

CLINT

CLIMATE INTELLIGENCE

www.climateintelligence.eu



ENHANCING CLIMATE SERVICES: H2020 CLINT

Elena Matta and the CLINT Consortium

Politecnico di Milano

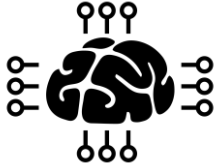
16 June 2022, JRC Ispra

CLINT CONSORTIUM

- 15 international Partners
- 9 EU Countries



CLINT MAIN CONCEPT AND OBJECTIVES



CLIMATE INTELLIGENCE will design new **Machine Learning algorithms** and tools to process **big climatological data** sets across different **spatiotemporal scales**.



AI-enhanced **CLIMATE SCIENCE** will advance **detection, causation, and attribution** of **extreme climate events**.



AI-enhanced **CLIMATE SERVICES** will be developed at the **EU continental scale** across the **water, energy, and food nexus** and on **selected climate change hotspots**.



CLIMATE SERVICES INFORMATION SYSTEMS will be deployed as **web processing services** based on most advanced open software and data standards and through **service demos**.

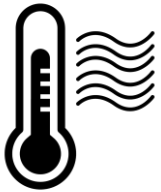
CLIMATE EXTREME EVENTS



Tropical cyclones



Extreme droughts



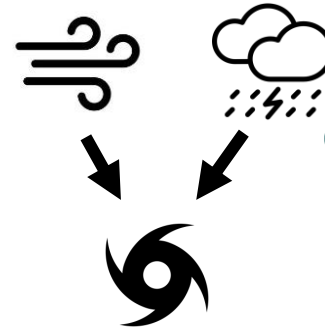
Heatwaves and warm nights



Compound events
concurrent extremes



DETECTION



CAUSATION



ATTRIBUTION



SPATIOTEMPORAL SCALES

EU CONTINENTAL SCALE



WATER
ENERGY
FOOD



CLINT Climate Services addressing the WEF Nexus at EU scale at seasonal and climate projection horizons			
WEF Nexus	Extreme Event	Impact modelling	Impact indicator
Water	Tropical Cyclones	E-HYPE hydrological model	Flood risk and Hydrological drought risk
	Extreme Droughts		
	Compound Events and Concurrent EE		
Energy	Heatwaves and Warm Nights	PRIMES-IEM energy model coupled with E_HYPE hydrological model	Power generation cost, load cuts, carbon intensity
	Extreme Droughts		
	Compound events and concurrent EE		
Food	Heatwaves and warm nights	JRC crop modelling system	Crop yield, crop suitability, areas of risks
	Extreme Droughts		
	Compound events and Concurrent EE		

