



EUROPEAN CLUSTER
COLLABORATION PLATFORM

Country factsheet

Germany

An initiative of the European Union





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Introduction



This document presents an overview of the cluster policy in Germany. Given its importance to contextualise the cluster policies (and related) analysed in the factsheets, a comprehensive outlook of the country in socioeconomic terms can be consulted in the [European Semester Country Report for Germany](#).

The European Semester was an instrument introduced to coordinate the EU Member States economic policies and address the economic challenges faced by the EU. Its goals are “to ensure sound public finances, to prevent excessive macroeconomic imbalances in the EU, to support structural reforms to create more jobs and growth, and to boost investment”. Thus, it focuses on the following areas: business environment; financial and fiscal stability; green economy; public administration; labour market and skills; and, social protection and cohesion.

The COVID-19 pandemic has caused an unprecedented economic shock to the European and global economy. In response, policymakers at EU and national level have acted decisively and at short notice to make available very significant financial resources, notably through the Recovery and Resilience Facility, to tackle the threat of a prolonged downturn. National recovery and resilience plans have been drafted in each Member State to ensure a recovery that addresses the challenges identified in the European Semester. In the Recovery and Resilience Plan for Germany,¹ clusters are frequently mentioned in its Part 2 (Description of reforms and investments) as part of concrete national measures to deal with the effects of the pandemic.

¹ Bundesministerium der Finanzen, Deutscher Aufbau- und Resilienzplan (DARP).

Available at:

<https://www.bundesfinanzministerium.de/Content/DE/Standardartikel/Themen/Europa/DARP/deutscher-aufbau-und-resilienzplan.html>

01

Industrial ecosystems and cluster landscape



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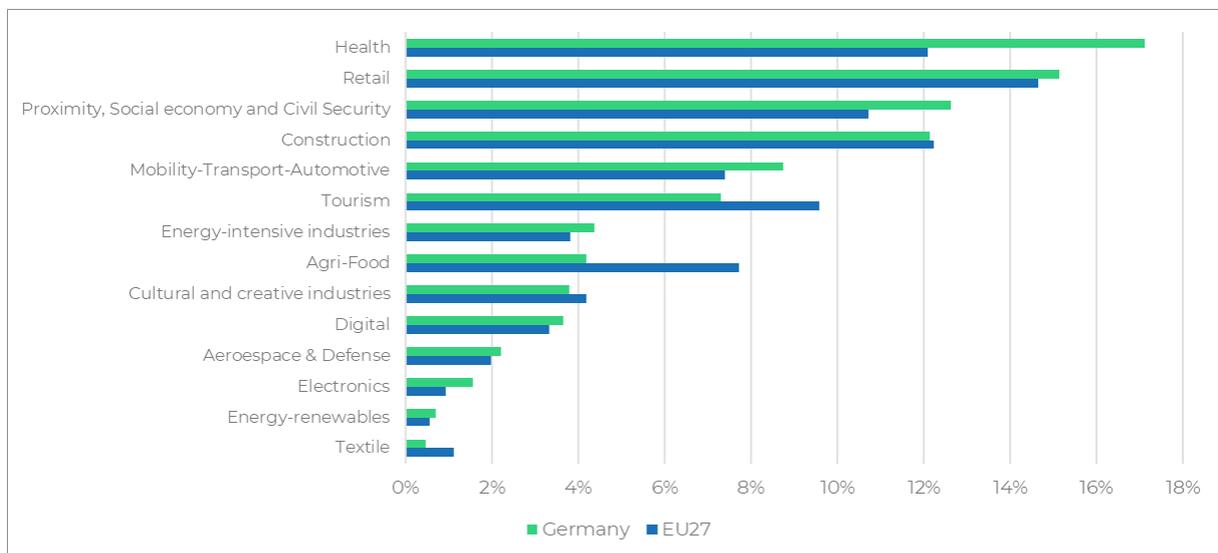


1. Industrial ecosystems and cluster landscape

Employment in the 14 ecosystems in the country

As part of its Industrial Strategy (March 2020), the European Commission has selected 14 industrial ecosystems that are particularly relevant in Europe and encompass all players operating in a value chain. The following graph shows the proportion of the country's employment accounted for by each ecosystem, as well as the equivalent figure for the EU27 on average. The ecosystems are ordered, from top to bottom, according to the amount of employment in the country. When the bar for the country is higher than that of the EU27, it indicates that the country is more specialised in that ecosystem.

