

**ECHoS**

Cancer Mission Hubs

**National Cancer Mission Hubs:  
concept, structure and governance models**

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# Table of Contents

1.	Summary .....	5
2.	Preamble .....	6
2.1	Mission-Oriented Research .....	6
2.2	Why a European Mission on Cancer .....	7
2.2.1	Mission on Cancer Objectives .....	7
2.3	Europe's Beating Cancer Plan .....	10
2.4	The Penta Helix model for multi-stakeholder collaboration .....	10
3.	National Cancer Mission Hubs .....	13
3.1	Definition .....	13
3.2	Mission .....	13
3.3	Vision .....	14
3.4	Objectives .....	14
3.5	Overarching Values and Attitudes .....	15
4.	NCMHs structure and Criteria (operational requirements) .....	16
4.1	Structure and Operational Models .....	16
4.1.1	Coordinated National Action .....	17
4.1.2	Consortium .....	19
4.1.3	Legal Organisation .....	21
4.1.4	Joint Venture .....	24
4.2	Governance .....	27
4.3	Human Resources Capabilities & Competences .....	28
4.4	Sustainability and funding schemes .....	29
5.	Activities .....	31
5.1	Sustain Cancer as a National Priority .....	32
5.2	Public Awareness, Advocacy and Engagement .....	33
5.3	Foster Cross-sector Collaborations .....	34
5.4	Effective Communication Strategies .....	35
5.5	Continuous Improvement and Innovation .....	36
6.	Positioning of NCMH in the National Ecosystem .....	38

7. Pitfalls to avoid.....	41
8. Conclusions.....	43
9. References.....	44
10. ANNEX I.....	45

## Table of Figures

<b>Figure 1.</b> Schematic representation of the outputs preceding D2.1.....	5
<b>Figure 2.</b> The Penta Helix framework for NCMHs stakeholder's collaboration.....	12
<b>Figure 3.</b> Schematic representation for the Coordination National Action governance structure.....	17
<b>Figure 4.</b> Schematic representation for the Consortium governance structure.....	19
<b>Figure 5.</b> Schematic representation for the Legal Organisation governance structure.....	21
<b>Figure 6.</b> Schematic representation for the Joint Venture governance structure.....	24
<b>Figure 7.</b> NCMHs positioning in the national ecosystem. Adapted from Figure 2 from Mission on cancer Implementation Plan.....	38
<b>Figure 8.</b> NCMH serve as primary convener within the national ecosystem, connecting national stakeholders (on the left) and National and EU initiatives (on the right) for dialogues and collaborations. The list of initiatives is illustrative and non-exhaustive.....	40
<b>Figure 9.</b> Schematic representation of the continuous learning and evolution of NCMHs framework.....	43

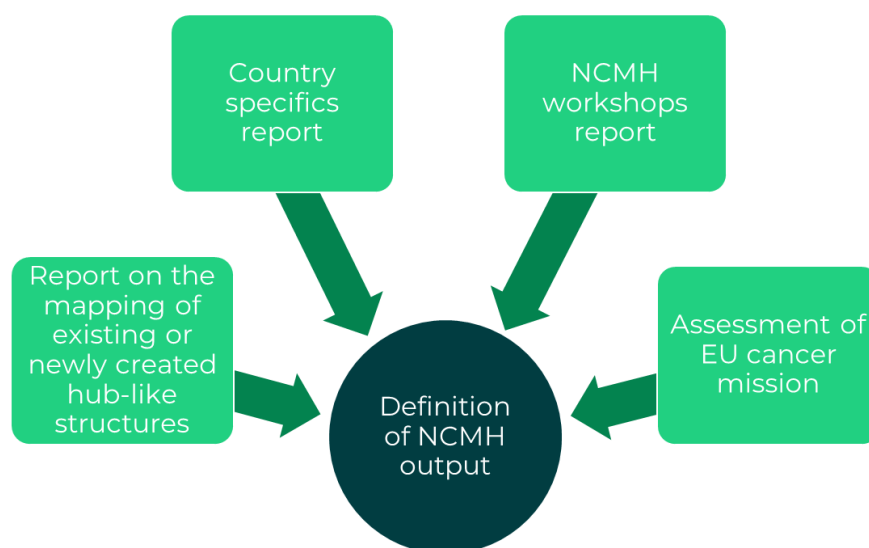
## Table of Tables

<b>Table 1.</b> Description of NMCH proposed actions, target audience, main message and tools to be delivered.....	37
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# 1. Summary

The main objective of the ECHoS project is to promote the creation of a National Cancer Mission Hub (NCMH) in each Member State and Associated Country (MS/AC) as a mean to ensure the proper and widespread implementation of the European Mission on Cancer. To do so, ECHoS has set **to define conceptual models of NCMHs acting at national, regional, and local levels**, including minimal requirements and guidelines for operation.

The present document reports the findings of Work Package (WP) 2, Task 2.1 - Definition of general design and operative NCMH structural elements. It provides a clear and structured summary of key aspects emerging during [two workshops](#) and a [mapping exercise](#) performed in the 1<sup>st</sup> year of the project (Figure 1) and the [report of the assessment](#) of the implementation of EU Mission on Cancer. This document presents the theoretical framework for the operational models of NCMHs without delving into concrete *how to* since a multitude of approaches may be used to achieving the same goal. Real, concrete and inspiring examples on how to set-up NCMHs are provided in Deliverable 2.2 – Guidelines for the implementation of National Cancer Mission Hubs.



**Figure 1.** Schematic representation of the outputs preceding D2.1.

## 2. Preamble

### 2.1 Mission-Oriented Research

Mariana Mazzucato defined Mission-Oriented Research as a strategic approach to innovation centred around bold, ambitious and inspirational goals targeting relevant societal challenges (Mazzucato, 2018). In Mazzucato's vision of Mission-Oriented Research, governments should play a pivotal role in driving innovation in areas of great societal needs, also known as *grand challenges* or *missions* (Mazzucato, 2018b). Here, governments are not just funders of research projects, they are mission-setters – they define priority areas for investment and [ambitious] goals for the missions. Governments are also mission-partners, by fostering a multidisciplinary approach to innovation (see section 2.4). Missions often drive collaboration between different entities from policy & decision makers (representing governments' interests) and academia to industry and civil society. As a result, the interest of governments in mission-oriented projects' results increase exponentially as they share missions' risks and successes.

Unlike traditional research projects, often resulting on incremental improvements, mission-oriented research aims to tackle grand challenges that require systemic change, in contrast to optimising existing technologies or processes. By setting clear and inspiring goals, and by mobilising diverse stakeholders, missions help to align public and private interests, focus resources and talent on pressing problems and catalyse knowledge exchange between multiple actors, ultimately delivering transformative innovation with significant value for multiple sectors of the society (Mazzucato & Dibb, 2019).

While Mission-Oriented research offers a promising approach to addressing societal challenges, it also faces significant challenges. One being the need for long-term commitment from governments and public entities and related investment over many years (Mazzucato, 2018). Mission creep and mission bleaching are two additional challenges. In the first, there is a gradually expansion in scope, shifting activities away from the original goals; in the second, there is a mislabelling of conventional projects as *mission* oriented to get more attention and value. In both cases, a strong leadership and proper knowledge over missions' principles are key to ensure the successful implementation and achievement of mission objectives.

## 2.2 Why a European Mission on Cancer

Cancer is a devastating societal challenge impacting millions of lives worldwide. Europe is no exception, home to one-tenth of the world's population, it bears a disproportionate share of the global cancer burden. Currently, Europe is accountable for a quarter of all cancer cases and one-fifth of cancer deaths. On top of the societal burden of such a disease, the development of more sophisticated diagnostics and treatments resulted in an increased financial pressure on healthcare systems. The increasing incidence of cancers in Europe, and the resulting domino effect on society and economy, exacerbates existing health disparities and underscores the urgent need to address inequalities in cancer care and research as disparities in outcomes are often linked to socioeconomic status, race, ethnicity, geographic location, and access to care (Mark Lawler, 2023).

Noncommunicable diseases (NCDs) kill 41 million people in the world each year, of which 9.3 million are cancer-related deaths. Aiming to incentivise the investment in health promotion and disease fighting, United Nations defined 12 target goals within Sustainable Development Goal #3: Good health and well-being, one of them (target #3.4) specifically focusing the reduction of mortality from non-communicable diseases. Responding to this appeal, the European Commission designed a multi-faceted and holistic approach to tackle cancer in all MS and Associated Countries. This approach addresses cancer from understanding and prevention, to quality-of-life and survivorship in a coordinated, pan-European, response bringing together researchers, clinicians, policymakers, patients, and industry. Multi-stakeholder engagement – in particular citizens and policy makers - is core to the [European Mission on Cancer](#) (EU MoC). The European Mission on Cancer is, in its core, a public statement and a commitment by EU authorities towards millions of people affected by cancer.

