Introducing the SIG AI for NRENs

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TNC25 – GNA-G Side-Meeting

13 June 2025

Introducing the SIG AI for NRENs: Collaborative AI Exploration

- **Newly Established SIG:** Started at TNC24 in Rennes, France

- **Focus:** Exploring the potential applications of AI within the context of NRENs

- **Cross-Cutting Approach:** Delving into various areas where AI can enhance NREN services

- **Areas of Exploration:** Cybersecurity, Network Automation, Next Generation Networks, Ethics, Policy, and Above-the-Net Applications

- **Objectives:** Knowledge Sharing, Use Case Development

Who are we?

- Coordinator: Leonie Schäfer (DFN)

- Chair: Daniela Brauner (GÉANT)

- SC Members:
  - Hrachya Astsatryan (ASNET-AM)
  - Jan Kohlrausch (DFN-CERT)
  - Albert Hankel (SURF)
  - Marcin Wolski (PSNC)
  - Panos Louridas (GRNET)

Wiki
https://wiki.geant.org/display/SIGAI/SIG-AI+Home

AI in NRENs: Opportunities & Challenges

- Opportunities
  - Innovation Driver
  - Service Enhancement
  - Efficiency Gains
  - New possibilities (e.g. Predictive Maintenance, Dynamic Resource Allocation)

- Challenges
  - Complexity
  - Security Concerns
  - Ethical Risks
  - Skills Gap