SPATIOTEMPORAL SCALES

CLIMATE CHANGE HOTSPOTS



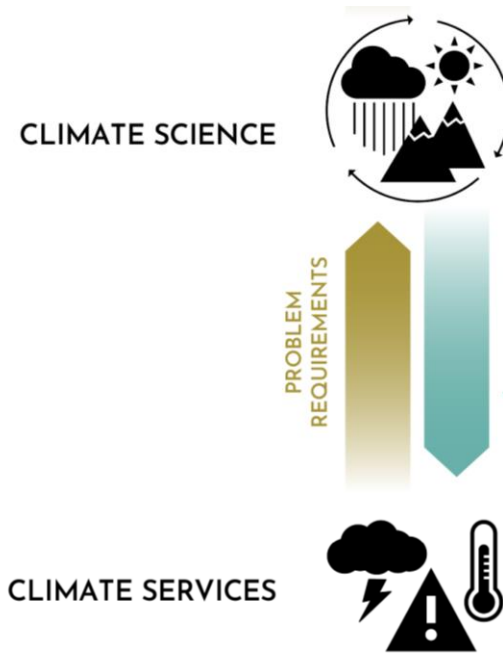
CLINT LOGICAL FLOW



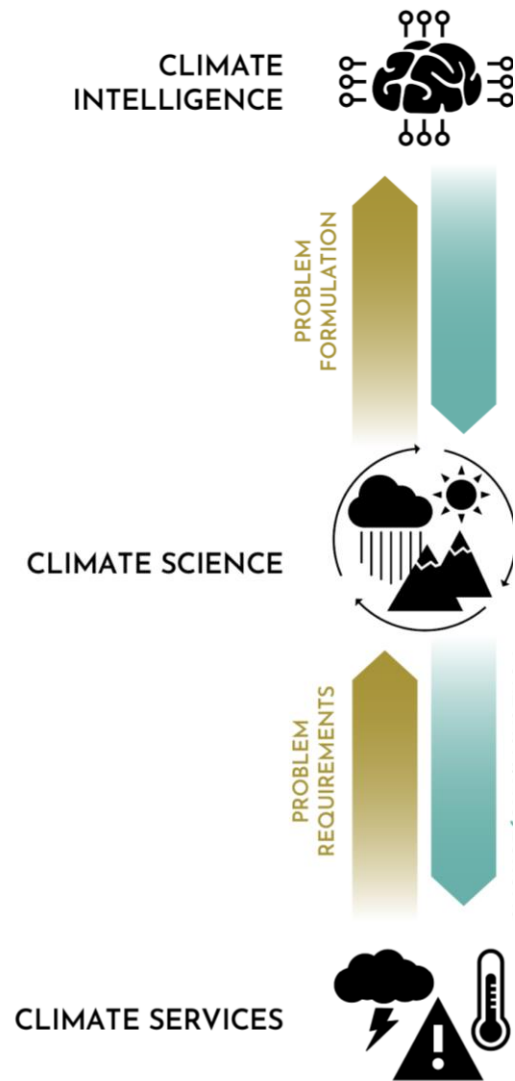
CLIMATE SERVICES



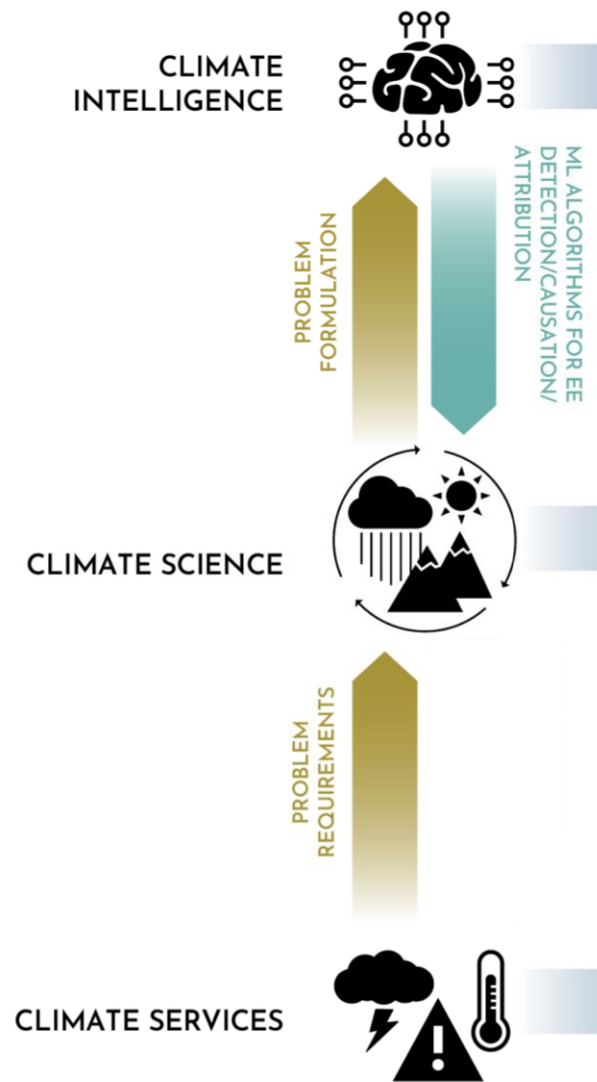
