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**DISTRIBUTION  
UTILITY MEET  
DUM 2023**

# **Session : RISE OF THE “PROSUMER” AND PROSUMER ENGAGEMENT STRATEGIES FOR NET ZERO POWER SYSTEMS**

## **Net Zero Roadmap for “PROSUMER”**

*Presented By*

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**158**

years

**~12,000**

employees

**100,000**

customers

**100+**

countries

**5% R&D**

of annual revenue

**Ship and offshore  
classification and advisory**



**Energy advisory, certification,  
verification, inspection and  
monitoring**



**Management system certification,  
supply chain and  
product assurance**



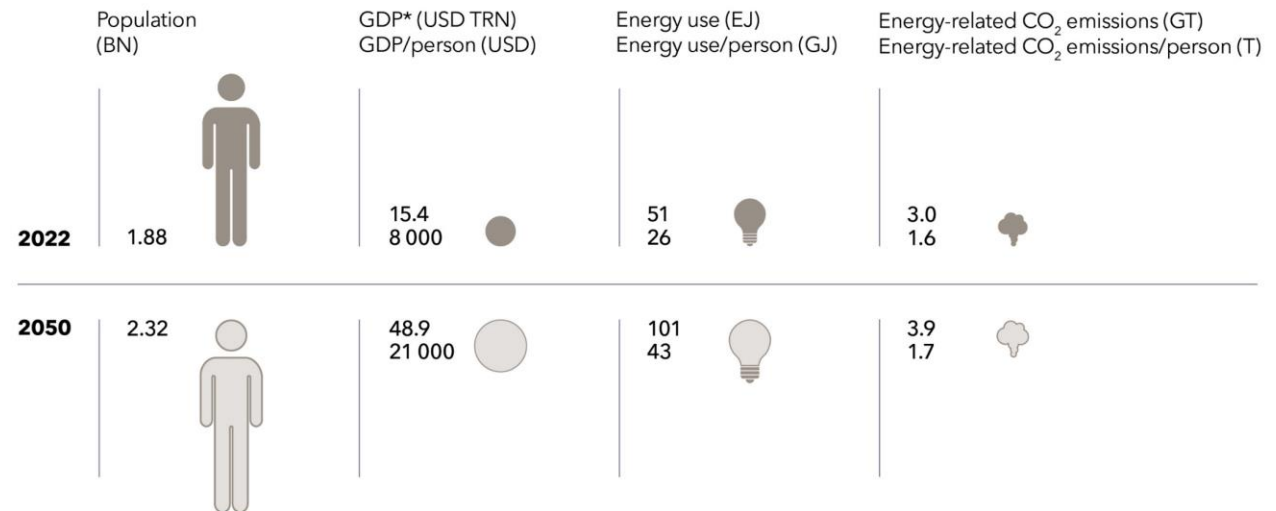
**Software, platforms and digital solutions**



## INDIAN SUBCONTINENT



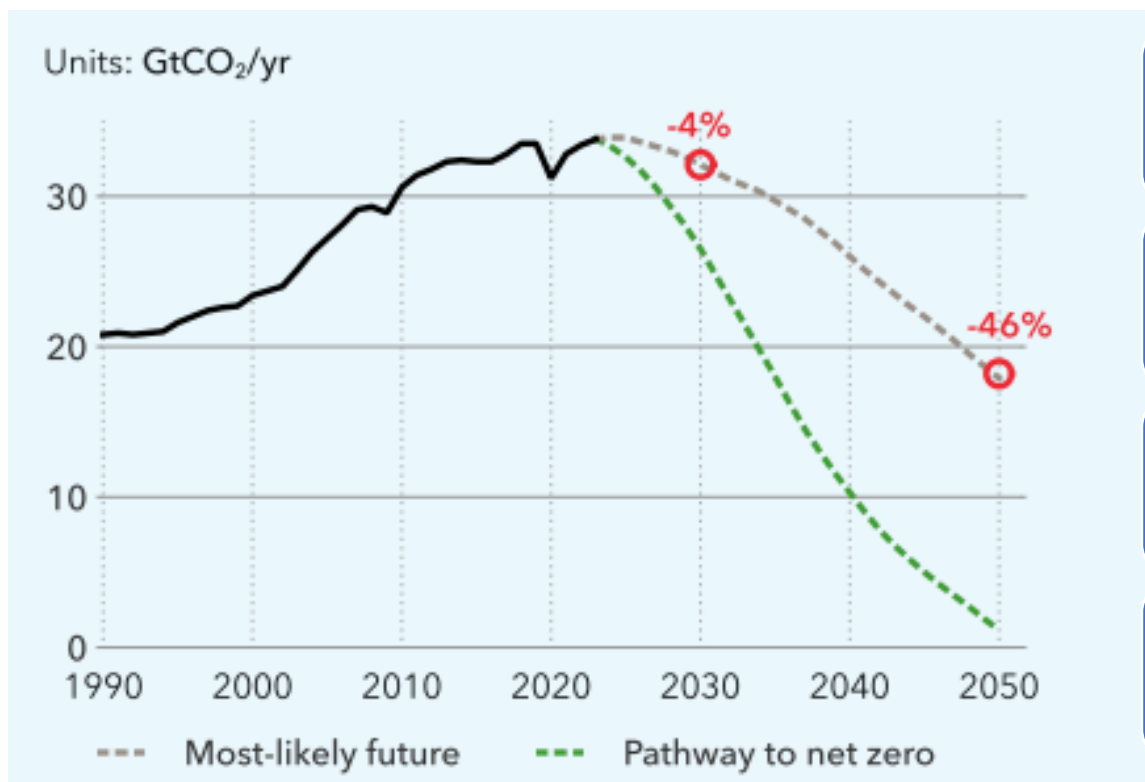
This region consists of India, Pakistan, Afghanistan, Bangladesh, Sri Lanka, Nepal, Bhutan, and the Maldives



