



TCI NETWORK



An Roinn Fiontar,
Trádála agus Fostaíochta
Department of Enterprise,
Trade and Employment

TCI Peer Review for a new Cluster Policy and Strategy in Ireland

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By Merete Daniel Nielsen,
David Fernández and
Helmut Kergel.



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Introduction

In the context of the preparation of a new **National Clustering Programme (NCP) 2025-2031** in Ireland, the Department of Enterprise, Trade and Employment of the Government of Ireland (DETE) requested TCI Network to deliver a peer review exercise to provide recommendations from experts that ultimately help to develop the new cluster policy and lead to a better cluster strategy implementation.

A TCI Peer Review is a strategic discussion on the potential of cluster development followed by a final assessment by a selected group of experts from the TCI Network, working in close collaboration with the hosting organisation. It is a helpful exercise for governments, agencies, and cluster organisations that are going through a strategic review or upgrade of their cluster strategy/programme/policy, as well as for those who are analysing the potential of cluster development in their territory for the first time.

This peer review aims to provide expert recommendations that will support DETE in developing its new National Clustering Programme (NCP), including innovative approaches concerning cluster support and the role/position/integration of cluster policy in the ecosystem supporting innovation and entrepreneurship, regarding the big societal challenges.

To carry out this project, TCI Network issued an open call for the selection of three international experts following the specific criteria determined by DETE. As a result, Merete Daniel Nielsen (Denmark), David Fernández (Spain), and Helmut Kergel (Germany) were the three experts selected to work on this peer review exercise.

Merete Daniel Nielsen has been the co-founder and CEO for Cluster Excellence Denmark during 15 years, supporting the Danish clusters on competence development, professionalization and internationalization. She has broad experience as an expert and leader in cluster and innovation projects at regional, national and international level mainly in Europe. For 4 years she was appointed to the EU Expert Group advising the EU Commission on cluster development and policy. She serves as President for TCI Network since 2018.

David Fernández has more than 15 years of experience in trade and competitiveness, both in the public policy managing side and hands-on field experience. He has supported the internationalisation of both SMEs and large firms, especially in emerging markets, and worked as well in Foreign Direct Investment (FDI) promotion. Currently, David is the Head of the Cluster Programme at the Dept. of Economic Development and Competitiveness of the Basque Country Government. He has been member of the board in different Cluster organisations and has been directly involved in the challenge of promoting competition and fostering open innovation for competitiveness.

Helmut Kergel is Director of the *European Secretariat for Cluster Analysis (ESCA)* in VDI/VDE Innovation + Technik GmbH. Besides being involved in the management, coordination, and evaluation of collaborative innovation projects at national and EU level, he has also been responsible for several international innovation consulting and training projects in several overseas countries. Helmut was significantly involved in the development of indicators and processes for assessing cluster management quality and benchmarking methodologies in the context of the *German Cluster Programme*, the *European Cluster Excellence initiative (ECEI)* and other national and European cluster-focused projects.

The peer review consisted of the following process:

1. Preparatory meetings

TCI facilitated four preparatory meetings between peer reviewers and the DETE organizing team, where DETE shared preliminary information with key features of current situation in terms of cluster/industry policy and related programmes in the region.

During these sessions, DETE and the experts collectively established common procedures for the upcoming peer review and defined the draft agenda for the next phase of work, an on-site workshop to be moderated by the experts. Additionally, they agreed on the formulation of four key questions to be addressed during the workshop:

1. KPI's – How to measure progress?
2. Selection criteria and relevance to layers.
3. Governance models.
4. Professionalisation and support.

2. On-site workshop

The reviewers participated in a 3-day agenda interviewing local stakeholders and moderating a full-day in-depth workshop during 22-24 May 2024, as agreed between the parties.

3. Final report

In the context of the preparation of a new National Clustering Programme in Ireland, DETE requested TCI Network to deliver a peer review exercise, including on-site workshop as outlined above, to provide recommendations that ultimately will help to develop the new cluster policy and lead to a better cluster strategy implementation. The final output of this exercise is the following report.

Context: General competitiveness framework and strategy in Ireland

Observations on the current situation in Ireland

The current cluster landscape in Ireland operates in a framework of a high level of innovation – especially many innovative SME’s are collaborating with each other. According to the European Innovation Scoreboard 2023, Ireland is a strong innovator performing above the European average. However, the lead is becoming smaller with some relative weaknesses in non-R&D innovation expenditures, R&D expenditures both in the public sector and in the business sector¹. There is also a relative weakness in environment-related technologies.

The current landscape of cluster organisations consists of a mixture of different types of clusters. The current mapping of clusters suggests around 40 organisations² identifying as clusters, covering the most of Ireland and the key sectors in the country. However, there is a lack of a deeper analysis related to the smart specialization strategy for Ireland and in mapping the cluster organisations in sectors/domains and geography to ensure more overview and insights into the different cluster organisations. Even without the deeper analysis there seems to be some overlapping in sectors/domains.

Some clusters have a long history and are supported by private funding, while 12 of the clusters have received funding from the Regional Technology Cluster Funding (RTCF clusters). The RTCF clusters are hosted at knowledge institutions (normally universities) which has allowed for 100 pct. funding of the cluster managers due to the GBER regulations. Most of the cluster organisations are rather small with 20 members, while a few have more than 150 members covering a more complex innovation eco-system with an international outreach. With the current organisation models in mind, it seems like the relations for the RTCF clusters are stronger to the knowledge institution side, while the linkages to business entities and FDI stakeholders are less strong. The opposite (less linkages to knowledge institutions and stronger to stakeholders working with business support and FDI attraction) is the main picture for the more private driven clusters.

There is a lot of support in the Irish cluster eco-system to work with clusters. The high attendance with almost 60 participants - both from cluster managers, chairs of the cluster boards and a wide range of public stakeholders - during the stakeholder workshop held in Dublin (May 2024) and the high quality of interaction and discussion during the gathering is a good indicator of interest to build a stronger and even more vibrant cluster system in Ireland.

