National Infrastructures for Research and Technology GRNET

Advanced e-Infrastructures and Digital Services for Public Administration, Education, Research, Health & Culture sectors

GRNET's Mission

National Infrastructures for Research and Technology - GRNET's mission is to offer an integrated environment of cutting-edge technologies, model digital solutions, infrastructures and specialized expertise which contributes to the modernization and digital advancement of the overall citizen experience in the fields of Public Administration, Education, Research, Health and Culture.

GRNET's Role

State-owned company (SA) established in 1998, operating under the auspices of the Greek Ministry of Digital Governance.

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Promotes and implements the strategic goals of the Ministry of Digital Governance, designs and develops advanced information systems and e-Infrastructures to achieve Greece's Digital Transformation goals.

Operation of the national high performance computing system (HPC-ARIS)

Operation of the national fiber optic network

Operates the GR-IX::The Greek Internet Exchange, the national neutral and non for profit infrastructure platform interconnecting all significant Internet players in Greece

Provides international cross-connectivity through the GÉANT pan-European network

Develops, operates and promotes the National initiatives and portal for digital skills in Greece.

Carries out technological research and development on telecommunications networks and computing services.

Implements and manages European, International and National Projects.

Artificial intelligence: formulating a national strategy

It is the main infrastructure/service enabler for Open Science in Greece and leader in a coordinated effort for development of electronic infrastructures and services in Southeast Europe and the wider region.

Design, development and maintenance of advanced information systems, computing and network infrastructures and cloud services

GRNET's Contribution

GRNET offers an integrated environment of cutting-edge technologies, e-Infrastructures and digital services to its users, contributing to the:

- Ministry of Digital Governance's goal to achieve **Digital Transformation** of the country through the implementation of the **National Digital Strategy 2020-2025**, aiming to improve citizen's experience in receiving public services;

- **empowerment of the research community** and the growth of research activity in the country;

- **enhancement of the educational processes**, supporting the development of digital skills;

- constitution of a more **extroverted Greek Research and Education community** by offering equal participation opportunities for its members in ICT global actions;

- **technology enhancement of the Health sector** and improvement of citizen's health service provision experience;

- **shaping new models of cooperation** amongst public agencies, research and education communities, citizens and businesses;

- **optimization of Greek State resources** in the sectors of Public Administration, Education, Research, Health and Culture.

GRNET

> **150** universities, research centers, hopsitals, cultural centers
> **15.000** schools

Single Digital Gateway "gov.gr"
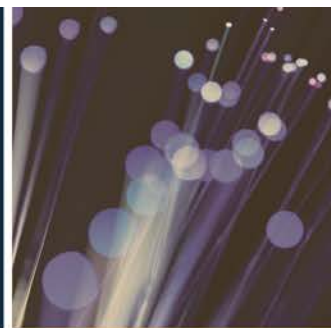
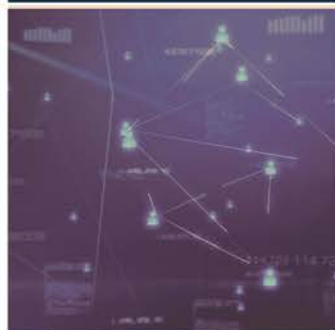**40** Services
50 National and European Projects

Hundreds of thousand users

Fiber optic network **10.000** km

- 6 Data Centers
- National Supercomputing Infrastructure
- National HPC Competence Center
- GR-IX

Digital Skills of Citizens

Connection with International Research and Academic communities

GRNET in numbers

- > 150 universities, research centers, academic organizations and a great number of hospitals
- > 15.000 schools
- > hundreds of thousands of end users
- Dark fiber backbone (Nx10 Gbps)
- Access 1 || 10 Gbps per institution
- International connectivity through GÉANT network multiple 10 Gbps
- Operates the Greek Internet Exchange (GR-IX) node – peering all Greek ISPs and SPs.
- 535 TFlops HPC Tier–1 centre, member of PRACE
- Storage Services
- Public Cloud (~okeanos)
- 6 DataCenters (EKT, Ypepth-Marousi, Louros Arta, Heraklio Crete)
  - hosting: 108 racks, 2000+ servers, 11.500 Virtual Machines, 1 TB disk storage and 5 PB tape

DATA CENTERS

HPC
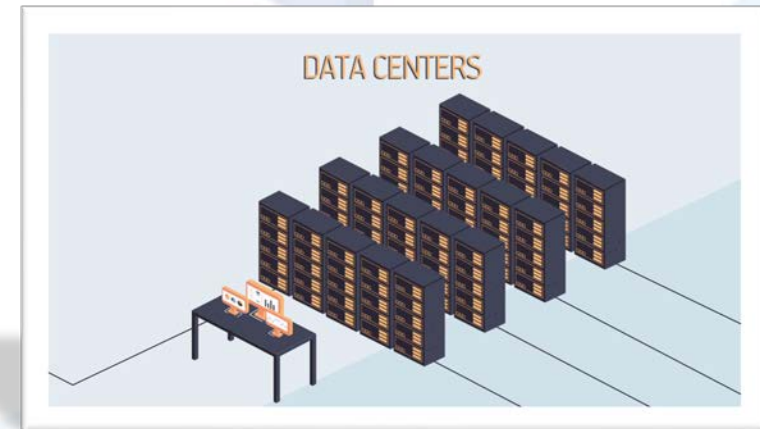
Serving daily users in the sectors of:
Public Administration, Education, Research, Health, Culture

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grnet @government   grnet@education   grnet@research   grnet@health   grnet@culture

Organizations and Institutions

- ✓ Universities
- ✓ Research Centers
- ✓ Large Research Infrastructures
- ✓ Hellenic School Network
- ✓ Public Libraries
- ✓ Culture Centers
- ✓ Content Providers
- ✓ Public Administration sector
- ✓ Public Health Sector (Hospitals, Blood Donation/Transfusion Services)

Types of Users

- ✓ Academic and Research Community users
  - ✓ Students, Professors, Researchers, Academic and Administration Management, Network Operations Centers (NOC), Technical Staff
- ✓ Health Sector users
  - ✓ Hospital: Doctors, Administration, Management, NOC, Technical
  - ✓ Blood Donor Volunteers
- ✓ Public Administration Officers
- ✓ Citizens

Services and Projects

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> 50 National & European Projects

> 40 Services

Projects

- Digital Governance
- Infrastructures & Services (Network, Computational, Connection, Storage, Cloud, Digital Content)
- Open Science
- Green Actions

Services

- Network and Connection Services
- Computational and Storage Services
- Data Services
- Identification & Security Services
- Sound, Voice and Visual Services

Highlights:
e-Infrastructures & Services

Infrastructure

- Nationwide Optical Network Ultra High Speed
- Data Centers
- Computational and Storage infrastructure
- High Performance Computing (HPC) infrastructures
- Interconnection Provider GR-IX
- Interface with international Internet / GÉANT
- Backbone network for the School Network
- Fiber optic connections to hospitals, with more to follow- includes wifi access
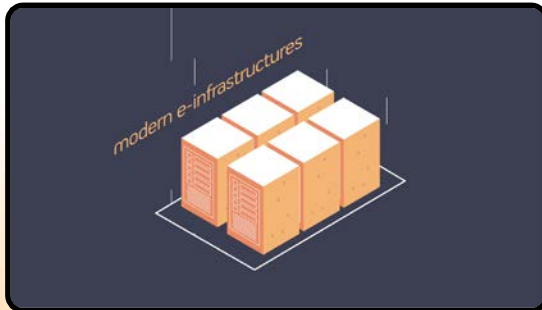
Services

- Cloud Computing (~okeanos)
- High Performance Computing
- PITHOS (Storage Service)
- University Books (EUDOXUS)
- Academic Identity Card
- Faculty eVoting-ZEUS
- e:Presence / Teleconference
- Web Casting - Live streaming scientific & cultural events
- Hospital Services – imaging backup service, eduroam/edugain access to publications

SERVICES

INTERNET

CLOUD COMPUTING

AUTHENTICATION & AUTHORIZATION

SECURITY

AUDIO

VOICE

VIDEO

HPC-ARIS:	hpc.grnet.gr	e:Presence:	epresence.gr
~okeanos:	okeanos.grnet.gr	DIAVLOS:	diavlos.grnet.gr
ViMa:	vima.grnet.gr	Academic IDs:	academicid.minedu.gov.gr
GR-IX:	gr-ix.gr	FoD:	fod.grnet.gr
eduroam:	eduroam.gr	Security CERT:	cert.grnet.gr
DIADOSIS:	diadosis.grnet.gr	Eudoxus:	eudoxus.gr
Harmoni:	harmoni.grnet.gr	APELLA:	apella.minedu.gov.gr
Blood Donor Registry:	bdr.gr	ATLAS:	atlas.grnet.gr
ZEUS:	zeus.grnet.gr/zeus	PYXIDA:	pyxida.grnet.gr
Eury-where:	eury-where.gr	Unified Digital Portal	gov.gr