Graph 1: Employment in the ecosystems



Source: Own elaboration from Eurostat and National Statistical Offices

Regionally relevant nodes

Economic activity, and therefore employment, is not equally distributed in all regions. Specialisation can be measured through Location Quotients (LQ) that reflect the relative specialisation of an activity in a region compared to the EU average. If the LQ for a given activity-region combination is above 1.5, it is considered a specialisation node, and if the activity accounts for at least 1 % of total employment in the region, it is considered regionally relevant. The following tables show the total number of regionally relevant specialisation nodes in each region in the country and identifies the top five most specialised of these nodes. The first table focuses on the 88 NACE 2-digit activities or sectors, totalling 121 in the country, while the second table is based on the 14 ecosystems, which total 14 in the country.



Table 1: Regionally relevant sectoral nodes

Region	Number of nodes	Node 1	Node 2	Node 3	Node 4	Node 5
DE1: Baden-Württemberg	8	C28 - Manuf. of machinery & equipment	C26 - Manuf. of electronic & optical products	C29 - Manuf. of motor vehicles & trailers	C32 - Other manufacturing	C27 - Manuf. of electrical equipment
DE2: Bavaria	6	C26 - Manuf. of electronic & optical products	C29 - Manuf. of motor vehicles & trailers	C28 - Manuf. of machinery & equipment	S94 - Membership organisations	C27 - Manuf. of electrical equipment
DE3: Berlin	9	S94 - Membership organisations	M72 - Scientific research & development	N82 - Business support activities	Q88 - Social work without accommodation	M70 - Head offices, management consult.
DE4: Brandenburg	7	H52- Warehousing & support for transportation	Q88 - Social work without accommodation	F42 - Civil engineering	N82 - Business support activities	S94 - Membership organisations
DE5: Bremen	9	C30 - Manuf. of other transport equipment	H52- Warehousing & support for transportation	S94 - Membership organisations	Q88 - Social work without accommodation	C24 - Manuf. of basic metals
DE6: Hamburg	9	C30 - Manuf. of other transport equipment	M73 - Advertising & market research	M70 - Head offices, management consult.	H52- Warehousing & support for transportation	J62 - Computer programming, consultancy
DE7: Hessen	9	H51 - Air transport	S94 - Membership organisations	M70 - Head offices, management consult.	K64 - Financial services	C20 - Manuf. of chemical products
DE8: Mecklenburg-Western Pomerania	7	I55 - Accommodation	Q88 - Social work without accommodation	N82 - Business support activities	Q87 - Residential care	S94 - Membership organisations
DE9: Lower Saxony	4	C29 - Manuf. of motor vehicles & trailers	Q87 - Residential care	S94 - Membership organisations	Q88 - Social work without accommodation	
DEA: North Rhine-Westphalia	7	C24 - Manuf. of basic metals	C20 - Manuf. of chemical products	S94 - Membership organisations	M70 - Head offices, management consult.	Q88 - Social work without accommodation
DEB: Rhineland-Palatinate	4	C20 - Manuf. of chemical products	S94 - Membership organisations	Q87 - Residential care	C28 - Manuf. of machinery & equipment	
DEC: Saarland	7	C24 - Manuf. of basic metals	C29 - Manuf. of motor vehicles & trailers	C28 - Manuf. of machinery & equipment	Q87 - Residential care	Q88 - Social work without accommodation
DED: Saxony	10	C26 - Manuf. of electronic & optical products	Q88 - Social work without accommodation	S94 - Membership organisations	H53 - Postal & courier activities	H52- Warehousing & support for transportation
DEE: Saxony-Anhalt	7	C20 - Manuf. of chemical products	H52- Warehousing & support for transportation	N82 - Business support activities	F42 - Civil engineering	Q88 - Social work without accommodation
DEF: Schleswig-Holstein	4	C30 - Manuf. of other transport equipment	S94 - Membership organisations	Q87 - Residential care	Q88 - Social work without accommodation	
DEG: Thuringia	14	C26 - Manuf. of electronic & optical products	C25 - Manuf. of fabricated metal products	C22 - Manuf. of rubber & plastic products	C23 - Manuf. of other non-metal mineral products	N78 - Employment activities

