

Horizon Europe Missions

#HorizonEU #EUMissions
#MissionCancer

This presentation is delivered by a member of a Horizon Europe Mission Board, which is an informal group of experts set up by the European Commission to provide advice for the identification and implementation of missions in the future Horizon Europe programme. The contents of the presentation do not represent the official views of the European Commission nor do they constitute a commitment of any kind on its behalf.



Mission on Cancer



Professor Tomi P Mäkelä

ERRIN - European Regions R&I network

Health Working Group Meeting

Wednesday, 1st July 1st

GoTo Webex meeting 09:30 – 10:30 CET

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Lessons Learned

from Horizon 2020 Interim Evaluation

Key Novelties

in Horizon Europe



Support breakthrough innovation



Create more impact through mission-orientation and citizens' involvement



Strengthen international cooperation



Reinforce openness



Rationalise the funding landscape



European Innovation Council

R&I Missions

Extended association possibilities

Open science policy

New approach to Partnerships



R&I Missions

R&I 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 intended to achieve **a bold and inspirational as well as measurable goal** within a set timeframe, with impact for science and technology, society and citizens that goes beyond individual actions.

Horizon Europe proposal defines mission characteristics and elements of governance

Specific missions will be **co-designed with Member States, stakeholders and citizens** and programmed within the Global Challenges and Industrial Competitiveness pillar (drawing on inputs from other pillars)

Missions - concept

Missions are modelled on the 1960s 'moonshot' programme to put a man on the moon.

« Missions provide a solution, an opportunity, and an approach to address the numerous challenges that people face in their daily lives ».

Professor Mariana Mazzucato



Goals of missions

- achieve **specific** targets in a set time
- **engage with citizens** to establish broader understanding and value of investments in research and innovation
- produce **tangible results for citizens** by 2030
- **maximise the impact** of investments when addressing global challenges

Why cancer?

- **Cancer is one of Europe's top five major societal challenges**
- **The number of new cancer cases diagnosed is projected to increase by >25% in Europe by 2035**
- **Europe needs better and equitable prevention and diagnosis, treatment and care, survival rates and post-cancer quality of life**



Mission Boards

Mission Boards **advise** the European Commission on:

- One or more **ambitious** missions, with input from stakeholders and citizens
- Characteristics of **project portfolios** for missions
- **How best to achieve** the objectives of the mission
- **Communication**
- **Policy** coordination/synergies
- Key performance **indicators**

The Mission Board for Cancer

high-level independent experts (15)

- research, academia, and medicine
- patient associations and NGOs
- industry and innovation
- international agencies

Assembly (26)

- sounding board
- additional ideas
- Broad know-how
- citizen engagement
- Cancer organisations & stakeholders



Walter Ricciardi

Professor of Hygiene and
Public Health at the
Catholic University of the
Sacred Heart in Rome
Chair



**Christine
Chomienne**

Professor of Cellular Biology
at the Université Paris
Diderot, Paris
Vice-Chair

Members of the Mission Board for Cancer



**Regina
BEETS-TAN
(NL)**



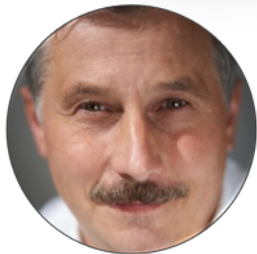
**Serban
GHIORGIU
(RO)**



**Fiona
GODFREY
(LU)**



**Ruth
LADENSTEIN
(AT)**



**Marcis
LEJA
(LV)**



**Tomi
MÄKELÄ
(FI)**



**Andres
METSPALU
(EE)**



**Martine
PICCART
(BE)**



**Pedro
PITA BARROS
(PT)**



**Konrad
RYDZYNSKI
(PL)**



**Anne Lise
RYEL
(NO)**



**Bettina
RYLL
(DE)**



**Elisabete
WEIDERPASS
(SE)**

Consultation with Member States

- Exchange on identification of specific Missions in the Horizon Europe Strategic Plan
- Support national events for co-design and co-implementation with citizens
- Identify relevant national programmes to join forces for accomplishing the missions

Dialogue with European Parliament

- Exchange on political support of Missions in Horizon Europe and policy initiatives
- Engage in events for co-design and co-implementation with citizens and stakeholders

Engagement with citizens



Why?

- Today's major societal challenges are important to citizens
- Citizens challenge ideas/assumptions of scientists/ policymakers and want to participate in the solutions



How?