Network connectivity offering

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340 PoPs

10.000 km. Optical fiber

151 organizations
- Greek Education Network
- Hospitals
- Universities
- Research centers

Access **1 || 10 Gbps** per organization

50 cities

Hundreds of thousands of users
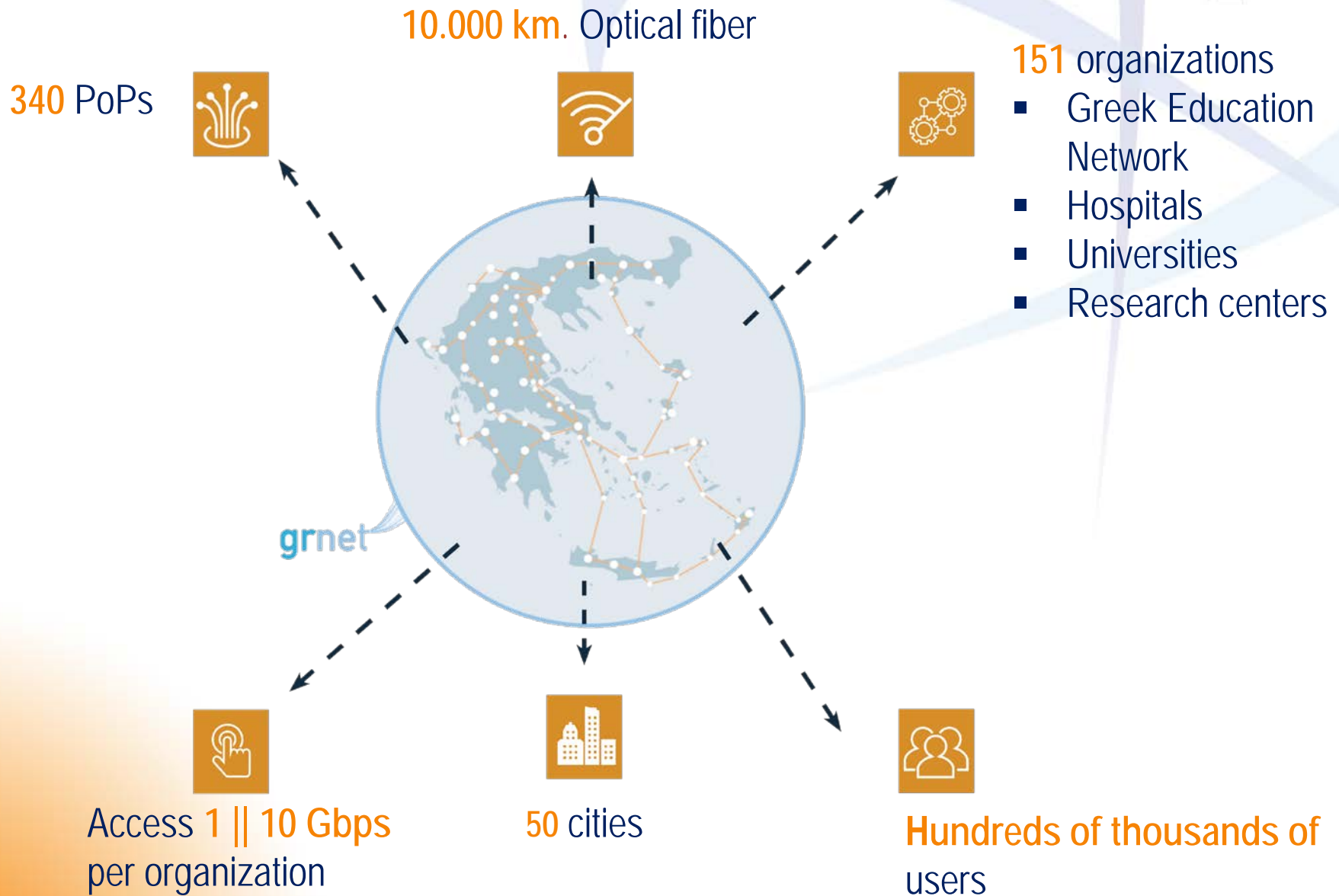
e-Infrastructures & Services

1 **GRNET backbone infrastructure**
Connection to GRNET Network

2 **GRNET cloud services - ~okeanos, GREEN DC**
~okeanos is our IaaS Service. "IaaS" stands for "Infrastructure as a Service". Build your own computer, own virtual machines and virtual networks, always connected to the Internet.

3 **National Supercomputer Infrastructure**
HPC ARIS (High-Performance Computing Services)
HPC services to the Greek R&E community

4 **ViMa** **Virtual Machines**
GRNET ViMa service aims to provide to the Greek educational and academic community access to shared computing and network resources that can be used for production purposes.

Computing Infrastructures

33.101 ~okeanos cloud users

6 data centers in 3 geographic locations
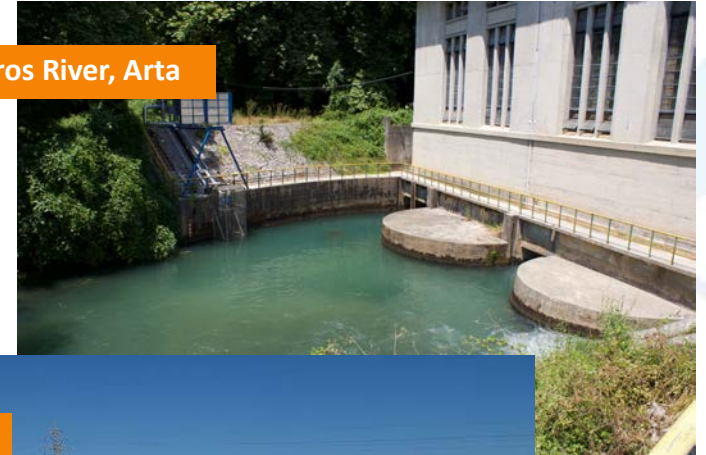
2.000 servers

11.500 active VMs

5.200 datacenter network ports in total

10.000 active cloud users

An optical network of a maximum capacity of 1 Tbps for the datacenters

20 Gbps of internet traffic for the Copernicus services

Louros River, Arta

Heraklion, Crete

Ministry of Education, Marousi

National HPC Infrastructure
National Super-Computer ARIS

5 computational nodes

2 PB of storage space

535 TFlops HPC Tier-1 centre,
PRACE Training Center

1.000 HPC projects

56.000 core Hours during the
last 7 years

New National Supercomputer
DAEDALUS

- Becomes operational in 2024 in the installation of the Lavrion Technological and Cultural Park

- 33 mil. Euros Build Cost (30% EuroHPC, 70% «Greece 2.0»)

- 30 Petaflops power

- Low energy cost of operation (powered by renewable energy sources and cooled by seawater)

- Will support scientific research with high computational capacity as well as innovative businesses

GR-IX
The Greek Internet Exchange

> GR-IX is an important national infrastructure that aims to help the growth of the Greek Internet as it interconnects all significant Internet players in Greece.

