

**Virtual
Energy
System**

Powered by ESO

VIRTUAL ENERGY SYSTEM

CREATING THE DATA SHARING INFRASTRUCTURE

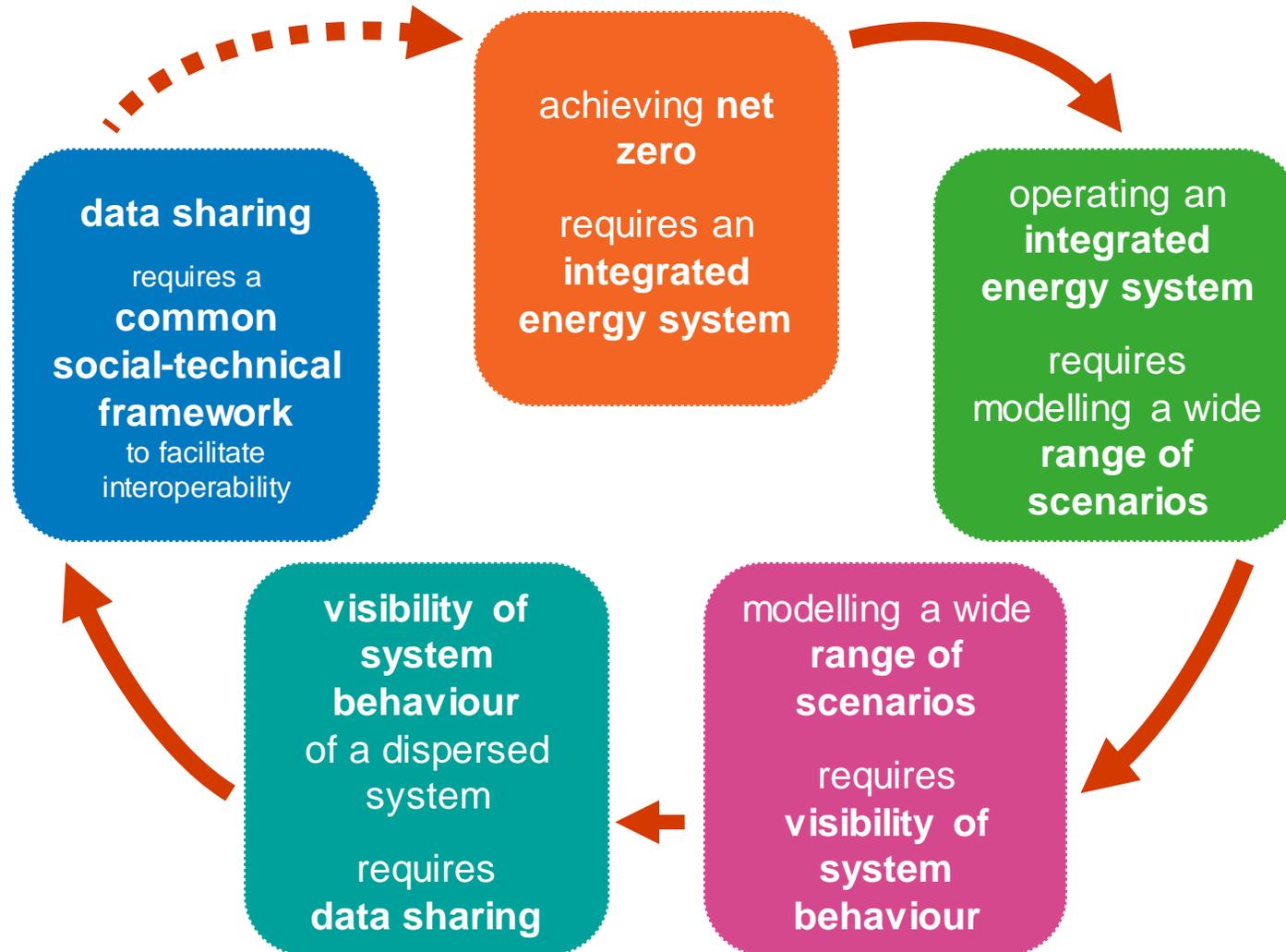
Gemini Call - November 2023



