

From outputs to outcomes and impact.

Personal reflections on the EU Cancer Mission.

Connect to Win, 3rd November 2021, Paris

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EUROPEAN UNION



EU MISSIONS

CANCER



From output to outcomes and impact.

#EUmissions #HorizonEU #MissionCancer



EU Missions

Relating EU's research and innovation better to society and citizens' needs; with strong visibility and impact

A mission is a portfolio of actions across disciplines intended to achieve a **bold and inspirational and measurable goal** within a set timeframe, with **impact** for society and policy making as well as relevance for a significant part of the European population and wide range of European citizens.

Missions will directly support other EU priorities such as the:

- European Green Deal
- New European Bauhaus
- Europe fit for the Digital Age
- Europe's Beating Cancer Plan
- EU's Long-term Vision for Rural Areas



Five Missions

Adaptation to
Climate Change



Cancer



Climate-neutral
and Smart Cities



Restore our
Ocean and Waters



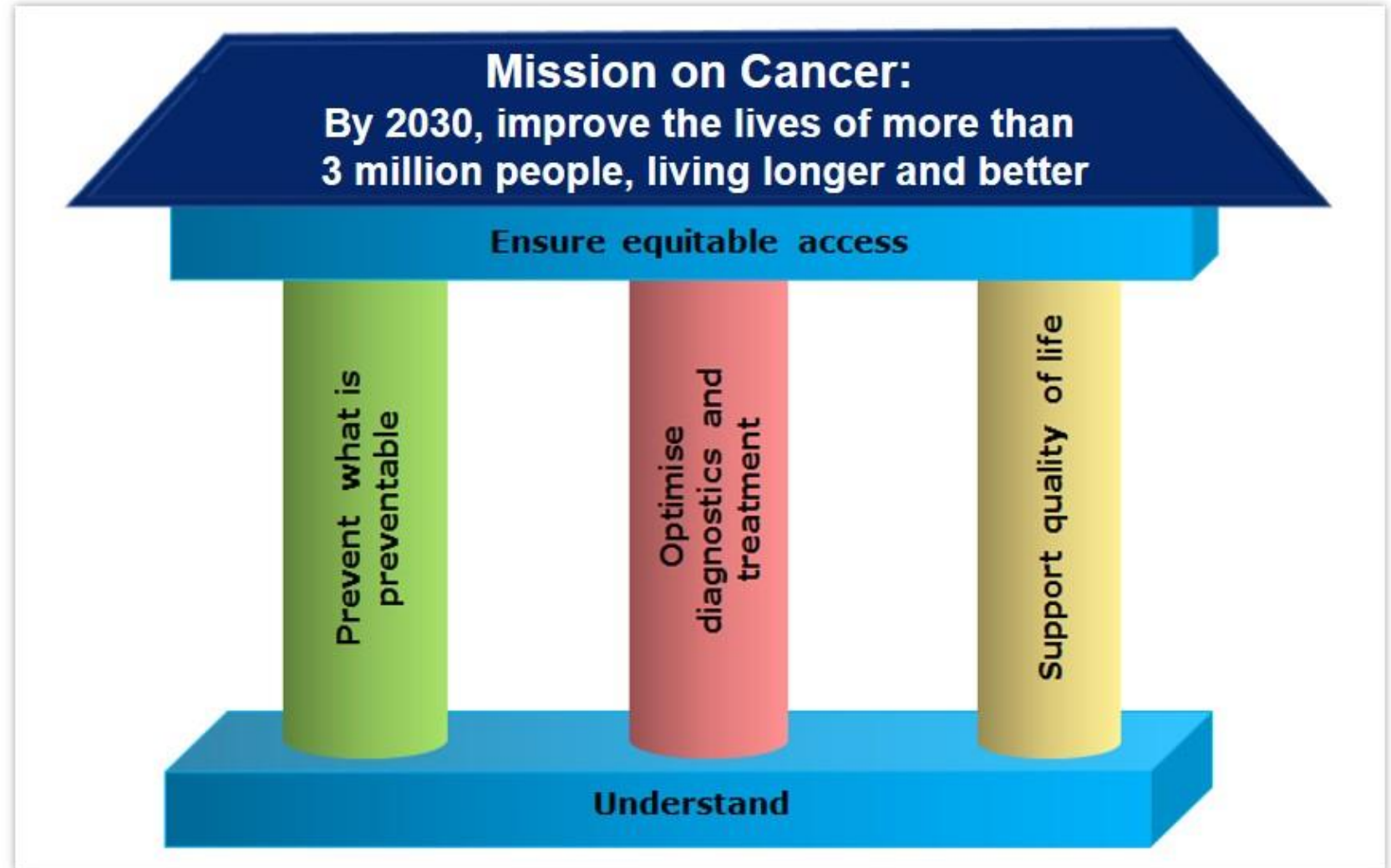
Soil Deal
for Europe

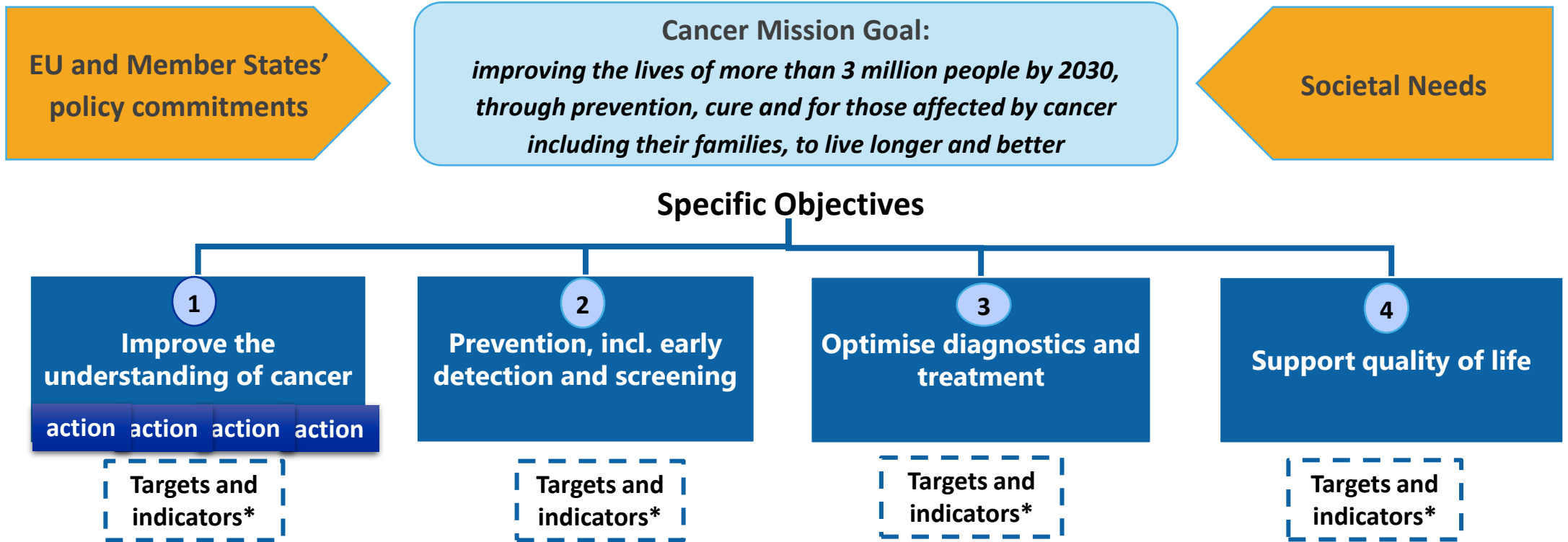




Overall approach

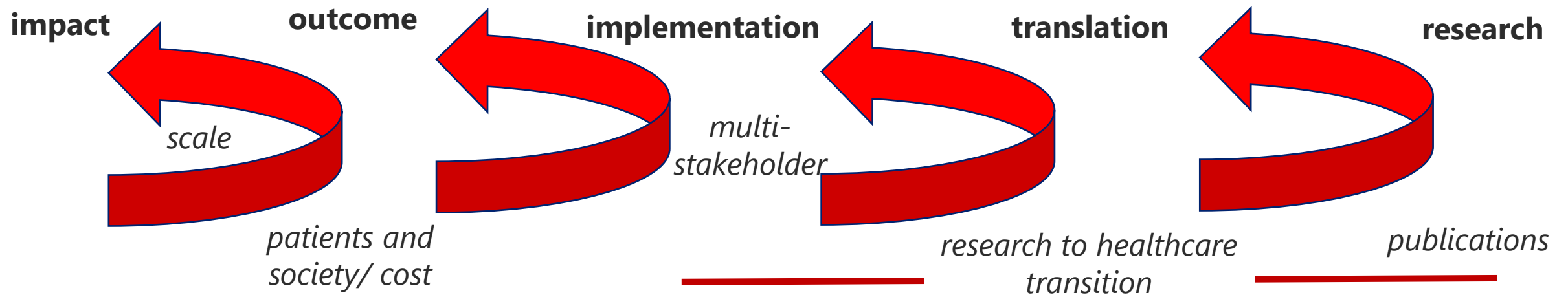
- Apply mission guiding principles
- Underpinning and synergising with Cancer Plan actions
- Joined up governance mission/cancer plan
- total budget 2021: ~125 M€





* Quantitative and qualitative targets, based on evidence and monitored through a set of **output, outcomes, impact indicators**