- Having citizens involved in missions' **co-design, co-implementation and co-assessment**
- Consensus building throughout **2020 to 2027**:
e.g. online focus groups, with groups of citizens drawn from across society, facilitated by experts, including Mission Board and Assembly

Progress



✓ **12 Board meetings** between September 2019 and June 2020

2020, JAN

Draft Discussion Paper

2020, FEB

Draft Discussion Paper debated with the Assembly

2020, APR

Draft Mission Outline discussed with Member States (Shadow Committee), MEPs, other Mission Board Chairs

2020, MAY

First pilots on citizen engagement and outreach with stakeholders

2020, JUN

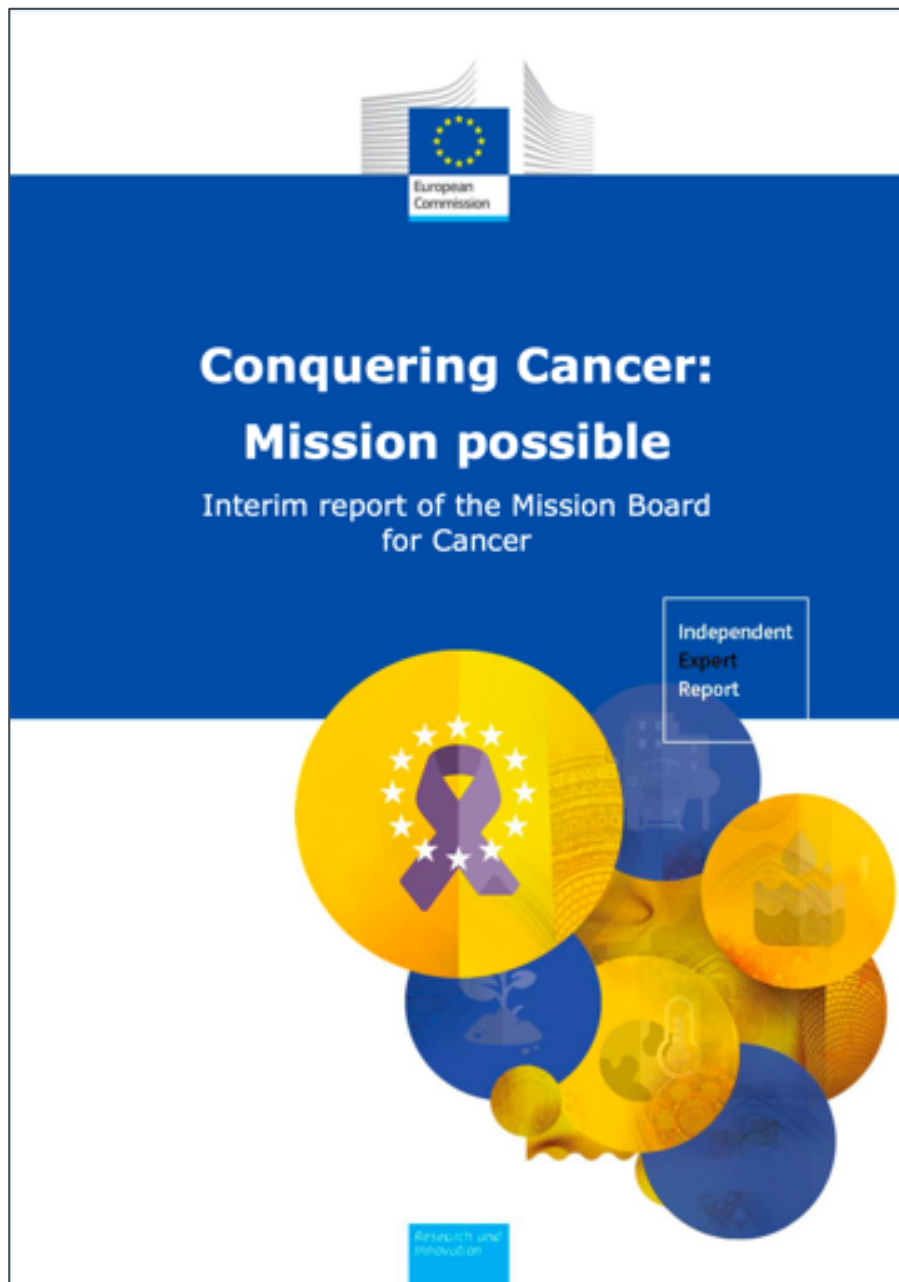
Draft Mission Outline published 25 June

June - December 2020:

- Citizens engagement activities
- Consultation with Member States and European Parliament
- Develop first R&I actions and calls under Horizon Europe



Progress



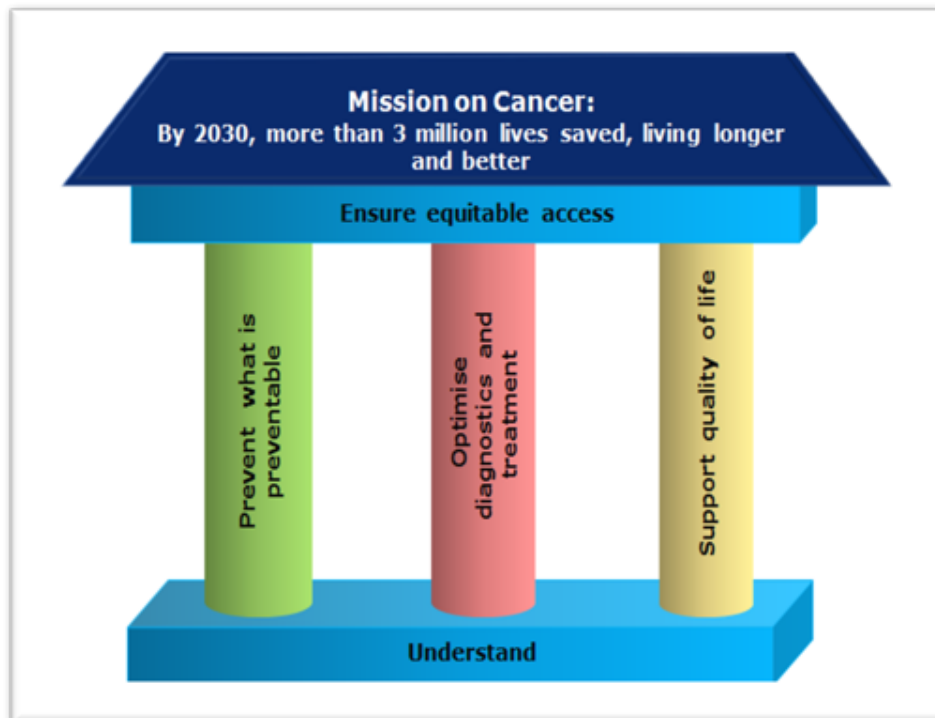
This document is an interim report of the Mission Board's progress towards the definition of a Mission in the area of cancer. The Draft Mission outline presented will be the basis for further discussion and consultation, including with European citizens, resulting in adjustments and refinements for the Mission Board's final advice.

<https://op.europa.eu/en/web/eu-law-and-publications/publication-detail/-/publication/d0235612-b68a-11ea-bb7a-01aa75ed71a1>

Conquering cancer: mission possible



Draft Mission Outline



Goal:

“By 2030, more than 3 million lives saved, living longer and better”

Five intervention areas:

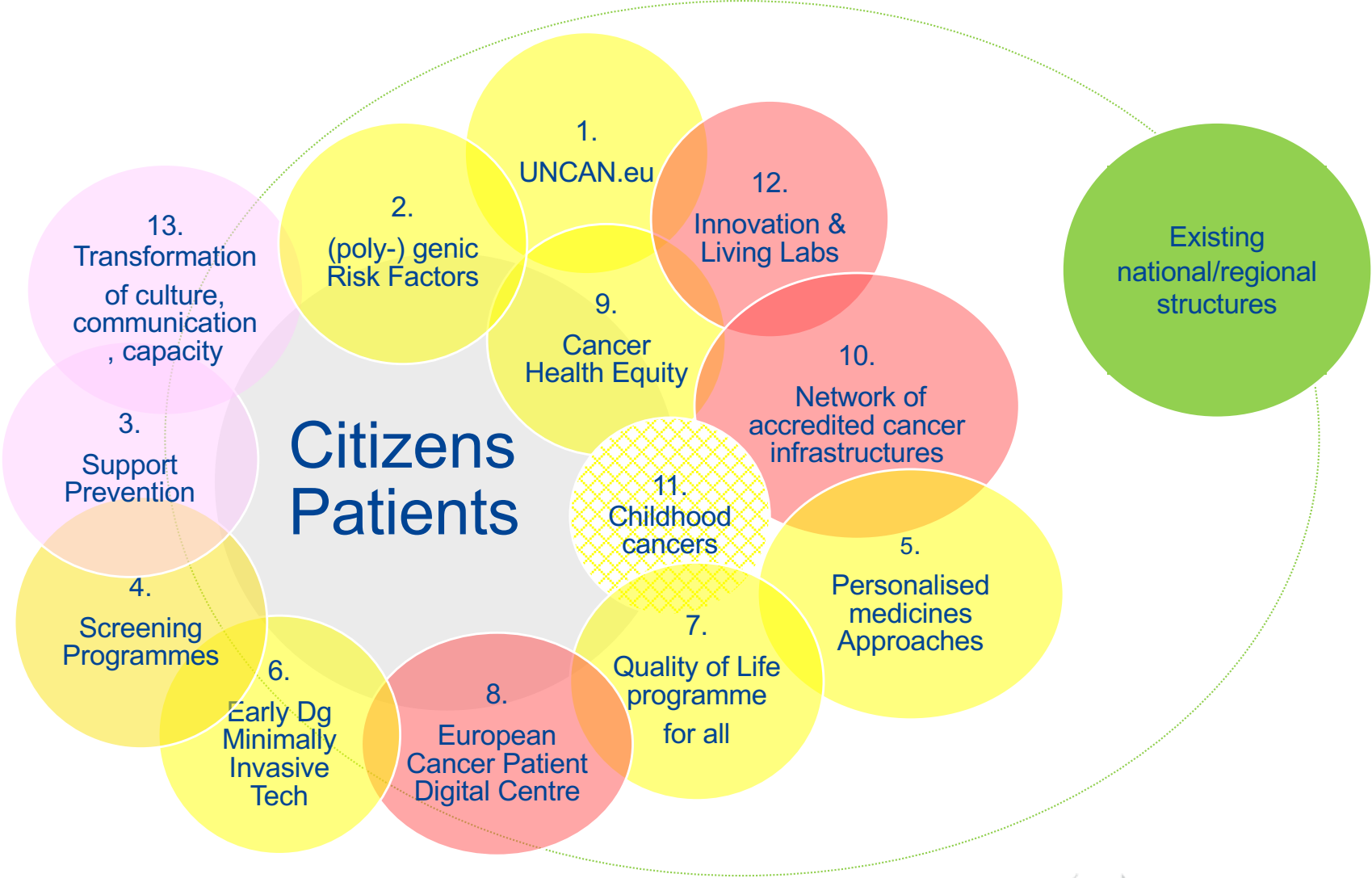
1. understanding
2. prevention
3. diagnosis and treatment
4. quality of life
5. equitable access

13 recommendations for bold actions

13 Recommendations for bold actions

- 1 Launch UNCAN.eu – a European Initiative to Understand Cancer
- 2 Develop an EU-wide research programme to identify (poly-) genic risk scores
- 3 Support the development and implementation of effective cancer prevention strategies and policies within Member States and the EU
- 4 Optimise existing screening programmes and develop novel approaches for screening and early detection
- 5 Advance and implement personalised medicine approaches for all cancer patients in Europe
- 6 Develop an EU-wide research programme on early diagnostic and minimally invasive treatment technologies
- 7 Develop an EU-wide research programme and policy support to improve the quality of life of cancer patients and survivors, family members and carers, and all persons with an increased risk of cancer
- 8 Create a European Cancer Patient Digital Centre where cancer patients and survivors can deposit and share their data for personalised care
- 9 Achieve Cancer Health Equity in the EU across the continuum of the disease
- 10 Set up a network of Comprehensive Cancer Infrastructures within and across all EU Member States to increase quality of research and care
- 11 Childhood cancers and cancers in adolescents and young adults: cure more and cure better
- 12 Accelerate innovation and implementation of new technologies and create Oncology-focused Living Labs to conquer cancer
- 13 Transform cancer culture, communication and capacity building