Jonathan Barcroft
Workstream Manager, ESO

ESO

THE CHALLENGE: THE ENERGY SYSTEM IS CHANGING



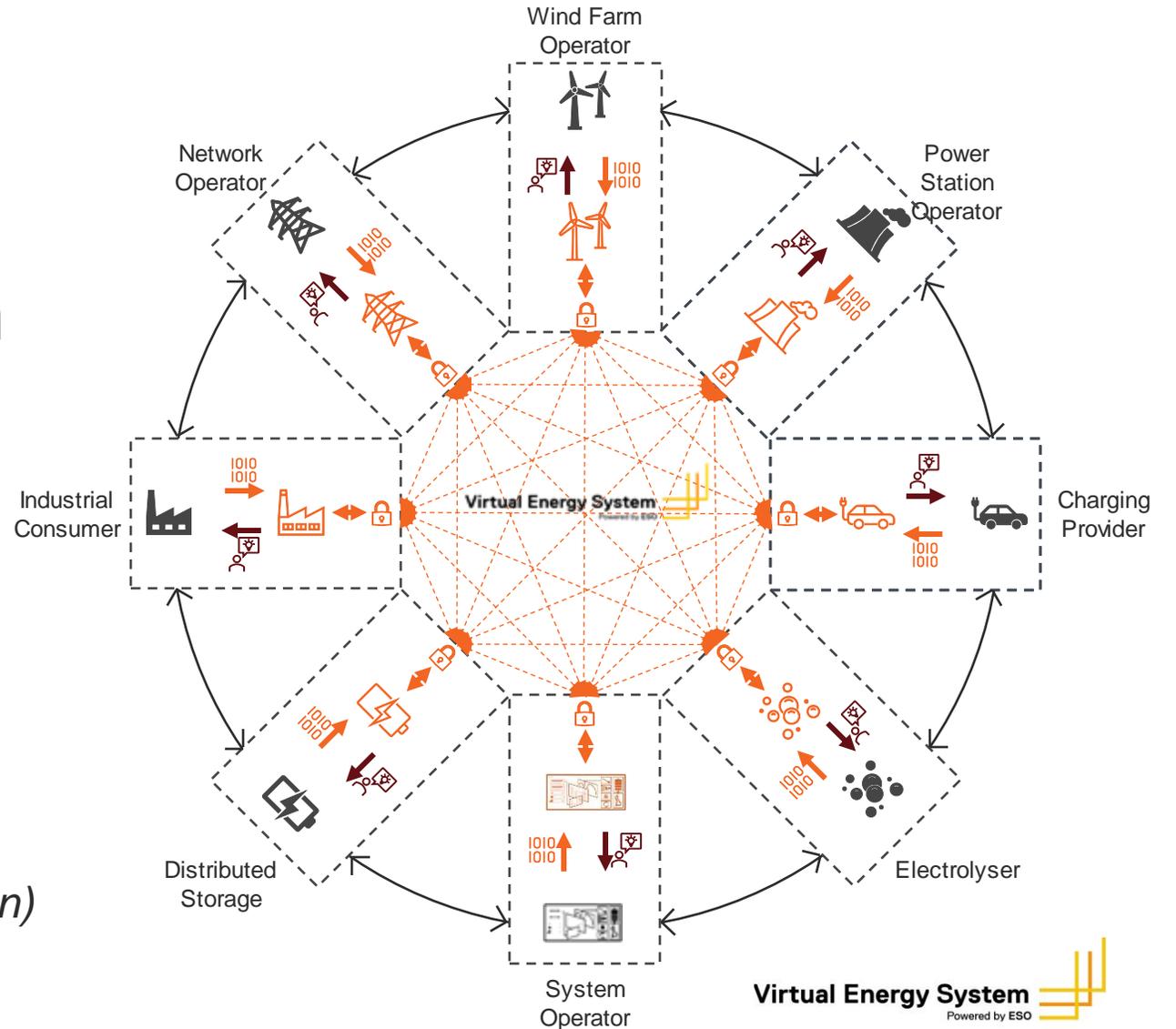
THE SOLUTION: VIRTUAL ENERGY SYSTEM

Ambitious objective:

