



ETN
Global

Outcome of High-Level User Meeting 2021

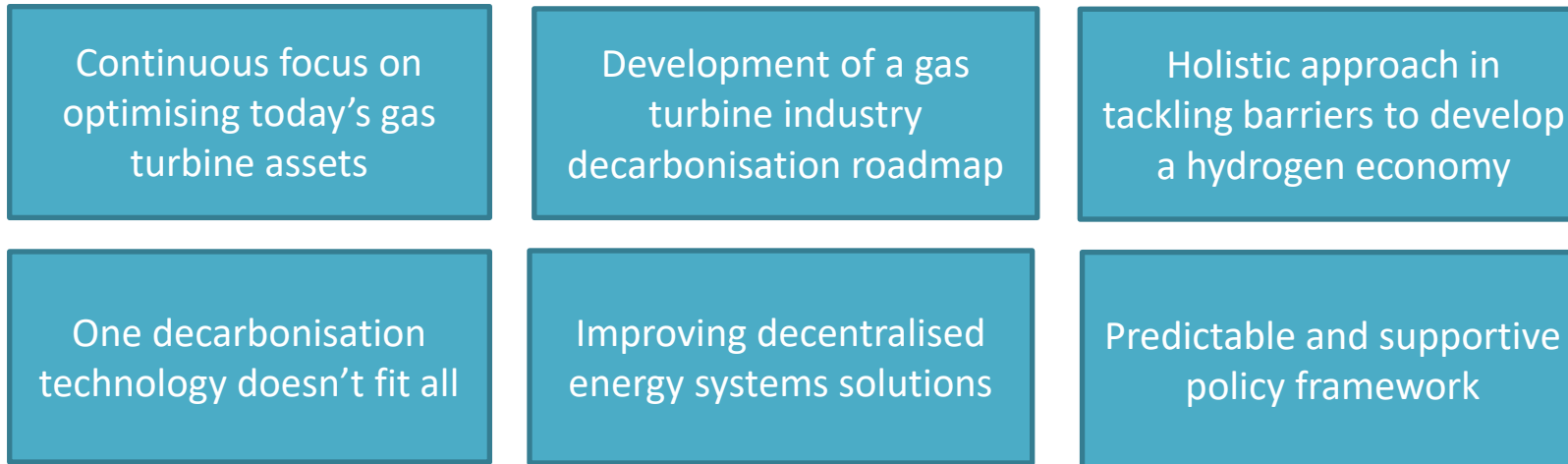
Pedro Lopez, ETN President, Uniper





ETN's High-Level User Meeting 2021 – Users' key messages

Main focus areas to accelerate the gas turbine transition to a carbon-neutral future



Focus optimising the exiting fleet while accelerating the decarbonisation roadmap.

Call for industry players to approach the challenge jointly.

ETN strategy well aligned with users' needs and ETN acting as key enabler

Vision for the energy transition

Energy efficiency
Explore new and more efficient options

Decarbonisation
Improve the carbon footprint of new and existing assets towards carbon-free generation

Transition to new energy systems
Expand the solutions portfolio in the transition to new energy systems

Strategic areas and goals

Integrated and trustful cooperation among the sectors to achieve affordable and decarbonised gas turbine-based solutions

Fleet improvements towards the most efficient and cost-effective solutions for the energy system

Decarbonisation and security of supply solutions through expanded fuel flexibility and system integration



ETN
Global

Key messages to the OEMs

1. Provide short-term engine-specific retrofit solutions to enable a safe, flexible and reliable operation with fuels that contain up to 30% hydrogen. Launch a gas turbine specific upgrade package to operate with up to 100% H₂ before 2030 without significant increase in the NOx emissions and maintaining the plant's performance.
2. Provide a lifetime extension programme for plant-specific gas turbines guaranteeing safe operation and optimised performance. It will involve lifetime assessment of critical components including advanced component repair to reduce material resources and costs of ownership.
3. Optimise power plant operation and maintenance through better use of digitisation and analytics. Combine analytics with engineering knowledge to reduce the operational costs and increase of plant's overall performance.
4. Develop gas turbine specific upgrade packages enabling operation with other low carbon fuels: e.g. biofuel (short term) and ammonia (long term)
5. Develop parallel technology development of decarbonisation solutions (CCUS) and other integrated energy system solutions (storage, waste recovery and other hybrid solutions)