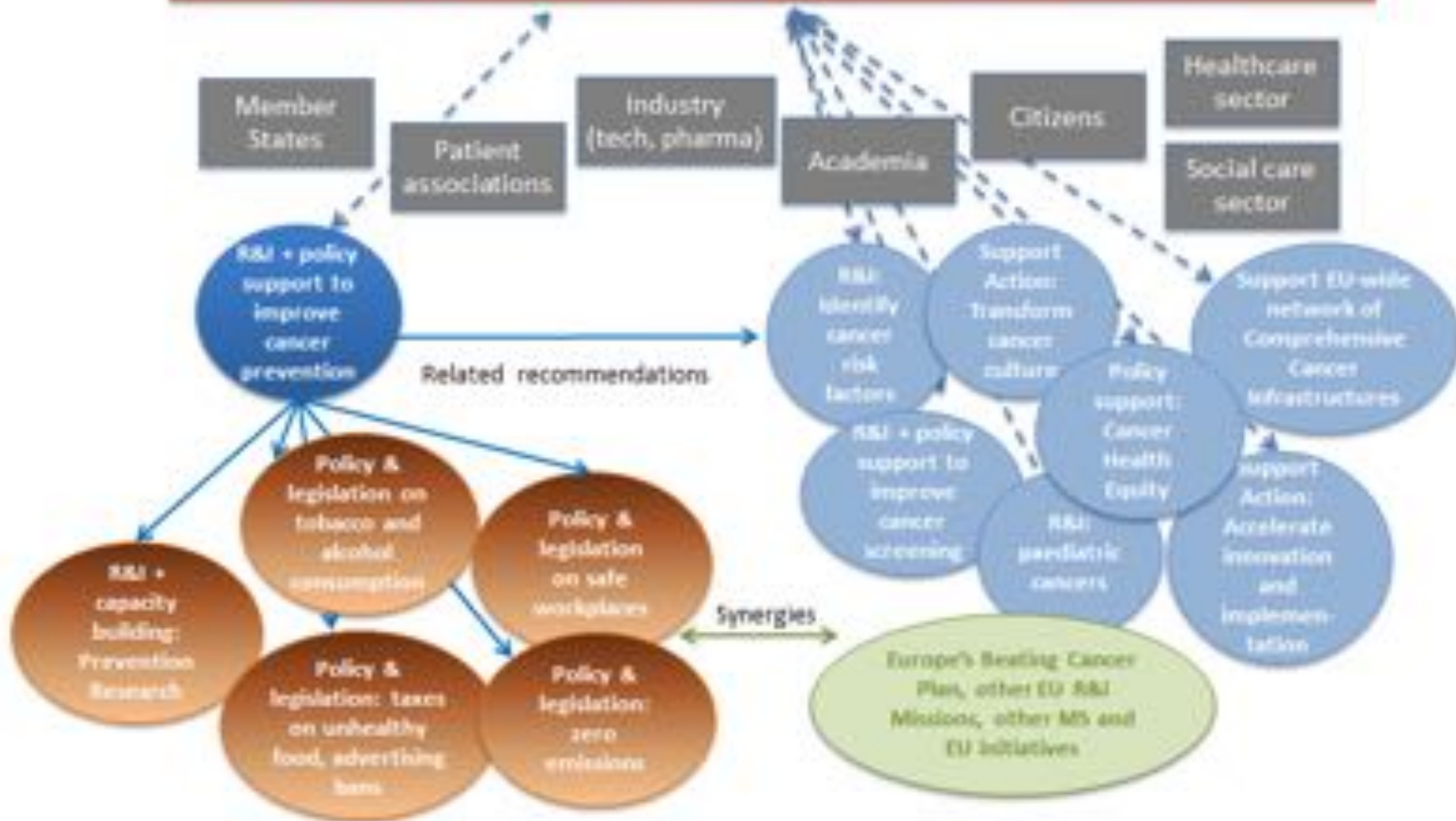
13 Citizen- and patient-centred recommendations of the Mission on Cancer



Prevention

Action area: Prevent what is preventable

By 2030, all EU Member States will have implemented comprehensive cancer prevention strategies, resulting in a reduction of preventable cancer cases of at least 25 %



