



# Dutch Offshore infrastructure optimization Project (DOMINO)

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# Agenda

- Introduction
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- Current situation
- Outlook
- Where do we go
- Den Helder consolidation
- Threats and hurdles
- Regulatory
- Decommissioning

# Introduction



NOGAT B.V. is the owner of one of the main pipeline systems transporting gas from SNS offshore platforms to shore.

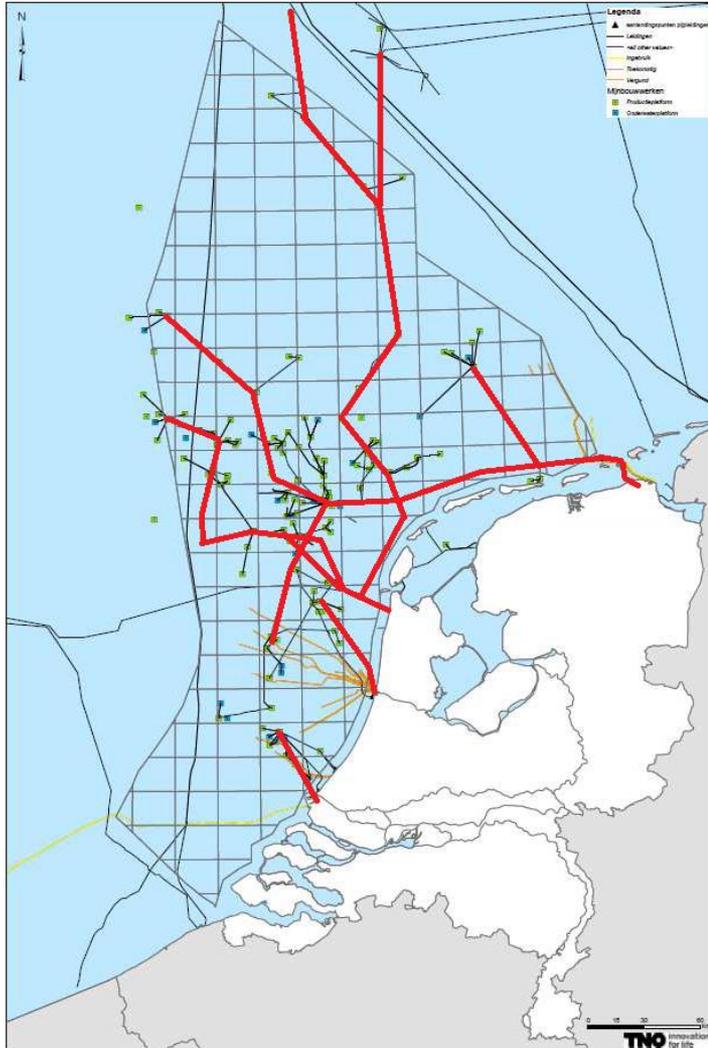
The main pipeline systems have been built and organized by Producers to get the produced gas to the market and they play an important role in the gas supply chain.

The outlook for our industry has changed dramatically in the last few years. We are planning for decommissioning rather than new developments.

As infrastructure we can't change the world but we can help to postpone COP.

The DOMINO project aims to consolidate the main pipeline infrastructure by making more efficient use of the facilities and organizations.

# The Offshore infrastructure



- 4000 km of pipelines
- 4 major trunklines (gas)
- 4 gas treatment installations



Three trunk lines, transporting hydrocarbon gas liquid mixtures from offshore gas and oil platforms, are landed at the Den Helder gas plant.

- The WGT (West Gas Transport) trunk line, operated by Wintershall and NAM
- The Local (Low Calorific) trunk line, operated by NAM
- The Nogat (Northern Gas Transport) trunk line, operated by ENGIE and NAM and owned by Nogat bv
- At the Den Helder site each trunk line is connected to its own dedicated plant.

