

Global Computing

at the heart of

Universal Science

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What do I do?

Collaborate with other Research Communities to make Science more open and secure.



Specialist in Digital Trust and Identity

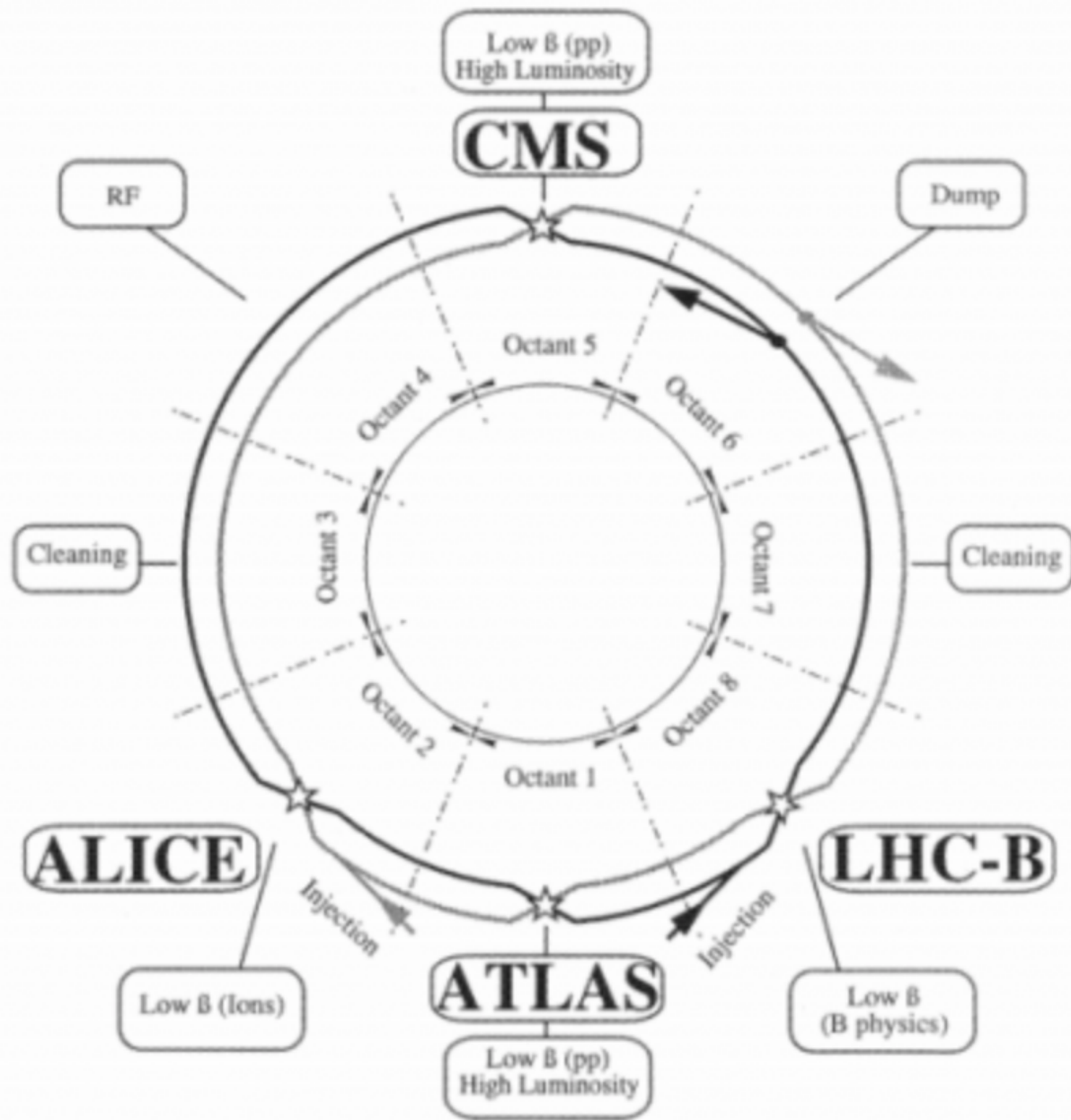


Figure 1: Schematic layout of the LHC

Supply - Demand = ?

