EUROPEAN CLUSTER COLLABORATION PLATFORM

Country factsheet

United States

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Content

01

Introduction and economic policy context

EUROPEAN CLUSTER COLLABORATION PLATFORM

Strengthening the European economy through collaboration

1. Introduction and economic policy context

This document presents an overview of the cluster policy in the United States. Given the 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 OECD Economic Survey: United States 2022. The "Economic Surveys" present the major challenges faced by the country, evaluate the short-term outlook, and make specific policy recommendations.

The COVID-19 pandemic has caused an unprecedented economic shock to the United States and the global economy. The American Rescue Plan[1] has been implemented to change the course of the pandemic, build a bridge towards economic recovery, and invest in racial justice. The American Rescue Plan will address the large, intergenerational inequities that have worsened in the wake of COVID-19. The US clusters are not mentioned in the plan. In addition to the COVID-19 pandemic, the ongoing Russian military aggression against Ukraine has also taken its toll on companies and industrial ecosystems in the United States, highlighting the significance of policy efforts in supporting SMEs and clusters.

Under President Biden, the United States have introduced sizeable programmes in the last two years that include significant investments in place-based industrial policy, most notably the CHIPS and Science Act, the Infrastructure Investment and Jobs Act (IIJA) and the American Rescue Plan Act (ARP). Out of these large programmes, the parts that relate to place-based industrial policy account for nearly $80 billion. This marks a change compared to the previous US industrial policy, as place-based approaches have played a subordinated role for the last 40 years but are now seeing an immense resurgence. The new policies aim to alleviate the worsening regional inequalities and to increase technological and industrial operations in the US by establishing innovative hubs all over the country, including regions where talents and capacities have been underutilised so far.

In the following, a succinct overview of the cluster policy in the United States will be provided. The structure of this factsheet generally encompasses:

1. an overview of the national cluster policy and an insight into the regional cluster policy,
2. an assessment of the state of the national cluster policy.

[1]American Rescue Plan: https://www.whitehouse.gov/briefing-room/legislation/2021/01/20/president-biden-announces-american-rescue-plan/

02

National cluster policy, programmes and initiatives

2. National cluster policy, programmes and initiatives

In this section we provide an overview of the existing cluster policies in the United States on a national level including three national cluster policies and one regional policy. The breakdown is presented in the form of a table, with the first column showcasing information on the aspects which constitute the policy (beginning with 'Policy Objectives', following with 'Policy Focus', etc.) and the other columns representing the case of a national, regional and sectoral cluster policies in the United States.

Within the table, the text presented in bold (black) depicts standardised categories across country factsheets (56 in total for 2023), which is applied for comparative purposes. This is followed by a complementary descriptive text to provide more insights about the cluster policy in the United States.

Table 1: Overview of United States cluster policy

Policy type:	National cluster policy	National cluster policy	Sectoral cluster policy	Regional cluster policy
Policy name:	Regional Innovation and Technology Hubs (Tech Hubs)	Regional Innovation Cluster Initiative	Regional Clean Hydrogen Hubs (H2Hubs)	2023-2025 Evergreen Manufacturing Growth Grants
POLICY OBJECTIVES	**Strengthening cooperation between companies or industry and RTDI actors** **Increasing competitiveness and boosting scale up of SMEs** **Fostering R&D activities, technology development and implementation** **Fostering innovation and strengthening innovation ecosystems**	**Strengthening cooperation between companies or industry and RTDI actors** **Increasing competitiveness and boosting scale up of SMEs** **Fostering innovation and strengthening innovation ecosystems** **Promoting employment and upgrading skills and competences**	**Strengthening cooperation between companies or industry and RTDI actors** **Fostering R&D activities, technology development and implementation** **Fostering innovation and strengthening innovation ecosystems** **Promoting employment and upgrading skills and competences**	**Increasing competitiveness and boosting scale up of SMEs** **Fostering R&D activities, technology development and implementation** **Fostering innovation and strengthening innovation ecosystems** **Promoting employment and upgrading skills and competences**