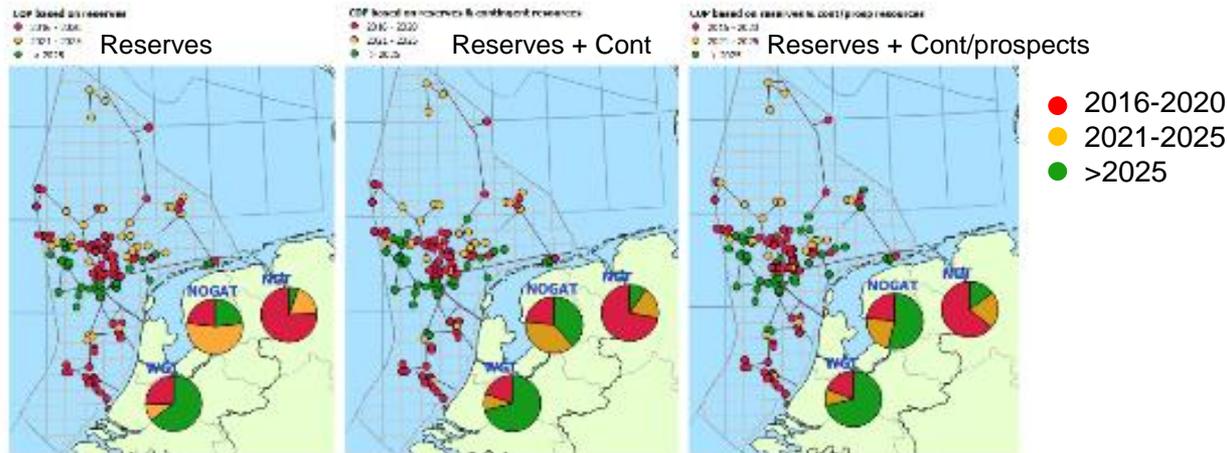
One more trunk line, the NGT system arrives in Uithuizen and has its own dedicated treatment installation.

# Current Situation

## The facts

- Offshore production is in decline !
- Field development opportunities are becoming marginal\*
- Little exploration and marginal fields struggle to be developed.
- Off-spec (sometimes stranded) gas fields require more blending capacity.
- The current market situation is grim
- Operators are working hard to bring Platform cost (opex) down
- Pipelines systems are operating at less than 30% of name plate capacity
- All pipelines have their own organizations for O&M, HCA and dispatching, etc.
- Considering EBN's Focus on Dutch Oil&Gas, COP of infrastructure is nearer than we think.

## COP of infrastructure assuming a gas price of 17.5 €ct/Nm<sup>3</sup>



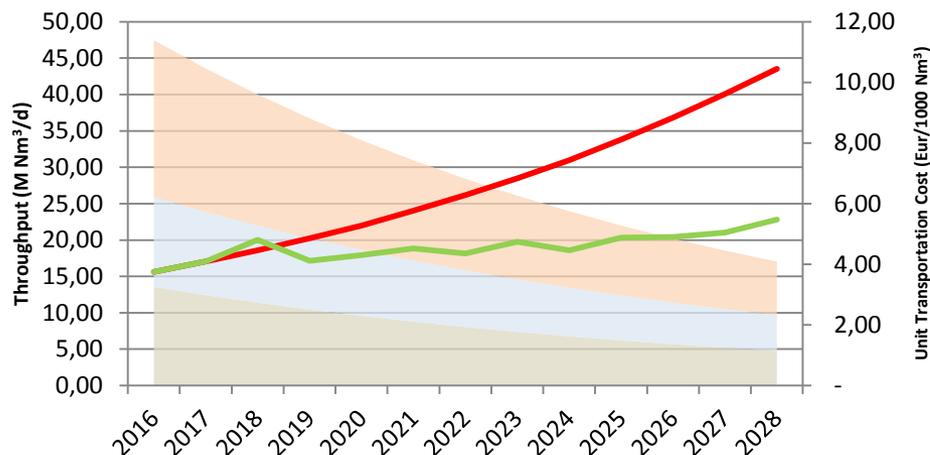
If we don't take action in time we may be heading in a direction we don't want to go -



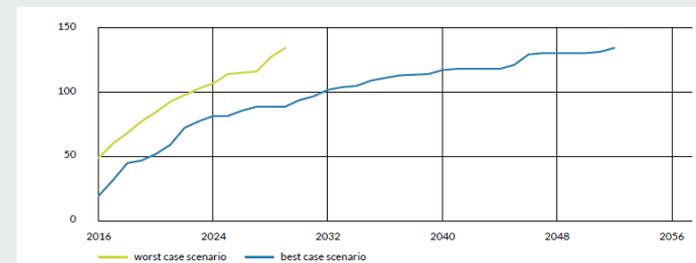
## The pipelines

- Unit Transportation cost of major trunklines will double in the next 10 years.
- Pipeline Opex has the third largest effect on reserves development and will be second largest after gas price in 10 years time.
- Total Operating expenditures of the major trunklines are currently ~ Eur. 65 mln.
- Throughput declines with 6-7% p.a.
- In the current market environment is probably going to stay for a few years and we cannot expect game changers

