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Petros Stefaneas
National Technical University
of Athens

The National Technical University (NTUA) is the oldest and most prestigious educational institution of Greece in the field of technology, and has contributed unceasingly to the country's scientific, technical and economic development since its foundation in 1836. NTUA participates actively or plays leading role in various open data initiatives for Greek Universities such as the Opencources and Openbooks National initiatives. It also participates into many EU funded or cofunded research or development projects in areas such as e-learning, e-government and e-culture.

NTUA will share the experience and knowledge related to the university-industry linkages and the evaluation of research impacts. The experts from the NTUA will participate in the preparation of materials and organize the seminars / workshops on digital libraries, semantic web technologies, digital scholarly communication, copyright, open access and open licenses. The NTUA experts will provide support and advice on the implementation of open science policies in Serbia.

NTUA Library Repository
<http://dspace.lib.ntua.gr/>

Open Access Scientific Content – Kallipos
project and repository www.kallipos.gr

NTUA Open Courses

www.aoc.ntua.gr

- Open Access Scientific Content www.kallipos.gr
- National Repository of Doctorate Theses
<http://www.didaktorika.gr/eadd/>
- GFOSS – Open Technologies Alliance
www.ellak.gr
- Apella - <https://apella.minedu.gov.gr/>

The Diavgeia project

<https://diavgeia.gov.gr/>

The opengov project

<http://www.opengov.gr/home/>



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Petros Stefaneas and
Georgia Aggelaki

Open Science & the Role of Research Libraries

[> Science, technology and innovation policy](#)[> Industry and globalisation](#)[> Emerging technologies](#)[> Digital economy](#)[> Broadband and telecom](#)[> Consumer policy](#)[> Innovation policies for space and oceans](#)

Open Science

Open science encompasses unhindered access to scientific articles, access to data from public research, and collaborative research enabled by ICT tools and incentives. Broadening access to scientific publications and data is at the heart of open science, so that research outputs are in the hands of as many as possible, and potential benefits are spread as widely as possible:



- Open science promotes a more accurate verification of scientific results. By combining the tools of science and information technologies, scientific enquiry and discovery can be sped up for the benefit of society.
- Open science reduces duplication in collecting, creating, transferring and re-using scientific material.
- Open science increases productivity in an era of tight budgets.
- Open science results in great innovation potential and increased consumer choice from public research.
- Open science promotes citizens' trust in science. Greater citizen engagement leads to active participation in scientific experiments and data collection.

Horizon 2020



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Horizon 2020?

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Your area

How to
Get funding?

News, Events
& Publications

Projects

The next
Framework Programme

Sections navigation



Science with and for Society

Open Science (Open Access)



Find
Your area

Open Science (Open Access)

Article

Newsroom

The global shift towards making research findings available free of charge for readers, so-called 'Open access', has been a core strategy in the European Commission to improve knowledge circulation and thus innovation. It is illustrated in particular by the general principle for open access to scientific publications in Horizon 2020 and the pilot for research data.



Nowadays, it is widely recognised that making research results more accessible contributes to



#H2020

■ Horizon 2020

@EU_H2020

#Oceanenergy 🌊 What Impact has #EUfunded R&I had? Hear industry experts share their insights & join discussion on increasing the impact of your own research projects 📅 16 October, Brussels. Places still left! ec.europa.eu/research/energ... #renewables #cleanenergyEU #InvestEUresearch pic.twitter.com/pqA2bYcQrb