Data Sharing

Data starts pouring out of experiments and needs to be made available to scientists...

- How can we store it?
- How can we transfer it?
- How can they analyse it?





1960s



1980s

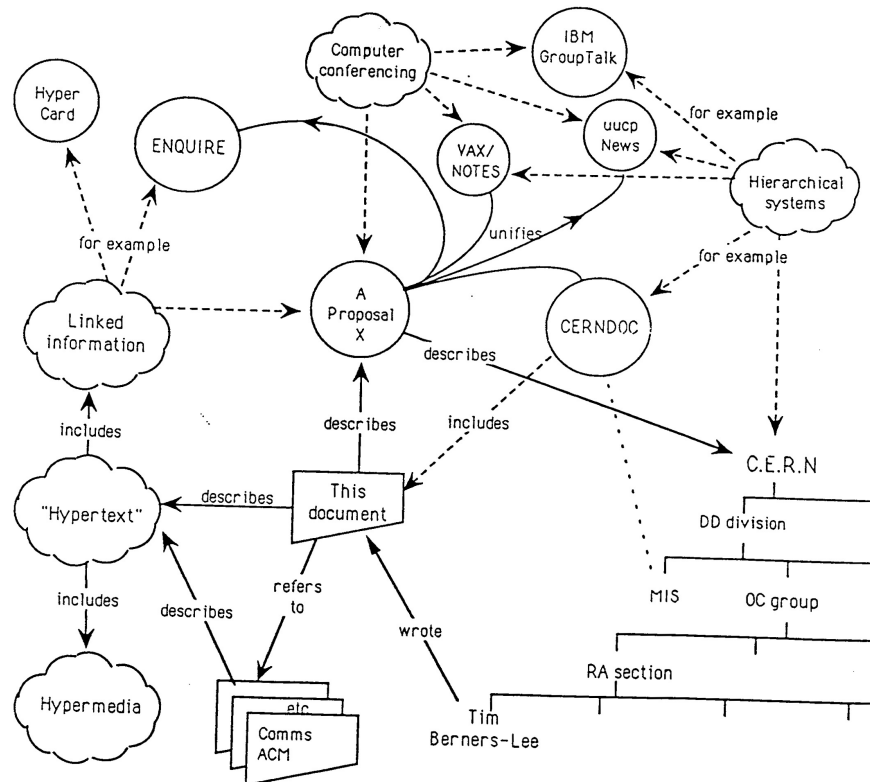
Vague but exciting ...

Information Management: A Proposal

Abstract

This proposal concerns the management of general information about accelerators and experiments at CERN. It discusses the problems of loss of information about complex evolving systems and derives a solution based on a distributed hypertext system.

Keywords: Hypertext, Computer conferencing, Document retrieval, Information management, Project control



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The World Wide Web project

WORLD WIDE WEB

The WorldWideWeb (W3) is a wide-area hypermedia[1] information retrieval initiative aiming to give universal access to a large universe of documents.

Everything there is online about W3 is linked directly or indirectly to this document, including an executive summary[2] of the project, Mailing lists[3] , Policy[4] , November's W3 news[5] , Frequently Asked Questions[6] .

What's out there?[7]Pointers to the world's online information, subjects[8] , W3 servers[9], etc.

