

ACT!ON



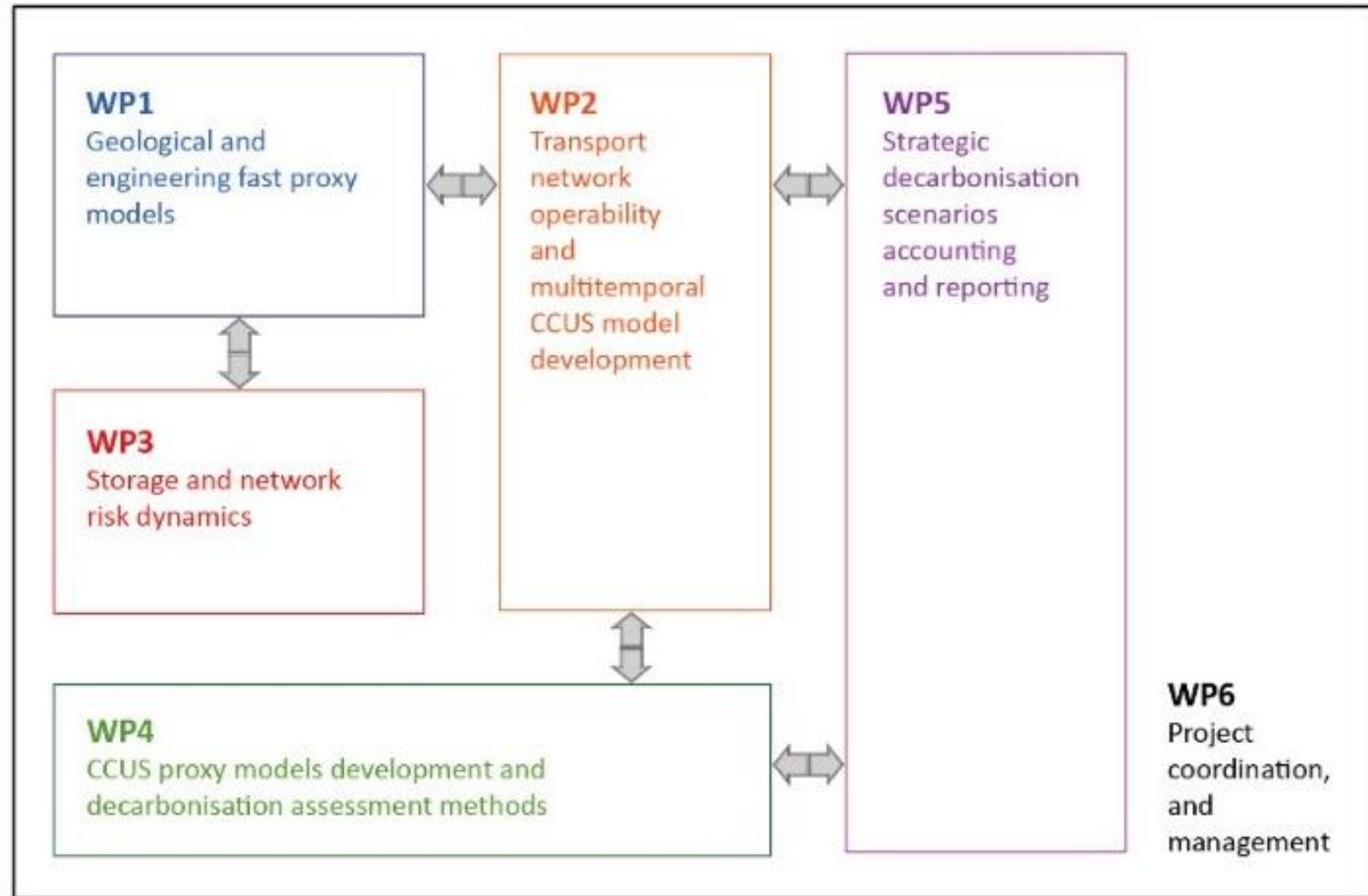
Advanced multitemporal modelling and optimisation of CO₂ Transport, stOrage and utilisation Networks

Objectives

ACTiON aims to establish how an efficient infrastructure, connecting CO₂ sources with CO₂ geological storage and non-geological utilisation options, can be developed as part of regional decarbonisation efforts. To achieve this objective, ACTiON aims to research and develop a multitemporal integrated assessment model that

- will support stakeholders in the planning and design of large-scale, flexible CO₂ transport, utilisation and storage networks, and
- enable reporting on decarbonisation efforts while addressing
 - the impacts of geological and engineering constraints,
 - the effect of the economic conditions and regulatory environment, as well as
 - the unavoidable uncertainties faced in defining them.