The European Open Science Ecosystem





e-Infrastructures

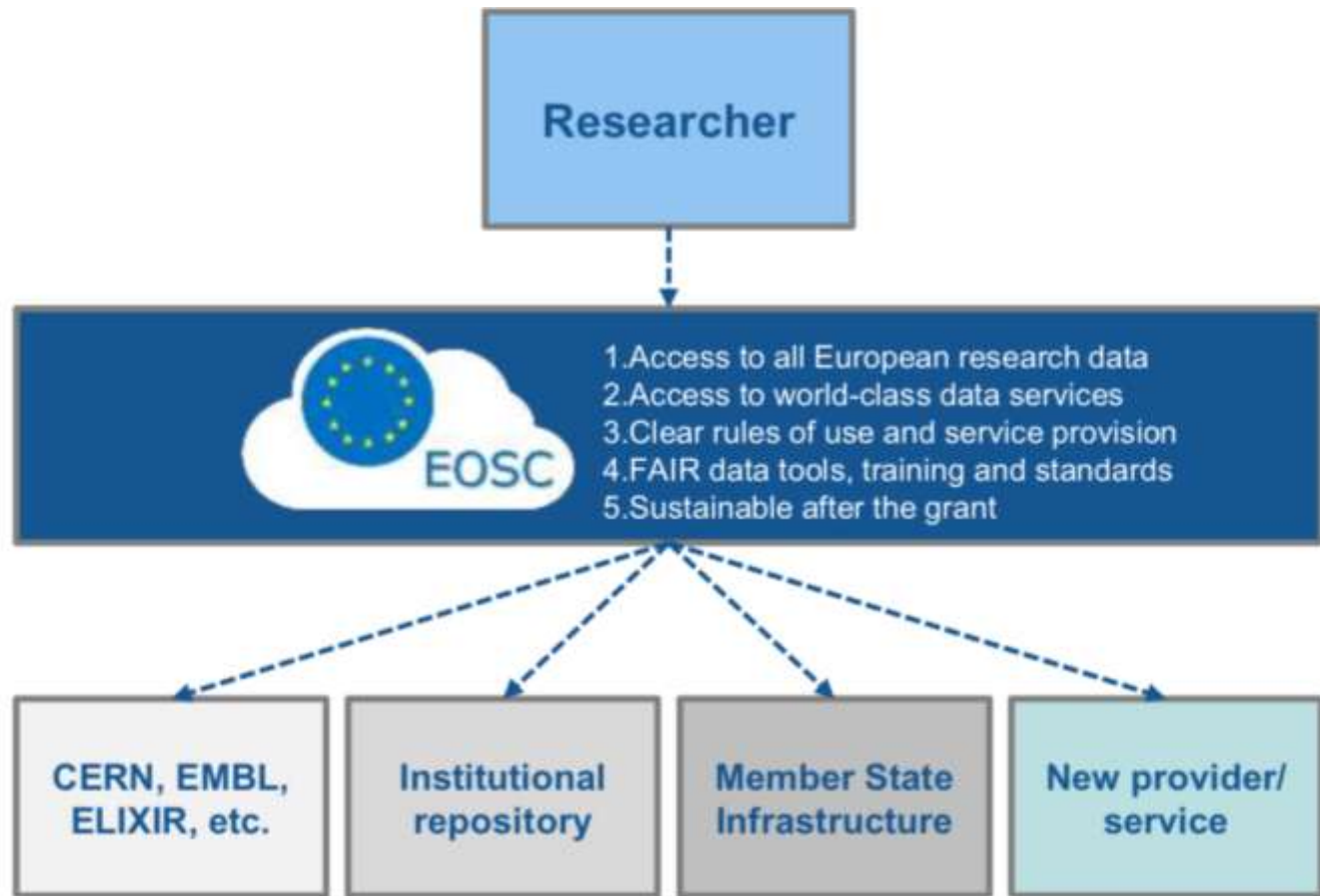


Applications
Computing
Software
Storage
Data



ESFRIs







EOSC Declaration (Autumn 2017-)

EOSC is a process
not a project

Data Culture & FAIR Data

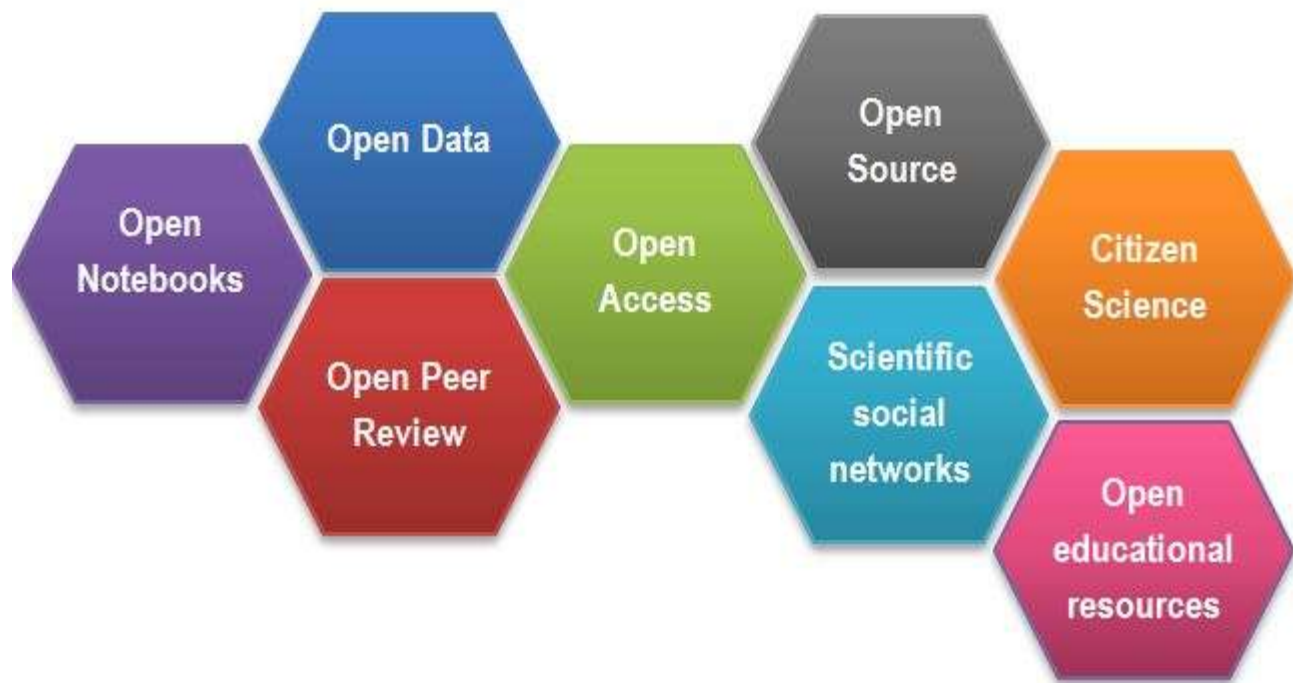
- Open by default
- Skills development
- FAIR principles
- Data Management Plans
- Engagement with researchers