With the White Paper for Enterprise 2020-30 there is also good political support to create a stronger policy framework for the Irish cluster community. The paper recognizing clustering as a key tool for achieving enterprise policy objectives, including driving innovation, attracting and embedding FDI and developing linkages between multinationals and indigenous firms. The White Paper proposes the establishment of a National Clustering Programme (NCP), with a target to fund five national cluster organisations by 2025.

¹ *European Scoreboard Innovation 2023, Country profile Ireland*

² *Grant Thornton report (January 2023) mentions 40 organisations self-identifying as clusters, but determined that only 19 clusters met the triple helix definition set out in the Report*

Key challenges and recommendations

Based on the reports made on the current situation, the ambitions with the whitepaper, and the TCI Peer Review visit in Dublin on the 22-24th of May, the experts have identified several overall challenges and related recommendations to consider in a future National Cluster Policy:

- **Clarify the overall purpose of the National Cluster Programme:** The Whitepaper outlines quite ambitious goals for the new cluster programme including driving innovation, attracting and embedding FDI, and developing linkages between multinationals and indigenous firms. In the current draft for NCP the overall purpose seems more unclear and varies across the different layers (layers to be understood as maturity stages and/or strategic ambition level of clusters). If the ambition is to be on the forefront of Europe, it is important to consider how the clusters can play a role in the new and more complex competitiveness agenda.
- **Improve the coordination, collaboration and leadership:** With the current high level of interest and support there is a huge potential for utilizing this more. However more coordination is needed and there is a lack of ongoing platforms (forum, events and workshops) for strengthening collaboration and communication across all the public and private stakeholders. Greater collaboration between stakeholders that have a key role raising SME competitiveness is required in order to avoid overlap and duplication. This would assist in positioning the National Clustering Programme among the key drivers of Irish economic development.
- **Improve the cluster mapping:** Make use of structures already existing. Some clusters have been mapped already but developing a more complete map around key sectors and geography including some core facts like number of members, size of the cluster secretariate and key activities will help to create more overview and can be helpful in the application approval process. This mapping should be linked to the smart specialization in the longer term to ensure focus and high level of competitiveness on Irish strongholds. Part of the cluster mapping is also to work with a cluster definition that is also discussed and broadly understood by all key Irish stakeholders working with clusters (see also recommendation on professionalization of the cluster community).
- **Make a more focused selection, but ensure the NCP to be an inclusive programme:** Keep it simple. Make harder choices. With the current suggestion in the draft for the NPC a three-layer system is suggested. In practice it will be difficult to keep the layers separate – especially the two layers – 2a & 2b. Implementing this will also be complicated and will put more pressure on the administration of the programme. A suggestion could be to have a two-layer model: One for the national (5-10 clusters) and one for others (max 5). Without knowing the specific amount for funding, a stricter choice on the number of clusters, could also ensure more solid funding helping to provide more professional management in the cluster organisations and a wider range of services towards the members.

In order to ensure an inclusive approach, it is proposed that in the event a cluster is not successful in their application for funding under the NCP they can still apply to be recognised as part of the NCP if they meet the core criteria.

- **Make support and funding of cluster organisations more competitive:** There seem to be good funding sources and funding volumes for cluster organisations. But as well here more coordination is needed. It is recommended to distinguish between cluster initiatives according to their strategic scopes, their maturity, their expected geographic outreach, their contribution to the development and implementation of innovation and necessary transformation of the Irish Economy as a whole, to avoid overlapping in timelines, focus and outreach. On the other hand, however, simplify the reporting for the cluster organisations by concentrating on data the organisations quite easily can determine and deliver.
- **Need for more support and more resources in the managing teams:** There is a clear need for a more established public structure and a larger team to manage the cluster programme and the cluster development, including the provision of specialized services such as capacity building and mentoring. For the support towards the cluster organisations, it can be considered if a better model is to support the cluster management and not directly the cluster managers that is the current suggestion in the draft for NCP, in order to avoid making the cluster managers being employed by DETE, while they in fact are/should be employed by the cluster boards.
- **Professionalize the clusters and their management bodies:**
 1. Ensure the right organisations are on board, the cluster initiative is clearly committed, and cluster participants with clearly agreed rights and obligations; triple helix should be represented; the resulting network and its management body shall be governed as an independent legal organisation (or should be embedded in such organisation) with clear roles of all governing bodies/persons well-defined.
 2. Have a cluster management team in place of sufficient quantity in relation to the size of the cluster and with a broad mix of relevant knowledge, skills and experience; financial resources from a variety of sources should be available.
 3. Needs of the cluster participants and external trends and developments should build the base of a well-developed cluster strategy outlining the medium and longer-term aims and objectives to be addressed.
 4. Provide a well-balanced set of activities and services for the cluster participants, well-matching the strategic aims and objectives and generating value for the cluster participants and other stakeholders of the cluster.
 5. Make sure that internal communication keeps the cluster participants informed and offers them the opportunity to get involved. Use various means of external marketing and communication to ensure and improve national and international recognition of the cluster initiative, as well as of all parties involved.
- **Coordination of the entire cluster activities from the policy level:** Provide an environment for all cluster initiatives of the NCP for peer learning and experience exchange, such “cluster coordination unit”. It could be contracted to a small group of designated experts, working in close cooperation with the political administration and the clusters, offering services to both, but as well moderating the dialogue between policy and the micro-level stakeholders of the innovation system in Ireland.

The four key questions addressed during the stakeholder workshop

During the preparation of the workshop, four key questions were identified by DETE as essential for developing the National Cluster Programme. These questions are listed in the table below and were shared with the participants in advance of the workshop for their preparation.

The workshop was organized so that all participants had the opportunity to address the questions one by one and build on top of other participants' feedback and ideas.

Table 1 – The four key questions addressed during the stakeholder workshop

1. KPIs – How to Measure Progress?

- Are there important areas missing which should be included for measurement?
- Are there any KPIs which will be too hard to measure/collect data for?

2. Selection Criteria and Relevance to Layers.

- Does the current layer structure adequately cover the different types of cluster organisations in Ireland and ensure that the regional ecosystem is supported whilst encouraging cluster organisations to grow to national scale and increase their international visibility?
- Is the layer structure clear and easily understandable?
- Are the core criteria achievable for existing clusters?