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Policy name:	Regional Innovation and Technology Hubs (Tech Hubs)	Regional Innovation Cluster Initiative	Regional Clean Hydrogen Hubs (H2Hubs)	2023-2025 Evergreen Manufacturing Growth Grants
	Supporting the creation of new cluster organisations **Promoting employment and upgrading skills and competences** **Increase supply chain resilience**		**Supporting the creation of new cluster organisations** **Supporting cluster excellence and professionalisation of cluster management**	
	The Tech Hubs Programme is a complementary but separate programme from the CHIPS and Science Act, focused on helping regions across the country build and evolve into technology industry hubs that support innovation ecosystems, including the semiconductor industry. The Tech Hubs Program was authorised under CHIPS but is not exclusively focused on the semiconductor sector. The Tech Hubs Programme aims to strengthen U.S. economic and national security with investments in regions across the country with assets and resources with the potential to become globally competitive in the technologies and industries of the future – and for those	The regional innovation clusters initiative is part of the US Small Business Administration's Innovative Economy Clusters Programme. These Regional Innovation Clusters (RICs) represent concentrated networks comprising small businesses, suppliers, service providers, and affiliated institutions collaborating to optimise resource utilisation, compete at broader scales, and stimulate innovation and job generation. Within the RIC initiative, three primary objectives can be identified. 1.) Facilitating the connection and augmentation of innovation assets, thus enabling small businesses to effectively exploit them for the commercialisation	The Regional Clean Hydrogen Hubs (H2Hubs) aim to kickstart a national network of clean hydrogen producers, consumers, and connective infrastructure while supporting the production, storage, delivery, and end-use of clean hydrogen. The goal is to accelerate the commercial-scale deployment of clean hydrogen helping to generate clean, dispatchable power, create a new form of energy storage, and decarbonise heavy industry and transportation, in support of the Biden Administration's goal to achieve a carbon-free electric grid by 2035 and a net zero emissions economy by 2050. In October 2023, seven regional clean hydrogen hubs were selected to receive $7 billion in	The Evergreen Manufacturing Growth Grants programme is designed to increase the number of manufacturing and research and development jobs in Washington State. The overarching goal is to accelerate innovation and help create jobs in every region of the state. The programme also aims to develop regional cluster acceleration strategies by fostering an environment of innovation and entrepreneurship.

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	industries, companies, and the jobs they create, to start, grow, and remain in the United States. This programme brings together diverse public, private, and academic partners into collaborative consortia focused on driving inclusive regional growth. With their existing innovation assets as a foundation, these Tech Hubs are supposed to build the workforce of the future; enable businesses to start and scale; and deploy and deliver critical and emerging technologies. On October 23, 2023, President Biden announced the designation of the inaugural 31 Tech Hubs, as well as recipients of 29 Tech Hubs Strategy Development Grants.	of new technologies and expansion into new markets. 2.) Fostering innovation within the areas of focus targeted by these clusters. 3.) Enhancing economic development and expansion in cluster regions.	Bipartisan Infrastructure Law (also known as Infrastructure Investment and Jobs Act) funding to accelerate the domestic market for low-cost, clean hydrogen. Together, they plan to produce more than three million metric tons of clean hydrogen per year while reducing 25 million metric tons of carbon dioxide emissions from end-uses each year and create tens of thousands of good-paying jobs across the country while supporting healthier communities.	
POLICY FOCUS	**No specific focus**	**No specific focus**	**Sectoral**	**No specific focus**
	Rather than focusing exclusively on one sector, the Tech Hubs Program focuses on 10 broad statutory key technology focus	No particular focus can be identified. The 16 Regional Innovation Clusters that are currently funded encompass a	The programme is focused on the energy sector, specifically the production and delivery of Clean Hydrogen.	Only projects that focus on Washington State's key economic sectors will be considered. Those sectors include