With four POPs in Athens and Thessaloniki,
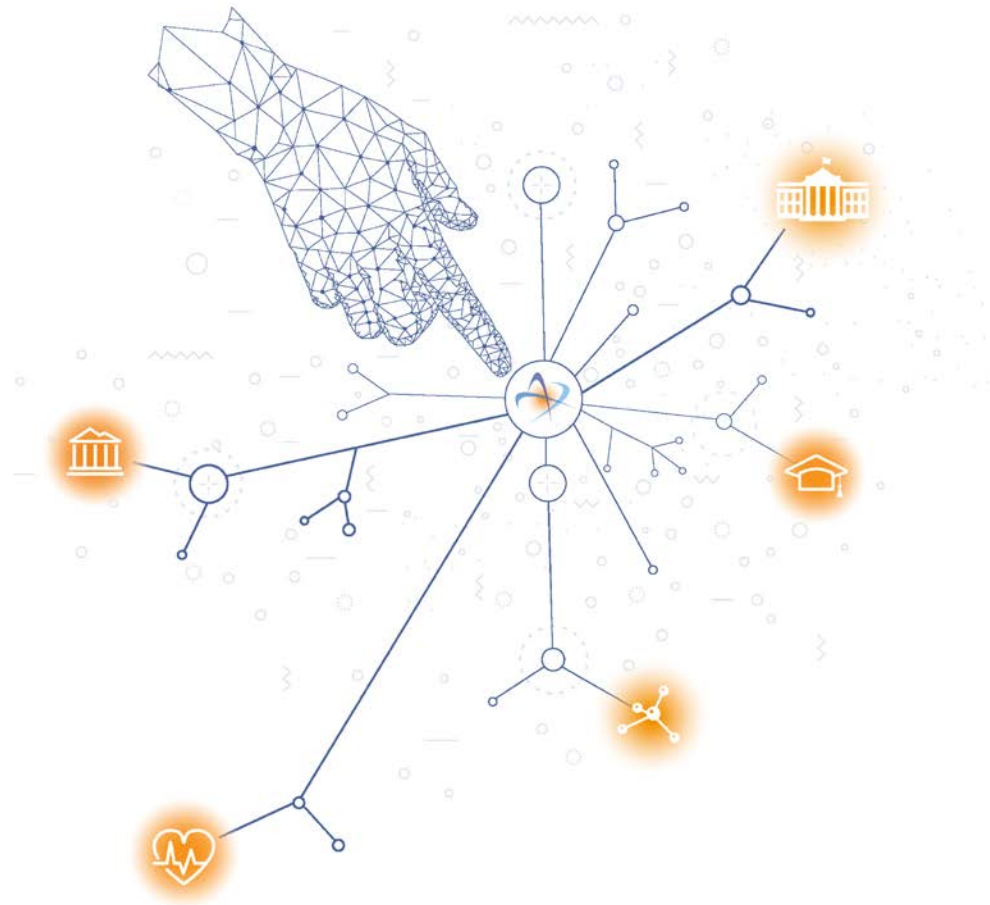GR-IX is the only Internet Exchange in Greece.

GR-IX customers enjoy:

- Reduced telecommunication costs;
- Improved network connectivity in terms of speed, capacity, stability and resilience;
- Greater proximity to their traffic producers and consumers;
- New business opportunities and enhanced market position.

Advanced e-Infrastructures & Services for the Public Administration

Role of GRNET in Digital Transformation

🏛 **grnet @government**

1. Digital Transformation Advisor

- **Promotion of the National Strategy for Digital Transformation** with emphasis on the Greek Public Administration

- **Creating the prerequisites for Research & Development** in the field of Digital Governance

- **Design** of modern, interoperable information systems and services

- **Development of** tools, methodologies and good practices

2.National Academy of Digital Skills

- **Implementation** of the Digital Governance Ministry Strategy for Digital Competence Development

- **Development of education** and training activities

- **Development of initiatives** for awareness and information

3. Artificial Intelligence Strategy

- **Drafting the National Strategy on Artificial Intelligence** for the Public and Private Sectors

- **Development of** "Harmoni for Covid" Artificial Intelligence/Deep Learning System for rapid and reliable diagnosis of coronavirus-COVID 19 using medical imaging

Digital Services and e-Infrastructures

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> GRNET acts as an advisor to the Ministry of Digital Governance in the implementation of Digital Transformation Strategy for the Greek Public Sector.

- Conducts analyses, studies and provides standard solutions for the achievement of interoperability amongst all Public Administration sector's information systems

- Organises workshops and hackathons, is active in the production and application of flexible service design tools, in the development of specifications and implementation of medium-term and short-term activities on behalf of the Ministry of Digital Goverrnance

- Implementation of the Ministry's Unified Digital Portal gov.gr, on point entry for all public services for all citizens

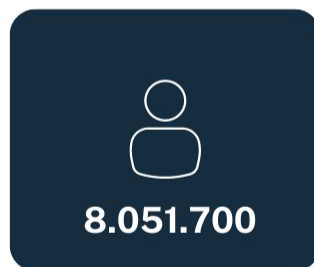- Implementation of a series of Public Sector Digital Services in gov.gr
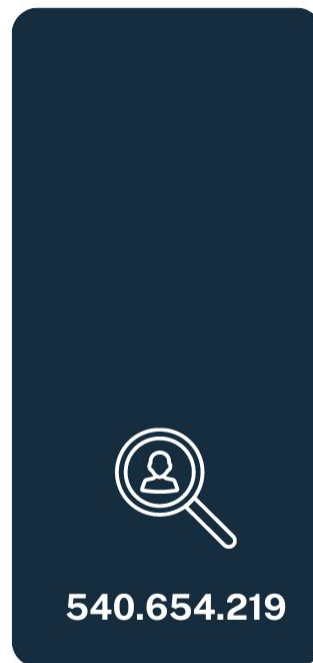
Implementation of Digital Services @gov.gr

grnet@government

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Ministry's Unified Digital Portal **gov.gr** serves citizens and businesses in their daily transactions with the State

1.425

DIGITAL SERVICES

8.051.700

CITIZENS

540.654.219

IDENTIFICATIONS

633.047.698

CALLS WEB SERVICES

Implementation of Digital Services @gov.gr

grnet@government

- EU Digital COVID Certificate: https://eudcc.gov.gr/start/ & Covid Free GR mobile app
- University admission exams: information about the results by sms: https://smsresults.minedu.gov.gr/
- COVID-19 self-tests: https://self-testing.gov.gr/
- Certificates about positive or negative COVID-19 test: https://www.gov.gr/ipiresies/ugeia-kai-pronoia/koronoios-covid-19
- TV coverage in "White areas": https://white-areas.gov.gr/
- Citizen's account: https://my.gov.gr/
- Digital graduation diplomas for graduates of high schools, lyceums and vocational lyceums: https://my.gov.gr/

- Copy of criminal record: https://www.gov.gr/ipiresies/dikaiosune/poiniko-metroo/antigrapho-poinikou-metroou
- E-applications for vacancies in mobile Health Units and the Regional Health agencies: https://dilosi.services.gov.gr/info/eody-komy
- Application for the issuance and control of the validity of e-documents. http://dilosi.services.gov.gr
- Issuance of citizens' movement official forms during the COVID-19 pandemic: http://forma.gov.gr
- Application for issuing and downloading in e-form, of temporary driving license: https://drivers.services.gov.gr
- "MyAuto" service provides real-time access to all vehicle details

Implementation of Digital Services @gov.gr

grnet@government

- Coordination and promotion of the Ministry of Digital Governance's **Digital Innovation initiatives against the Coronavirus** for:
    - Innovative Ideas Contest - #COVIDhackGR
    - Immediate Implementation of Mature Digital Solutions.
    - https://covidhackgr.gov.gr/
- **Digital Services Training Portal** provides instructions for the use of selected digital services of the Public Sector provided by the **Unified Digital Portal gov.gr**. The aim of the training portal is to provide citizens easy to use, fast and easily accessible practical guides for the use of digital Public Administration services: https://howto.gov.gr/

govgr | Digital Innovation Initiatives Against COVID-19

Digital Innovation Against COVID-19 Ideas Challenge

The challenge is an initiative of the **Ministry of Digital Governance** and aims to pursue new innovative ideas to address the needs of the National Health System against the COVID-19 pandemic.

Submission deadline Sunday 26/04

Proposals will be evaluated and those that lead to **directly applicable solutions** will be awarded.

Rapid Implementation of Mature Solutions

A distinct rapid evaluation process is established to review well-documented proposals for technological solutions that address the issues of the COVID-19 pandemic that:

Either have excelled in established competitions (e.g. hackathons)

Or they form mature solutions with the potential for immediate implementation through the use of existing production facilities.

Gov.gr Wallet

- Gov.gr Wallet enables the creation, storage and control of **new digital identity cards** and **digital driver's licenses**.

- The new digital identity cards and driver's license are digital documents issued through gov.gr and are fully equivalent to paper documents, for any legal use within Greece.

- Implementation by GRNET, in cooperation with the Ministry of Digital Governance.

EU Digital COVID Certificate

- The EU Digital COVID Certificate can be used by citizens as **a record of proof for vaccination**, a diagnostic test result, or recovery from coronavirus.

- In Greece, the certificate will be issued through the gov.gr portal.