Managing attrition in research



Mission Beating Cancer



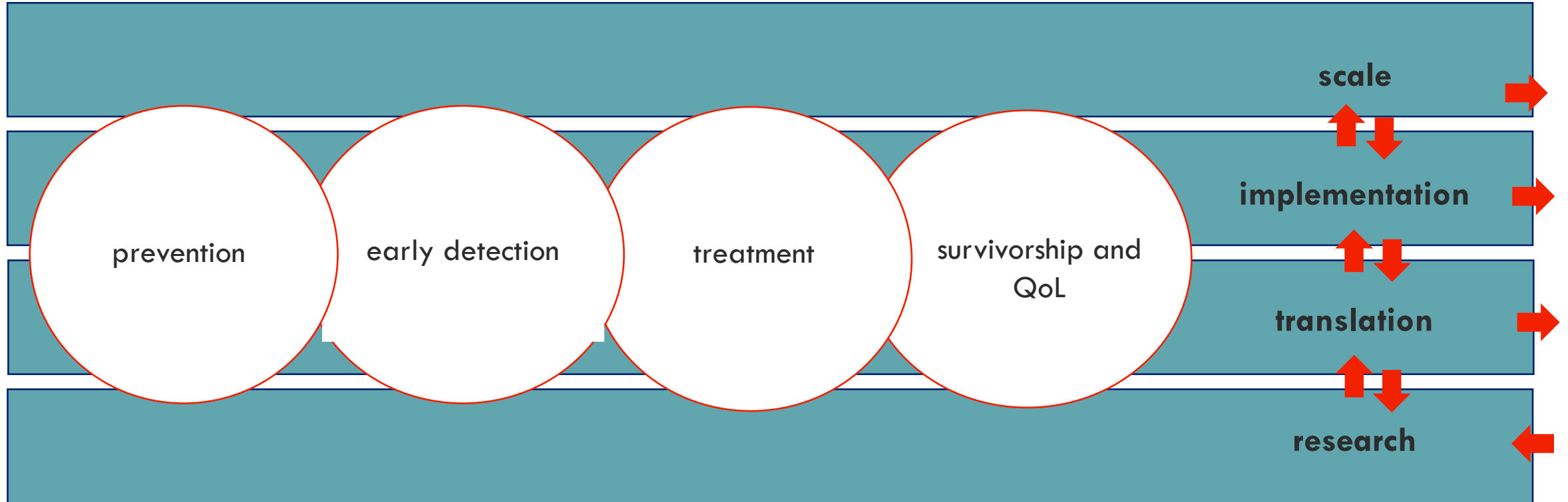
prevention

early detection

treatment

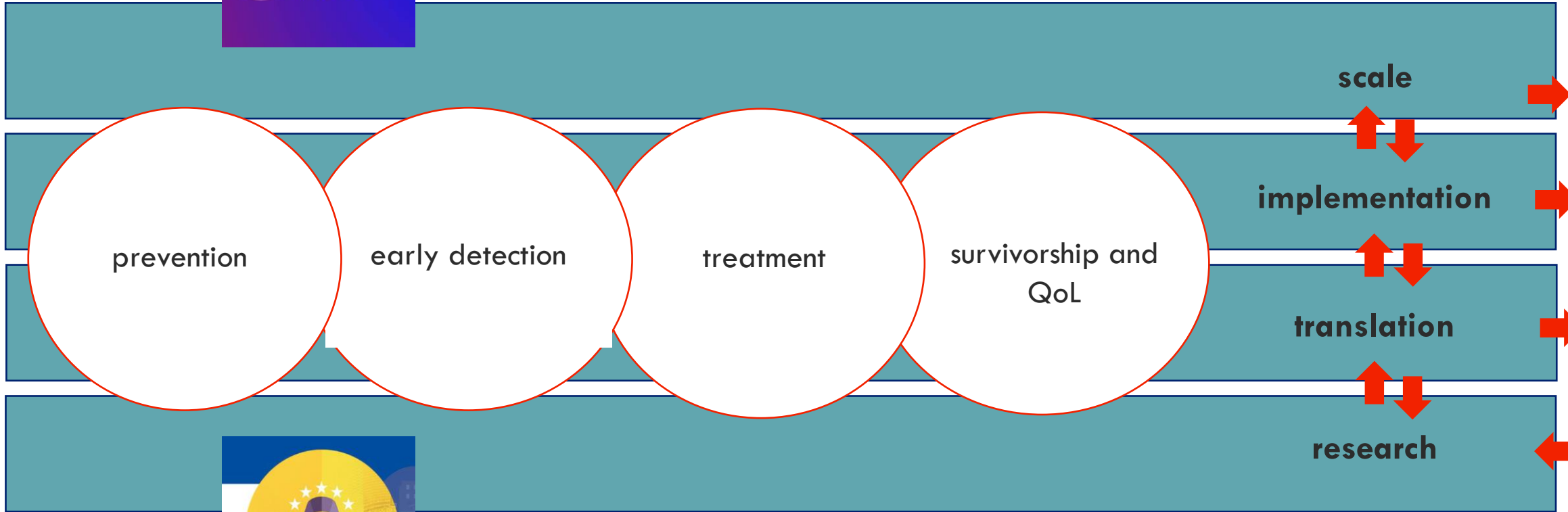
survivorship and
QoL

Manging the research to implementation at scale continuum





EU Beating Cancer Plan



EU Cancer Mission



Mission: Cancer

ACTIONS

- The Horizon Europe programme will provide €378.2 million in the period 2021-23 to support the implementation of the mission
- Implement a strategic research and innovation agenda to better understand, prevent, screen, diagnose and treat cancer and to improve the quality of life of patients and their families
- Establish high level collaboration within the cancer community
- Set up the EU platform UNderstanding **CANcer.eu** (UNCAN.eu), a **network of Comprehensive Cancer Infrastructures** and the **European Cancer Patient Digital Centre**