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	areas, one of which includes semiconductors and other computing-related technologies. A Hub's selected core technology area may either directly or indirectly impact any of the key technology focus areas, including the domestic semiconductor industry, and aims to strengthen associated supply chains, build ecosystems that enable regions to translate R&D into market-leading products and services, or advance technologies at the intersection of those technologies and another domain.	broad spectrum of sectoral areas, spanning from Agri-Food, Bioscience & Healthcare to Manufacturing.		aerospace, agriculture, advanced manufacturing, clean technology and renewable energy, forest products, information and communications technology, life science, maritime, and defence.
RESPONSIBLE AUTHORITIES	**In charge of drafting** **In charge of implementation** **Provides funding** **Oversees the implementation**	**In charge of drafting** **Provides funding** **Oversees the implementation**	**In charge of drafting** **In charge of implementation** **Provides funding** **Oversees the implementation**	**In charge of drafting** **In charge of implementation** **Provides funding** **Oversees the implementation**
	The programme is part of the CHIPS and Science act. The Department of Commerce Economic Development Administration (EDA) is	Through the U.S. Small Business Administration, the government provides support and funding for the Regional Innovation Cluster Initiative. It also oversees how	The programme is part of the Infrastructure Investment and Jobs Act. The Department of Energy (DOE) is responsible for its implementation.	The Evergreen Manufacturing Growth Grants programme is administered by the Washington State Department of Commerce (Commerce).

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	responsible for its implementation.	funds are allocated and implemented.		
BENEFICIARIES	**SMEs** **Research organisations** **Academic institutions** **Large firms** **Business associations** **Cluster organisations**	**SMEs** **Research organisations** **Academic institutions** **Large firms** **Cluster organisations** **Business associations**	**SMEs** **Research organisations** **Academic institutions** **Large firms**	**SMEs** **Large firms** **Business associations** **Cluster organisations**
	Each regional consortia must include at least one of each of the five required entity types (institutes of higher education, state or local governments, industry groups, economic development organisations, and labour organisations or workforce training organisations) and encourages two or more firms directly relevant to the consortium's selected core technology area to participate as members. Beyond those mandates, the EDA outlines 13 additional types of institutions – from national laboratories to community development	The initiative targets clusters that support small businesses by establishing a network of large businesses, universities, SMEs, investors, research organisations and business associations.	Eligible applicants for the development of H2Hubs were Institutions of higher education, For-profit entities, Non-profit entities as well as State and local governmental entities and Tribal nations.	There are two application types available for this programme: one form designated for individual businesses, and a second form designated for innovation cluster organisations. For the purposes of this programme, a cluster is defined as an industry-led group that work together to drive innovation, pursue market opportunities, and identify and solve challenges that limit growth. The programme will provide funding to address a variety of regional cluster acceleration strategies in order to ensure that

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		financial institutions to K-12 education system – that could be relevant consortia members. Many of these entities tend to have long-standing trust and ties with historically excluded communities.			the entire state of Washington can benefit from a strong manufacturing and research and development base. It will therefore take geographic location into account when choosing grant awardees.
INSTRUMENT	Financial	**Funding collaboration initiatives** **Support to R&D projects, SMEs becoming cluster members, etc.** **Subsidies for cluster infrastructure (e.g. offices, equipment)** **Supporting market entry (e.g. testing, proof-of concept, prototyping, demonstration projects)**	**Support to R&D projects, SMEs becoming cluster members, etc.** **Innovation: voucher, support to hire PhDs, cooperation with R&I actor**	**Funding collaboration initiatives** **Support to R&D projects, SMEs becoming cluster members, etc.** **Subsidies to hire personnel** **Subsidies for cluster infrastructure (e.g. offices, equipment)** **Supporting market entry (e.g. testing, proof-of concept, prototyping, demonstration projects)**	**Support to R&D projects, SMEs becoming cluster members, etc.** **Supporting market entry (e.g. testing, proof-of concept, prototyping, demonstration projects)** **Strategic assistance related to supply chain management and resilience**
	Technical assistance	**Infrastructure: coworking spaces, offices, incubation and accelerator spaces, research centres, technology parks etc.**	**Support for soft skills development: coaching, management training, upskilling/reskilling**	**Support for hard skill development: knowledge transfer, intellectual property, entrepren**	**Support for hard skill development: knowledge transfer, intellectual property, entrepren**