Improve QoL

**of cancer patients, survivors, family members, carers
and all persons with an increased risk of cancer**

**Gain comprehensive understanding of the holistic needs of all
(subgroups) exposed to cancer**

**Develop appropriate
methods and metrics
based on personal life
and values**

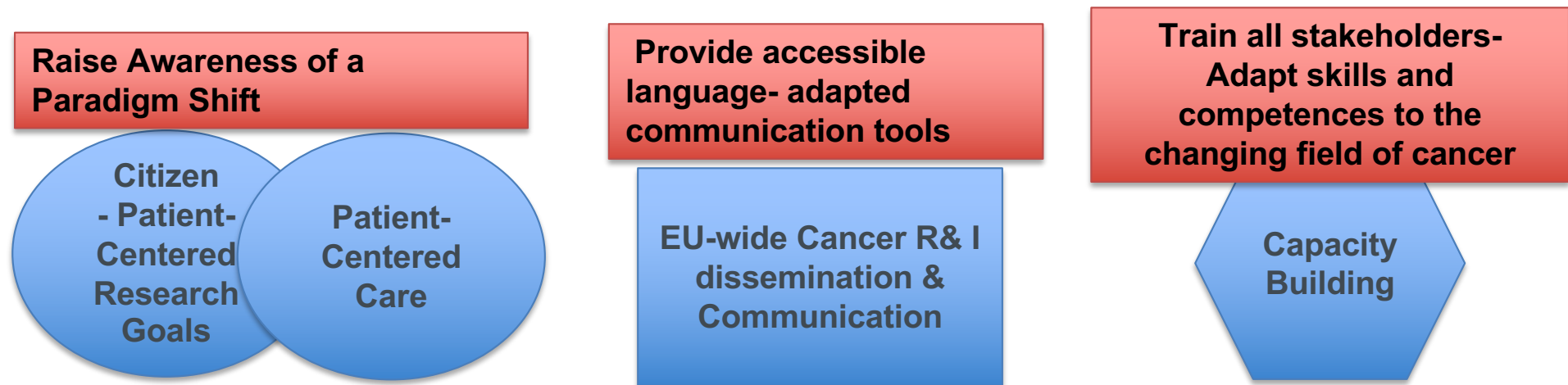
**Identify and monitor physical
and mental health problems**

- **Develop research for innovative effective intervention**
- **High Quality research to limit (late) side-effects of cancer treatment, relieve pain and improve palliative care**

- **Implement a health (survivor) passport**
- **Help survivors achieve their personal live goals**
- **Assert the right to be forgotten**
- **Counteract discrimination**
- **Strengthen legal position (patients/survivors/carers)**

Transform cancer culture, communication, capacity building

- Increased understanding of cancer has substantially improved cancer prevention and treatment with more patients alive with and after cancer.
- But thinking and communicating about cancer in research, healthcare and society has not substantially changed in the same manner.



Transformation is needed to save more lives, live better and longer

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iCAN Digital Precision Cancer Medicine



Linking tumor molecular profiling to Finland's digital health, longitudinal, and clinical data for a new trove of discovery



Discovery platform

- Enabling public-private partnerships
- Providing breakthrough capabilities
- Enabling the launch of adaptive clinical trials for individualized therapies
- Patient in the focus





**World's
second
biggest
*CHALLENGE.***

**Finland's early engagement activity
February – March 2020**

The second biggest challenge in the world.

The European Union has identified cancer as one of its five mission areas. Missions in this area will help set common goals aiming to reverse current, frightening trends in cancer through innovation and research.

Finland was the first country to increase citizen participation through Cancer Challenge idea competition, which was launched on World Cancer Day, February 4th.

Participants sent a total of 123 unique ideas for making cancer prevention, personalized treatment and life with cancer better. Ideas will be used in planning Horizon Europe cancer missions.

"I am excited in this idea competition. We take the results seriously, and they will encourage us forward", said Mariya Gabriel, European Commissioner for Digital Economy and Society, in her video greeting.



123

unique ideas

103

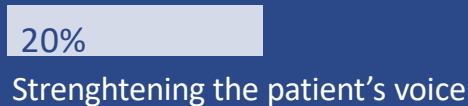
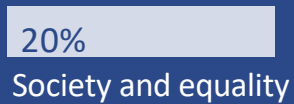
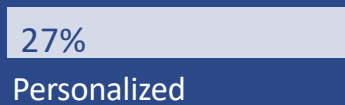
ideas by individual citizens

20

ideas by companies and organisations



Themes for ideas



What was proposed?

The most common type of proposal was a novel approach to treating cancer or providing healthcare services. Cancer research and cancer awareness was also often proposed.

Number of proposals

32	New treatment or healthcare service
22	Information or research idea
21	Food and life habits
14	Costs of treatment
12	New technology
11	Cancer screening
9	Mental support
3	Game or cultural work

In what language?

The participation form was provided in Finnish, Swedish and English.

107
in Finnish

15
in English

1
in Swedish

Winners: Individual category



1. prize: 1000€

Diagnosis curator – Eva-Maria Strömsholm

After a cancer diagnosis, every cancer patient should meet a diagnosis curator. A diagnosis curator is a healthcare professional who gives patients the big picture of their situation and helps patients over the worst crisis phase, and thus gives more strength to recover from cancer treatments.



