WORLD CLIMATE RESEARCH PROGRAMME

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Chair WCRP Joint Scientific Committee
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WMO UNESCO INTERNATIONAL COUNCIL FOR SCIENCE WCRP World Climate Research Programme

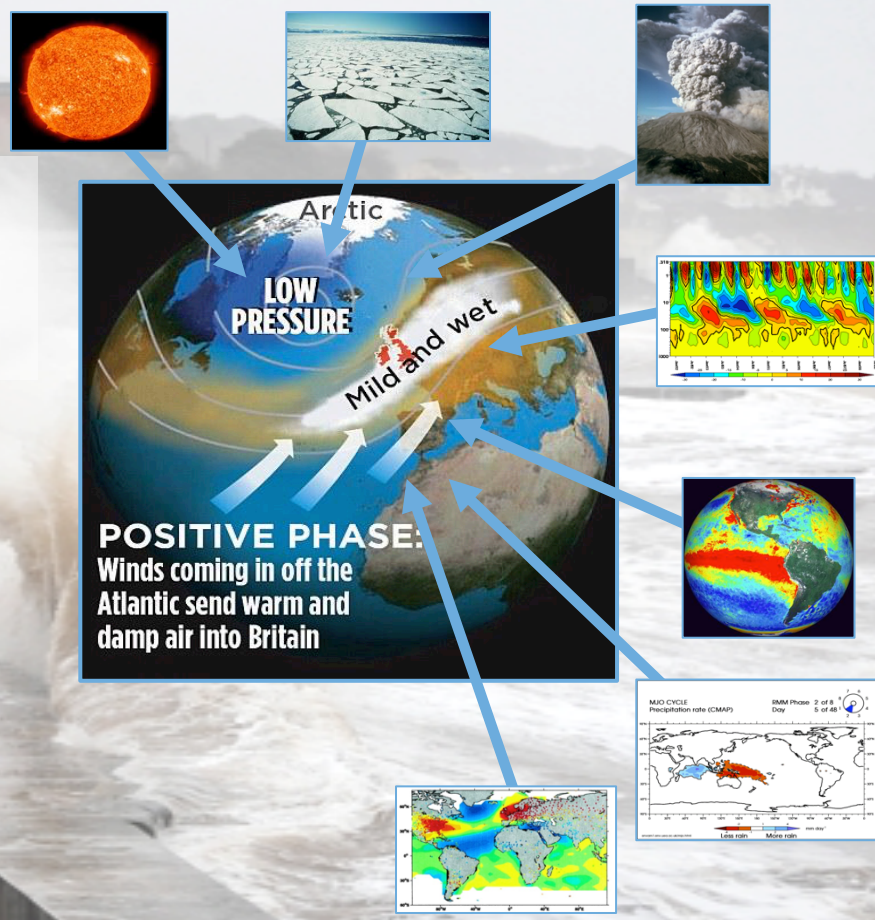
An Important Research Emphasis for WCRP

Monthly to Decadal Prediction: Understanding near-term risks

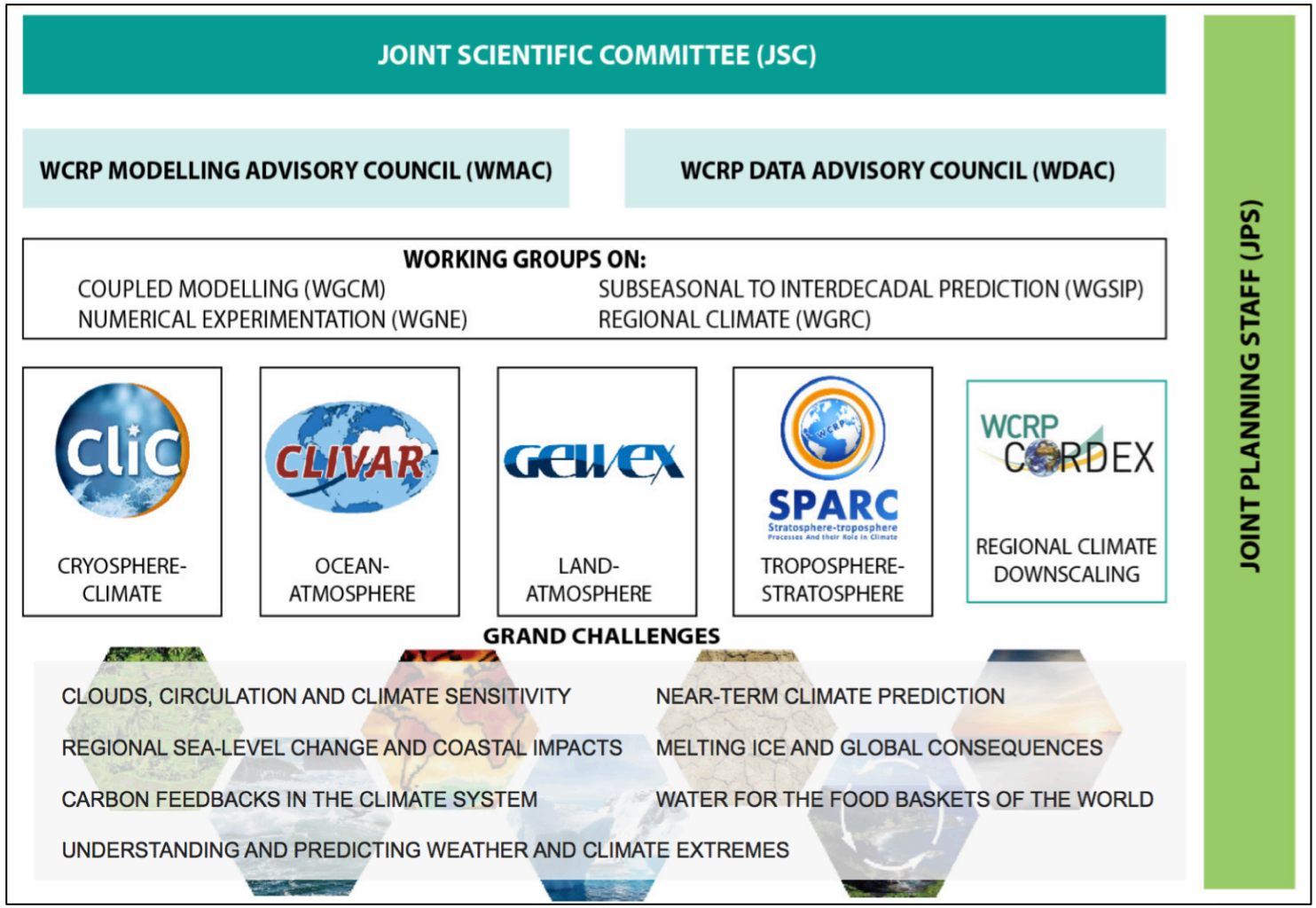
There are many drivers of seasonal weather and each 'loads the dice' in a different way.

CLIMATE VARIABILITY, PREDICTABILITY & PREDICTION

Ocean, Land, Cryosphere, Atmosphere & Solar Drivers; Climate Dynamics, Modes of Variability & Teleconnections; Monthly to Decadal Predictability & Prediction



From Julia Slingo



CURRENT WCRP STRUCTURE

Unwieldy, complex and confusing.

Core Projects stuck in the past?

Where is whole system approach?

Where is next generation model development?