### 2.2.1 Mission on Cancer Objectives

Together with [Europe's Beating Cancer Plan](#) (section 2.3), the EU Mission on Cancer is the European Commission's response to addressing the increasing cancer burden which represents a growing societal challenge. The overarching objective of the EU Mission on Cancer (MoC) is to *improve the lives of more than 3 million people by 2030 through prevention, cure and for those affected by cancer including their families, to live longer and better* (Innovation, 2021). This ambitious

goal lays the ground on thirteen bold recommendations (see Box. 1) grouped around four main pillars 1) understanding, 2) prevention, 3) early detection and treatment and 4) quality of life and survivorship. Additionally, it includes four transversal operational objectives i) foster innovation through generation of knowledge and evidence, ii) promote innovation, test, validate, demonstrate and upscale solutions, iii) track progress and monitor inequalities in access to knowledge, research and care and iv) engage with cancer community, citizens/patients and society at large.

The EU MoC aims to address all types of cancer in all stages. From prevention to survivorship, for all ages, under all circumstances, for everyone across the European Union. These include people with rare cancers, cancers in children, adolescents, adults and old people, in socially or economically vulnerable families, among people living in remote areas, etc. Such an ambitious endeavour requires setting up a new ecosystem to work *on missions* at both European and country levels – including regions and local levels - to guarantee the engagement and commitment of relevant stakeholders from policy/decision makers, health, academia, industry and civil society (including patients) in each specific action. The proposed mission approach aims to spark cross-sectoral collaboration on an ambitious European scale, in order to integrate fundamental, translational, clinical, and interventional research, as well as innovation in new ways, which will be essential for decisive progress on cancer. It will build structured multidisciplinary collaboration and allow for continuous interactions among relevant actors in health, research, innovation, finance, social sciences and humanities, and integrate the engagement with citizens, as basis for its implementation. The Mission on Cancer advocates upfront reflections and discussions on the design of proposed actions through continuous, structured dialogues with Member States and Associated Countries, stakeholders, and citizens, when developing innovative solutions on the ground (Innovation, 2021).



**Box 1** Mission on Cancer bold recommendations

**13 Recommendations for Bold actions:**

Understanding

1. Launch UNCAN.eu – a European Initiative to Understand Cancer
2. Develop an EU-wide research programme to identify (poly-) genic risk scores

Prevention

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

Diagnostic and Treatment

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

Quality of Life

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

Equitable Access

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

Cross-Cutting Actions

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.

## 2.3 Europe's Beating Cancer Plan

In addition to the EU MoC, the European Commission has put forward the Europe's Beating Cancer Plan (EBCP), a comprehensive policy framework designed to address the multifaceted challenge of cancer in Europe (Commission, 2021). Just like the EU MoC, the EBCP recognises cancer as a complex disease with far-reaching societal and economic implications. The plan outlines a strategic approach focused on prevention, early detection, diagnosis, treatment, and improving the quality of life for cancer patients and survivors. Following the most recent political orientations, and similar to EU MoC, a cornerstone of EBCP is to foster coordinated and collaborative efforts among EU member states, research institutions, healthcare providers, and patient advocacy groups. By pooling resources and expertise, the EBCP aims to accelerate progress in cancer research, innovation, and care. Some key initiatives of EBCP have clear links with Mission on Cancer objectives, such as the [Knowledge Centre on Cancer](#) and the [European Cancer Imaging Initiative](#), both outlined in the MoC recommendation #1 to Launch Uncan.EU platform.

By joining efforts, the MoC alongside with EBCP (through the EU4Health program) and other programs such as the Digital Europe Program, will fund a diversity of projects worth more than 4 billion Euros during the 2021-2027 period.

## 2.4 The Penta Helix model for multi-stakeholder collaboration

As mentioned before, due to their transdisciplinary nature, mission-oriented research programmes require a highly collaborative and multidisciplinary environment. The Penta Helix model for multi-stakeholder collaboration is an effective strategy widely used in social innovation (Calzada, 2020). This type of cooperation extends the classical collaboration between Public sector, Business sector and academic institutions – common in the triple helix model – to the non-profit sector, and citizens (Calzada, 2020). Owing to these additional actors, the adoption of the Penta Helix model in innovation action such as projects, networks, platforms etc. often result in more citizen-centred and meaningful solutions for society at large.

The Penta Helix model is a framework that emphasises collaboration between the aforementioned key groups of stakeholders, within a co-creation, co-design and co-implementation approach. By understanding the interactions and dependencies between these stakeholders, organisations aim to develop strategies leading to more efficient and collaborative dialogues and collaboration between partners.

The Penta Helix framework adopted by ECHO S project was adapted to reflect the needs of the health and care sector, including research (Figure 2). As such, individual National Cancer Mission Hubs operating in each MS/AC should aim to incorporate the following stakeholders (i.e. their representatives) in their operational structure, as well as to engage with these in their activities. The 5 key group of stakeholders include i) Public Administration, representing policy makers, authorities, regulators, government etc, ii) Health and Care, representing public and private hospitals, oncology centres, pharmacies, diagnostic centres and laboratories, etc. iii) Knowledge and Academia, representing both academic and non-academic research centres, knowledge hubs, innovation clusters, higher education institutions, etc. iv) Business sector, representing pharmaceutical and medical devices industry. employers, media, banks, commercial sector etc. and v) Citizens and Civil Society, representing patients (and patient associations), citizens, Charities, non-profit organisations, entities from the social and education sectors etc. (Figure 2). Noteworthy, for effective identification of relevant stakeholders, each cluster should be analysed across different levels. At “macro” level, focus is on identifying major sub-groups within a given cluster. At “meso” level, these sub-groups can be divided by areas, and at “micro”, specific organisations can be identified. It is important to note that, stakeholder mapping is a continuous activity and should be repeated every time a new initiative or activity is planned.



**Figure 2.** The Penta Helix framework for NCMHs stakeholder's collaboration.

### 3. National Cancer Mission Hubs

Considering the ambitious objectives described above, the implementation of both the MoC and EBCP must gain a strong and sustainable commitment from individual MS/AC. With this in mind the EC will, through Horizon Europe MoC, support the setup of a new type of structures called National Cancer Mission Hubs (NCMHs) (Innovation, 2021). By linking policies and activities emerging from the EC, and when relevant other European institutions such as the European Parliament or the European Council, to policies and activities in each country, individual NCMHs will help the implementation of MoC and EBCP in each country. A wider implementation of these two strategic programmes must contribute to reducing inequalities, promoting and speeding up access to innovation in cancer care and research.

#### 3.1 Definition

NCMHs constitute a structure of governance of EU Mission on Cancer operating across national, regional, and local levels (Innovation, 2021) in each MS/AC. By fostering collaborations, dialogues and partnerships between diverse stakeholders, including representatives of policymakers, healthcare professionals, researchers, business, patients and, citizens NCMHs play a pivotal role in uniting efforts and accelerating research and innovation on cancer prevention, cancer care and quality of life of cancer survivors and carers. Convening national stakeholders on the fight against cancer and ensuring the collaboration between MS/AC is central to the successful implementation of both MoC and EBCP's objective of improving the lives of 3 million people living with cancer by 2030.

#### 3.2 Mission

The mission of NCMHs is to empower and promote a collaborative ecosystem serving the implementation of both EU Mission on Cancer and Europe's Beating Cancer Plan. By facilitating co-design, co-creation, co-implementation, and co-evaluation activities on cancer between multiple stakeholders, NCMHs must work to improve cancer understanding, prevention, early detection, treatment, care, and

quality of life in a people-centric way. When applicable, NCMHs may also contribute for the implementation of National Cancer Control Strategies (NCCS) or National Cancer Control Plans (NCCP).

### 3.3 Vision

The NCMHs envision a future where cancer is no longer a leading cause of death, and all individuals can live long and healthy lives by accelerating the integration of solutions emerging from research and innovation into healthcare, from prevention to quality of life, and enabling policies.

### 3.4 Objectives

National Cancer Mission Hubs should function as two-way intermediaries between European and national structures. NCMHs should act as advocates and representatives of the EU MoC contributing for the implementation of its goals in each country and, as representatives of each country contributing to improve EU policies and regulations on Cancer.

Reflecting the overarching goals of MoC and EBCP, NCMHs should contribute to the core objective of **improving the lives of 3 million people in Europe by 2030** by acting in four distinct levels:

1. **Political/Legislative**, to position Cancer as a national priority in all policies.
2. **Technical/Normative**, to promote the capacity and capability building, and optimisation of resources and infrastructures.
3. **Societal**, to nurture a collective awareness and social culture against cancer.
4. **Economic/Financial**, to stimulate investment in cancer research and care, to stimulate the exploitation of research results and, to reduce costs associated to cancer.