3. Governance Models

- Would it be possible/useful to include a requirement for Layer 1 cluster organisations to be legal entities (DAC/CLG etc.)?
- Do certain governance models suit certain cluster organisations or ones in specific sectors?
- Are there better ways to integrate cluster organisations not hosted in third level institutions/research centres into the innovation and skills systems?
- What are the key elements in cluster organisations' governance models?

4. Professionalisation and Supports

- What supports would cluster managers like to see the Cluster Ireland Unit provide?
- Can cluster managers give examples of supports that they found useful?
- Should there be a mix of formal training and peer learning?
- Can the ECEI label system³ be of assistance in professionalising cluster management? People could be invited to share their experiences of labelling. What type of experience is necessary to be a cluster manager? Formal academic qualifications/sectoral experience/transversal skills?

The following paragraphs will address each of the four questions. The sections will not provide comprehensive details on all the feedback received during the workshop. Rather, specific feedback was taken into consideration, compared with the opinions and judgments of the experts, and consequently, recommendations have been formulated. These recommendations may be important to consider for the future National Clustering Programme.

³ see www.eucles.be and www.cluster-analysis.org

1. KPI's – how to measure progress?

Overall reflections

Defining KPI's is rather essential in any cluster programme. It's a way to sharpen the focus and clarify the key objectives of the programme; a way to keep track of progress; a way to evaluate (and learn) and ultimately, also change funding and/or terminate funding for some clusters if the performance is not matching the requirements.

Clear KPI's also helps to ensure communication on the key outcomes of the cluster programme. These numbers can be used both to justify continued political support (both internally in government and to the broader society) and by the cluster organisations to explain and clarify their role in the innovation eco-system. Good numbers will also help to attract new members and partners to the clusters and their eco-systems.

Finally, tracking and monitoring relevant KPIs provides data-driven insights into performance and facilitates continuous learning and improvement, while allowing for evidence-based cluster management and policy making.

While defining KPIs' it is tempting to ask for too much information putting an administrative burden on the cluster organisations, while still perhaps not get the needed information to really evaluate the outcome and impact of the cluster policy. Hence simple is better, and asking for "need to know" and not "nice to know" is a good guiding principle. Well-defined KPIs should run a clear red thread from the overall policies down to each of cluster organisations.

The overall feedback from the stakeholder workshop indicates a strong understanding of the necessity for a KPI system. The recommendations from the TCI peer review experts are in line with this feedback. This is rather complicated to design, and progress can be measured annually to track change and hopefully progress.

Recommendations

- **KPIs' should have more focus on outcome and less in output:** Some of the suggested KPIs in the current draft for NCP have more focus on output (or even input), like the size of the cluster organisation or the advisory board. This kind of data is of course of interest but are not core KPI's. Where indicators on collaboration is a core since this can measure the interaction in the cluster. The current suggestion of measuring collaboration projects is one good way of documenting the interaction and value of the cluster. These measurements are seen both in the Canadian Innovation Cluster Programme and in the Danish Cluster Programme.
- **Clarifying the overall objective of the programme and aligning with the KPI's:** As mentioned in the beginning of this report, it seems like the objective of the NPC needs to be clarified or sharpened. Currently, the White Paper mentions the following key objectives: driving innovation, attracting and embedding FDI, and developing linkages between multinationals and indigenous firms. Some reflections on these objectives:

- Driving innovation is today a cornerstone in many European cluster programmes and serves as a benchmark both nationally and internationally for many governments. Hence it seems like a good idea to keep this.
- Attracting and embedding FDI is perhaps more a consequence of the cluster programme than a key objective. Currently the FDI component is also a bit vague in the programme: which key stakeholders are to be integrated to make this happen? What are the key activities: Investor meetings? Trade missions? And how will this be measured in the end to ensure the real outcome? Therefore, there could be arguments for either changing into a softer objective like “internationalization” or take the full step and rethink how FDI as a key objective is integrated in the programme.
- Developing linkages between multinationals and indigenous firms is also a cornerstone in many cluster programmes. It is suggested to make the collaboration element mentioned more directly and could be considered as a key objective since the current KPI’s also highlight the role of collaboration (both B2B and between knowledge institutions and businesses).
- **Develop a more comprehensive measuring and evaluation system:** Besides the measuring of KPIs – which is normally done by the cluster organisations themselves on a self-assessment basis – then adding complementary analysis can give new dimensions to the understanding of the cluster dynamics and also validate the self-assessment through the KPI-reporting to DETE. Some suggestions could be (some of this also mentioned by stakeholders during the workshop):
 - Economic assessment of impact done by externals (consultants or academics).
 - Case studies and testimonials from companies.
 - Second yearly analysis of the companies involved in the clusters (asking for some of the feedback like the KPI-reporting).
 - ESCA labelling and benchmarking can also serve as a source of measuring and keeping track.

2. Selection criteria and relevance to layers

Overall reflections

In cluster policy, criteria can be set for different goals. It can be established as “eligibility criteria”, to define under which conditions a cluster initiative is to be *admitted* by the policy/support programme as a cluster management organisation of a given cluster in the territory and, eventually, to *determine which layer* a given cluster/cluster management organisation will enter; on the other hand, certain criteria can also be used in order to assign the financial support level, so that the support programme *rewards the contribution* -and the private effort- of each cluster management organisation to the goals of the programme and policy.

Criteria can also be set in the form of minimum thresholds or entrance requirements (quantitative and qualitative) and also as targets to be achieved within a time period.

On the *National Clustering Programme Draft* document, some eligibility criteria are proposed, in section 1.7 Eligibility Criteria, establishing certain requirements:

- *Being in a policy area of strategic national importance or sectors where Ireland has a comparative advantage.*
- *Being a triple helix model (includes members from enterprise and academia, with engagement of Government/public sector).*
- *Having a FTE cluster manager with relevant experience.*
- *Having an advisory board whose members are at least 60% private companies and there is a minimum of two technology or knowledge entities.*
- *Having the cluster organisation a strategic plan which includes a funding model and growth targets.*
- *Having a Governance structure in place*
- *Focus must not overlap with the focus of other cluster organisations.*
- *Being the cluster organisation mainly focused on the improvement of business competitiveness through RD&I.*

All these requirements seem appropriate, but some precisions could be made in order to provide further guidance (see *recommendations*).

