

The logo for ERINHA, featuring the word "erinha" in a lowercase, sans-serif font. A small orange horizontal bar is positioned below the letter "i".

European Research Infrastructure
on Highly Pathogenic Agents

ISIDORe PROJECT

Integrated Services for Infectious Diseases Outbreak Research

High-Consequence Infectious Diseases in CEE: Gaps
& Cooperation Opportunities

Online workshop, 25th November 2021

Audrey RICHARD, ERINHA Director of Operations

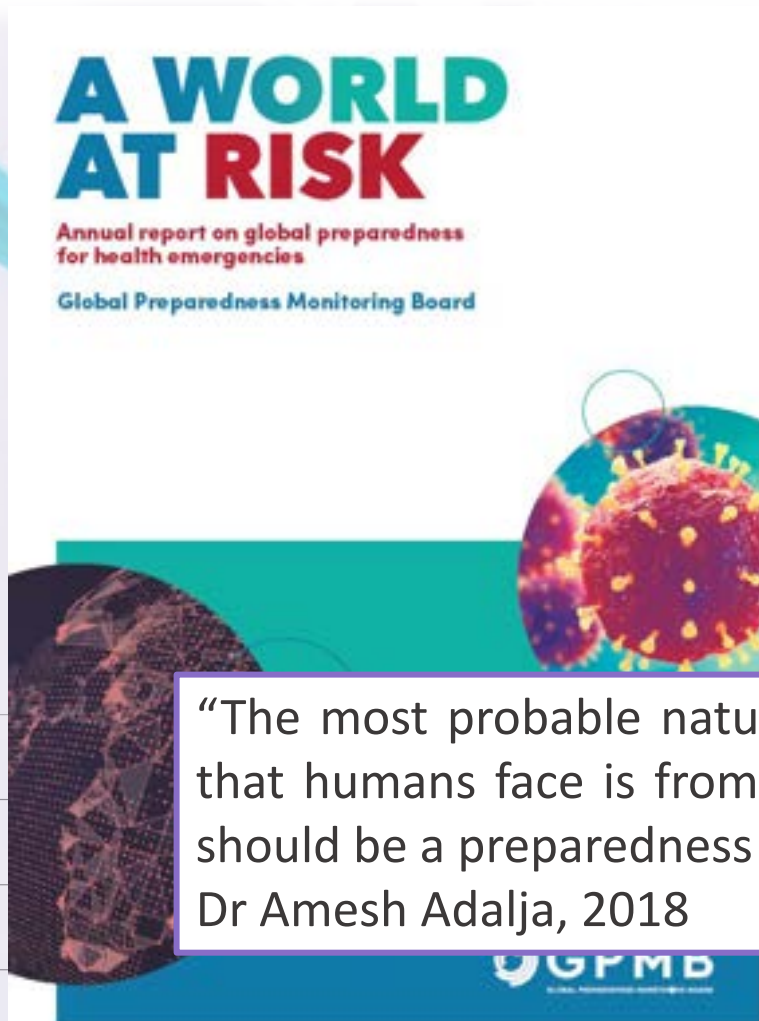
ERINHA.EU



This project has received funding from the European Union's Horizon 2020
research and innovation programme under grant agreement No. 824061

▶ Pandemic preparedness beyond COVID-19

The COVID-19 pandemic was not a surprise



*World Health Organization
September 2019*

“The most probable naturally occurring [global catastrophic biological risk]-level threat that humans face is from a **respiratory-borne RNA virus**, and so this class of microbes should be a preparedness priority.”

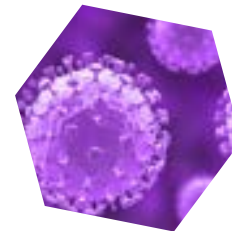
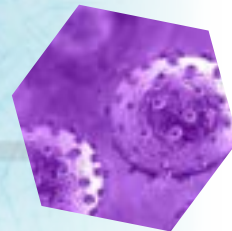
Dr Amesh Adalja, 2018

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The COVID-19 pandemic was not a surprise

Infectious disease events during the twenty-first century:

- 2002-2004 SARS (Severe Acute Respiratory Syndrome) outbreak
- 2009 swine flu pandemic
- 2012 MERS outbreak
- 2013-2016 Western African Ebola virus epidemic
- 2015-2016 Zika virus epidemic
- **2019-? COVID-19 pandemic - *ongoing***



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COVID-19: What went wrong?

