



# Pandemic management through indoor pathogen transmission suppression

EU innovation funding & technology mapping

*WHO Europe Indoor Air Conference, Bern*

*20/09/2023*

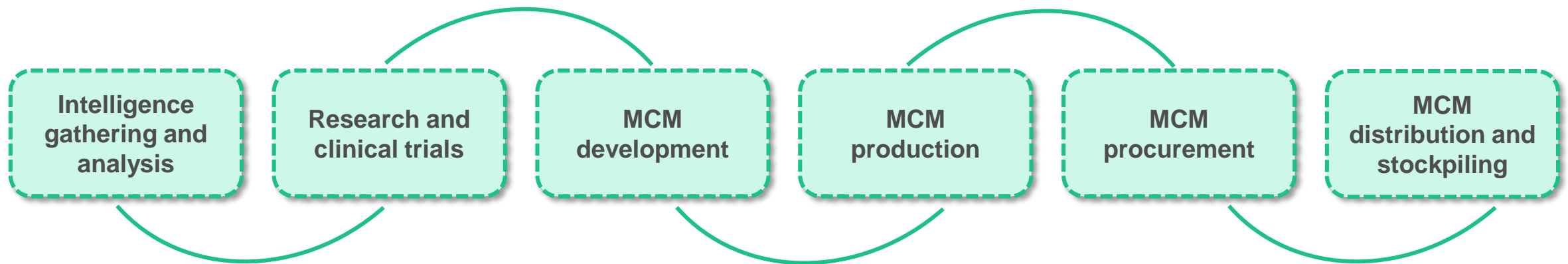
# Outline

- 1) Introduction HERA
- 2) Innovation funding: EIC Accelerator Challenge
- 3) Foresight project on indoor pathogen transmission suppression

# 1) Introduction HERA

- ❖ **When?** Created on 16 September 2021
- ❖ **Budget:** EUR 6 billion over 2022-2027
- ❖ **Mission:** strengthening Europe's ability to prevent, detect, and rapidly respond to cross-border health emergencies, by ensuring the availability of and access to key **medical countermeasures** (MCM) by looking at the **whole value chain**

*= medicines, medical devices, other goods or services that are aimed at combating serious cross-border threats to health*



**CROSS-SECTOR, MULTI-ACTOR AND INTERNATIONAL COLLABORATION**



# 1) 2023 HERA innovation actions

R&D budget: ca. EUR 560m

## Early-stage research

- ❖ Broad spectrum **anti-viral therapeutics** for infectious diseases with epidemic potential: EUR 50 m
- ❖ **Immunogenicity** of viral proteins of viruses with epidemic and pandemic potential: EUR 50 m
- ❖ In vitro **diagnostic devices** to tackle cross-border health threats: EUR 40 m
- ❖ Understanding **vaccine-induced immunity**: EUR 20 m
- European and Developing Countries **Clinical Trials Partnership (EDCTP3)**: EUR 40 m

