CCS at Scale

System lessons from Norway's Longship and Northern Lights

CCS AT SCALE

From ambition to execution – What changed everything for CCS

HIGHLIGHTED MILESTONES

< 2015	2016	2017	2018	2019	2020	2021	2024	2025
Norwegian climate policy developed - Mongstad TCM start up 2012	**Statoil delivers CO2 storage feasibility report to MPE**	**Statoil, Shell and Total Energies enter CO2 T&S Partnership**	Northern Lights applies for permit	**NL awarded exploration permit for CO2 storage**	**FID for Northern Lights Partners**	NLJV DA Constituted - PDO approved	NL Facilities ready to receive CO2	**First CO2 Injection**

CCS AT SCALE

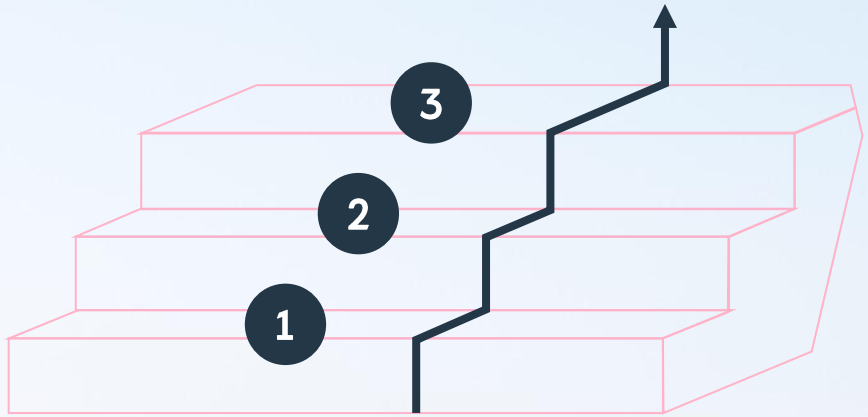
Designing for scale - Flexibility and scalability from day one

Scalability & Flexibility

6	Limited flexibility drives misalignment and slows critical decisions
5	Dependencies across customers, contracts and timing create bottlenecks
4	Locking in scale too early increases risk and reduces optionality
3	Northern Lights scalability through flexible shipping solutions
2	Design for modular scale-up, not fixed capacity decisions
1	CCS systems must handle uncertain volumes and evolving demand over time

CCS AT SCALE

From potential to scale - We need to keep building



1 Cross-border coordination

- The North Sea can become a core CCS system for Europe
- Integration and cross-border coordination will unlock full potential

2 Scale through execution

- Waiting for the "optimal system" risks delaying deployment
- CCS must scale through real projects, real volumes and real learning

3 Evolvement through experience

- Systems should evolve through use, not be fully designed upfront
- New service providers and infrastructure must come online now