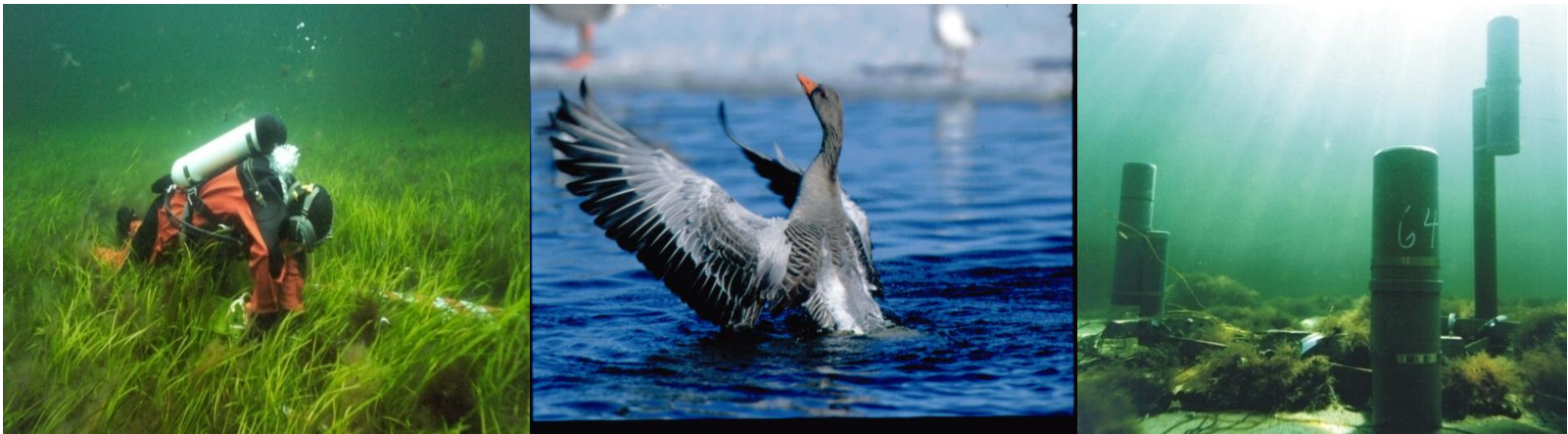
The approval process and the environment

- **Development** of design
- **Investigations** (environmental, navigational, geotechnical etc.)
- **Preparation** of the plan approval documents
- **Formal plan approval process** including EIA (Environmental Impact Assessment) in DK and DE
- **Danish approval:** Construction act
- **German approval:** "Planfeststellungsbeschluss"



Comprehensive environmental investigations

- Broad investigation program, e.g. water exchange, flow conditions, sediment spill, birds, fishes, mammals
- Environmental investigations: 2008–2013 (to be concluded)
- 270 Millionen EUR
- Final stage of assessments. But clear indication: immersed tunnel will have no permanent effects on the environment.



What will happen

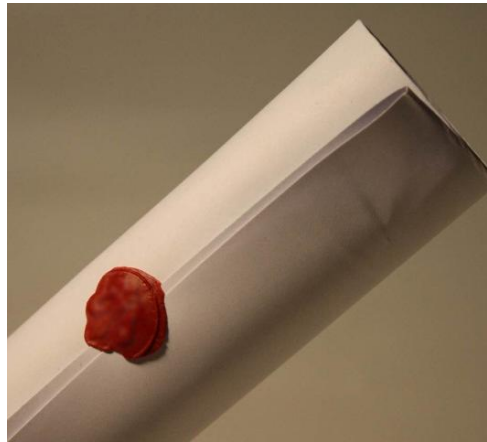
▪ 2013

Construction work
put out to tender



▪ 2014

Construction act



▪ 2015

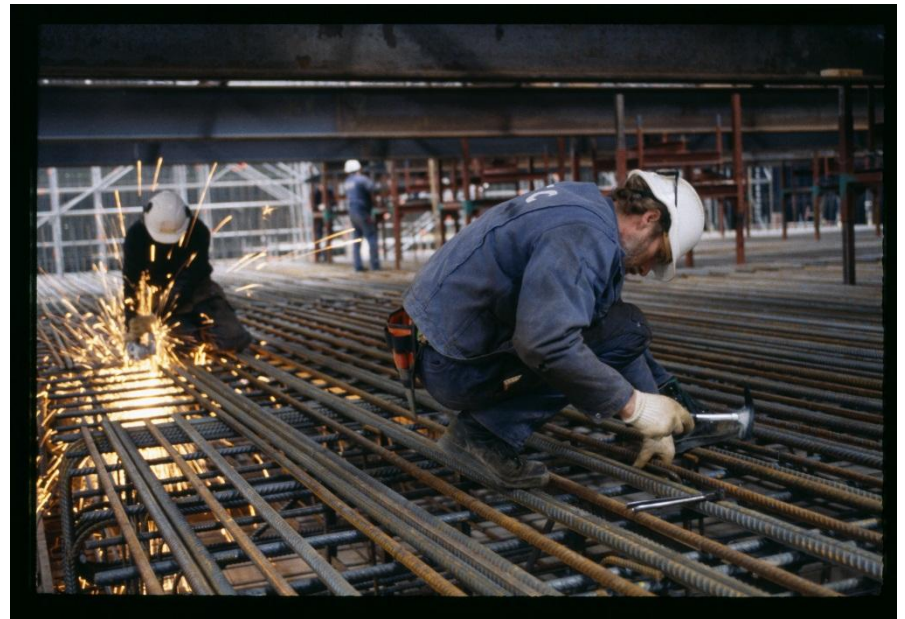
Construction work
begins (6½ years)



▪ 2021: Opening

Jobs at the coast-to-coast link

- The direct and closely related indirect employment from 2009 to 2021 is estimated to be between 25,000 and 30,000 man years
- During the busiest years in the middle of the construction phase, approx. 4,000 people are expected to be directly engaged in the project.



