



Entering AI Era with 6G



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Paradigm is Shifting

The Decline of Software and The Rise of AI Agent

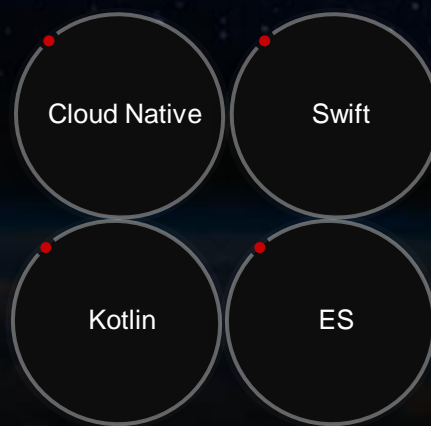
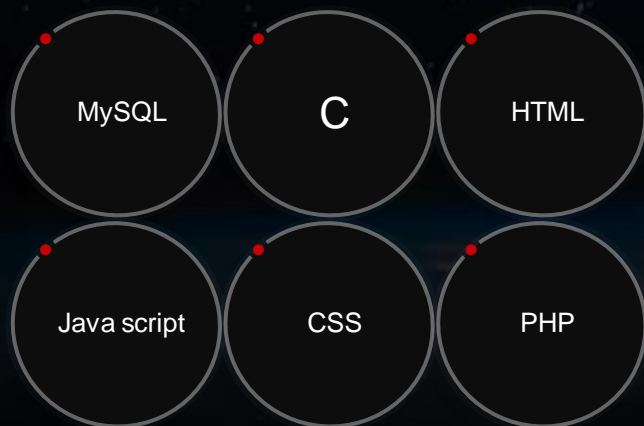
Old Paradigm