**Contribution to CEPI (EUR 70 m)**

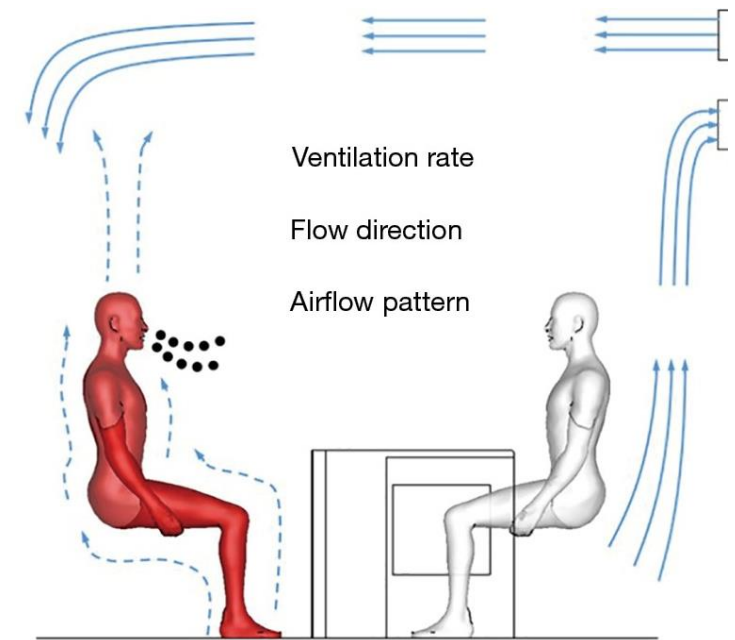
## Late-stage development

- ❖ Speed up MCM development: EUR 82 m
  - ❖ Point-of care **metagenomic sequencing**
  - ❖ Broad-spectrum **antivirals**
  - ❖ AMR **vaccines**
- EIC Accelerator Challenge: EUR 65m
  - **UV-C** irradiation systems
  - Pathogen capture/**ventilation systems**
  - Next-generation **face masks**
- ❖ Innovative Health Initiative (**IHI**): EUR 30mn

**HERA Invest (EUR 100 m)**

## 2) Funding opportunity: 2023 EIC Accelerator

- ❖ Development and commercialization of aerosol and surface decontamination solutions
- ❖ Pandemic management: evidence that intervention can avoid or reduce social distancing
- ❖ Applicants: SMEs established in EU (or Horizon Europe associated countries)\*
- ❖ Total funding: €65 million
- ❖ Up to €2.5m in grants and up to €15m in equity
- ❖ Final deadline: 19 October 2023

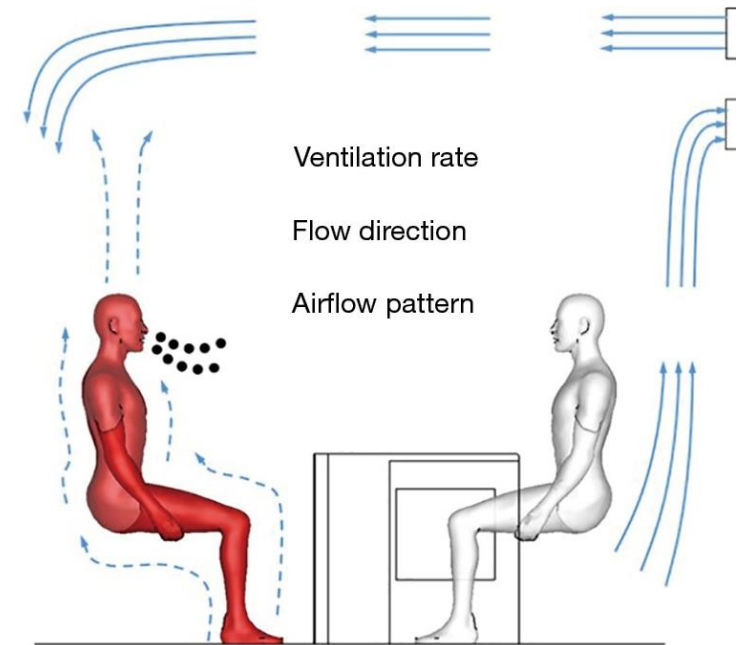


## 2) Funding opportunity: 2023 EIC Accelerator

Supports solutions in three areas:

- ❖ Full systems for aerosol capture, pathogen deactivation and air circulation management
- ❖ Rapid surface decontamination devices (UV-C irradiation systems, biocidal agent dispersion)
- ❖ Next-generation face mask technologies

Potential to integrate pathogen profiling sensors for quasi-real-time information