The strategy, leading to the successful implementation of meaningful actions, among these four levels vary among countries, influenced by specific governance,

and by socio-economic and cultural factors. Nevertheless, objectives of individual NCMHs should reflected the capacity to:

- Guarantee implementation of EU Mission on Cancer and Europe's Beating Cancer Plan at national, regional and local levels.
- Coordinate the implementation of multi stakeholder initiatives
- Create societal awareness and facilitate collaboration between stakeholders
- Facilitate communication among stakeholders, including policymakers and citizens.
- Leverage stakeholder across the Penta Helix through public, private, philanthropic collaborations to unify cancer control efforts.
- Ensure strategic and operational alignment between MoC, European Beating Cancer Plan and National Cancer Control Strategies/Plans by connecting national, regional and local organisations to EU efforts/instruments.
- Support Health in all policies by connecting MoC and EBCP objectives with non-health policies such as national innovation strategies or recover and resilience plans, among others.
- Establish robust monitoring and evaluation frameworks to assess the impact of NCMH, MoC and EBCP initiatives, ensuring accountability and transparency.

### 3.5 Overarching Values and Attitudes

To effectively fulfil their mission, NCMHs must adhere to a set of core values such as trust, knowledge, diversity and leadership, as well as attitudes of being respectful, motivator, inspirational and diplomat. These values and attitudes should serve as the foundation for all NCMH activities and boards, ensuring an evidence-based, people-centric, collaborative, sustainable and impactful innovation in cancer research and care.

It is crucial that NCMHs commit also to non-discrimination practices, ensuring inclusivity for all individuals regardless of socioeconomic status, ethnicity, gender, religion, sexual orientation, age or geographic location. Both dominant classes and minorities should have equal access to NCMH activities and benefits. Evidence of such discrimination will not be tolerated by the ECHoS consortium (and later by the EU Network of NCMHs). In extreme situations, the NCMH title can be revoked by the Network.

## **4. NCMHs structure and Criteria (operational requirements)**

### **4.1 Structure and Operational Models**

NCMHs may vary in their structure or operational model to ensure optimal outcomes. Moreover, NCMHs can be oriented by different core competences such as funding of projects or regulatory assessments, among others. Nonetheless, a key element that should be considered across all structures is the engagement of stakeholders from all sectors of the Penta Helix model. Considering the importance of stakeholders' participation in implementing the MoC, this section explores how to integrate stakeholders in four common NCMH structures - Coordinated National Action, Consortium, Legal Organisation, and Joint Venture. Noteworthy, the structures presented below aim to provide general guidance on the design of a NCMH. When adopting one of these structures, the instigator of the NCMH should also adapt it to optimal performance. Moreover, the adoption of one of the structures below may represent a stepwise process where the involvement of stakeholders, or the creation of the different bodies is gradual. Finally, a NCMH can start adopting a more flexible and faster to implement structure and with time evolve to another more definitive set up. NCMHs with hybrid characteristics may exist during development phases.



#### 4.1.1 Coordinated National Action

An informal collaboration where multiple parties agree to work together. Labile commitment from partners. Lighter management and administrative needs. This structure offers flexibility but may lack the commitment/accountability of more formal agreements.

This structure is often centred in a coordination team with representatives of each partner, acting on behalf of the action. The coordination team organises different groups of stakeholders in thematic working groups and/or advisory boards that help in the implementation of NCMH goals as this structure is often limited in resources.



**Figure 3.** Schematic representation for the Coordinated National Action governance structure.

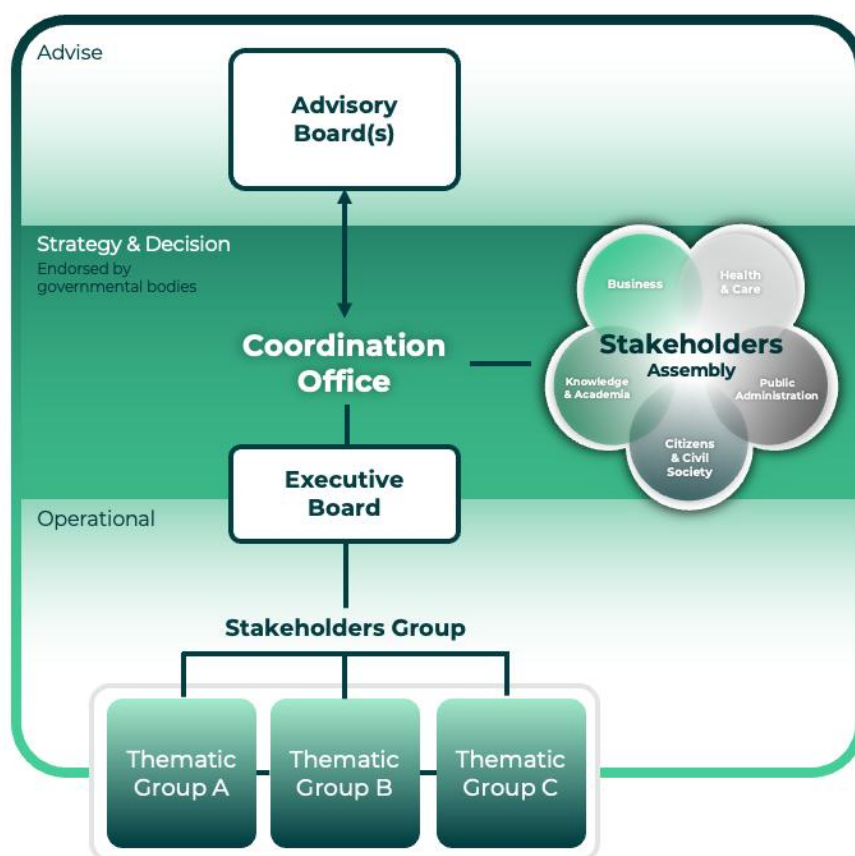
**Table 1** Risks and Mitigation measures of NCMHs structured as Coordinated National Actions

Risk	Description	Mitigation
Labile Commitment from Partners	Informal collaborations often rely on goodwill rather than contractual obligations, making it easy for partners to reduce or withdraw their involvement, especially during resource constraints or strategic shifts.	<ul style="list-style-type: none"> <li>• Regular meetings of coordination team,</li> <li>• Celebration of Milestones</li> <li>• Active communication with stakeholders.</li> <li>• Clear role of each partner</li> <li>• Create value to each partner foster continuous motivation</li> </ul>
Lack of Formal Accountability	Without formal contracts, accountability can be challenging, risking inconsistent participation and poor follow-through on commitments.	<ul style="list-style-type: none"> <li>• Establish Memorandums of Understanding that outline expectations without being legally binding.</li> <li>• Foster peer review</li> <li>• Establish an influential leadership.</li> <li>• Engage in public actions generating commitment with the community</li> </ul>
Resource Limitations	Informal partnerships may lack the funding or resources of more formal arrangements, risking program underperformance due to financial or staffing shortfalls.	<ul style="list-style-type: none"> <li>• Encourage partners to pool resources.</li> <li>• Pursue additional funding from external sources (e.g., grants, sponsorships...).</li> <li>• Seek non-monetary contributions.</li> <li>• Keep good track of each partner's contribution (financial and in-kind).</li> </ul>
Fragmented Coordination	Coordination with many informal partners can lead to fragmented or duplicated efforts	<ul style="list-style-type: none"> <li>• Ensure the coordination team has sufficient authority to streamline decision-making.</li> <li>• Limit the size of the coordination team</li> <li>• Clearly define responsibilities</li> <li>• Foster open communication</li> </ul>
Difficulty in Sustaining Long-Term Goals	Informal partnerships may prioritise short-term gains due to the uncertainty of ongoing involvement.	<ul style="list-style-type: none"> <li>• Create short-term targets that align with NCMH long-term objectives.</li> <li>• Continuous validate the commitment with the community</li> <li>• Conduct regular audits to assess alignment with long-term goals.</li> </ul>

#### 4.1.2 Consortium

An alliance of multiple organisations bound by formal and structured agreement(s). It operates with a decentralised leadership model, distributing responsibilities and decision-making across its members. Depending on its size and complexity, the consortium requires medium to heavy management efforts.

This structure often hosts one or more advisory boards and may have a coordination team acting on behalf of the executive board. The different groups of stakeholders are managed directly by the coordination office who is also responsible for the creation of thematic working groups composed of diverse stakeholders engaged in dedicated, time-limited, endeavours.