Regarding the relevance to layers: setting different entry layers the National Clustering Programme for cluster organisations can serve as a way of addressing different maturity levels or stages in the development of cluster initiatives.

Establishing a pathway for progression encouraging engagement and participation can also help optimizing resource allocation, enhancing programme accessibility, improving the effectiveness of interventions, and facilitating development and progression in the professionalisation and performance of the target cluster organisations.

In that sense, a multilayer approach is proposed in the *National Clustering Programme Draft* in order to cover the existing cluster initiatives or “self-describe cluster organisations” in Ireland.

In the current cluster scene, there seems to be some overlapping (in industry/technology focus and spatial range) and a heterogeneous portfolio of organisations. The reason might be that the existing self-defined cluster organisations are not apparently the result of a previous mapping exercise (based on metrics such as location quotient or specialization Index) and public-private interaction, but rather the result of a spontaneous bottom-up self-definition and activation process.

The proposed exploration approach might help evidence the strongholds and emerging domains with impact potential and, simultaneously, engage all administrative levels and stakeholders in building a strong national portfolio of cluster organisations.

Recommendations

As a general recommendation, it might be advisable to introduce in the criteria categorization (instead of -Core / Non-core) a definition that encompasses the dual functionality of eligibility criteria or requirements to be met in order to be able to apply, and criteria for evaluating,

assessing, and remunerating (or assigning appropriate funding) each applicants' performance and progress.

- **Combining Thresholds and Targets** (to be achieved in a short/medium term) might be advisable.

Specific recommendations on the proposed criteria (in the policy draft):

- ***“Areas of strategic national importance or sectors where Ireland has a comparative advantage”.***

CORE CRITERIA

- ***“Being a triple helix model (includes members from enterprise and academia, with engagement of Government/public sector)”.*** Additional specifications on the weight of each helix component or stakeholders' group could be relevant, in particular regarding the importance of the business sector both in the membership and in the governance.
- ***“Having an FTE cluster manager with relevant experience”.*** This requirement could be further developed as “having an appropriate cluster management team” in terms of number of staff -proportionated to the number of cluster members or participants- and competences and responsibilities as to fulfil the goals of the policy.
- ***“Having the cluster organisation a strategic plan which includes a funding model and growth targets”.*** The application to the programme should require a Strategic Plan and, also, its deployment in an annual Action Plan, with detailed information on activities, resources and expected participation, that would be assessed as part of the application.
- ***“The focus of the cluster must not overlap...”*** A fundamental decision is to establish the need for clusters and cluster management organisations to have a clear industry/technology focus.

Most important, the boundaries of the industry/technology focus and the range of geographical coverage should be defined by the government in the policy framework. They should be ambitious enough as to allow to fulfil the goals of the policy/programme.

NON-CORE CRITERIA

- ***“Critical mass”:*** To set the ground for achieving the overall goal of the programme - “increase the competitiveness of the Irish companies” - setting ambitious thresholds is mandatory.

The question is on critical mass is how many companies should the programme reach so as to deliver impact and fulfil that goal? To answer this question, the current number of companies regular exporters and companies participating in R&D+I calls could be a reference.

The proposed critical mass indicator in the Draft (30, 15, 5) could be not ambitious enough for a national programme, in particular the entrance level (5 companies). Taking as a reference, for example, ESCA Gold label holding cluster organisations, have on average more than 100 companies, and for a national scope programme, this could be the reference for the highest level; as a matter of fact, today there are already 6 “self-identified cluster organisations” with more than 100 participants. Another reference might be BRONZE label eligibility criteria, where 15 participants is the minimum.

- **“A minimum enterprise members are MNE.** This requirement might be adjusted as in some industries/technology domains it might be easily reached (e.g. the ICTs) but not in others (e.g. wood and furniture or food/agritech). Perhaps it would be better to refer to large companies rather than to MNE (usually, even subsidiaries of MNEs are large).
- **“A minimum RPO/knowledge dissemination members”** (in Layer 2b it says “academic/RPO”). Regarding Science, Technology and Innovation (STI) system: an essential actor in R&D+I companies’ projects and cluster organisations are RTOs (independent centres or University research departments) and should be specified. Additionally, there is an increasing relevance of academic and training institutions (mainly, Universities and VET schools) as a key actor to ensure talent development and the provision of adequate professionals.

A crucial aspect is requiring and ensuring the participation of these actors in both the membership and the governance body (Board of Directors) of the cluster management organisation.

- **Subgroups in the target areas.** Definition and prioritization of target areas beyond R&D or R&I (talent development, sustainability, internationalisation...)
- **Collaboration:** Instead of, or together with “number of events”, an indicator on the “Number of participants in cluster projects, working groups (and activities)” measured in terms of net participants and repetitions would be advisable.

Recommendations regarding the layers.

A quick review exercise of the Appendix evidences the following existing entities (see at the end of this section the complete table with the 44 clusters and networks grouped in 12 domains, each with a different colour):

- a) Some domains with a certain critical mass, where 2 or more *self-defined* cluster organisations and networks.

	CLUSTER	MEMBERS	COMMENTS
1	Digital/ICT	550	
2	Advanced Manufacturing	325+	
3	Fintech / Financial Services	325	
4	Engineering	200	Does it make sense an “engineering” cluster? Is it industrial, electric, civil engineering? Would it not make more sense for their members to join the relevant focused clusters? (e.g. electric engineering firms the energy cluster or civil engineering firms the construction cluster organisation)
5	Construction / Wood & Furniture	175	Does it make sense to merge these clusters? Would it be better to do something between “Wood & Furniture” and “Creative Industries”?
6	Energy	150+	With the Offshore Wind figures, it will be larger.
7	Food/Agri-Tech	125+	
8	Health, Life/Med Sciences	85	
9	Bioeconomy/Sustainability	50	Is it a cluster? Circular economy & sustainability are transversal issues.
10	Marine	25	
11	Aerospace	25	
12	Sports	-	

- b) 6 networks, consortiums and industry associations that seem to be non-focus, transversal initiatives gathering members from different industry/technology focus, which could eventually join the cluster organisations resulting from the 12 clusters in the above table to build stronger and more relevant cluster organisations

3. Governance models

Overall reflections

The overall goal of Cluster Policy is to enhance the sustainable competitiveness and transformation of a territory by fostering the business sector in developing collaborative dynamics within the framework of a triple helix approach, with all relevant stakeholders contributing to cluster initiatives and engaging in the design and implementation of a cluster strategy and the action plan needed.