Services & Architecture

- EOSC is an infrastructure commons
- EOSC to use existing high spec. services
- HPC to be developed in tandem

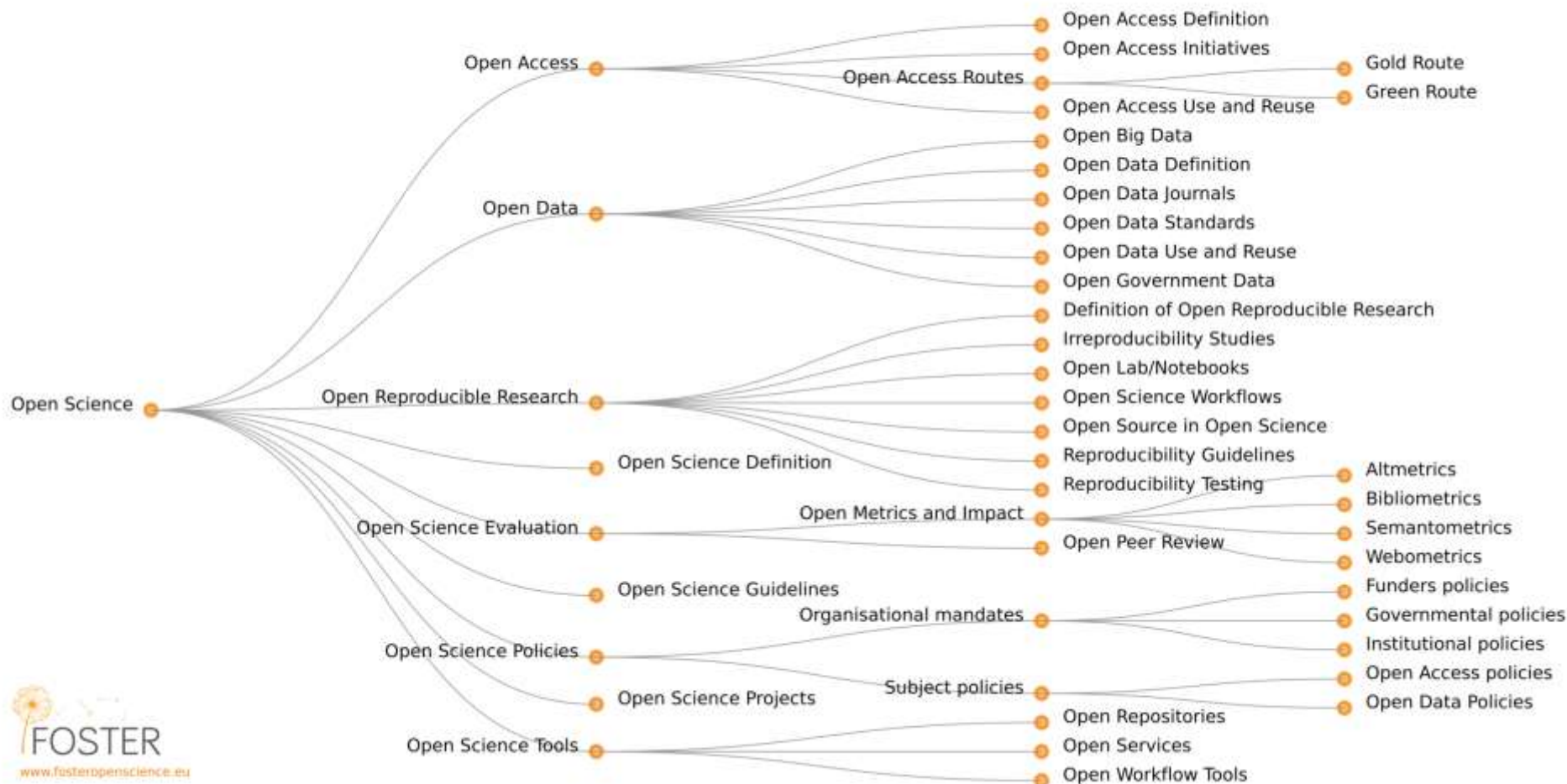
Governance & Funding

- Strong Governance model, but flexible
- 3 levels of membership – institutional, operational, advisory



“Libraries have adapted their role and are now active in the preservation, curation, publication and dissemination of digital scientific materials, in the form of publications, data and other research-related content. Libraries and repositories constitute the physical infrastructure that allows scientists to share use and reuse the outcome of their work, and they have been essential in the creation of the Open Science movement”
([OECD, 2015](#)).

