ISCF Workshop – 06/03/19

Plusses: What are (at least) three things you like about the idea	Potentials: What are (at least) three things that might result if the idea were implemented?	Concerns: What are some concerns you have about the idea (e.g. How to ensure links between activities and the overall programme or How we might ensure the right people are included)	Options or Overcome the concerns: What are some ideas you have for how to fix the concerns you just noted?
Focus on knowledge exchange Sharing or even better KSA - Action	Broad reach for wide variety of stakeholders Strong relationship development	Too little money on tech side Seed corn funding by IUK Money spread too thinly across delivery partners (not model specific)	Impact would be focusing on policy & KE (exclude tech & RAs) Draw on network of previously engaged companies
Separation of CCUS & H_2 Policymakers understand this	Finding a use for CO_2 Understanding the commercial potential and application of low GHG H_2 – "Green"	Need significant, sustained industrial buy in	Spending money on H_2 or CCUS " either or"
Opportunity to come up with new user ideas	De-risking decarb innovation for UK PLC Could work with entire upstream and downstream supply chain	Middle section too defined for money	Link with Wave 1 & 2
Over-arching policy More efficient	Potential for industry engagement and matching funds AI in tech	Links with activity 1 and 2, be inclusive not exclusive Partners outside these activities	Get involvement with CSA at BEIS Circular economy approach to CCUS/H_2

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Clarity on two areas and openness on the third	Network could reach out to all 5 clusters, even ones not funded	Level of funding for network (£5m not £1M) £20M not enough	Leverage other funding sources
Looks like topics industry will engage on	Network can engage with lots of areas, a lot of things are happening	Network + needs to engage technology KE as well as policy	Links with demonstrations important
Like network + but needs enough funding (i.e. £5M not £1M)	UIET could respond to relevant industrial needs → good impact flex funding	"User inspired emerging technologies" becomes too diffuse	Respond to actual industry developments, staggered funding and quick response Don't demand co-funding but does require engagement
	Could help produce integrated system	Was presented as two discrete technologies, plus a vague concept rather than a unified solution	CCUS & H_2 need to be viewed as an integrated approach for industrial decarbonisation Management Options: One big institute, decoupled from Universities, but could be lean, would have dedicated staff, could be neutral for 5 clusters (Whole UK)

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(4) Mission oriented to reduce CO_2 Technology focused Academic input to resolve industrial challenges → TRL 1-3	Significant impact on CO_2 emissions Academic – Industrial interactions	SILOed/Separate (CCUS/H) Piecemeal, might not deliver anything measureable	Don't use this structure 1) Require each of the ≈ 5 consortia to address at least 2 of the following: CCUS, H_2, other 2) And social/policy WPs
(3) Good to have policy and knowledge exchange All important components are there Aligned with CGS (clean Growth strategy – BEIS)	Interaction with existing projects e.g. CREDS/UKERC4 (needs to be real interaction)	Risk of duplication of existing work (in activities 1 & 2) or through other centres e.g.cred/UKERC	Exercise Civic Mission of HEI Knowledge (res) Teaching?? (long) KE () Proactive UKRI management/monitoring
Impact on CO_2 reduction target Potential for –ve CO_2 emission	Delivery of GovT Policy	Ignores the system nature of the problem	Work closely with activities 1 +2 e.g. regular workshops Social science led Systems thinking training for all PI's/Co-Is and PDRAs (staff exchanges)
UK Energy intensive industry	Evidence based policy	Disconnected with cluster realities Ignores "place"	Focus on ADOPTION What are the tech/ R & D/ policy barriers to adoption of existing technology / future - proofing
			Interdisciplinary mediation Skills training from UKRI Interdisciplinary Ambassadorship?

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Big rather than bitty	Pathway to low Carbon industry/economy	Maintaining cohesion and collaboration Integration *	Leadership (with & external) excitement about challenge
Covers the relevant topics	Create a research community *	Ensuring real delivery *	Use diverse methods: core, skills, training, KE, flex-funding Theme –led PHD partnership, joint supervision, critical mass
Problem driven not capability driven *	Provide sound evidence to inform policy	Too much analysis and scope creep→ keep focus	Piloting; understand existing natural CO_2 stores Leadership governance, outcome – oriented monitoring*

*==➔ single hub?

Alternative Mechanisms

- Balance of funding & relationships between 3 activities - 3 activities must be integrated

  → more funding for activity 3

  →activity 3 should feed into activity 1 & 2, research should drive where we do things (demonstrators)

- Prefer a single institute to ensure strong leadership
- Complimentary mechanisms e.g. CDT + PhDs + Post Docs
- Ensure cross cutting linkage between all packages including policy (legal/regulatory/economics), needs to be whole systems
- Link with stakeholders in all release areas including insurers
- Ensure funding mechanisms are focussed on problems rather than disciplines
- Completely problem based approach (results driven) oriented around an actual project – like problem based teaching
- Recognition that industrial decarbonisation links into broader decarbonisation issues
- Focus to ensure success in decarbonising one cluster to encourage future/further government investment (avoid mission creep)
- Support of research base in short term interdisciplinary working will underpin future work - 2030
- An Institute – what are the risks?
    - There are very diverse industrial sectors – how do you deal with this heterogeneity?
    - Issue over inclusivity of academic community
    - Could an alternative be a 'mega' network

Cyclic

Policy
Regulation/Government

Activity 1 & 2 (glue) Entity
creating legacy for industrial
decarbonisation of other
clusters

Long term policy
trajectory

De Risk
Social, Economic,
Environment/Effectiveness

Address market failure

Informing policy

Supply chain and building
supply chain

Increasing investor & industry
confidence

Knowledge

Know what companies want

Other funded
consortia e.g.
Supergen,
UKCCsrc,Cred,
UKERC

Activities 1 +2/Other sites/Other Decarb(Domestic ,
public buildings)

Structure to be
Explicit in the Call

Policy/Governance

Current Technologies

Cost Reduction
(Technology specific but cross cutting themes and
concerns)

De-Risking
(Commercially bankable and socially
acceptable)

Decarbonisation Performance
(environmental techno-economic)

Capacity Building
(e.g.secondments)

Engagement

Synergies/Integration

Social Impacts

Next Generation

UKRI Research
Infrastructure e.g.
UKGEOS, Pact etc.