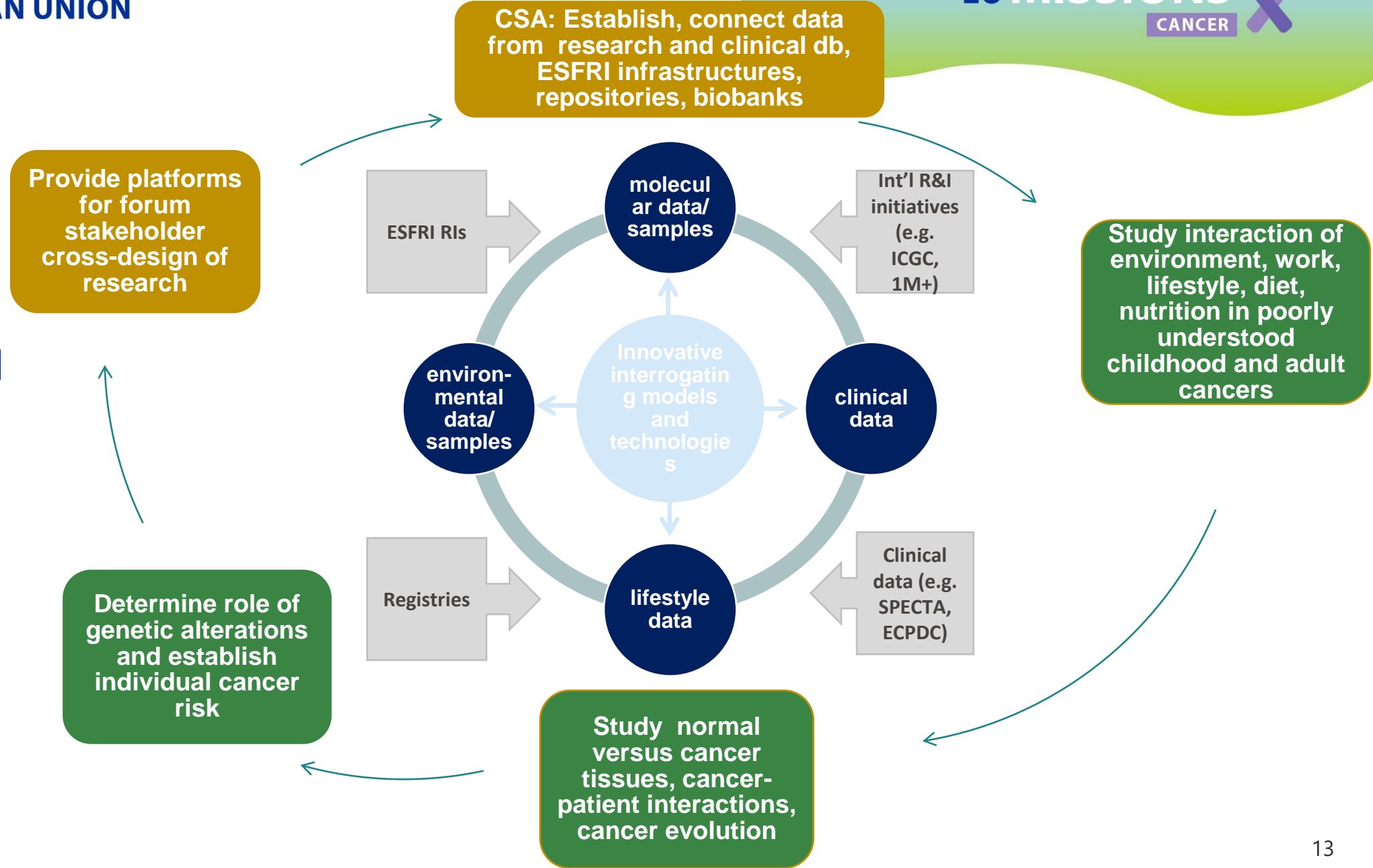


UNCAN.eu platform - goal

- A fully-fledged UNCAN.eu initiative will:
 - Underpin Mission priorities that require a better understanding cancers
 - Agree on a strategic research and innovation agenda between relevant stakeholders
 - Integrate innovative models and technologies with longitudinal patient data, samples and biomarkers
 - Allow for data interoperability and re-utilisation, while guaranteeing full protection for the data subjects and applying FAIR data principles