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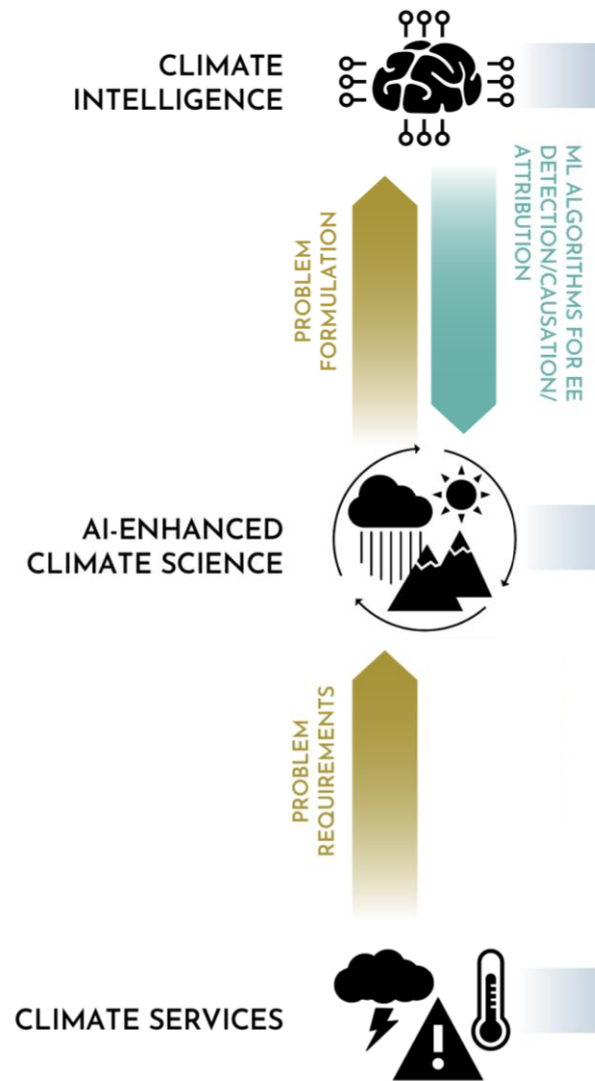
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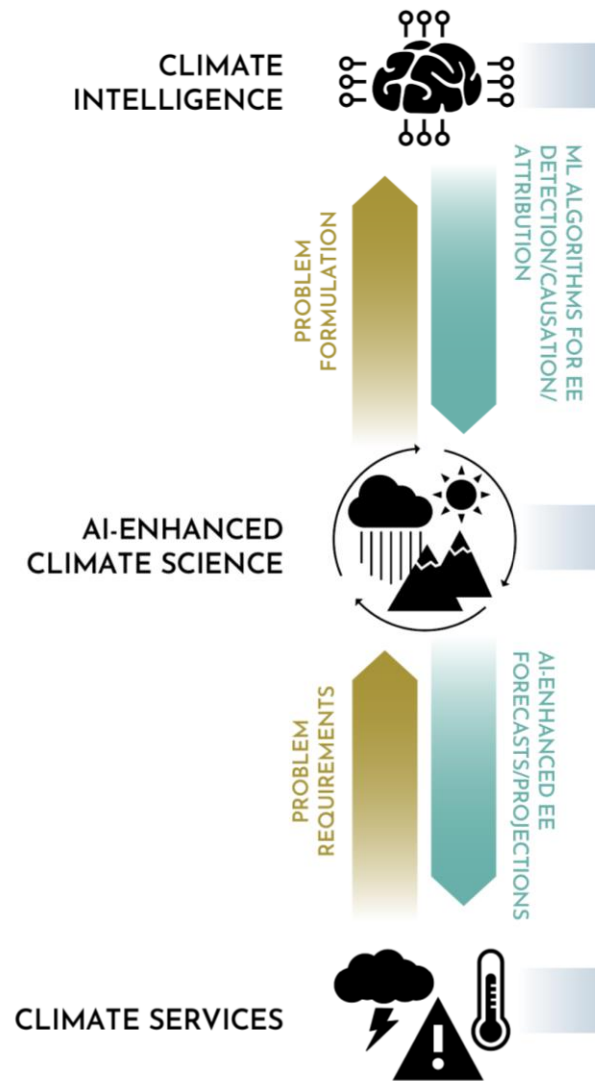
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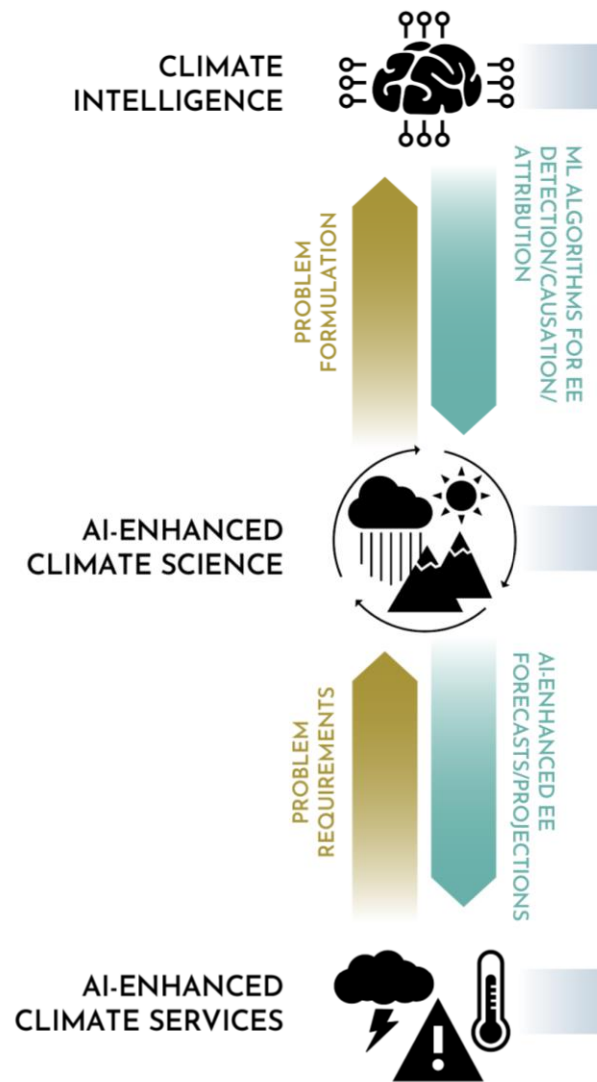