- **Insufficient preparedness and response systems and capabilities for disease outbreaks to deal with a pandemic**
- **Insufficient R&D investment and planning for:**
 - Vaccine development and manufacture,
 - Broad-spectrum antivirals
 - Targeted therapeutics (including monoclonal antibodies)
 - Appropriate public health measures
 - Sharing sequences
 - Sharing limited medical countermeasures across countries.

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EU initiatives to improve preparedness



GOAL: Strengthen Europe's ability to PREVENT, DETECT, and rapidly RESPOND to health emergencies

HOW: Ensure the development, manufacturing, procurement, and equitable distribution of key medical countermeasures

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EU initiatives to improve preparedness

**Outcome of HERA Incubator call for expressions of interest on coronavirus variants:
11 projects**



On 7 April 2021, the European Commission launched [an emergency request for expressions of interest](#) – the first under [Horizon Europe](#) – for EU-funded research and innovation actions to fight the coronavirus and contribute to the Commission's overall action to prevent, mitigate and respond to the impact of coronavirus variants, in line with the new European bio-defence preparedness plan [HERA Incubator](#).

On 22 July 2021, the EC announced that **11 projects** were short-listed for funding, with **total funding of €120 million**. The 11 projects involve **312** research teams from **40** countries

in Europe and beyond, which are addressing the four topics of the emergency request for expressions of interest:

- **Clinical trials for therapeutics and vaccines** to boost COVID-19 prevention and treatment and further inform public health policy and clinical management.
- **Cohorts united against COVID-19 variants of concern** supporting activities that are enabling or contributing to the development of large scale, COVID-19 cohorts and networks worldwide, including beyond Europe's borders, forging links with European initiatives as a global response to the pandemic.
- **FAIR and open data sharing in support to European preparedness** for COVID-19 and other infectious diseases, to further develop and integrate platforms for the sharing of relevant research resources
- **Research infrastructure services for rapid research responses** to COVID-19 and other infectious disease epidemics, to set up and provide access to a comprehensive portfolio of relevant services

FIRST HORIZON EUROPE PROJECTS

- **11 COVID-19-dedicated projects** already funded
- *Research infrastructure services for rapid research responses* topic

➔ **ISIDORE** project coordinated by **ERINHA**

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The ISIDORe project

ISIDORe

Integrated Services for Infectious Diseases Outbreak Research

- **3-year long project led by ERINHA**
- **21 M€ budget**
- **155 partners from 32 countries including Bulgaria, Czech Republic, Hungary, Latvia, Poland, Serbia, Slovenia, & Slovakia**
 - **Core consortium**
 - 6 EU-funded networks: **EVA, VetBioNet, INFRAVEC, Sonar-Global, TRANSVAC, MIRRI**
 - 1 nationally-funded surveillance network: **EMERGEN**
 - 10 legally established ESFRI infrastructures: **INSTRUCT, EuBi, EU-OS, ECRIN, EATRIS, BBMRI, INFRAFRONTIER, EMBRC, ELIXIR, and ERINHA.**
 - **Dozens of Service Providers**

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OBJECTIVES & MODES OF ACTION

- Contributing to **fighting the rise of the SARS-CoV-2 variants**

→ CHALLENGE-DRIVEN APPROACH

Fast provision of access to services to scientific user communities for the development or adaptation of countermeasures

- Contributing to **Europe's readiness to any epidemic-prone pathogen**

→ PREPAREDNESS-DRIVEN APPROACH

Provision of access to services to scientific user communities for supporting projects in the field of infectious diseases in “peaceful times”