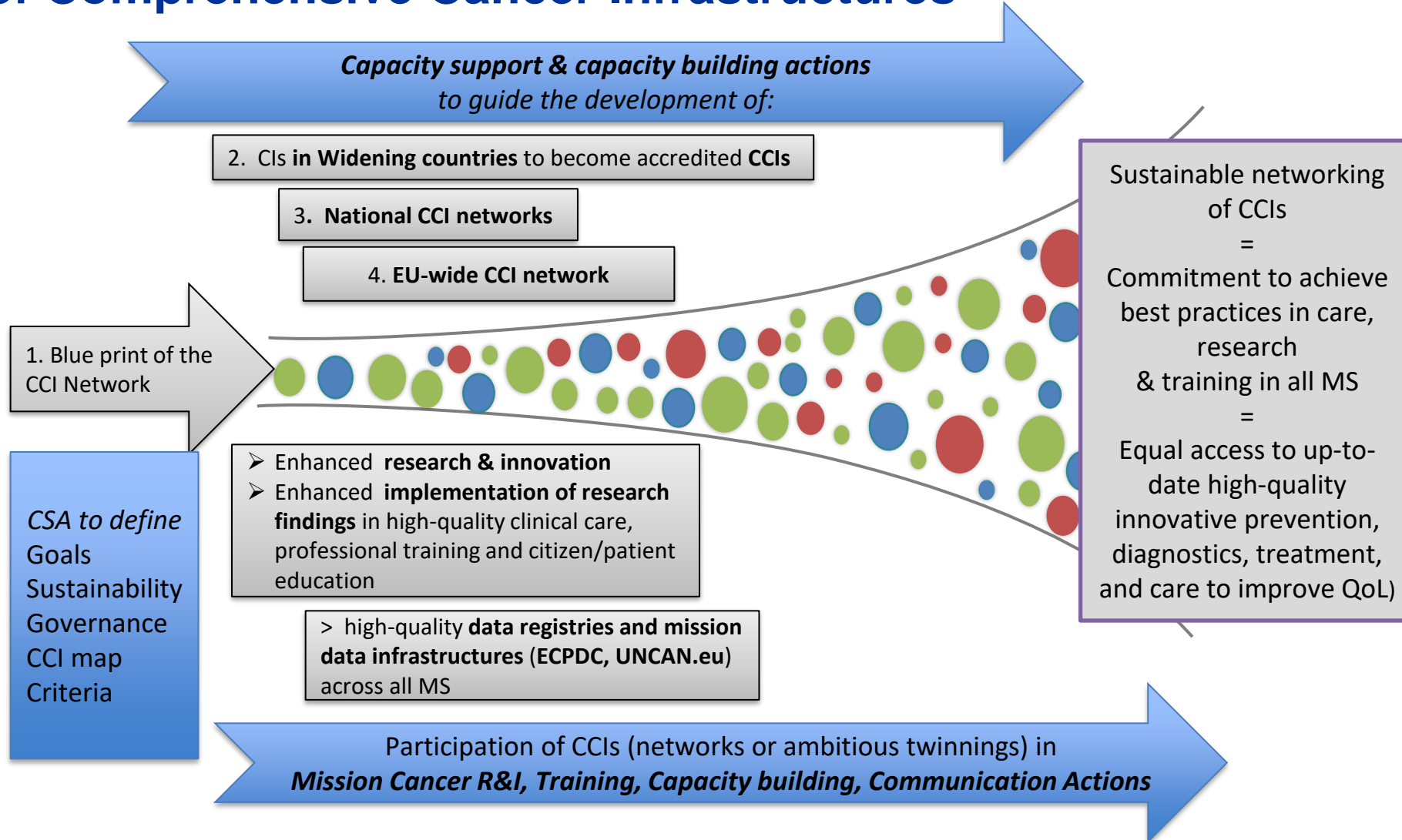
UNCAN.eu platform overview



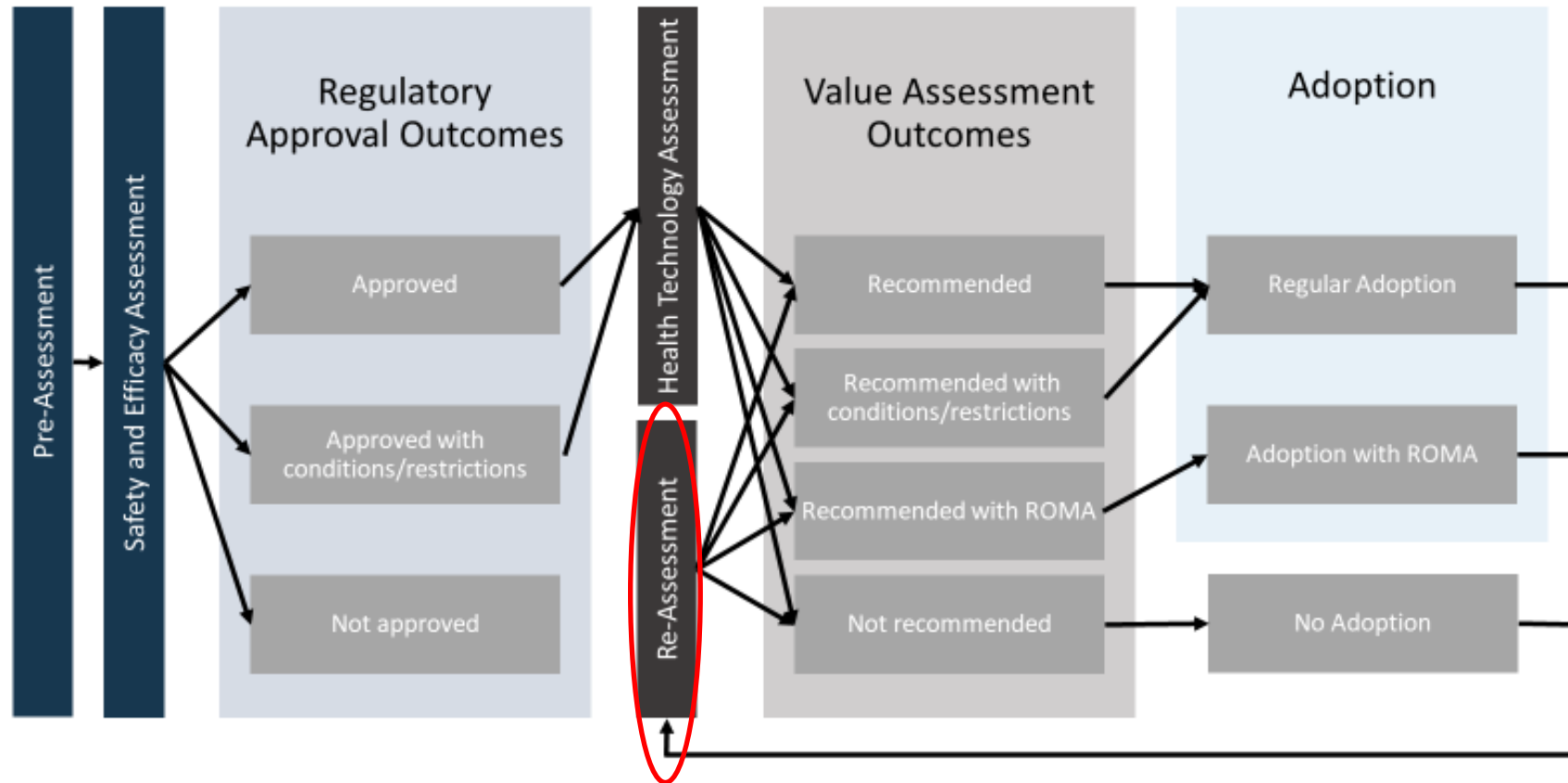


Network of Comprehensive Cancer Infrastructures

**integration
of
healthcare
and research**



ROMA



data can be used for multiple purposes, here for the