



AI in NRENs a data analysis...

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Public

Summary

- AI Data Collection
- European NRENs - Compendium 2025 AI Section Analysis
- Non-European NRENs – AI Survey **partial** analysis
- Closing remarks

Data collection initiatives

- **WP3 T1 - Compendium data**
 - GEANT Member NRENs
 - 2025 data collected.
- **WP3 T4 - SIG-AI Data Collection**
 - Non-GEANT Member NRENs
 - Started already.
- **WP3 T3 - AI NREN Coordination Group**
 - Extra data from GEANT Members about participation in AI Projects
 - not started yet
- **WP9 T2 – Software governance**
 - AI within software development
 - Started already

Type of data collected

NRENs AI adoption, offerings and their engagement in the AI ecosystem

- **Strategic AI Readiness:** existence of an AI strategy
- **AI offerings: Infrastructure and services, training**
 - Types of AI services offered to institutions (e.g. research, education, cybersecurity, infrastructure)
 - AI Infrastructure (owned or contracted)
 - AI trainings offered
- **AI adoption and implementation**
 - AI tools currently in use or under development within the NREN
 - Use of open vs. closed AI models
 - Use for Sw. Development
- **AI Projects**
 - Participation in AI-related projects or initiatives

European NRENs - Compendium 2025 AI Section Analysis



GÉANT Compendium of NRENs

- Since 2001 tracks the development of Europe's NRENs, covering their infrastructure, organisation, policies, users, and services.
- It's used to benchmark NRENs, identify needs and opportunities, and demonstrate achievements and requirements to policymakers.



Compendium Data 2025

- Data Collection took place during October – December 2025.
- 41 out of 43 NRENs filled out the survey.



AI Questions

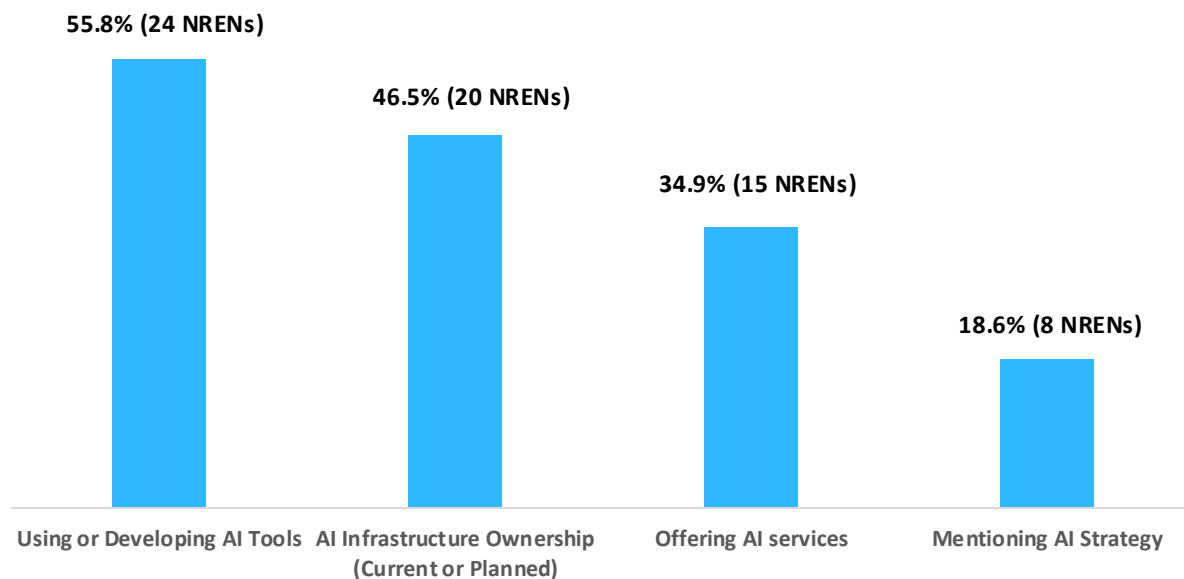
- 2025 is the first year the Compendium asked about AI.
- Questions covered policies and strategies, AI infrastructure, adoption and provision of AI tools and services.

Explore Compendium Data Here!