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		Support for hard skill development: knowledge transfer, intellectual property, entrepreneurship, export advice, market intelligence **Support for soft skills development: coaching, management training, upskilling/reskilling** **Support for networking and partnership building (at national and/or international level)**	**Support for networking and partnership building (at national and/or international level)**	**eurship, export advice, market intelligence** **Support for soft skills development: coaching, management training, upskilling/reskilling** **Infrastructure: coworking spaces, offices, incubation and accelerator spaces, research centres, technology parks etc.**	**eurship, export advice, market intelligence** **Support for soft skills development: coaching, management training, upskilling/reskilling**
	Explanation	The programme funds workforce development activities, business and entrepreneur development activities, technology development and maturation activities and infrastructure-related activities. Of the 31 Tech Hubs, 11 received Strategy Development Grants to strengthen their consortia and mature their approach to becoming more globally	The initiative funds activities that increase small business participation in cluster activities, promote innovation and enhance economic development and growth. This includes providing funds for mentorship and counselling of small businesses and providing services.	The programme funds the planning, construction, and operation of commercial-scale H2Hubs.	Funding will be provided for the following types of projects: • Research and development projects, including design and testing of new technologies that align with the state's goal of building a resilient, innovative, and equitable manufacturing and research and development base of employment.

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		competitive. EDA also awarded 18 additional Strategy Development Grants to consortia to further mature their plans and achieve designation in the future. The 31 Designated Tech Hubs will have the opportunity to compete for $500 million in implementation funding in the next phase of the Tech Hubs competition through up to 10 implementation grants between $50 million and $75 million each in 2024.			• Pilot or demonstration manufacturing projects coordinated with organised industry cluster initiatives. • Strategic assistance related to analysis of existing and potential customer bases and market demands, including analysis of capabilities of business's employees to expand their skillsets. • Strategic assistance related to supply chain management and resilience. • Projects intended to increase manufacturing jobs or research and development jobs regionally within the next three years. • Workforce development initiatives.
	Period	**Limited period**	**Unlimited**	**Limited period**	**Limited period**

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HISTORY	Ending year	2027		Anticipated Period of Performance of 8-12 years	2025
	Starting year	2023	2010	2023	2023
	Explanation	The programme was authorised and funded through the CHIPS and Science Act of 2022. In October 2023, the U.S. Department of Commerce's Economic Development Administration (EDA) designated 31 Tech Hubs that aim to strengthen the country's economic and national security, and global competitiveness by enabling the industries of the future to start, grow, and remain in regions across the United States. In the next step, the 31 Designated Tech Hubs will have the opportunity to compete for $500 million in implementation	The policy was launched in 2010 as part of the pilot programme Innovative Economies. Since 2014, regional innovation clusters have been supported through the Regional Innovation Strategies. Each cluster organization contract is for a base year and four option years. As of January 2024, there are 16 Regional Innovation Clusters that receive funding through the programme. There is no indication that the overall initiative is for a limited period. From the information that is available, support to clusters is granted continuously.	The programme was established through the Infrastructure Investment and Jobs act of November 2021. The Funding Opportunity Announcement was published in 2022 and the 7 new H2Hubs were selected in October 2023.	The grants support the Building Economic Strength Through Manufacturing (BEST) Act that was passed by the state legislature in 2021 to provide a framework for adding 300,000 new manufacturing jobs over the next decade. The deadline to apply for the grants was in December 2023.