Web



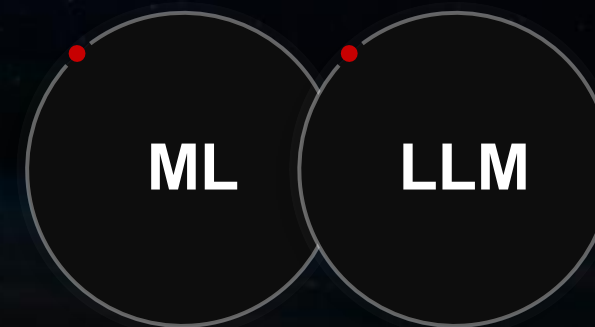
Mobile



New Paradigm



AI Agent for everyone



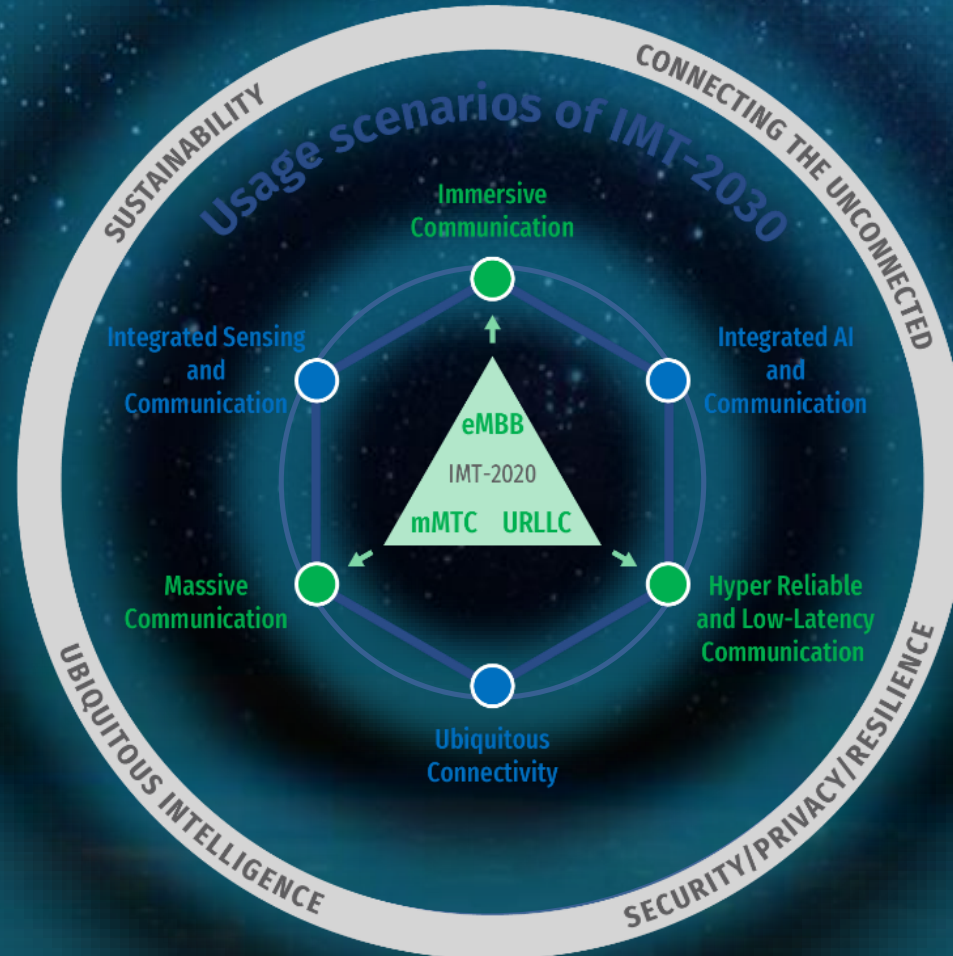
6G: Connected Intelligence



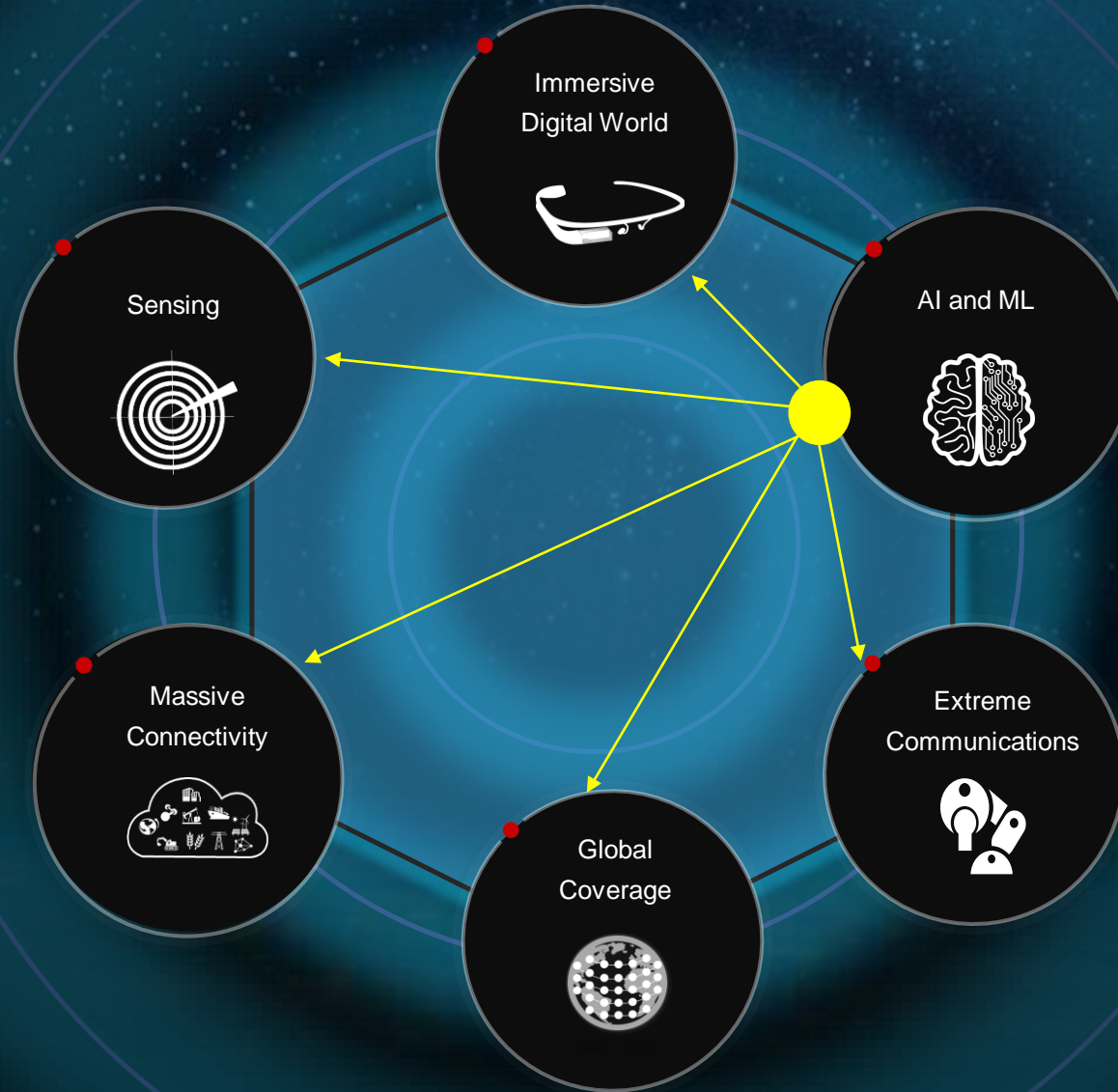
AGI for 6G