**Figure 4.** Schematic representation for the Consortium governance structure.

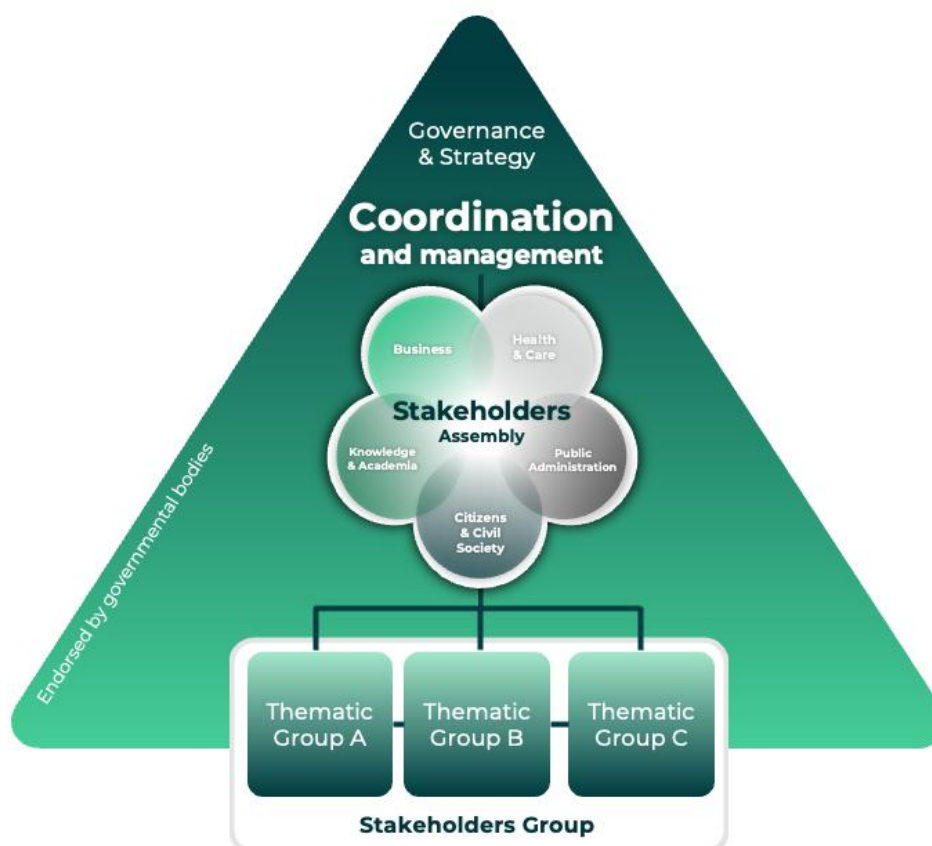
**Table 2** Risks and Mitigation measures of NCMHs structured as Consortiums

Risk	Description	Mitigation
Lengthy Decision-Making processes	Decentralised leadership and distributed decision-making can lead to slowing down critical actions	<ul style="list-style-type: none"> <li>• Establish clear decision-making protocols and responsibilities</li> <li>• Establish processes for dispute resolution.</li> <li>• Establish regular meetings with decision makers</li> <li>• Regularly review and align goals across all members</li> </ul>
Management Complexity	Management may require dedicated resources, especially for coordination teams managing multiple advisory boards and thematic working groups.	<ul style="list-style-type: none"> <li>• Appoint a dedicated administrative and project management team</li> <li>• Use standardised reporting mechanisms.</li> <li>• Designate sub-coordinators for working groups to improve oversight and communication.</li> </ul>
Resource Allocation and Financial Management Issues	Managing resources across multiple organisations can lead to budget inconsistencies, allocation inefficiencies, or duplications of efforts.	<ul style="list-style-type: none"> <li>• Develop common budget management frameworks and tools.</li> <li>• Centralise budget tracking with periodic reviews</li> <li>• Establish a contingency fund to manage unexpected costs.</li> </ul>
Variable Expertise and Inputs	The consortium may face fluctuating levels of engagement or commitment from member organizations	<ul style="list-style-type: none"> <li>• Map each partner's strengths and align with specific activity needs</li> <li>• Recruit advisory boards who can provide guidance and maintain standards across partner contributions.</li> </ul>

### 4.1.3 Legal Organisation

A formal entity established under the law, such as a for-profit company, non-profit organisation, government agency, association, non-governmental organisation or any other legally recognised body. It takes a leading role in planning, executing, and overseeing the action. It provides resources, direction, and potentially coordinates the involvement of other entities. The management structure is typically hierarchical.

In this structure, the different types of stakeholders interact directly with the management structure of the NCMH. Stakeholders can be organised in boards (e.g. advisory board) or assembly(ies). Heterogeneous thematic working groups can be created, joining representatives from the different stakeholders in specific and time-limited endeavours.



**Figure 5.** Schematic representation for the Legal Organisation governance structure

**Table 3** Risks and Mitigation measures of NCMH structured as Legal Organisations

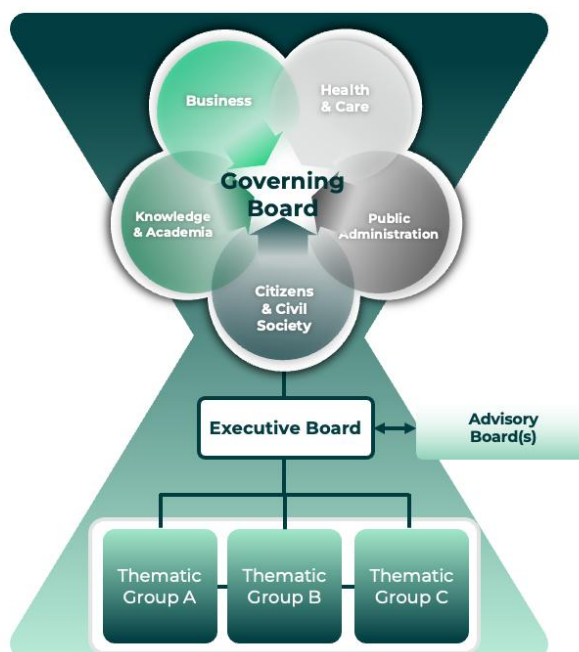
Risk	Description	Mitigation
Regulatory and Compliance Risk	A formal legal structure is subject to strict regulations and reporting requirements. Compliance with health regulations, patient privacy laws, and governance laws can be complex and varied.	<ul style="list-style-type: none"> <li>Establish a dedicated compliance and legal advisory team to oversee regulatory matters.</li> <li>Develop internal policies and processes to ensure adherence to all applicable regulations.</li> <li>Regularly train staff on relevant compliance requirements and ethical standards to minimise liabilities.</li> </ul>
Financial Sustainability	Dependence on government funding, grants, or donations may leave the organisation vulnerable to changes in funding sources or economic downturns.	<ul style="list-style-type: none"> <li>Diversify funding sources, including partnerships, grants, fundraising, and revenue-generating services (where applicable).</li> <li>Build a financial contingency fund to manage cash flow during funding gaps.</li> <li>Implement robust financial planning and control mechanisms.</li> </ul>
Hierarchical Bureaucracy Leading to Slow Decision-Making	A formal hierarchical structure can lead to bureaucratic delays, especially when quick decisions are needed for time-sensitive healthcare initiatives.	<ul style="list-style-type: none"> <li>Delegate decision-making process for operational matters where possible.</li> <li>Develop a streamlined protocol for decision approval that can adapt based on urgency and impact.</li> </ul>
Ineffective Communication	With multiple stakeholders and advisory boards, there's a risk of information silos.	<ul style="list-style-type: none"> <li>Establish a centralised communication platform to streamline messaging across all consortium members.</li> <li>Designate a communications officer responsible for ensuring all parties receive critical information.</li> <li>Implement a "dashboard" system to visually track progress, deadlines, and outstanding issues.</li> </ul>

Staff Retention and Skill Development	High turnover, lack of qualified personnel, or burnout can hinder continuity.	<ul style="list-style-type: none"> <li>• Invest in employee well-being and ensure competitive benefits packages to retain skilled professionals.</li> <li>• Provide opportunities for professional development, including training, and technological tools.</li> <li>• Create a culture that supports teamwork, growth, and work-life balance.</li> </ul>
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#### 4.1.4 Joint Venture

A formal business arrangement where two or more legal entities/bodies collaborate. This partnership involves shared ownership, governance, risks, and rewards, with each party contributing resources and expertise. The management responsibilities are collectively shared.

This structure is centred around an executive board or team acting on behalf of the Joint Venture's Governing Board. The governing board is composed of representatives of the different actors that sign the formal business agreement and contributing with resources for the Joint Venture. Just like the consortium, joint ventures commonly rely on the existence of one or more advisory boards, composed of **external experts who provide strategic guidance and counsel to the executive team**. Thematic working groups, action areas, activity streams, or other thematic focus group may be created to help the implementation of NCMH goals. These working groups may include representatives from partners of the joint venture as well as others invited to join.