In order to ensure achieving the goals and delivering impact, strong cluster organisations with relevant industry focus, ambitious geographical range and enough critical mass are required.

Cluster organisations with a legal form, usually registered associations, with a wide membership, mostly businesses' representatives, but also those from the science, technology and innovation (STI), the education system, and the administration; with a strong market focus, action-oriented and private sector driven perform better, grow faster, deliver greater impact and, in the framework of public-private partnerships, have the capacity to transform the economy.

The core actor in the governance of such cluster organisations is a committed board of directors that mirrors the cluster membership, provides direction and ensures execution of the cluster strategy, deployed in action plans to be implemented by a dedicated professional cluster management team engaging the cluster membership in their initiatives, working groups, projects and activities.

The full membership, met in ordinary general assembly at least once a year, approves and follows up the strategy and the action plan implementation and also elects the board of directors among the cluster members.

Recommendations

The key element in the governance of a cluster initiative is the Board of Directors.

- **There is evidence in favour of cluster management organisations legally constituted as private independent non-profit association with a strong membership contributing to its self-sustainability paying a membership fee.** This formal engagement and shared contribution is entail a sense of ownership and commitment to the cluster initiative and is the base for responsibility and accountability since its inception.
- **The Triple Helix should be present in the membership and also well represented in the *Board of Directors of the association, as its main governance actor*.**
 - Cluster membership should gather all relevant actors in the territory in the industry/technology field of the cluster (businesses' representatives, SMEs and Large companies but also start-ups; actors from the science, technology and innovation (STI) system (Research and Technology Organisations, University Research Institutes, etc.) and also actors from the education system (including University and also Vocational Education and Training), and from the administration.

- All these stakeholder groups should be fairly represented on the board of directors.
- **In the Board of Directors of excellent cluster organisations, at least 60/70% of the members are business representatives and the President is one of them.**
 - The composition of the Board of Directors, established in the by-laws of the association, reflects the relevance of the business sector as the driving force of the cluster.
- **Organisational aspects of the governance.**
 - The board of directors should meet regularly (at least, around 6 times a year) to follow up the strategy implementation and action plan orientation together with the cluster management.
 - The cluster membership should gather at least once a year in general assembly.

Some references and practical examples on cluster management organisations legally constituted as private independent non-profit associations:

- The prevalent legal form for cluster management organisations in Europe is that of private independent non-profit associations.
- In Spain, most cluster management organisations are registered associations constituted according to the Spanish *Organic Law 1/2002 of March 22 regulating the right of association* ([*Ley Orgánica 1/2002, de 22 de marzo, reguladora del Derecho de Asociación*](#)).
- All associations must submit for registration their constitution agreement and their by-laws. Associations that hold the role of cluster management organisations usually include in their by-laws a reference to the triple helix model in the membership and governance as well as a reference, in the object/purpose and activities of the association, to enhancing competitiveness through cooperation, developing collaborative innovation, etc. beyond just disseminating of information, representing its members before third parties, including the government.
- In France, they are also associations registered according to the French *Law of July 1, 1901, concerning the association contract* ([*Loi du 1er juillet 1901 relative au contrat d'association*](#)); for instance, Systematic Paris-Region Association (known as Systematic Paris); and in Germany, most cluster organisations also Companies, LLC), which is regulated in the *Bürgerliches Gesetzbuch, BGB* or German Civil Code, section 21, Non-profit Associations. For example, Silicon Saxony e. V. (e.V. meaning "*eingetragener Verein*"; in English, "registered association") or Hamburg Aviation e. V.
- In Ireland, the equivalent legal form for cluster associations seems to be CLG (Companies Limited by Guarantee) registered at the Companies Registration Office (CRO) and regulated by the *Companies Act 2014*. This is the usual legal form in Ireland for non-

profit and membership-based organisations such as associations. In fact, some current Irish cluster organisations are constituted as CLGs, for instance, Microelectronics Industry Design Association - Midas Ireland CLG.

4. Professionalisation and support

Overall reflections and general recommendations

When thinking of professionalization of cluster initiatives, various aspects need to be considered:

Is the focus of the initiative well chosen (content; technical/sectoral/application), having in mind to achieve an attractive position, well-recognised inside the country and on international level? Strategy-building processes inside the cluster initiative, stimulated and facilitated by the cluster management must be used to continuously further develop this focus. Thus, specific support dedicated to activities for (further) identifying the strategic challenges fosters professionalization. Strategy development, from global megatrends down to small-scale challenges on regional/local level is a key activity for a cluster organisation. The value chains and their change potential need to be considered, where does the cluster initiative position themselves, and how can this positioning be secured or increased on longer term. The cluster organisation here is the mastermind of strategy-building for in particular smaller-scale industry being involved in the cluster.

When starting a new cluster initiative in particular, but as well for existing cluster initiatives, it is important to have a certain minimal number of interested stakeholders with well-defined and clear relevant experiences on board. In particular larger industry and industry being very relevant for the chosen focus area need to be on board in order to achieve credibility in the relevant communities, locally, regionally, nationally, and internationally. Thus, an aspect of professionalization can be seen in having “the right organisation/people on board” in the cluster initiative.

