

Open Science as a cultural basis in Digital Economy

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Since 2013 trainings and consulting on Open Data, Data Science and Open Education:

- United Nation
- World Bank
- ITMO University
- Higher School of Economics
- European University
- St. Petersburg State University

Workshops and lecturing both in English and Russian

Guest lecturing in foreign universities, webinars and hackathons





Open Knowledge Foundation – 2012
Open Data Institute (ex-Moscow ODI Node,
St. Petersburg ODI Node) – 2013
Open Data School – 2013 (Moscow)
School of Data – Data Expedition – 2013
Webinar on Linked Open Data for FAO United Nation – 2013
Open Knowledge Festival (Open Education working group,
Open Science working group) – 2014
Open Data day in Oxford – 2014 (Open Science working group)
Central Asian Hackathon (World Bank) – 2015
Hackathon in Uzbekistan (United Nation) – 2016
International Workshop on Open Data (SPb State University) – 2016

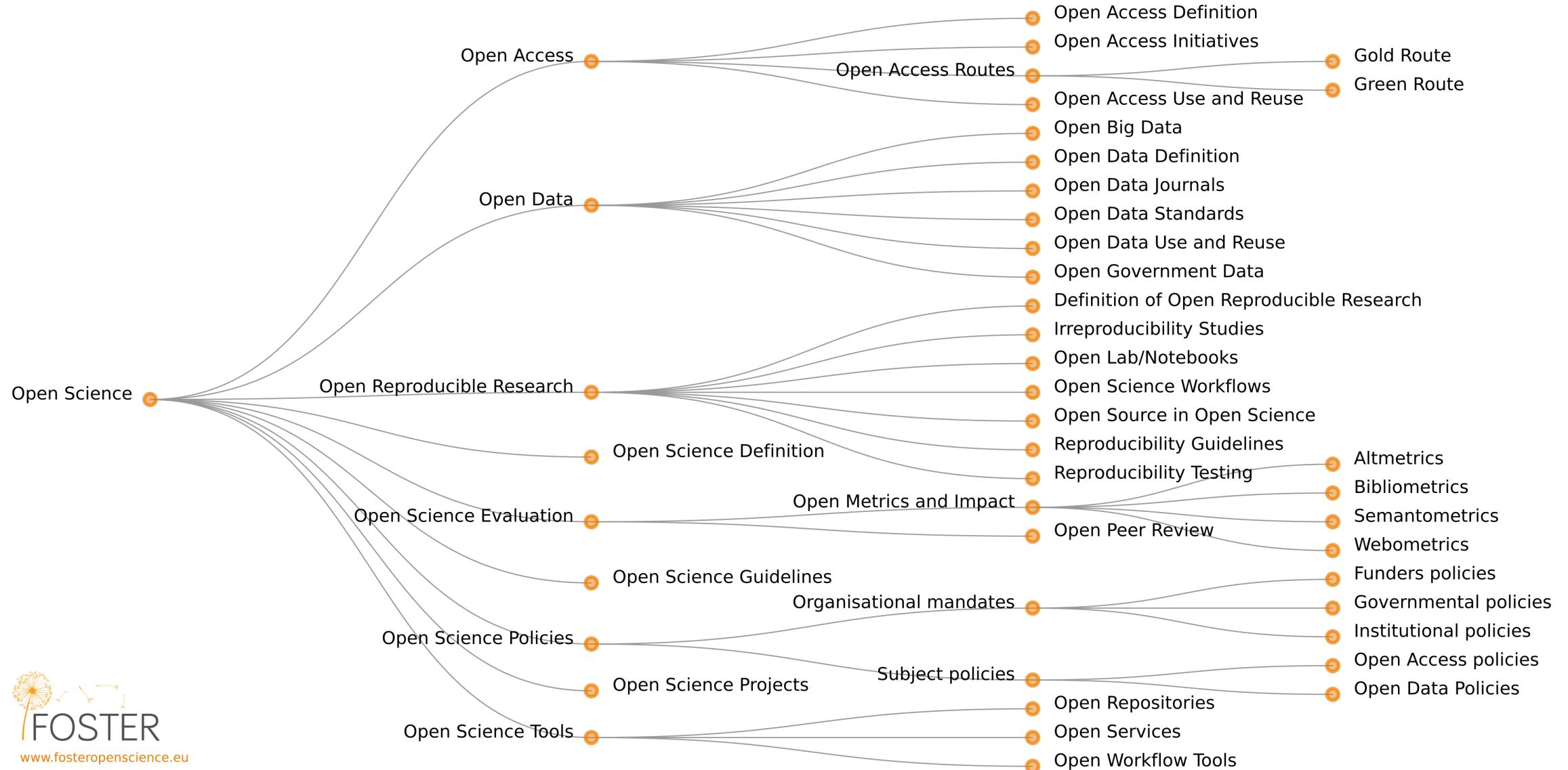


What is Open Science?



- **Open science** is the movement to make scientific research, data and dissemination **accessible to all levels** of an inquiring society, amateur or professional.
- It encompasses practices such as publishing **open research**, campaigning for **open access**, encouraging scientists to practice **open notebook science**, and generally **making it easier to publish and communicate scientific knowledge**.