6G for AGI



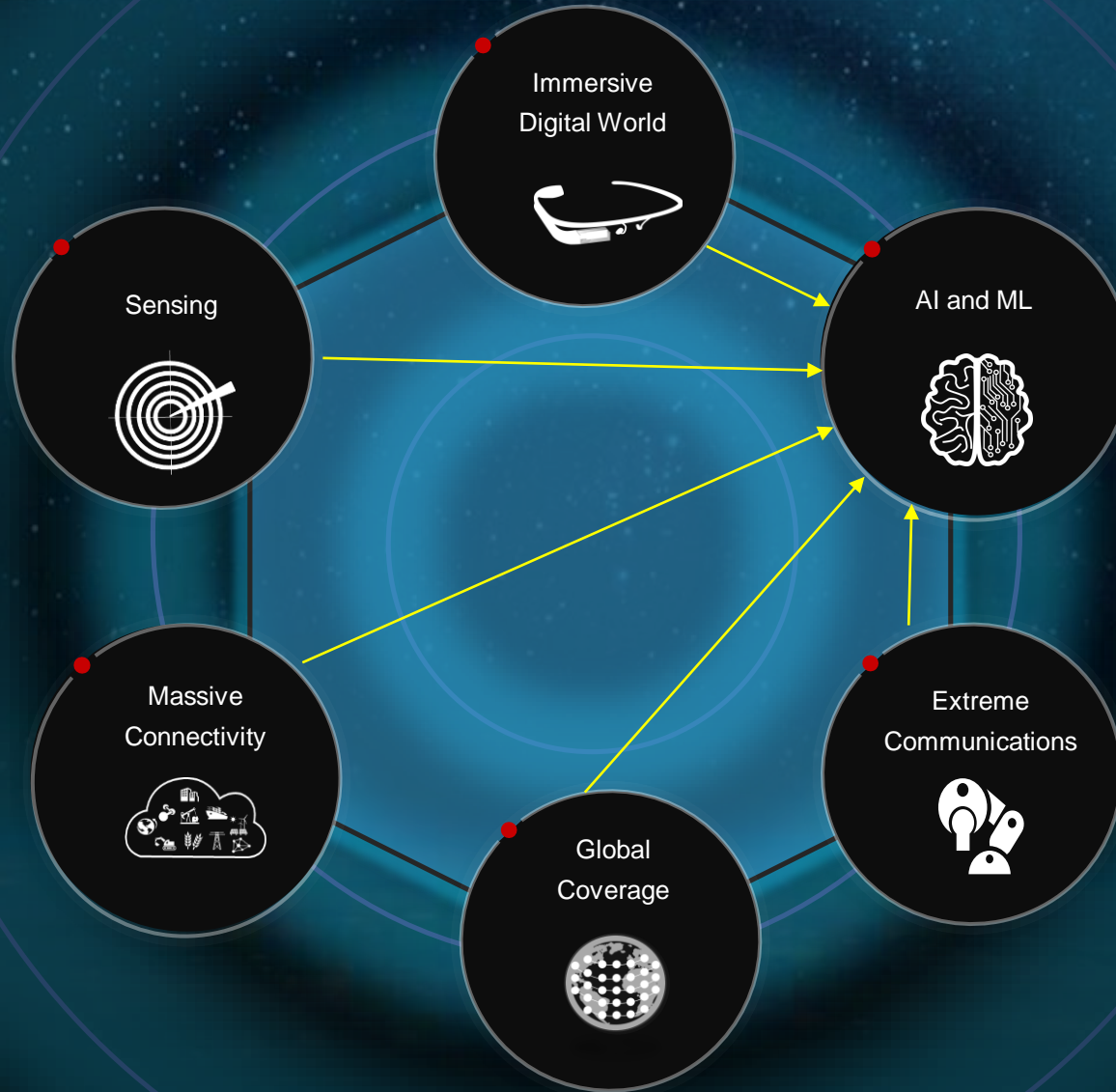
6G: the Converged Vision



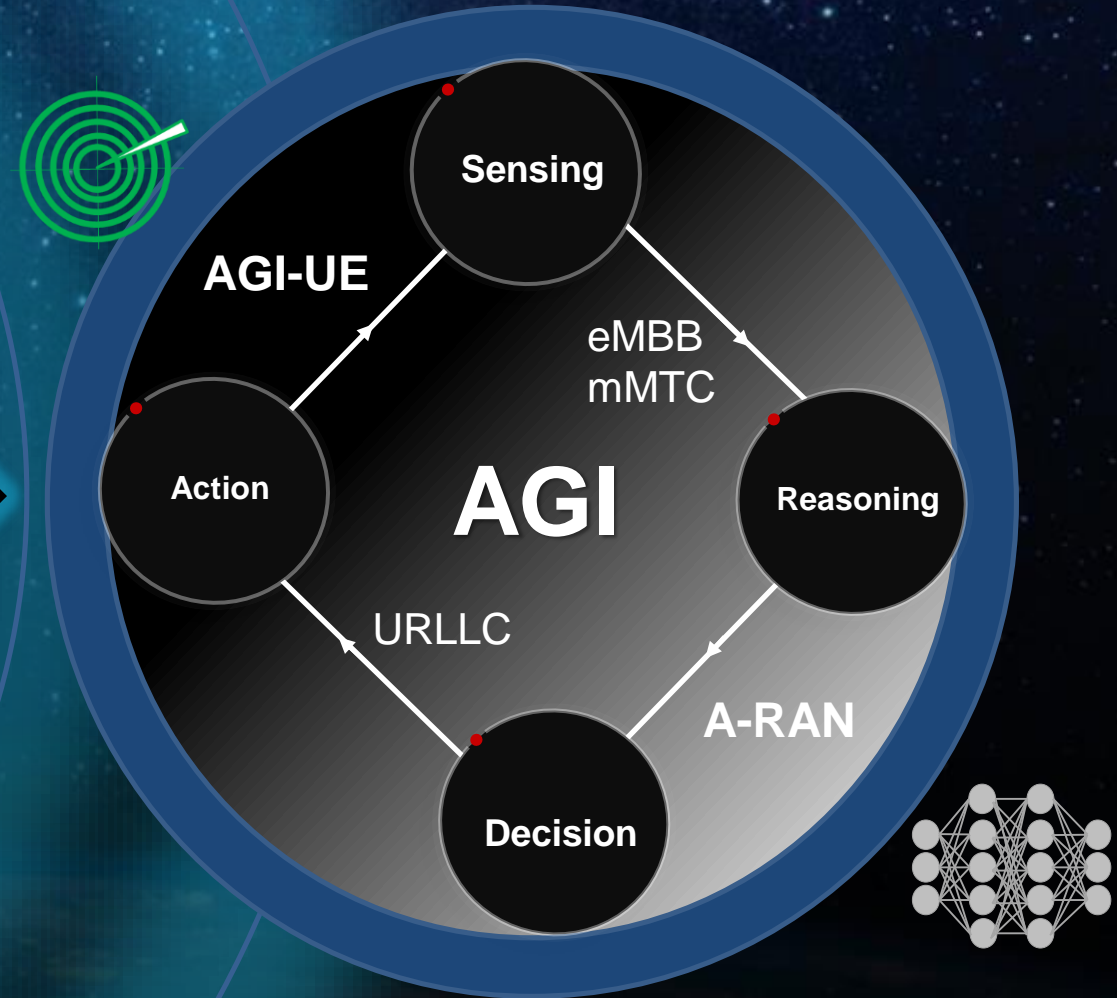
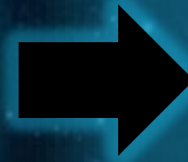
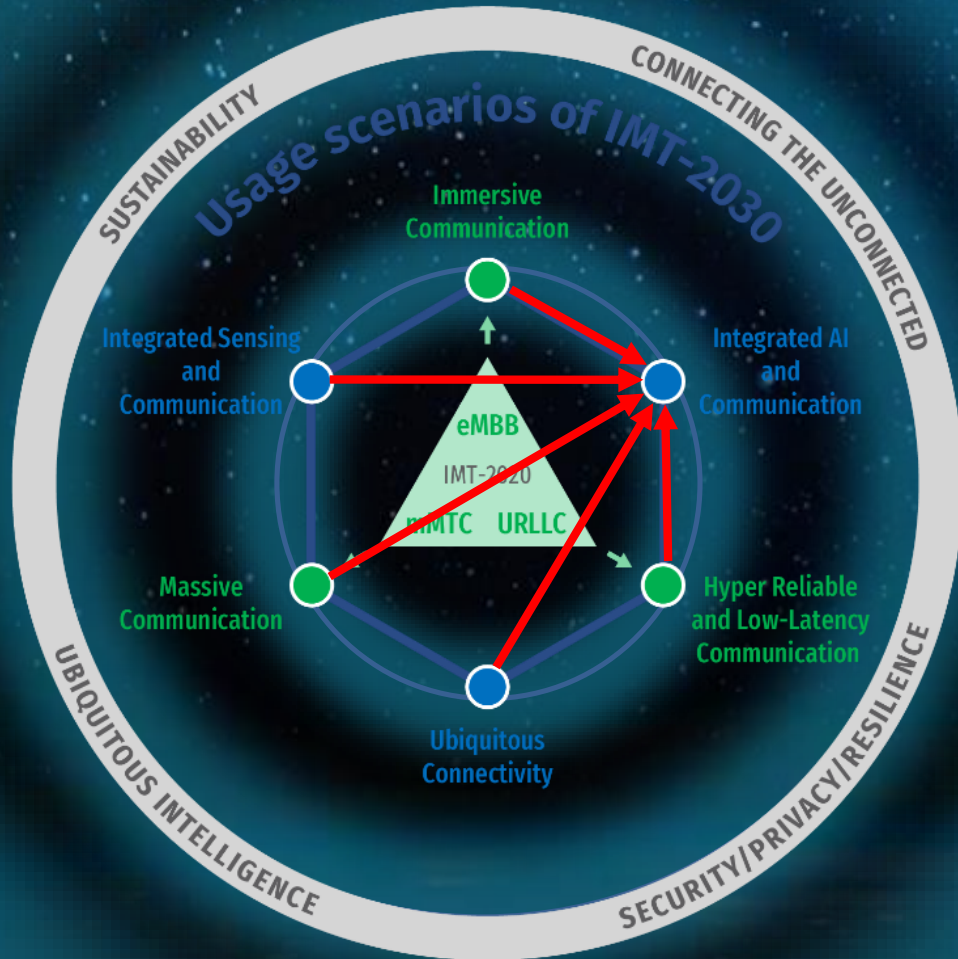
6G: AI for Communications



