RDI needs (1/2)

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	NOW	2030	
Carbon Capture tech	• Efficient low cost Carbon Capture with high capture rates • Upscaling Carbon Capture technologies – large scale plants • Lower cost materials • Bio-CO_2	• Monitoring/ metering tech for Carbon Capture/CO_2 quality	• DAC • Reduce plant sizes / space requirement
CCUS process	• Costs down and energy efficiency up for all parts of CCUS processes • R&D needs for preparation for upscaling • Utilisation also for non energy products • Pilot plants and further upscaling		• Energy and Cost efficiency remains topic
CO_2 logistics	• CCUS atlas: industrial hubs for infra planning • CO_2 logistics (rail/trucks/ships/pipelines) linking sources and sinks, large and small volumes	• Metering technology • CO_2 storage atlas	• European CO_2 pipeline network
CO_2 storage	• Reservoir integrity • Drillhole tech and integrity • Monitoring • Competing reservoir uses (e.g. H_2 storage), capacity estimation and modeling • Emerging storage options like mineralization and long-term CO_2 storage in the soil • Small-scale CO_2 storage opportunities for smaller industries		

RDI needs (2/2)

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	NOW	2030
Business models, value chains, industry symbiosis	• Varied CCU solutions, connections between industries • Modeling functioning business options, integrated solutions and value-chains: actors, new businesses, gaps • Supporting/optimising the integration of new technologies into existing facilities, side streams and infrastructure	• Upscaling: Cost vs size
Standards	• RDI to support standards: CO_2 quality, Carbon Capture, utilisation, transport and storage	
Environmental impact	• LCA and sustainablility	• Environmental assessment from large plants
Cross cutting topics	• Update of carbon capture and main synthesis roadmaps based on TRL • AI based technologies (e.g. control of plants) • Research infra, shared European pilot plants	• Capacity building - labour requirements