Source: Own elaboration from Eurostat and National Statistical Offices



Table 2: Regionally relevant ecosystem nodes

Region	Number of nodes	Node 1	Node 2	Node 3
DE1: Baden-Württemberg	1	Electronics	-	-
DE2: Bavaria	1	Electronics	-	-
DE3: Berlin	1	Digital	-	-
DE4: Brandenburg	0	-	-	-
DE5: Bremen	1	Aeroespace & Defense	-	-
DE6: Hamburg	3	Digital	Cultural and creative industries	Aeroespace & Defense
DE7: Hessen	0	-	-	-
DE8: Mecklenburg-Western Pomerania	1	Health	-	-
DE9: Lower Saxony	0	-	-	-
DEA: North Rhine-Westphalia	0	-	-	-
DEB: Rhineland-Palatinate	1	Energy-intensive industries	-	-
DEC: Saarland	2	Mobility-Transport-Automotive	Health	-
DED: Saxony	1	Electronics	-	-
DEE: Saxony-Anhalt	0	-	-	-
DEF: Schleswig-Holstein	1	Health	-	-
DEG: Thuringia	1	Electronics	-	-

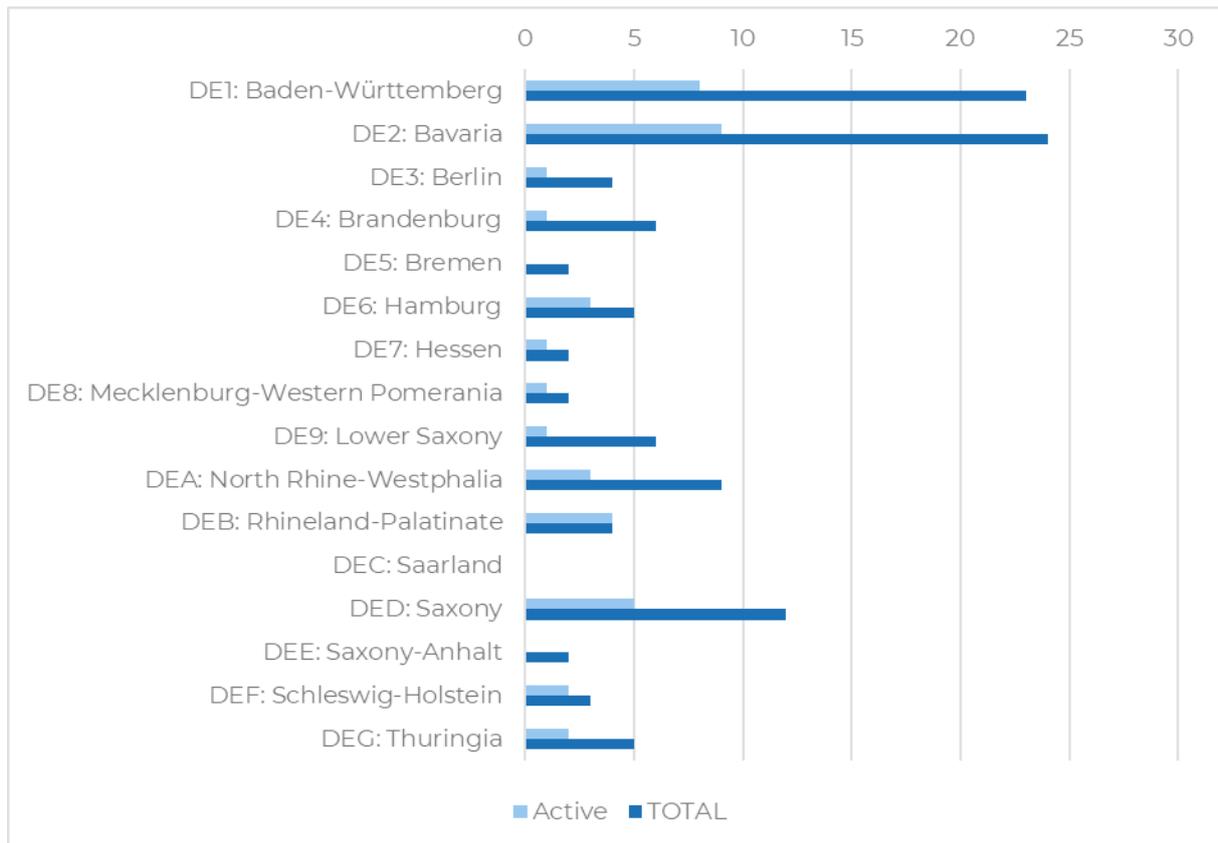
Source: Own elaboration from Eurostat and National Statistical Offices



