

The Launch of the Citizen Science Nederland Network

Our vision for supporting, sustaining, and expanding Citizen Science in the Netherlands

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About this document

The purpose of this document is to form a bridge between our origins in the Citizen Science Programme Line of the National Programme Open Science (NPOS) and the formal launch of the Citizen Science Nederland Network. We discuss Citizen Science in the Netherlands and the vision and mission of CS-NL, followed by a description of the history of the CS-NL Network leading to the festive launch of the Citizen Science Netherlands Network on May 28, 2024 in Leiden.

The Citizen Science Nederland (CS-NL) Network currently consists of 465 registered members on <u>LinkedIn</u>, 385 followers on <u>Twitter</u> (now X), and more than 537 subscribers to the <u>CS-NL newsletter</u>. The <u>Application for Impulse Funding</u> of the Citizen Science Nederland Network has been read online by 248 people and downloaded by 303 people.

Citizen Science in the Netherlands

Thanks to the individual efforts and initiatives of researchers and members of society across a wide range of disciplines, the Netherlands has been playing a pioneering role in the field of Citizen Science (CS) over the past decade in fields as diverse as Archaeology, Astronomy, Biodiversity, Environmental Sciences and Public Health.

Examples of citizen engagement and participatory research practices are growing in number and strength within Dutch Universities where they contribute to both fundamental discoveries and improved quality of insights; and are already common practice within the Universities of Applied Sciences where partnerships with commercial, civil, and societal organisations are addressing societal issues and launching social innovations. Additionally, grassroots community science initiatives can be found across the Netherlands on topics of societal importance such as air quality, soil health, noise pollution, and patient-led health research.

However, despite these advances, the CS field of practice lacked central national coordination and institutional support for CS remained modest to low. This has hindered knowledge exchange, capacity development, and the further maturation of the field of practice at a time when the polycrises facing society make bundling our knowledge and strengths together all the more urgent. With the formal launch of Citizen Science Nederland (CS-NL) on 1 May 2024 - the first national network for Citizen Science practitioners in the Netherlands - we now come one step closer to achieving the national strategic ambition to strengthen collaborations between knowledge institutions, government, industry and citizens to co-produce, share and communicate knowledge for the benefit of all members of society.



Our Vision

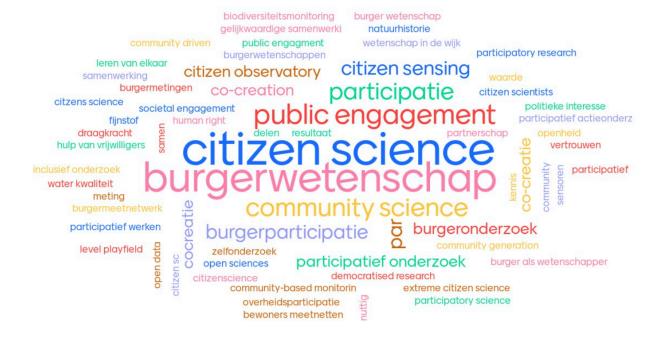
Our vision for the CS-NL Network is to build a strong, self-sustaining community that brings together all actors engaged in participatory research practices - from grassroots and citizen interest groups, through public authorities and private companies, to academia and the professional science sector; including all levels of education, from research universities to vocational education.

Our Mission

The mission of the CS-NL Network is to establish a supportive ecosystem for open, inclusive and participatory processes for knowledge creation. We aim to continue to embed Citizen Science within Open Science practices across the Netherlands, such that participatory processes for knowledge creation initiated by both citizen scientists and professional researchers are recognised, valued, and supported as part of mainstream research.

There are many ways of describing and naming participatory research practices, varying according to the question being researched, the nature of the task or collaboration, and the objectives and motivations of those participating. This can be seen for example in the range of terms that the members of the CS-NL Network use to describe their approaches (Fig. 1). We embrace and seek to protect this plurality and diversity of practices in the Netherlands, and aim for balanced representation within the network of initiators and practitioners from all walks of life.

Figure 1: Word cloud describing collaborations between science and society in the Netherlands, generated by the members of the CS-NL community at the first network day organised on 7 December 2022.





Our Objectives

The core objectives for Citizen Science in the Netherlands now form the foundations for the CS-NL Network at its official launch, to which the members of the network are invited to make their contributions via Working Groups and Thematic Groups and to shape the future direction of the network together with the CS-NL Team from this point onwards.

These core objectives are to:

- 1. Create awareness of the benefits of Citizen Science approaches for science, policy and society;
- 2. Facilitate knowledge exchange within and amongst members of the CS community and adjacent OS communities, from across the Quadruple Helix;
- 3. Consolidate and further develop good practices for CS within all domains of research;
- 4. Embed CS practices in the system of rewards and recognition, as a valued research approach with valorised societal impact;
- 5. Promote the development of training and education resources, to increase appropriate support and execution capacities within research and higher education organisations and civil society partners;
- 6. Foster greater and enhanced cooperation, synergies, and cross-pollination of practitioners among and between the Citizen Science, Open Science and Public Engagement communities, and between the Academic Universities and the Universities of Applied Sciences; and
- 7. Promote the development of supporting (technical) infrastructures and other aspects of an enabling environment for CS in the Netherlands, including through specific funding programmes and policy instruments.