introduction of a new product with high uncertainty



European Cancer Patient Digital Centre – synergies and links

European Health Data Space

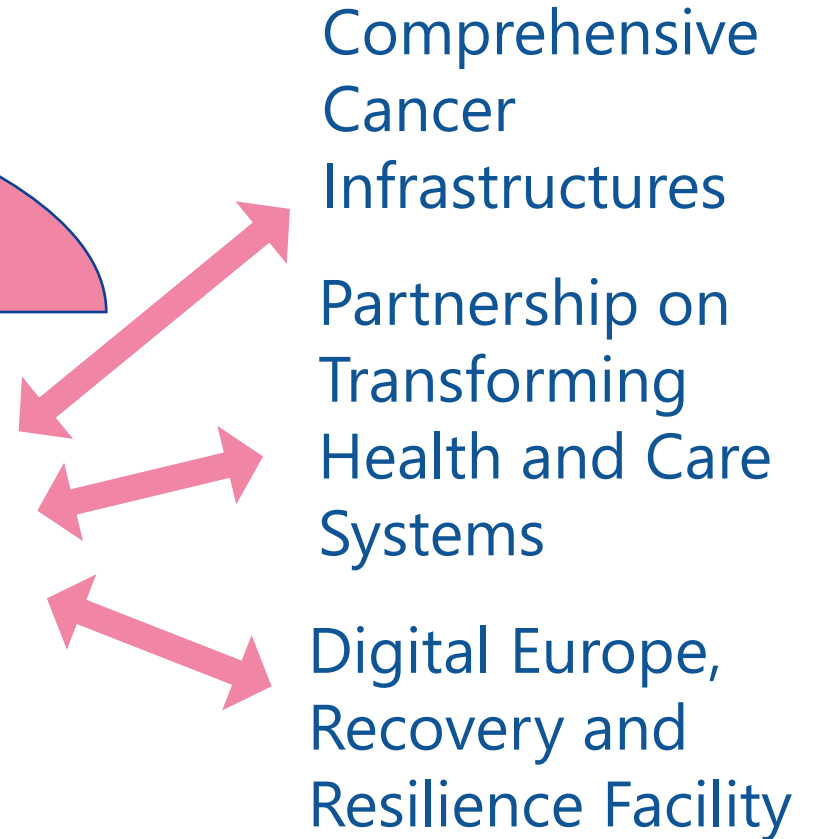
European Cancer Patient Digital Centre
National portal to access and exchange data

