Emerging Energy and New Technology

Changing Energy Landscape

18th November 2020
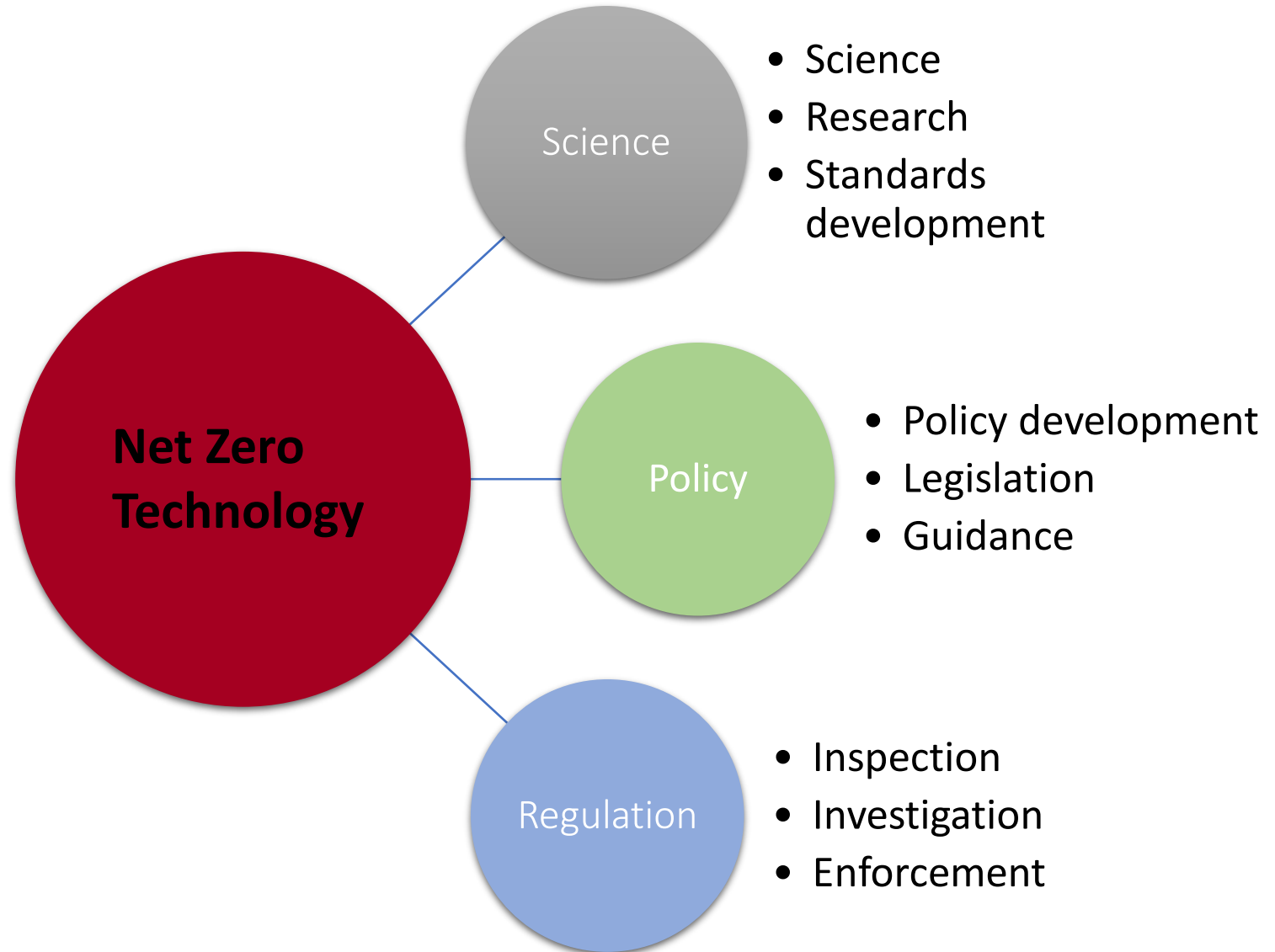
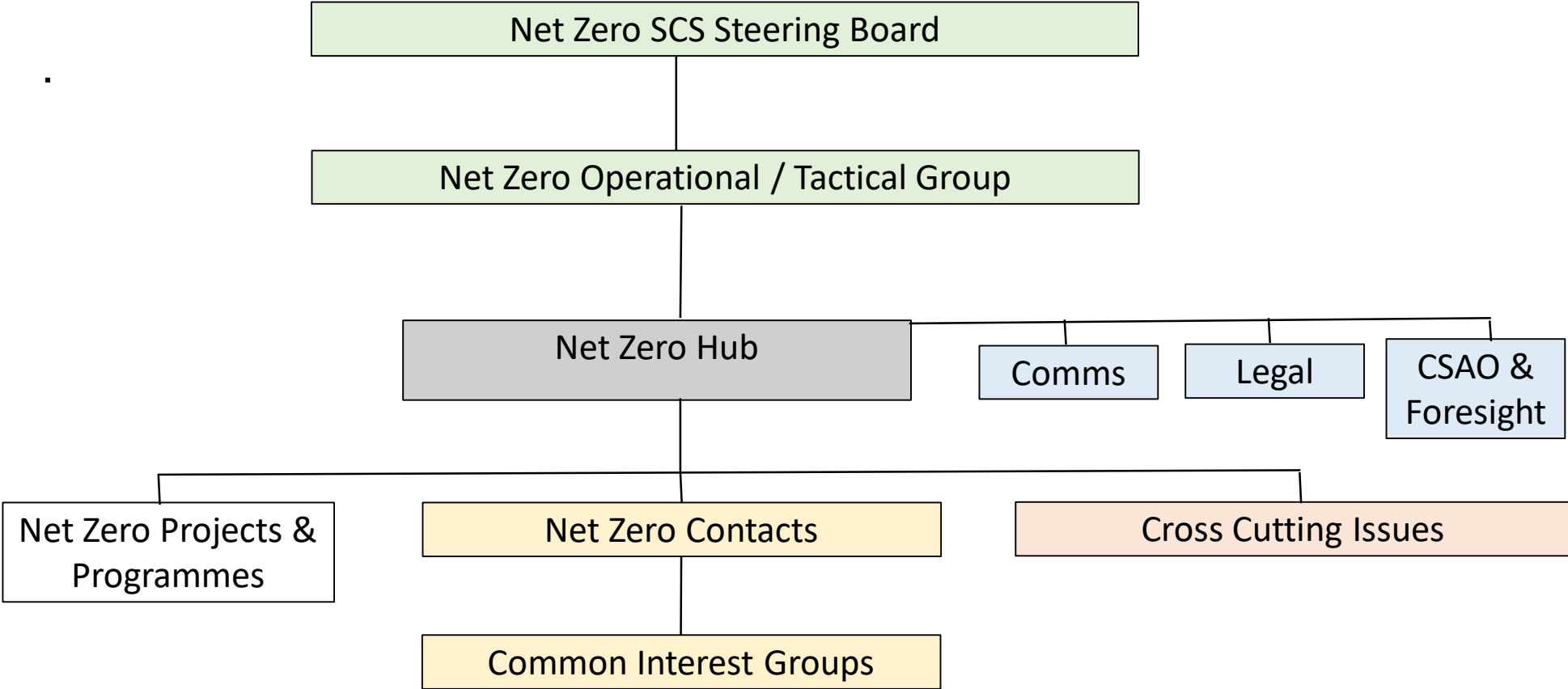**14th December 2020**