Open Science Taxonomy



Role of Research Libraries In the OS landscape

- **Advocating and raising awareness:** promotion of the benefits of Open Science should take place in parallel with the development of tools and services, the incentives and recognition mechanisms that support excellence in Open Science. Libraries can advocate within institutions to develop open access policies and roadmaps. This will benefit not only researchers, but also other stakeholders at institutional level and international level, and even the whole society, promoting Open Science and engaging with citizens.
- **Giving support to the infrastructures** to share articles or data, including repositories; keeping with their involvement and responsibilities in the development and governance of repositories of publications and data, in regards to appraisal, selection, description and metadata application, curation and preservation; information retrieval; monitoring data reuse, citation and impact, etc.
- Contributing to the development of **research data management (RDM)** policies and strategies at their home institutions and carrying RDM themselves;
- **Training and supporting researchers** to open their research workflows, sharing and reusing the research outputs produced by others. Besides the necessary research infrastructure, researchers need support at a practical level throughout the whole research cycle. Librarians can offer guidance, training and services in: the provision of information during the exploratory stage of research; funding opportunities and requirements; bibliography and data management; applying metadata; identification of open research methods and tools for analysis; outputs sharing and publication; data citation, licensing and other intellectual property issues; preparing data for deposit and long-term preservation of data, among others. For these purposes, librarians need to know their community research practices in regards to information use, production, and sharing, and the platforms, tools and services that they use.