<https://compendium.geant.org/>

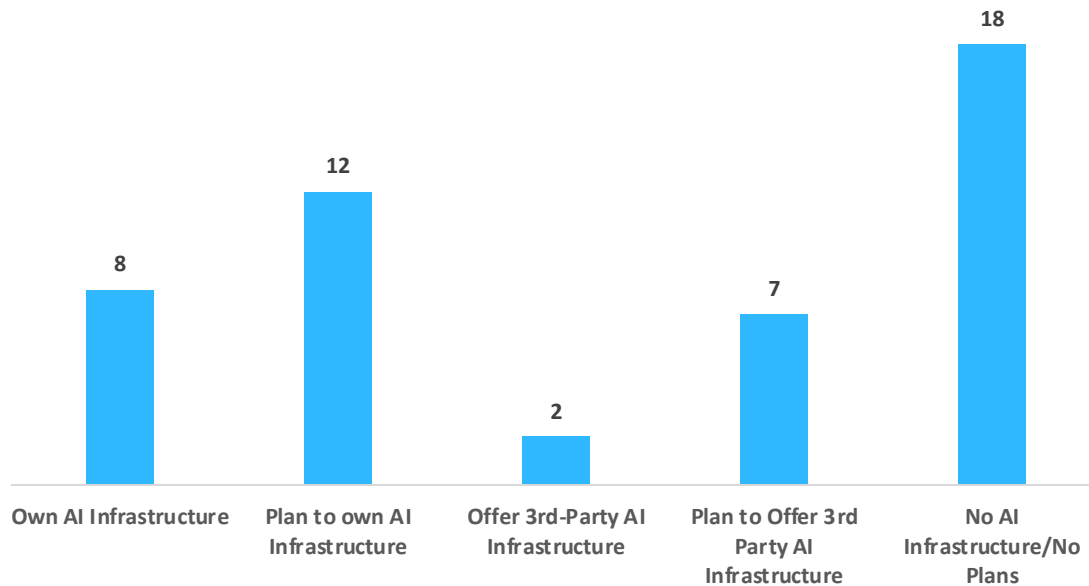
NRENs are experimenting with and implementing AI, but few have formal strategies



AI Adoption Among NRENs
Percentages represent NRENs that responded "Yes" to each survey question.

- This might suggest that community adopts AI faster technologically than strategically.
- While AI adoption is still emerging, there may be value in sharing practices and strategic approaches to support shared learning.

AI infrastructure is emerging, but not yet mainstream



Note: Categories are not mutually exclusive. Some NRENs both own and offer third-party AI infrastructure.

Growing part of NRENs is moving toward owning AI infrastructure:

- ✓ Running AI-ready infrastructure: HPC systems, GPU clusters and AI factories.
- ✓ For ex: LUMI (CSC), Deucalion (FCCN), Deadalus (GRNET), TRUBA (ULAKBIM), GARR Cloud, Switch Cloud.
- ✓ Focus on localized European AI and education/research use cases.

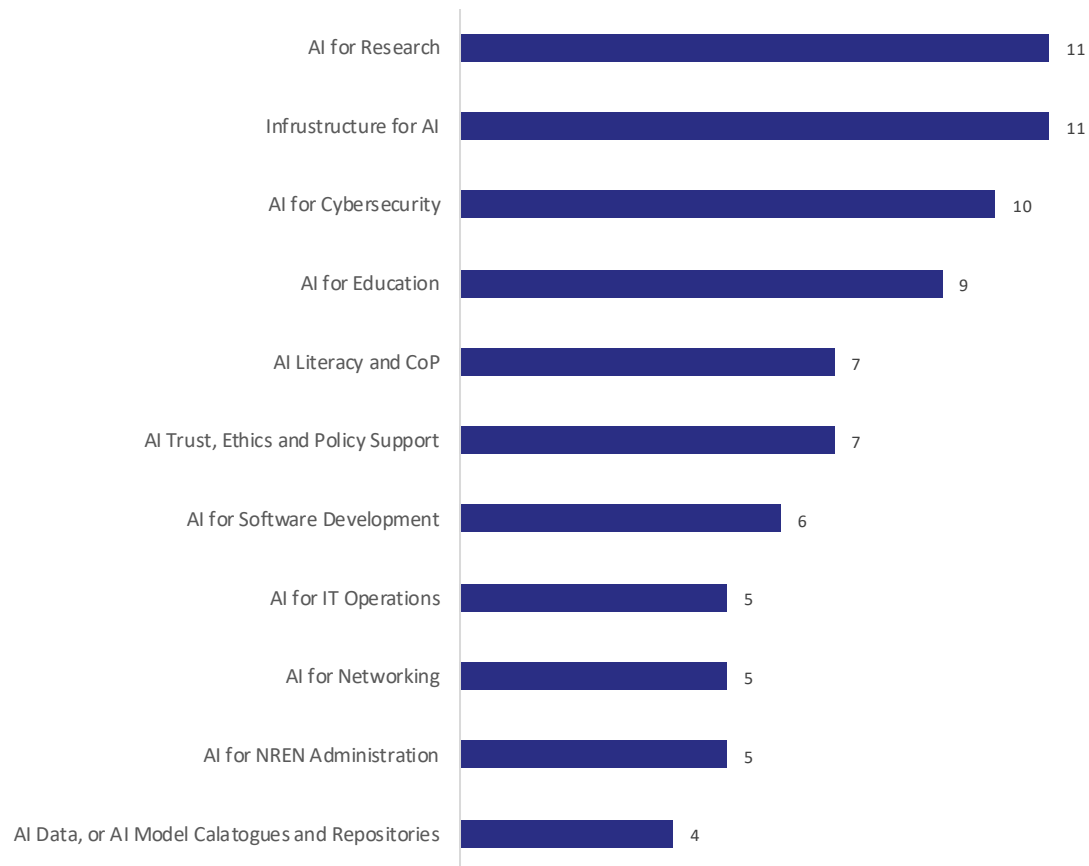
Examples of third-party AI infrastructure providers mentioned by NRENs include:

- ✓ Microsoft AI services
- ✓ CloudFerro
- ✓ Setcor
- ✓ VSHN
- ✓ AWS
- ✓ Google Cloud



AI Tools NRENs Use or Develop

24 NRENs indicated that they use or develop AI tools



Some of the examples NRENs shared:

AI for Research: HPC systems using open-source tools and NVIDIA AI Enterprise on H200 GPUs for approved AI users.

AI Infrastructure: AI Hub - Trusted layer between application and AI models (GTP's, LLMs).

AI for Cybersecurity: Claude-assisted DevSecOps - A prototype workflow where AI prepares compliance and security assessments for human review.

AI for Education: AISE – Automated Essay Evaluation Tool - A developing system that automatically analyses and evaluates student essays.
eduGenAI - A service supporting safe and responsible use of generative AI in educational settings.

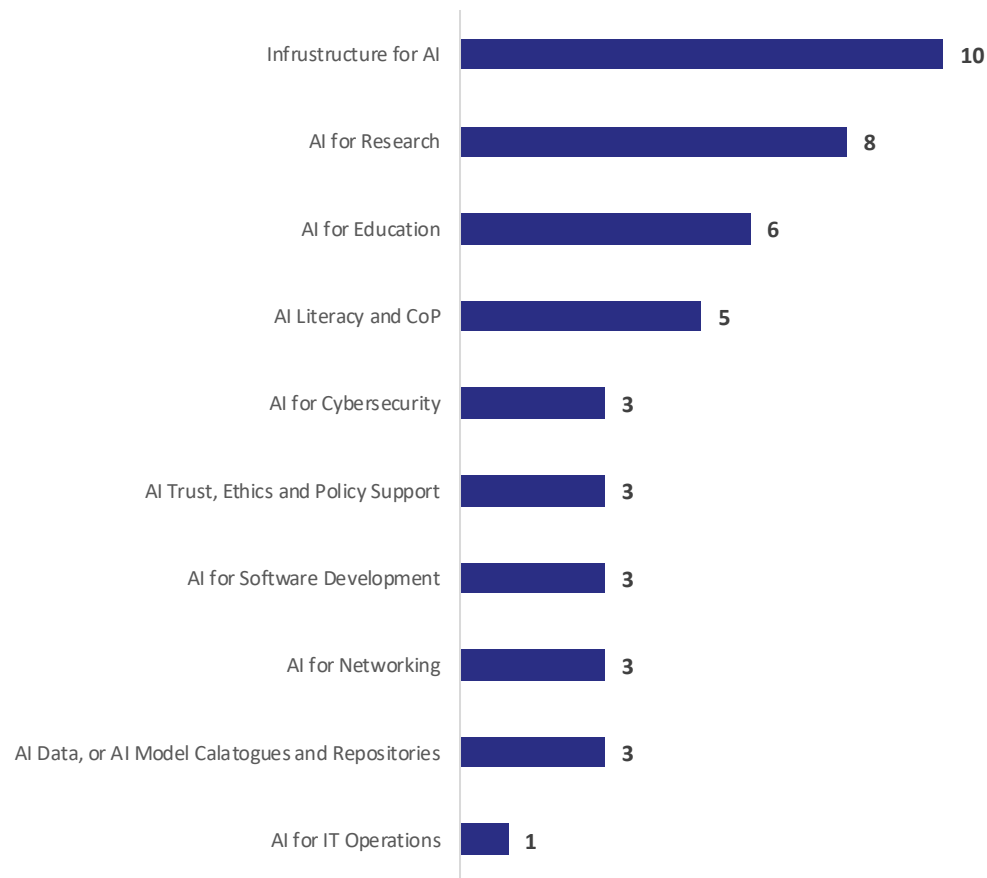
AI for Software Development: Proxy-tickets - retrieves tickets that are semantically similar to a given text. Applies AI analysis to offer a solution or answer to the retrieved tickets