- Implementation by GRNET, in cooperation with IDIKA SA – e-Government Center for Social Security Services and the participation of the General Secretariat of Information Systems for Public Administration.
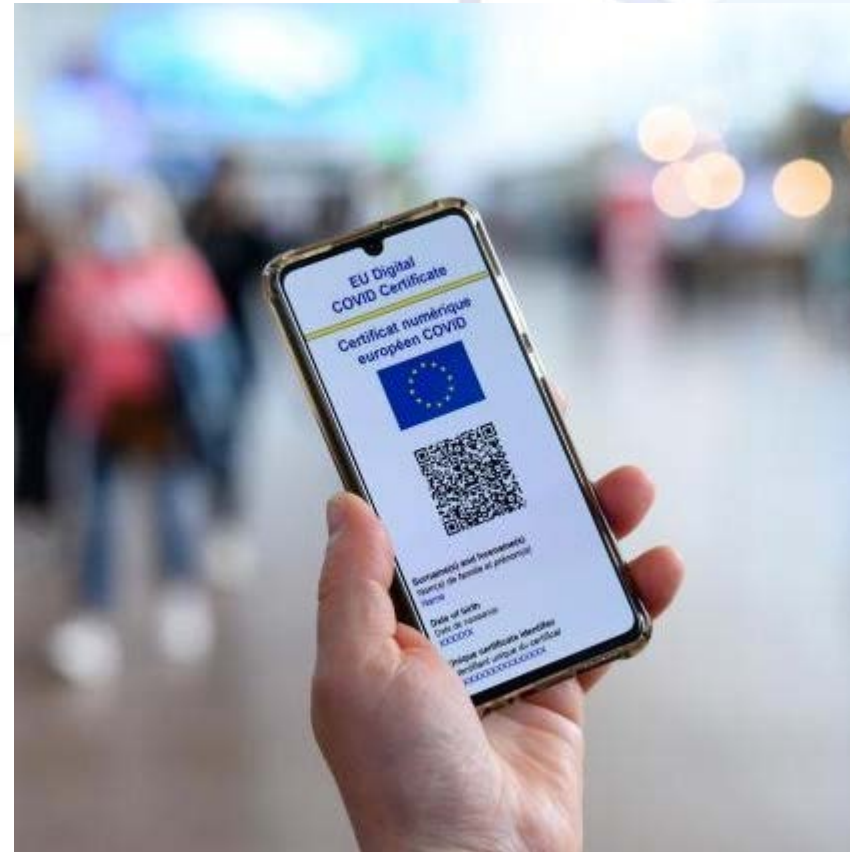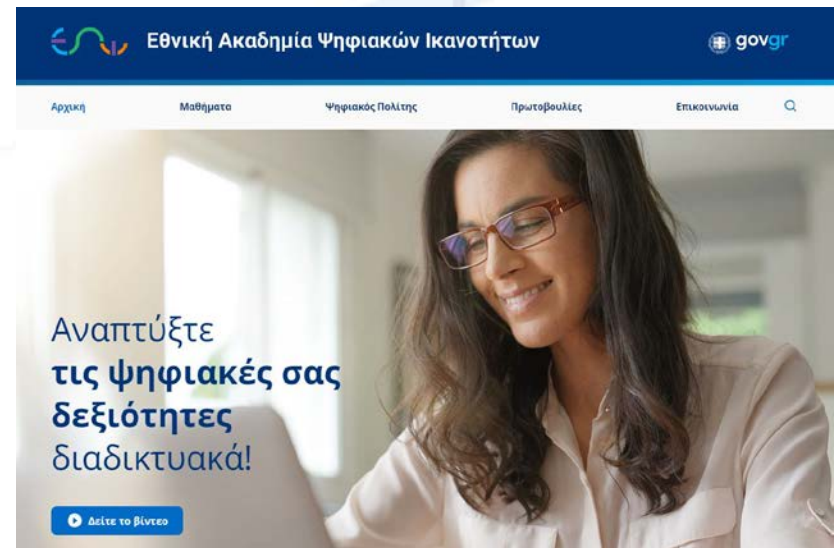
National Academy of Digital Skills

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> **GRNET is responsible for the implementation of the Ministry's of Digital Governance Strategy for the Development of Citizens' Digital Skills.**

The implementation of the Strategy is carried out through 2 pillars:

- 1: **Education and training actions** aimed at developing digital skills through the **National Academy of Digital Skills**

- 2: **Awareness initiatives** that aim to provide opportunities and possibilities for citizens to participate in educational actions

Εθνική Ακαδημία Ψηφιακών Ικανοτήτων · govgr

Αρχική · Μαθήματα · Ψηφιακός Πολίτης · Πρωτοβουλίες · Επικοινωνία

Αναπτύξτε **τις ψηφιακές σας δεξιότητες** διαδικτυακά!

▶ Δείτε το βίντεο

Nationaldigitalacademygovgr

https://nationaldigitalacademy.gov.gr/

Role of GRNET
in the development of digital skills

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The National Academy of Digital Skills (www.nationaldigitalacademy.gov.gr) gathers digital educational content for the development of citizens' digital skills and aims to act as the national portal for digital skills in the country.

299 Available Lessons / 38 Providers

Courses according to the needs, interests and level of knowledge of each citizen through asynchronous education. Use of a self-evaluation tool and suggestions for personalized thematic chapters.

"Digital Citizen" Lessons

Participation in the lesson course of the Digital Citizen consisting of five courses for the development of basic digital skills. The courses are developed based on the European Digital Competence Framework (DigiComp).

Initiatives

Participation of citizens in awareness-raising, information and empowerment initiatives to cultivate digital culture and develop computational thinking.

Role of GRNET
digital skills development

National Academy of Digital Skills Initiatives
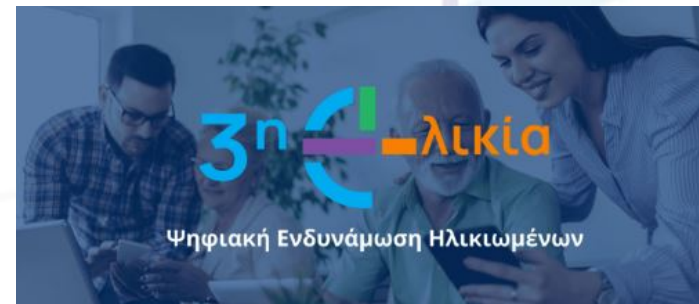http://www.act.nationaldigitalacademy.gov.gr/

➤ Women

Women in Tech

Women in the Technology Sector:

Today and in the Future

https://womenintechgreece.gr/

An initiative that aims to raise awareness, inform and encourage women to pursue a career in the field of technology.
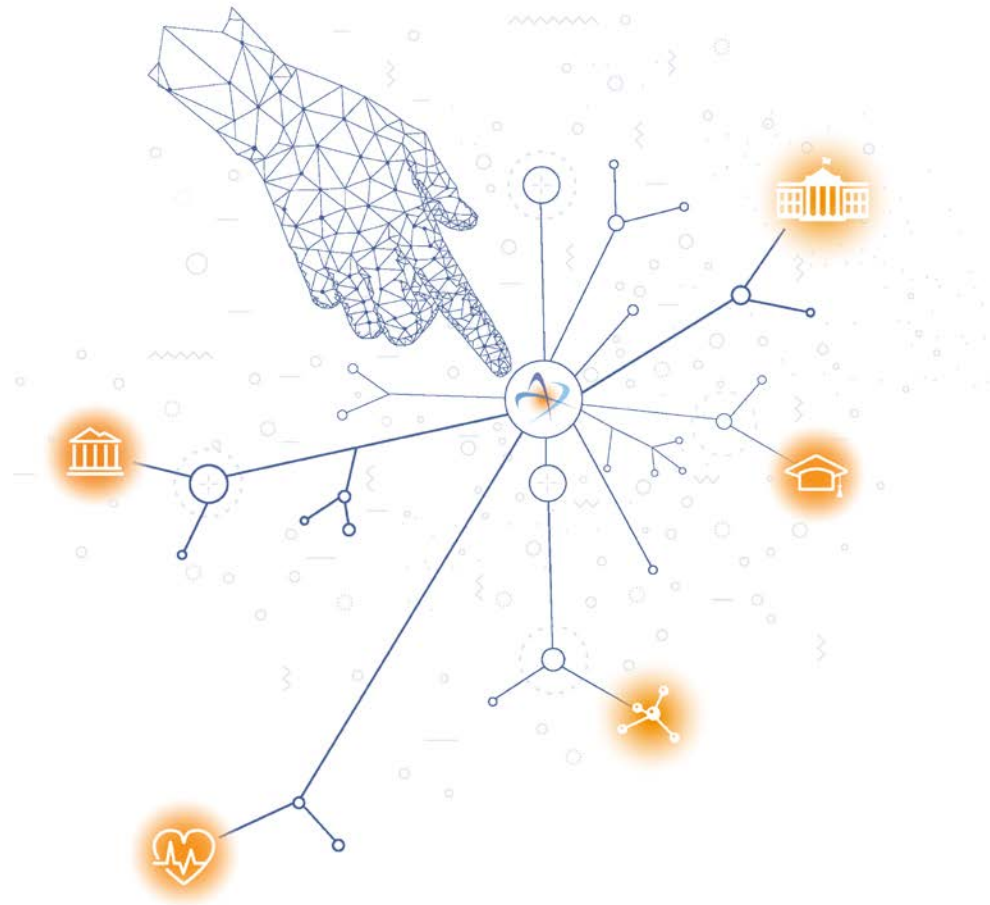
➤ Elderly

3η e-λικία

Digital Empowerment of the Elderly

https://www.3elikia.gr/

An initiative that aims digitally empower citizens 65+. The program has been launched in the municipalities of Florina and Kavala.

