CELTIC-NEXT
Proposers Brokerage Day

30th January 2026, Vienna

Pitch of the Project Proposal

Trustworthy Agentic AI-powered Communications for Autonomous Robotics Applications (TRACA)
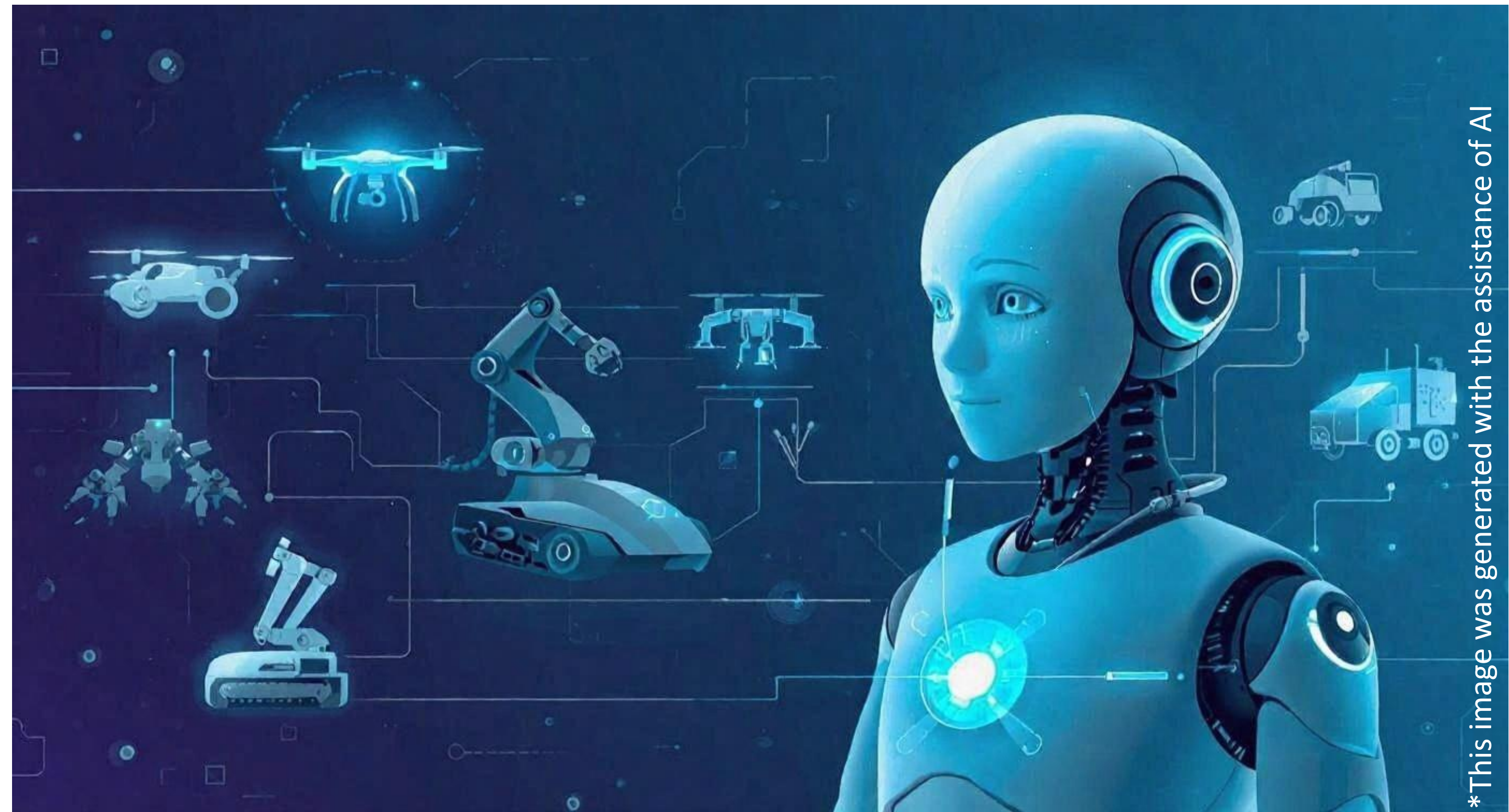
Teo Redondo, Head of Innovation, AUNOA
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TRACA:
Trustworthy Agentic AI-powered Communications for Autonomous Robotics Applications