2. prize: 400€

Health promoting board game for 4-6th graders – Mikko Viitanen

The health promoting board game would be based on primary school curriculum and become a national tool for health education. The game motivates and engages adolescents to take responsibility of their own well-being in a new, innovative way.



3. prize: 100€

ChasingCancer blog empowering patients to make informed decisions – Shishir Pant

How to communicate the latest advancements in cancer research to patients and non-specialists for free, while maintaining the scientific integrity of the findings?

Honorable mentions

Making cancer visible with theatre

Satu Mustanoja

Adjustment training as remote rehabilitation

Minna Salakari

Early recognition of cachexy

Mira Määttä

Lung cancer challenge – goal: “25-25”: 5 year survival rate 25% in 2025.

Paula Lumme



Winners: Organizations and companies



1. prize: 5000€

3D Morphometrix – Wickström Lab ([Watch introduction](#))

Cancer is a complex group of diseases. Two patients who have the same diagnosis may in the end have different results for treatment. Especially now that expensive targeted cancer treatment is becoming more and more common, the need for an exact diagnosis is growing. 3D Morphometrix is an AI based tool for image analysis. It screens hundreds of cell characteristics in a biopsy image with help of 3D imaging and helps achieve a more exact diagnosis and choose of individual treatment without the need of biomarkers and expensive special methods.



2. prize: 2500€

Saattaa sisältää sytostaatteja -podcast – Young Cancer Finland ry ([Listen to demo](#))

May include cytostatics -podcast is a supportive podcast that aims to raise awareness of cancer in young adults, highlight imperfections in cancer treatment and rehabilitation, and offer support to young adults or their close ones. The podcast was a result of collaboration between young adult cancer patients and their close ones. The guests in the podcast are experts by experience and professionals working among cancer.



3. prize: 1000€

Equal and accessible cancer work – Tunne rintasi ry

We propose statutory equal action and accessible information as part of work to reduce the risk of getting cancer and cancer treatment in all sectors. Particularly for the public healthcare sector (in collaboration with other operators), one of the most important tasks is to offer sufficient information, understanding and high quality treatment and appreciative encounters to people who suffer from multiple discrimination and minority stress, and do not usually have the possibility to get healthcare elsewhere.

Honorable mentions

CancerStopGo mobile game

Saara Ollila research group

“Health bus”

Lounais-Suomen Syöpäyhdistys

“Sun agent 2.0 – sun lotion training for kindergartens”

Lounais-Suomen Syöpäyhdistys



Cancer challenge reached over

70 000

persons through different channels

 [Cancerchallenge.eu](https://cancerchallenge.eu)

2860

unique visits of which 18% in English

 52% on mobile  45% on desktop

910

views for video interviews

1:09 min

average time spent on site

Events

4.2.
Kick-off

37 live
160 stream and
recording

16.3.
Final

40+ viewers
in webinar

Press

University of Helsinki news 14.2.
195 reads

MTV3 Uutisaamu

Article by STT-info 14.2

Helsingin Sanomat ad insert

½ page ad
Distribution 140 000 pieces
336 000 readers

More: Iltalehti, Apteekkari.fi,
Kaleva, Medi uutiset

Social media

In addition to visibility listed below, the campaign was marketed in Association of Finnish Cancer Patients' and Europa Donna Finland's closed Facebook groups, which in total have over 8000 members.

141 Facebook followers

Campaign Facebook ad reached 17 000 persons
Final event reached 15 000 persons

88 tweets

with hashtag #syöpähaaste

Additional tweets by companies, ministries etc. involved in the campaign.