6G for AGI

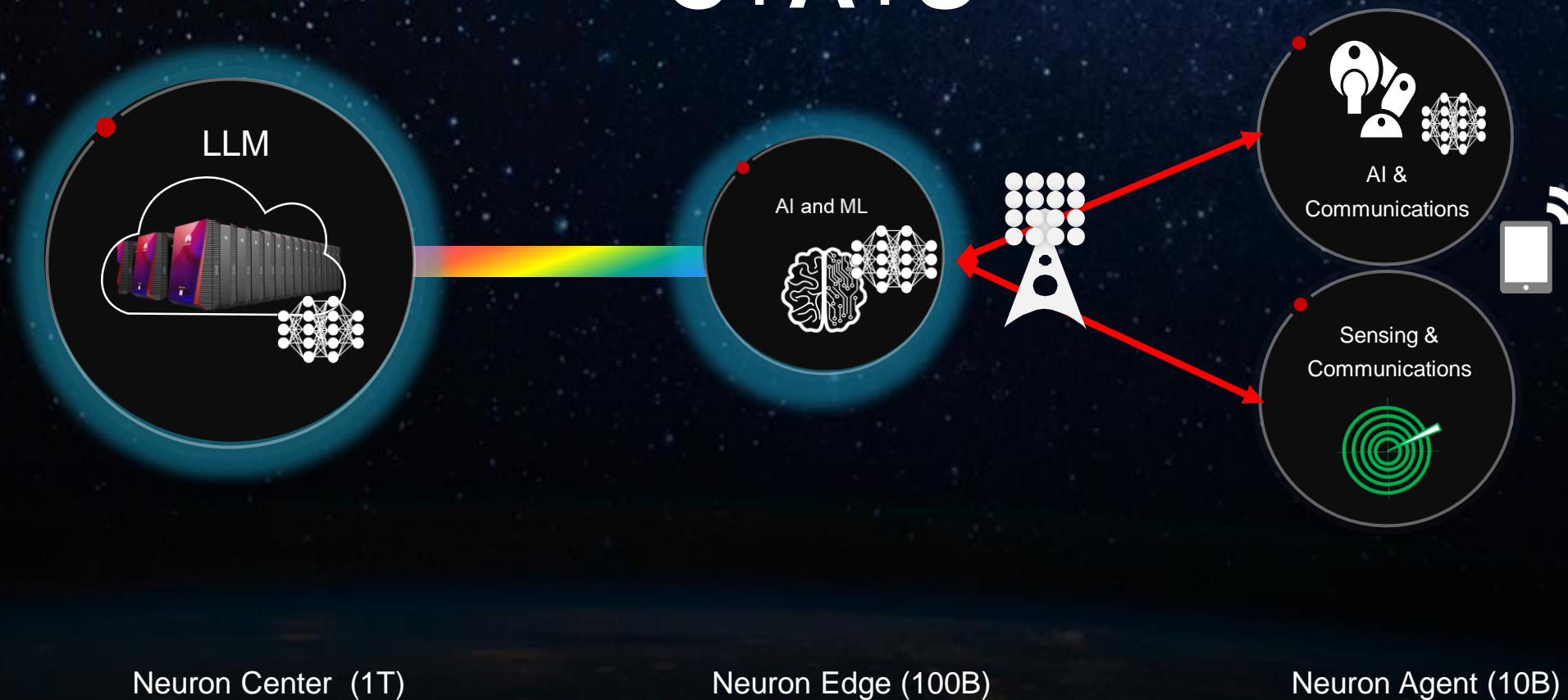


6G- an AI Native Principle



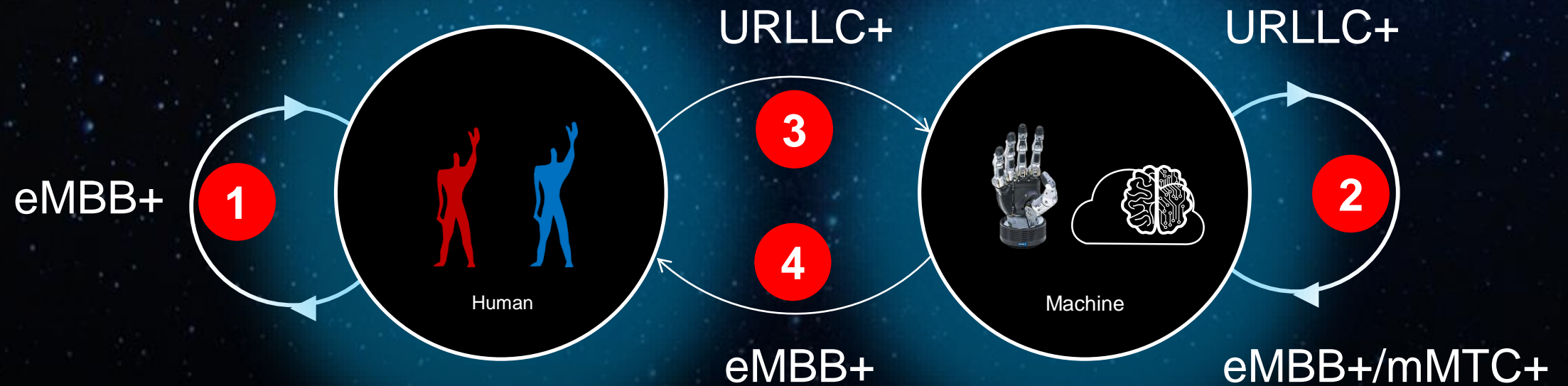
The LLM Architecture for 6G

C+A+S



New LLM Based Communications

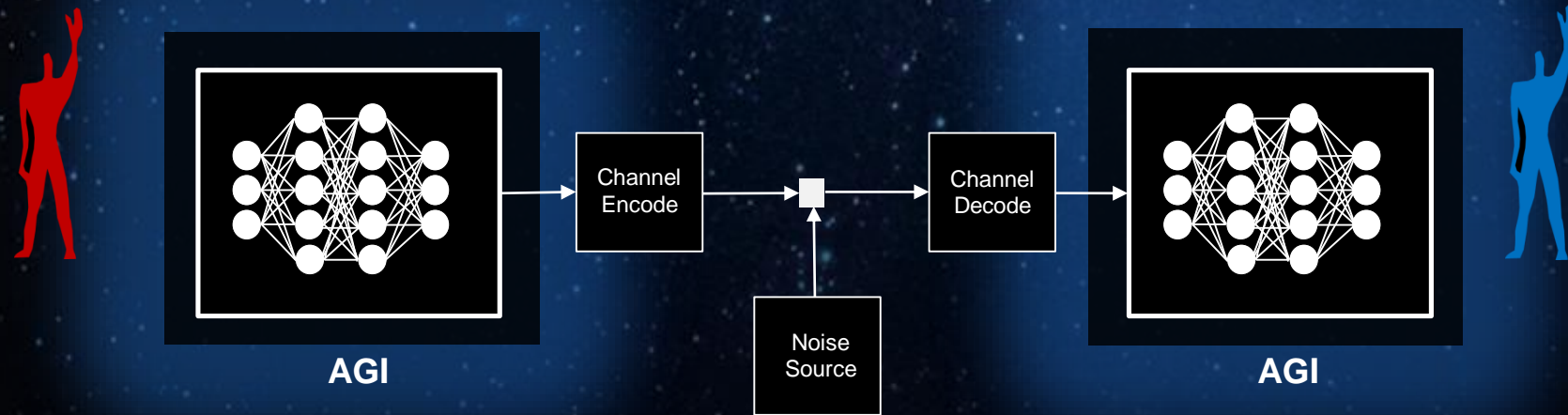
Next Generation Source Processing and Coding Paradigm



- 1** People to People
- 2** Machine to Machine
- 3** People to Machine, Tactile
- 4** Machine to People, Metaverse