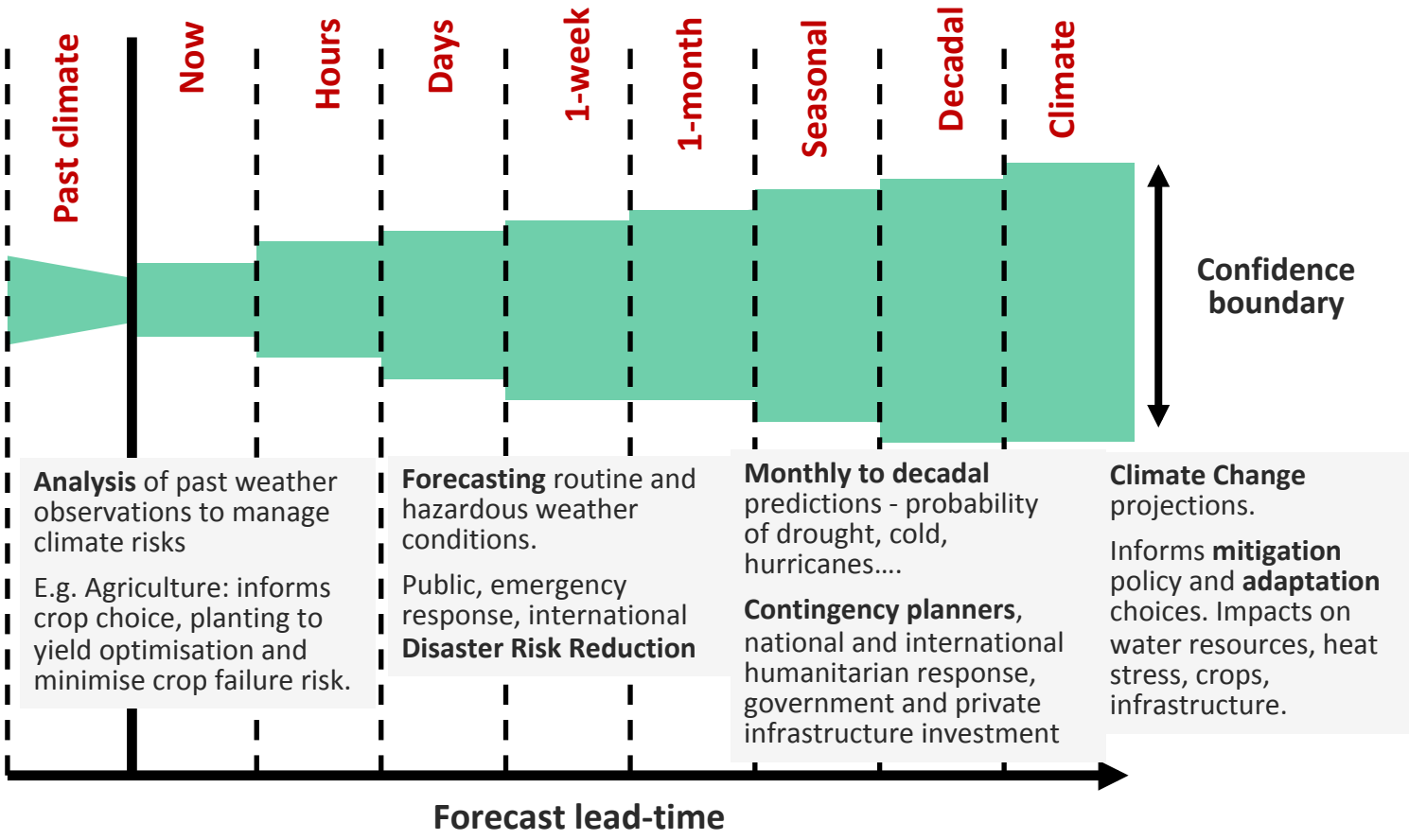
Where is the pathway to climate services?

Where is climate change?