The History of the CS-NL Network

Our Founders - The NPOS Citizen Science Working Group

The first National Plan Open Science was signed in the Netherlands in 2017 by a large group of stakeholders across the Dutch research landscape and soon evolved into the more active National Programme Open Science (NPOS), which aimed to achieve a coordinated effort towards the transition to Open Science and to disseminate its importance. In parallel with the growth in Open Science practices, the Citizen Science landscape has also been in motion. Across the world, the field of Otizen Science has been becoming increasingly professionalised, with Citizen Science practitioner associations in the United States, Australia, various European nation-states (such as Austria, Switzerland, Germany, and Spain), Europe, and at the global level.

Drawing on these examples, a group of Dutch CS practitioners formed a CS Working Group within NPOS in 2019, to better embed and support CS practices in the Netherlands, and give them a firm anchoring in the movement to open up science. They observed that Otizen Science is strongly related to transdisciplinary research, in which not only the combination of multiple scientific disciplines but also the collaboration between scientific and societal actors is essential to solving urgent and complex scientific and societal problems - such as realising the Sustainable Development Goals.



Figure 2: The members of the NPOS Citizen Science Working Group in 2019 - 2020.

Their 2020 report, Kennis en krachten gebundeld - Citizen Science in Nederland recommended the establishment of a national network in the Netherlands that facilitates the sharing of knowledge and experience, stimulates cooperation and innovation, links scientific initiatives with social initiatives (and vice versa) to bring widely shared questions in society to science, and both connects disciplines and develops new disciplines and Citizen Science methods.



Our first Seed Funding - the National Programme Open Science

Although Dutch national policy and funding bodies were becoming more aware of the importance and value of societal engagement to future science policy and practice, in 2020 this potential was still under-discussed, under-recognised and underfunded in mainstream research practices. The inclusion of a dedicated CS Programme Line alongside the FAIR Data and Open Access Programme Lines gave further substance and direction to the Dutch ambitions in the field of Citizen Science. The key lines of action with NPOS included reaching out to policymakers, funding bodies, and CS initiators both inside and outside academia to promote Citizen Science practices, and action the recommendations of the CS Working Group to further consolidate and develop best practices.

Figure 3: The action lines of the National Programme Open Science (NPOS) in 2020 - 2022 and their main aims.

key lines of action

Build a professional community of data stewards Incentivise FAIR digital research outputs and metadata **FAIR DATA** Enable sustainable interoperable networks of FAIR data services Develop a national FAIR data trust framework with societal stakeholders Make all scholarly output Open Access Enable full Open Access without additional costs Maintain high quality and research integrity OPEN ACCESS Get control over ownership, public values, academic and digital sovereignty Enable novel ways of recognition & rewards Grow towards less dependency on publishers Consolidate and further develop best practice **CITIZEN SCIENCE** Enhance transdisciplinary collaboration **Develop Supporting infrastructures**

Funding for the coordination of this Programme Line also made the soft launch of the first Dutch national CS Network (dubbed CS-NL) possible in 2022. At the end of that year, CS practitioners from across the Netherlands gathered together for the <u>first national network day</u> to discuss the potential and the needs of the CS-NL Network, and the need for significant strategic investment to:

- 1. Consolidate and develop the vast practical experience across the full range of societal engagement practices within the Dutch research community,
- 2. Foster greater and enhanced cooperation, synergies and cross-pollination of practitioners among and between the Citizen Science, Open Science and Public Engagement communities, and between the Academic Universities and the Universities of Applied Sciences, and
- 3. Provide supporting infrastructures, including technical infrastructures and community networks for both top-down and bottom-up participatory research collaborations.



Citizen Science in the NPOS 2030 Ambition

Throughout 2021 and 2022 the activities of NPOS were focused on accelerating the transition towards Open Science via an open consultation process to which 78 institutions, networks, communities and individuals gave their constructive inputs and feedback towards the development of the NPOS Ambition 2030 Document for Open Science in the Netherlands.

During this period the NPOS strategic goals became more fully aligned with the UNESCO Recommendations for Open Science, and the first stated goal of NPOS focused on the partnership between science and society that is embedded in Citizen Science practices:

GOAL 1. Towards Societal Engagement and Participation: In 2030, there is close collaboration between knowledge institutions, government, industry, and citizens to strengthen the international position of Dutch science and optimise the processes of creating, sharing, and communicating knowledge for the benefit of society.