The AGI Model

Weaver Effectiveness Communications: Information is not equal to Understanding

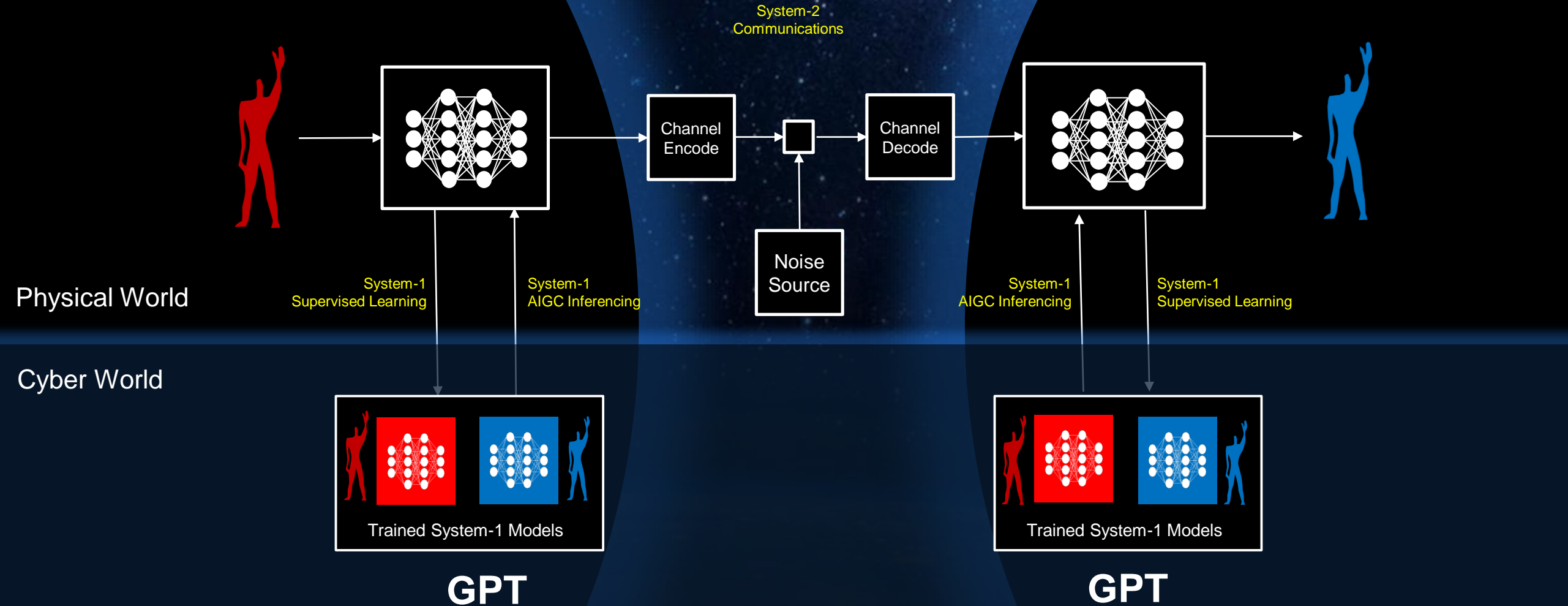


- Inner Shannon Channel
- Outer Weaver Channel

Information is not equal to Intelligent Effectiveness

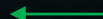

AGI Communications Architecture

Based on Generative Pre-trained Transformer



Integrated Sensing and Communications

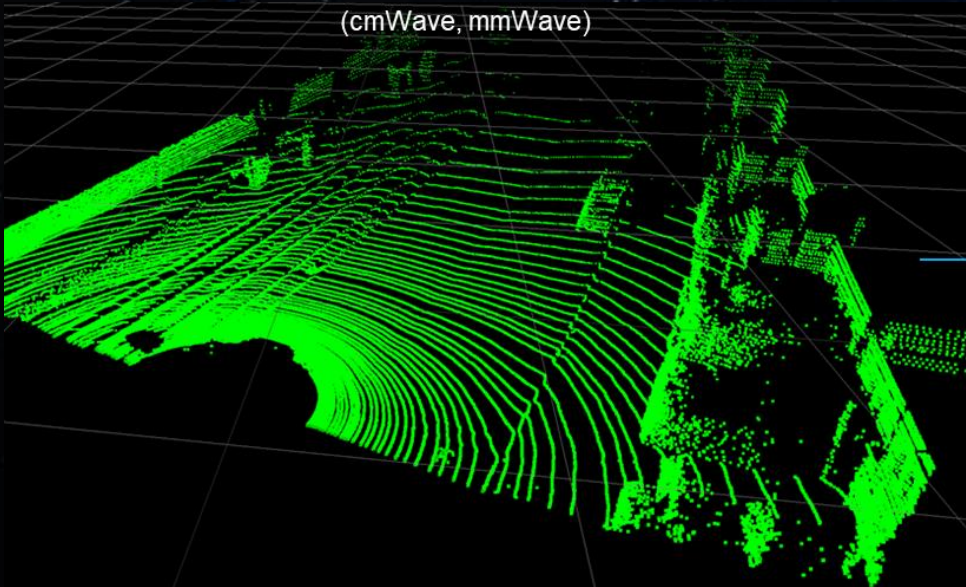


-  Data Link
-  Bidirectional Sensing
-  Unidirectional Sensing

NLOS joint sensing with gNB and UE

cmWave/mmWave ISAC

6G Point Cloud
(cmWave, mmWave)