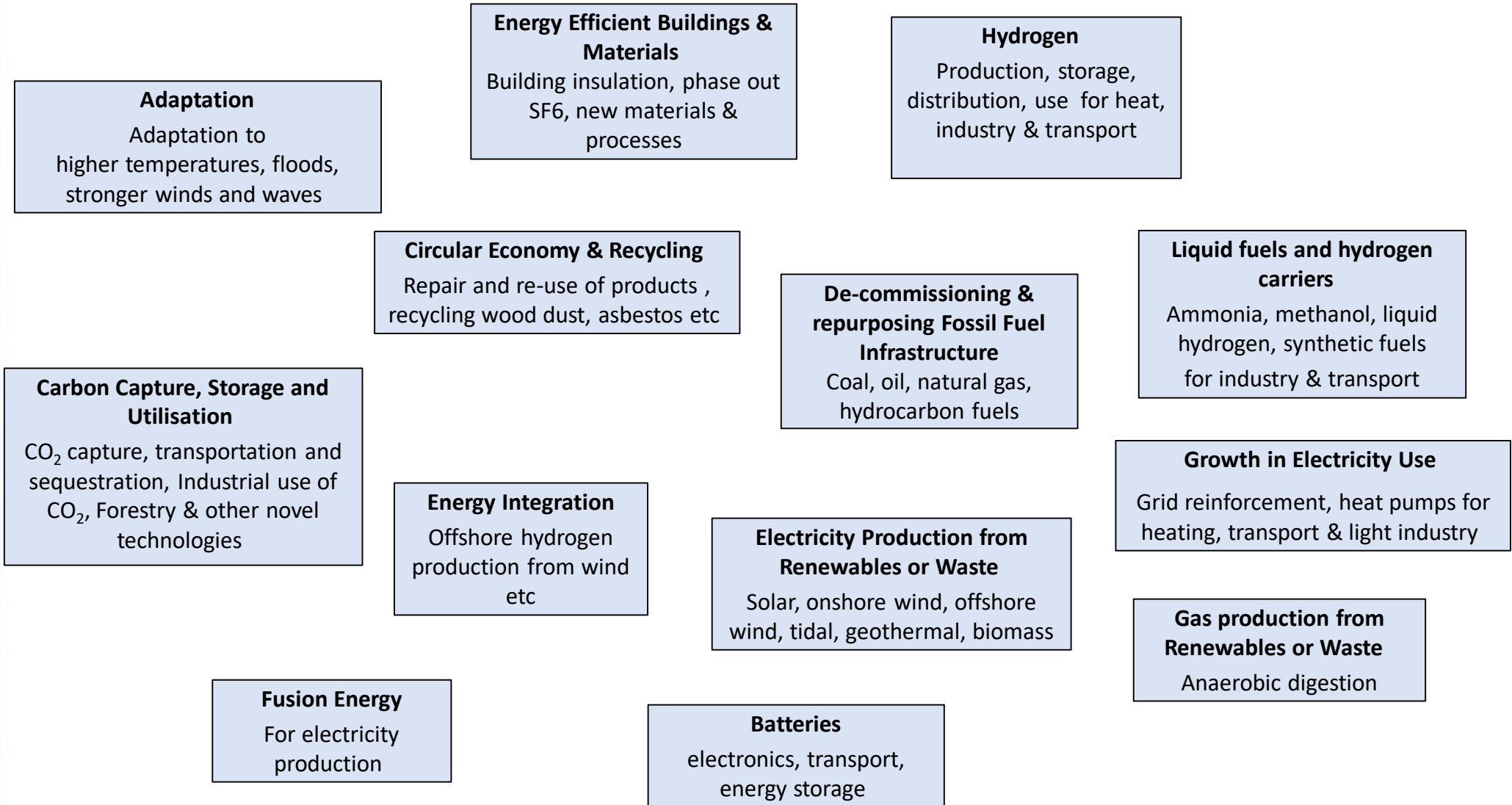**19th October 2021**

Science, Policy and Regulation

Net Zero Technology

Science
- Science
- Research
- Standards development

Policy
- Policy development
- Legislation
- Guidance

Regulation
- Inspection
- Investigation
- Enforcement

HSE

HSE Net Zero Hub

Areas of HSE Net Zero Hub Interest

Energy Efficient Buildings & Materials
Building insulation, phase out SF6, new materials & processes