**Figure 6.** Schematic representation for the Joint Venture governance structure.



**Table 4** Risks and Mitigation measures of NCMHs structured as Joint Ventures

Risk	Description	Mitigation
Differences in strategic priorities and decision-making styles	Differences in organisational and leadership cultures among entities can lead to internal conflicts	<ul style="list-style-type: none"> <li>Establish well-defined governance structures with delineated roles, decision-making power, and procedures for conflict resolution.</li> <li>Rotate leadership among partners to distribute authority equitably.</li> </ul>
Resource Allocation Imbalance	Uneven contributions (financial, human resources, or technology) can lead to tension if some parties feel they are contributing more.	<ul style="list-style-type: none"> <li>Use transparent accounting and reporting practices to track contributions and ensure fair resource use.</li> <li>Consider weighting contributions to adjust for each party's capacity and equity stakes.</li> <li>Use an equalisation fund to balance any financial or resource disparities among partners.</li> </ul>
Mission Creep	With multiple stakeholders, there's a risk of focus deviating from primary goals to satisfy all parties.	<ul style="list-style-type: none"> <li>Regularly review goals and objectives with all stakeholders to reaffirm focus and prevent deviation.</li> <li>Establish criteria to assess whether new initiatives align with the mission and strategic focus.</li> <li>Use a formal process to evaluate and approve new project ideas to keep the JV mission focused.</li> </ul>
Financial Risks and Funding Gaps	Uncertainty in funding from one or more partners could impact the NCMH's operational budget and program continuity.	<ul style="list-style-type: none"> <li>Allocate a portion of funding to a reserve for financial contingencies.</li> <li>Develop partnerships with other funders (NGOs, governments) for emergency support.</li> <li>Secure staggered funding from each partner, tied to project milestones and performance.</li> </ul>

Intellectual Property (IP) Disputes	Partners may have different IP policies, and disputes could arise over ownership or use of joint research and developments.	<ul style="list-style-type: none"> <li>• Draft a framework for shared IP rights, especially for research results and publications.</li> <li>• Engage third-party IP advisors to mediate potential conflicts and streamline agreements.</li> <li>• Regularly update IP policies to reflect evolving contributions, keeping all partners on board.</li> </ul>
Accountability and Compliance Issues	Shared governance could blur accountability, complicating compliance with health regulations or policies related to cancer research/treatment.	<ul style="list-style-type: none"> <li>• Have compliance officers from each entity who ensure adherence to protocols and standards.</li> <li>• Conduct periodic internal audits and reviews for regulatory compliance.</li> <li>• Create compliance training for all JV staff to uphold regulatory standards.</li> </ul>

In addition to the representation of the different stakeholders and the promotion of a collaborative structure, NCMHs should ensure:

- Endorsement by national government/authorities: although a NCMH can virtually operate with no such endorsement, the capacity to translate actions into policies and policies into actions is facilitated.
- Endorsement by the EU network of NCMHs: NCMHs are new structures created in the scope of EU Mission on Cancer through the ECHO S project according to a set of criteria defined in a series of supporting documents. NCMHs should always comply with these criteria, and updated version of these, to maintain their NCMH status.
- Multi-ministerial involvement: beyond Health and Research Ministries, the engagement of NCMH with ministries responsible for Economics, Finance, Industry, Education, Labour, Foreign Affairs and others considered relevant, can facilitate the implementation of priorities defined in Cancer Mission and National Cancer Plans, as well as implement a *Health in All Policies* approach.

- Partnerships with simplified processes: de-escalate administrative burden and simplify cooperation mechanisms (Public-Public, Public-Private, Public-Social, Public-Private-Philanthropy or others) to expedite implementation of the objectives of the NCMH.
- Co-creation with stakeholders: Beyond integrating stakeholders from the Penta Helix in the structure, it is important to ensure stakeholders are called to participate in co-designing, co-developing and co-evaluating different national initiatives as well as being informed accordingly on the developments of the EU Mission on Cancer.
- Autonomy and sustainable financing: The stability and independence support an organisation's ability to stay mission-focused, adapt to emerging needs, and drive impactful change over time.

## 4.2 Governance

Despite variations in cooperative structures and available resources, a NCMH should incorporate, as part of its governance, bodies with strategic, executive, and operational functions. The structure and composition of these governing bodies should be tailored to the scale of the NCMH and may evolve as it matures. While the benefits of scaling are crucial for the effective implementation of MoC objectives, these should not hinder the NCMH's ability to act efficiently.

NCMH governance may include 1) a governing board for overall strategy; 2) advisory boards for specific expertise and to foster independent decision-making processes; 3) an executive board or executive team for day-to-day operations; and 4) thematic working groups for time-specific endeavours. Other boards such as board of funders may also be created according to the specificities of NCMHs and their actions.

Just like NCMHs themselves, their advisory and governing boards should be guided by and committed to defined **Principles**, including:

- Ethical, Legal and Regulatory compliance.
- Citizens' and Patients' first.

- Health-in all approaches/policies.
- Transparency in decisions, data management, financial transactions, activities, results and recommendations.

The overarching principle defined here for governing bodies are cornerstone to the true embodiment of NCMH values (trust, knowledge, diversity and leadership) and attitudes (respect, motivation, inspiration and diplomacy). By setting the example, governing bodies influence working culture, environment and staff performance in a top-down approach. A health-driven approach, prioritising citizens and patients, must underpin all activities, policies, and decisions. Hence, a strict adherence to ethical, legal, and regulatory standards, as well as transparent management is key for the success of a NCMH.

## 4.3 Human Resources Capabilities & Competences

It is important to ensure the integration of dedicated human resources (HR) in NCMHs. These HR are part of the wide "coordination team" or "executive board" in the models above and focus on the organisation of NCMH activities including the mobilisation of stakeholders and allocation of resources. Being the permanent staff and the point of contact with the community it is important to guarantee high-quality of its performance and to provide these with professional stability since high turnover can affect public perception and trust, compromising the capacity of NCMHs to execute and deliver.

Before delving into specific competences, it is important to emphasise that Mission-Driven research aims to implement significant cultural changes going beyond incremental innovation. To achieve this, NCMH executive and operational bodies must bring a specific set of competencies that complement those of stakeholders in the different boards. While certain competencies may vary according to needs of each NCMH, others are fundamental to the implementation of Mission-Oriented research (ANNEX I) and are, therefore, recommended to be present in all NCMHs. These core competencies are listed below:

- Change Management and Complex Systems Management
- Social Sciences and Humanities / Behaviour Sciences

- Public /Governmental Affairs and Diplomacy
- Science and Project Management
- Networking and Communication

Adding to the list of competences above, the success of NCMHs is directly linked to its personnel capability to engage with diverse stakeholders. It is crucial that NCMHs staff act with autonomy and are recognised as leaders by their peers and by the community. This means they must be non-controversial figures, able to present themselves confidently, engage their audience, and work toward clear objectives with a strong sense of collaboration. Fluency in the local language, proficiency in English and capacity to structure an appealing speech are essential for tracking progress and ensuring successful outcomes. Finally, the staff needs to be fully aware of the MoC and EBCP objectives and funding opportunities.

Worth noting, expertise in oncology, public health, biomedical etc. is often present in the group of stakeholders and advisors. While the NCMH do not require expertise in the medical field, NCMH staff must be able to understand and communicate fluently with representatives from the healthcare and research communities. On top of this, and considering the different areas of activity, NCMH staff may consider people with complementary backgrounds in the fields of political sciences, legal and, patients advocacy as beneficial.

Specialised scientific or technical expertise in tools or area of interest, such as public health and epidemiology, science communication, website and social media management, technology transfer, among others may be considered and must be defined according to specific needs and context of individual NCMHs. Also, NCMHs size and volume of activities may dictate if a specific need is internal to the organisation or seconded to external providers to be activated on demand.

## 4.4 Sustainability and funding schemes

Ensuring the long-term sustainability of NCMHs is paramount to their success. It is, thus, essential that each NCMH develops a structured strategy to ensure sustainable funding. Such strategy is highly dependent on NCMH structure as well as national context, it may consider a hybrid public-private funding model since the diversification of funding sources or of the portfolio of investors is key to building

resilient organisations. **Public Funding** may provide a stable [pluriannual] source of income to NCMHs ensuring the maintenance of NCMH structure and core activities. In contrast, **Private Funding** can take the form of competitive funding (e.g. project grants, awards, etc), fees (membership, training, events, etc) or even from business agreements with specific partners. While public funding provides stability and enhances commitment of national, regional, local governments and authorities in the fight against cancer, private funding provides **flexibility** to NCMH operation. By adopting a strategic approach to funding, with mixed private and public income, NCMHs can build a solid financial foundation and maximise their continued ability to deliver on their mission.

A comprehensive funding strategy should be developed, considering the specific context and capabilities of each participating organisation. While **Consortiums** and **Legal Organisations**, generally, lean on pluriannual public funding to ensure their baseline operation and see competitive/private funding as a possible source for specific actions; **Joint Ventures** and **Coordinated National Action** are more prone to engage in resource mobilisation and fundraising activities to develop their activities.