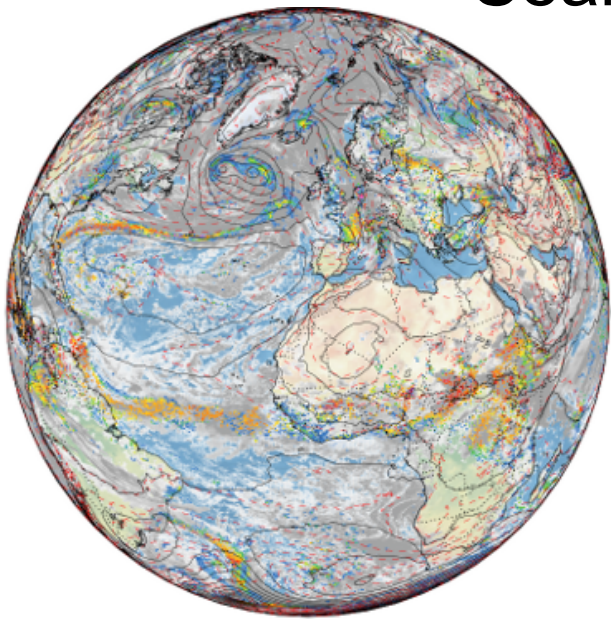
CURRENT STRUCTURE IS NOT THE STRUCTURE FOR THE FUTURE

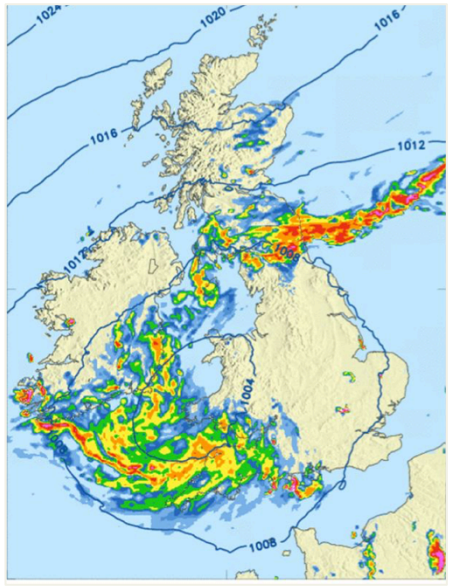
New Tools in the Toolbox:

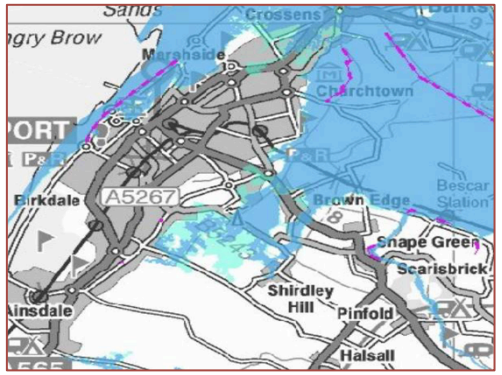
Seamless Prediction Across Timescales



New Tools in the Toolbox:
Seamless Prediction Across Space Scales







N x Global predictions at ~10km with lead times of days to years:

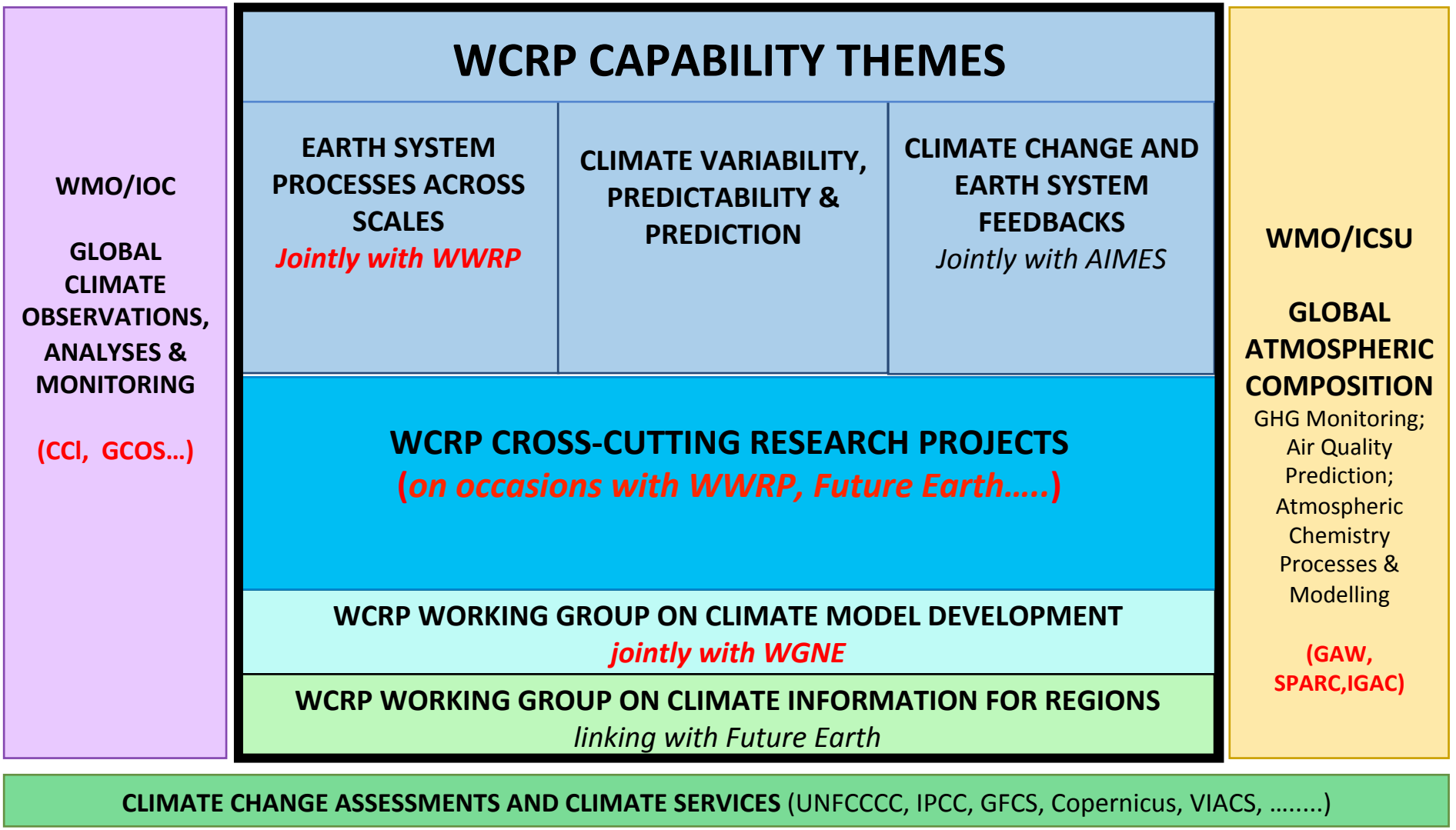
Synoptic drivers

<N x Regional predictions at <1km with lead times of hours to years:

Local meteorology

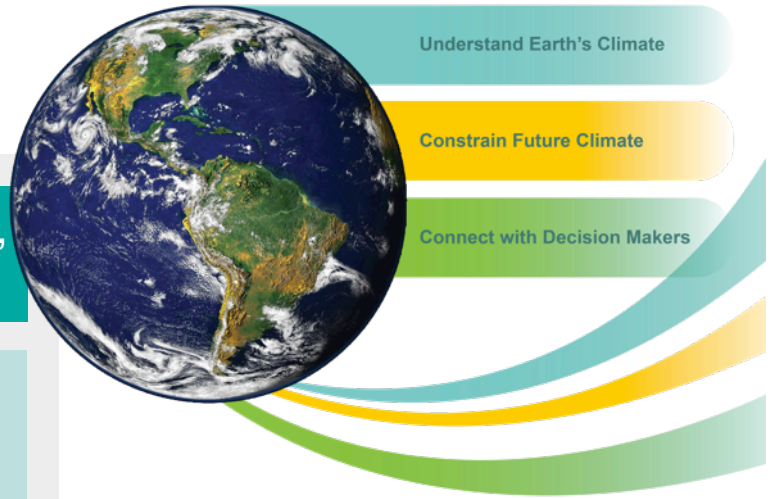
Probability of local hazards:

Impact Scenarios & Narratives


WMO/IOC
GLOBAL CLIMATE OBSERVATIONS, ANALYSES & MONITORING
(CCI, GCOS…)
WCRP CAPABILITY THEMES
EARTH SYSTEM PROCESSES ACROSS SCALES
Jointly with WWRP
CLIMATE VARIABILITY, PREDICTABILITY & PREDICTION
CLIMATE CHANGE AND EARTH SYSTEM FEEDBACKS
Jointly with AIMES
WCRP CROSS-CUTTING RESEARCH PROJECTS
(on occasions with WWRP, Future Earth…..)
WCRP WORKING GROUP ON CLIMATE MODEL DEVELOPMENT
jointly with WGNE
WCRP WORKING GROUP ON CLIMATE INFORMATION FOR REGIONS
linking with Future Earth
WMO/ICSU
GLOBAL ATMOSPHERIC COMPOSITION
GHG Monitoring; Air Quality Prediction; Atmospheric Chemistry Processes & Modelling
(GAW, SPARC,IGAC)
CLIMATE CHANGE ASSESSMENTS AND CLIMATE SERVICES (UNFCCCC, IPCC, GFCS, Copernicus, VIACS, ……..)

WCRP Strategic Plan

Overarching Objectives



Processes and Feedbacks to Close the Energy, Water and Carbon Cycles

Improving Predictions and Quantifying Uncertainties	Constraining Projections and Identifying Sensitivities

Connecting Climate Science to Decisions

Bedrock Science (Emphases)

Tools and Capabilities (Imperatives)

Partnerships

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