Radio Rendering
Processing



Ground Truth



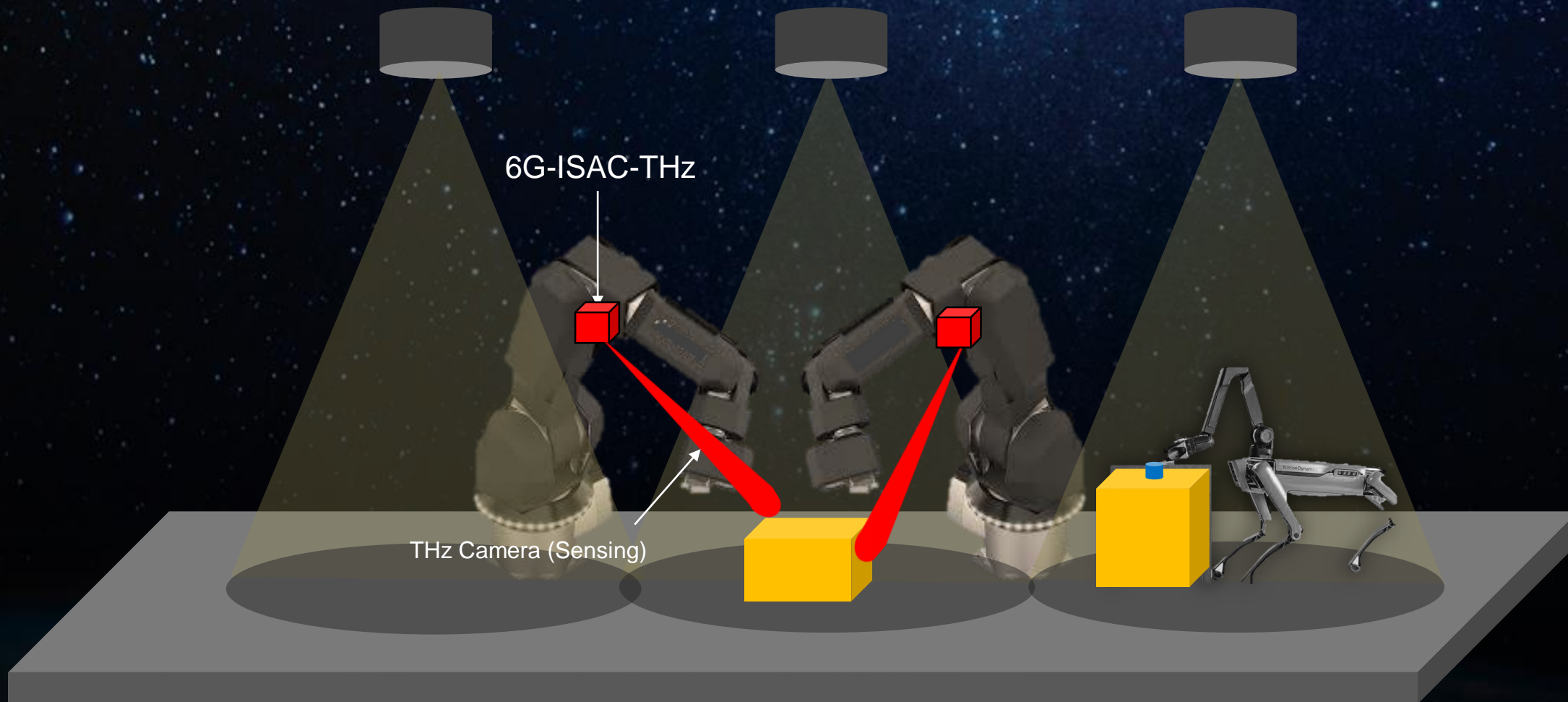
Network Wide ISAC



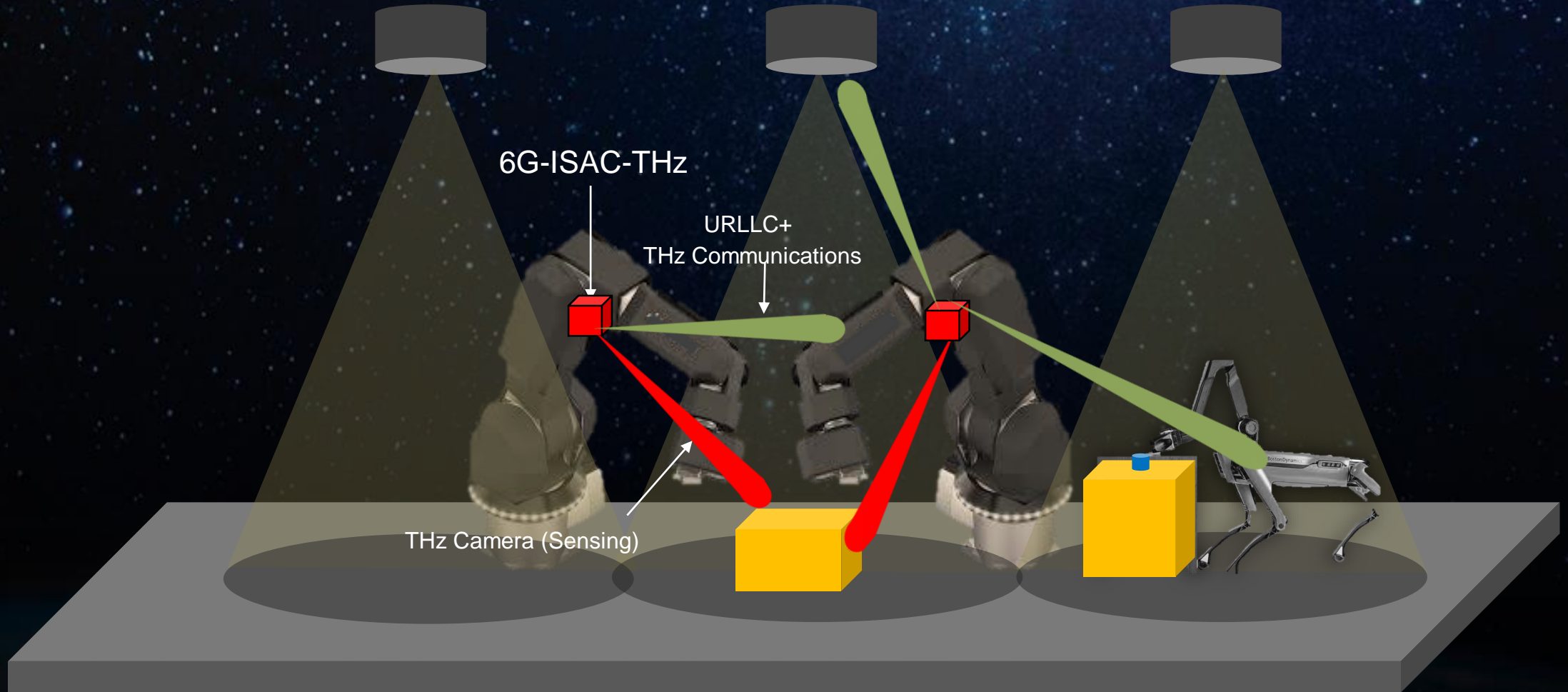
NLOS joint sensing with gNB and UE



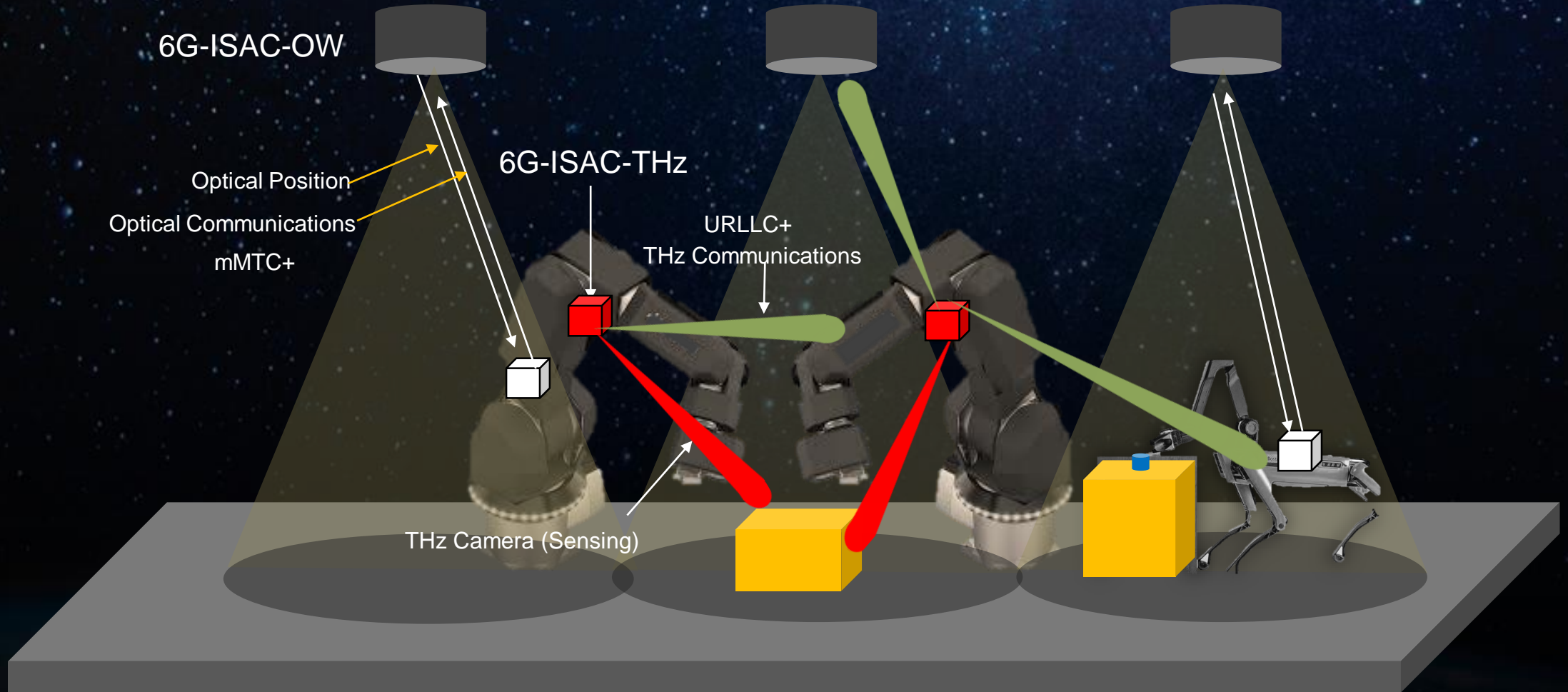
6G ISAC Enabled Industry IoT



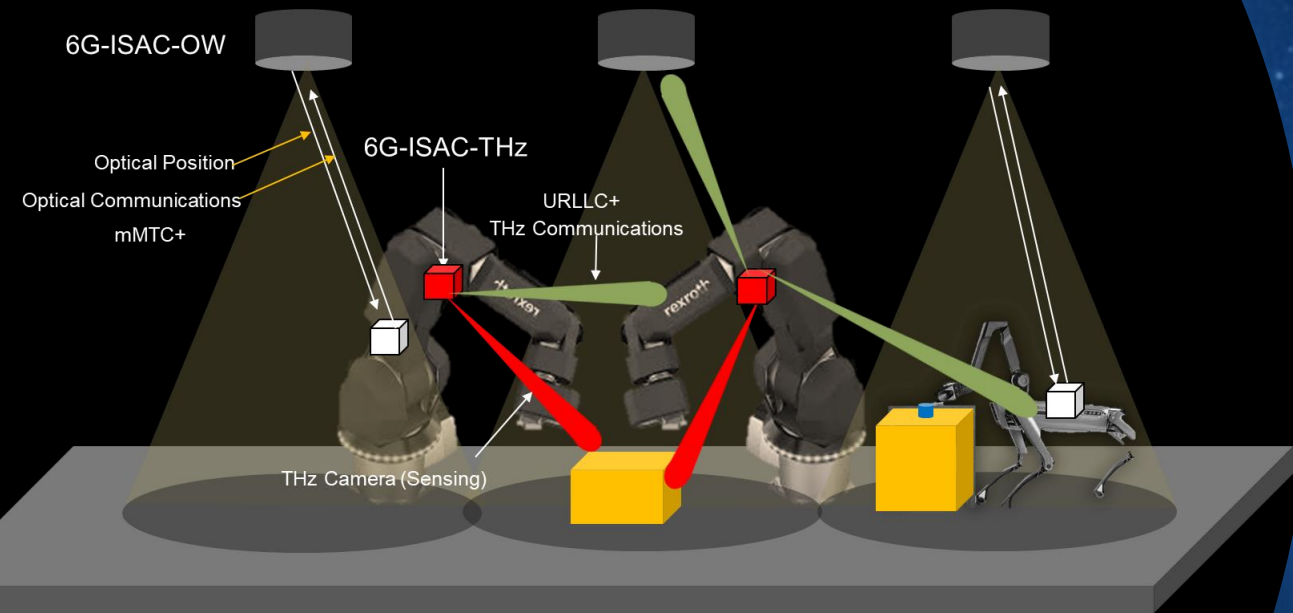
6G ISAC Enabled Industry IoT



6G ISAC Enabled Industry IoT

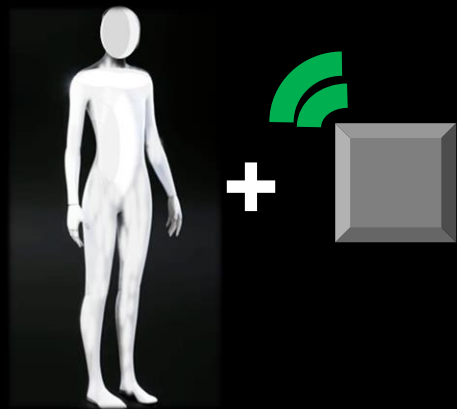


6G ISAC for 2B Devices

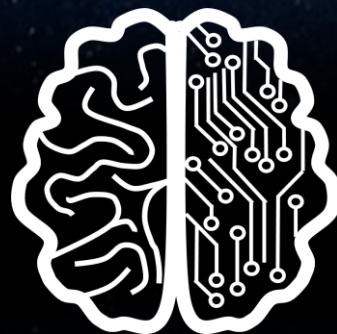


6G ISAC for 2C Consumers

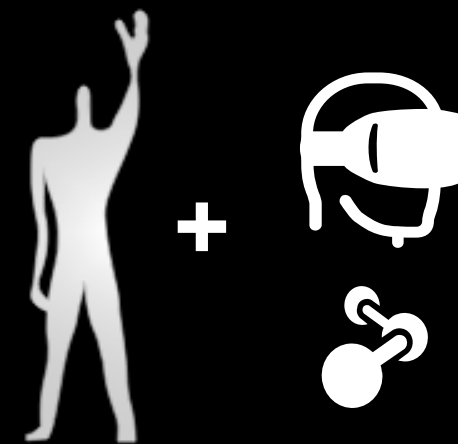
The Make of General Purpose Robot



Robot Butler
(URLLC) **6G**
(ISAC)