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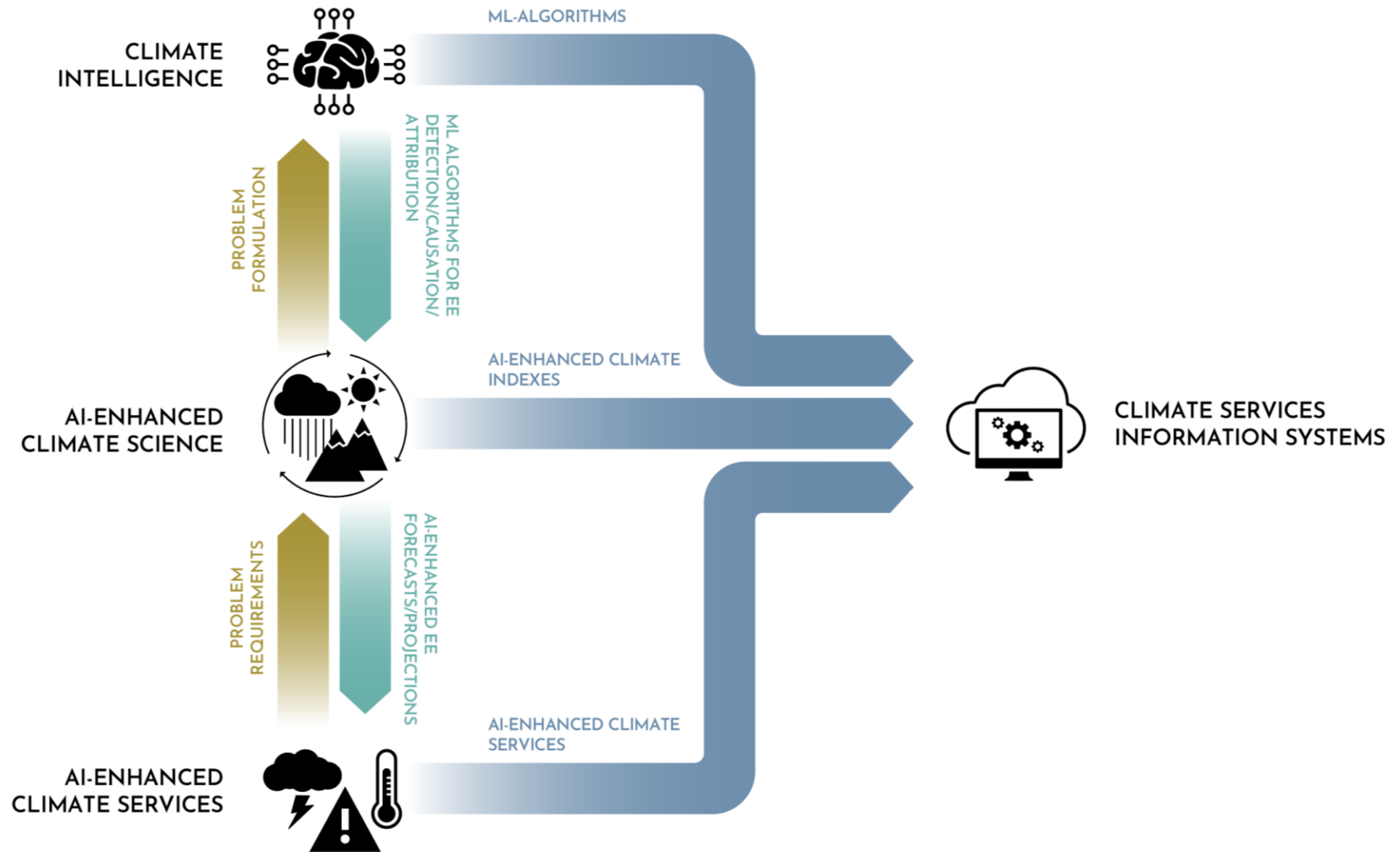
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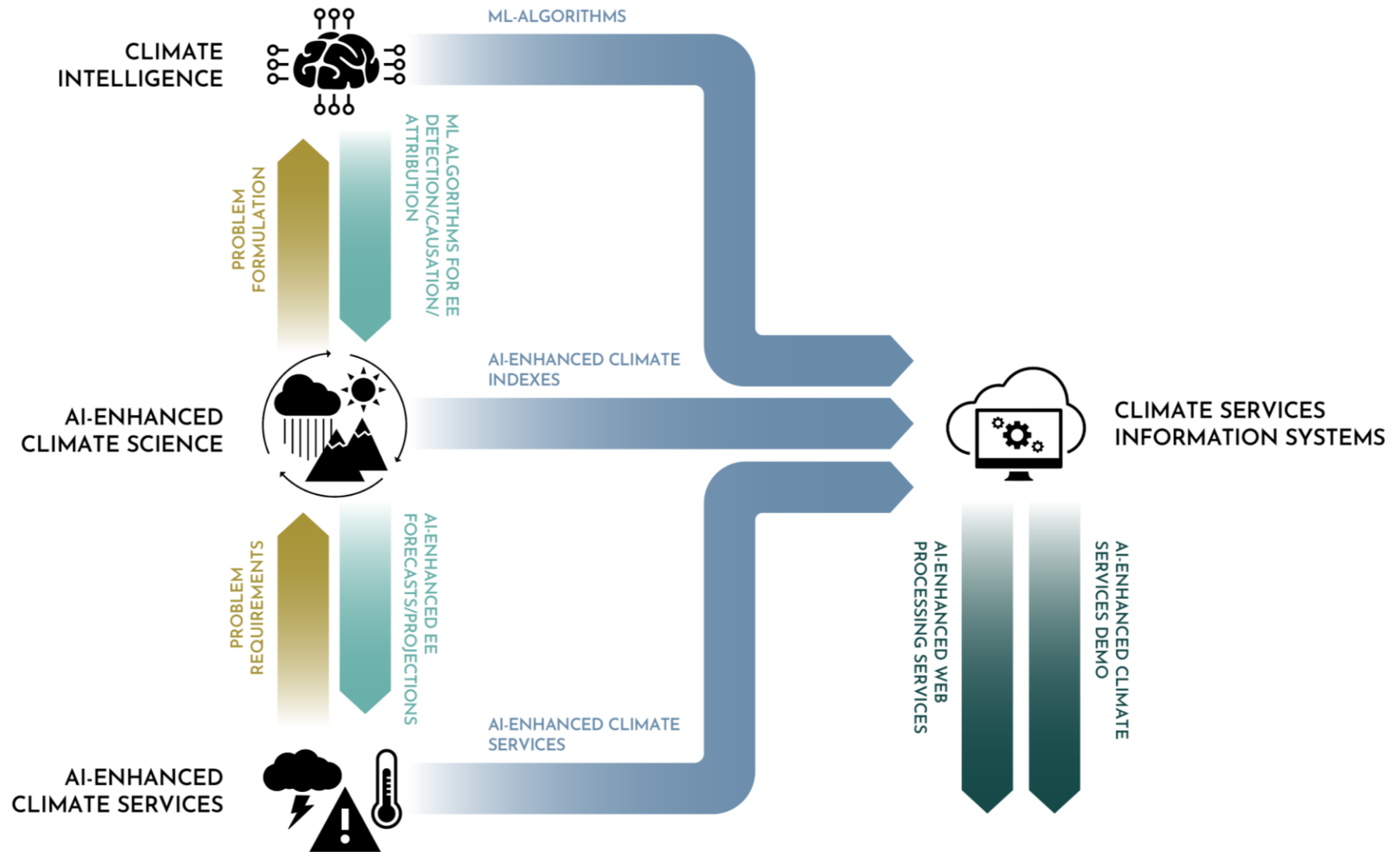
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