HEAnet

Ireland's National Education & Research Network

Strategic Plan 2017-2019

Incorporating the 2019 extension to the HEAnet Strategic Plan

"Collaboration - The key to Development and Success"

A National Education Network for Shared ICT Services

National Network

HEAnet provides high speed, resilient Internet connectivity and associated ICT services to education and research organisations throughout Ireland:

www.heanet.ie/the-network

Global Connectivity

HEAnet also provides its clients with international connectivity via GÉANT - the pan-European network; facilitating research collaboration around the world:

www.geant.org

HE and Research Services

HEAnet provides an extensive portfolio of shared services; delivering economies of scale and more cost-effective ways of working for the education and research community:

www.heanet.ie/services

Schools

HEAnet provides Internet connectivity and associated services to all primary and post-primary schools in Ireland:

www.heanet.ie/schools

EduCampus

EduCampus Services, a subsidiary of HEAnet, provides MIS shared services to the higher education sector:

www.educampus.ie

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Chairperson's Foreword

"HEAnet is a real asset to Ireland's education system, delivering as it does, common, repeatable and shareable solutions for the sector, and I look forward to being part of its continued future success"

HEAnet is a real asset to Ireland's education system. With over 1.1 million users connected to their 100 Gbps capable network, its clients, their students and staff avail of a future-proofed network, to fulfil their everyday learning and research needs.

HEAnet also offers an extensive portfolio of shared services; delivering economies of scale and more cost-effective ways of working for the education and research community in Ireland, as well as facilitating research collaboration around the globe.

Against a background of constantly changing technology, I welcome the company's decision to extend its current 2017-2018 Strategic Plan for an additional 12-month period. This extension provides an opportunity for HEAnet to re-visit its strategic priorities and track the progress they have made against their goals and targets.

I would like to acknowledge the work of the members of the Board, the Chief Executive and staff of HEAnet. This combined effort and commitment ensures that the company continues to achieve its goal of delivering common, repeatable and shareable solutions for the sector, and I look forward to being part of its continued future success.

Professor Anne Scott,
Vice-President for Equality & Diversity, NUI Galway
& Chairperson, HEAnet Board of Directors

Message from the Chief Executive Officer

"HEAnet is focused on delivering greater efficiencies through joint action, shared services and centralised brokerage for Ireland's education and research community"

In this new age of digital transformation, HEAnet operates in an environment of accelerating change at the cutting edge of technology. Challenges also extend beyond technology, with sectoral funding, GDPR and ePrivacy regulation, and the mergers of institutions presenting on the immediate horizon. As such, it is particularly important that the company continues to articulate its strategic vision - one that retains the essential elements of our success to-date, while positioning us to meet the changing needs of our clients and stakeholders.

By focusing on our core competencies: Networking, Identity Management, Brokerage and ICT Security we can:

- identify common denominators, locating the areas in which it makes sense to share technology and develop these through innovation;
- continue to grow our reputation as a collaborative partner and trusted provider of common, repeatable and shareable solutions.

Encompassing research, education and innovation, HEAnet is in a unique position to deliver value adding shared services that are applicable across the entire sector. One such example is ICT Security. While ICT security is now a significant factor for all education and research bodies, not everyone has the resources to dedicate to policies that need to be written, awareness training that needs to be provided or vulnerability assessments that need to be performed. This is where HEAnet can step in and help across the whole sector, because these things aren't unique - everyone needs the same kind of vulnerability testing and everyone needs similar policies - thus allowing individual client resources to focus on what is unique to their organisation.

HEAnet is focused on delivering greater efficiencies through joint action, shared services and centralised brokerage for Ireland's education and research community as a whole.

Take cloud services for example - in collaboration with GÉANT and our education and research peers across Europe, HEAnet have brokered framework agreements for services from major cloud providers at the very best prices available in the marketplace. By engaging with leading vendors, we are well positioned to identify how the latest developments can be leveraged to provide opportunities for innovation for the benefit of all.

This document represents a 12-month extension of our current 2017 - 2018 Strategic Plan, which is consistent with our adoption of a rolling planning strategy model and enables us to be responsive and flexible to the dynamic nature of the environment in which we operate.