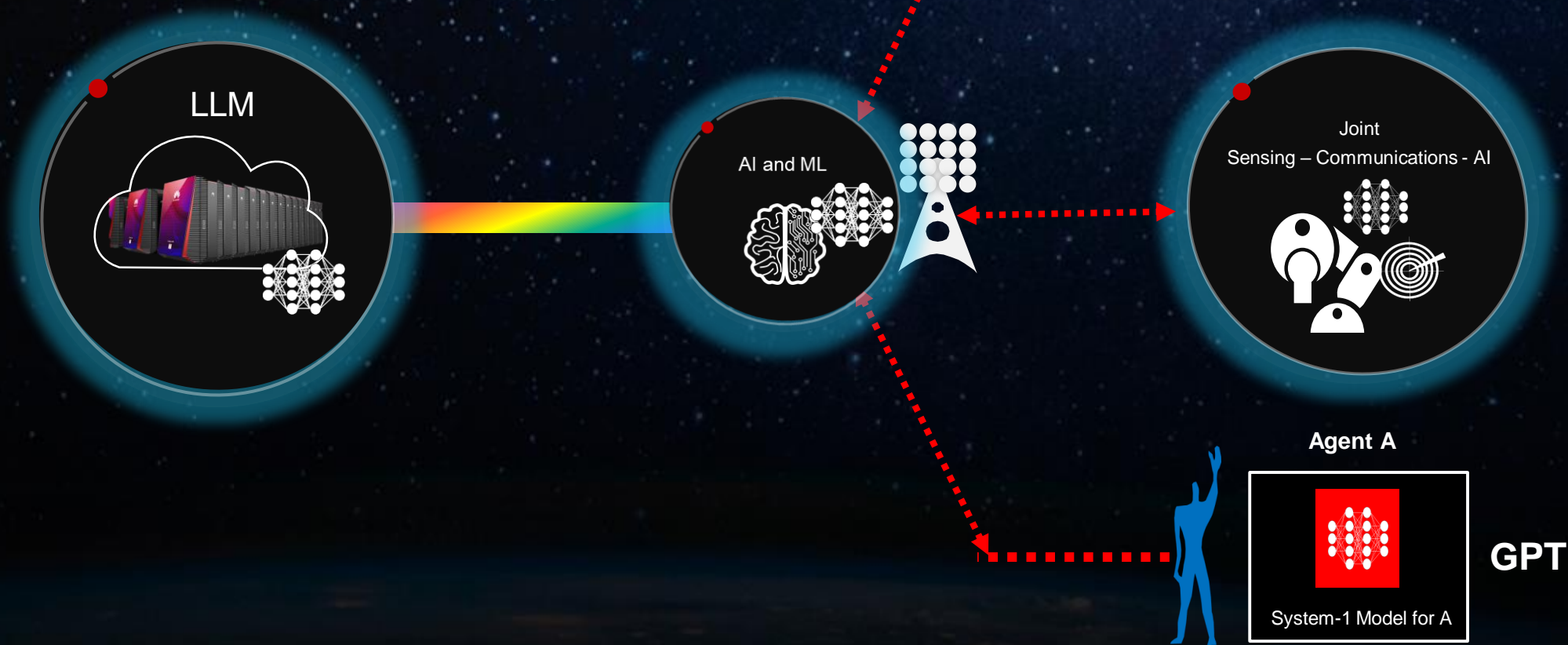
AI Model
(Cloud)



Human
(URLLC) **6G**
(URLLC)

A-RAN Architecture

C+A+S



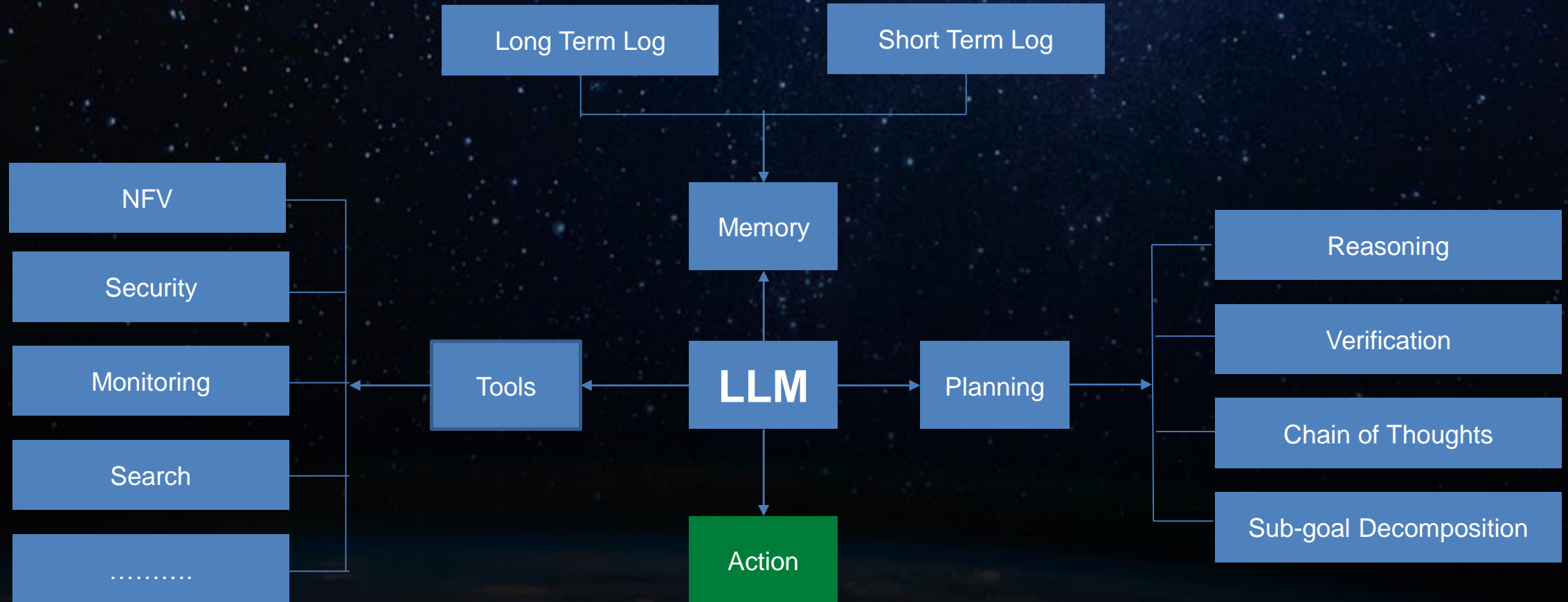
Neuron Center (1T)

Neuron Edge (100B)