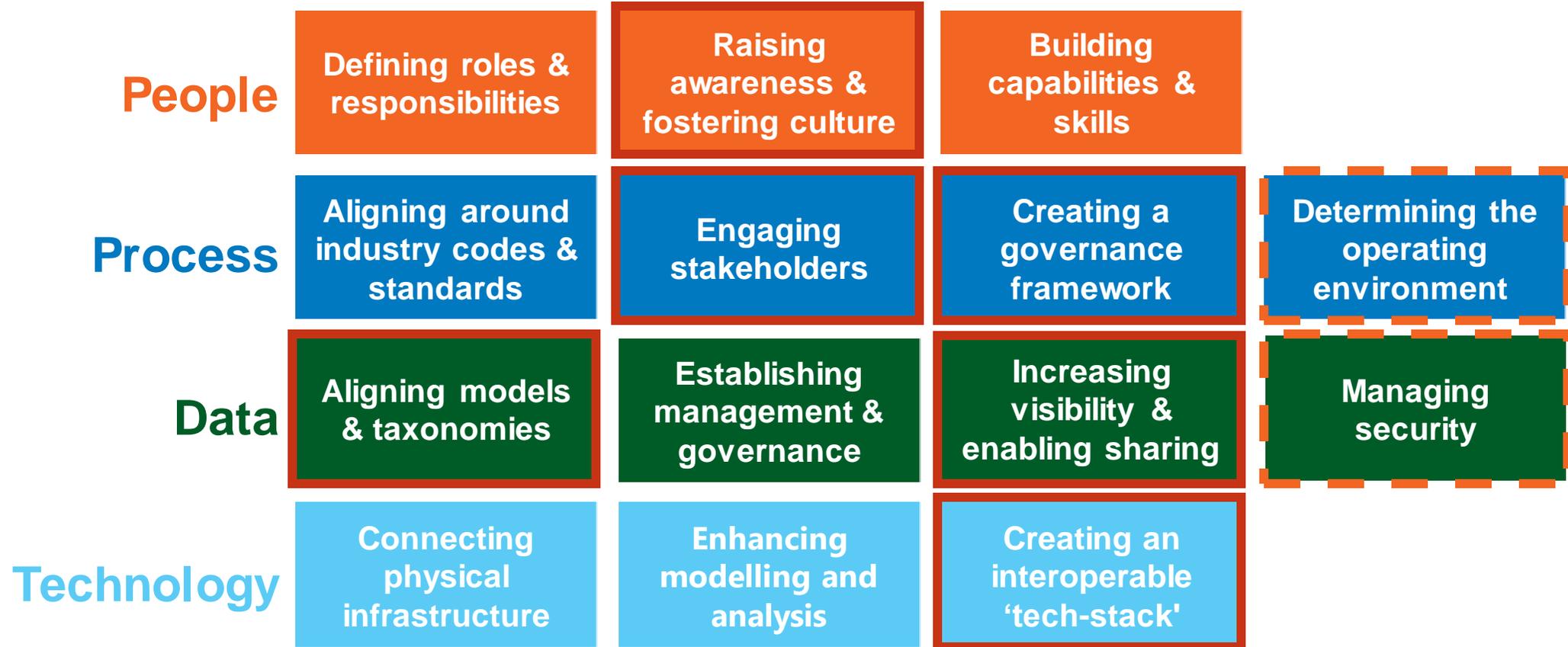
Creating the **data sharing infrastructure** to enable an ecosystem of **connected digital twins**

For the **entire GB energy system** to solve wider system challenges

(e.g. energy optimisation, carbon reporting, investment planning, ...net zero energy transition)