Recommendation: *From these two aspects a first recommendation for the Irish National Cluster Policy can be derived: Which topics/sectors/technologies etc. are of national importance, based on general megatrends as well as derived from the industrial/economic/scientific structure in the country? As part of an Irish National Innovation Strategy domains/topics for cluster initiatives of national importance can be determined. Together with the cluster mapping it should become clear which clusters are fulfilling criteria for the layers 1 or 2a; what topics are missing to be initiated as clusters of layer 2b, and finally where groups/clusters are identified which need to develop further in order to become relevant for an application to become a NCP-funded cluster initiative.*

It's important to note that having a well-chosen focus, brilliant ideas, a well-developed strategy, and motivated cluster participants does not guarantee automatic success for a cluster initiative. While these factors are essential, they do not automatically ensure intended or unintended/spillover effects and impacts for the cluster members, the industry as a whole, and the society.

For any organisations, excellent management as well is a general prerequisite and success factor for successful operation, for:

- industry and the private sector in general,
- in public sectors, like education, health, environment, etc.,
- in public administration and governmental organisations.

Therefore, it is obvious that excellent management must also be considered to be a main prerequisite for a cluster organisation to achieve the highest effects and impacts of the cluster within a given technological, industrial, regional, and legislative framework:

- for the cluster participants,
- for the industrial sector in general,
- for the development of regions.

It is widely accepted in Europe that improving the management of cluster initiatives is an effective way to maximize the benefits for all participants and stakeholders involved. This holds true despite the unique characteristics of each initiative and the specific country or region it represents. A world-wide unique approach for assessing and judging the quality of cluster management is the labelling of cluster management organisations according to the approach of the European Cluster Excellence Initiative (ECEI)⁴.

The ECEI Labelling - Assessing and improving cluster management excellence

Initiated by the European Commission, DG Enterprise and Industry back in 2009, a network of international experts from policy, research, private sector, and well-recognised cluster managers developed a methodology for assessing cluster management excellence in an “as neutral and objective as possible manner”. The underlying methodology defines cluster management excellence and can be considered as the guideline of what should be achieved in the long-term when supporting cluster management organisations in their efforts for professionalisation.

Under the brand “European Secretariat for Cluster Analysis (ESCA)”, assessment and labelling processes are conducted and when validated respective “Cluster Management Excellence Labels BRONZE, SILVER, and GOLD are awarded. These processes should be seen as continuous learning processes, with the actual label being awarded only as a “by-product”.

Details: www.cluster-analysis.org

Recommendation: *A second recommendation can be derived from these considerations: Supporting cluster organisations in their efforts for getting such labels could be understood as a valuable support of a learning process for improving the management capabilities of the cluster organisation. The methodology is mainly a capacities and capabilities oriented approach, therefore putting bits and pieces in place step by step is a feasible approach for improvement. Facilitating a multi-cluster learning process in a mixture of formal training and mutual peer-learning approaches can be centrally organised and offered. The knowledge and the resulting services to cluster organisations step by step should be built up locally in the country.*

⁴ see textbox “The ECEI Labelling - Assessing and improving cluster management excellence”

From assessing cluster organisations regarding their management capabilities, their structure, activities portfolio, etc. over many years, the following five aspects can be listed when characterizing excellent cluster management:

1. **Having the right organisations (industry, R&D, education, intermediaries, -political-administration, etc.) on-board in the cluster initiative as well “committed cluster participants”.** The formal commitment to being part of the cluster initiative should on one hand side include clear rules regarding the contribution of the “committed cluster participant” to the cluster community/initiative (this can be a membership payment, but as well other binding contributions with clear monetary value). On the other hand side, it should make clear as well the wishes/expectations of the cluster participant in order to achieve individual benefits from his (active) participation, leading to an attractive return-on-invest. It is one of the most important tasks for professional cluster management to continuously ensure that expectations are fulfilled, and contributions are received. The way of thinking of the cluster management should go away from “thinking about cluster participants” to “thinking of these participants being (the most important) customers. Segmentation of these customers, individual care, and an individual relationship will support the implementation of vivid activities within the cluster initiative.
2. **In order to be able to fulfil the above listed “requirements of caring for every single participant”, resources are required: most important, people!** ...skills, experiences, multidisciplinary, strong communication, well-motivated. The well skilled and experienced team requires a well-equipped working environment. Understanding members, partners, participants as “customers”, and being obliged to work for all of these, the implementation and mutual use of a customer relation management or similar management information system is strongly recommended, leading to a “culture of documentation”. Of course, sufficient financial resources as well are required. Interestingly experience shows that the generation of financial resources for the work of a cluster management organisation mostly is not the critical path; where valuable work is delivered and respective effects arise, financial sources are available or can be achieved quite easily, in particular when the private sector/industry is significantly involved.
3. **How can the cluster community as a whole achieve progress, where individual actors alone are unable to move forward, due to lacking resources, knowledge, and many other possible shortcomings.** Therefore, as described earlier, the initiation, implementation, and continuous elaboration of a strategic profile of the cluster initiative, is the key activity within the cluster initiative. The committed cluster participants should be involved in this strategy process. This leads to high requirements of the facilitators within such a strategy process. The key in supporting the professionalization of cluster initiatives is the support of such strategy process to be carried out.
4. **The best strategy will not lead to progress, when the operational implementation lags behind.** Cluster initiatives become visible, internally mainly due to services provided, and externally mainly, due to activities being conducted, being visible for outsiders as well. An activity and service portfolio – well taking up the challenges formulated in the

cluster strategy – addressing all, internal forthcoming in the selected priority areas, internal individual care and support for every single committed cluster participant, and as well activities and actions addressing outsiders, nationally and internationally.

5. **And finally: If things are done well-organised, well-planned based on an up-to-date sound strategy, then results will deliver interesting outputs, outcomes, and effects.** In the first stage, the participants of the cluster should be provided with first-hand information, in the second stage a well-defined communication strategy will be the guideline for external marketing and communication. “Do good things and talk about them!”, professional cluster management should have such approach implemented.

Sustainable and professional cluster initiatives in Europe are based on financing from various sources, from the public as well as from the private sector. A mix of various public and private sources incomes is considered as the most resilient financial model for cluster organisations. The overview of sources of funding of excellent clusters in Europe, see figure below, could be a guideline for a well-balanced financial framework of a matured cluster organisation with national and international recognition (layer 1 cluster).