Information and support for cancer patients, survivors and their families

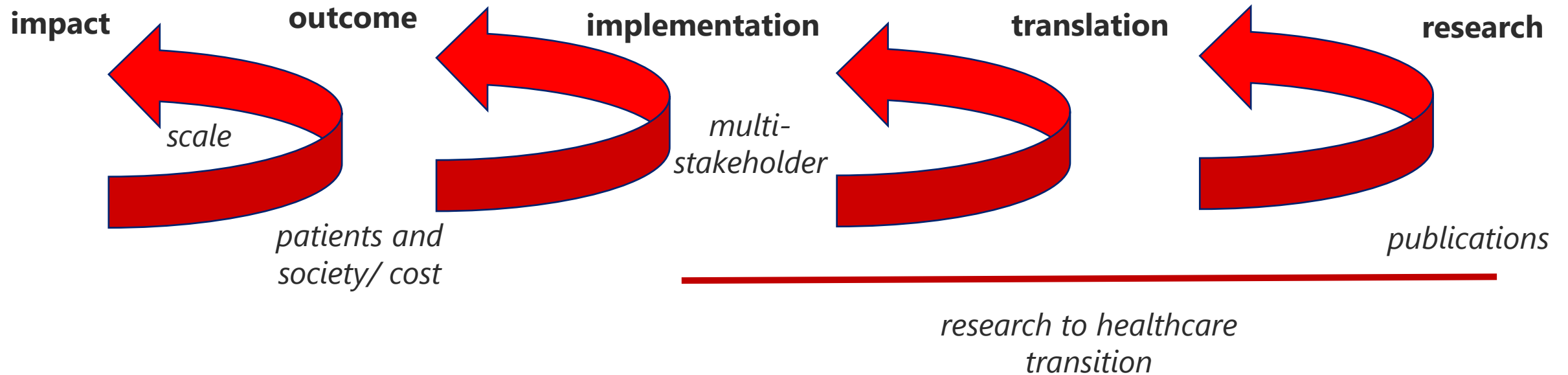
Data collection on patient-reported outcomes (PRO) on and data and ability to share these data - via a smart card

Access for patient and survivors to own clinical data and ability to share

Empowering patients in co-decision on their care, including participation in research



Managing attrition in research



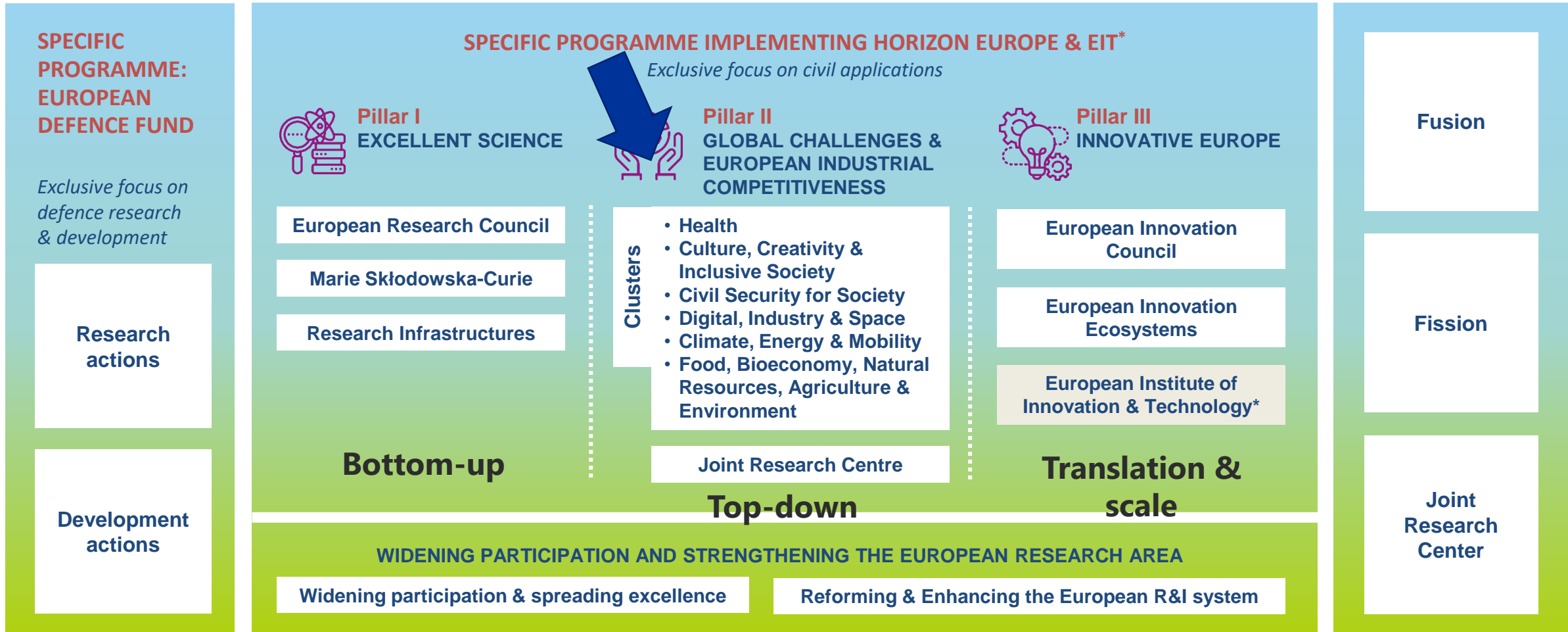


Horizon Europe- problem-based/ challenge-based research: top-down



HORIZON EUROPE

EURATOM



* The European Institute of Innovation & Technology (EIT) is not part of the Specific Programme