Help[10] on the browser you are using

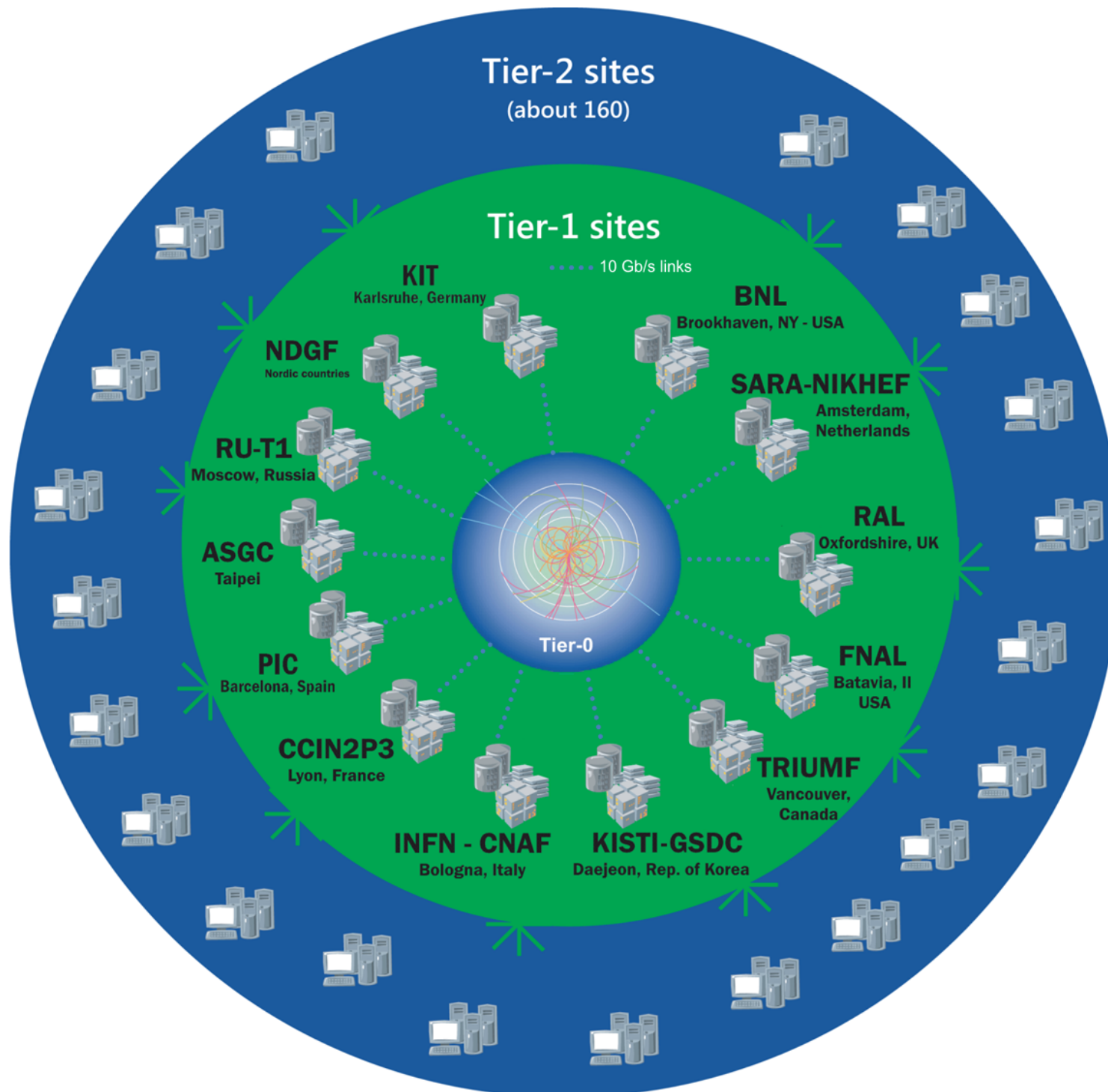
Software Products[11] A list of W3 project components and their current state. (e.g. Line Mode[12] ,X11 Viola[13] , NeXTStep[14] , Servers[15] , Tools[16] , Mail robot[17] , Library[18])