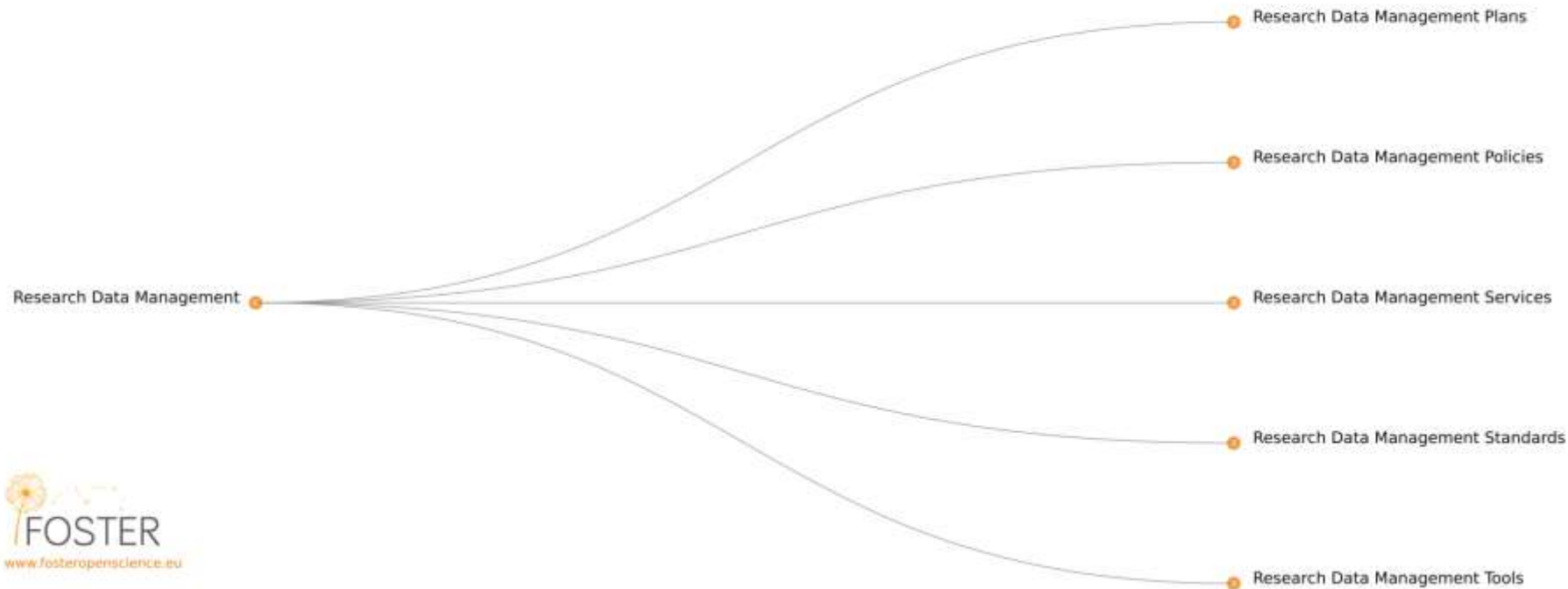
Skills

- Ability to advise on **preserving research outputs**;
- Knowledge to **advise on data management** and curation, including ingest, discovery, access, dissemination, preservation, and portability;
- Knowledge to **support researchers** in complying with the various **mandates of funders**, including open access requirements;
- Knowledge to advise on potential **data manipulation tools** used in the discipline/ subject;
- Knowledge to advise **on data mining**;
- Knowledge to advocate, and advise on, the use of **metadata**;
- Ability to advise on the **preservation of project records** (e. g. correspondence);
- Knowledge of **sources of research funding** to assist researchers to identify potential funders;
- Skills to develop **metadata schema, and advise on discipline/subject standards and practices**, for individual research projects.

Source Re-skilling for research: An investigation into the role and skills of subject and liaison librarians required to effectively support the evolving information needs of researchers, Research Libraries UK



Research Data Management Taxonomy



FAIR Principles

Make your data:

- **F**indable
- **A**ccessible
- **I**nteroperable
- **R**eusable

Findable

- Descriptive metadata
- Persistent Identifiers

Accessible

- Determining what to share
- Participant consent and risk management
- Access status

Interoperable

- XML standards
- Data Documentation Initiative
- CDISC

Reusable

- Rights and licence models
- Permitted and non-permitted use

<http://datafairport.org/>





Welcome to NNLM RD3

The National Network of Libraries of Medicine aims to support data sharing and open science, and foster the development of professionals in data science. This resource supports advancing data science, open science & biomedical informatics through aggregate data resources, programs and services across NNLM.



NNLM RD3: Resources for Data-Driven Discovery

The NNLM supports access to biomedical and health information with the goal of making data discoverable, accessible, and citable. NNLM RD3:

The National Library of Greece

- Founded in 1832
- Mission: *to collect, organize, safekeep, preserve, and offer open and equal access for all, to every work of science and culture produced in Greece, or internationally, relating to the Hellenic world.*
- <1m items (first copy) mainly due to legal deposit mandate
- 116 archives and different special collections (maps, engravings, etc)
- 17.500 unique and valuable treasures









NLG premises at the SNFCC

- 22.000m² National Library space
- 5,000m² public lending department
- 8 reading rooms
- State-of-the-art preservation facility
- State-of-the-art digitization facility
- Conference rooms
- Radio station
- Makerspace
- Co-working spaces