Combining disparate technologies with European-owned models (EU technological sovereignty) and applying extended realities to different use cases, with a special focus on communications from different media/data sources.
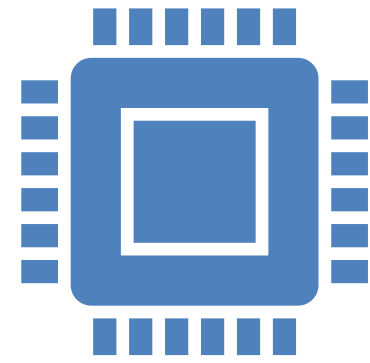

*This image was generated with the assistance of AI

Key Focus Areas

- *Pushing Agentic AI* (independent and autonomous, working separately or in an orchestrated way)
- *Quantum communications* (with QKD, or other alternatives)
- *Building and training specific-domain models* (multimodal: text, voice, graphics, Vision-Language-Action (VLA)…)
- *Pushing XR (eXtended Realities) tools and software*, as another communication means (these could be related to navigation in a Digital Twin – Agro, Healthcare, Emergency situations, and so on), as the basis for AI-powered Robotics and "contextual computing" (this area of work is getting attention from Meta and Google)
- *Smart Grid Monitoring with AI-based cybersecurity*

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Use Cases

Education

pervasive learning, immersive simulation environments (3D spaces, contextual computing, …) - sustainable communication infrastructure / massive virtual environments (XR)
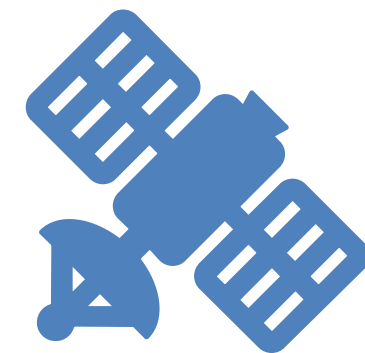
Scientific Research datasets repository

FAIR principles: ingest and exploration – beyond communication constraints

Healthcare

XR-based telemedicine (deliver immersive, real-time healthcare services) using Quantum comms - QKD

Smart agriculture (agroecology)