Non SARS-CoV-2 respiratory viruses

RG4 pathogens

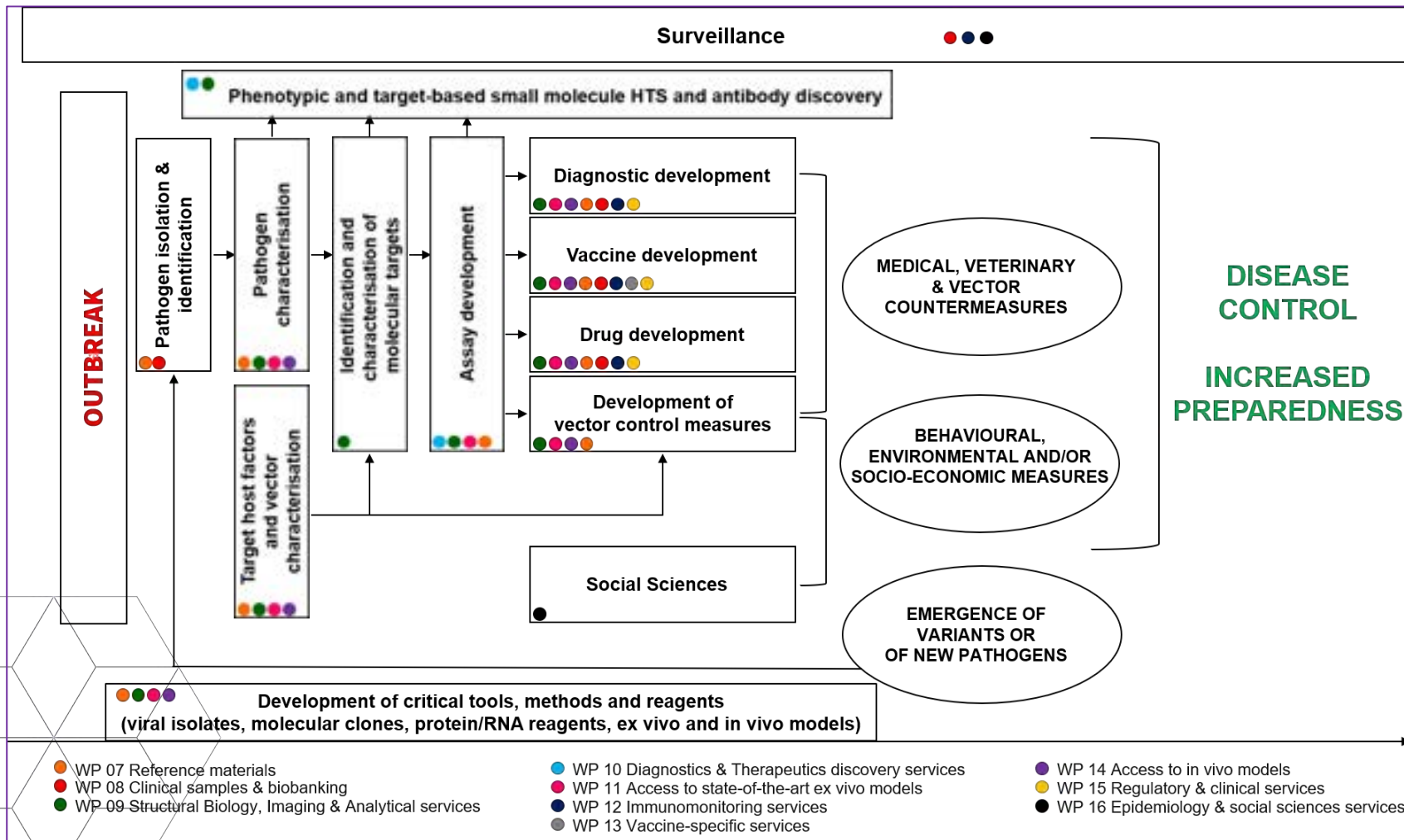
Arboviruses

Disease X

USER NEEDS

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ISIDORe CONCEPT

Offer capacities to cover the R&D pathway to:

- Support the response to an epidemic crisis and/or
- Increase preparedness to epidemic-prone pathogens