In summary, when looking into sustainability and funding, NCMHs should heavily consider to i) **diversify funding sources** by applying to competitive grants, or looking for philanthropic donations, industry partnerships, etc.; ii) consider **synergistic funding** making use of diverse public and private funding instruments to co-finance activities; iii) perform **cost-Benefit Analysis** to justify funding requests and demonstrate the value of NCMH initiatives; iv) **develop a long-term financial strategy** outlining revenue generation and expenditure management; v) **track and actively communicate** the impact/results of developed activities; and vi) **Foster partnerships** with other organisations sharing resources, responsibilities and costs.

## 5. Activities

The range of potential activities to be performed by NCMHs is extensive and varies according to organisational structure, involved stakeholders and, naturally, the goal of the activity. At the national level, NCMHs should prioritise the development of robust communication strategies generating enthusiasm for the EU MoC and EBCP (and on the NCMH itself) among a diverse audience. In complement NCMHs should also guarantee the connection to the network of NCMHs and liaise with this when relevant and as defined by the network to influence EU policies in Health/Cancer and to maintain Cancer as a political Priority.

At the national level, a broad spectrum of activities may be developed, from local events and training sessions to collaborative projects and knowledge sharing. NCMHs can take an active role in organising or funding these activities or contribute passively through advisory or support functions. It is worth mentioning that NCMHs access to data, expertise, and potential governmental endorsement, position them as leaders in the field. This leadership position must be incorporated to serve the society and must be leveraged to foster cross-sectoral collaborations, engage with the media, deliver trainings and develop opportunities. In certain instances, NCMHs may also be able to provide financial support or facilitate access to funding sources (e.g.: through the networks of National Contact Points and/or National Focal Points).

At national level, NCMHs activities can be grouped in five categories, those that aim to i) Position for and Sustain Cancer research and care as a National Priority; ii) Create Public Awareness, Advocacy and Engagement for cancer research and care; iii) Foster Cross-sector Collaborations; iv) Develop Effective Communication Strategies; and those aiming at v) Continuous Improvement and Innovate in Cancer area. In addition, a sixth set of activities articulating national and European initiatives, needs and opportunities must be assured by the hub in collaboration with the EU network of NCMHs.

Being a collaborative structure, NCMHs do not act alone but in collaboration with national stakeholders in a co-creation and co-promotion approach. The listing of these activities is **not** a statement of *take-over*, quite the opposite, NCMHs can actively and always look to leverage existing initiatives by establishing collaborations with national structures/stakeholders contributing to increase the outreach of these initiatives. On the other hand, when gaps are identified NCMHs

must take a proactive attitude of mobilising relevant stakeholders to the action, taking or transferring the organisation and leadership of the action as relevant.

## 5.1 Sustain Cancer as a National Priority

Achieving sustainability in cancer research and care requires positioning the fight against cancer as a national priority now and beyond 2030. These activities aim to embed the fight against cancer within the national political agenda, ensuring that it receives the attention, resources, and focus from both research and health communities, as well as from other communities such as education and social sector. This set of activities should not only create or maintain the momentum of cancer research and care but also ensure that national priorities reflect the pressing needs identified by cancer patients.

Possible actions:

- Encourage the preparation, implementation and monitoring of National Cancer Control and research Strategies/Plans.
- Advocate for the integration of Cancer-specific topics in other national strategic plans such as overarching National Health Plans, National Research and Innovation Agendas or National Mental Health Plan, among others.
- Elaborate and disseminate reports, position papers, joint opinions, manifestos and other type of policy documents.
- Actively participate in, or promote the participation of relevant organisations, in Joint Actions and other relevant initiatives emerging from both Health and Research Framework Programs.
- Organise policy dialogues joining researchers and healthcare professionals with policy makers, citizens, business sector, and other relevant stakeholders.
- Secure sustainable funding for long-term policy and awareness actions.
- Identify synergies between EU funding programs and national needs.

**Key target audience:** policy makers & local governments



## 5.2 Public Awareness, Advocacy and Engagement

Public awareness and advocacy are crucial to building a societal momentum against cancer. This activity focuses on raising public awareness and literacy about cancer (from research and, prevention, diagnosis to treatment and, quality of life) while advocating for supportive policies that reflect the needs of the communities. By leveraging the Penta Helix framework, NCMHs can promote the creation of awareness campaigns that demystify cancer and promote informed decision-making.

NCMHs are recommended to follow the guidelines, issued by the **International Association for Public Participation (IAP2)**, regarding **Public Participation Spectrum** and the **WHO [Social Participation Resolution for Universal Health Coverage, Health and Well-being](#)**. This spectrum outlines the different levels of citizen engagement in decision-making processes, ranging from providing information to full co-creation.

The spectrum consists of five key stages:

- **Inform:** This level focuses on providing the public with balanced and objective information to help them understand the issues and decisions being made.
- **Consult:** In this stage, public feedback is sought on alternatives or decisions, although the final decision remains with the authorities.
- **Involve:** At this level, citizens are actively involved in the process to ensure that their concerns are directly reflected in the decision-making.
- **Collaborate:** In this stage, decision-makers work together with the public in developing solutions or alternatives.
- **Empower/Co-create:** The final stage, where decision-making authority is given directly to the public.

This approach also aligns with the EU Horizon Europe points on Communication, Dissemination and Exploitation, specifically on the need to engage relevant stakeholders, raise awareness, maximise the impact, and ensure a concrete use of the results.

Possible actions:

- Promote the dissemination of opportunities, initiatives, and results from both health and research framework programs.
- Integrate or facilitate the participation of individual citizens and patient organisations into relevant activities including research projects and the definition/revision of a national cancer control strategy/plan.
- Create opportunities for patients and citizens to have a voice in cancer initiatives (e.g. organise or participate in outreach, education or coaching activities).
- Create (or foster the creation of) awareness campaigns.
- Through a multi-ministerial collaboration agreement promote the introduction of Cancer literacy courses/topics in the syllabus of pre-university students.
- Promote participation of civil society organisations, citizens, and patients (or Patient associations) in cancer prevention and care across the Penta Helix areas (by providing resources/tools/knowledge to stakeholders).

**Key target audience:** patients & citizens

## 5.3 Foster Cross-sector Collaborations

Collaboration is the cornerstone of Mission-Oriented research and innovation. NCMHs must promote a shared culture and alignment of values across stakeholders acting as facilitators of partnerships that encourage interdisciplinary research, shared resources, and innovative solutions. By cultivating a **collaborative ecosystem where stakeholders from the Penta Helix are prone to co-create, co-design, and co-implement their own activities**, NCMHs accelerate the translation of scientific discoveries into practical applications, and policies. NCMHs are encouraged to promote an ecosystem where collaborations are initiated and incentivised in both top-down and bottom-up approaches.

Possible actions:

- Organise meetings and brokerage events.
- Mobilise resources for initiatives that unite stakeholders and that aim for the implementation of EU MoC, EBCP and national strategies.
- Fund collaborative projects and networks in the cancer area
- Promote information sharing and the participation of national community on relevant oncology research projects and initiatives of the EU setting,

including Research and Health framework programs and EU partnerships (such as Innovative Health Initiative).

**Key target audience:** all the stakeholders across the Penta Helix Model

## 5.4 Effective Communication Strategies

Effective communication is vital to any collaboration and collaborative environment. NCMHs must invest in a variety of communication channels and strategies to disseminate relevant information to relevant stakeholders. By defining communication channels, tailoring messages to specific audiences and cancer types, NCMHs maximise efforts and enhance outcomes while promoting evidence-based decision-making.

While NCMHs can position themselves as a communication channel (vector) they can also foster two-way communications between different stakeholders (Medical Community, Patients, Researchers etc.).

Possible actions:

- Organise accessible cancer awareness campaigns through television and other media outlets.
- Improved communication between cancer-related organisations and external communities.
- Utilise digital and social media to enhance communication and resource management.
- Clearly define target audiences for outreach efforts.
- Organise events such as workshops with patients, clinicians, caretakers, civil society, etc. dedicated to specific topics of cancer research and/or life with cancer, survivorship and end-of-life.

**Key target audience:** all the stakeholders across the Penta Helix Model

## 5.5 Continuous Improvement and Innovation

Continuous improvement is a fundamental principle in the pursuit of sustainability over time. By setting benchmarks and performance indicators, the NCMHs will systematically monitor progress, identify areas for improvement, and implement evidence-based strategies to optimise operations and impact. Through a positive commitment to continuous improvement, NCMHs **ensure their relevance and capacity to adapt to the complex and ever-evolving nature of cancer research and care.**

Possible actions:

- Conduct gap analysis to highlight national, regional and local needs (e.g., to identify regional vulnerable groups) to tailor activities to real needs.
- Continuous monitoring of progress and look for emerging opportunities.
- Evaluate the impact of implemented activities and use it to improve the results of NCMH (positive feedback loop).

