



CELTIC-NEXT Event

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Dependable Connectivity as a Service

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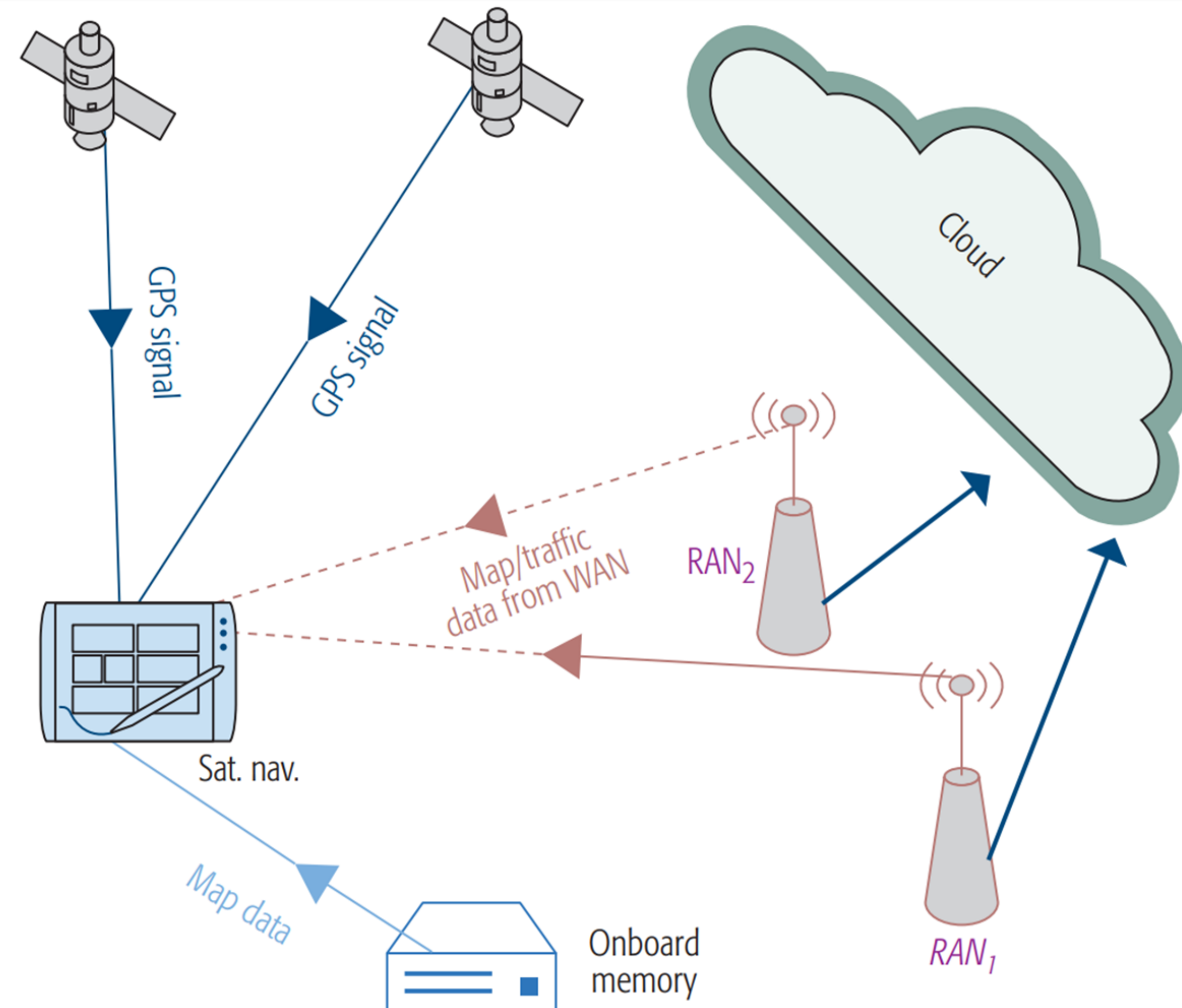
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Network Resources

- Dependability is subject to timely, reliable and secure exchange of information
- Smart combination of resources in various network entities improves dependability
- Added values comes from exploiting otherwise unused resources
- DaaS provides an Ecosystem and is an Enabler



Organisation Profile

- Top-ten (7th) in the UK ranking among computing science departments
- A world-class teaching and research hub for computer science and communications systems
- Multi-million research funding from EU and EPSRC
- +100 academic staffs
- +150 PhD and Postdocs