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CORE CONSORTIUM PARTNER	MAIN FIELD OF EXPERTISE
ERINHA	Preclinical research on highly pathogenic agents
EVA represented by AMU	Viral reference materials
VetBioNet represented by INRAE	Veterinary bio-contained research
INFRAVEC represented by IP	Insect vector biology & vector control
TRANSVAC represented by EVI	Vaccine development
BBMRI-ERIC	Biobanking of clinical samples
ECRIN-ERIC	Clinical trials & regulatory expertise
EATRIS-ERIC	Translational medicine
INSTRUCT-ERIC	Structural biology
EURO-BIOIMAGING-ERIC	Biological and Biomedical Imaging technologies
EU-OPENSREEN-ERIC	Medicinal chemistry, therapeutics development
INFRAFRONTIER GmbH	Mouse disease models
EMBRC-ERIC	Applied marine biology & ecology research
ELIXIR represented by EMBL	Biological data
MIRRI represented by UMinho	Reference materials
SONAR-GLOBAL represented by IP	Social sciences
EMERGEN represented by ANRS	Epidemio-surveillance

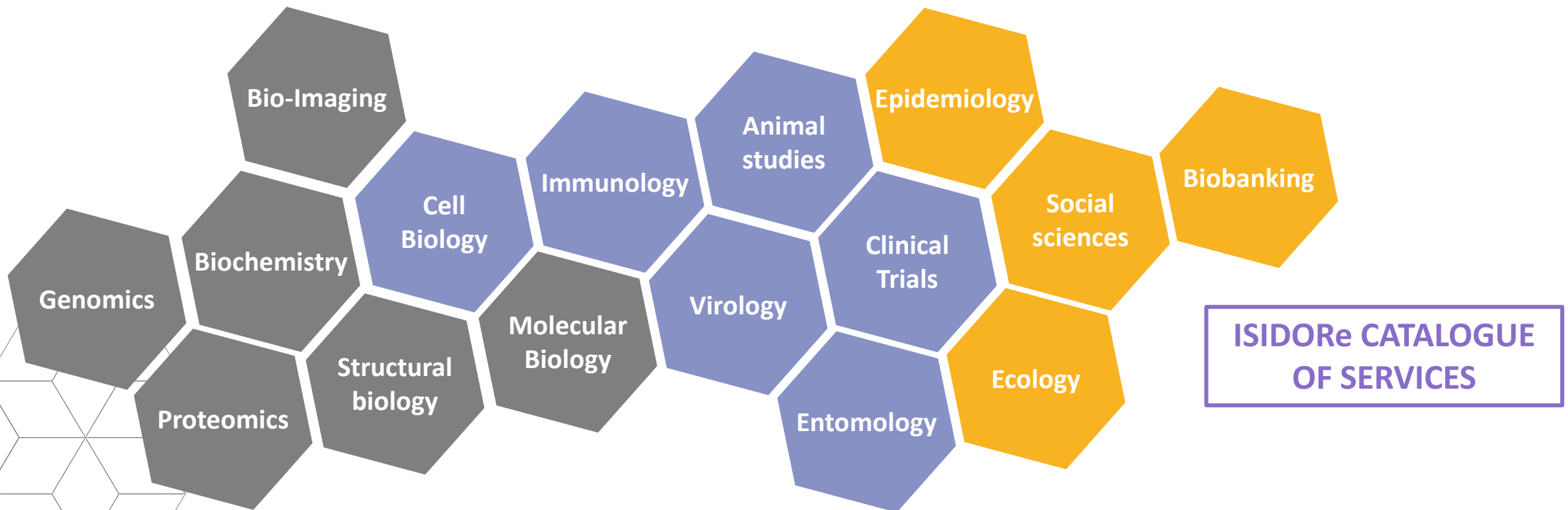
ISIDORe CONCEPT

Offer capacities to cover the R&D pathway by gathering RIs & network with relevant fields of expertise