AI Literacy and CoP: University level AI labs and SIG AI in Education



AI Services NRENs Offer

15 NRENs indicated that they offer AI services to their customers



Some of the examples NRENs shared:

AI for Research: Sikt KI (AI Chat Service) – AI chat service that allow teachers, students, researchers, and employees to use GPT technology, while at the same time safeguarding the privacy and data security of the users.

Infrastructure for AI: Physical infrastructure (1 server, 1 GPU); Dell PowerEdge R650 server, NVIDIA Tesla T4; Turkish Science e-Infrastructure Computing Services.

AI for Education: BrAIIn Project - A national initiative integrating AI-based digital technologies into schools, including curriculum development and classroom activities.

AI for Networking: Managed WiFi via Juniper MIST - A cloud-managed wireless service that uses AI-driven insights for network optimisation and automated troubleshooting.

AI Trust, Ethics and Policy Support: publicly available guidance and resources supporting safe, responsible and secure use of AI, including recommendations for preventing misuse of AI and safe use of generative AI models.

AI for Cybersecurity: KTU DigiDefence - A cybersecurity-focused AI service supporting research and training in defensive technologies.

Non-European NRENs – AI Survey

8 Answers - Expect more answers until TNC26

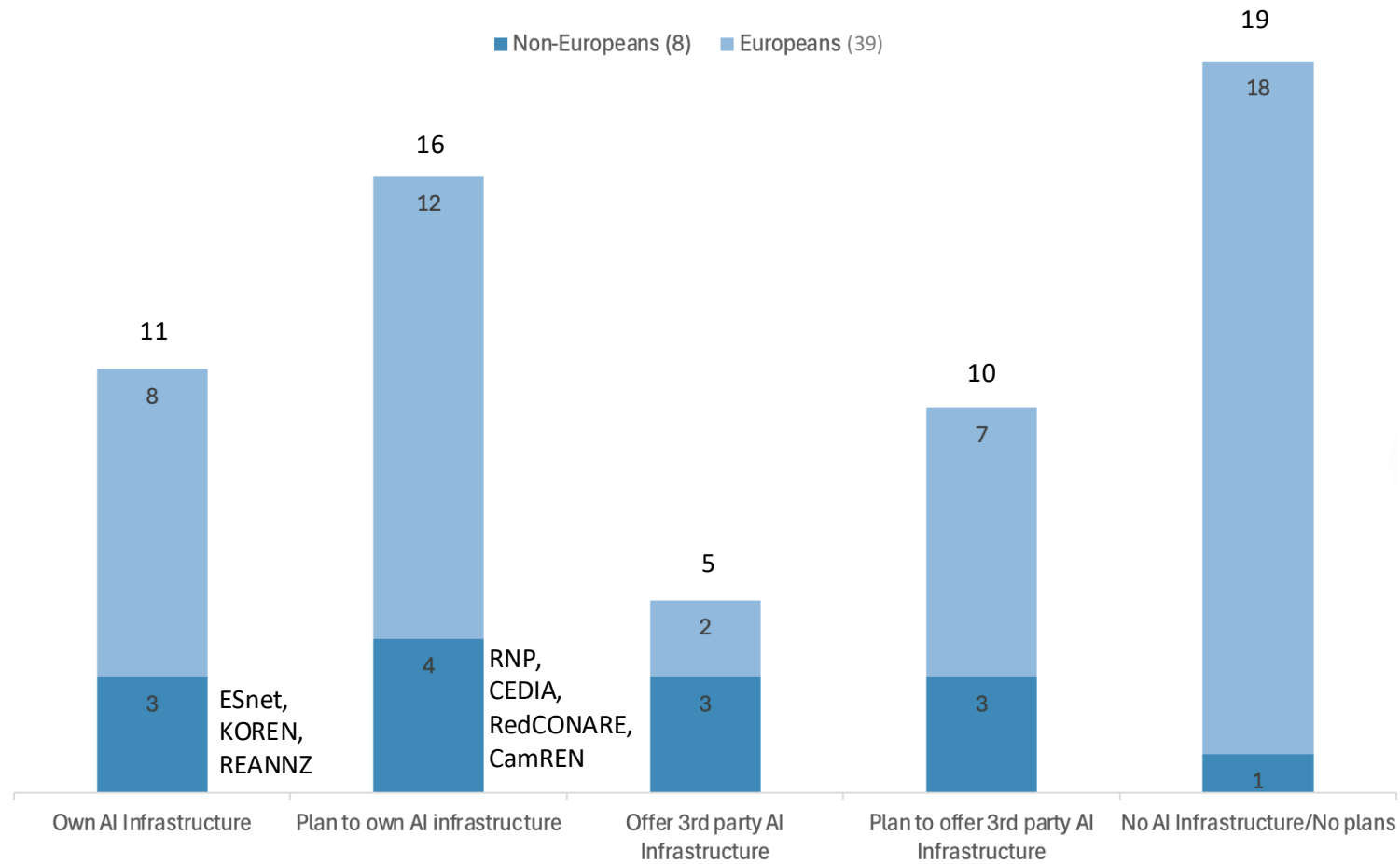
- ESnet - United States of America ✓
- KOREN - South Korea ✓
- CamREN - Cambodia
- REANNZ - New Zealand ✓
- RNP - Brazil ✓
- CUDI - Mexico
- CEDIA - Ecuador ✓
- RedCONARE - Costa Rica ✓