Kerrie Power,
CEO, HEAnet

HEAnet's Mission

To realise Ireland's education and research goals in partnership with our clients

by providing advanced infrastructure and services

HEAnet's Guiding Principles

- **Integrity**
- **Service Centric**
- **Openness & Transparency**
- **Delivery Oriented**
- **Collaboration & Enthusiasm**
- **Value for Money**
- **Client Focus**
- **Innovative**

About HEAnet

HEAnet is Ireland's National Education and Research Network, providing Internet connectivity and shared ICT services to educational and research organisations throughout Ireland.

HEAnet's ICT services underpin academic research and education activity in Ireland with just over one million people (210,000 third-level students & staff and 800,000 first and second-level students & staff) relying on the HEAnet network each day for their learning and research needs.

It is HEAnet that connects these Irish based learners and researchers to the Internet, on-line educational resources, and to fellow national educational and research networks in Europe and the rest of the world.

The company was established in 1983 by the Irish Universities with the support of the Higher Education Authority (HEA). Since its incorporation in 1997, it has successfully provisioned a robust 100 Gbps capable, high-bandwidth network connecting all Irish Universities, Institutes of Technology, other higher education institutions (HEIs), research organisations, and all primary and post-primary schools across Ireland.

HEAnet is guided by the principles of integrity, openness & transparency and collaboration & enthusiasm. It is also client focused, service centric, delivery oriented and innovative.

HEAnet is in its 22nd year of existence and has developed a culture of openness where everyone is expected and encouraged to contribute positively to the success of the company. We are proud to have a workplace that supports equal opportunities for all and where the company's policies and procedures lend for a safe environment for all roles to develop and be successful. As a company, we value our employees and strive to maintain a workplace that gives everyone opportunities to work with challenging and cutting edge technology as well as providing opportunities for further enhancement in the form of training, professional development and educational assistance.

HEAnet is publically funded through The Higher Education Authority, The Department of Education and Skills, The Department of Communications, Climate Action and Environment, the European Commission (EU) and its third-level sector client charges.

Value for money remains at the heart of the HEAnet operation and we are committed to delivering common, repeatable and shareable solutions to support the ICT needs of our client community.

The updated HEAnet Strategy covers the three year period 2017 - 2019

HEAnet have adopted a rolling planning strategy model and this allows us to be flexible and responsive to the dynamic environment in which we operate and will incorporate an annual review and renew process.

This report provides an update on the revision and development of our strategic goals, as well as an update on progress made during 2018 against the delivery of our strategic goals and targets.

A fundamental periodic review of our strategy will be conducted in 2019 and a new Strategic Plan will be developed for the period 2020 - 2022.

1. Collaborative Partner

Be a collaborative partner who delivers services intrinsic to the business of our clients

Goals	Targets	Progress
Continued provision of appropriate ICT Security Services	Agree and deliver upon SLAs for ICT Security Services	DDoS Mitigation service SLA (service included in 24/7 on-call support as part of IP connectivity service)
Provision of 24/7 on-call support for mission critical services	24/7 on-call support arrangements extended to three (03) additional services	P2P Links (service included in 24/7 on-call support arrangements) eduroam national gateway & HEAnet radius services (service included in 24/7 on-call support arrangements) It was not deemed appropriate to extend 24/7 on-call support to a third service in 2018
We are delivering services that support the businesses of our clients	Improved Net Promotor Score (NPS) i.e. greater than NPS 60	NPS +70 (HEAnet Client Survey 2017) HEAnet Client Survey 2018 to be conducted in October 2018

2. Trusted Provider

Continue to be the trusted provider of advanced networking and infrastructure services on a value for money basis

Goals	Targets	Progress
Replacement of HEAnet Metropolitan Area Network Equipment (RMAN) to deliver advanced networking services	Clients using edge-to-edge advanced Ethernet services in 2018 Old network decommissioned and removed in 2018	RMAN project underway & scheduled for completion in Q4 2018
Integrate public cloud infrastructure services with client requirements and existing/emerging HEAnet services	Utilise public cloud infrastructure on a value for money basis	Backend storage for a number of HEAnet services migrated to public cloud providers Trial of IdP in the cloud complete Trial of FileSender in the cloud complete
Lead the delivery of advanced infrastructural services	Annual service plan circulated to clients in Q1 of relevant year Service Infrastructure Strategy to be revised in 2019	HEAnet Service Plan 2019 scheduled for publication in Q1 2019 Service Network Refresh to be concluded in 2019 (SNRE Project)