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		funding in the next phase of the Tech Hubs competition.			
BUDGET	Overall	$ 10 billion over 5 years.	Data unavailable.	$8 billion (between $750 million and $1.2 billion per H2Hub).	$2 million for up to 10 grants in total (between $200,000 and $400,000 per project).
	Annual	$500 million in 2024 through up to 10 implementation grants.	The grants allocated to the cluster organisations differ from year to year. Those clusters awarded in 2021 received $300,000 each, which they can allocate towards expenses such as events, conferences, booths, webinars, salaries, and operational costs.	Not specified	Not specified
	Source of funding	The programme is authorised and funded through the CHIPS and Science Act of 2022. The act invests $280 billion to bolster U.S. semiconductor capacity, catalyse R&D, and create regional high-tech hubs and a bigger, more inclusive STEM workforce.	The Small Business Administration and private investors.	The programme is funded through the Infrastructure Investment and Jobs Act (IIJA), also known as the Bipartisan Infrastructure Law (BIL).	Washington State Department of Commerce, in line with the Washington Building Economic Strength Through Manufacturing (BEST) Act.

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POLICY EVALUATION	Availability	**no policy evaluation**	**in-itinere**	**no policy evaluation**	**no policy evaluation**
	Results	As the Tech Hubs were only chosen in October 2023 and the funding has yet to be allocated, there is no policy evaluation at this time.	The Year Three Report in 2014 showed that in the first 3 years of the initiative (2010-2013), participants increased by over 500%. There was also a 43% increase in the participation of small businesses in cluster activities. Employment amongst cluster-associated firms grew by 6.9% and revenues also grew by 6.9% compared to non-cluster-associated firms, which grew at only a 3.5% rate.	As the H2Hubs were only chosen in October 2023 and the funding has yet to be allocated, there is no policy evaluation at this time.	There is no policy evaluation available yet.
POLICY ALIGNMENT WITH THE EU PRIORITIES		**Resilience**	**Resilience**	**Green Economy** **Resilience**	**Resilience**

03

State of cluster policy

3. State of cluster policy

This section presents an overview on the state of play of the US cluster policy in the form of a qualitative assessment across four categories of analysis – policy scope, continuity of cluster policies, evidence of performance, and the range of cluster support instruments. Please refer to the **Annex** for the detailed overview of the categories. The table below presents an overview of the **state of the US cluster policy** for 2023.

Table 2: State of play

United States	State of play
POLICY SCOPE	Absence of cluster policy
	Broad policy
	Sectoral policy
	National and/or regional cluster policy
CONTINUITY	No cluster-specific policy available
	Cluster policy established recently
	Cluster policy established between over 2 and 10 years
	Cluster policy established over 10 years ago
EVIDENCE OF PERFORMANCE	No evaluation and / or monitoring available
	Existence of evaluations of past policies
	Existence of monitoring or an ongoing / interim evaluation
	Existence of monitoring and ex-ante or ongoing / interim evaluation
CLUSTER SUPPORT INSTRUMENTS	No instruments for cluster development
	Financial support for cluster development in the broader and / or sectoral policy
	Financial or technical support for cluster development in dedicated cluster policy
	Financial and technical support for cluster development in dedicated cluster policy

Source: ECCP (2023).

The text below provides a **qualitative description** of the state of play of the cluster policy in the United States.

Policy scope

The administration under President Biden introduced various place-based programmes as part of laws such as the CHIPS and Science Act or the Infrastructure Investment and Jobs Act in the last two years. These newly introduced programmes differ in scope, as some act as cluster policies on the national level (Regional Innovation and Technology Hubs) while others have a specific sectoral focus (Regional Clean Hydrogen Hubs). Besides those nationally orchestrated programmes, there are also regional initiatives such as the 2023-2025 Evergreen Manufacturing Growth Grants in Washington State.