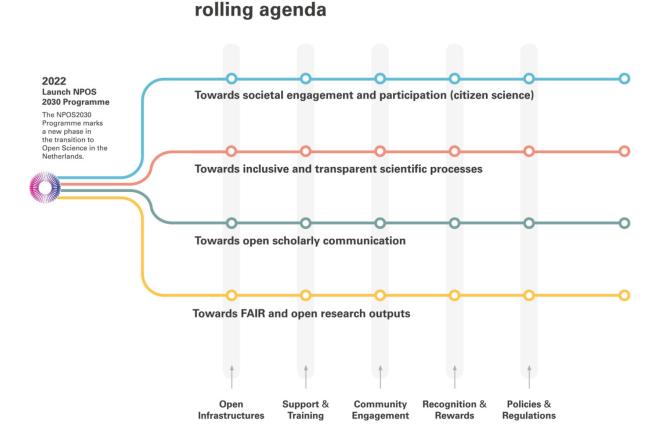
To flesh this strategy out in more detail, the NPOS CS Programme Line facilitated seven roundtable conversations and input gathering with the 158 members of the nascent CSNL community of practice both inside and outside academia, to co-develop a Polling Agenda towards Societal Engagement and Citizen Science. Furthermore, 30 people actively contributed to the co-development of a range of action lines within the rolling agenda that aim at ensuring that:

- 1. Citizen Science is Embedded: Such that in 2030, there is a high level of awareness of the value and impacts of CS approaches to science, policy and society amongst RPOs, RFOs, and HEIs, such that participatory and inclusive research practices are embedded as part of mainstream research, funding, education and innovation processes. Dedicated funding programmes and policy instruments serve to support and sustain CS initiatives at all scales in all domains of knowledge production.
- 2. Citizen Science Data is Integrated: Such that in 2030, citizen-gathered or generated data, knowledge and insights are easily gathered, hosted and aggregated via data infrastructure and technical tools, and CS data is integrated into mainstream processes for research, policy-making and decision-making, Interactions between researchers and societal stakeholders (government, industry and citizens) with easy and efficient.
- 3. Citizen Science is Supported: Such that in 2030, the capacity for CS has been built up to identify and engage a wide range of different actors, with their needs addressed in context, and training, skills development, and knowledge exchange are facilitated and implemented, a central online repository of consolidated research and best practice is widely available, and the development of new resources is supported.
- 4. Citizen Science is Networked: Such that in 2030, there is a strong and active national CS practitioners network that collaborates closely with the Centre for Science Communications & Public Engagement and the Open Science Communities network, a diverse range of members across the Quadruple Helix are represented, and knowledge exchange, transdisciplinary collaboration, the further development of best practice and innovations are facilitated for the formation of new multistakeholder initiatives across a wide range of domains.



5. Citizen Science is Inclusive: Such that in 2030, stakeholders in the outcomes of scientific research from across all sectors of society and all components of the Quadruple Helix have clear pathways to participate in open and collaborative processes of scientific knowledge creation, evaluation, and communication to the benefit of society and its members, in all domains of research.

Figure 4: The National Programme Open Science (NPOS) Ambition 2030, and the Rolling Agendas to achieving the Strategic Goals, including societal engagement and participation.





Citizen Science in the Open Science NL Work Programme

On 17 June 2022, the Minister of Education, Culture and Science announced in a Policy Letter on Open Science¹ that 20 million euros would be allocated for Open Science each year from 2023 to 2031, with explicit support for multi-stakeholder participation in the knowledge chain, bottom-up research practices that tackle societal issues, and participatory collaborations between scientific and societal actors. He asked the Dutch Research Council (NWO) to take responsibility for the spending of these funds and to set up a temporary. Regieorgaan Open Science.

The Open Science NL governing body to fulfil this mandate has now been established within the Dutch National Research Council (NWO) and was ratified by 16 partners from across the Dutch research landscape, who formalised the agreements on the new governing body in a covenant on 29 March 2023.

The mission of Open Science NL (OS-NL) is to establish open science as the norm in the Netherlands within ten years, using the plans outlined in the 'NPOS2030 Ambition Document and Rolling Agenda' as its foundation. Within OS-NL, the Citizen Science & Societal Engagement Programme is responsible for bringing together different communities inside and outside of science to work towards more open, inclusive, diverse and participatory science, in keeping with the aims of the Polling Agenda described in the NPOS Ambition Document.

As one of the first steps in delivering its 2024-2025 Work Programme, Open Science NL has awarded a grant of 1.1 million euros to the CS-NL network to enable it to maintain and expand the Dutch community of practice over the next four years and support knowledge exchange between CS practitioners and participants both inside and outside academia. The CS-NL work plan for the coming four years is described in the Application for Impulse Funding of the Citizen Science Nederland Network.

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¹ Policy Brief from the Dutch Minister of Education, Culture and Science: <u>Hoger Onderwijs-, Onderzoek- en Wetenschapsbeleid, Nr. 964. Brief van de minister van Onderwijs, Cultuur en Wetenschap Aan de Voorzitter van de Tweede Kamer der Staten-Generaal, Den Haag, 17 juni 2022.</u>