Hydrogen
Production, storage, distribution, use for heat, industry & transport

Adaptation
Adaptation to higher temperatures, floods, stronger winds and waves

Circular Economy & Recycling
Repair and re-use of products, recycling wood dust, asbestos etc

De-commissioning & repurposing Fossil Fuel Infrastructure
Coal, oil, natural gas, hydrocarbon fuels

Liquid fuels and hydrogen carriers
Ammonia, methanol, liquid hydrogen, synthetic fuels
for industry & transport

Carbon Capture, Storage and Utilisation
CO_2 capture, transportation and sequestration, Industrial use of CO_2, Forestry & other novel technologies

Energy Integration
Offshore hydrogen production from wind etc

Electricity Production from Renewables or Waste
Solar, onshore wind, offshore wind, tidal, geothermal, biomass

Growth in Electricity Use
Grid reinforcement, heat pumps for heating, transport & light industry

Gas production from Renewables or Waste
Anaerobic digestion

Fusion Energy
For electricity production

Batteries
electronics, transport, energy storage
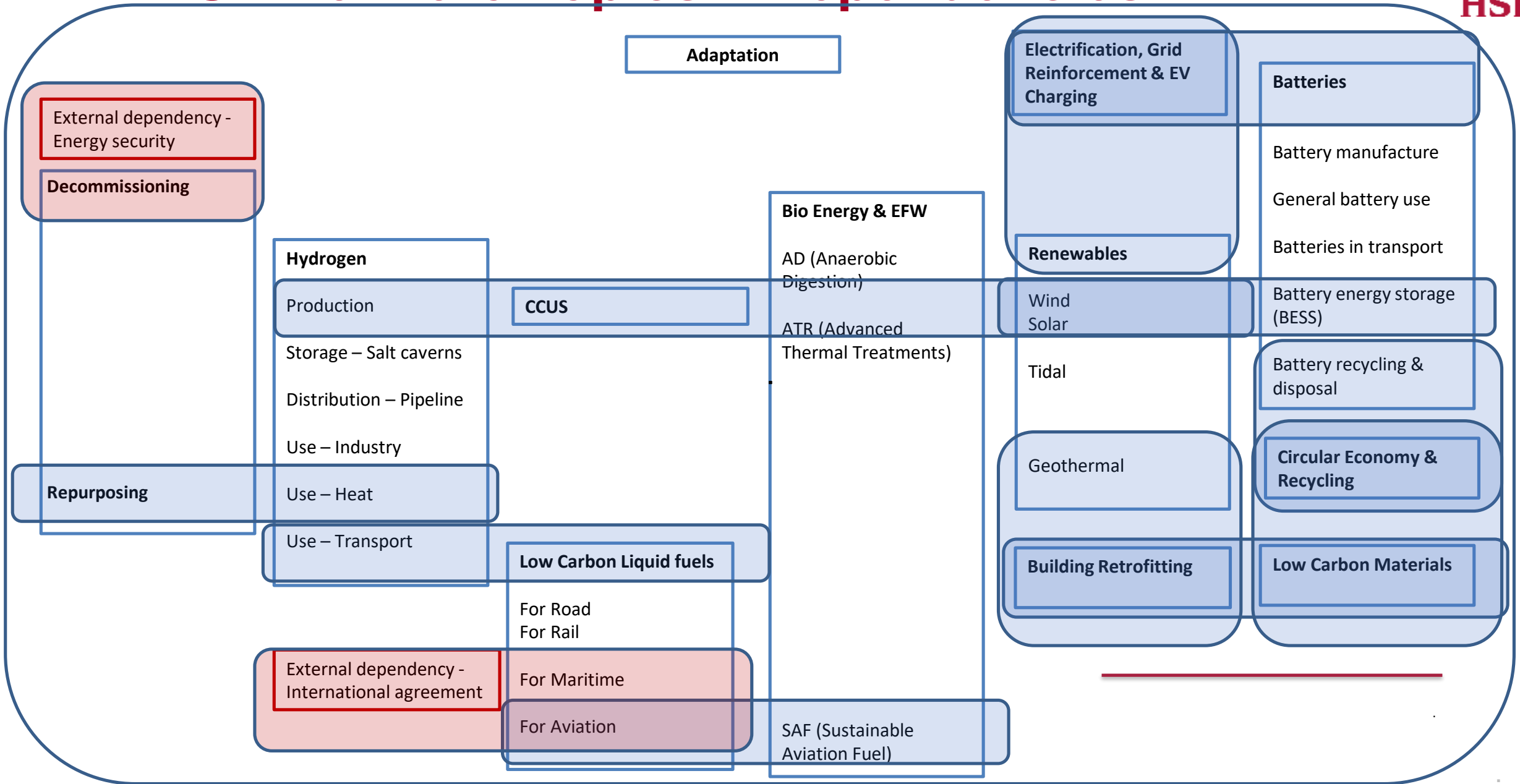
HSE