Horizon Europe

About the programme

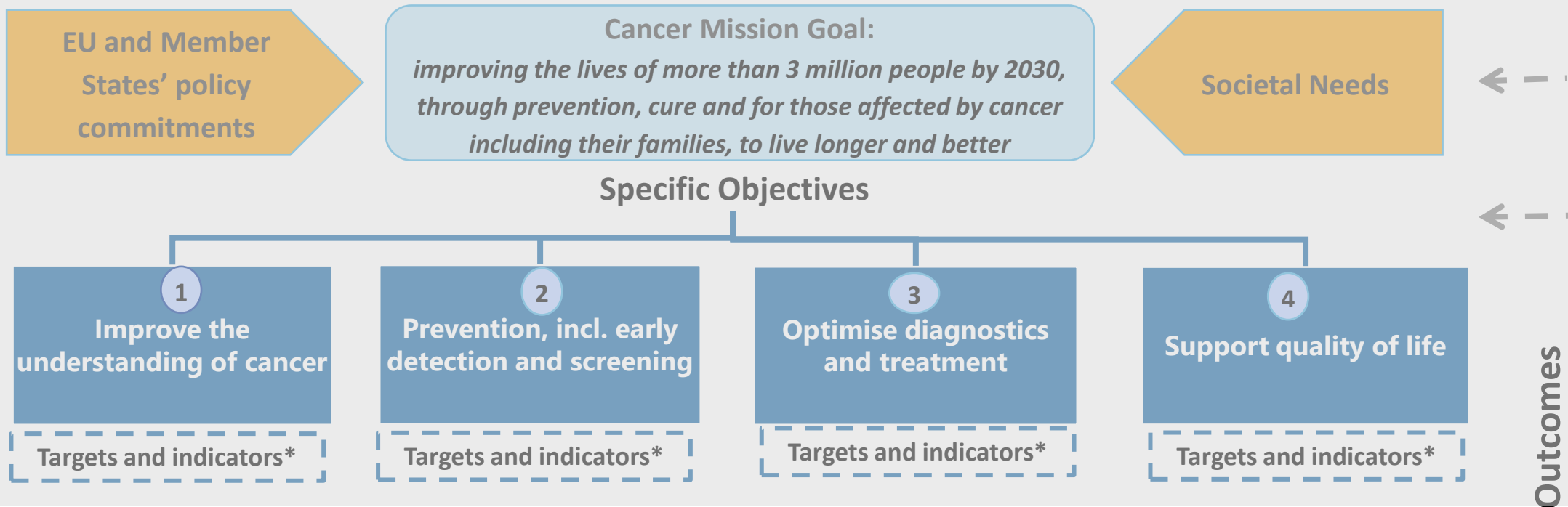
[Horizon Europe](#) is the EU's research and innovation programme for 2021-2027 with a budget of €95.5 billion.

It tackles climate change, helps to achieve the UN's Sustainable Development Goals and boosts the EU's competitiveness and growth.

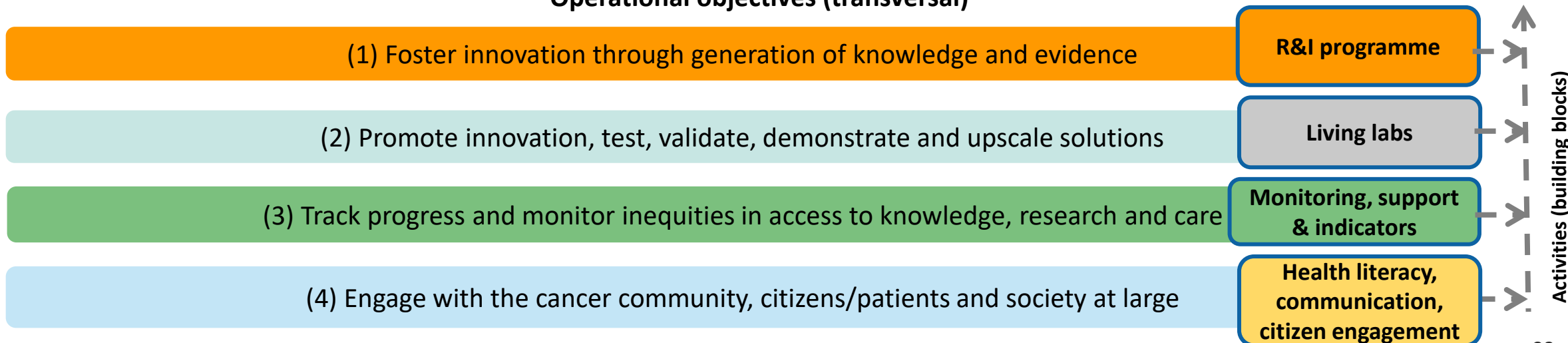
The programme facilitates collaboration and strengthens the impact of research and innovation in developing, supporting and implementing EU policies while tackling global challenges. It supports creating and better dispersing of excellent knowledge and technologies.

It creates jobs, fully engages the EU's talent pool, boosts economic growth, promotes industrial competitiveness and optimises investment impact within a strengthened European Research Area.

[Open and upcoming calls for Horizon Europe](#)



Operational objectives (transversal)



* Quantitative and qualitative targets, based on evidence and monitored through a set of output, outcomes, impact indicators