WHAT NEEDS TO HAPPEN: COMMON FRAMEWORK

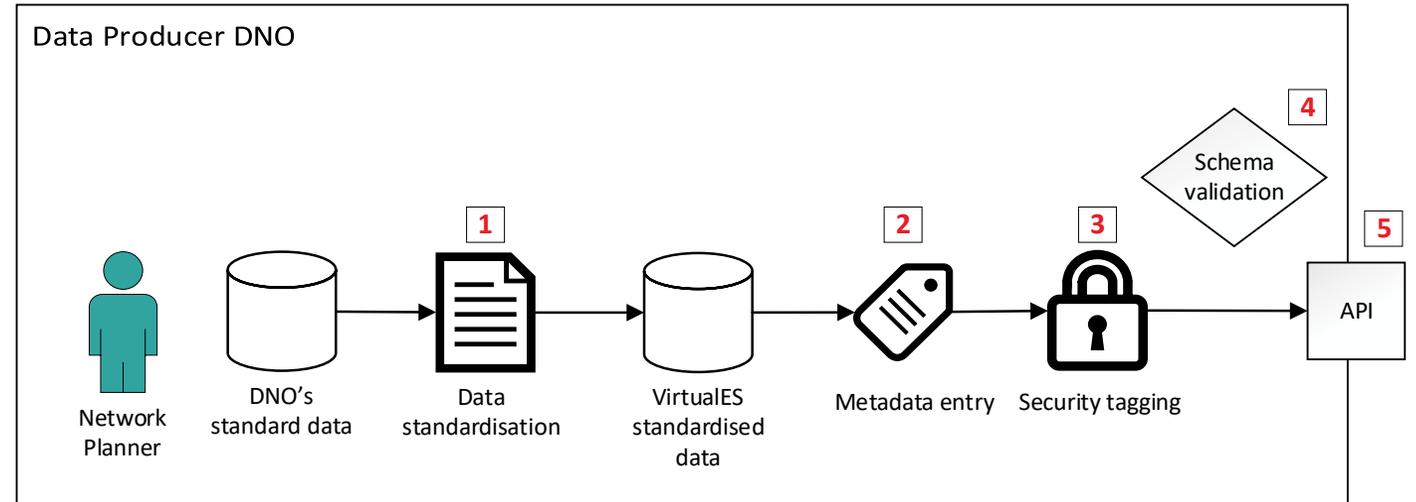


USER JOURNEY



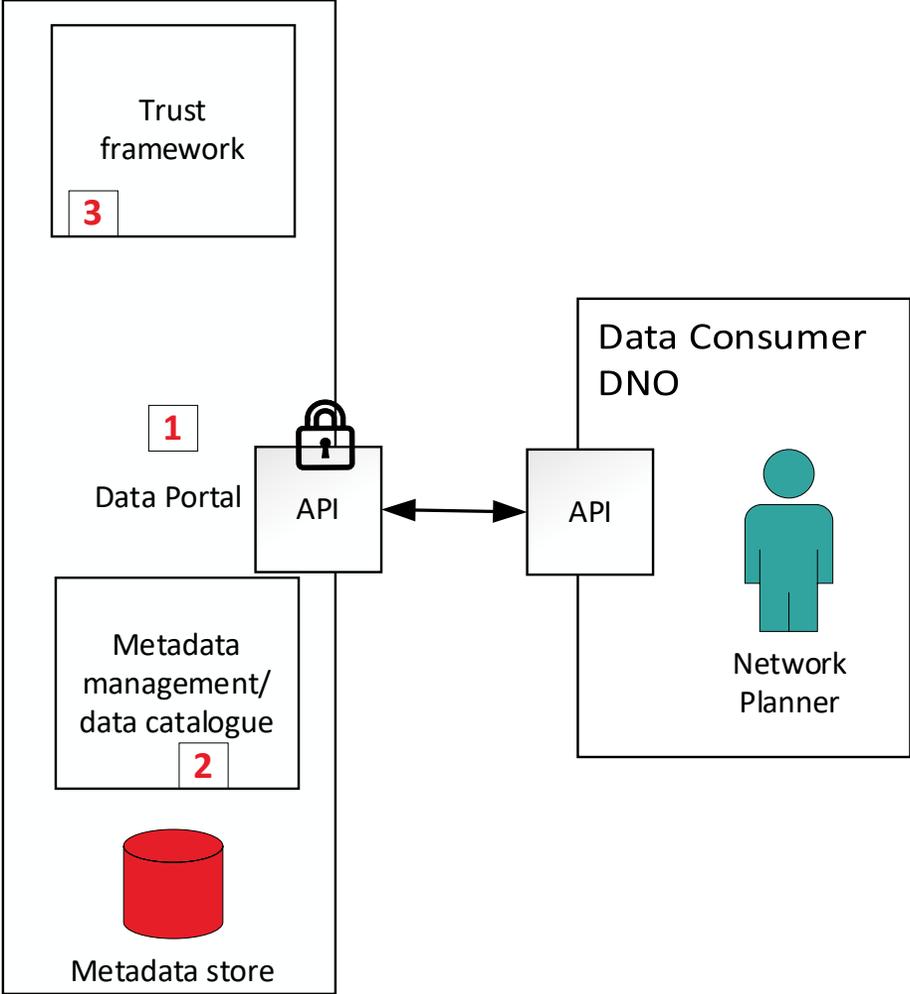
1 – PREPARE & 2 – PUBLISH

