

# INPUTS

Technical param.

For each pipeline  
(e.g., high-pressure)

- Existing capacity
- Pressure level
- Year of construction
- Technical lifetime
- ...

Economic param.

For each pipeline  
(e.g., high-pressure)

- Investment cost
- Year of amortization
- Weighted average cost of capital
- ...

Empirical data needs

For each node  
(i.e., LAU level)

- Feed-in & demand
- Seasonal storage
- Spatial data  
(e.g., shapefiles)
- ...

**CANCEL**  
(modeling framework)

- Linear program
- Graph theory based
- High spatial resolution ( $\sim 40\text{km}^2$  resolution)
- Investment planning horizon 2025 to 2050
- Limited temporal dispatch resolution (monthly per year)

## Outputs

Decommissioning and  
refurbishment  
investment decision  
per pipeline

Investment/  
Decommissioning

Utilization of pipelines  
and gas demand  
not supplied

Dispatch of the  
network