Project structure



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WP1: Geological and engineering fast proxy models (lead: IFPEN)

WP2: Transport network operability and multitemporal CCUS model development (lead: TNO)

WP3: Storage and network risk dynamics (lead: UAlberta)

WP4: CCU proxy models development and decarbonisation assessment methods (lead: Imperial/LANL)

WP5: Strategic decarbonisation scenarios accounting and reporting (lead: Imperial)

WP6: Project management and dissemination (lead: Imperial)

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Industry partners and regional clusters

- UK:** BP Net Zero Teesside (NTZ) and Northern Endurance (NEP); South Wales Industry cluster (SWIC)
- The Netherlands:** Neptune Energy, EBN (Porthos, Aramis), Netherlands-North Sea CCS cluster
- USA:** Chevron, HeidelbergCement, Chemvita, Enchant Energy (CCU at Intermountain West region of US)
- Canada:** Alberta Carbon Trunk Line (ACTL); PTRC (Weyburn Midale CO₂ Monitoring & Storage Project, Saskatchewan; Pembina Cardium CO₂ Monitoring Pilot (Alberta), Aquistore (Saskatchewan), Cvictus utilisation (Alberta)
- France:** Total - Gas Renewables and Power (Dunkirk-North Sea CCS cluster)
- Romania:** PicOil, Getica (Romanian cluster)

Project partners

PARTNER NO	PARTNER ORGANISATION NAME	COUNTRY
1 (COORDINATOR)	IMPERIAL COLLEGE OF SCIENCE, TECHNOLOGY AND MEDICINE (IMPERIAL)	UNITED KINGDOM
2	NETHERLANDS ORGANISATION FOR APPLIED SCIENTIFIC RESEARCH (TNO)	NETHERLANDS
3	LOS ALAMOS NATIONAL LABORATORY (LANL)	US
4	UNIVERSITY OF ALBERTA (UAlberta)	CANADA
5	IFP ENERGIES NOUVELLES (IFPEN)	FRANCE
6	THE NATIONAL INSTITUTE FOR RESEARCH AND DEVELOPMENT OF MARINE GEOLOGY AND GEOECOLOGY (GeoEcoMar)	ROMANIA
7	PETROLEUM TECHNOLOGY RESEARCH CENTRE (PTRC)	CANADA
8	CVICTUS INC. (CVICTUS)	CANADA
9	WINTERSHALL DEA GMBH (WD)	GERMANY
10	TOTAL SE (TOTAL)	FRANCE
11	NEPTUNE ENERGY NETHERLANDS B.V. (NEPTUNE)	NETHERLANDS
12	WOLF CARBON SOLUTIONS INC. (WOLF)	CANADA
13	BP EXPLORATION OPERATING COMPANY LTD. (bp)	UNITED KINGDOM

LIST OF ASSOCIATED PARTNERS:

ASSOC PARTNER NO	ORGANISATION NAME	COUNTRY
1	CHEVRON (CHEVRON)	USA
2	ENERGIE BEHEER NEDERLAND B.V. (EBN)	NETHERLANDS
3	SOUTH WALES INDUSTRIAL CLUSTER (SWIC)	UNITED KINGDOM
4	PICOIL INFO CONSULT (PICOIL)	ROMANIA
5	HEIDELBERGCEMENT (HEIDELBERG)	GERMANY
6	CEMVITA FACTORY (CEMVITA)	USA
7	ENCHANT ENERGY (ENCHANT)	USA

Project Sponsors

ACT - Accelerating CCS Technologies programme

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Department of Energy-Office of Fossil Energy (DOE-FE)
Emissions Reduction Alberta (ERA), Canada

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