**Key target audience:** NCMH Governing and Executive Boards

Regardless of the activities best suited to each MS/AC, NCMHs are encouraged to focus on the following during the design phase:

1. Define short and long term NCMH objectives.
2. Align activities and quantitative metric for the tools to be delivered.
3. Assess the expected short-term outcomes and long-term impact of the defined activities.

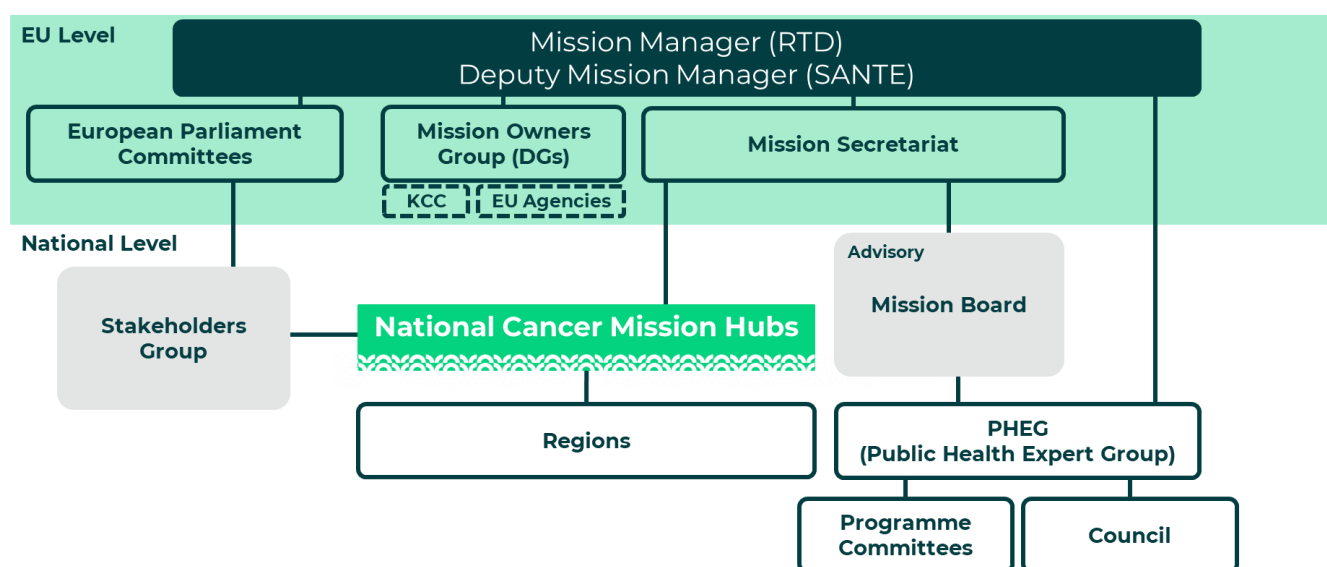
Perform periodic evaluation of activities and metrics for the defined tools, and re-assessment of the NCMH objectives, messages, outcomes and impact.

**Table 5.** Description of NMCH proposed actions, target audience, main message and tools to be delivered.

Activity	Target Audience	Messages	Tools
The fight against Cancer as national priority	Policy makers & local government	Social benefits and Health related costs reduction derived from additional investments in cancer research and care	Reports, position papers, joint opinions, EU projects, manifestos, policy dialogues
Public awareness and advocacy	Patients & Citizens	Benefits to patients/citizens from research activities, prevention, new therapies/ palliative cares	Website, social media, info-campaign, Token at Hospitals
Collaboration	All the stakeholders across the Penta Helix Model	Cultivate a collaborative ecosystem where stakeholders from the Penta Helix can co-create, co-design, and co-implement strategies that address the complexities of cancer research and care	Scientific publications, Dissemination at various events, Targeted seminars
Communication	All the stakeholders across the Penta Helix Model	Importance of feedback loops, allowing stakeholders to share insights and inform strategic adaptations.	Website, social media, communication events held at shopping centres, info stands in downtown, interviews
Continuous improvement	NCMH Governing and Executive Boards	Importance of impact analysis, importance of metrics definition, need to align to NCMH performance measurement	Internal NCMH meetings, yearly performance evaluation

## 6. Positioning of NCMH in the National Ecosystem

Being part of EU Mission on cancer governance structure, National Cancer Mission Hubs are designed to work alongside/complement existing specialised networks and infrastructures funded by EU Mission on Cancer and EBCP bridging these with relevant stakeholders across the Penta Helix (Figure 7). This unique positioning ensures that the NCMHs are at the forefront of collaborative dialogues, driving policy(ies), and enhancing resource utilisation, making the NCMHs ideal structures to oversee, coordinate and advocate for the implementation of EU MoC in each country – as idealised by the first Board Members of the EU MoC and enshrined in the Mission on Cancer Implementation Plan. Likewise, NCMHs are also in a privileged position to influence EU research and health policies and programmes such as Mission on Cancer, EBCP, Digital Programme Europe, EU partnerships and their follow-ups.



**Figure 7.** NCMHs positioning in the national ecosystem. Adapted from Figure 2 from Mission on cancer Implementation Plan.

As mentioned, the EU MoC is as bold in its overarching goal as is in the 13 recommended actions (see box 1). The implementation of the general and specific objectives of the EU MoC is currently underway and involves multiple consortia composed by a variety of organisations. These organisations are key stakeholders in the cancer field in Europe as much as in their country.

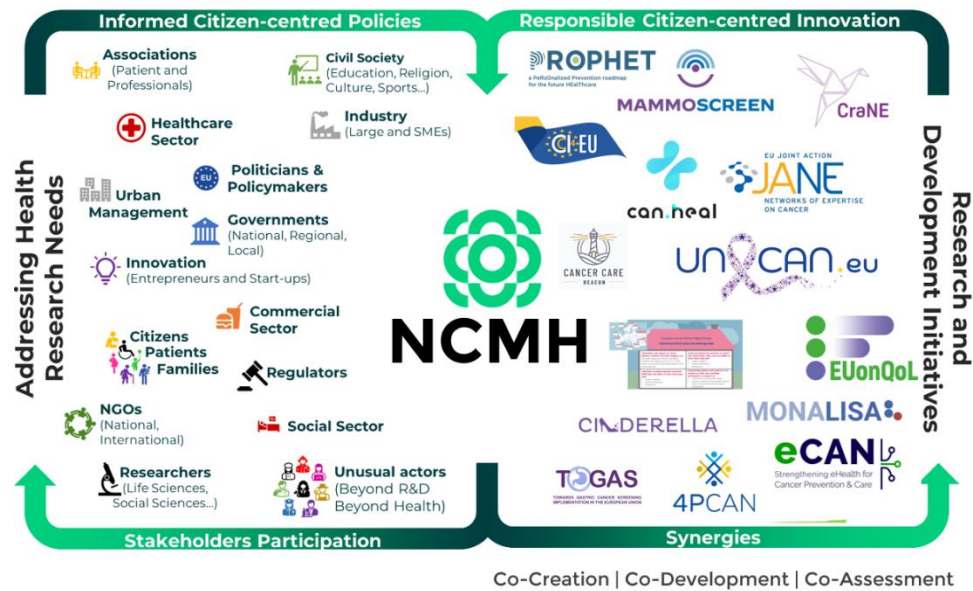
Serving as privileged platforms for knowledge exchange, NCMHs should lead by knowledge and complement stakeholders mapping with the identification of initiatives of national interest in which they participate (or coordinate). As it is utopic to engage all interested and relevant stakeholders from all MS/AC in all key EU MoC funded projects hence, NCMHs must act as the meeting point serving as the national platform for discussion in one (or more) given topic(s).

As an example, when referring to cancer information/data it is common to find cancer registries, clinical (trials) data, Patient Reported Outcomes, Image repositories, Genetic Sequence data, tumour biobanks and many other information completely scattered by multiple organisations and departments in the country. NCMHs can create a thematic group on Cancer Data that convenes all relevant organisations (stakeholders) with national representatives in key EU initiatives in the field (e.g.: 4UNCAN.EU, CCI4EU, EUnetCCC, JANE, eCAN, EUCAIM, ECPDC, 4PCAN, SMARTCARE...). This approach maximises the access to information to all relevant stakeholders even if only a few organisations are direct beneficiaries in each of these initiatives (Figure 7).

By engaging different boards and stakeholders in specific thematic groups NCMHs can accelerate the access to information to a diverse group of stakeholders helping the development of specific areas/initiatives in the country, helping building networks and helping to develop informed actions.