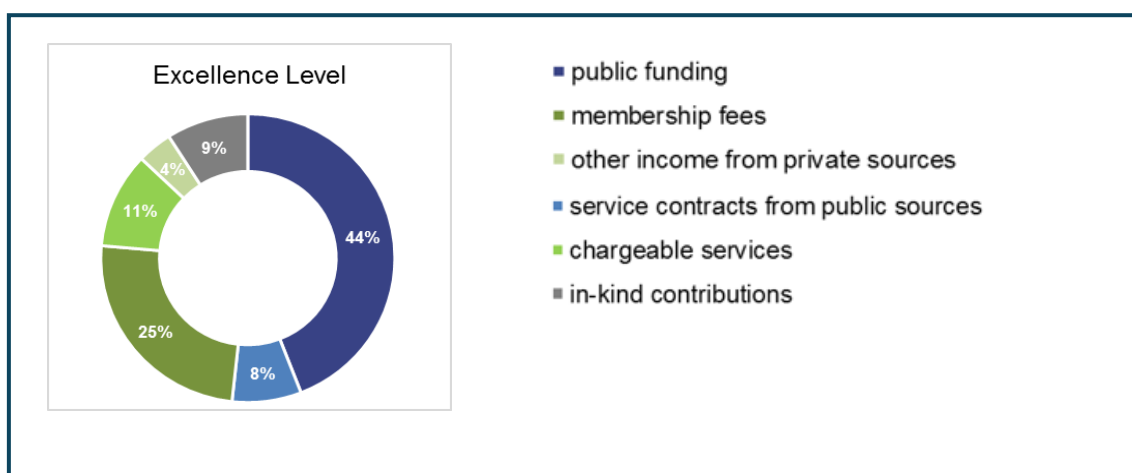


Figure: Sources of financing of excellent clusters in Europe (Source: ESCA 2024)

Discussion of specifically addressed questions and related recommendations

Four specific questions regarding “Professionalisation and support” of/for the (future) cluster community/landscape were addressed during the “stakeholder workshop”, to be commented here a bit more in detail.

- **What supports would cluster managers like to see the Cluster Ireland Unit provide?**

Cluster managers mainly see funding available as the main support measure. In this context, so far mostly individual persons are funded; full-time persons to be involved as part of the cluster management (particularly for the RTCF clusters). Cluster organisations in many cases are dependent on the availability of the funding. Such funding needs to have a longer perspective. Finally, such funding should cover more than one person, as it is seen critical to operate a cluster with a single employee (cluster manager) only.

Recommendation: *The experts recommend changing the model of cluster funding away from financing individual persons, towards financing specific activities and services to be provided within the cluster initiative in a project-oriented approach. The character of the financial support can have a project-funding format or can be provided form of dedicated service contracts for specific activities to be conducted and/or specific results to be achieved⁵.*

Providing funding for activities, not for individual persons.

The idea of such support measure is to provide cluster organisations with funding for specific activities instead of just paying for personal costs of individual people being involved.

A project-oriented approach is required. In a first step, the funding authority needs to define actions, activities, results, etc. for the cluster initiatives to work on and to deliver, which are considered as mandatory/important to be in place. Respective applications from the clusters are to be requested, describing what they plan to do, how they plan to implement the activities, what type of costs do they plan and how do they want to deliver the results the funding authority is expecting.

Both is feasible: Calls for proposal of projects to be funded (or only partly funded with co-financing from private side) or Calls for tenders leading to a 100 % fixed price contract for delivering a specific result.

Calls can be competitive, where at the end the best proposals, but not every cluster will succeed. Or, Calls can as well be dedicated to specific cluster initiatives, where the successful negotiation and agreement on contents, costs, schedule will be the key issue for implementing the respective project.

Content-wise such contracts could cover (examples from throughout Europe):

- *develop a new cluster strategy including member feedback, external support, internal efforts,*
- *develop a strategy for internationalisation for the cluster and its technological/sectoral/scientific/etc. focus and/or implement respective selected means,*
- *develop and implement a professional framework for member management in the cluster organisation (including tools, software, training of the personnel, etc.),*
- *provide a framework for education and training for a new, urgently required by industry, profession and organise the respective training programme (in the context of the cluster and under involvement of cluster participants for a certain minimum of individuals,*
- *(specifically for service contracts) establish a representative/subsidiary in a foreign country.*

⁵ see text box "Providing funding for activities, not for individual persons"

- **Can cluster managers give examples of supports that they found useful?**

Interestingly in this context only formal training activities by national/international experts were mentioned.

- **Should there be a mix of formal training and peer learning?**

This question relates to the previous one.

Both forms of training were considered important, however with tendency related to peer learning approaches. When looking to the peer learning approaches, these are seen useful for all cluster being part of a National Cluster Policy, to learn from each other, but as well to enable staff from the policy side to learn more about the specifics of managing and operating cluster initiatives.

In particular, training for staff of relevant policymakers, departments and agencies is seen as an important item, too. Looking to the programmatic set-ups and their operational implementation in other countries and regions is considered as useful. Respective activities under involvement as well of interested cluster management personnel are demanded.

Building-up know-how regarding cluster and cluster management know-how at the policy level or in close cooperation with the policy level as well is seen valuable. Centrally then, feedback be given back to the cluster initiatives supporting them in their efforts.

***Recommendation:** Regarding this last aspect, a recommendation would be to take detailed looks to the regional Catalanian Cluster Programme operated by ACCIO⁶ and the German National cluster excellence initiative “go-cluster”⁷ of the Federal Ministry of Economic Affairs and Climate Action. In both cases some central know-how was set-up and support in training and competence-building activities is provided to the participating clusters rather instead of giving monetary support/funding.*

- **Can the ECEI label system be of assistance in professionalising cluster management?**

People could be invited to share their experiences of labelling. What type of experience is necessary to be a cluster manager? Formal academic qualifications/sectoral experience/transversal skills?