✓ NRENs mentioning an AI Strategy
(in some cases, a national AI strategy)

Link to the survey

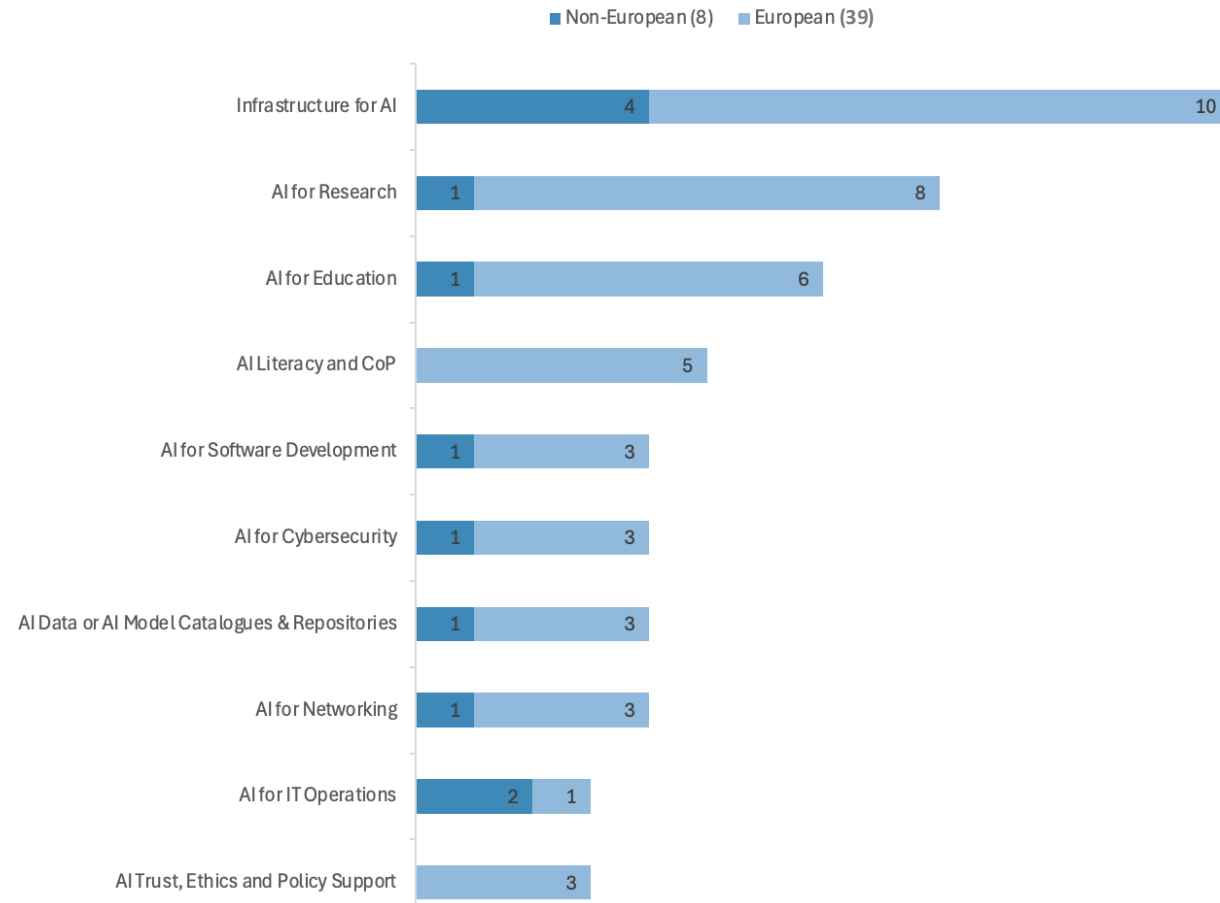


Non-European NRENs – AI Survey partial analysis (from 8 answers)

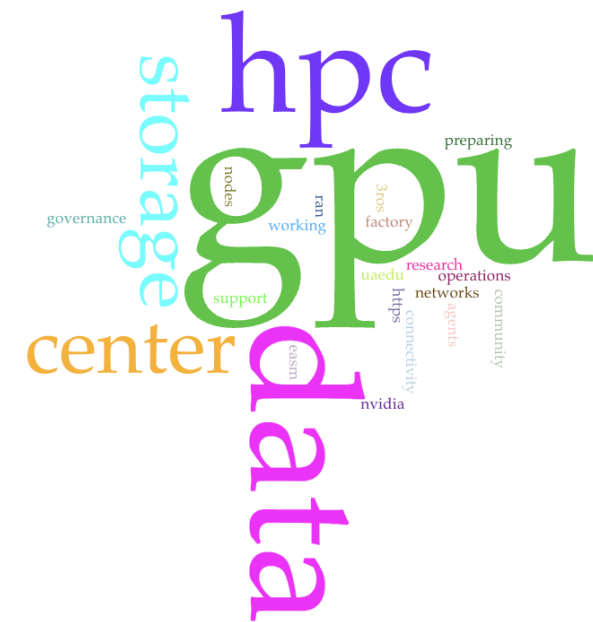


Non-European NRENs – AI Survey partial analysis (from 8 answers)