Open Science Taxonomy



Three main stages in e-infrastructure development. Technical basis of Digital Economy

USING OPEN SCIENCE APPROACH AS A MAIN PARADIGM

1 Environment: Internet development

[Docs] [txt|pdf] [draft-ietf-httpbis...] [Diff1] [Diff2] [Errata]

PROPOSED STANDARD
Errata Exist
Internet Engineering Task Force (IETF)
Request for Comments: 7231
Obsoletes: 2616
Updates: 2817
Category: Standards Track
ISSN: 2070-1721

R. Fielding, Ed.
Adobe
J. Reschke, Ed.
greenbytes
June 2014

Hypertext Transfer Protocol (HTTP/1.1): Semantics and Content

Abstract

The Hypertext Transfer Protocol (HTTP) is a stateless application-level protocol for distributed, collaborative, hypertext information systems. This document defines the semantics of HTTP/1.1 messages, as expressed by request methods, request header fields, response status codes, and response header fields, along with the payload of messages (metadata and body content) and mechanisms for content negotiation.

Status of This Memo

This is an Internet Standards Track document.

This document is a product of the Internet Engineering Task Force (IETF). It represents the consensus of the IETF community. It has received public review and has been approved for publication by the Internet Engineering Steering Group (IESG). Further information on Internet Standards is available in [Section 2 of RFC 5741](#).

Information about the current status of this document, any errata, and how to provide feedback on it may be obtained at <http://www.rfc-editor.org/info/rfc7231>.

[cs] [txt|pdf] [draft-ietf-httpbis...] [Diff1] [Diff2] [Errata]

PROPOSED STANDARD
Errata Exist
Deleted by: 7230, 7231, 7232, 7233, 7234, 7235
Revised by: 2817, 5785, 6266, 6585
Category: Standards Track

R. Fielding
UC Irvine
J. Gettys
Compaq/W3C
J. Mogul
Compaq
H. Frystyk
W3C/MIT
L. Masinter
Xerox
P. Leach
Microsoft
T. Berners-Lee
W3C/MIT
June 1999

Hypertext Transfer Protocol -- HTTP/1.1

Abstract

This document specifies an Internet standards track protocol for the Internet community, and requests discussion and suggestions for improvements. Please refer to the current edition of the "Internet Official Protocol Standards" (STD 1) for the standardization state and status of this protocol. Distribution of this memo is unlimited.

Copyright Notice

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[txt|pdf]

INFORMATIONAL
V. Cerf
MCI
October 1998

Work Working Group
Request for Comments: 2468
Category: Informational

I REMEMBER IANA
October 17, 1998

Abstract

This memo provides information for the Internet community. It does not specify an Internet standard of any kind. Distribution of this memo is unlimited.

Copyright Notice

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Text

A long time ago, in a network, far far away, a great adventure took place!

In the chaos of new ideas for communication, the experiments, the tentative designs, and crucible of testing, there emerged a cornucopia of networks. Beginning with the ARPANET, an endless stream of networks evolved, and ultimately were interlinked to become the Internet. Someone had to keep track of all the protocols, the identifiers, networks and addresses and ultimately the names of all the things in the networked universe. And someone had to keep track of all the information that amounted with volanica force from the

<https://tools.ietf.org/html/rfc7231>

<https://tools.ietf.org/html/rfc2616>

<https://tools.ietf.org/html/rfc2468>

2 Internet of Things

1999!

**“THE INTERNET OF THINGS IS
ABOUT EMPOWERING COMPUTERS
...SO THEY CAN SEE, HEAR
AND SMELL THE WORLD FOR
THEMSELVES”**

**KEVIN ASHTON
INVENTOR OF THE TERM
“INTERNET OF THINGS”**



3 Cloud computing

Open source software for creating private and public clouds.

OpenStack software controls large pools of compute, storage, and networking resources throughout a datacenter, managed through a [dashboard](#) or via the [OpenStack API](#). OpenStack works with [popular enterprise and open source technologies](#) making it ideal for heterogeneous infrastructure.

[Hundreds of the world's largest brands](#) rely on OpenStack to run their businesses every day, reducing costs and helping them move faster. OpenStack has a strong [ecosystem](#), and users seeking commercial support can choose from different OpenStack-powered products and services in the [Marketplace](#).

The software is built by a [thriving community](#) of developers, in collaboration with users, and is designed in the open at our [Summits](#).



Latest Release: [Pike](#) (August 2017)

<https://www.openstack.org/>

The image shows the top portion of the CERN website. The header includes the CERN logo and the tagline "Accelerating science". Below the header, a navigation bar offers links to "About CERN", "Students & Educators", "Scientists", and "CERN community". A large, bold title "The Large Hadron Collider" is displayed prominently. To the left of the main content area, there is a sidebar with the text "This content is archived on the CERN Document Server".

TOPIC **The Large Hadron Collider**

This content is archived on the CERN Document Server

The Large Hadron Collider (LHC) is the world's largest and most powerful [particle accelerator](#). It first started up on 10 September 2008, and remains the latest addition to CERN's [accelerator complex](#). The LHC consists of a 27-kilometre ring of superconducting magnets with a number of accelerating structures to boost the energy of the particles along the way.

Inside the accelerator, two high-energy particle beams travel at close to the speed of light before they are made to collide. The beams travel in opposite directions in separate beam pipes – two tubes kept at [ultrahigh vacuum](#). They are guided around the accelerator ring by a strong magnetic field maintained by [superconducting electromagnets](#). The electromagnets are built from coils of special electric cable that

<http://home.cern/topics/large-hadron-collider>