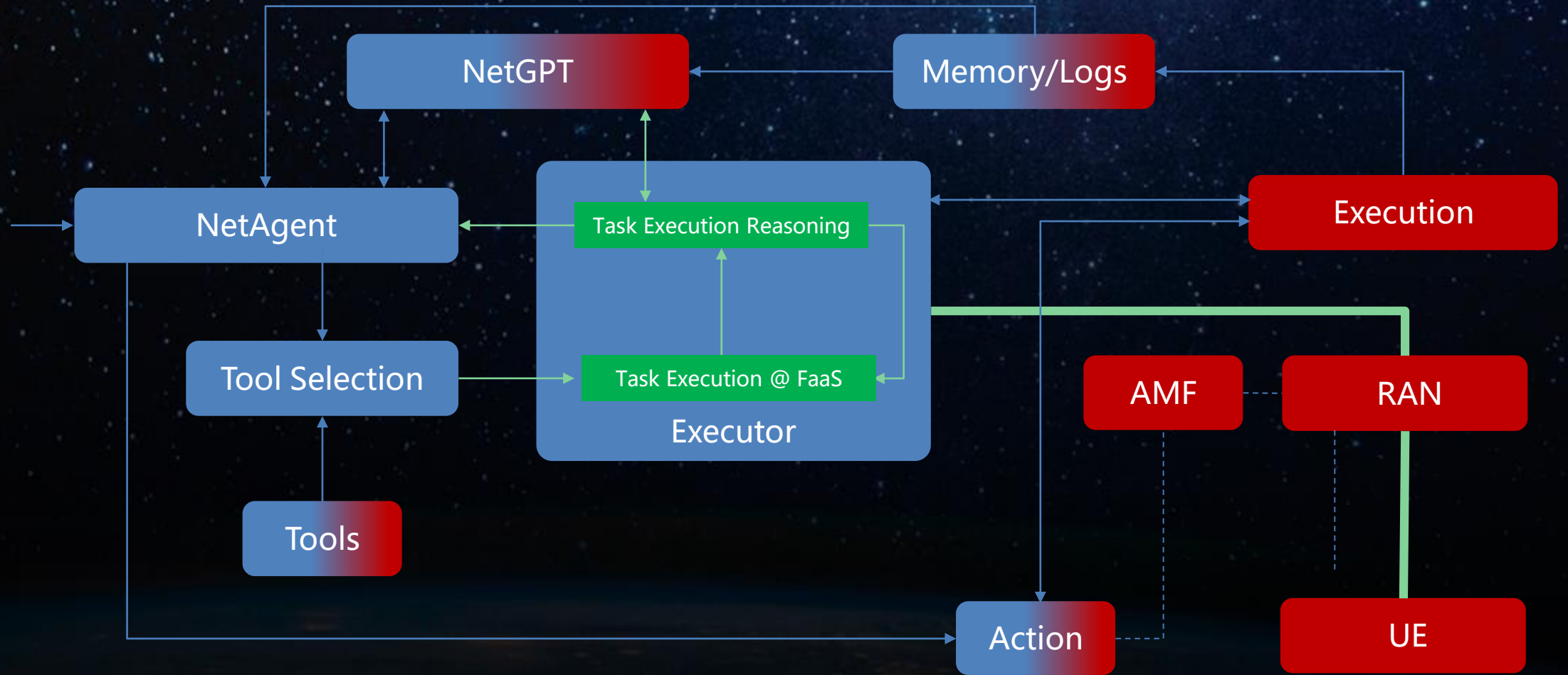
Neuron Agent (10B)

Agent = LLM + Memory + Planning + Tool

Network Functions are Defined by Network Agents

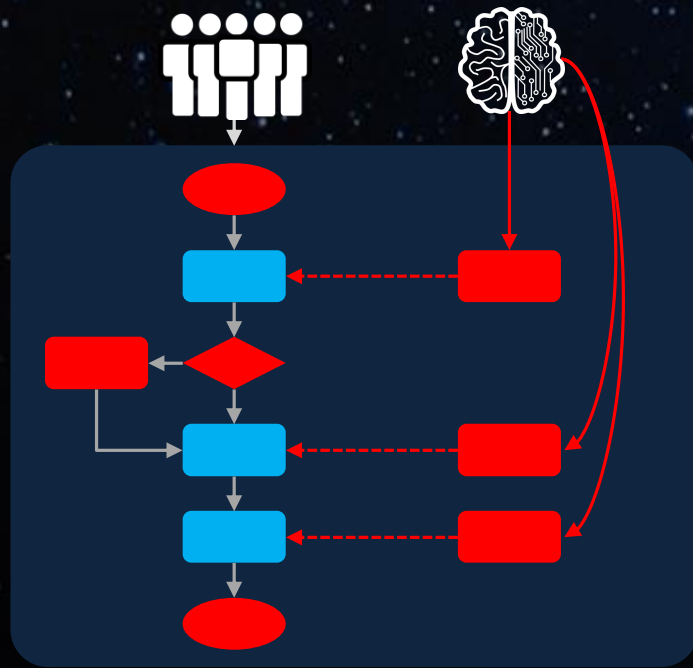


A-Core Architecture



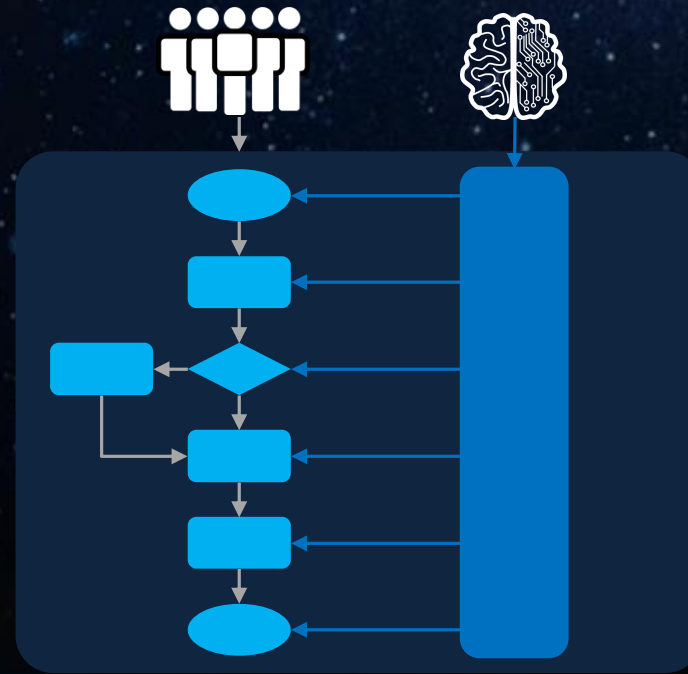
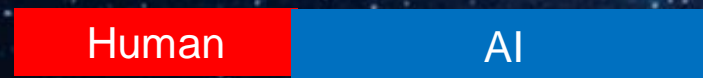
LLM Revolutionizes the Software Development

Copilot



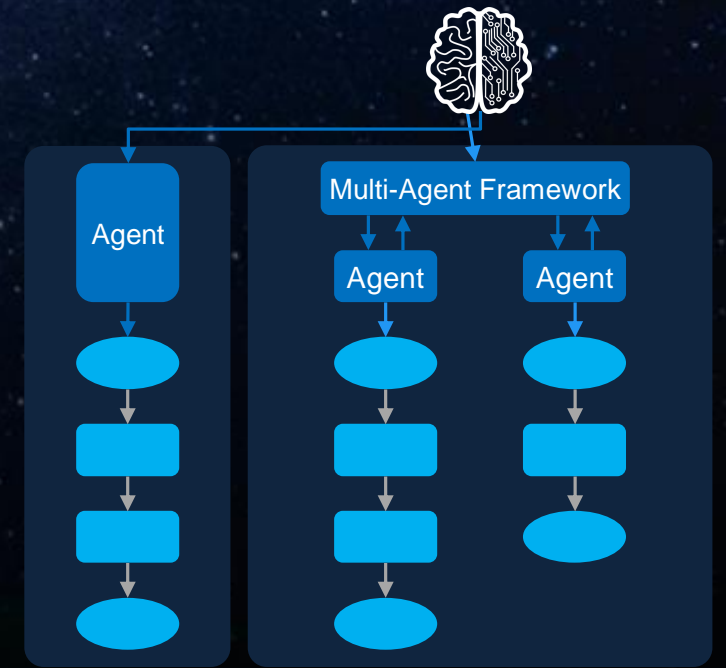
Task

Autopilot



Task/Complex Task

AI Agent



Task

Complex Task

Architecture: Human
Module: AI Assist

Architecture: AI
Design Decision: Human

Requirement: Human
Design: AI Autonomous

Application Driven Networks (ADN, 2015)

Different AI agents and services are enabled by a unified AI framework

- External AI task trigger
- In-network AI task trigger
- NRT adaption (mobility...)



Infrastructure Provisioning

Intelligence Provisioning





Thank You.

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