March 2021

GÉANT Association Strategy 2021–26

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1   Introduction

This document describes the GÉANT Association strategy for 2021−2026. The GÉANT Association is the collaboration of European national research and education networks (NRENs), delivering e-infrastructure and services to research and education. It comprises member NRENs and the GÉANT associates supported by the GÉANT organisation.

2   The GÉANT Association

European NRENs are collaborating under the umbrella of the GÉANT Association to deliver the pan-European GÉANT network for scientific excellence, research and innovation on a global scale to advance research and education (R&E).

The GÉANT Association information ecosystem consists of infrastructures and services (from GÉANT and the NRENs) that are used for communication, collaboration, exchange of data and access to repositories, services, and facilities. The GÉANT Association serves the NRENs. NRENs deliver their own national infrastructure and add services specific to the needs of their users: R&E organisations. These R&E organisations deliver the services to researchers, supporting staff, teachers, and students.

3   Scope of the Strategy

The strategy aims to frame the activities undertaken under the umbrella of the GÉANT Association collaboration. As the Association has a very diverse membership, this strategy does NOT include or presume to dictate the strategies of the individual NRENs. The strategy is an essential tool for the Association to navigate a shared course through the decision points encountered in the evolution of global and European R&E.

4   Audience

This strategy is primarily aimed at the NRENs collaborating in the GÉANT Association. However, it is also a useful statement of the Association's ambition for stakeholders such as the European Commission. And, last but not least, it will provide guidance to the GÉANT organisation itself.

5   What Drives the GÉANT Association?

For researchers worldwide, the ability to cooperate and build rapidly upon each other's ideas and results is paramount to allow them to conduct world-class research. The quantity of data and information exchanged is constantly growing. Capabilities such as creativity, brainpower and research skills are urgently needed to tackle major issues, such as shortages of energy, material and food, aging, and climate change. At the same time, technological developments also have an impact on education. These developments change the way students collaborate and interact with teachers and each other. It is important to make sure that education, worldwide, can benefit from new technological

opportunities. To realise this, knowledge communities need access to trusted, effective, and efficient information and communication services and products that enable and enrich collaboration, as well as provide new and innovative possibilities to their users.

5.1 Vision

To collaborate to deliver the infrastructures and services that enable the research and education community to excel.

5.2 Mission

To empower research and education with an open, innovative, and trusted information ecosystem.

5.3 Ambition

The ambition is for the GÉANT Association to:

- Address and anticipate the needs of the R&E community by offering sustainable, open, innovative, and trusted infrastructures and services.

- Be a trusted and preferred-choice partner to the benefit of the European R&E community.

- Collaborate and share knowledge to enable NRENs to improve their performance, both individually and collectively.

6 Strategic Goals

To sustain the ambition and to achieve the vision and mission, strategic goals in eight different interest areas are defined (note that the order does not imply a priority):

6.1 Network

The GÉANT Association is the trusted partner for pan-European and global advanced R&E networking.

The world of research is experiencing a radical shift from a model with locally stored data, where information sharing is difficult, to a collaborative model with open, accessible, distributed data repositories. Given the phenomenal expansion of open data, this makes international, high-speed network capacity critical to research success. Education is also becoming more and more dependent on global networks to allow students and teachers to interact, collaborate and access resources from any location. The GÉANT Association will meet this increasing demand inside Europe while also bridging the digital divide.

The GÉANT Association will also supply global connectivity of a high quality (resilient, sufficient capacity, low latency), driven by the needs of researchers, lecturers, and students, such that they can easily collaborate with their peers in all parts of the world.

6.2 Security

The GÉANT Association is a safe and secure information ecosystem for researchers, educators, and students.

The GÉANT Association information ecosystem consists of infrastructures and services that are used for communication, collaboration, exchange of data and access to repositories, services, and facilities. The information ecosystem will increasingly be subjected to the challenges of cybersecurity and these can only be dealt with if we cooperate closely. The GÉANT Association will continuously work to improve the resilience of R&E in this environment. This requires an active attention to cybersecurity that encompasses awareness, tools, and services, as well as a framework for awareness, prevention, and incident response.

The focus of how researchers and educators conduct their work is now shifting towards (scientific and non-scientific) facilities that support open data and cloud storage. An important part of this is the access to those facilities. This includes the network, authentication and authorisation, policy frameworks and procurement frameworks to guarantee safe and secure access to services (both community supplied (preferred) and commercially procured (if needed)).

The GÉANT Association needs to continuously develop the existing infrastructure, services, tools and policies for security and safety, as well as develop new ones that meet the needs of R&E in this new context.

6.3 Community

The GÉANT Association is acknowledged worldwide as a leader for developing and supporting R&E networking communities, and global REN development.

Striving for digital inclusion, the GÉANT Association will continue to invest in and support the R&E networking community within Europe, as well as contribute to community building with the rest of the world. Research and education does not stop at national borders. Collaboration with peers all over the world is a key part of the day-to-day activities of the R&E community.

In order to optimally strengthen and support collaboration between NRENs in a global environment, where agile and flexible access and delivery of the resources is required, the Association will establish and nurture a collaborative service delivery framework to realise the concept of a global research and education network (GREN). The ambition is for this GREN to be a global federation of RENs reaching into every corner of the world, both technologically and in terms of community, cooperating on standards for collaboration, and supporting the development of upcoming RENs. This allows a member NREN to support any type of international collaboration for researchers and students in their country.