Advanced e-Infrastructures & Services
for Education and Research

GRNET: Advanced computational and storage services

grnet@research   grnet@education

GRNET offers to the research and higher education community:

- Computing, Networks and Storage for all (Universities, Research Centers, Institutes, Laboratories, Classes, Students, Researchers)

- The possibility to supply a full computer operating system and network in seconds

- Development of Information Systems at minimum time, dynamic allocation in real time

- Distribution through the Internet

(Amazon style-IaaS)

- Online file storage and syncing

(Pithos+ Service)

e-Infrastructures & services

grnet@research   grnet@education

grnet

e:Presence
Secure, and Greek law compliant videoconference service
For the official meetings of the Greek R&E community

DIAVLOS
"Diavlos" is GRNET's live streaming service
Lectures, seminars, cultural and other events, which are hosted by major cultural institutions are broadcasted through the GRNET state of the art e-Infrastructure.

eduroam
eduroam (education roaming) is the secure, world-wide roaming access service developed for the international research and education community. It allows students, researchers and staff from participating institutions to obtain Internet connectivity across campus and when visiting other participating institutions by simply opening their laptop.

Pyxida
GRNET's portal containing educational /training materials for the Services it offers

e-Infrastructures & services

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APELLA
FUNDING: OPERATIONAL PROGRAM "PUBLIC SECTOR REFORM 2014-2020"
"Apella" facilitates the election and promotion of the faculty members of the Greek Academic Institutions

Student Housing Allowance
FUNDING: OPERATIONAL PROGRAM "PUBLIC SECTOR REFORM 2014-2020"
System for submitting and evaluating applications for the granting of the annual student housing allowance.

Eudoxus
FUNDING: OPERATIONAL PROGRAM "PUBLIC SECTOR REFORM 2014-2020"
Electronic book distribution service to students

ATLAS
FUNDING: OPERATIONAL PROGRAM "PUBLIC SECTOR REFORM 2014-2020"
"Atlas" is a centralized online service that creates a unique internship positions database.

National Academic ID
FUNDING: OPERATIONAL PROGRAM "PUBLIC SECTOR REFORM 2014-2020"
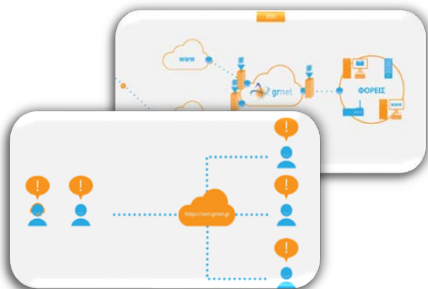*The national academic ID service based on DELOS*

e-Infrastructures & services

ZEUS eVoting

GRNET "Zeus" is a computing system that ensures the fair conduct of digital private polls carried out remotely with the use of cryptography to ensure validity of results without any breach of secrecy.

Security Services

- Firewall on Demand (FoD)
The service enables users to mitigate active attacks aimed at their network equipment
- Computer Emergency Response Team (CERT)
GRNET provides incident response and security services, process, correlate and notify end users
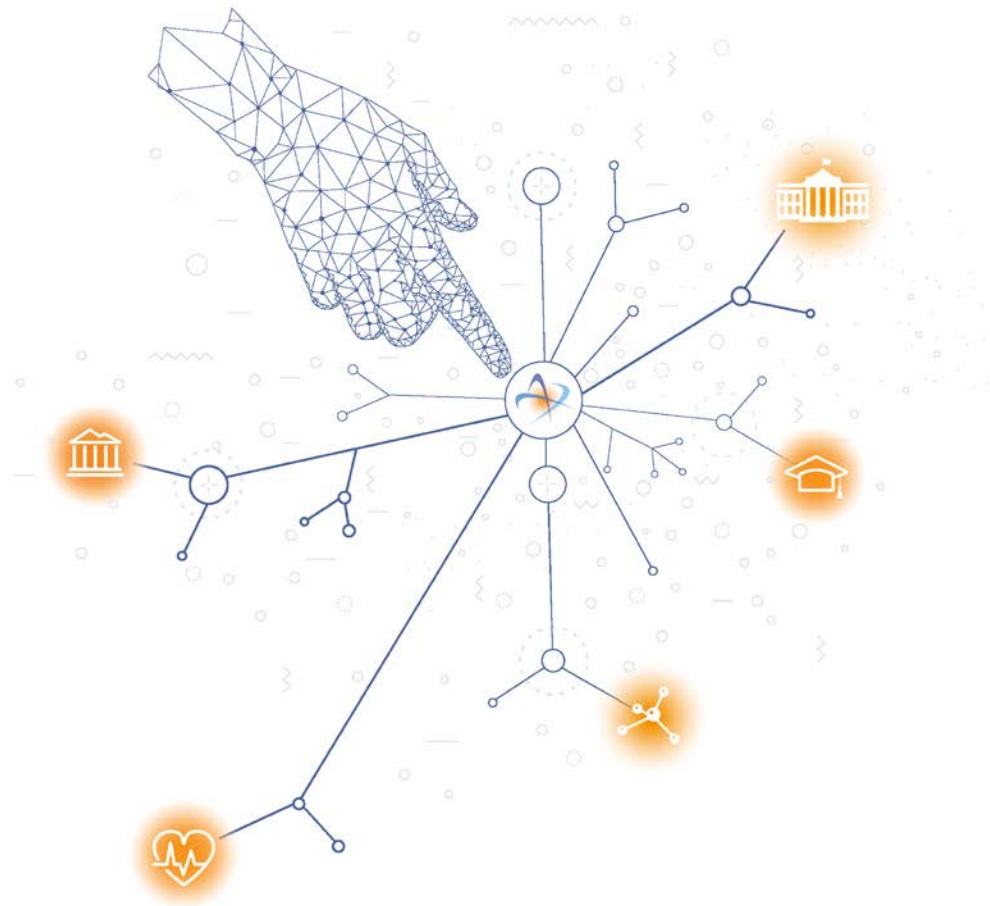
DELOS – AAI

GRNET "Delos" Authentication and Authorization Infrastructure enables cross-institutional services by providing federated authentication and authorization among participating organizations.
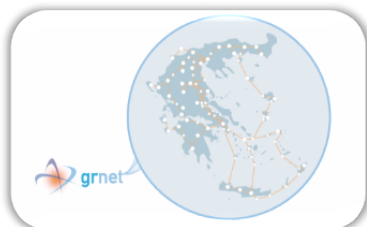
Digital Certificates

Extra security and authentication of people, sites and data transfers

Advanced e-Infrastructures & Services for Health

e-Infrastructures & services

grnet@health

Hospitals get connected on the GRNET fiber optics network, 1/10Gbps
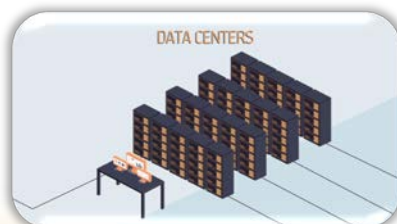*Secure and fast processing of medical and research data*

wi-fi
Remote access service in all hospitals
Fast access to all hospital services for staff and customers

New Data Center for the Health Sector
Effective, fast, secure storage and retrieval of medical data

Central Electronic Management Services for the National Blood Donors Registry
Managing the registry and issuing volunteer donor IDs through modern, credible and friendly procedures for blood donors, donation services and blood centers in the country.

e-Infrastructures & services

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grnet

Harmoni

High-Performance Archiving and Retrieval of Medical On-line Imaging Data.
Effective and flexible management of large amounts of imaging data, enabling hospitals to manage the long-term storage and retrieval of the large amount of imaging data effectively, providing a centralized repository, based on the DICOM standard (Digital Imaging and Communication in Medicine).