Cluster organisations in the regions

There are 109 cluster organisations registered on the ECCP in the country, 41 of which can be considered active on the ECCP, having updated their profiles during the first half of 2021. The following graph shows the presence of cluster organisations in the different regions.

Graph 2: Cluster organisations profiled and active on the ECCP



Source: Own elaboration from Eurostat and National Statistical Offices

02

National cluster policy, programmes and initiatives



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2. National cluster policy, programmes and initiatives

Policy type:	National cluster policy	National cluster policy	National cluster policy	Regional cluster policy (example of Bavaria)
Policy name:	“go-cluster” programme	Zukunftscluster-Initiative (Clusters4Future)	Clusters - Networks - International	Cluster <u>Initiative</u> Bavaria All 16 Länder have cluster programmes. Bavaria was selected as example because it is a region with many “excellent clusters” (according to the German cluster platform)
POLICY OBJECTIVES 	Supporting cluster excellence and professionalisation of cluster management Enhancing the visibility of clusters Strengthening the network of cluster organisations/cross-clustering Supporting the consolidation of existing cluster organisations Cluster analysis and support of policymaking	Strengthening cooperation between companies or industry and RTDI actors. Fostering R&D activities, technology development and implementation Fostering innovation and strengthening innovation ecosystems	Supporting internationalisation activities Enhancing the visibility of clusters Strengthening the network of cluster organisations/cross-clustering Cluster analysis and support for policymaking Connect to global supply chains	Strengthening cooperation between companies or industry and RTDI actors. Increasing competitiveness and boosting scale up of SMEs Fostering innovation and strengthening innovation ecosystems Supporting the creation of new cluster organisations Enhancing territorial cohesion (through RIS3)
	“go-cluster” was launched in 2012 to follow up on the previous programme ‘Competence networks Germany’. Already the	The Zukunftscluster-Initiative (Clusters4Future) is a central cluster initiative launched in August 2019. Compared to	Clusters-Networks-International started in 2014 and has the aim to support innovation regions in the development and	The Bavarian cluster policy is a ‘classic’ cluster policy that supports the establishment of cluster organisations to