sensor data (EO, satellite and land), drone (aerial, terrestrial, aquatic) / visualization with Augmented Reality
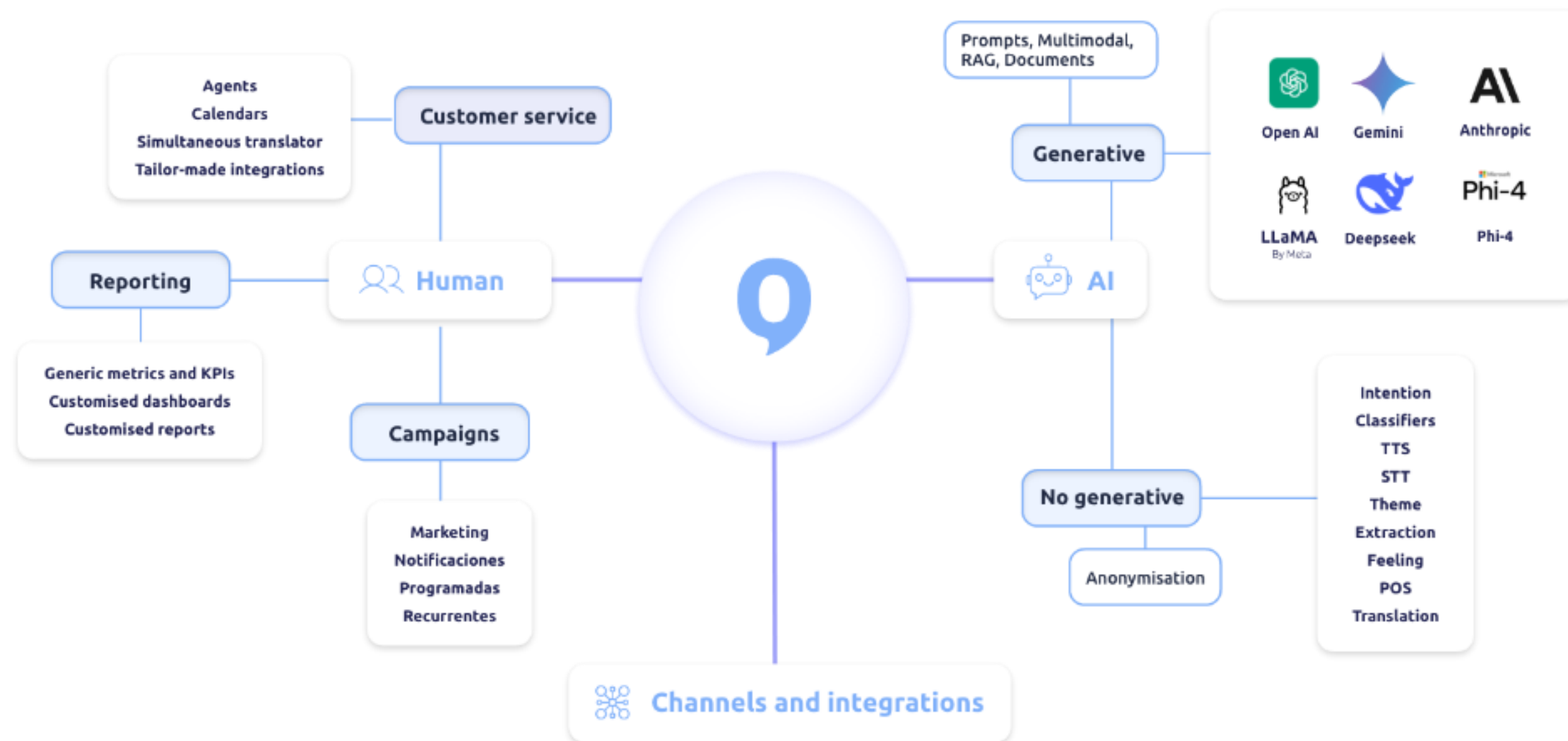
Environmental monitoring (ecoresilience)

emergency situations (flooding, fires, coastal situations, …), management: early warning, climate resilience and sustainable bio-economy value chains

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Who we are

CELTIC-NEXT · eureka clusters

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Cutting-edge AI Agents platform

dfki ai — Deutsches Forschungszentrum für Künstliche Intelligenz
German Research Center for Artificial Intelligence

The World's Largest Public AI Research Center

55 Professors
26 Research Departments
>600 Researcher from 83 countries
+ ~1000 German colleagues
>100 Startups and Spin-Off companies
Project Budget 2023 ~260 Million €

262 Professors +
34 Junior Professors
17.000 Students
1.800 PhD Students
85 Bachelor degree programs
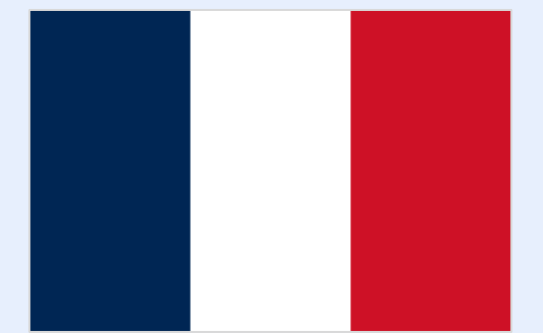104 Master degree programs
28 Distance learning programs

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Partners

CELTIC-NEXT — eureka clusters

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CATAPULT — Satellite Applications

QX

dfki — ai
Deutsches Forschungszentrum für Künstliche Intelligenz
German Research Center for Artificial Intelligence

Talking to...

aunoa

Synergies with other CELTIC-NEXT projects

SafeRoute- **6G**

SUSTAINET guardian

SECURE X

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Contact Info

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Presentation is available via:

Join the Consortium Building Sessions

3rd February
from 11:00-12:00 CET

Connection details:
Via
www.celticnext.eu/new-ideas