

TIARA: considerations for application for call

Horizon-infra-2022-Dev-01-01?

C Rogers with thanks to Roberto!

3<sup>rd</sup> Community meeting of the International Muon Collider Design Study - 6 Oct. 2021



## **Horizon Europe Framework programme**

(Courtesy, R. Aleksan, 1st community meeting)

Horizon Europe (WP21-22 anticipated call)

WARNING: Situation in Brussels is changing dramatically with a large reorganization of the Research Division

At this time, there is a draft Work Programme in which Design Study is included:

#### It is called:

« Destination 1: Research infrastructure concept development »

#### Main information

Design Study call denomination :	HORIZON-INFRA-2022-DEV-01-01			
Total Budget	24 M€			
Max budget/project	3 M€			
Date Call opening	2021 Nov. 10			
Deadline Call	2022 March 24			
Expected funded projects	10			

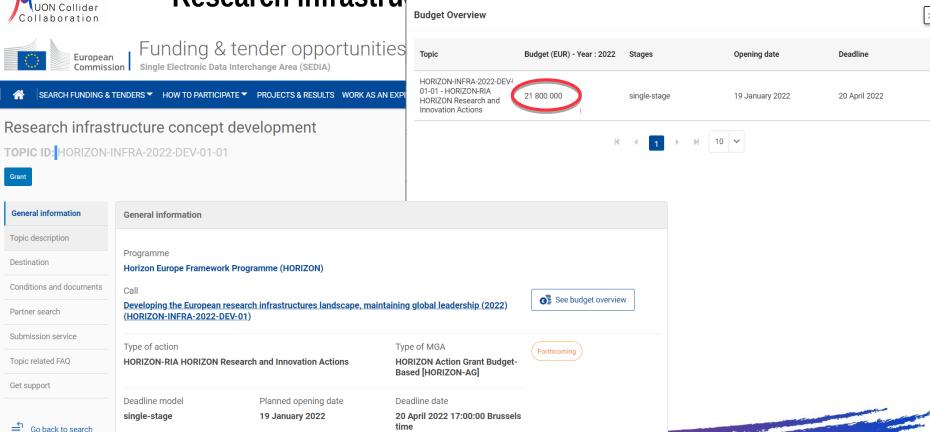
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results

#### HORIZON-INFRA-2022-DEV-01-01

Research infrastructure concent develonment





# **ExpectedOutcome**

- Projects are expected to contribute to all the following expected outcomes:
  - sound science cases for new research infrastructures, including expected scientific breakthrough, gap analysis and feasibility/design studies to support planning and decision making at the national level (e.g. funding bodies, governments) and at European level (e.g. ESFRI);
  - a better alignment of the development of the research infrastructure landscape with the advancement of excellent science and frontier research;
  - new services and access opportunities available to the research community, allowing to better tackle scientific and societal challenges.



# Scope

- This topic aims at supporting the development of new concepts for the next generation of research infrastructures of European interest<sup>□</sup>, single/multi sited, distributed or virtual, that none or few countries might individually be able to afford. All fields of research can be considered.
- Major upgrades of existing infrastructures may also be considered if the end result is significantly transformative and equivalent to a new infrastructure concept.
- Proposals for RI concept development will tackle all key questions concerning the technical and conceptual feasibility of new or upgraded fully fledged user facilities.



- In this respect, proposals should address all following aspects:
  - demonstrate relevance in relation to ERA, including to the existing landscape, and the advancement with respect to the state-of-art of the new infrastructure;
  - highlight the research challenges the new research infrastructures will make possible to address, including at global level;
  - indicate the gaps in the research infrastructure landscape the new infrastructure will cover and the synergies with existing infrastructures at European and global level, including those cofinanced from other EU instruments (e.g.: Cohesion policy);
  - Indicate, when relevant, the potential impact of the new research infrastructure at regional level.



- Proposals should also provide evidence that the project will effectively:
  - identify technologies and develop research infrastructure architecture (e.g. single site or distributed, ...);
  - identify scientific user communities (and their related needs) that will benefit from access to RI services, including scientific data and instrumentation, and develop the planning of research services to users;
  - identify governance options and strategic approaches for institutional/stakeholders' commitment and engagement;
  - develop initial financial plans for the RI construction (or major upgrades) and operation as well as preliminary ideas for long-term sustainability, including synergies with other funds and programmes (e.g.: ERDF);
  - develop plans for an efficient data curation and preservation and for the provision of access to data collected or produced by the future infrastructure, in line with the FAIR principles.



Proposals considering just a new component of a research infrastructure are not in scope of this topic.



### Propose :

- Seek to pick off important topics at < priority 2 >
  - Hoping priority 1 issues are already dealt with
- Try to get a broad spread across the programme
- Discuss with work package managers to identify details



- LDG process is coming to an end
  - Developed a concept for a tentative baseline facility
    - Proton driver
    - Target
    - Cooling
    - Acceleration
    - Collider
  - Taking your inputs on board
    - Deliver work plan
    - Seen by CERN council in December
- Now the real work begins!





### Nathaniel Craig

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- ✓ What is the origin of mass?
- ✓ What kind of unification may exist?
- ✓ What is the origin of flavor?
- ✓ Is there a deeper reason for gauge symmetry?
- ✓ What is the nature of dark matter?

"The only chance in our lifetime"

A Higgs! Yet:

- ✓ Is it the SM Higgs?
- ✓ Is it the only one?
- ✓ Why is there EWSB?
- ✓ What sets the scale?