3. Common, Repeatable & Shareable Solutions

Deliver common, repeatable & shareable solutions in a fast, agile and effective manner

Goals	Targets	Progress
Delivery of common, repeatable & shareable solutions to agreed project timelines	Solutions delivered to agreed project timelines	HEAnet Service Plan projects delivered to agreed project timelines Regular reporting on the delivery of HEAnet strategic projects PMO Review conducted on an annual basis
Delivery of improved connectivity to cloud providers	Progress Private Cloud Connections to major cloud provider	Piloting Virtual Private Cloud Connections Increased capacity to INEX
Ongoing review of the HEAnet Services Portfolio	Add and remove services as appropriate to ensure that we are meeting the needs of our entire client community	Evaluation of VLE (Moodle) Hosting strategy underway Cost Analysis of HEAnet Services scheduled for completion in 2018

4. Innovative Solutions

Deliver opportunities for clients to collaborate on innovative solutions

Goals	Targets	Progress
High engagement from our clients with us in collaborating on strategic service development	HEAnet clients are included in the process of our strategic service development	Service Portfolio Groups established Input from SIGs into service development
The creation of working groups to enable clients to come together to share expertise	Establish appropriate working groups to foster client collaboration on innovative solutions	HEAnet Client VLE Group established PMO Workshop(s) delivered PMO Client Group established
Clear evidence of collaborative outcomes	Tangible output from collaboration leading to the provision of service enhancements or new services	ICT Security Services represent an example of service development in collaboration with an executive client sponsor

5. Identity Federation

Be the driver of Identity Federation across the education and research sector and to develop the provision of extended expertise in the wider identity management domain

Goals	Targets	Progress
Expansion of Edugate (eduGAIN) service across all HEAnet clients	Evidence a 10% increase in authentications (annually)	In 2018 we forecast a 15-20% increase in authentication levels over 2017 end-of-year figures
Edugate to support one (01) additional Single Sign-On (SSO) protocol (e.g. Open ID Connect) so as to attract new service providers	Implement one (01) additional SSO protocol across Edugate services	OpenID Connect (OIDC) protocol implemented and in production across Edugate services
HEAnet to provide extended services in the area of general Identity Management expertise	Deliver Identity Management best practice design for IS Services audience with external third-party support as appropriate	Added the ability to block individual users accessing specific services without change to users accounts Added support for Azure Multifactor Authentication and use of Azure Active Directory to HEAnet IdP Services

6. Brokerage

Continue to be a key provider and broker of cost-effective procurement for the education and research sector

Goals	Targets	Progress
Delivery of financial savings	Brokerage Services to deliver savings in excess of €3m annually	We anticipate total Brokerage savings to end of 2018 will be in the order of €4.5m (this encompasses savings to institutions plus savings attributable to staff & students)
Delivery of the volume of tenders, frameworks, agreements and brokered services in line with client requirements	To maintain the current level of agreements across HEAnet, the Office of Government Procurement (OGP) and GÉANT catalogues To add one (01) new Brokerage Services Agreement per quarter (via HEAnet, OGP or GÉANT source)	4 new agreements added in 2018
Increase the uptake (by number of clients) of the frameworks, agreements and brokered services	HEAnet to offer brokerage advice and guidance to a minimum of ten (10) clients in order to increase the uptake of brokered services	Brokerage advice and guidance offered to 34 clients as at mid-year 2018

7. Key Advisor

Be a key advisor on emergent and disruptive technologies

Goals	Targets	Progress
Establish best practice guidelines for cloud based application hosting	Provide Layer 2 or Layer 3 VPNs to clients Plan enhanced resilience together with clients Re-engineer network connectivity with clients (to support mergers and/or site relocations)	The RMAN Project has realised HEAnet's new network in 2018 Sessions have been held with potential clients around Layer 2 or Layer 3 VPNs
Anticipate emergent and disruptive technology trends and their impact on HEAnet's client environment	Facilitate disruptive technology events with contributions from academia and industry In collaboration with our clients, publish a position paper on an emergent technology or service	Bi-annual disruptive technologies events planned from 2019 onwards Participation in sectoral SIGs in relation to Identity Management best practice and Cloud adoption practice Participation in GÉANT SIG on Cloudy Interoperable Software Stacks (SIG-CISS)
Be a source of independent advice on multimedia communication for our clients	Review and update of the HEAnet Multimedia strategy in 2019	Advising clients on the refresh of their streaming and archiving infrastructure Development of LTI plugin for media.heanet.ie complete