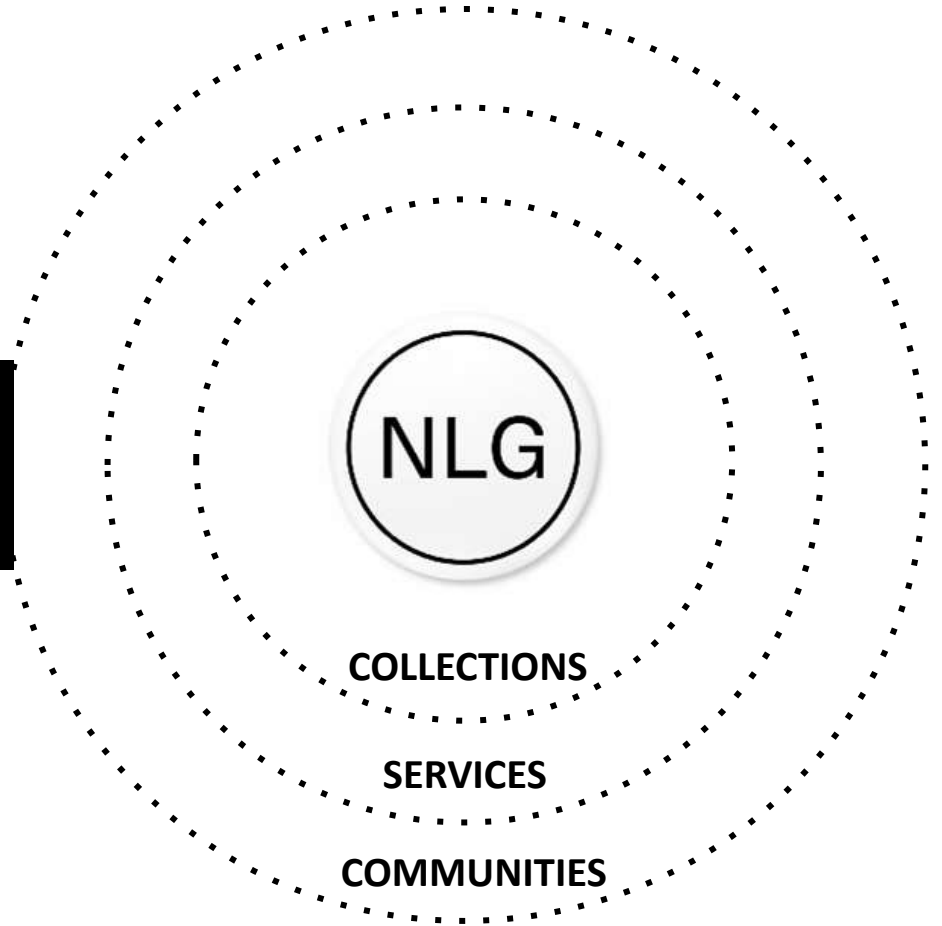


Transition Challenges

- 100 staff (of which half are teachers seconded on an annual basis), unspecialised and near-to-retirement
- The lowest annual budget among all NLs in Europe
- No new books acquisitions since a couple of decades
- Outdated and limited IT infrastructure and no in-house developer

EBE NLG → Transition





The National Library of Greece Transition Programme to the Stavros Niarchos Foundation Cultural Center 2015-2018

Beneficiary

Εθνική Βιβλιοθήκη  της Ελλάδος
National  Library of Greece

Grant Management



FRIENDS & PATRONS OF THE
STAVROS NIARCHOS FOUNDATION
CULTURAL CENTER

Exclusive Donor


ΙΔΡΥΜΑ ΣΤΑΥΡΟΣ ΝΙΑΡΧΟΣ
STAVROS NIARCHOS
FOUNDATION

Transition Programme Facts & Figures

- €5m grant
- 3 years
- 50 projects through closed tender processes
- 167 contracts: S,M and International companies, Universities, Publishers, ICT, individual experts
- 400 external collaborators
- 150 library staff
- Tight project management and quality assurance processes!

COLLECTIONS

EBE NLG → Transition

Mission

- prepare all collections for their relocation to the new premises by
 - ensuring safe transfer through a unique ID
 - ensuring permanent and efficient control and inventorisation of all material for the future

Goals

- clean, conserve, document, classify, identify all items
- optimize access points for the end user
- enrich the collections with international acquisitions

Collections Preparation & Processing



Tagging
Preparation

RFID
Tagging

ILS
Identification

Record
Correction

Record
Creation

Books
Cover
Digitization

Re-
Classification



Collections Development



- Enrichment of the treasures collection by 12.000 items
- Purchase of 2.500 new books with an emphasis on Greek Studies
- Perpetual access to 11

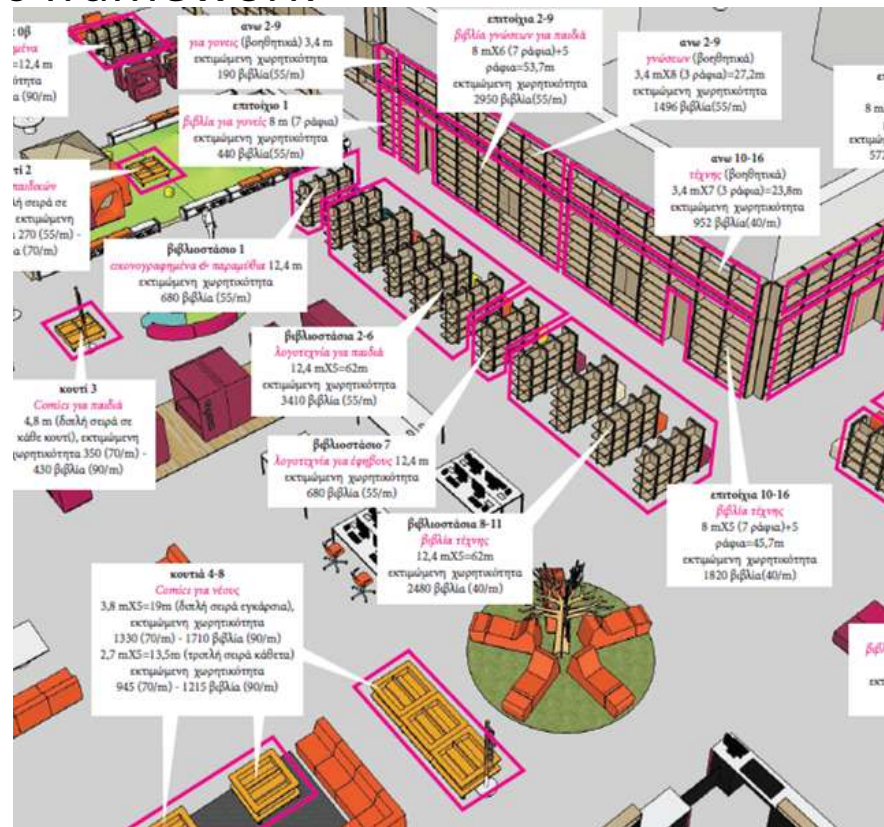
Public Library strategic framework

Main NLG reception area and outreach channel
for all NLG departments

Incubator of future NLG researchers, creators,
explorers

Experimental space for the future of Public
Library services

Physical hub of Greek Libraries Network



Internal Transition Workshops & Staff Training



Internal Transition Workshops & Staff Training



- Internal transition and change management
 - coaching services for executive staff
 - 7 half-day internal transition participatory workshops
 - 30 weekly two-hour mutual teaching seminars
- Adoption of tools and processes for remote co-working and improved internal communication
 - basecamp
 - google docs
 - skype