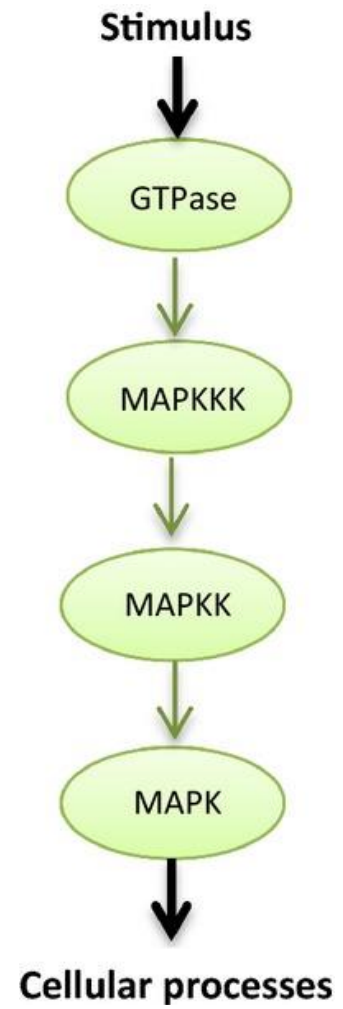
Mission on Cancer

Guiding principles for implementation

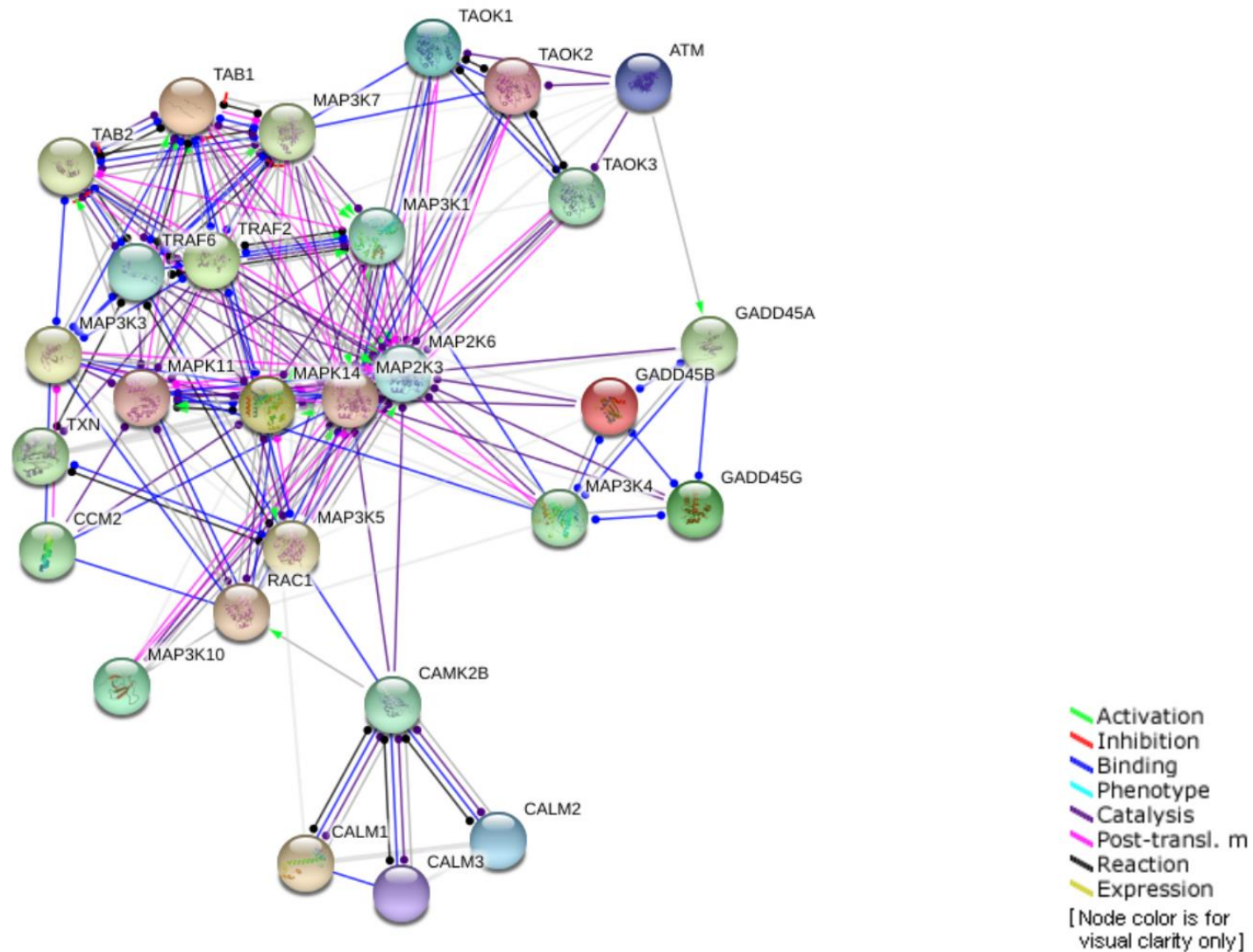
- **Ensure equity and access to knowledge, research and care**
- **Promote innovation:** social innovation, novel approaches to public procurement such as pre-commercial procurement, Living-Labs and other methodologies.
- **Allow for risk taking:** not all innovative approaches will deliver but we can learn from failure and avoid repeating past mistakes.
- **Work with “the coalition of the willing”:** A group of Member States may decide to advance on certain intervention areas and implement actions, sharing their experiences and best practices with the other Member States.
- **Communication and citizen engagement:** An informed and engaged citizen community, including cancer patients and survivors, constitutes a great asset.



mission-driven innovation
(it's just like biology)



STRING interaction network for p38 MAPK signaling pathway (Pathway Interaction Database) SuperPath



managing complex adaptive systems

- missions are a way to provide directionality to complex adaptive systems
- deliberate, small-scale experimentation
- continuous learning and improvement
- requires expertise and appropriate mental models: novel forms of research management, benefiting from e.g. Design Thinking tools
- member states to establish national mission hubs and cancer mission hubs



EUROPEAN UNION

no impact without scale



Scaling up multi-party computation, data anonymisation techniques, and synthetic data generation

Expected outcome (contribute to **all of the following** elements)

- Strong **EU contribution to global standards** for health data;
- Access to **secure data processing tools** for robust data-driven digital solutions and services;
- Provision of **secure, trustable testing environments for innovators**;
- Use of a larger variety of **high quality data tools and services for health**;
- Use of testing and development of **GDPR compliant data driven solutions**;

Scope (address **all of the following** elements)

- **Consolidate and scale up** data anonymisation techniques and synthetic data generation;
- Develop innovative unbiased **AI based and distributed tools, technologies and digital solutions**;
- **Advance the state-of-the-art** of de-identification techniques;
- Develop innovative **anonymisation techniques that don't compromise privacy**;
- Explore and develop **further the techniques of creating synthetic data**;
- Widen the basis for **GDPR-compliant** research and innovation on health data;
- Ensure **uptake and scalability** of methodologies and tools, promote **high standards of transparency** and openness;

Taken together....

- increased focus on outcomes and impact: projects need to focus on **concrete benefit to society at scale**
- Successfully managing complexity: Novel ways of working, 'innovation' approach to research, coalition of the willing
- European priorities apply: green, digital recovery, equity and cohesion
- Citizens and patients are involved and balance other stakeholders' interests

So what will a successful consortium look like?

- starting with the end in mind
- all relevant stakeholders involved, including citizens and patients
- dedicated research management, requires specific expertise
- common rules, measure progress, communication and trust
- small-scale experimentation, deliberate re-inforcement – adaptive complex systems
- anticipating, not being surprised by scale

in a nutshell

- changing success criteria
- complex multi-stakeholder settings requiring specific expertise
- scalability critical

Thank you

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