8. Conduit to Europe

Be the conduit to Europe for the promotion of Irish education and research ICT interests and the trusted gateway to world-wide infrastructural services

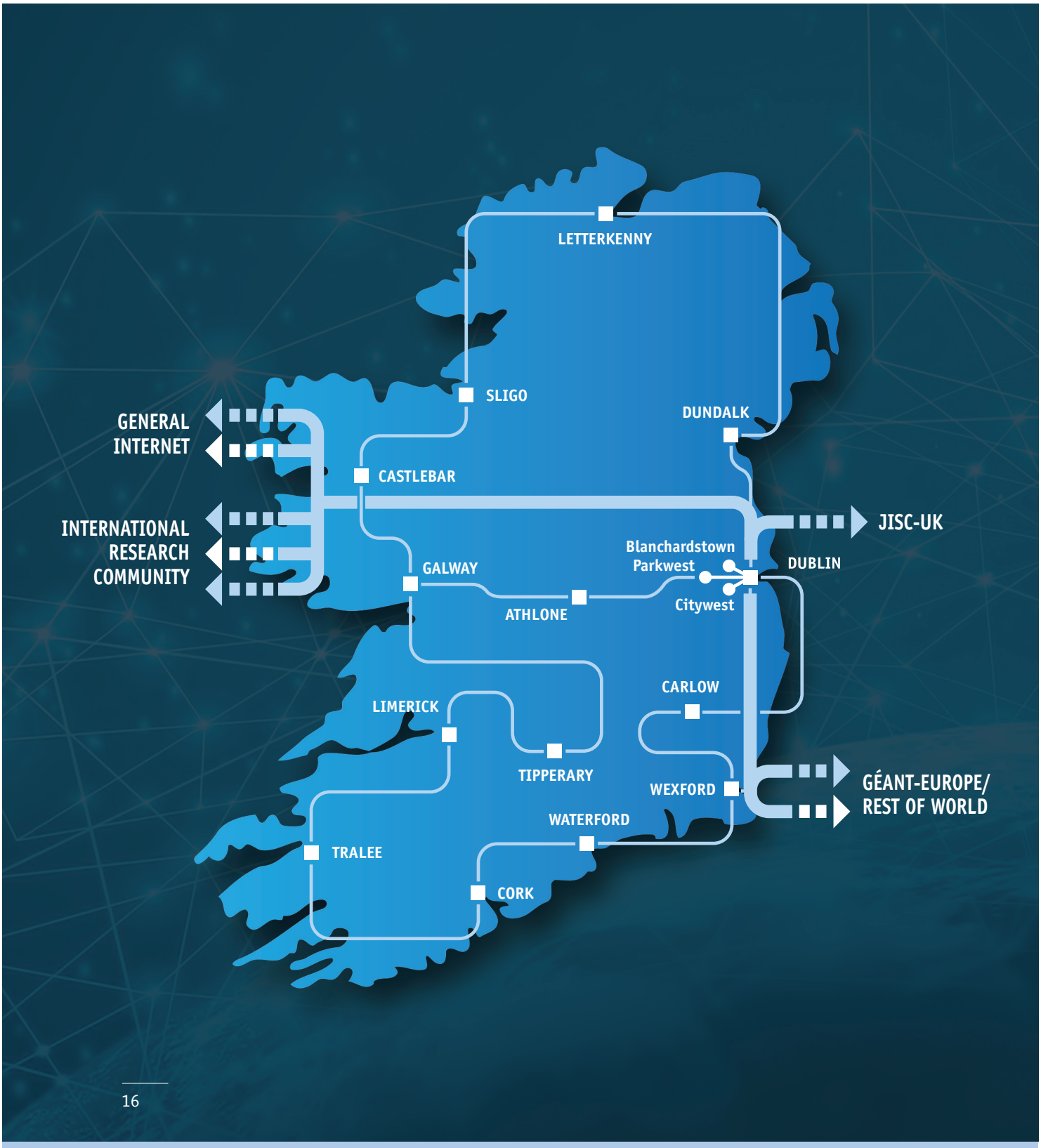
Goals	Targets	Progress
Maintain strong links to services (VLE, Databases, Cloud) both R&E and commercial, via the GÉANT network	Work with GÉANT Operations to exceed the SLA uptime of 99.99% and ensure an awareness of the criticality of these links	99.99% uptime exceeded on our links throughout the period. GÉANT peering has increased across Europe and connectivity to vital cloud services has been maintained at a very high level
Activate participation in relevant GÉANT projects	HEAnet staff working in their assigned GÉANT project tasks and bringing appropriate knowledge back to the company and HEAnet clients	HEAnet staff members are leading or participating in GÉANT project activities
Leverage pan-European knowledge and experience to help clients expand their international R&E involvement and offerings	Improve, pilot and iterate the Transnational Educational (TNE) process via at least two (2) clients	Transnational Education work directly benefiting from HEAnet relationships with GÉANT & JISC HEAnet are active members of the GÉANT SIG-TNE