It is not by chance that the example provided in Fig. 7 includes MoC and EU4Health funded initiatives, the action of NCMHs should be inclusive and embrace relevant initiatives beyond Horizon Europe such as EU4Health/EBCP, Digital Europe Program or key NCCP/NCCS initiatives. It is worth stressing that, as a people-centred structure, NCMHs shall actively engage representatives from the patient community, civil society, observatories and other groups in the Penta Helix, within the aforementioned programs, with special relevance for Joint Actions and strategic CSAs which represent initiatives of particular interest for the country.

This people-centric approach not only enhances the relevance and effectiveness of the discussions and developed initiatives but also fosters trust and transparency within the national ecosystem.



**Figure 8.** NCMH serve as primary convener within the national ecosystem, connecting national stakeholders (on the left) and National and EU initiatives (on the right) for dialogues and collaborations. The list of initiatives is illustrative and non-exhaustive.



## 7. Pitfalls to avoid

In addition to 'what should be done', it is important to be alert for common practices that can hinder the process, leading to undesirable results - most of these practices result from poor preventive strategies. Therefore, NCMHs have higher chances to succeed if they act proactively to avoid the following pitfalls:

### 1- Leadership, funding and Resources

- Lack of leadership with limited or no concrete activities undertaken.
- Insufficient funding or difficulty to execute funding.
- Insufficient dedicated staff and resources to carry out NCMH objectives.
- Inability to monitor progress, measure results, and report on achievements.
- Lack of influence on policy and decision-making processes.
- Inability to take responsibility for recommendations or opinions expressed by the NCMH.

### 2- Culture and attitudes

- Presumptuous attitude and lack of inclusiveness
- Creation of a top-down/hierarchical approach where the decision-making process disregards expertise.
- Relying on the exact same people/organisations/processes/resources and expect different results.
- Failing to involve stakeholders beyond conventional – including citizens and patients in developed activities.
- Neglecting the support of the community.
- Failing to involve those who's been (is/are) actively working on the ground ("doers").
- Downgrading people and organisations responsible for past efforts in cancer control.
- Not following up on patient needs and feedback, while adopting a "we know better" attitude.

### 3- Stifling innovation

- Discouraging new initiatives / innovative approaches and rely on a me-too approach.

- Introducing multiple layers of 'approval' before action.
- Understand NCMHs as just another structure in the “care” or “research” sector rather than an opportunity to challenge established ideas and go beyond common practices in both care and research.

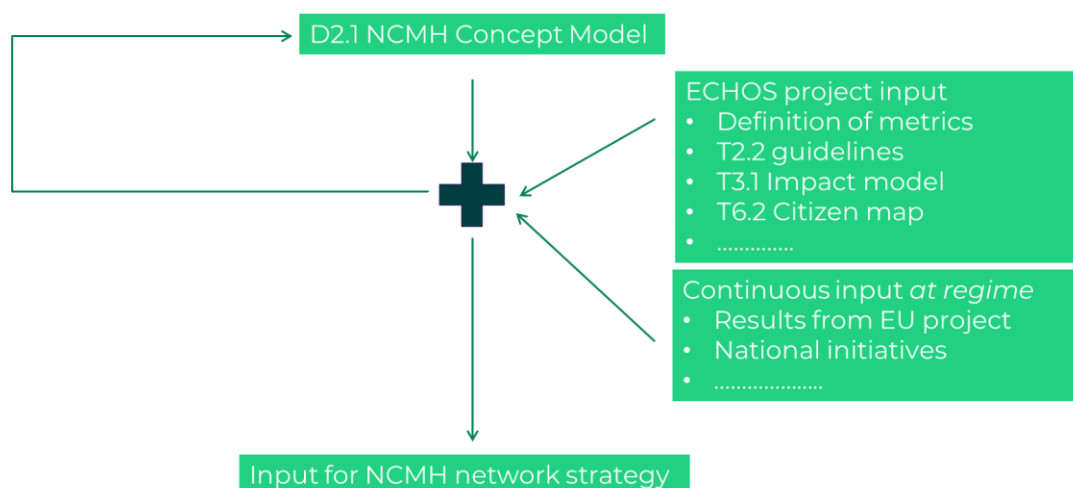
#### **4- Inefficiency and poor management**

- Setting too many priorities and attempting to solve all problems simultaneously.
- Setting Overambitious goals without breaking very ambitious goal down to more realistically reachable ones
- Trying to be the sole authority, rather than connecting experts and stakeholders.
- Fail to establish or align short-term objectives and activities with long-term goals and vision.
- Inexistence of a, or very poorly defined, contingency plan for key activities
- Choosing an inappropriate leadership model that hinders progress.
- Taking an uncoordinated approach to activities.
- Waiting for unanimous approval from every party involved before acting.
- Focusing on lengthy reports instead of taking concrete steps.

## 8. Conclusions

This deliverable provides a comprehensive overview to guide the establishment of National Cancer Mission Hubs (NCMHs) across European MS/AC. Built on the strategic goals of the EU MoC and the collaborative framework of the Penta Helix model, the document outlines the vision, objectives, organisational structures, and activities essential for successful NCMH implementation. Being a personal or patient-centred structure, NCMHs requires adoption of dynamic, adaptable models that foster cross-sector collaboration, drive innovation, and align with both national and European cancer initiatives.

The NCMH concept should not be seen as static but as evolving concept. By remaining adaptive and responsive to new challenges and opportunities (Figure 8) from the ECHoS project, from national ecosystems and from EU programs, NCMHs can maximise long-term impact on cancer care and research.



**Figure 9.** Schematic representation of the continuous learning and evolution of NCMHs framework.

Detailed operational procedures, best practices, and guidelines will be covered in an independent document (Deliverable 2.2 – Manual/eBook with guidelines and best practices), ensuring a clear path for the effective implementation on EU Mission on Cancer, EBCP and National Cancer Control Plans and subsequent sustainability of NCMHs.

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## 10. ANNEX I

**Table 6** List of competences required for the implementation of Mission-Driven research

Category	Capability/competence	Description
Strategic	Change Management and Complex Systems Management	Essential for managing large-scale change initiatives and navigating the complexities within healthcare and mission-driven organizations.
	Public / Governmental Affairs and Diplomacy	Needed for understanding and influencing public policies, aligning with governmental bodies, and fostering political partnerships, especially given the importance of cancer as a national priority.
	Networking and Communication	Strategic networking with stakeholders and fostering alliances across different sectors, crucial for broad social impact.
	Political Science	Backgrounds in political science or equivalent for work positioning cancer as a national priority.
Operational	Science and Project Management	Required for the efficient execution of research projects, managing timelines, resources, and deliverables aligned with

		the Cancer Mission objectives
	Stakeholder Engagement	Skills necessary for working with and maintaining the engagement of various stakeholders to fulfil the mission-oriented research goals.
	Fluency in Local Language and Proficiency in English	Essential for communication within local contexts and for international collaboration, as well as tracking progress and reporting.
	Orchestration of Resources and Stakeholder Mobilisation	Focused on the allocation of resources and stakeholder involvement across various projects and initiatives.
Technological	Science Communication Tools	Specific technical expertise in communication channels and tools that help disseminate scientific findings effectively.
	Website and Social Media Management	Capabilities in managing digital platforms and engaging online audiences for broader awareness and reach.
	Technology Transfer	Skills related to conveying results stemming from scientific and technological research to market and to wider society, as

		needed for specific initiatives.
Leadership	Autonomy and Confidence	Ability to operate independently and assertively to present themselves as leaders within the mission-driven cancer landscape.
	Public Speaking and Audience Engagement	Proficiency in delivering appealing presentations and engaging audiences to inspire action toward cancer-related goals.
	Collaboration with Clear Objectives	Leading collaborative efforts with well-defined goals to enhance team performance and align with broader organizational objectives.
Functional	Patient Care Knowledge	Understanding of patient-centred approaches for initiatives directly involving cancer patients and patient care.
	Science Background (preferably biomedical)	Necessary for staff working on more technically oriented, science-based initiatives.
	Sociology and Communication Knowledge	Relevant for staff handling activities aimed at the general public, ensuring clear and relatable communication on cancer-related topics.
	Dedicated “Management Team” or “Orchestration Office”	Core team that centralizes organizational management, resource

		allocation, and staff coordination.
Interpersonal	Diplomacy and Cross-Cultural Sensitivity	Ability to work effectively with a diverse range of stakeholders, accommodating different cultural and social perspectives.
	Audience Engagement and Collaboration	Engaging audiences and working collaboratively with teams and external partners to reach mission goals.
	Social Sciences and Humanities Expertise	Understanding human behaviour and social dynamics to drive impact-oriented engagement across various audiences.
Learning & Development	Continuous Learning in Cancer Mission Objectives	Ensuring all staff are well-versed in the Cancer Mission's evolving goals and guidelines for better mission alignment and effective information dissemination.
	Education in Political Science, Patient Care, Sociology, and Biomedical Sciences	Providing staff with educational opportunities or hiring individuals with backgrounds in relevant fields to enhance mission-oriented activities.





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