	<p>previous programme focused on cluster excellence, based on the observation that just supporting the establishment of cluster organisations often leads to the creation of weak and non-sustainable organisations who cannot achieve the desired effects. “go-cluster” continues this approach and adds a focus on cross-clustering (by creating a German cluster platform), on increasing innovation and competitiveness and on improving services that cluster organisations offer to their members.</p>	<p>previous measures, such as the Leading-Edge Cluster Competition, which was implemented from 2012 until 2017, it starts earlier in the innovation process and particularly addresses young, newly emerging research topics and technologies on the threshold of application. Zukunftscluster are based on outstanding results of fundamental research. Their aim is to develop new and lasting value systems and to increase the velocity of bringing research to society.</p>	<p>implementation of strategically managed, international cooperation. The measure focusses on the integration of outstanding clusters / networks and their actors in international innovation and knowledge processes in order to establish long-term cooperation and avoid lock-in effects. Further, the programme aims to improve the innovation competence and to strengthen the competitiveness of cluster / network actors.</p>	<p>promote the cooperation between cluster actors. 17 cluster organisations have been established until now.</p>
<p>POLICY FOCUS</p> 	<p>No specific focus</p> <p>The programme does not explicitly focus on any sectors, but rather on innovation, excellence and high prospects of success for the cluster organisations. In practice, participants in the programme are cluster initiatives from all major sectors of the German economy.</p>	<p>Cross-sectoral</p> <p>The focus is on research and innovation, and on creating new networks beyond existing disciplines, including new players and new ways of knowledge creation and transformation using the open innovation culture in clusters.</p>	<p>No specific focus</p> <p>Clusters and networks from all sectors of the German economy are participating in the funding measure. The focus is on research and development whilst promising technologies, products and solutions arise through national and international cooperation across different industries and technologies.</p>	<p>Sectoral</p> <p>The policy follows the traditional approach of creating cluster organisations in sectors that are strong in the region.</p>
	<p>In charge of drafting</p> <p>Provides funding</p>	<p>In charge of drafting</p> <p>Provides funding</p>	<p>In charge of drafting</p> <p>Provides funding</p>	<p>In charge of drafting</p> <p>Provides funding</p>



RESPONSIBLE AUTHORITIES 	Oversees the implementation In charge of implementation	Oversees the implementation In charge of implementation	Oversees the implementation In charge of implementation	Oversees the implementation In charge of implementation
BENEFICIARIES 	Cluster organisations Policymakers	Research organisations Academic institutions Technology centres NGOs Cluster organisations SMEs Large firms	Cluster organisations Research organisations Academic institutions SMEs Large firms	Cluster organisations
	<p>The programme focusses on cluster excellence and cross-clustering, therefore the main target group are cluster organisations from Germany. Other target groups are cluster organisations and cluster policy programmes from other countries for international networking activities and transnational R&D projects. In</p>	<p>In its six-months initial conceptualisation phase, the focus of the measure is clearly on research organisations. The participation of companies and other players is foreseen afterwards from the implementation phase onwards. There will be up to three three-year implementation phases</p>	<p>With the funding measure, German clusters and networks receive support for building bridges to complementary players in the world.</p>	<p>The policy focuses on establishing and supporting cluster organisations.</p>



		addition, there are also programme activities for cluster policy representatives at national and federal state levels (e. g. data analysis and supporting the Federal Ministry for Economic Affairs and Energy in developing cluster policies).	with the increasing proximity to application.		
INSTRUMENTS 	Financial	Application to labelling schemes and similar initiatives Funding collaboration initiatives (through Programme internal funding (four announcements so far; funding priorities e. g. development of new cluster services, initiation of cross-cluster cooperation, internationalisation, digitalisation))	Funding collaboration initiatives Support to R&D&I projects, SMEs becoming cluster members, etc. Financing networking events Supporting market entry (e.g. testing, proof-of concept, prototyping, demonstration projects)	Funding collaboration initiatives Support to R&D&I projects, SMEs becoming cluster members, etc.	Funding collaboration initiatives Support to R&D&I projects, SMEs becoming cluster members, etc. Subsidies to hire personnel Subsidies for cluster infrastructure (etc. offices, equipment)
	Technical assistance	Support for soft skills development: coaching, management training, upskilling/reskilling Support for networking and partnership building (at national and/or international level) Marketing activities: advertising, communication, events, fairs Others	No non-financial instruments	No non-financial instruments	Support for networking and partnership building (at national and/or international level) Marketing activities: advertising, communication, events, fairs, and so on