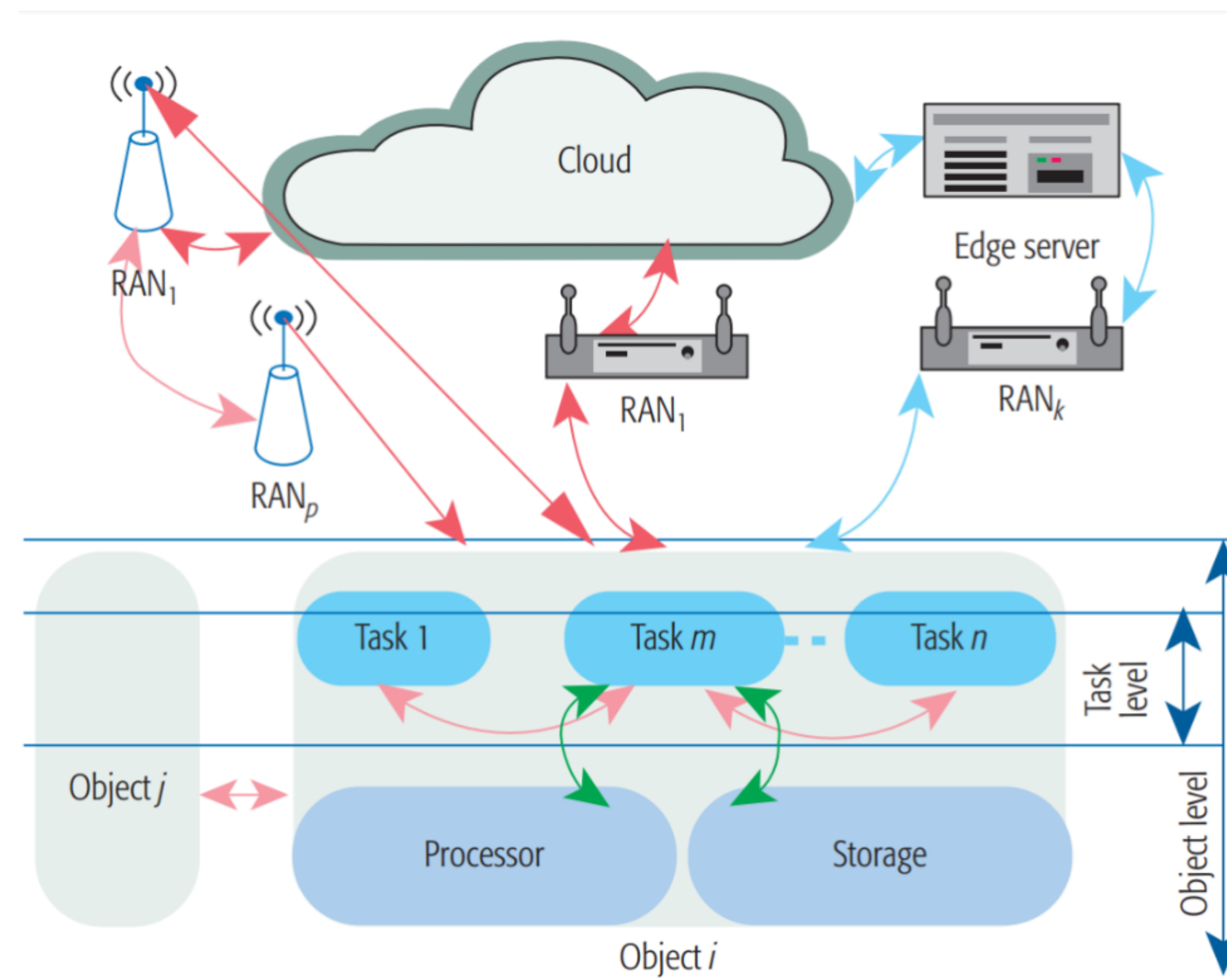
Dependability of Communications

- Dependability is subject to timely, reliable and secure exchange of information
- Major Enabler for mission-critical systems:
 - Industry 4.0, E-Health, Mass-surveillance, Autonomous cars/robots, Smart cities