6.4   Innovation

The GÉANT Association continually evolves key infrastructures, innovates, and develops new services in order to fulfil the needs of the R&E community in a sustainable way.

The GÉANT Association is differentiated from commercial entities by the capabilities of its infrastructures, as well as by a set of services specific to the needs of R&E (Sections 6.1, 6.2). The community also facilitates any type of international R&E collaboration (Section 6.3). In order to keep fulfilling this role for R&E, NRENs need to constantly assess new technologies. The GÉANT Association needs to innovate and continuously develop to keep up with the market evolution and, most important, the requirements of R&E users. As part of its innovation, the Association actively participates in research efforts.

The GÉANT Association will be agile in aligning with and contributing to opportunities and developments, both in large projects and in flexible, small-scale work. The main focus is on unique R&E-tailored infrastructures with services that are adopted by R&E users (product leadership), while customer intimacy and operational excellence are also important. Innovation can be delivered by adopting solutions developed by NREN members or others, following the principle of subsidiarity[1].

The GÉANT Association will make ecological and climate sustainability a priority for all of its work, striving to be carbon neutral.

6.5   Funding

The GÉANT Association will ensure financial sustainability to benefit its members.

The main income for the GÉANT Association is cost sharing among the membership, and European Commission (EC) supported projects. Ensuring a dependable income stream from the EC through a long-term partnership is key (Section 6.6). GÉANT will evaluate other funding opportunities, within the boundaries of its mission and always to serve the interests of the NRENs and R&E community.

Such evaluation of opportunities will be carried out in a sustainable way, striking a balance between project financing and structural financing, while delivering value for money in a cost-efficient way and in close partnership with key regional European and international partners.

6.6   European Union (EU)

The GÉANT Association is seen by the EU as an indispensable partner for their vision.

The GÉANT Association is focused on serving the R&E community, but it does not operate in a vacuum. The EU has ambitions relating to R&E that provide the GÉANT Association with the opportunity to evolve its infrastructures, deliver new services, and/or develop new service delivery channels. The

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[1] https://www.europarl.europa.eu/factsheets/en/sheet/7/the-principle-of-subsidiarity

GÉANT Association strives to be an indispensable partner to key policy makers and funders such as the EC, and to help develop R&E policy, in the same way that NRENs do at a national level.

The GÉANT Association strives to contribute to the priorities set by the EC, and the United Nations' Sustainable Development Goals (SDGs). Interaction with (inter)national research communities and (inter)national research infrastructures is required to realise and maintain this alignment.

6.7   Stakeholders

The GÉANT Association forges relationships with other e-infrastructure providers, research infrastructures (RIs), and other stakeholders, to benefit the R&E community.

In the new data infrastructure that the EU and the member states are creating there will be less focus on separate e-infrastructures. The reshaped EC policies, distinct funding programmes and their impact on national environments, etc. will help to shape the new approach to data and the support for underlying e-infrastructures such as those offered by the GÉANT Association.

In addition to its focus on the unique value of the GÉANT infrastructures for the R&E community, the GÉANT Association forges relationships with other e-infra providers (inside and outside of Europe) and RIs to collaborate on coherent and integrated delivery of services.

The integrated service delivery concept will be aimed at coordination and sharing of information related to large international research projects and transnational research organisations, with the goal to preserve the relationship between the individual user sites and the NRENs they connect to.

6.8   Governance

The GÉANT Association has a governance structure that is agile and benefits from the diversity of its membership.

The GÉANT Association requires a flexible governance structure where decision lines are short and where the governance is at an appropriate distance, accurately representing the stakeholders involved.

To optimise collaboration, the Association creates a safe, motivating, and diverse environment in which people from NRENs, R&E and the GÉANT organisation can perform at their best.

7   Process

The Board reviews the strategy on an annual basis and, if necessary, proposes amendments to the General Assembly in June. Based on that, the Board sets the goals for the upcoming year that form the basis for the Annual Operating Plan and Budget.

Appendix A Definitions for the Use of the Term GÉANT

Term	Meaning	Note	Summary
GÉANT	Can be used as a short version of: 'GÉANT community', 'GÉANT network', 'GÉANT Association' or 'GÉANT organisation'.	Used for brevity only when the meaning is clear from the context (e.g. in the same paragraph or in a footnote).	
GÉANT Association	The GÉANT Association – the NREN members, NORDUnet (representing five Nordic countries) and the GÉANT associates supported by the GÉANT organisation.	Currently 39 members (38 national, 1 representative) and associates + the GÉANT organisation.	GÉANT members + GÉANT associates + GÉANT organisation
GÉANT organisation	The entity of the GÉANT Association consisting of all GÉANT staff, the main office in NL and the branch office in the UK.	The term GÉANT office is confusing and should NOT be used.	
GÉANT community	GÉANT organisation, the NREN members, NORDUnet (representing five Nordic countries), the GÉANT associates *plus* the many users of GÉANT and NREN infrastructures and services.	'GÉANT community' should be explicitly used in many cases for clarity.	GÉANT members + GÉANT associates + GÉANT organisation + users
GÉANT project	The GÉANT network, services and associated programme of activities, which is made up of the GÉANT project consortium and co-funded by the European Commission.	The term should be used for all external communication, unless a particular project (GNx) needs to be identified for administrative purposes.	
GNx-y	The administrative name for the current instance of the GÉANT project.	E.g. GN4-3. Use is confined to internal audiences, administrative, legal and policy communications.	

Table A.1: Definitions for the use of the term GÉANT