Net Zero Hub

Net Zero Hub

Engaging with Industry
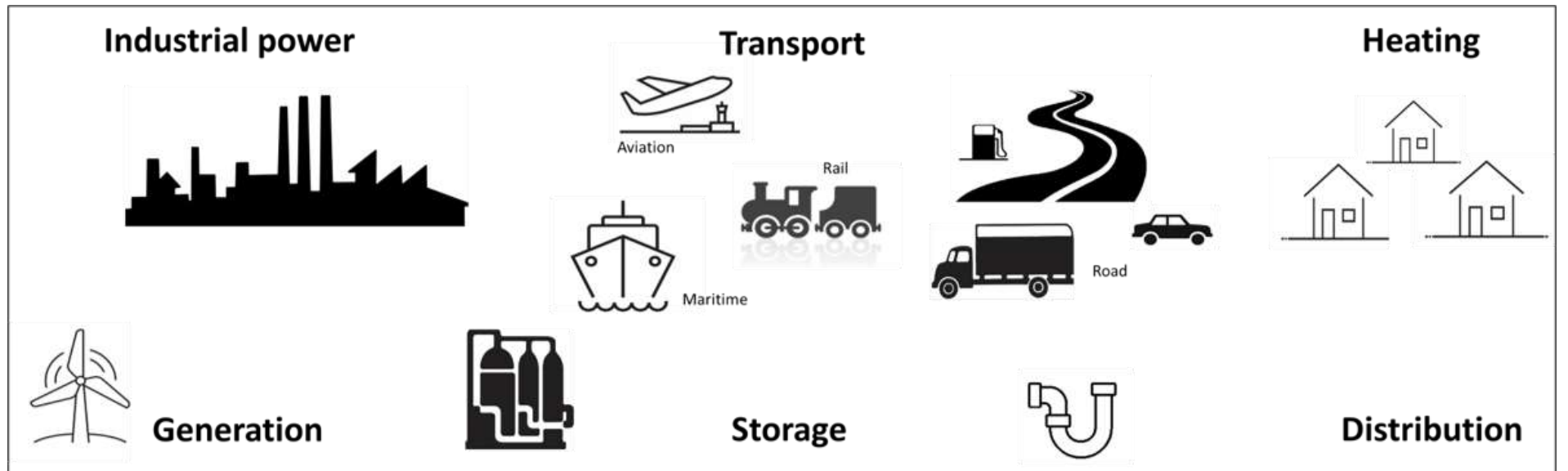
HSE Net Zero Topics – Dependencies

Cyber Security

- Measures to protect Industrial Automation and Control Systems (IACS), Industrial Control Systems (ICS) or Operational Technology (OT)

- Operational guidance – March 2017

- Publicly available

- Trial inspections: Nov 2017 – May 2018

- Evolving compliance picture

HSE

Questions