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The ISIDORe project

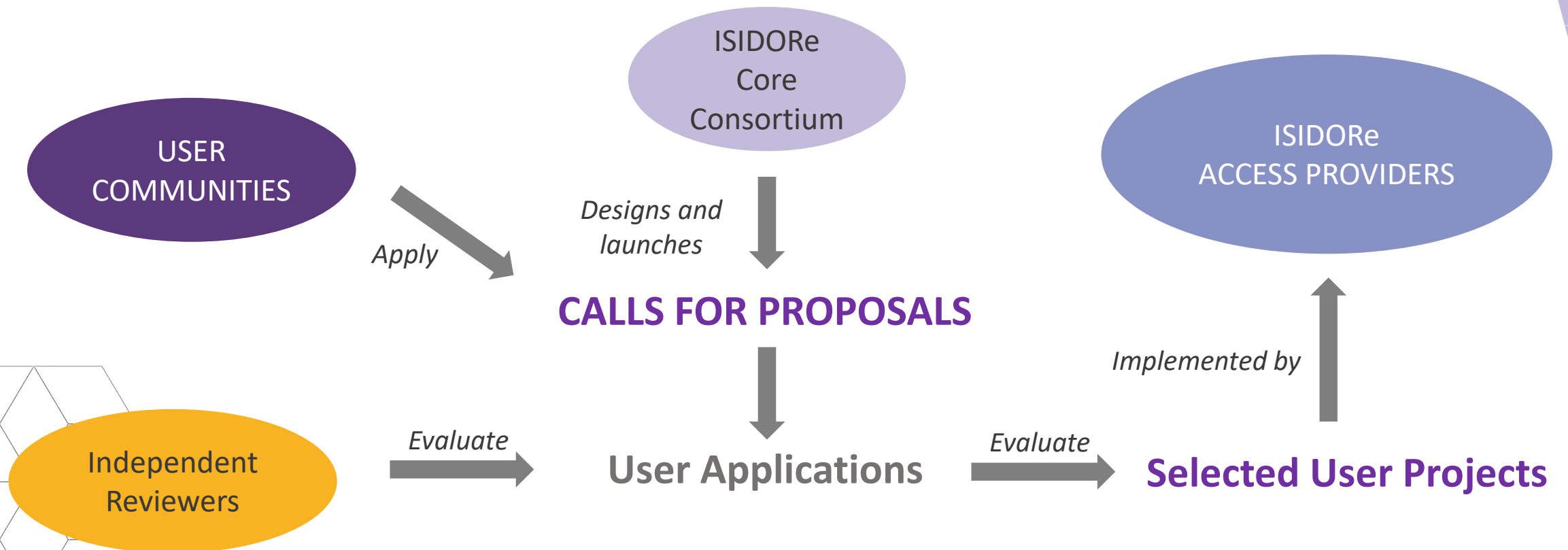
- ▶ Complementary expertise & capacities to support User projects
- ▶ Any User need for the study of epidemic-prone pathogens can be addressed



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The ISIDORe project

- ▶ Support research communities through free of charge Transnational Access (TNA) to ISIDORe catalogue of services



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The ISIDORE project

- Support User projects by providing access to **ISIDORE catalogue of services for free**
- For scientists who need certain capacities/services (one or multiple) to advance their research project
- Access can **in-person, remote or virtual**
- **Selection** based on technical feasibility and **quality** of the **proposed research project (independent peer-review)**
- **Non-EU Users are eligible**

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ISIDORe ADDITIONAL CHALLENGES

- DATA MANAGEMENT
- DATA MOBILIZATION
- DATA SHARING
- FAIR & OPEN DATA

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ISIDORe AMBITIONS

- **Build the foundation for:**
 - Sustaining the cooperation between all the Partners
 - Assembling similar integrated research and service provision instruments to address other complex societal challenges.
- Act as a proof of concept for developing **new ways to ensure Europe's resilience** and further structuring the ERA
- Act as **HERA's operational tool for supporting needs-driven R&I** to address health emergencies specifically caused by infectious diseases

▶ Making science happen: TNA research projects

Forthcoming TNA Calls

- **ERINHA-Advance project**

- ▶ **Upcoming (November 2021)**

Special call on SARS-CoV-2 / COVID-19

www.erinha.eu

- **ISIDORe**

- ▶ **Beginning 2022**

SARS-CoV-2 / COVID-19 ; emerging and epidemic-prone agents

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European Research Infrastructure
on Highly Pathogenic Agents

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