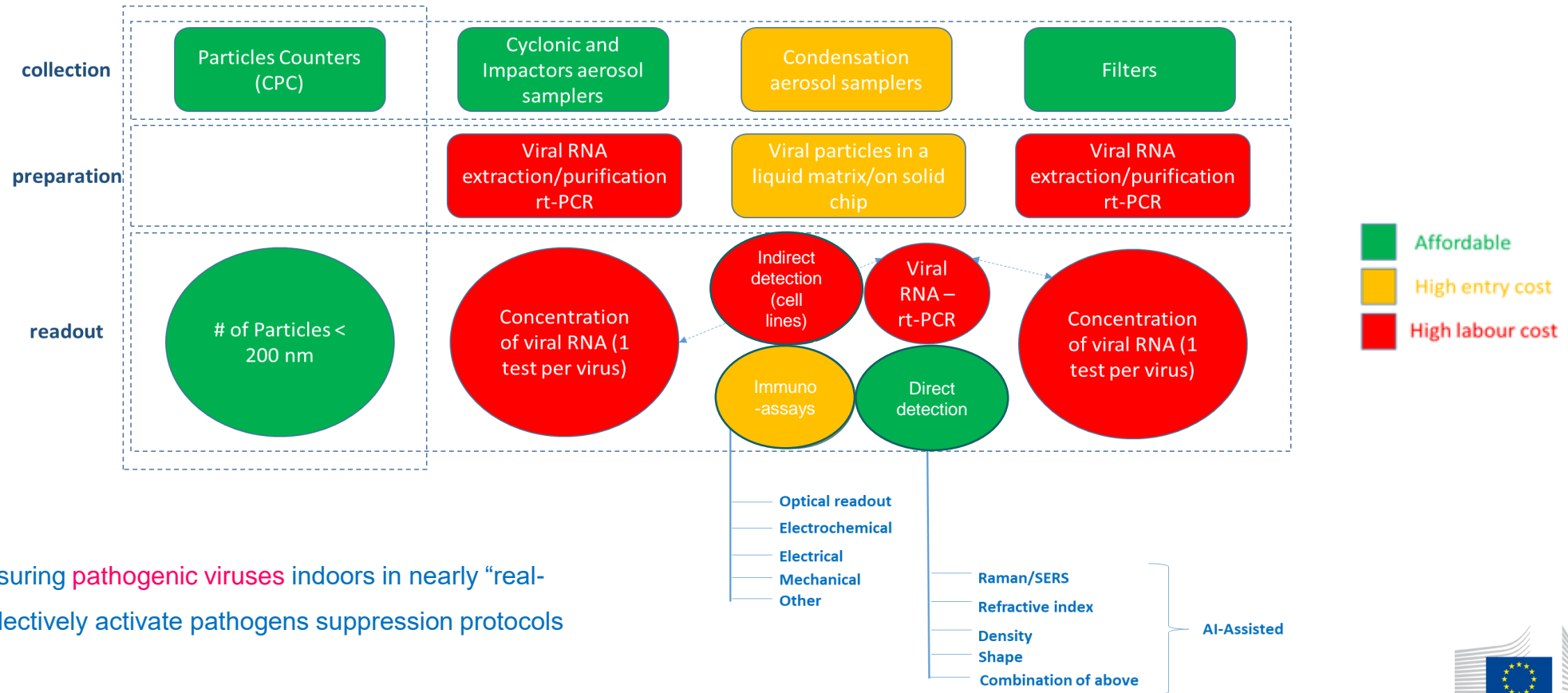
# 3) JRC – HERA Foresight project

## Technology mapping: elimination

TRL →	High		Medium		Low	
Phys-Chem	Filtration		HVAC		Photocatalytic filtration	
	Thermal		Thermal (el.)	Thermal		Thermal (HTST)
	UV			UV + photocatalysis		
		Electrostatic				
			Microwave			
			Photocatalytic filters			
		Non-thermal Plasma			DBD Plasma	
		Ozone				
Bio-Chem	Chemical Aerosolization			Lisozyme		
		Bot. Disinfectant				
				Fumigation		