SIG AI Objectives: Working Together on AI

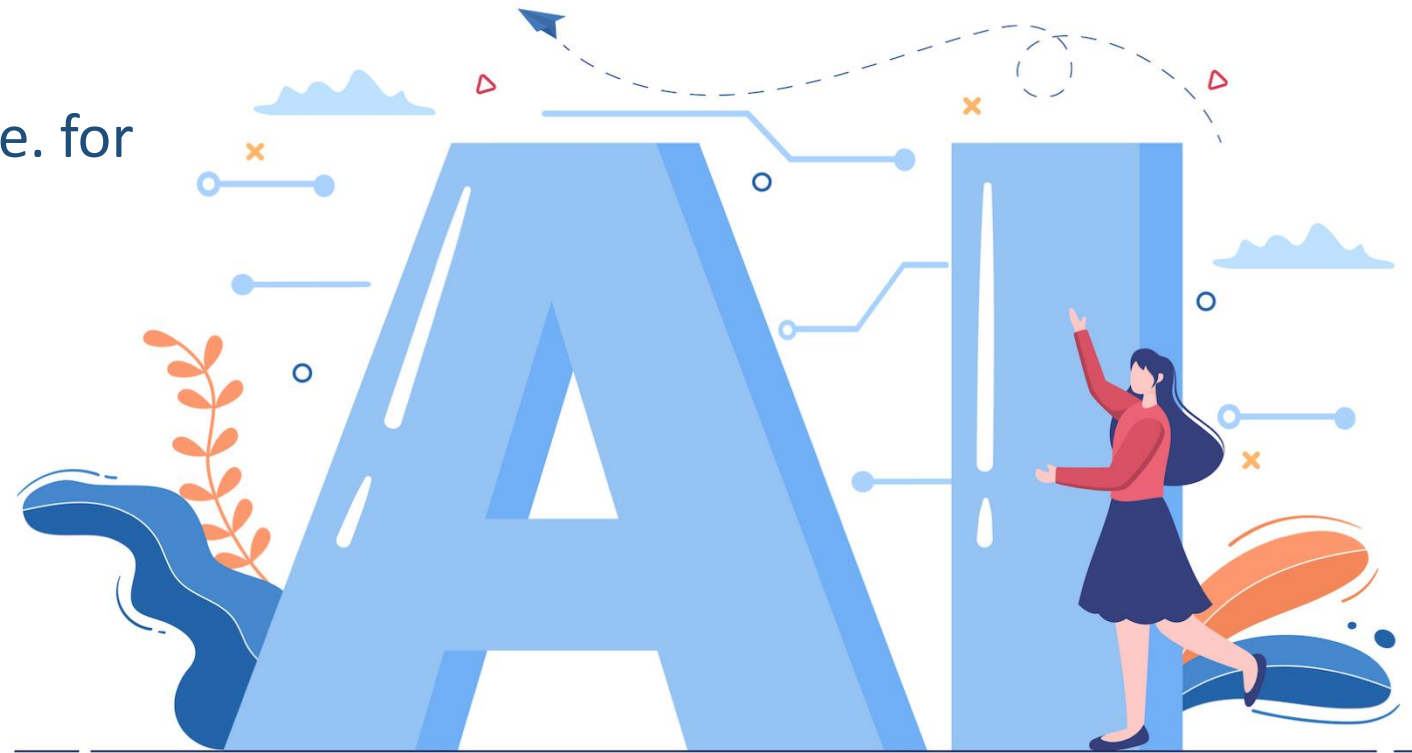- Knowledge Exchange

- Use Case development

- Community Hub

In the future, maybe also

- Think Tank

- Pre-Incubator

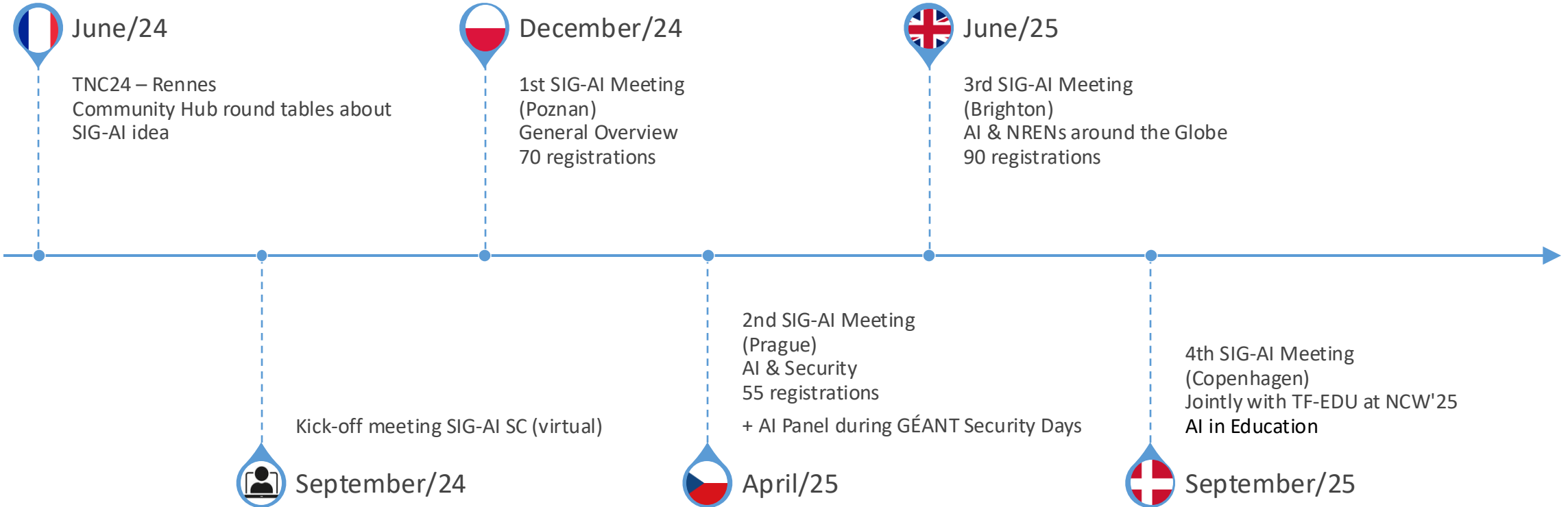- Strategy

Exploring the AI Landscape for NRENs: Key Areas of Focus

- Cybersecurity

- Network Automation

- Next Generation Networks

- AI and HPC

- Above-the-Net Applications, i.e. for
  - Education & Research
  - MarComms

- Policy

- Ethics

SIG-AI Roadmap

June/24

TNC24 – Rennes
Community Hub round tables about
SIG-AI idea

December/24

1st SIG-AI Meeting
(Poznan)
General Overview
70 registrations

June/25

3rd SIG-AI Meeting
(Brighton)
AI & NRENs around the Globe
90 registrations

Kick-off meeting SIG-AI SC (virtual)

September/24

2nd SIG-AI Meeting
(Prague)
AI & Security
55 registrations

+ AI Panel during GÉANT Security Days

April/25

4th SIG-AI Meeting
(Copenhagen)
Jointly with TF-EDU at NCW'25
AI in Education

September/25

Emerging Themes: Collaborative Priorities in AI for NRENs

- **Strategic AI Approach & Collaboration**: NRENs need coordinated strategies to effectively leverage AI for service innovation and avoid fragmented efforts.

- **Data Sharing Challenges & Trust**: Establishing trusted mechanisms for data sharing is crucial to train AI models and unlock the full potential of AI in research.

- **AI Factories and its implications for NRENs**: Understanding the role and impact of AI Factories on NREN infrastructure and services is essential for future planning.

- **Broader AI Considerations**: Addressing ethical implications, regulatory compliance (e.g., EU AI Act), and skills development are vital for responsible and sustainable AI adoption.

Get Involved: Connect, Share, and Shape the Future of AI in NRENs

- Join the SIG AI for NRENs
  - influence the direction of AI in NRENs
  - network with experts
  - access to resources

- Mailinglist: https://lists.geant.org/sympa/subscribe/sig-ai

- Join our Hybrid SIG-Meetings: to be announced via the Mailinglist

Join our
mailing list:
https://lists.geant.org/sympa/subscribe/sig-ai

Any questions?

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