Construction site at Puttgarden



Puttgarden – 2021



Puttgarden – 2021



Thank you for your attention!



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Blog:

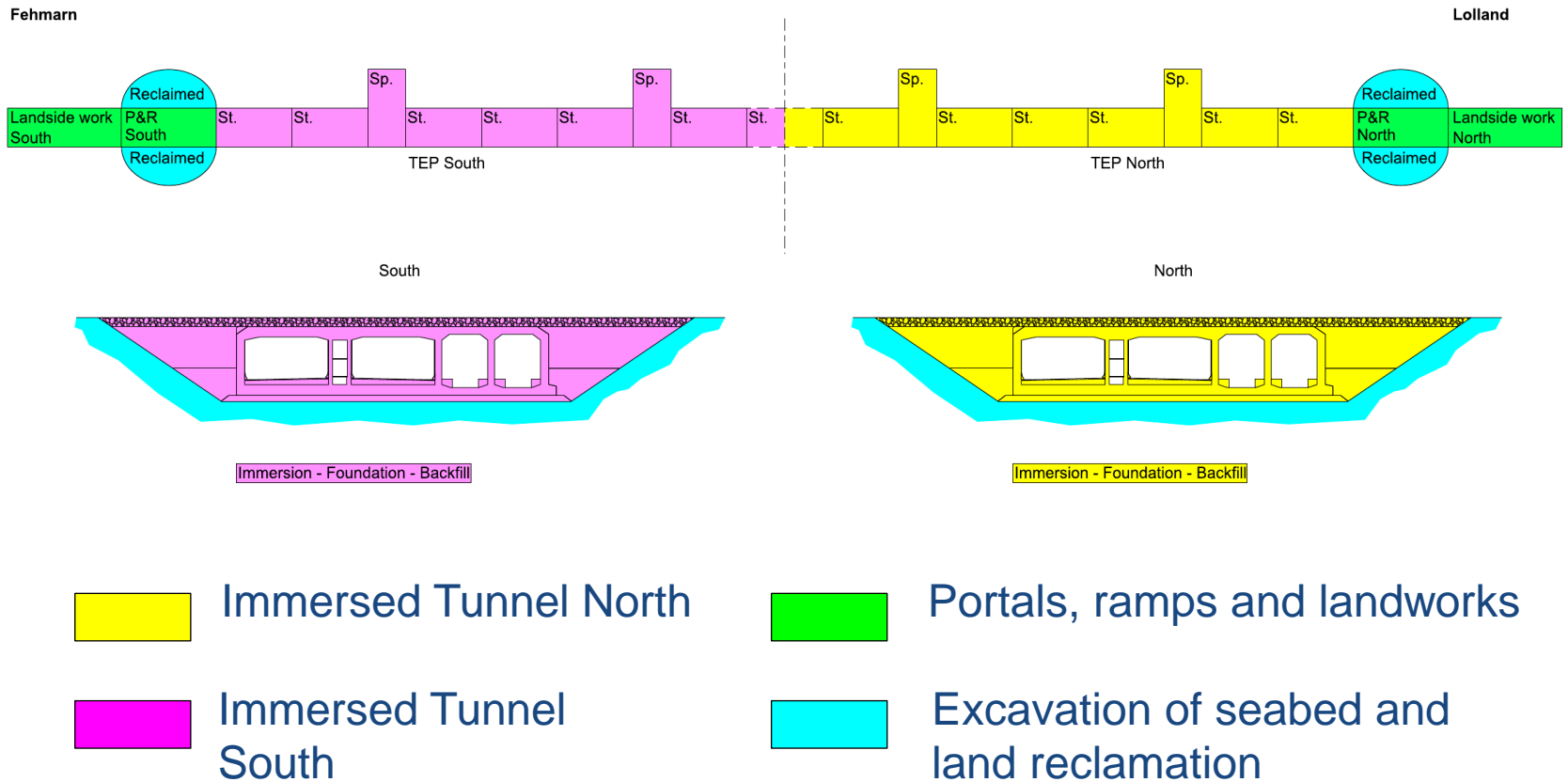
www.blog.femern.com



Prequalification

- In the prequalification process, Femern A/S identifies those companies best suited for implementing the large construction contracts
- Interested companies will be rated according to:
 - General suitability
 - Financial and economic abilities
 - Technical abilities

Prequalification for Four Major Contracts



Tender Modalities

- EU tender regulations:
 - Ensure a fair competition
 - Define certain requirements for equal treatment
 - Define limits for national special regulations
- Split into several contracts ensures:
 - Optimum competition between the bidders
 - A sensible size of the different contracts
 - Focus on competitors' key competences
 - Simple interfaces between contracts

Social Responsibility

- Femern A/S seeks to be a good citizen in the region
- The major building contracts will include some social responsibility requirements for the contractors, e.g. reg.:
 - Apprentices and interns
 - Wage and work conditions
 - Housing at the construction sites
- All requirements need to be compatible with EU rules and international conventions