# 3) JRC – HERA Foresight project

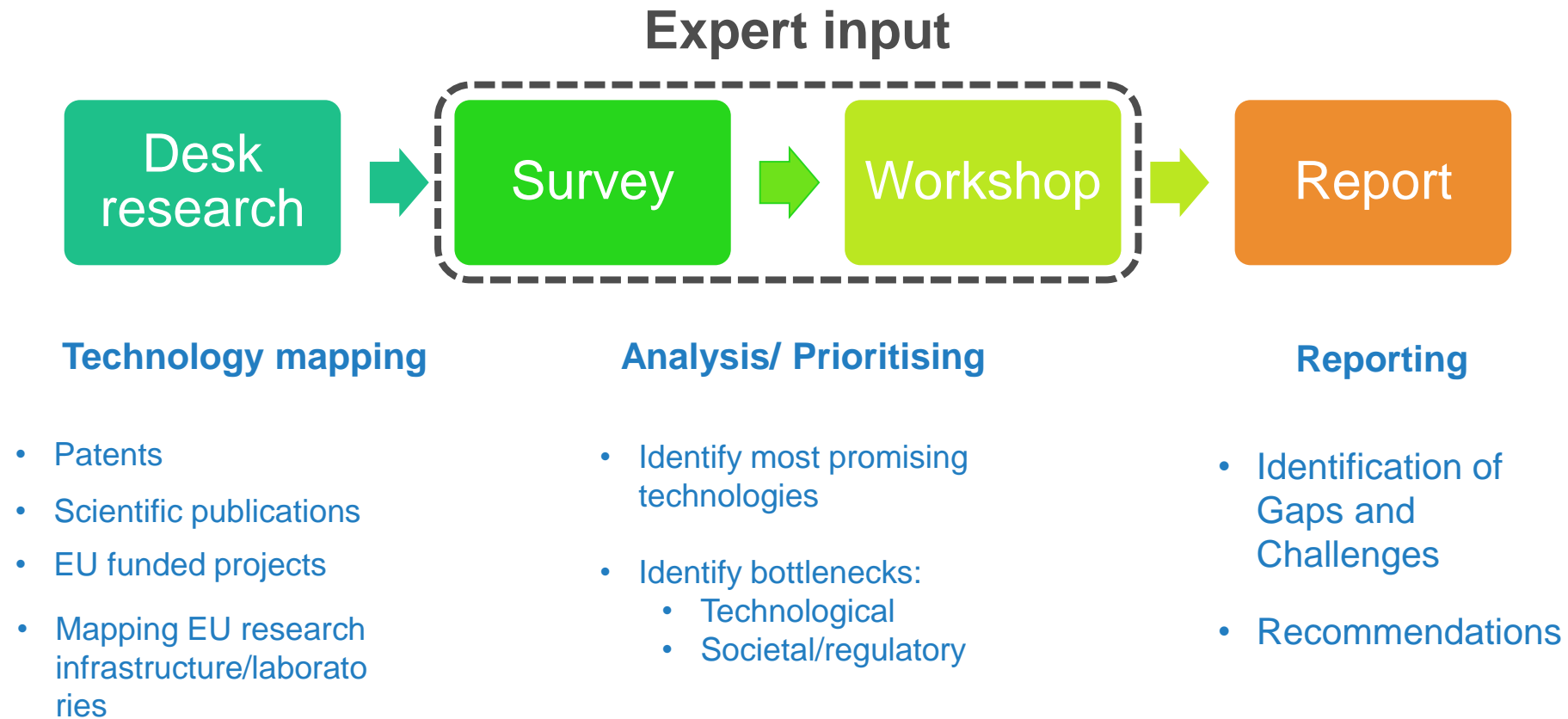
## Technology mapping: detection



Goal: measuring pathogenic viruses indoors in nearly “real-time” to selectively activate pathogens suppression protocols



# 3) JRC – HERA Foresight project



# 3) Call for external experts

- Expression of interest:
  - Online expert survey
  - Workshop: Friday, November 10 2023, Brussels
- Email to: [hera-02@ec.europa.eu](mailto:hera-02@ec.europa.eu)
  - Indicating interest in participation in survey or workshop
  - Short info on relevant background/experience

# Thank you



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