	Explanation	The programme includes direct funding (e.g. support for ESCA labelling, programme internal funding programme) but focusses more on non-financial support (coaching, networking, internationalisation, running the German cluster platform, support for strategy development).	The programme funds a large variety of cluster activities. The focus is on the objective (innovation) and the potential of the applicant, not so much on the type of activity. It covers innovation-supporting measures such as the integration of education and training, innovative methods and instruments for the exchange and use of knowledge (e.g. open innovation and open source), the use of experimental spaces and participatory elements, and social innovations. However, the main focus is on joint R&D project funding.	The programme funds a large variety of cluster activities with international partners or activities to enhance cluster internationalisation with the focus on R&D&I projects.	Via the funding of cluster organisations the programme funds a large variety of cluster activities (e.g. knowledge transfer, networking, partnership building, training, R&D-projects, cross-cluster-projects).
HISTORY 	Period	Limited period	Limited period	Limited period	Unlimited period
	Ending year <i>(for policies with limited period)</i>	2023	2023	2023	-
	Starting year	2012	2019	2014	2006
	Explanation	The sources do not indicate any end date. In view of the type of programme, it is more likely that it is unlimited/undetermined.	Currently two competition rounds are ongoing; additional rounds are in discussion.	The programme is divided into two phases: A conception phase, to develop an internationalisation strategy for	Four-year periods of the programme are followed by an evaluation. Evaluations form the basis for layout and funding



				the funded cluster or network and to initiate projects with international partners; and building on that, a second phase to provide funding for R&D&I projects with international partners. Currently three competition rounds took place while the R&D&I projects are still ongoing. In principle, the programme could continue with additional rounds.	of a subsequent period. The current period runs from 2020 to 2023.
BUDGET 	Overall	Not indicated in the sources	Up to EUR 450 million	EUR 80 million	EUR 16 million (2020 to 2023)
	Annual	EUR 1,21 million	Varying, depending on the implementation by the selected clusters	Varying, depending on the implementation by the selected clusters	EUR 4 million
	Source of funding	Federal Government	Federal Government	Federal Government	State Government
POLICY	Availability	in-itinere	in-itinere	ex-post	in-itinere
EVALUATION 	Results	An evaluation was carried out and published in 2016 for the first three years of the programme (2012-2015). The evaluation confirmed that the “go-cluster” programme makes a valuable contribution to promoting innovation through clusters and should be continued. The aim to develop cluster excellence is highly relevant and	The programme started in 2019 so there is no evaluation yet. However, the preceding Leading Edge Cluster Competition was evaluated so it can be expected that the Zukunftscluster-Initiative (Clusters4Future) will be evaluated as well.	An evaluation of the programme has not been carried out yet, but the programme is monitored by accompanying research projects.	The Cluster Initiative Bavaria was evaluated in the years 2008, 2010, 2014 and 2018. The evaluations are not published but achieved positive results.



	<p>in line with the cluster policy at EU level. The programme complements well cluster initiatives that are already undertaken at regional level. 60% of cluster organisations consulted for the evaluation stated that they were able to improve their know-how thanks to “go-cluster”. One main shortcoming of the programme was that the brand “go-cluster” was not well developed and that positive reputational effects, which were also expected from the European labels, had not materialised to the intended extent.</p> <p>In addition to this evaluation, an internal programme monitoring system has also been put in place and is carried out annually.</p>			
<p>POLICY ALIGNMENT WITH THE EU PRIORITIES</p> 	<p>Green Economy</p> <p>Digitalisation</p>	<p>-</p>	<p>-</p>	<p>-</p>

03

State of play of cluster policy



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3. State of play of cluster policy