Technical[19] Details of protocols, formats, program internals etc

<ref.number>, Back, <RETURN> for more, or Help: █

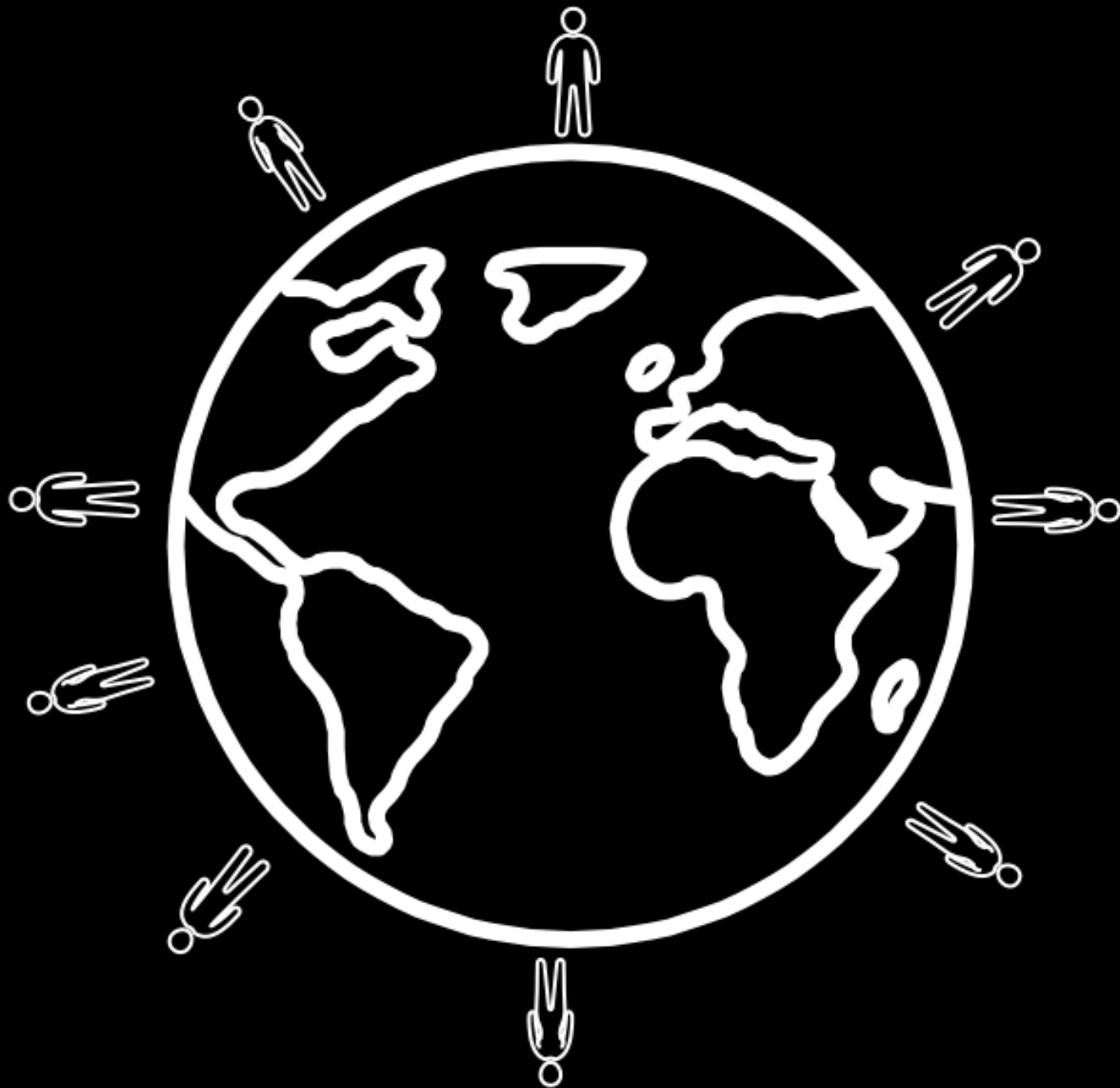


2000s

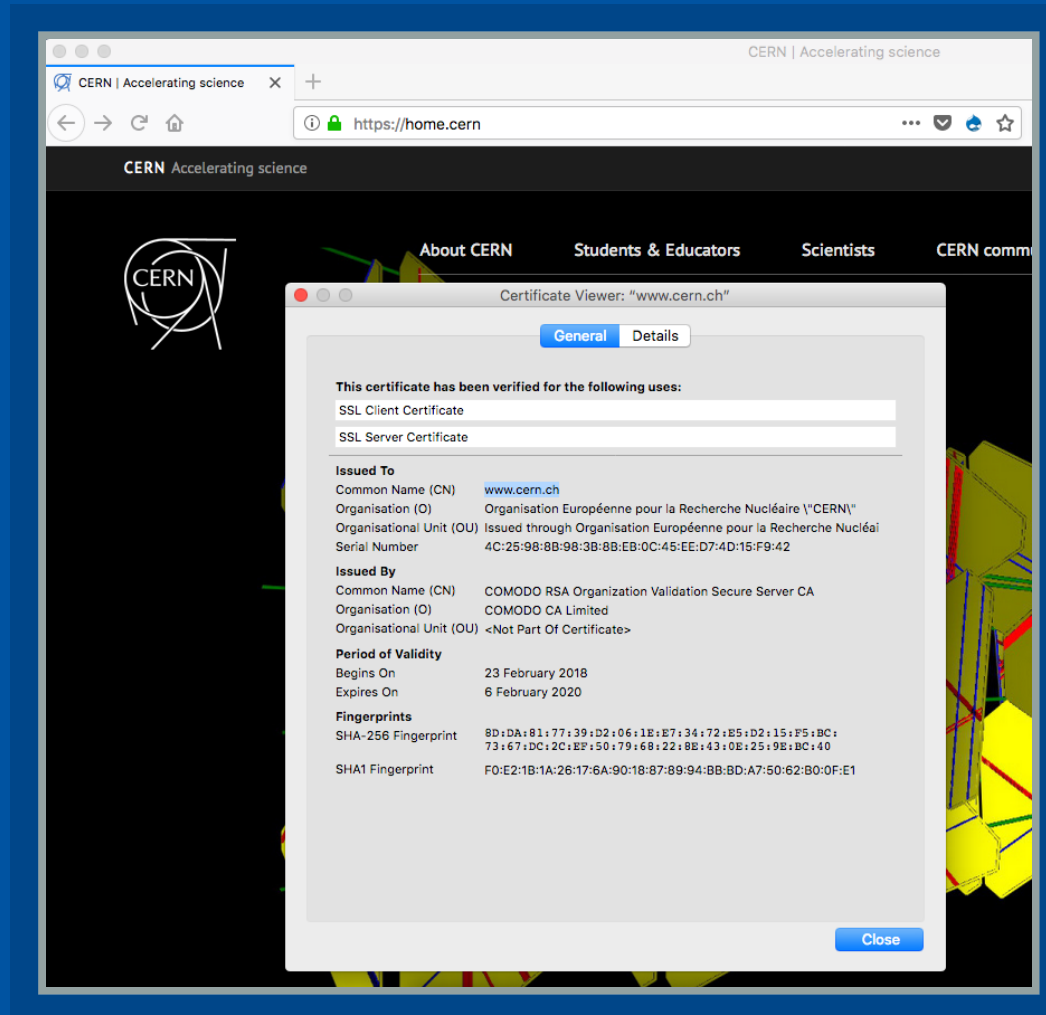


2000s

	Field	Users	Countries	Sites
LIGO	Gravitational Waves	1,200	20	9
WLCG (CERN)	High Energy Physics	13,000	43	170
ESGF	Climate Science	17,000	13	18



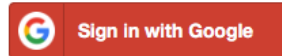
Researcher Access



Researcher Access



Select your identity provider



or

your institutional account

Université de Genève

Université de Lausanne

Université de Neuchâtel

Université de Paris 6 - Pierre et Marie Curie

2020s

- High-luminosity LHC
- 500 PB expected annually
- How will CERN and its collaborators cope?



2020s

- Improved data selection and filtering
- Efficient coding
- Joint R&D with academia and private sector
- Volunteer computing



Why does this matter?

**Collaboration and Diversity
are at the heart of Global
Computing for Universal
Science**

Credits

- Pictures from CERN CDS and from GEANT
- Statistics from other experiments fim4r.org
- WLCG wlcg-public.web.cern.ch