



# Campfire on Interoperability and APIs

Input from *Hugo G. Labrador, Diogo Castro, Giuseppe Lo Presti*

*pp collision, ATLAS detector, Oct 2017*

28/01/2020

CS3 Workshop, DeiC, Copenhagen

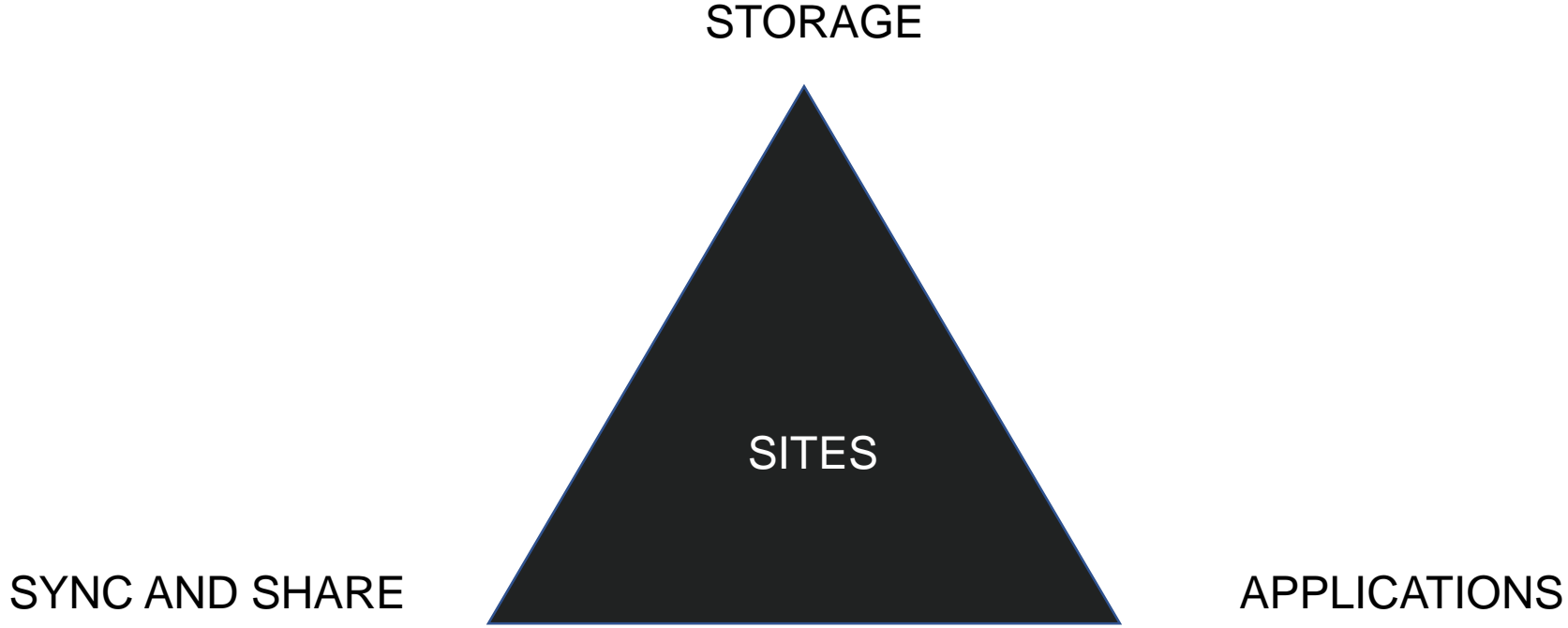
# CS3 APIs

## From the community to the community

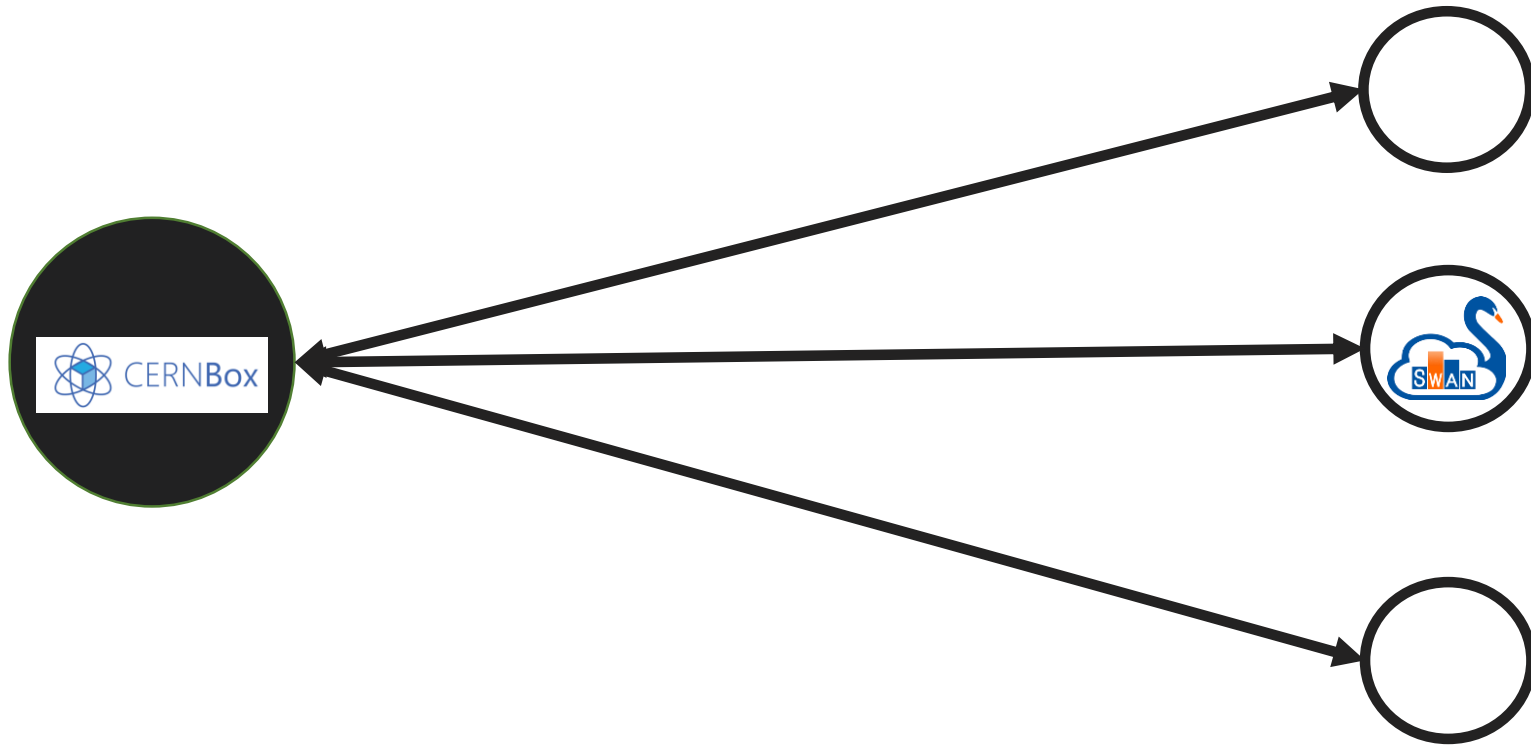
Hugo G. Labrador



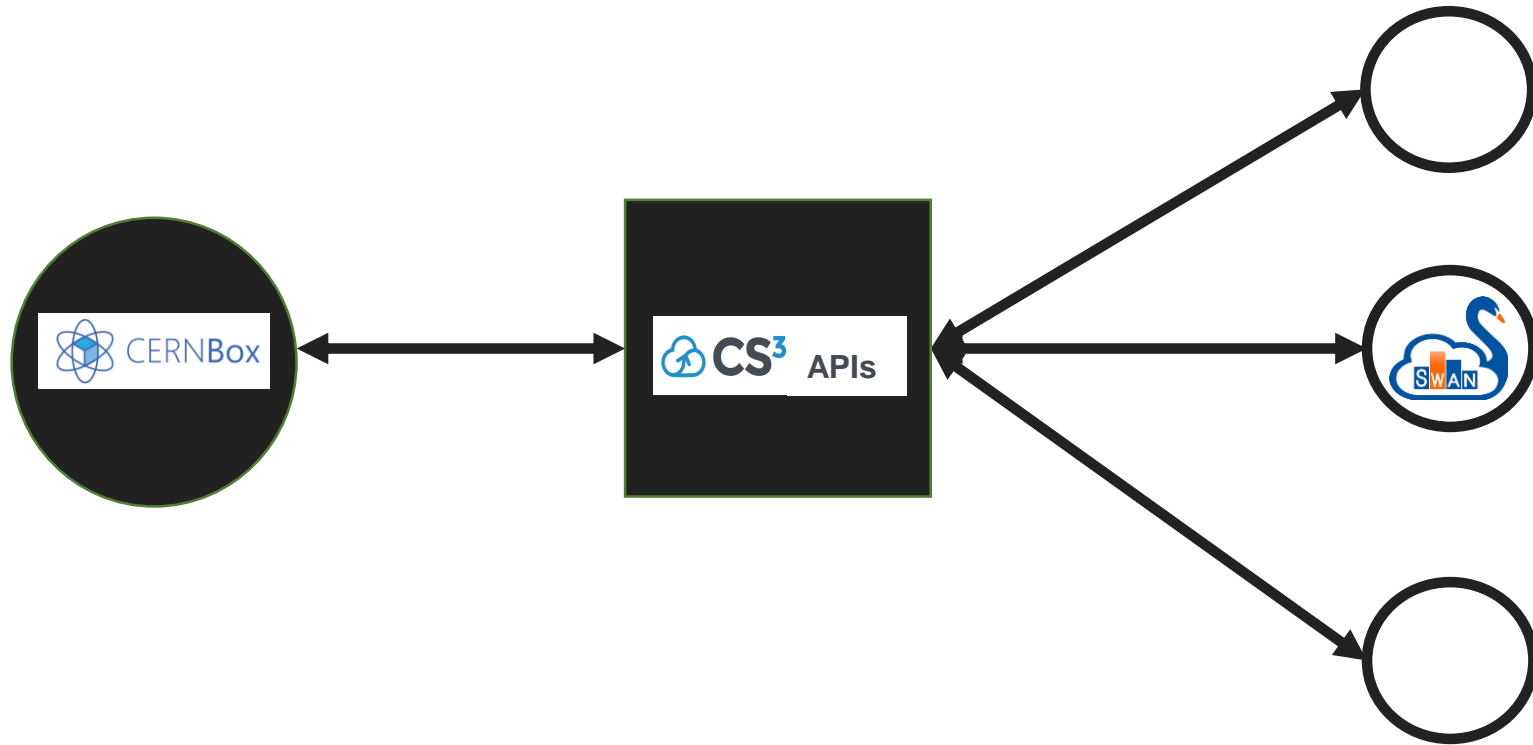
# From the community



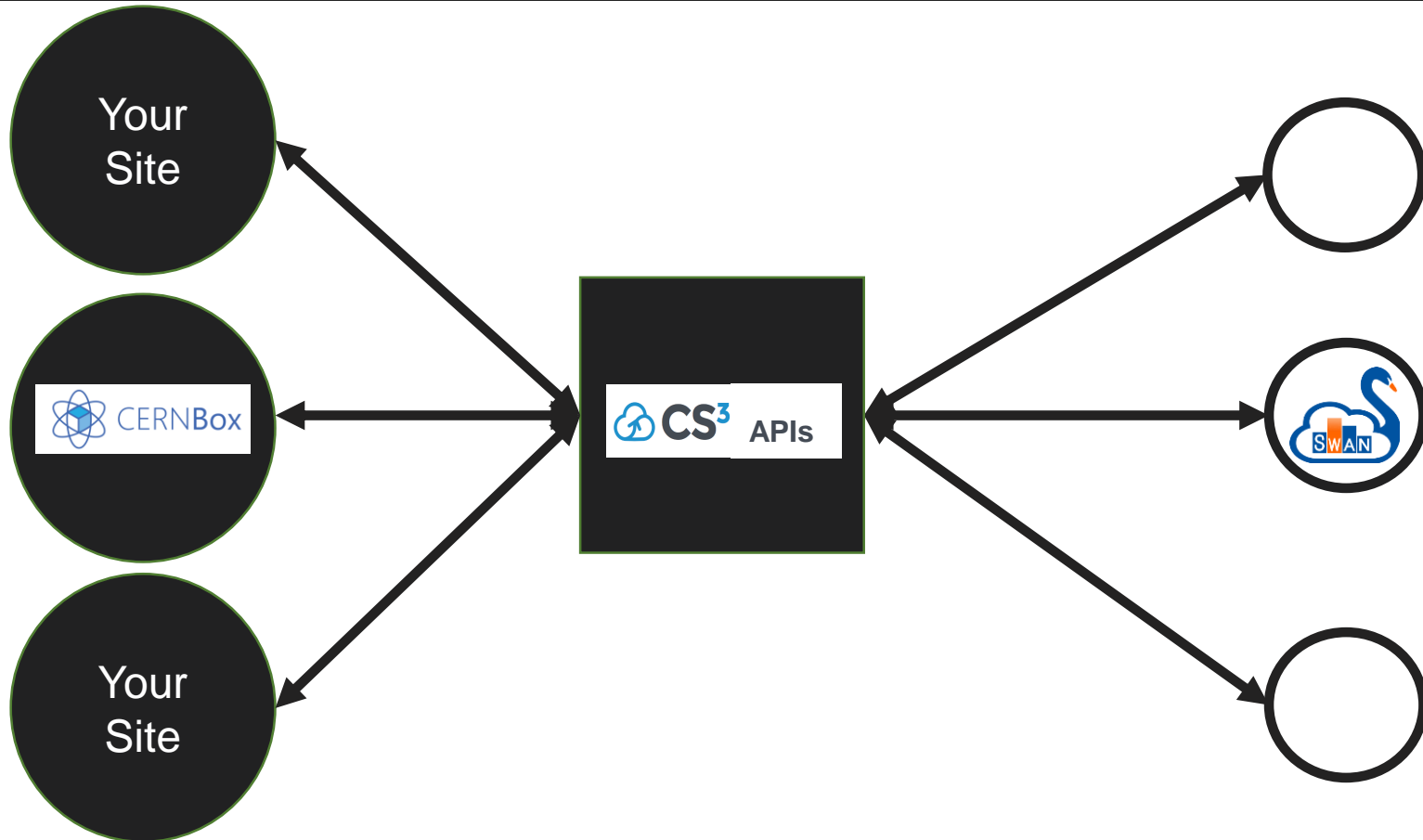
# #1 Connect to Research and Science Services



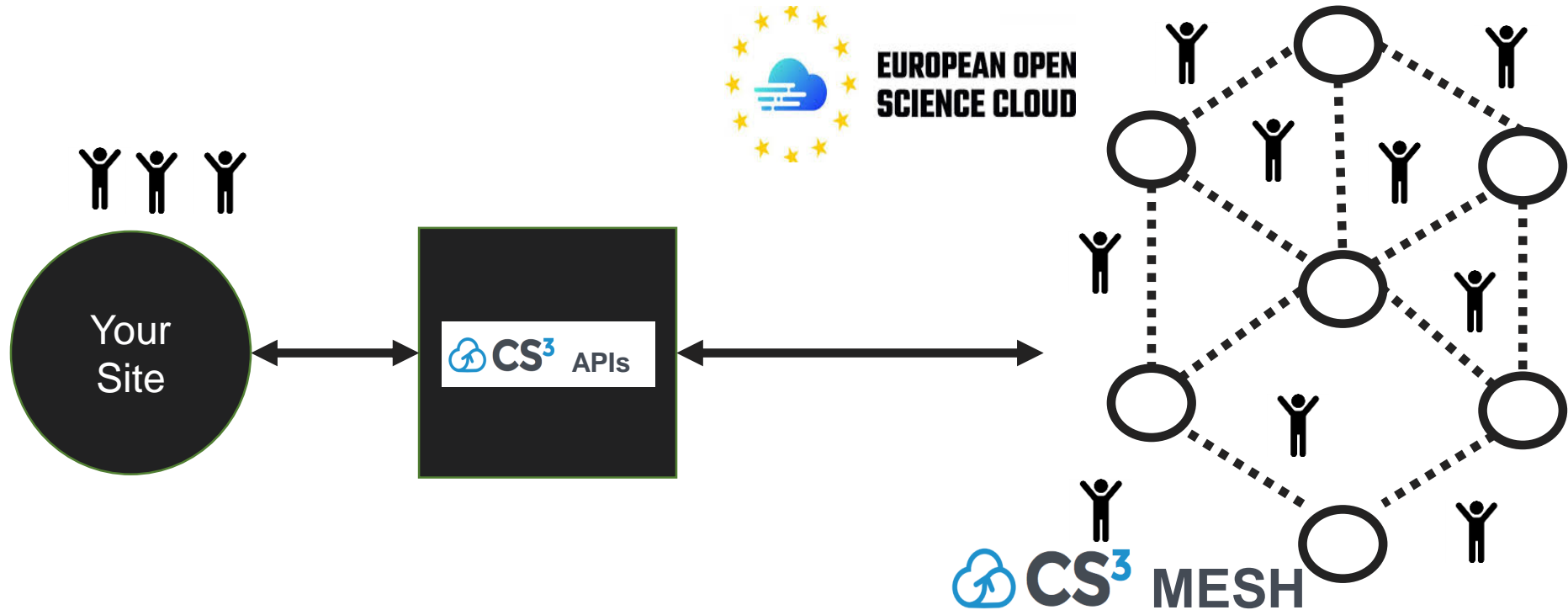
# #1 Connect to Research and Science Services



# #1 Connect to Research and Science Services



## #2 Connect to the mesh



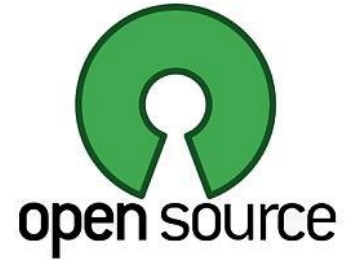
# What is inside?

- A metadata control plane to connect storage, sync and share and application providers.
- Based on GRPC and Protocol Buffers
  - Controlled and safe protocol evolution thanks to Protocol Buffers
  - High-performance and reliable implementations thanks to GRPC
  - Universal accessible thanks to HTTP/2
- Used at big scale:
  - DropBox, Google, Netflix, Cisco ... CERNBox, EOS.





# To the community



<https://github.com/cs3org/cs3apis>

<https://gitter.im/cs3org>

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# CS3 APIs for Data Science Environments

Diogo Castro



# CS3 APIs for Scientific Platforms (SWAN use case)

Why it matters?

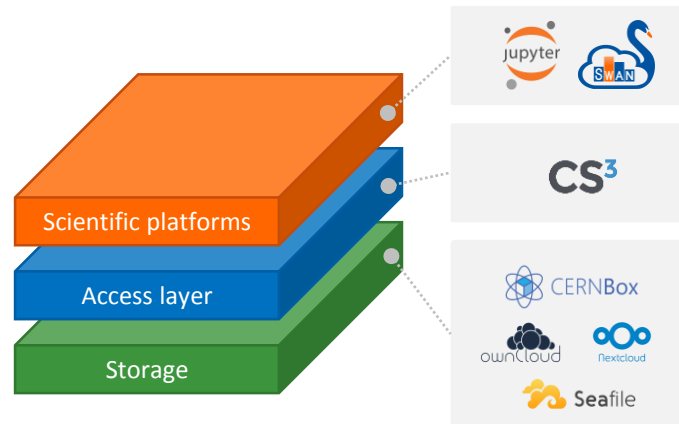
- Native sharing capabilities in Jupyter
- Core to scientific work: foster collaborative analysis

Added advantages

- Multi-vendor storage access compatibility (easy deployment outside CERN)
- Consistent view of storage across all platforms for the user

Next development in SWAN

- Connector implemented as Vanilla Jupyter extension
- We plan to include this with the upstream Jupyter project



# WOPI and Custom Apps in the CS3 APIs

Giuseppe Lo Presti



# Office-like Apps Interoperability

- Science and Research oriented services interested in Office-like apps, too
- WOPI (or WOPI-like!) as the Office “standard” protocol
  - Adopted by Microsoft and Collabora
  - What about **other Office-like Apps providers?**
  - Promote it as an interoperable standard, given its features set?
- WOPI and the CS3 APIs
  - **CERN is prototyping a connector**
    - Incentive for apps providers: go WOPI and get seamless access to the CS3 APIs based ecosystem of storage/cloud providers!
  - Interest for adoption from the community?
  - What about long-term maintenance?





[www.cern.ch](http://www.cern.ch)