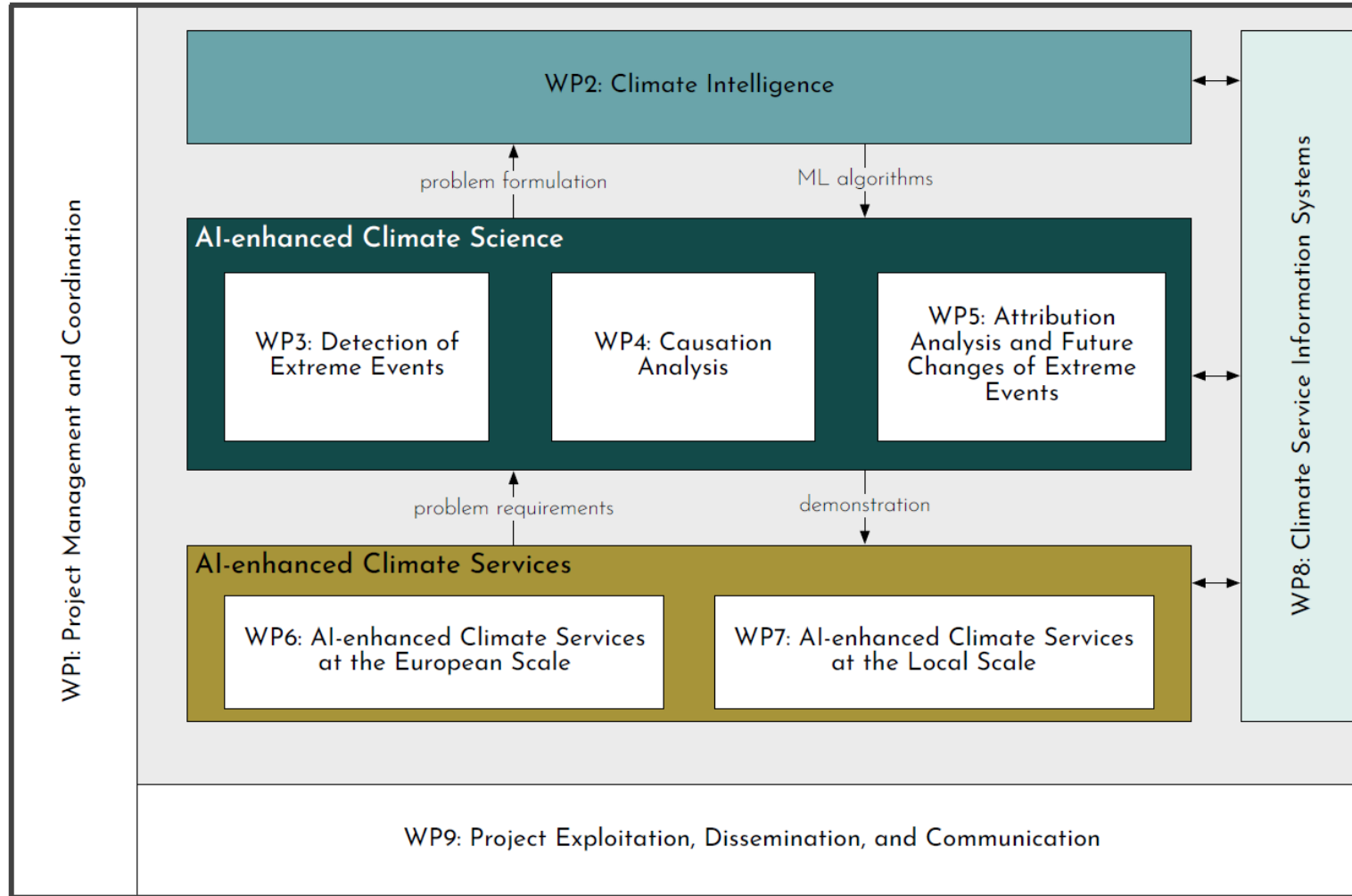
CLINT LOGICAL FLOW



CLINT LOGICAL FLOW



CLINT STRUCTURE



CLINT EXPECTED IMPACT

1 Enhanced adaptive capacity, from pan-European to local scale

2 Reduced vulnerability to climate change

3 Enhanced actions on adaptation

4 Strengthened scientific knowledge on climate

5 Better informed CS and decision-making



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EDORA WORKSHOP

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