DIADOSIS

Inter-loan online library. Is an electronic system which provides access to all research and medical publication papers via the DELOS- Authentication & Authorization Infrastructure service, to all hospital staff
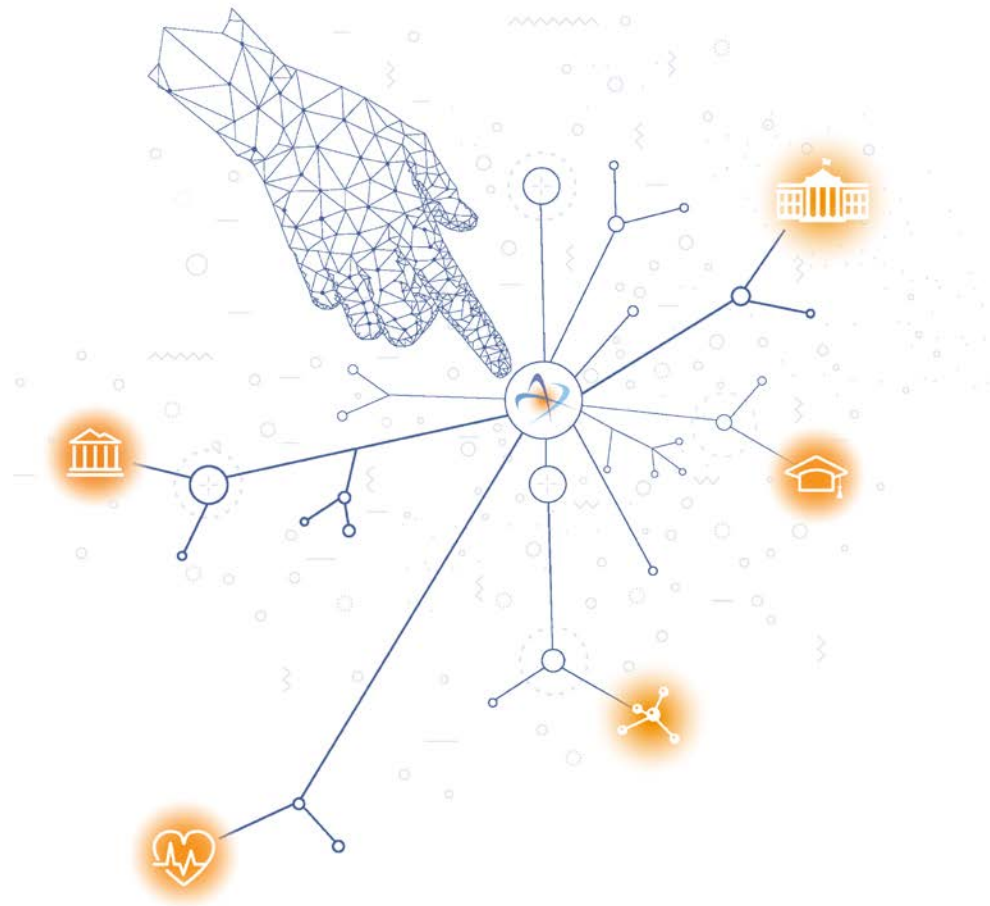
Central Staff Directory Service-DELOS for Hospitals

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eduroam

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Advanced e-Infrastructures & Services
for Culture

e-Infrastructures & services
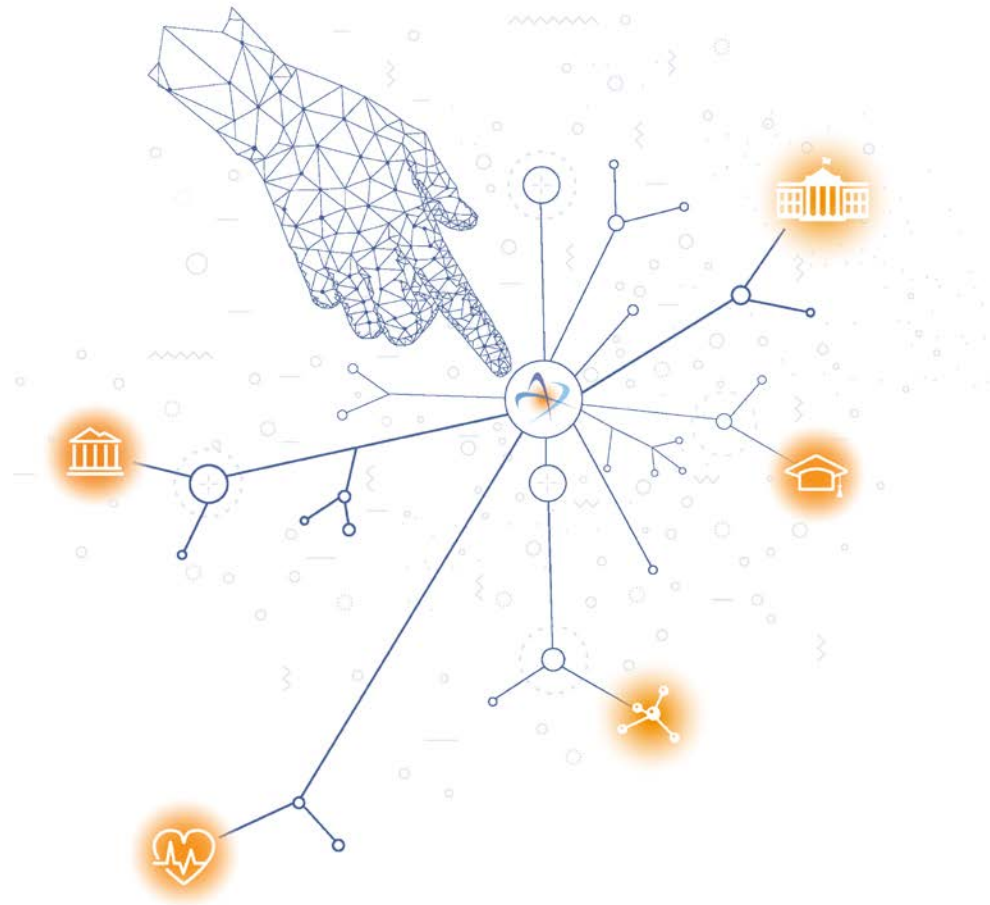
grnet@culture

DIAVLOS

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International Collaborations

International collaborations

GRNET **facilitates the evolution** and **proliferation of research and technology**, by offering opportunities to all its users to develop their academic and scientific activities.

Our teams of professionals collaborate with key partners, through national, European and international partnerships, adopt and advance state-of-the-art digital technologies, with the aim to support continuous growth and excellence for the benefit of the Greek society.

International collaborations

GÉANT

European collaboration on e-infrastructures and services for Research and Education

egi

Federated e-Infrastructure set up for the provision of advanced computing services for Research and Innovation

EUROPEAN OPEN SCIENCE CLOUD

European Open Science Cloud

Copernicus Europe's eyes on Earth

Collects, stores and provides access to data from the Sentinel satellites of the Copernicus Earth Observation program

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PRACE — PARTNERSHIP FOR ADVANCED COMPUTING IN EUROPE

Partnership for Advanced Computing in Europe

EUDAT Collaborative Data Infrastructure
Data shared and preserved across borders and disciplines