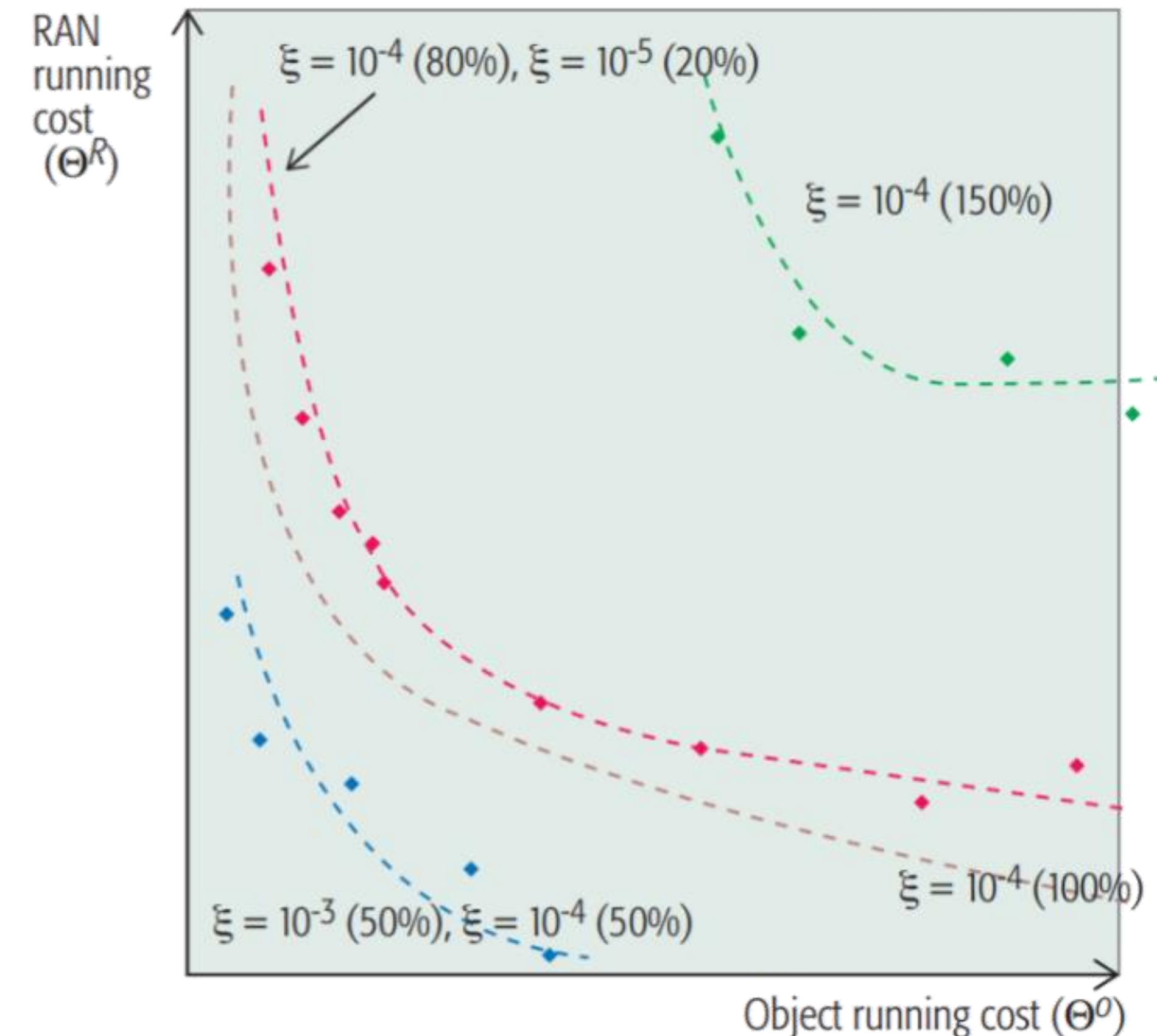