Task Lead: Data Provider



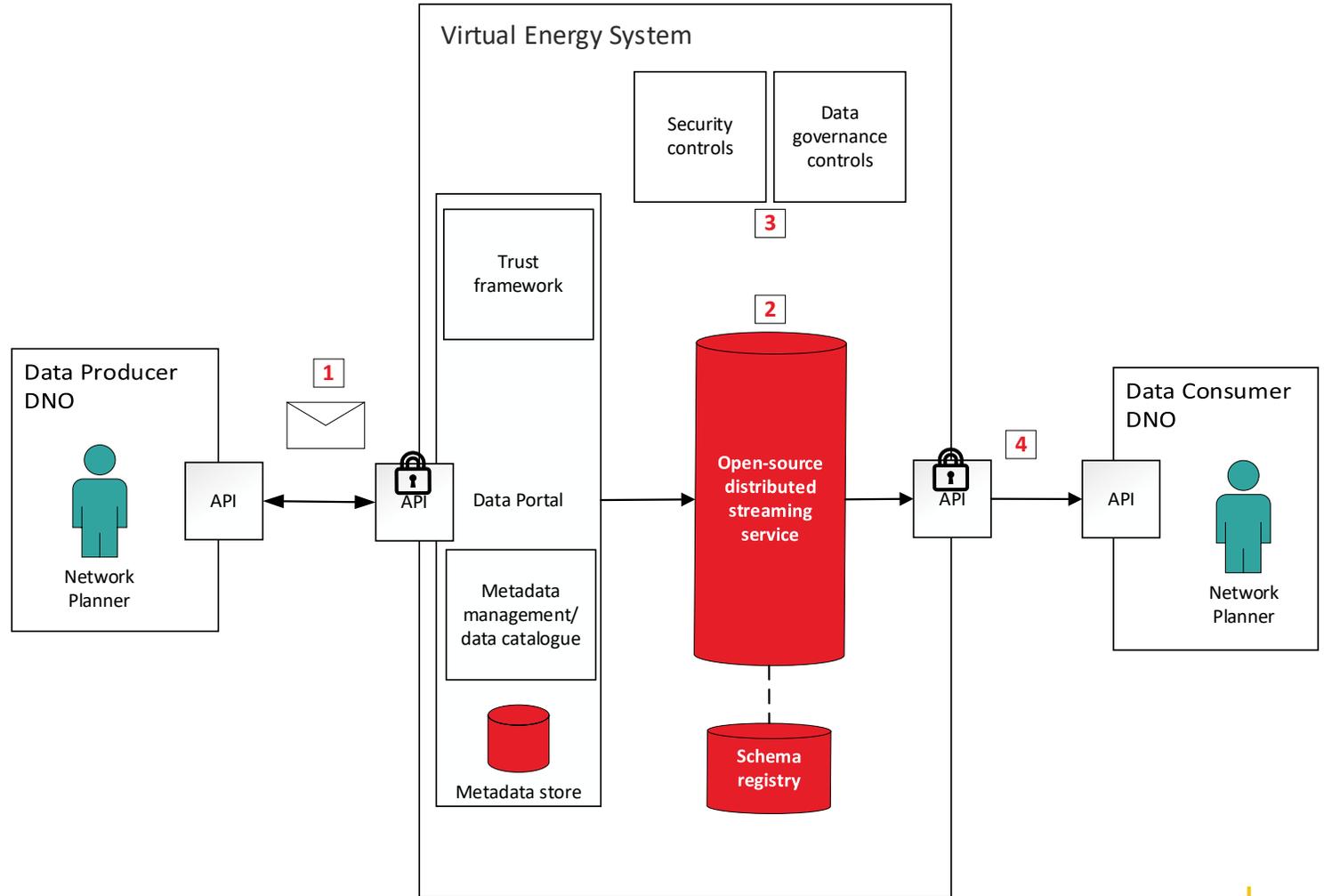
3 – SEARCH & 4 – REQUEST ACCESS

Task Lead: Data Consumer

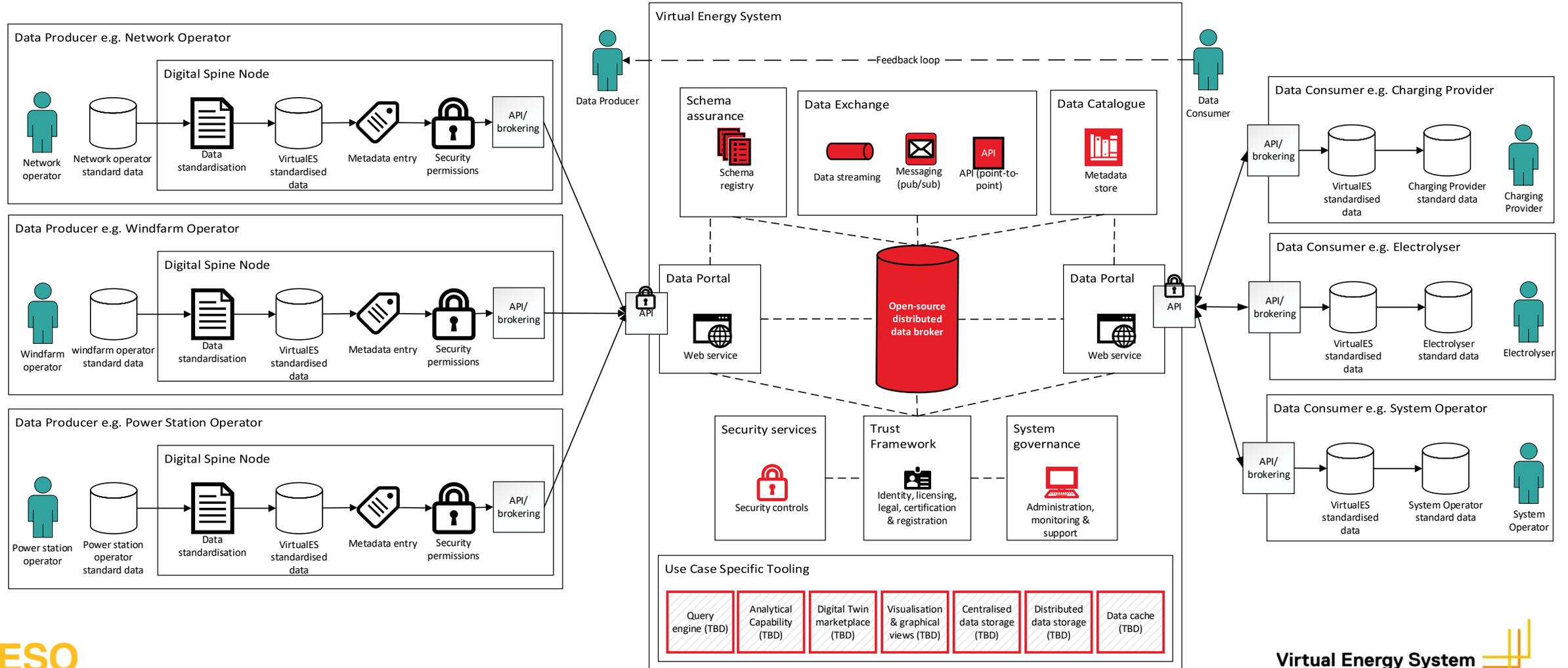


5 – REVIEW REQUEST & 6 – PROVIDE ACCESS

Task Lead: Data Provider



HIGH LEVEL DESIGN



Virtual Energy System

Powered by ESO

VirtualES@nationalgrideso.com

ESO