### Forecast of Average Unit Transportation Cost and Throughput

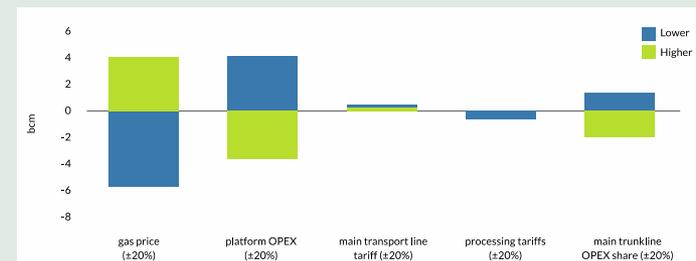


### Number of installations that reach COP in upcoming years: best and worst case scenario



EBN 2016

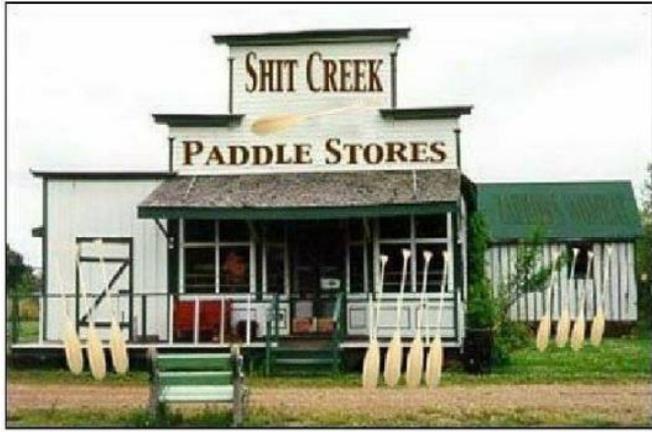
### Reserves added or lost



EBN 2016

# Where do we want to go

So what is that “The Paddle”



- The infrastructure is perhaps the last part of the gas supply chain that can save cost.
- In order to save on infrastructure cost we need to cooperate.
- We need to consolidate the existing pipelines, facilities and organizations.
- Cost reductions will postpone COP and enable marginal developments
- We need to explore opportunities to attract more gas.
- And we need to do this now !

So, what we propose to do is to see whether we can create one single pipeline organization in the Netherlands managing all major pipelines more efficiently.

# Some examples

## Den Helder Consolidation:

NOGAT can use the WGT Treatment Installation and decommission its own. By bringing NOGAT and WGT together in one stream, there may be sufficient blending capacity to accommodate Local gas as well. This could potentially lead to the elimination of one complete pipeline and two treatment installations.

This case is currently being worked on by NOGAT, NAM and Wintershall.

Further opportunities exist to:

- Join forces with NGT (physical connection and organization)
- Connecting with UK infrastructure via WGT and NGT.
- Supplying Denmark via the existing connections.
- On the long term, attracting transit volumes to UK .

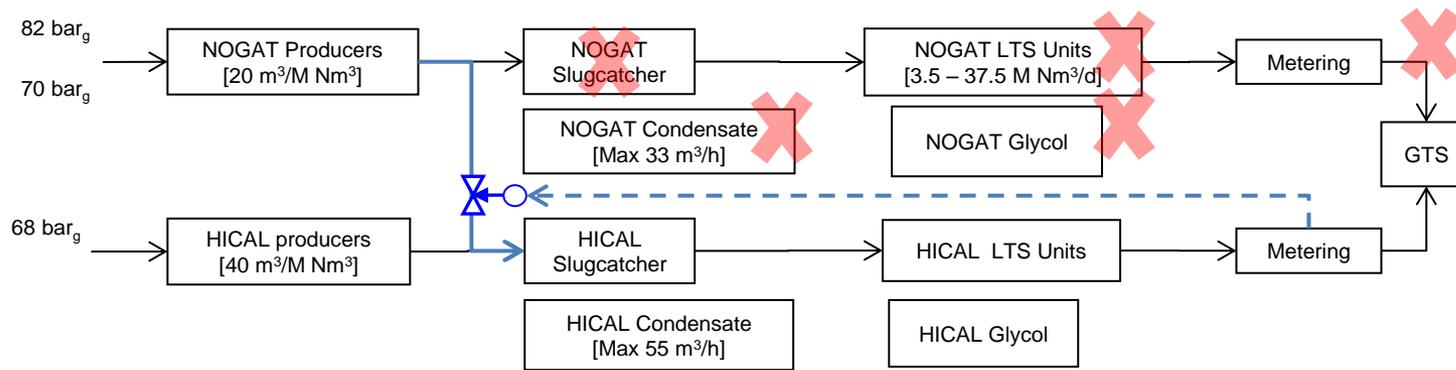
# Den Helder consolidation

Connect NOGAT to the process facilities of WGT. Remove the redundant facilities and possibly use WGT for Local gas.

