

Computing for the general public at CERN's Science Gateway

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What is CERN's Science Gateway?

- CERN's flagship education and outreach facility
- Exhibitions (age 8+), Labs (age 5+), and Events
- Currently in design phase
- Officially launched in April 2019
- Objective: encourage young people to aim for careers in science, technology, engineering and mathematics (STEM).

Why Dedicated Computing Exhibits?

- Existing CERN Computing outreach activities (largely driven by volunteers) experience high demand and interest
 - E.g. by the Women in Technology Community, CERN Microclub, Expanding your Horizons
- Concern over future applicant pool for computing roles; both technical relevancy and diversity
- Computing literacy increasingly required for all scientific domains



Could data be modeled like water? Flowing from one point to another, variable flow rates, need to avoid bottlenecks (!)...

create a binary representation of a live image, let people see how data looks to a machine...

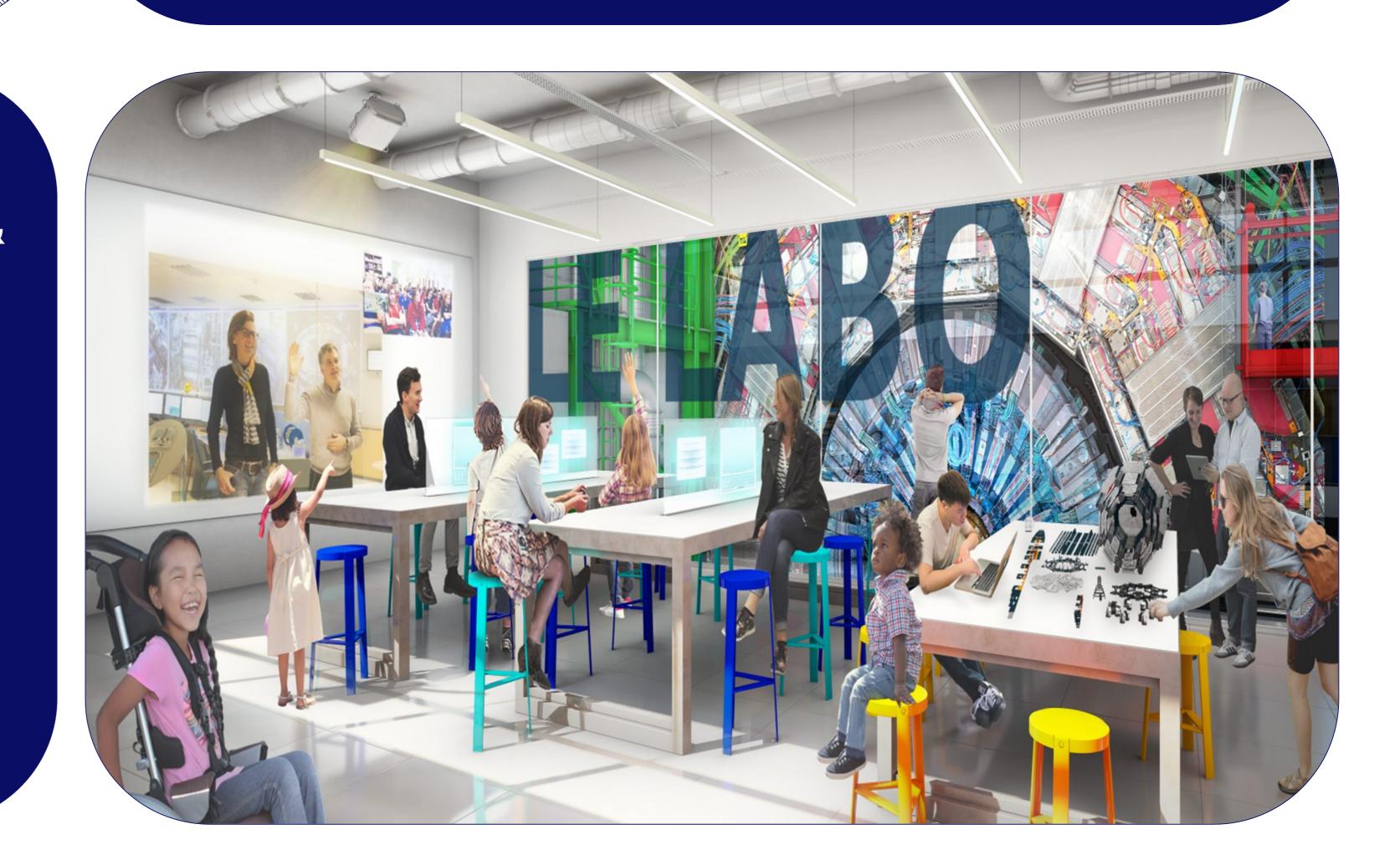
X.509 Certificates have been essential for grid computing, why not let the visitors generate their own certificate?

Exhibit Idea Generation

- Workshop in March 2019
- 14 CERN participants with backgrounds in Computer Science and Outreach
- Session moderated by external experts
- 3 categories
 - 1. What is data?
 - 2. How is data stored and accessed?
 - 3. CERN Technologies
- Objective: explore initial concepts for hands-on computing exhibits for the Science Gateway

Exhibit Development

- Analyse real process, identify main points & messages
- Translate into draft scenario
- Test with public
 - do they understand what to do?
 - do they get the main message?
- Refine, if needed repeat previous step
- Develop exhibit
- Test again
- Finalise exhibit



Science Gateway Timeline

2019

2020

2021

2022