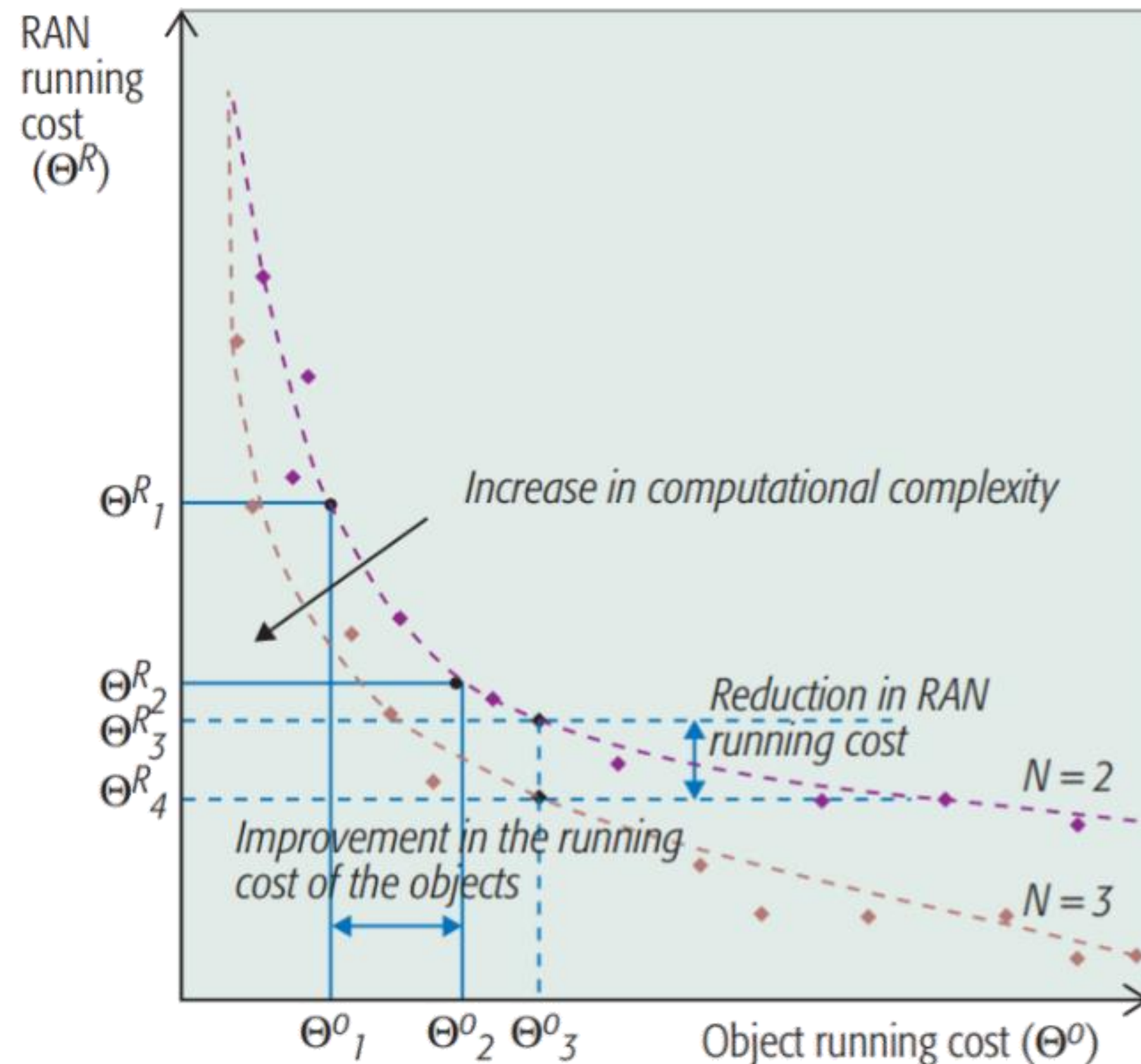