Benefits:

- Reduction of pipeline pressure in NOGAT. (more gas and more ultimate recovery)
- Reduction of maintenance costs by eliminating one entire treatment facility.
- Further cost reduction if Local can be re-routed to WGT and Local system becomes redundant.
- With a reduced footprint there will be Organizational benefits
- There will be more gas to blend non-compliant gas streams.

Downside: we may loose on flexibility and capacity.



# Hurdles and Threats

However, it is not all done and dusted

There are some hurdles to be taken:

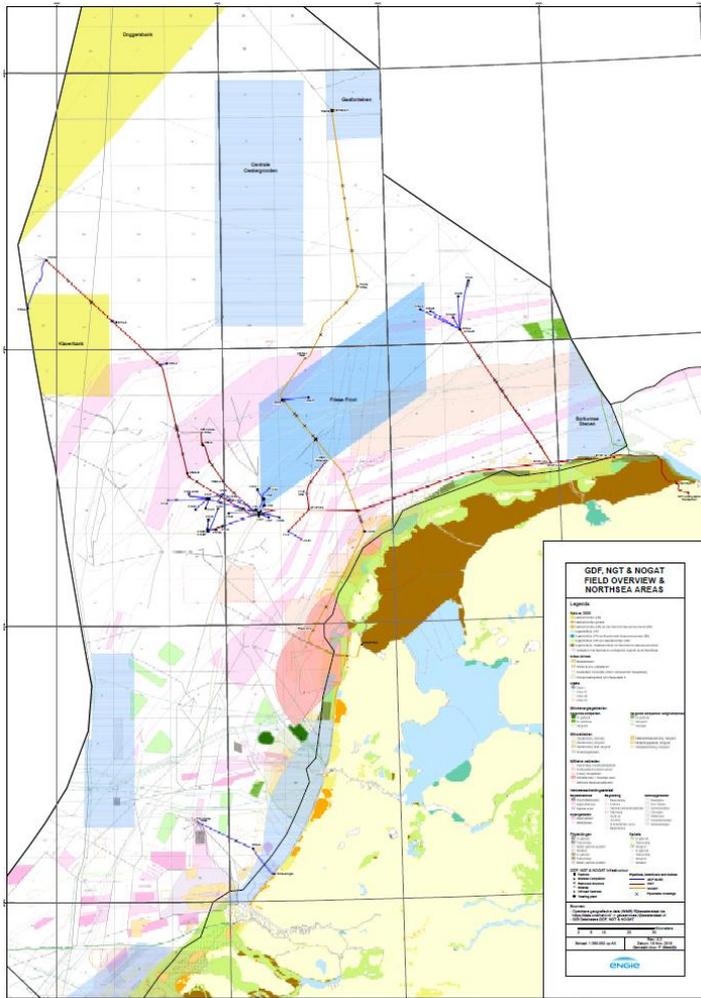
- Accommodation studies
- Convincing stakeholders (pipeline owners, producers, authorities, etc)
- Commercial issues and business cases
- Competition law aspects

And there are some threats:

- Conservatism
- Competitive thinking
- Timing (is it not too late)
- Change in Decommissioning obligations

- L&L screened EU and Dutch competition law
  - The DOMINO project raises certain competition law issues irrespective of the manner the DOMINO project is implemented
    - Prohibition of anti-competitive agreements between undertakings
    - Merger control rules
    - Prohibition of abuse of a dominant position
  - Notification to and prior approval of the EC and/or NL competition Authority is required, arguing
    - The pipelines and GTI's are not part of one and the same relevant market
    - DOMINO project does not restrict competition, because there is little existing competition between the pipelines (determined by location of development) and/or because owners of gas fields will have sufficient countervailing power
    - DOMINO is necessary to create efficiency gains which outweigh the negative effects on competition
- 
- Main argument of allowing DOMINO: The biggest benefit is for the producers!

# Decommissioning



With the effectuation of the “Nationaal Waterplan” the emphasis has changed from “leave in place, unless” to “remove, unless”.

The criteria for removal are fairly vague and we are seeking clarification.

As an example, do we have to remove pipelines from a Natura 2000 area. Obviously a pipeline does not belong there but removal will disturb the area.

If pipeline systems have to be removed entirely, the decommissioning costs will be tenfold of current estimates.

# To conclude

The project is gaining momentum, we are working on the first important step.  
However, there is still a lot of work to be done and time is of the essence !