NRENs Offering AI Services

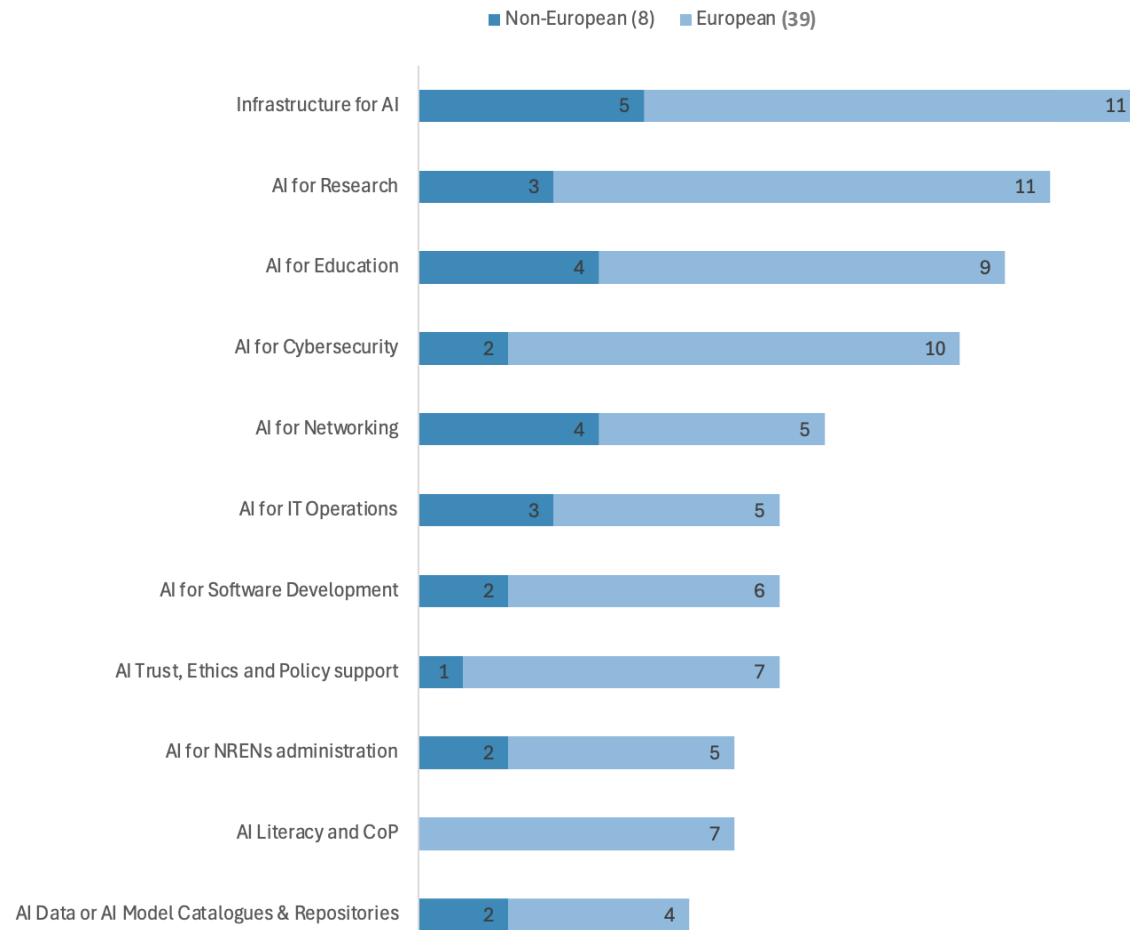


ESnet, KOREN, REANNZ, CEDIA



Non-European NRENs – AI Survey partial analysis (from 8 answers)

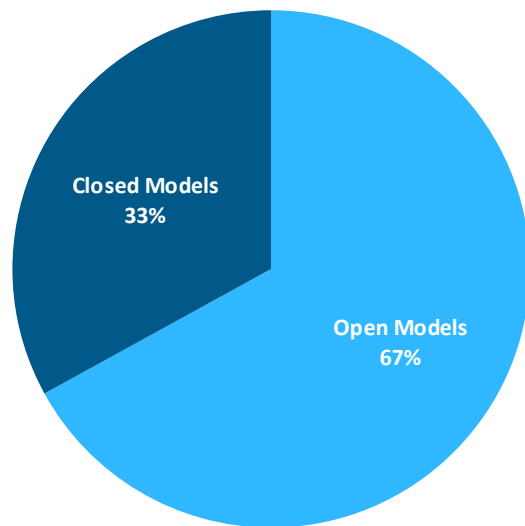
NRENs Using or Developing AI Tools



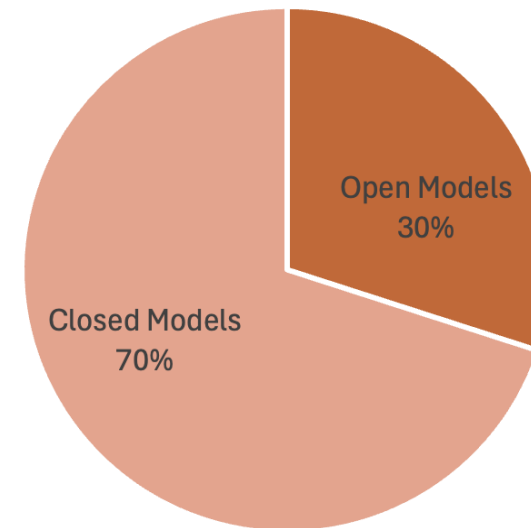
KOREN, CEDIA, RedCONARE, REANNZ, RNP

The usage of open/closed AI models

Europeans
15 NRENS



Non-Europeans
7 NRENS



Closing Remarks

- Growing part of NRENs is moving toward owning AI infrastructure (GPUs)
- Several NRENs are already using or developing AI tools (mostly AI for R&E, Cybersecurity and Networking)
- The number of AI Services being offered is growing in our community (mostly infrastructure and AI for R&E)
- NRENs are using both open and closed models
- We need to share more good practices on AI Strategy, to stimulate more NRENs to develop their own AI strategies.



Thank You

Any questions?

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