Continuity

The United States Federal Government has not always been directly involved in cluster policies, it has however through federal agencies such as US Defense Advanced Research Projects Agency (DARPA) in the past played a supportive role by creating policies and situations for cluster organisations to be successful. In recent years, the US has begun to have a more direct role in encouraging innovation clusters. In 2007, Congress passed the America Competes Act, which includes the authorisation of innovation clusters without funding. In 2010, the Obama Administration, through the Small Business Administration (SBA), launched Regional Innovation Cluster Initiative (RIC) to support industry clusters.

As part of the SBA's Innovative Economy Clusters programme, the agency supports two types of Innovative Economies: Regional Innovation Clusters and Advanced Defence Technologies. Since 2014, regional innovation clusters have been supported through the Regional Innovation Strategies (RIS) programme. In addition, the administration created a task force called Taskforce for the Advancement of Regional Innovation Clusters (TARIC) to develop and administer grant competitions. Congress funding to the RIS programme remained stable during the Trump administration between 2016 and 2020, continuing to provide funding for activities such as the development of proof-of-concept centres, the expansion of incubator and accelerator programmes, and the establishment of industry-university partnerships.

Under the administration of President Biden, the US approach on innovation policy shifted as new programmes investing billions of dollars in place-based approaches under laws such as the CHIPS and Science Act and the Infrastructure Investment and Jobs Act were introduced. Some of the most important initiatives are the Regional Innovation and Technology Hubs as well as the Regional Clean Hydrogen Hubs, both are presented in detail in chapter 1 of this paper.

Evidence of performance

The Regional Innovation Clusters were evaluated in 2014, three years after the inauguration. The evaluation showed that in the first 3 years of the initiative (2010-2013), participants increased by over 500%. There was also a 43% increase in the participation of small businesses in cluster activities. Employment amongst cluster-associated firms grew by 6.9% and revenues also grew by 6.9% compared to non-cluster-associated firms, which grew at only a 3.5% rate. Further evaluations are planned.

Due to the fact the recently introduced programmes presented in this paper are still in early ages of implementation, first evaluations are to be expected in the years ahead.

Cluster support instruments

Programmes such as the Regional Innovation Hubs or the Regional Clean Hydrogen Hubs directly fund the creation of industry and technology hubs in certain regions, which were chosen based on their applications. These newly developing clusters are supposed to increase the competitive advantage of the US in technologies and industries of the future, such as hydrogen or semiconductors.

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Annex

Table 3: Analytical framework for the state of cluster policy

Criterion	Description	Categorical variables
Policy scope	assessment whether the country has a dedicated cluster policy, or cluster creation and/or development is targeted through broader policies, e.g. foreign trade policies, labour and social policies or specific sectoral policies, e.g. industrial policy tourism policies, agriculture policies	**absence of cluster policy** **existence of broader policies** **existence of specific sectoral policies** **existence of targeted cluster policies**
Continuity of cluster policies	assessment of the duration and experience of the country in carrying out cluster policies. This criterion assesses only existence of targeted cluster policies and not broader policies or sectoral policies	**absence of policies supporting cluster development** **cluster policy established recently (within the last 2 years)** **cluster policy established between over 2 and 10 years** **cluster policy established over 10 years ago**
Evidence of performance	assessment whether there are evaluations of past and ongoing policies and a monitoring system in place. The existence of monitoring and evaluation mechanisms determines the degree of policy development in the country	**no evaluation and / or monitoring available** **existence of evaluations of past policies, e.g. ex-ante** **existence of monitoring or an ongoing / interim evaluation** **existence of monitoring and ex-ante or ongoing / interim evaluation**
Cluster Support Instruments	assessment whether the policies provide any instruments to support the policy implementation, being these financial and/or technical support	**no instruments for cluster development** **financial support for cluster development in the broader and / or sectoral policy** **financial or technical support for cluster development in dedicated cluster policy** **financial and technical support for cluster development in dedicated cluster policy**

Source: ECCP (2023).