Collaborative Data Infrastructure

ETP 4 HPC — EUROPEAN TECHNOLOGY PLATFORM FOR HIGH PERFORMANCE COMPUTING

European Technology Platform for High Performance Computing
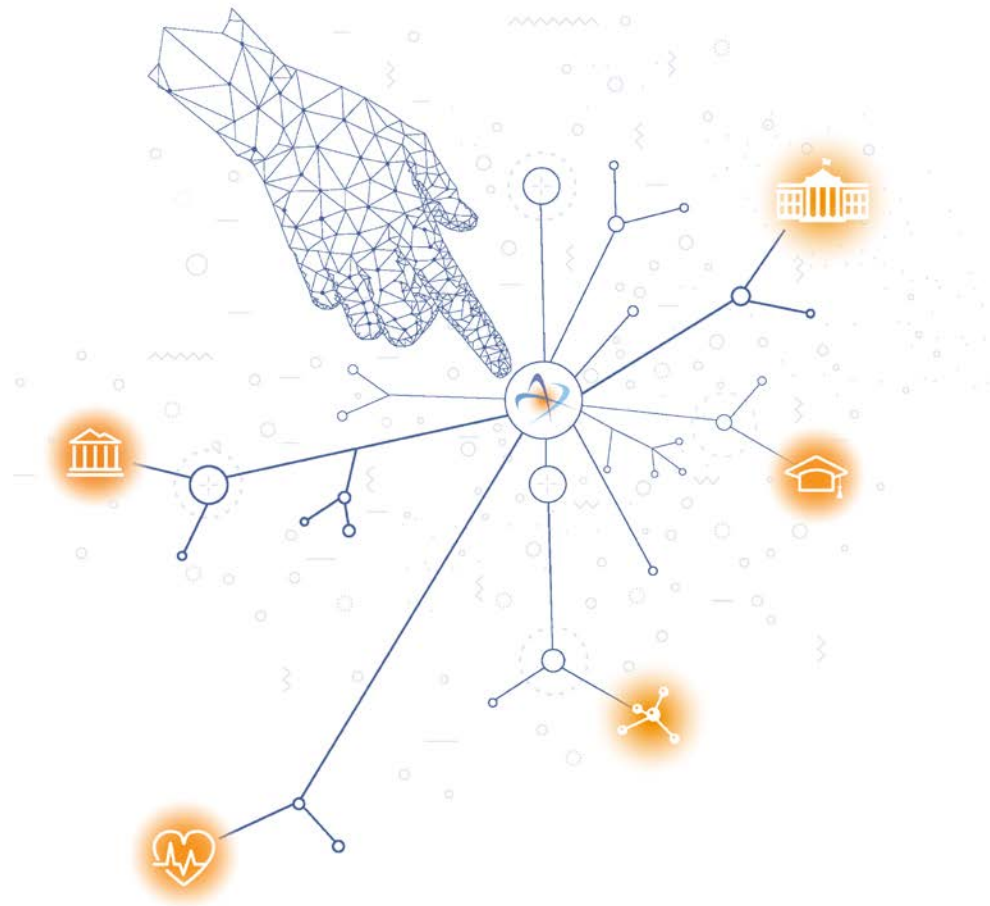
ARIADNE EU

Integrating existing archeological data infrastructure across Europe to explore research methodologies

ePIC

European Persistent Identifiers Service

euro-IX

The European Internet Exchange Association for strengthen and improve the Internet Exchange Point (IXP) community

Current International, European and National Projects

European and International Projects (1/6)

EuroCC: https://www.eurocc-project.eu/

National Competence Centers in the framework of EuroHPC
Funding: HORIZON 2020 - Duration: 01/09/2020 - 31/12/2022
A joint initiative between the EU, European countries and private partners to develop a World Class Supercomputing Ecosystem in Europe, which will be reinforced by a European Network of HPC Expertise.

HPC-EUROPA3: http://www.hpc-europa.eu/

Transnational Access Programme Pan-European Research Infrastructure on High Performance Computing
Funding: HORIZON 2020 - Duration: 01/05/2017 - 30/04/2022
The main objective of the HPC-Europa3 project is to maintain the high quality of transnational access services to some of Europe's most advanced supercomputing infrastructures in the European community of computer science researchers.

PRACE-6IP: http://www.prace-ri.eu/

Partnership for Advanced Computing in Europe
Funding: HORIZON 2020 - Duration: 01/05/2019-31/12/2022
The mission of PRACE is to enable high-impact scientific discovery and engineering research and development across all disciplines to enhance European competitiveness for the benefit of society.

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GN4-3 & GN4-3N: https://www.geant.org/Projects/GEANT_Project_GN4-3/

Research and Education Networking - GÉANT
Funding: HORIZON 2020 - Duration: 01/01/2019 – 31/12/2022

GN4-3N's mission is to deliver unconstrained access at higher minimum capacity thresholds, highest levels of security across the network, and equal access to clouds and other services in the European research area and beyond. It will also increase network footprint, future proof connection speeds and stimulate the market in cross-border communications infrastructure while decreasing the digital divide.

ACROSS: https://across-h2020.eu/

Towards user journeys for the delivery of cross-border services ensuring data sovereignty
Funding: HORIZON 2020 – Duration: 01/02/2021 - 31/01/2024

The project focuses on the mobility of citizens between EU Member States and aims to support them in aligning and fulfilling their obligations under the Single Digital Gateway Regulation.

EGI-ACE: https://www.egi.eu/projects/egi-ace/

Advanced Computing for EOSC
Funding: HORIZON 2020 - Duration: 01/01/2021 - 30/06/2023

The project aims to implement the European Open Science Cloud (EOSC) Compute Platform and contribute to the EOSC Data Commons by delivering integrated computing platforms, data spaces and tools as an integrated solution that is aligned with major European cloud federation projects and HPC initiatives.

European and International Projects (3/6)

NI4OS-Europe: https://ni4os.eu/

National Initiatives for Open Science in Europe
Funding: HORIZON 2020- Duration:01/09/2019 - 28/02/2023
Support the development and inclusion of the national Open Science Cloud initiatives in 15 Member States and Associated Countries in the EOSC governance.

DICE: http://www.dice-eosc.eu/

Data Infrastructure Capacity for EOSC
Funding: HORIZON 2020 - Duration: 01/01/2021 - 30/06/2023
DICE aims to enable a European storage and data management infrastructure for EOSC, providing generic services and building blocks to store, find, access and process data in a consistent and persistent way.

C-SCALE: htps://c-scale.eu/

Copernicus - eoSC AnaLytics Engine
Funding: HORIZON 2020 - Duration: 01/01/2021 – 30/06/2023
The proposed C-SCALE (Copernicus - eoSC AnaLytics Engine) project aims to federate European EO infrastructure services, such as the Copernicus DIAS and others. The federation shall capitalise on the European Open Science Cloud's (EOSC) capacity and capabilities to support Copernicus research and operations with large and easily accessible European computing environments.

OpenAIRE Nexus: https://www.openaire.eu/openaire-nexus-project

Scholarly Communication Services for EOSC users
Funding: HORIZON 2020 - Duration: 01/01/2021 - 30/06/2023
Το έργο θα παρέχει σε πανευρωπαϊκό επίπεδο προηγμένες υπηρεσίες επικοινωνίας επιστημονικού χαρακτήρα, ως μέσο υλοποίησης της ανοιχτής επιστήμης.

EOSC Future: http://eoscfuture.eu/

Funding: HORIZON 2020 - Duration: 01/04/2021 - 30/06/2023
EOSC Future aims to promote EOSC portal and unlock the potential of European research via a vision of Open Science for Society. EOSC Future will interconnect and integrate digital infrastructures, Open Science national initiatives and research communities to EOSC, aiming to further enhance the EOSC Portal, EOSC-Core and EOSC Exchange.

Copernicus Space Component Data Access Bridge:

Funding: European Space Agency (ESA) - Duration: 01/02/2021 – 31/12/2022
The project concerns the access of international organizations and users across the globe to the European programme Copernicus data. It aims to provide (a) the continuity of the different data access services currently running in ESA Copernicus operations framework, and (b) expansion of access services.

Synthesis+: http://www.synthesys.info/

Synthesis of systematic resources
Funding: HORIZON 2020 - Duration: 01/02/2019 - 31/01/2023

SYNTHESYS aims to produce an accessible, shared, high quality approach to the management, preservation and access integrated European resource to leading European natural history collections for research users in the natural sciences.

DCoMEX: Data Driven Computational Mechanics at EXascale

Funding: HORIZON 2020 – Duration: 01/04/2021 – 31/03/2024

DCoMEX aims to provide unprecedented advances to the field of Computational Mechanics by developing novel numerical methods enhanced by Artificial Intelligence, along with a scalable software framework that enables exascale computing.

ELEDGER Hellenic Distributed Ledger Technology Infrastructure

Funding: **Innovation and Networks Executive Agency (INEA), EU** – Duration: 01/04/2021 – 31/03/2023

The project aims at establishing a solid pillar for the development and spreading of the European Blockchain Partnership (EBP) initiative in Greece and supporting the participation and contribution of Greek stakeholders to the European Blockchain Service Infrastructure (EBSI), in particular, with regard to the European Self-Sovereign Identity Framework (ESSIF), and the Diplomas, Notarization and Asylum use cases.

ICT-AGRI-FOOD https://www.ictagrifood.eu/
Funding: H2020/ERA-NET - Duration: 10/01/2019 - 30/09/2024
Supporting the development and implementation of new technologies for a competitive, sustainable and environmentally friendly agriculture.

eSSIF-Lab https://essif-lab.eu/
Working for development, integration and adoption of Self-Sovereign Identities (SSI) technologies
Funding: **H2020**/ICT - Duration: 01/11/2019 - 30/10/2022
Aims at advancing the broad uptake of Self-Sovereign Identities (SSI) as a next generation, open and trusted digital identity solution for faster and safer electronic transactions via the Internet and in real life.