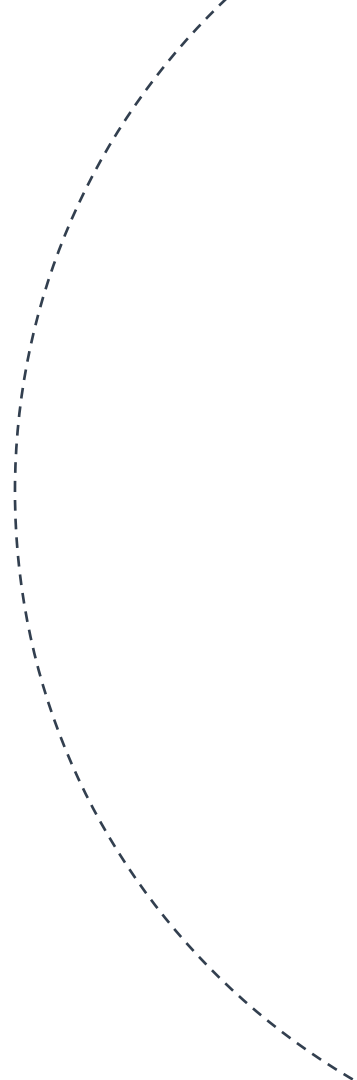
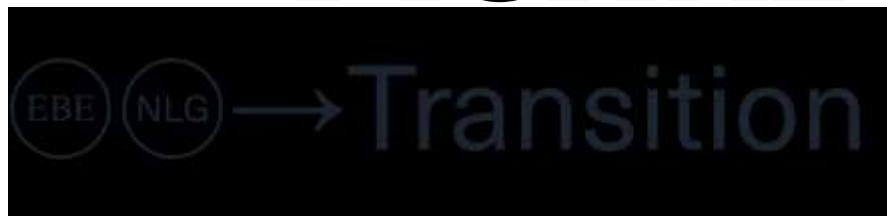
NLG Pilot operation at SNFCC

service design workshops

- Cross-departmental participatory design workshops
- Role-playing and simulation exercises to map user journey and define interaction points in physical and digital space
- Identification of gaps and issues, prioritisation of needs
- Development of NLG Service Design Toolkit



DIGITAL



Vision

→ create a **state-of-the-art national e-infrastructure 1.0** that can:

- deliver the unique services mandated in the law
- serve the diverse internal and external audiences both locally and remotely

Mission

- upgrade the existing and build new digital services for end-users
- modernise and automate organisational workflows and operations
- expand the IT infrastructure

From books to big data

Collection

Digitisation, Digital legal deposit, Web harvesting

Digital Curation

Digital preservation

Enrichment

Semantic Web, Crowdsourcing

Processing

OCRing, Text & Data Mining, Machine-learning
and Artificial Intelligence

Re-use

APIs, Linked Data, etc

Data needs to be:

- authoritative
- standardised
 - persistent
- processable
 - open
 - secure
 - re-usable
- interconnected

Καζαντζάκης

NLG Catalog / Browse Author/ISBN

Search: Καζαντζάκης

Suggested Topics within your search:

Καζαντζάκης Παναγιώτης
(1893-1957) Καζαντζάκης Παναγιώτης
(1893-1957) Καζαντζάκης Παναγιώτης
(1893-1957) Καζαντζάκης Παναγιώτης
(1893-1957) Καζαντζάκης Παναγιώτης

Showing 1 - 20 results of 144 for search: Καζαντζάκης

1 2 3 4 5 6 7



Καζαντζάκης: Ποίηση
By Σπ. Σπ. Παναγιώτης
Published 1999
1. Καζαντζάκης Παναγιώτης
Call Number: Π9-1215-558
Location: ΕΙΣΙΤΗΡΙΟ ΒΙΒΛΙΟΘΗΚΗΣ

Book Available

Είδη των εγγραφών: Εισαγωγικές ISBN-10/ISBN-13 Αναδρομικές Εισαγωγικές Διαδρομικές Εισαγωγικές

Όροι αναζήτησης

Αναζήτηση

Αποτελέσματα

Ελληνικό Κέντρο ISBN - ISMN - ISSN

Το Ελληνικό Κέντρο ISBN-ISMN-ISSN, από το 1982, το οποίο είναι μέλος του Διεθνούς Κέντρου ISBN (International ISBN Centre), παρέχει σε όλους τους ενδιαφερόμετους τον χώρο της εκδόσεως, με βάση τον Εθνικό Κώδικα ISBN, τον ISMN και τον ISSN.