It appeared that the cluster community in Ireland so far has hardly no experience with the label system of the “European Cluster Excellence Initiative”. Therefore, content-wise comments from cluster managers could not be assessed. Costs related to such labelling processes however are seen critical. If such labelling processes are demanded by policy side, cluster managers see it as necessary that costs then are covered as well centrally.

***Recommendation:** The reviewers, all very much involved for many years as experts in these processes of labelling of cluster organisations, consider the labelling processes as a valuable contribution to the development of a cluster organisation.*

When implementing the planned “Layer-Model” of clusters in Ireland, having around five clusters of national importance on medium-term (layer 1), it is recommended to support these cluster in

⁶ see <https://www.accio.gencat.cat/en/serveis/clusters/>

⁷ see <https://www.clusterplattform.de/CLUSTER/Navigation/EN/NationalLevel/go-cluster/go-cluster.html>

order to have them labelled GOLD within a scope of 3-5 years. Support needs to start early as it is a learning process with several aspects to be developed and to be put in place, well suited for a peer learning approach facilitated and driven centrally. It is well recommended to support this learning process. The actual labelling process at the end, including fees to be paid to the operator/provider of the actual labelling process however, should be (at least partly) financed out of the regular budget of the cluster organisation. Experience has shown that only when spending “own money” for application to the GOLD Label, the numerous related efforts in preparation will be driven forward with the respective necessary priority, leading to the expected learning effects. In particular, international visibility significantly increases when using a GOLD Label in marketing and communication. Before starting a formal GOLD label process, it is strongly recommended to have successfully achieved a BRONZE Label earlier already, in order to have a (formal) feedback on many relevant aspects of cluster management excellence at an early stage, as a guideline where improvements are required when going on further to applying for the GOLD Label.

Clusters classified in the Layer 2a should be supported to present a BRONZE Label upon their inclusion/award into this level. However, only when a certain maturity of the cluster initiative is reached. Particularly, for new cluster initiatives in their first two years of existence, any of the labelling processes will not generate any added value for the cluster initiative. When being considered as a Layer 2a cluster, it is seen useful not only to renew the BRONZE Label on a regular base, but to work on upgrading it to the SILVER status in a period of max 4 years.

It is furthermore seen as a valuable approach, realised in several countries in Europe, to train and develop a group of “ECEI experts” locally in Ireland to support the clusters locally in their efforts. Such local network of experts (2-5 persons) can be completely informal, but it as well could be more formal, possible then linked to DETE Cluster Unit, maybe with one or two experts as well-being DETE employees. All processes of external assistance related to the BRONZE Label could be conducted by members of this group.

When it comes to the question of skills/experiences required for cluster management, it was noted that the technological/sector-specific knowledge appears not to be the most important, but that the personality and particular soft skills are more relevant. The right type of persons shall be involved, connectors, communicators, ambassadors, etc., sector knowledge is seen as a secondary aspect.

Recommendation: Here it is recommended to maybe follow the assessment approach of the ECEI GOLD Label for the respective GOLD Label indicator 2.2.2 “Qualification of the Cluster Management Team”⁸. This could be used as a starting point for profiling and selecting skills/experiences/qualifications required in an excellently composed cluster management team.

The following two text boxes from partly internal documents of the ECEI labelling give an idea on setting up such profiling framework.

⁸ see non-public document “Cluster Organisation Management Excellence Label – Expert Manual” used in GOLD Label assessment processes, indicator 2.2.2

Indicator 2.2.2: Qualification of the Cluster Management Team

What skills and experiences do the personnel involved in the cluster management have (evidence to be provided by relevant documentation on life/work track records and/or education)?

The assessment shall be done for each person in the cluster management team and the scores shall be weighted according to the % of FTE each person contributes to the cluster management. Back-office personnel, like secretary, project controller, etc. shall only be included in the assessment if relevant for cluster management activities (to be decided and argued by the cluster manager). Pure administrative personnel (book-keeping, personnel managing the facility of the cluster organisation, etc.) shall not be included in this evaluation.

Qualification assessed:

- Tertiary level education
- Work experience in the private sector, excluding experience in cluster organisations or cluster management in particular
- Leadership and management skills
- Social skills including intercultural skills
- Communication skills
- Project management skills
- Language, skills in English
- Language, valuable skills in at least one foreign language (excluding English)
- Relevant sector and/or technical knowledge of > 3 years, due to education and/or work experience
- Cluster and policy related training

Assessment notes indicator 2.2.2:

Indicator 2.2.2 is a ko-Indicator (RED not allowed).

Tertiary level education (business card, certificate, CV, ...):			
Prof/PhD/Master degree = 2 credits	bachelor degree = 1 credit	lower degree than bachelor degree = 0 credits	
Work experience in the private sector, excluding experience in cluster organisations or cluster management in particular (CV, ...):			
more than 15 years = 6 credits	more than 10 years = 4 credits	more than 5 years = 2 credits	more than 3 years = 1 credit
Leadership and management skills (CV, track record of work/projects, ...):			
if yes = 1 credit			
Social skills including intercultural skills:			
if yes = 1 credit			
Communication skills:			
if yes = 1 credit			
Project management skills: (List/proof of managed projects, certificates, ..)			
if yes = 1 credit			
Language, skills in English: (certificates, CV, life history, ...)			
if yes = 1 credit			
Language, valuable skills in at least one further foreign language: (certificates, CV, life history, ...)			
if yes = 1 credit			
Relevant sector and/or technical knowledge of > 3 years, due to education and/or work experience: (CV, certificates, ...)			
if yes = 2 credits, > 1 year = 1 credit			
Cluster- and policy related training: (certificates, attendance lists, ...)			
if yes = 1 credit			

Max. of 17 credits

The assessor is allowed to give 0.5 points where a clear decision between 0 and 1 credit is not possible.

GREEN: > 10 credits

YELLOW: 7-10 credits

RED: < 7 credits




TCI NETWORK

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for the Department of Enterprise, Trade and
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By experts:
Merete Daniel Nielsen, David Fernández
and Helmut Kergel.

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TCI NETWORK

 Passeig de Gracia, 129, 08008 Barcelona
 +34 613 765 473
 info@tci-network.org
 tci-network.org

