

NRENs: Facing the challenge of relevance

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Abstract

In the last two decades NRENs have successfully provided new services to the (higher) education and research in their countries. However, times are changing as the ASPIRE foresight study [3] explains:

Liberalisation of the telecommunications market, the increasing commoditisation of ISP services, pressure on NRENs to reduce costs and nature of the research required, have contributed to a shift in balance of innovation to the commercial sector. There is a common feeling that the NRENs are currently falling behind as an engine of innovation.

As explained by the GÉANT Expert Group [1], the Reykjavik Group [2], and the aforementioned ASPIRE foresight study [3] there is a clear need for change for NRENs to stay relevant for their user communities.

The Netherlands has since long had a competitive telecommunications and Internet market, and at the same time, a user community that is required to pay for SURFnet's services. Thus, it has been important to make explicit the value that SURFnet adds to both its community, to the Dutch ICT sector and the Dutch economy.

SURFnet has developed and implemented a formal vision and strategy since 2007. This paper describes SURFnet's current vision and describes its three main challenges.

SURFnet's vision 2013

SURFnet ensures that researchers, instructors, and students can work together simply and effectively with the aid of ICT. It therefore promotes, develops, and operates an advanced, trusted, and connecting ICT infrastructure that facilitates optimum use of the possibilities offered by

ICT. SURFnet is thus the driving force behind ICT-based innovation in higher education and research in the Netherlands.

In realising this vision three main challenges have been identified. These challenges and how we cope with them are described below. International collaboration is shown to be a key factor, and an effective way of collaborating globally is currently lacking.

1. Add value over what commercial organisations deliver

From a situation in which the research and education community was traditionally in the lead, we have moved to a world where the consumer market leads much of the innovation. However, the demands of high-end research and the specific demands for research and education are not met in an effective way in the consumer market.

How we cope with this challenge

- We use the market's potential by making the consumer services available to our user communities on their own terms: (1) pricing, (2) legal terms, and (3) integration with institutional systems.
- We do not enter the rat race with commercial providers, but actively phase out services that can be better delivered by commercial parties.
- We focus on exploring, piloting and creating new services for which the demand of our community is (currently) unique and/or the market is not able to deliver.
- We focus on interconnecting the commercial consumer services, the institutional ICT services and the high end services delivered by for example supercomputer centres for the benefit of our user community.

International collaboration could add value to our community in terms of pricing, legal terms and integration with institutional systems through joint deals/negotiations with commercial providers on an international scale (demand aggregation). International collaboration could also add value to our community through specific high quality services developed and managed by one NREN for many countries (specialisation).

2. Reaching the end users

The institutes are SURFnet's shareholders, through their governing boards, and they are also our "customers", through their IT department. However, the main added value that we deliver is to their users: researchers, instructors, and students. The IT departments also have a new role, focussing on strategic buying, contract, and service level management and corporate IT. At the same time, users are bypassing their IT department for their most important IT services including collaboration and mind mapping tools and mass storage. It is possible

that the institutional IT landscape could get out of control in the area of responsibility (privacy, data ownership, confidentiality) and from a cost perspective.

How we cope with this challenge

- We work with both the IT department and the user communities, and are actively bringing these together.
- We collaborate with our national e-infrastructure partners, such as SARA and the Netherlands eScience Center, and integrate the high-end services and expertise that each of the partners offer, such as lightpaths, capacity and capability computing and large-scale storage, and support for these.
- We set up and participate in international collaborations, via e.g. joint contests such as Enlighten Your Research, and via reaching out to international users together.

3. Connect our users to their relevant partners with IT

Researchers, influenced by e.g. multi-disciplinary research, hyper specialisation and EC framework programs, are increasingly working together across organisational boundaries: both in flexible groups, in more formal virtual organisations and in joint research and education programs. These collaborations also extend beyond sectorial research and education boundaries into business and government and across national and continental boundaries. This triggers questions such as: How to facilitate an easy collaboration across organisational boundaries with no central IT decision making? How to facilitate collaboration beyond the boundaries of our national community: with e.g. companies and government in the Netherlands and with research, education and business internationally?

How we cope with this challenge

- We take away barriers for collaboration through ICT for our community in order to be able to work together with other organisations, sectors or countries. Therefore we develop, and operate an advanced, trusted, and connecting ICT infrastructure.

International collaboration could add value for example by rolling out global identity federations that would lower the barriers to collaborate globally, and by jointly delivering services to international research and education organisations.

Acknowledgements

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Vitae

Erwin Bleumink studied information management at Tilburg University. At Stratix Consulting he helped banks, telecom operators, and several Dutch ministries to explore their future, draft their vision and define strategies to make those visions reality. In 1998 he prepared GigaPort in which SURFnet made a major step forward in network development. In 2006 Erwin joined SURFnet's executive management team and became responsible for several innovation programs, finance, marketing, relations with institutes & Dutch sister organisations and product management. Since summer 2012 Erwin is SURFnet's CEO. Erwin is member of CIO Platform Netherlands, the Dutch e-infrastructure alignment team and Reykjavik Group.

Erik Huizer is CTO at SURFnet, the Dutch national educational and research network. Until May 2012 he was managing director for ICT at the Netherlands Organisation for Applied Scientific Research (TNO). He is part-time professor Internet Applications at University of Utrecht.

From 1991 till 1995 he was Area Director of the Internet Engineering Task Force (IETF) and member of the Internet Engineering Steering Group (IESG). From 1995-2002 he served on the Internet Architecture Board. From 1999 till 2002 he was chairman of the Internet Research Task Force (IRTF). He served on the ISOC Board of Trustees from 2002 till 2007.