Dependable Connectivity (DeC)

- DeC is **collective system capability** to provide task's required information
- Multi-level cooperation required among
 - **Tasks, objects, and RANs** as well as **on-board processing**, etc.
 - Aggregation of the available data on-board or at MEC
- DeC is a **task-centric and multi-faceted measure** and can be provided through different combination of resources



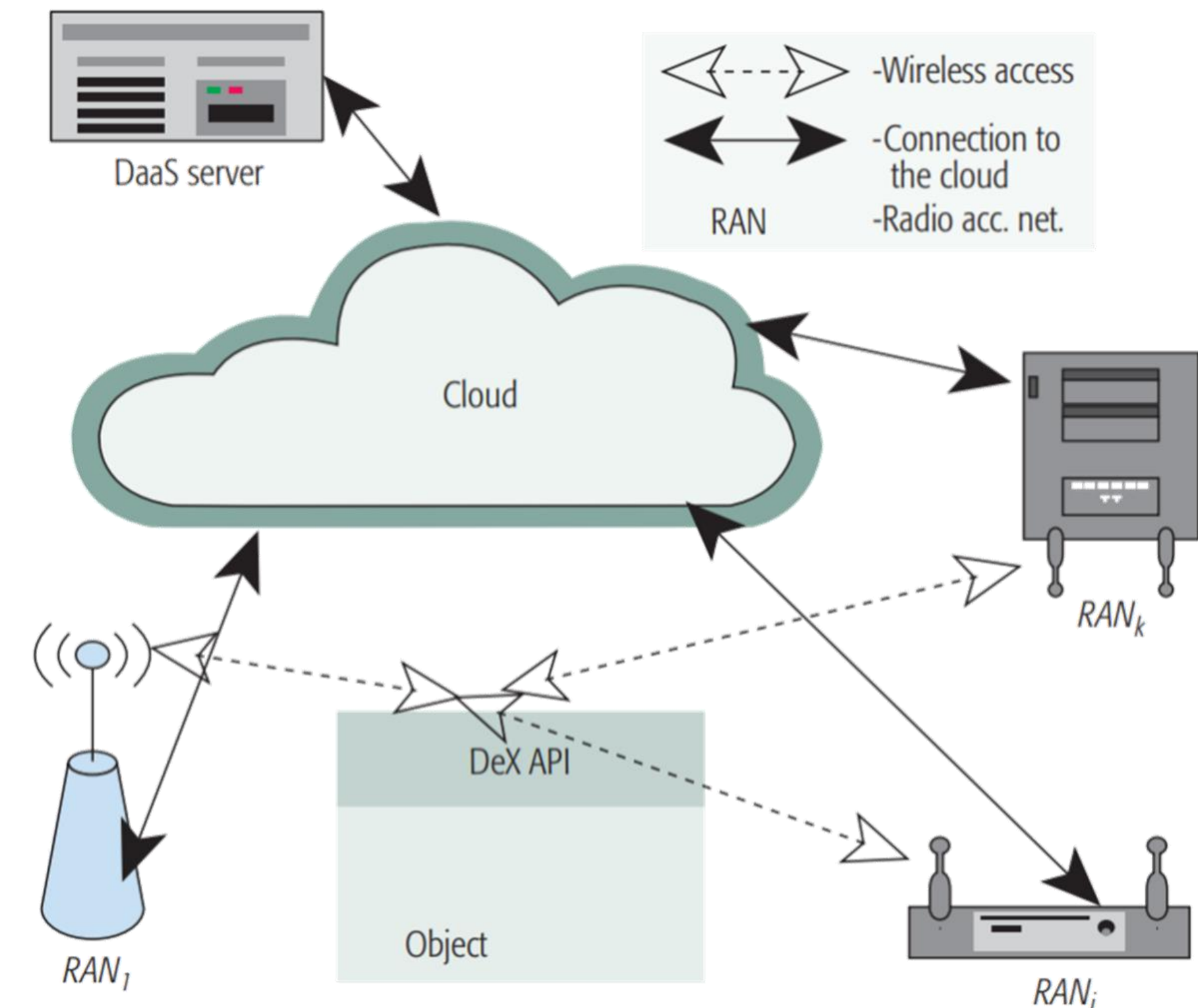
Heterogeneity, Dynamism, and Multiple Objectives



- Each entity maximizes its own objective while network resources are limited
- Multi-Objective optimization with multiple degrees of freedom and trade-offs

Dependable Connectivity as a Service: DaaS

- WP1: Architecture Design and Concept development
- WP2: System Design
- WP3: Algorithm Design and Machine Learning
- WP4: Modeling and Analysis
- WP5: Implementation and Conformity
- WP6: Coordination and Delivery



Partners



Work Packages

- WP1: Architecture Design and Concept development
- WP2: System Design
- WP3: Algorithm Design and Machine Learning
- WP4: Modeling and Analysis
- WP5: Implementation and Conformity
- WP6: Coordination and Delivery

Partners Solicited

- **Wireless Network Technology**
 - Lancaster University, UK
 - Manchester University, UK
- **Software Platforms**
 - Paremus, Ltd., UK
- **Mobile Edge Networks and Cloud/Fog Computing**
- **Machine Learning and Algorithms**
- **Optimization and Modelling**
- **Project Coordination and Management**
- **Testbed and Implementation**

Contact Info

For more information and for interest to participate please contact:

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