\*All GDP figures in the report are based on 2017 purchasing power parity and in 2022 international USD



# Global emissions will fall, but not fast or far enough



We forecast global energy-related CO<sub>2</sub> emissions in 2050 to be 46% lower than today, and by 2030, emissions are only 4% lower than they are today

The emissions we forecast are associated with 2.2°C of global warming above pre-industrial levels by the end of this century

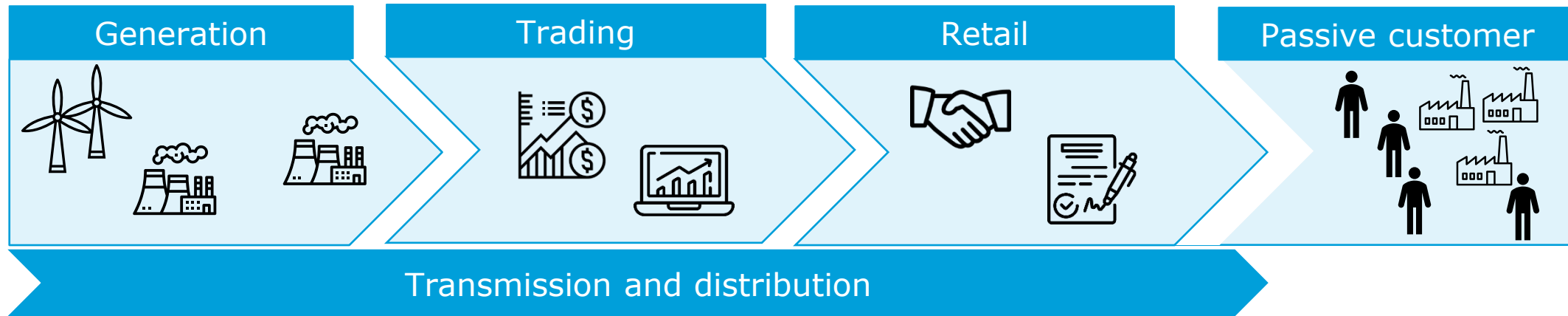
From 2024, the share of renewables in the primary energy mix will grow by more than one percentage point per year, resulting in a 52% non-fossil share by 2050, up from 20% today

Limiting global warming to 1.5°C is therefore less likely than ever

The pace of the transition is far from fast enough for a net-zero energy system by 2050. That would require roughly halving global emissions by 2030, but our forecast suggests that ambition will not even be achieved by 2050

# Electricity: just another commodity?

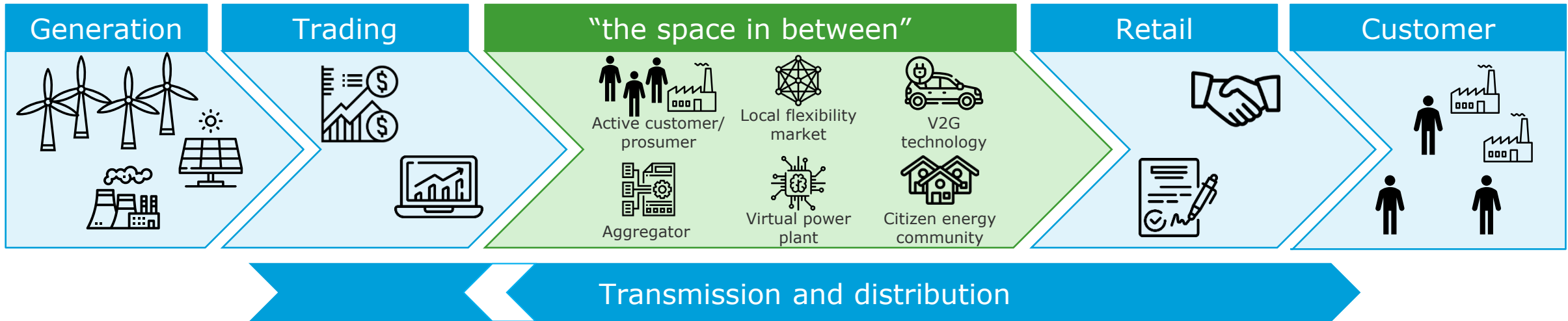
Already the traditional value chain has certain unique characteristics



- Electricity is one of humanity's most basic requirements.
- Demand and supply need to be in balance all the time, whereas electricity cannot be stored within the value chain.
- As a consequence, electricity is not one product, but a different product depending on the time of generation/use and location.
- In most countries, generation and supply activities are liberalized, whereas transmission and distribution activities are performed by regulated monopolies. Due to physical constraints, high interaction is needed between these parties.

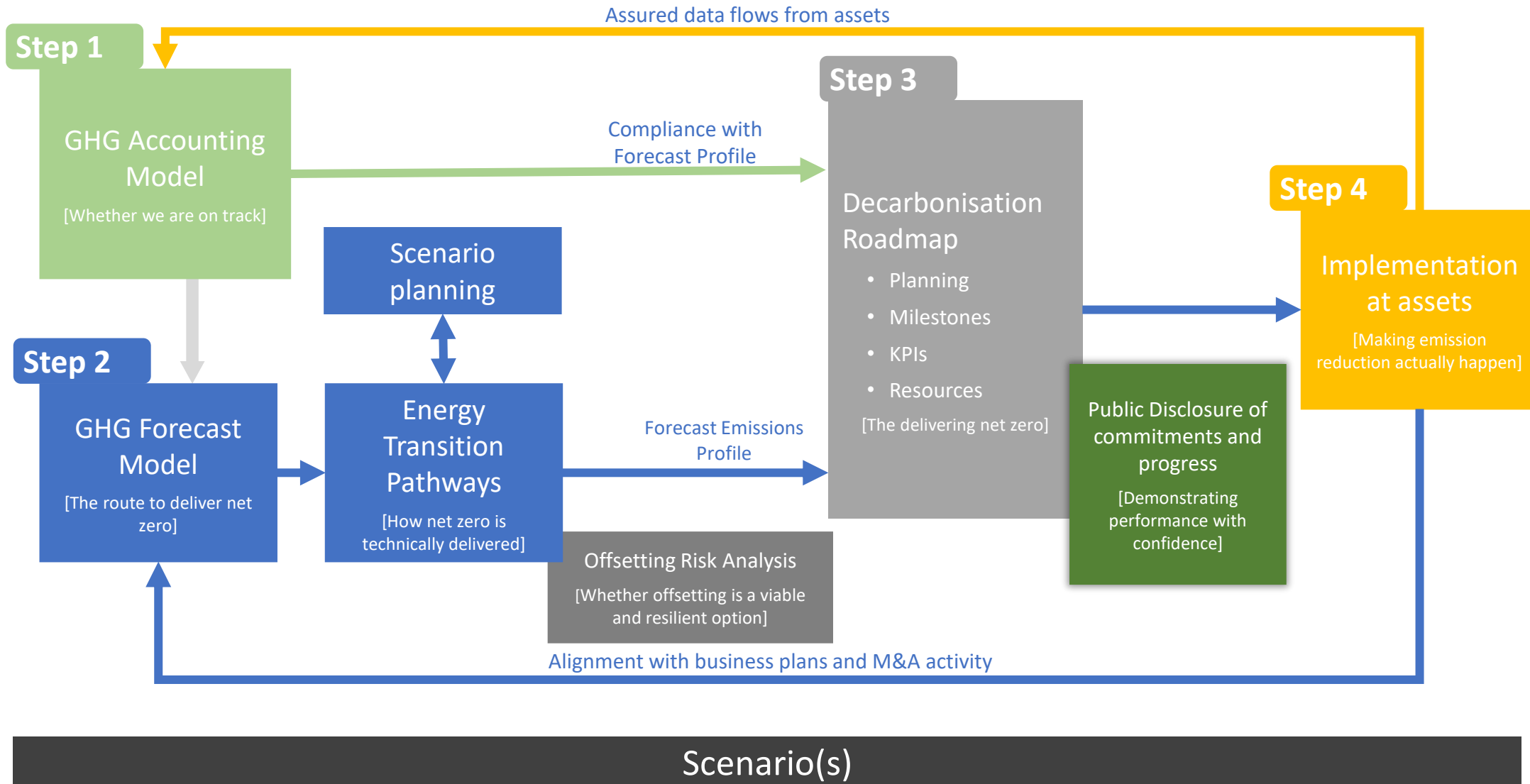
# The energy transition will reshape the value chain

## Leading to new roles, activities and market players



- De-carbonisation, de-centralization and electrification of electricity demand/supply; "Prosumer" concept
- Intermittency of renewable generation, leading to a paradigm shift from "supply follows demand" to "demand follows supply"; storage facilities.
- Sector coupling (electricity-gas, electricity-heat, electricity-transportation, electricity-communication, ...)
- Not only new technologies (on supply and demand-side) are entering the electricity markets, also new players, or existing players in other markets, are entering this arena.

# Assessment & Development of Net Zero plans



# THANK YOU

*For discussions/suggestions/queries email: [Alok.mishra@dnv.com](mailto:Alok.mishra@dnv.com)*



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# THANK YOU

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