57 000

views for tweets by
Cancer Challenge

8 000

views for tweets by
Academy of Finland

1500

views for tweets by
Association of
Finnish Cancer
Patients

Instagram

300+ likes



Europe's Beating Cancer Plan



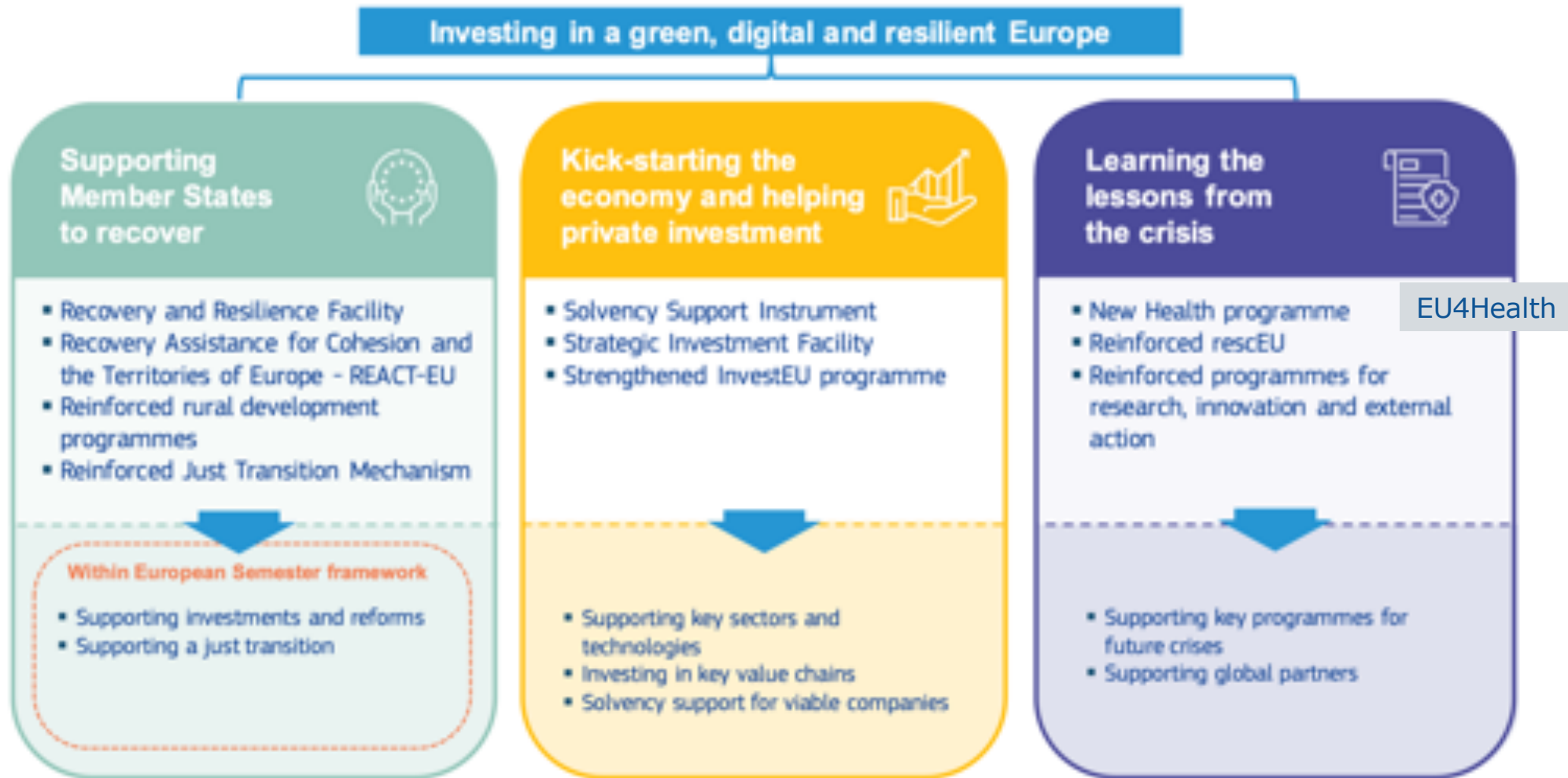
Part of President von der Leyen's mandate for Commissioner for Health, Stella Kyriakides

Actions to strengthen approach at every stage of disease (prevention, early detection and diagnosis, treatment and care, quality of life and survivorship)

Role of the Mission Board:

- Evidence base - to support effective actions as scientific advice body
- Accelerate - its recommendations will spur a recurring cycle between research, innovation and policymaking
- Engage - continuous dialogue with citizens / stakeholders to complement the consultation on the Cancer Plan

Europe's Covid-19 Recovery Plan: Next Generation EU



EU4Health



- EU4Health is the EU's response to the COVID-19 challenge. By investing €9.4 billion, this programme will:
 - boost EU's preparedness for major cross border health threats
 - make sure health systems are resilient and can face
- Tackling cross-border health threats
- Making medicines and medical devices available and affordable
- Being ready for the health challenges of tomorrow
- EU4Health will also make a real difference for ongoing health priorities, in particular:
 - the fight against **cancer**;
 - reducing the number of antimicrobial-resistant infections;
 - improving vaccination rates
- The EU will **expand successful initiatives like the European Reference Networks for rare diseases**



Thank you!

**#HorizonEU #EUMissions
#MissionCancer #EUCancerPlan**

<http://ec.europa.eu/horizon-europe>