CELTIC-NEXT
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RASCAL

Radar Augmented Sensing, Communications and Advanced Local Services for beyond 5G

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Introduction & Objective

- This project will develop and prove the new concept of **combined TeraHertz-THz radar and communications (RadCom) capability** that leverages the use of the same hardware for both sensing and communications.

- This project will investigate and develop **novel radar-augmented sensing** for 6G long term evolution, bringing **advanced situational awareness to 6G networks via *RadCom cartography.***

- This Project will show that the developed RadCom cartography-enabled techniques and algorithms result in **significantly improved radio resource management and spectrum utilization, scalable and robust network coverage, and support for novel value-added services** for beyond 5G.
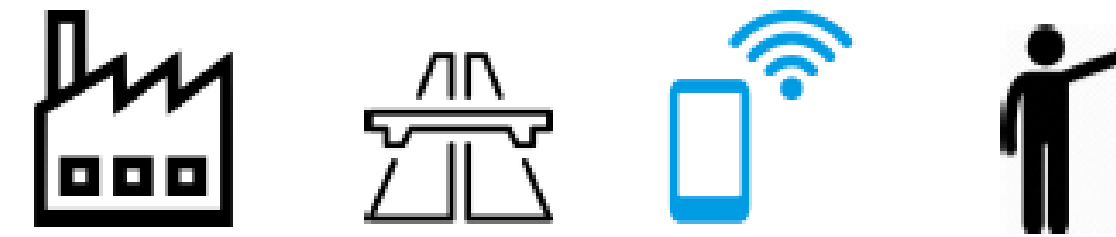
Introduction & Objective

- The project **will enable the offer of appealing, low-cost hardware modules** including novel, commercial-grade **transceivers with phased arrays** and **baseband processing modules.**

- The project will **provide initial proof-of-concept demonstrations** of the proposed innovation pillars, including **novel services that are enabled by RadCom.**

- It will thereby advance the **technological leadership** and skill level in Europe, provide step-change capable technological innovations for beyond 6G evolution and THz communication systems.

- It also **supports European industry** and particularly two innovative SMEs in the evolution of their products.

Concept

- Project concept & vision: combined radar and THz communications (*RadCom*) capability is used to bring advanced situational awareness to 6G networks and novel services, via *RadCom cartography*.
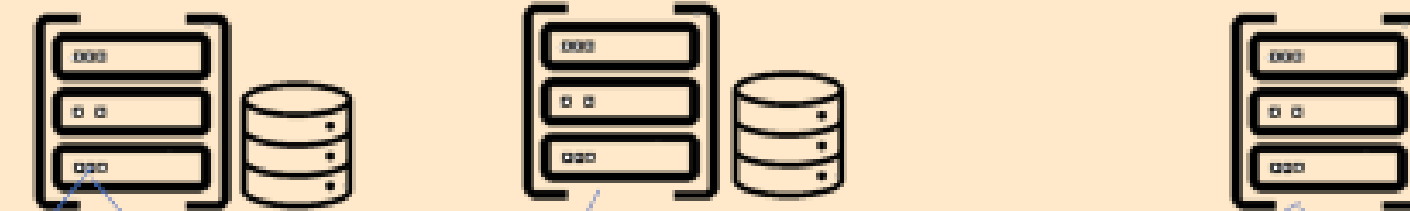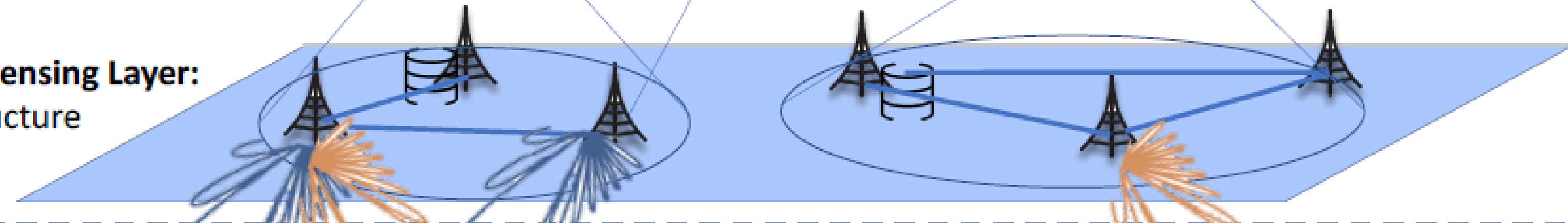

Vertical Users for New Services
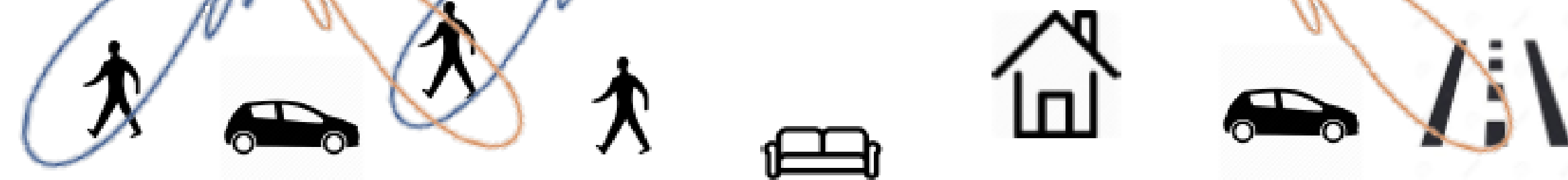
Global Optimization & New Services: RadCom Services & New 5G LTE
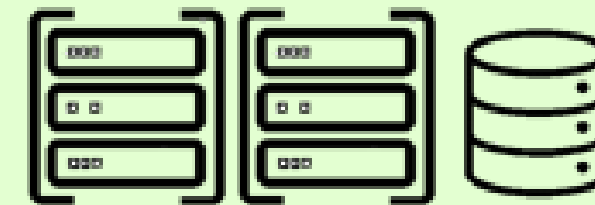
Comprehension & Situation Awareness: RadCom Radio Cartography

Communications + Sensing Layer: RadCom 5G Infrastructure

Physical World

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Presentation available via: