Pan-European e-infrastructure & national perspective

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Perspective: Pan-European e-Infrastructure Governance (GÉANT/EGI) ↔ National Delivery Node (SRCE)"

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„e-commons”







DIGITAL SERVICES TO USERS

INFORMATION SYSTEMS AND SERVICES
(collaboration and groupware systems, information systems, Internet applications, public registries, CRIS systems, library systems, e-learning platforms, ERP, CRM, DMS, …)

DATA LAYER
(digital archives, digital repositories, data collections, portals, …)

MIDDLEWARE LAYER
(authentication and authorization systems, monitoring, security, accounting, …)

COMPUTING SYSTEMS AND STORAGE RESOURCES
(physical or virtual servers, clusters, IaaS, PaaS, HPC / HTC, supercomputers, data storage, …)

DATA CENTERS
(national and university data centers, computer rooms, …)

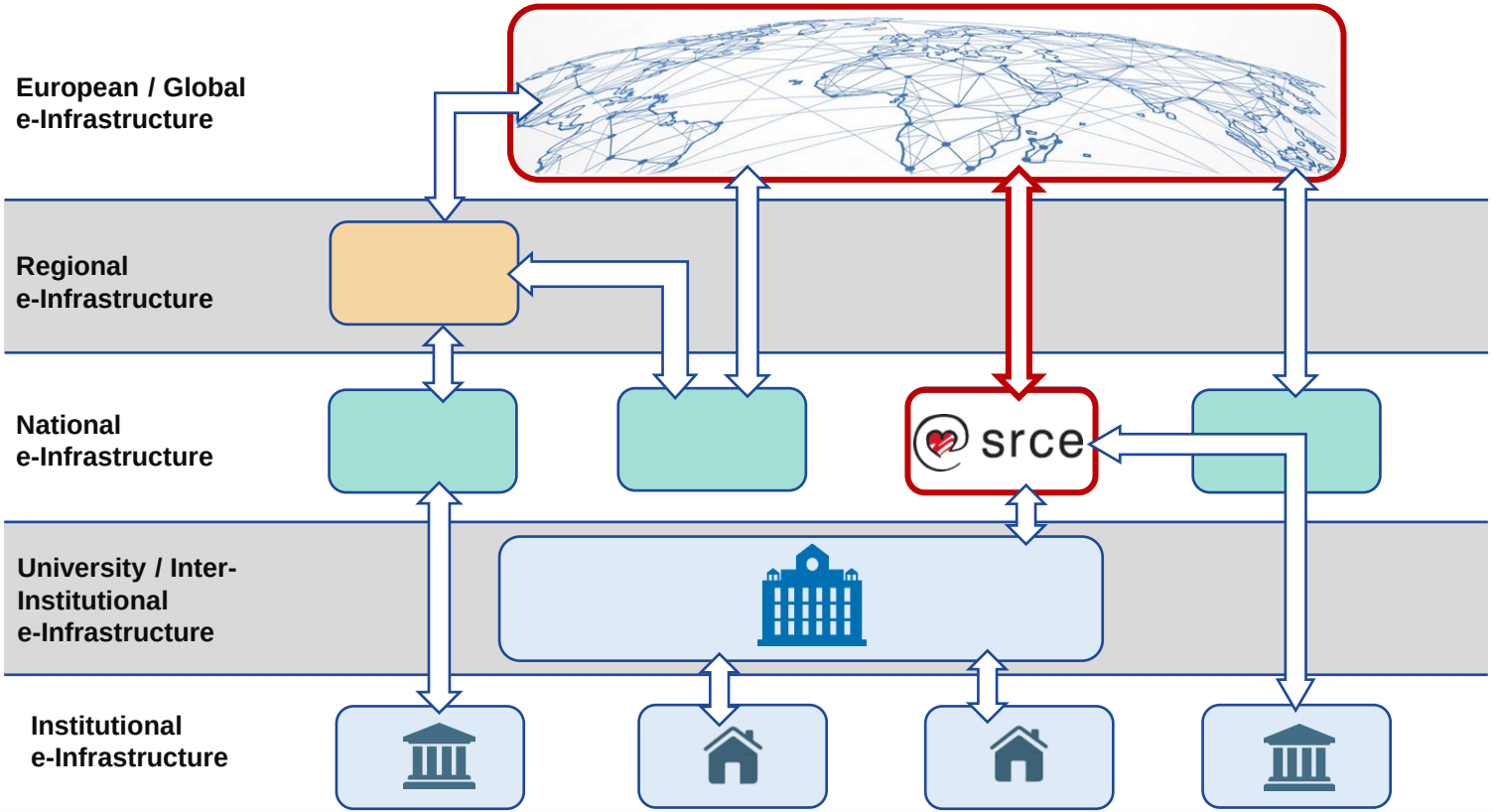
NETWORKS AND NETWORKING SERVICES
(international and national networks, MAN, LAN, WLAN…)

ORGANIZATIONAL AND GOVERNANCE FRAMEWORK OF E-INFRASTRUCTURE

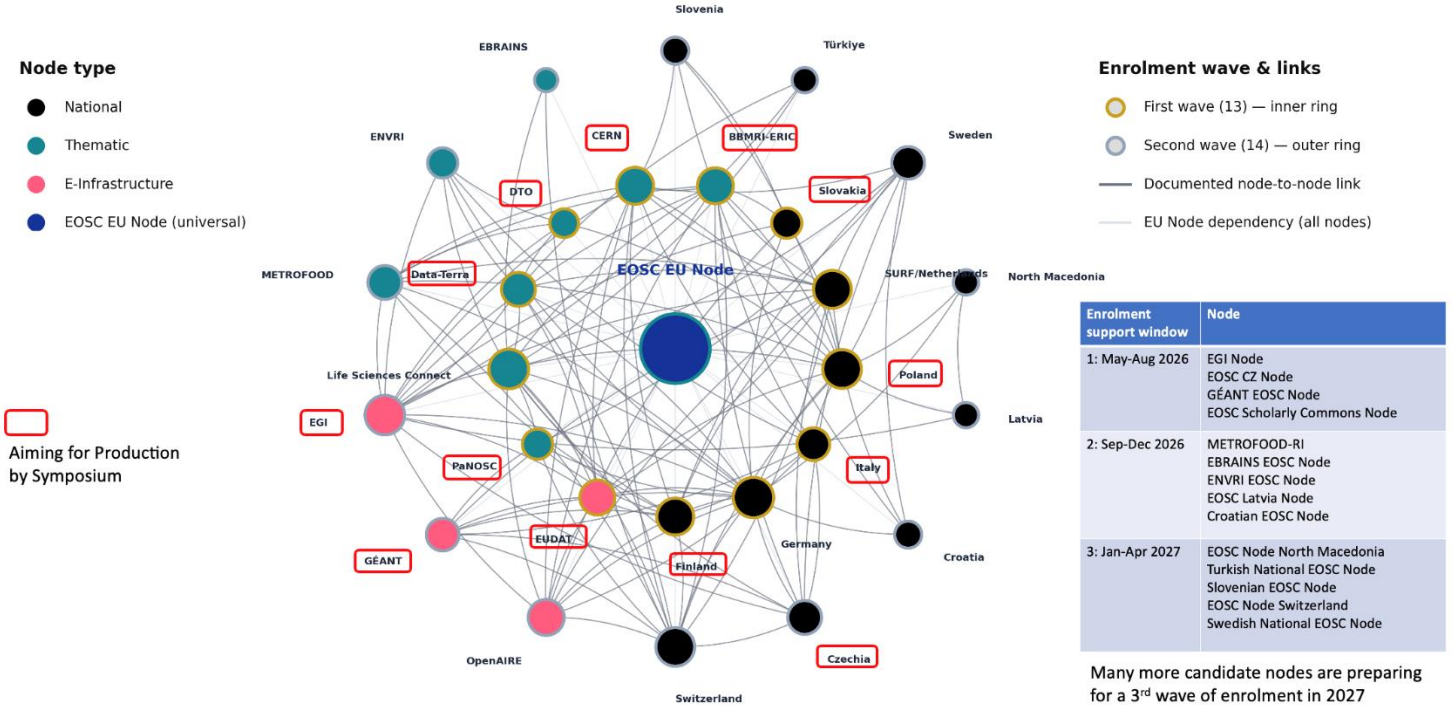
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individuals, user groups and institutions
from the science and education system

3-tier model


European / Global
e-Infrastructure
Regional
e-Infrastructure
National
e-Infrastructure
srce
University / Inter-
Institutional
e-Infrastructure
Institutional
e-Infrastructure

EOSC Federation



Enrolment support window	Node
1: May-Aug 2026	EGI Node EOSC CZ Node GÉANT EOSC Node EOSC Scholarly Commons Node
2: Sep-Dec 2026	METROFOOD-RI EBRAINS EOSC Node ENVRI EOSC Node EOSC Latvia Node Croatian EOSC Node
3: Jan-Apr 2027	EOSC Node North Macedonia Turkish National EOSC Node Slovenian EOSC Node EOSC Node Switzerland Swedish National EOSC Node

Many more candidate nodes are preparing for a 3rd wave of enrolment in 2027

Documented cross-node collaborations mined directly from the nodes' latest project charters, coloured by node type; EOSC EU Node shown as universal dependency

Source: EOSC SB #33 slidedeck, Bob Jones

Stakeholder Perspectives

Transition from grant-funded pilot projects to a scalable,
predictable resource-sharing model across independent entities / national EOSC nodes

Service Provider View

- predictable cost recovery,
- lightweight usage metrics,
- clear SLAs
- no unbudgeted “resource tourism”

National Node View

- protecting domestic tax revenue while ensuring local research impact

ESFRI/ERICs thematic View

- domain-specific data integration,
- long-term FAIR preservation
- Community-specific access rules

Pan-EU e-infrastructure View

- scalable, cross-border interoperability without 27 or 44 separate bilateral negotiations



Fair, efficient allocation of compute, data, and services without creating administrative friction or "resource tourism."

Key Pan-European Models

Infrastructure	Core Business & Funding Engine	Resource Allocation Mechanism	National Delivery Friction Point
GÉANT	Statutory NREN Subscriptions + EU Framework Co-Funding	Universal Access via NREN Membership	Highly stable for homogeneous network / AAI; rigid for dynamic compute workloads
EGI Federation	Member Dues (EGI Foundation) + NGI In-Kind + EU Grants	In-Kind Reciprocity + Virtual Access (VA) Vouchers	Grant-funded Virtual Access creates funding 'cliffs' when Horizon projects end.
EuroHPC JU	50% EU Central + 50% Participating State Co-Investment	Dual Quota: EU Open Peer-Review vs. National Allocation	Balancing national return-on-investment with EU-wide access priorities.
EUDAT CDI	Partnership Agreements + Institutional Cost-Recovery	Service-Level Commitments per Node Partner	Long-term data preservation lacks permanent operational funding streams.
ESFRIs / ERICs	Member State Dues (Hub) + Distributed National Nodes	Central Hub Coordination; Local Node Operations	Variable national budget cycles and mismatched legal status across nodes.

GÉANT’s subscription model works for homogeneous networks; EuroHPC’s co-funding works for heavy hardware; EGI/EUDAT/ERICs prove that project-based Virtual Access creates funding 'cliffs’; EOSC needs a hybrid model combining all three.

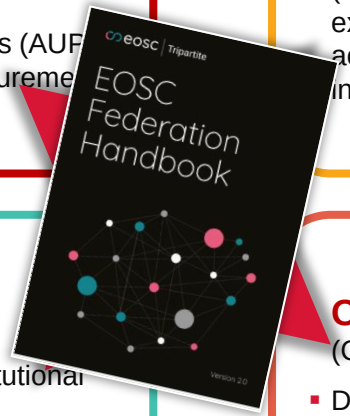
Minimal Conditions for Scalable National Node

Legal & Governance
(National Mandates)

- Formal mandate enabling national entities to act as official EOSC Nodes;
- Harmonized Acceptable Use Policies (AUP protecting nodes from local tax/procureme liability;

Financial & Accounting
(Standardisation)

- Standardised accounting metrics (CPU/GPU core-hours, TB-month, API execution units) to enable credit-based accounting rather then direct financial invoicing;



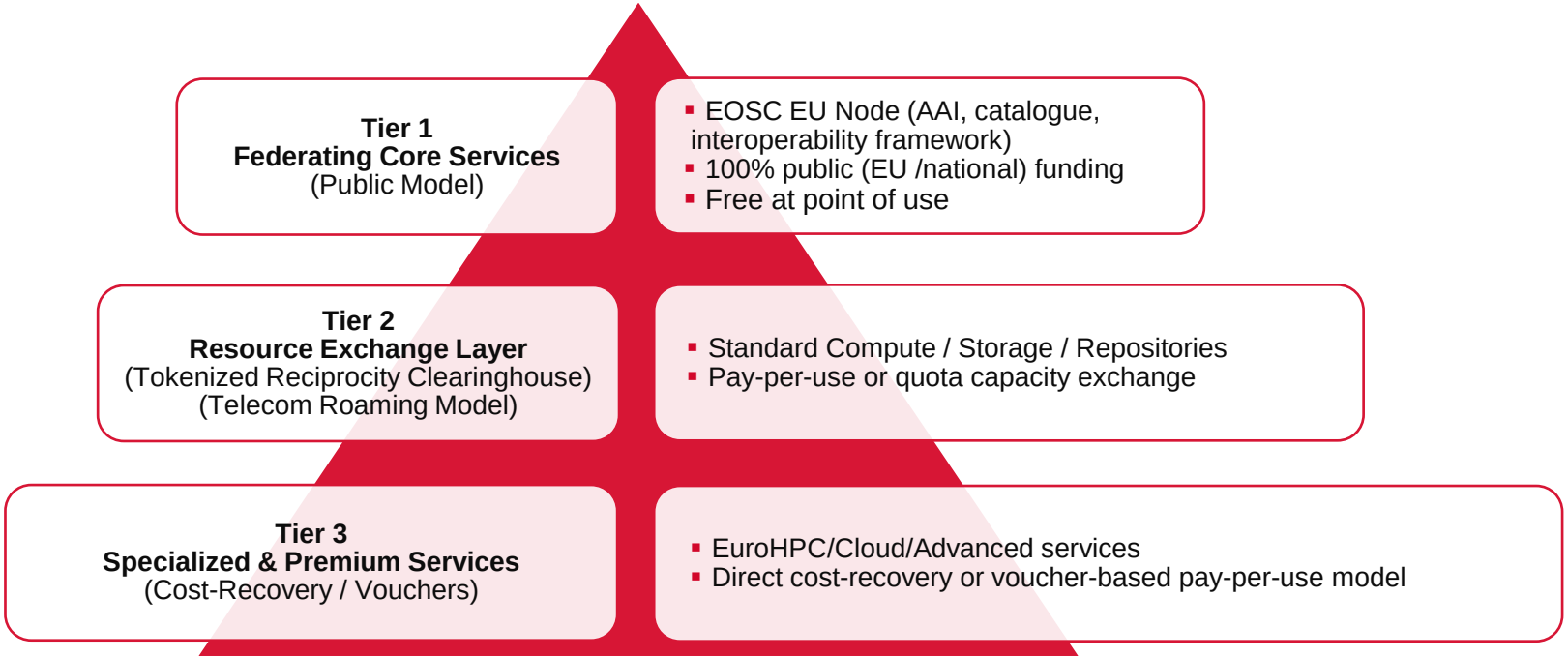
Technical & Identity
(Federated AAI)

- Unbroken identity chain linking institutional identities to global resource access (eduGAIN / EOSC Federated AAI);

Operational Quality
(Commitment)

- Differentiate 'Best-Effort Academic Access' vs Production SLAs;

Hybrid Business Model



Recommendations from the field

1

Separate Innovation (CapEx) from Continuous Operations (OpEx)

2

Deploy the Tokenized Clearinghouse First

3

Minimize Administrative Burden

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