Skills4EOSC https://cordis.europa.eu/project/id/101058527
Funding: Horizon Europe Programme, European Research Executive Agency
Duration: 01/09/2022 - 31/08/2025
Skills4EOSC brings together leading experiences of national, regional, institutional and thematic Open Science (OS) and Data Competence Centers from 18 European countries with the goal of unifying the current training landscape into a common and trusted pan-European ecosystem, in order to accelerate the upskilling of European researchers and data professionals in the field of FAIR and Open Data, intensive-data science and Scientific Data Management.

HEPHAESTUS: https://grnet.gr/grnet_projects/hephaestus/

Funding: NSRF 2014-2020, Operational Program - Competitiveness, Entrepreneurship and Innovation - Duration: 01/10/2017 – 31/10/2023

The Hephaestus project provides all Greek academic and research institutions with advanced network e-Infrastructures & Services.

HELIX: https://grnet.gr/grnet_projects/helix/

National e-Infrastructures for Research

Funding: NSRF 2014-2020 - Duration: 01/01/2017 - 31/12/2022

The project aims at expanding / upgrading and making available for use by the national research infrastructures the NNCRI (National Network and Computational Research Infrastructure), OpenAIRE-D and HELNET, as listed under the consolidated title National Digital Infrastructures for Research (HELIX) in the National Roadmap for Research Infrastructures.

MACHAON: https://grnet.gr/grnet_projects/hospitals/

Provision of advanced network-computing services to hospital units in a cloud computing environment

Funding: NSRF 2014-2020, Operational Program - Competitiveness, Entrepreneurship and Innovation - Duration: 01/07/2020 - 30/06/2023

This project continues a previous relevant action and concerns the upgrade of the technological infrastructure in additional 98 public hospitals and health structures in the country (129 in total). The aim is to support clinical work, strengthen the research work of medical staff and improve the competitiveness of the health sector.

Digital Services for the National Blood Donation System

Digital Services for the National Blood Donor System
Funding: «REFORMATION of PUBLIC SECTOR» 2014-2020
Duration:26/04/2016 - 30/06/2023

Provision of advanced network-computer services for hospital units in cloud environment

Provision of advanced network-computer services for hospital units in cloud environment with the aim of supporting the clinical procedures, strengthening the research activity and improving the competitiveness of the Health Sector
Funding : Operational Programme Competitiveness, Entrepreneurship & Innovation (EPAnEK) Duration : 01/07/2019 - 30/06/2023

DIKTYNNA
Energy Footprint Upgrade for Crete University and the National Health Data Center of GRNET SA
Funding : NSRF: 2014 - 2020 - Duration: 01/01/2020 - 31/12/2023
The DIKTYNNA project concerns the infrastructures energy upgrade with the use of renewable sources of energy, for the daily operations of the resources.

EVIA SAMOS PASS: https://vouchers.gov.gr/eviasamospass
Digital debit cards in order to support Tourism in North Evia and Samos areas.

WHITE AREAS: https://white-areas.gov.gr/
Access to TV stations of national coverage for permanent residents of areas without TV coverage
Funding: Public Investments Program – Duration: 01/01/2021 - 31/12/2023
The aim of the project is to provide television coverage to households even in the most remote continental and island regions of the country, which have specific geomorphological characteristics.

Further operations for Development of the Information System for the Implementation of the Transportation Equivalent
Funding: Public Investments Program of Secretariat General for the Aegean and Island Policy of the Ministry of Maritime Affairs, Islands and Fisheries
Duration: 12/04/2019 - 31/12/2021

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hpc.grnet.gr

Development of a new national HPC system "DAEDALUS"

Upgrade of National HPC System "ARIS" :

https://grnet.gr/en/grnet_projects/upgrade-of-aris-hpc/

Funding: Operational Program "Attica 2014-2020" and the Priority Axis "Dissemination and Development of Innovative Products and Services of SMEs using ICT" -

Duration: 01/01/2022 - 31/12/2023

GRNET's existing HPC system will be upgraded with additional high performance computing equipment at the existing Data Center. ARIS HPC will continue to support the scientific applications which have special requirements regarding the speed of executing calculations, the storage space and memory capacity in various scientific fields of the Greek scientific community.

DAEDALUS: https://grnet.gr/en/grnet_projects/development-of-daedalus/

Funding: Joint Undertaking/ EU / Recovery And Resilience Facility (RRF) –

Duration:01/06/2022 - 31/12/2029

The "GRNET S.A. Grant for the development and operation of a new national High Performance Computing (HPC) system". DAEDALUS will serve a wide range of Greek and European users of the scientific and academic community, the industry and public sector. Anticipated to boost the development of new applications in a wide range of research fields such as Computational Chemistry, Physics, Biology, Biomedicine, Meteorology, Artificial Intelligence.

National Infrastructures for Research and Technology GRNET
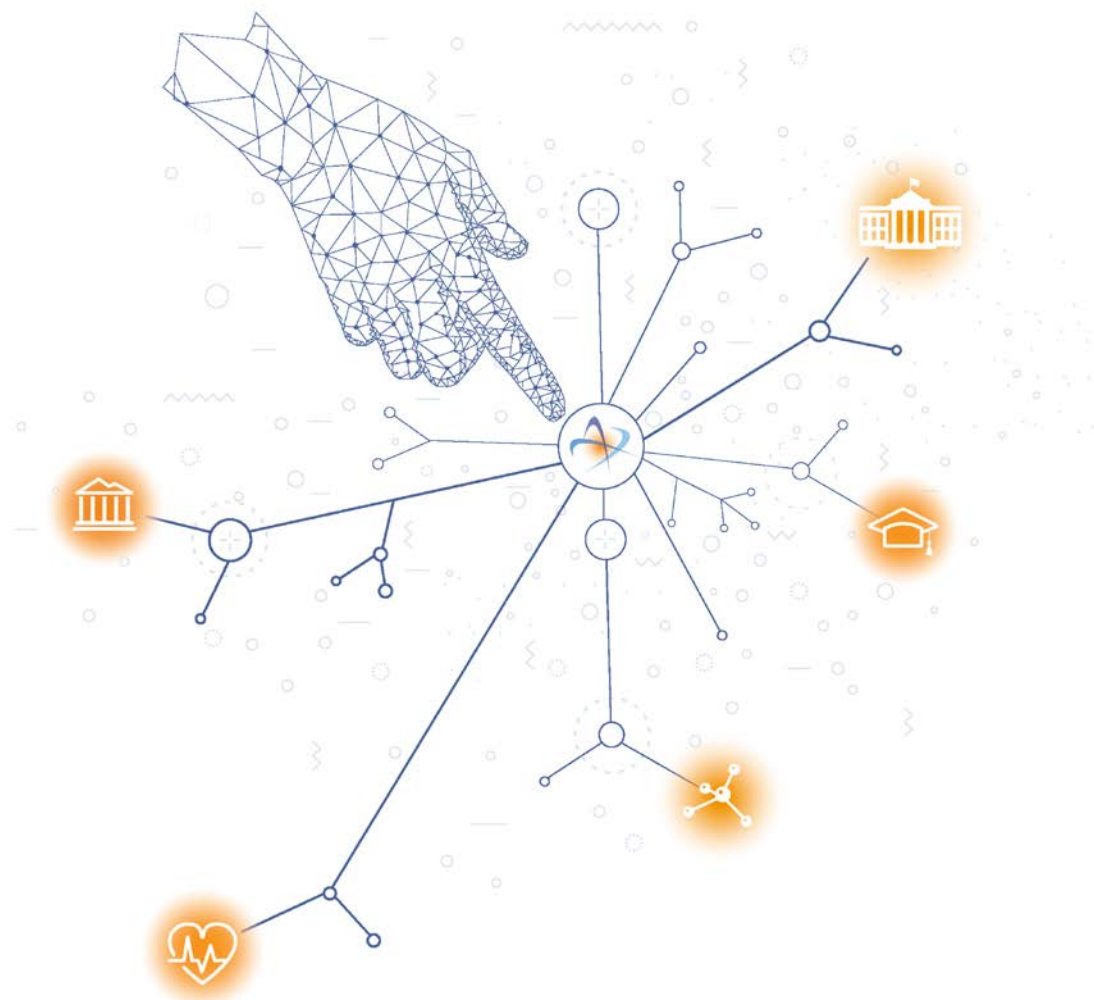
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