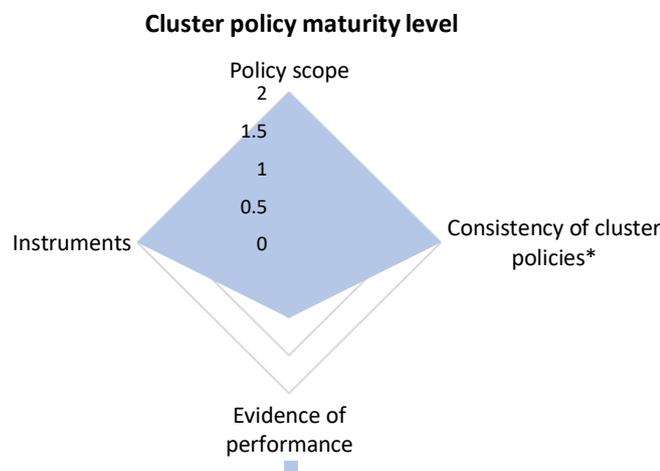
The data below illustrates how the country ranks in terms of maturity of cluster policy. The maturity index is based on a combination of factors presented in Chapter 2 and which are scored based on their existence:

- **Policy scope:** whether the country has a dedicated cluster policy, or cluster creation and/or development is targeted through broader policies (existence of broader policies = 1 point; existence of targeted cluster policies = 2 points)
- **Consistency of cluster policies:** assessment of the duration and experience of the country in doing cluster policies. This dimension assesses only existing cluster policies and not broader policies (no cluster policies available = 0 points; < 10 years of experience or > 10 years (but interrupted) = 1 point; > 10 years (but with clear continuity = 2 points)
- **Evidence of performance:** the existence of monitoring and evaluation mechanisms determines the degree of policy development in the country (no evaluations = 0 points; existence of evaluations of past policies or in-itinere = 0.5 points; existence of ex-ante and/or ex-post evaluations = 0.5 points)
- **Instruments:** whether the policies provide any instruments to support the policy implementation, being these financial and/or technical assistance (1 point for each type of instrument available)

It is important to note that the maturity does not reflect the performance of a country, but only the degree of development of their cluster policy at the moment when the data was collected (2020 and 2021). The maturity index illustrates how the country scores for each of these four dimensions (policy scope, consistency of cluster policies, evidence of performance and instruments) compared to the maximum score that they can reach.

	Germany	Maximum score
Policy scope	2	2
Consistency of cluster policies*	2	2
Evidence of performance	1	1
Instruments	2	2

* This dimension is scored solely if the country has a dedicated cluster policy and it assesses only cluster policies





State of play of cluster policy in the country

Policy evaluation (for terminated policies)	Availability of evaluations for terminated policies <p>The Leading Edge Cluster Competition which preceded the current Clusters 4 Future programme was evaluated in 2014. The Kompetenznetze Deutschland programme which preceded the current “go-cluster” programme, was evaluated last in 2009. The evaluation report is no longer published.</p>
Policy approach in the country	Policy support for the activities of cluster organisations <p>Dedicated cluster policy was started in the late 90s with the Kompetenznetze Deutschland and regional innovation initiatives. Since 2000, numerous cluster policy measures and support programmes have been implemented at federal state level. In this context, many regions started to establish cluster organisations, and the national Leading Edge Cluster Competition was launched.</p> <p>As a result, all of the federal states in Germany have individual cluster programmes. These programmes focus sometimes on different goals or support special/other kinds of cluster. Therefore, not all regionally supported clusters are also supported at national level and vice versa. As an example, of the 21 Bavarian clusters which are members of the “go-cluster” programme only 12 are also supported by the “Cluster Initiative Bavaria”.</p>
Continuity	<p>At the national and federal state levels, cluster policy programmes and measures have been in place continuously since the 1990s and 2000s respectively.</p>
Consistency	<p>> 10 years (but with clear continuity)</p> <p>Both national and federal programmes have been running since the late 90s or the mid-2000s, either continuously or, if they ended, they were continued with a new follow-up programme. Cluster programmes started as regional innovation initiatives. To date, all 16 Länder (federal states) have cluster initiatives in the context of their regional innovation strategies which aim to support the development and excellence of cluster organisations. At national level, primarily the Ministry of Economic Affairs and Energy and the Ministry of Education and Research have been running national programmes for more than 20 years that aim to connect clusters beyond region, to increase the dynamics of innovation and to boost the excellence of German clusters at EU and global level.</p>

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