Με βάση τις νέες οδηγίες, προκειμένου να γίνει η επεξεργασία των δεδομένων των εκδόσεων, οι ενδιαφερόμετοι μπορούν να υποβάλουν τις πληροφορίες τους μέσω του διαδικτύου.

Η διαδικασία των εγγραφών είναι απλή και εύκολη.

Τακτικές Καταχωρήσεις

ISBN-10-13-14-15
ISBN-10-13-14-15
ISBN-10-13-14-15
ISBN-10-13-14-15
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ISBN-10-13-14-15
ISBN-10-13-14-15

Τακτικές Επανεγγραφές Εισαγωγικών



Η ΕΒΕ

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- Αναζήτηση
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Ανάλυση: Εισαγωγή των δεδομένων των εκδόσεων

Είδη των εγγραφών: Εισαγωγικές ISBN-10/ISBN-13 Αναδρομικές Εισαγωγικές Διαδρομικές Εισαγωγικές



Εθνική Βιβλιοθήκη της Ελλάδος National Library of Greece

Manage account Register as:

α → Registered User

Registered Users have access to all of the electronic services offered

Register

β → Simple User

REFERENCES

Κατὴν Διοίκησιν / Ἄγρο Ὀφρὸς 1896-1899



EBE 2645

ПЕРЕХОМЕНА

44

EBE 2645

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NLD 284...

11.03.2004



NLG 204

3. 12. 2004



PA 13 254

v1.0: 2004



3. Innovation Projects

→ web archiving

→ e-lending

→ national cataloguing center

EBE

NLG

Menu

Συλλογές

- Επιλεκτική συλλογή
- Μαζική συλλογή
- Χρονοδιαγράμματα
- Εύρεση ιστότοπου
- Ορισμός ιστότοπου
- Στατιστικά ιστοτόπων
- Επεξεργασία προτύπου συλλογής
- Παγίδες συλλέκτη

Ιστορικά

- Κανάλια συλλογής
- Βήματα ενεργοποίησης
- Διασφάλιση ποιότητας
- Κατάσταση συστήματος

Εύρεση ιστότοπου

Εισάγετε ερώτημα

Αναζήτηση ιστοτόπων με βάση

Ημερομηνία Συλλογής

Από:

Έως:

National Web Archiving Infrastructure

- Biggest available digital corpus in Greek
- Prototype graph of the Greek web

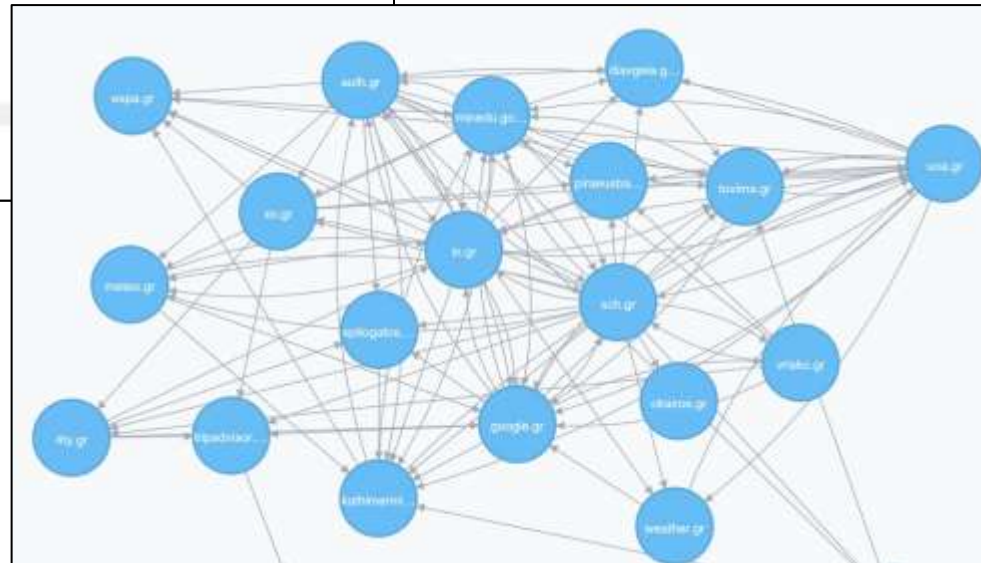


Figure 4

Investment	Operating	Non-operating
Capital assets		

56



99



99

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Regulation 12(1)(b)
Collective Duty Enforcement by Police
Investigation Note

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doi:10.1017/S002229240000209

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