9. Excellent Place To Work

Be recognised as an excellent place to work

Goals	Targets	Progress
Leading by Example	The management team and team managers working together to ensure that everyone is managed consistently and fairly and all employees treat each other respectfully and in line with HEAnet's guiding principles	Emphasising leadership and behavioural objectives through the Performance Management system Introduction of mid-year performance review Review of job specifications leadership roles, strengthening the people management components
Ensure that HEAnet is resourced appropriately to deliver upon the HEAnet mission	Secure adequate level of funding in order to deliver upon the HEAnet mission Maintain the reputation of HEAnet for our association with leading edge technological developments in Ireland	2018 Organisation Review focused on flexibility of resources and internal talent mobility Creation of Strategy R&D Department responsible for scoping project resources
Become an Employer of Choice	Develop and implement strategies aimed at achieving an Employer of Choice status	Well Being Programme expanded to include enhanced leave benefits, return to work support for new families, increase flexibility and further support work-life balance for all 2018 Keep Well Mark accreditation achieved

HEAnet Network Infrastructure



HEAnet Client List

- Athlone Institute of Technology
- Ballyfermot CFE
- Carlow College
- Central Applications Office
- College of Anaesthetists of Ireland
- Cork ETB - Administrative Office
- Cork Institute of Technology
- Dublin City University
- Dublin Institute for Advanced Studies
- Dublin Institute of Technology
- Dundalk Institute of Technology
- Dun Laoghaire Further Education Institute / DFEI
- Economic and Social Research Institute
- Education & Training Boards Ireland
- Education Shared Business Service
- EduCampus Services
- Environmental Protection Agency
- Eurofound (European Foundation for the improvement of living and working conditions)
- Galway-Mayo Institute of Technology
- Health Research Board
- Higher Education Authority
- Houses of the Oireachtas
- IE Domain Registry
- Irish Centre for High End Computing / ICHEC
- Institute of Art, Design and Technology Dun Laoghaire
- Institute of Public Administration
- Institute of Technology Blanchardstown
- Institute of Technology Carlow
- Institute of Technology Sligo
- Institute of Technology Tallaght, Dublin
- Institute of Technology Tralee
- Irish Prison Service
- Irish Universities Association
- Letterkenny Institute of Technology
- Limerick & Clare ETB
- Limerick Institute of Technology
- Louth & Meath ETB
- Marine Institute
- Maynooth University
- Medical Council
- Mountbellew Agricultural College
- National Cancer Registry, Ireland
- National College of Art and Design
- National College of Ireland
- National Digital Research Centre
- National Forum for the Enhancement of Teaching & Learning in Higher Education
- National University of Ireland
- National University of Ireland Galway
- Ordnance Survey Ireland / OSI
- PDST Technology in Education
- Post-Graduate Applications Centre
- Quality & Qualifications Ireland / QQI
- Royal College of Physicians of Ireland
- Royal College of Surgeons in Ireland
- Royal Irish Academy
- Royal Irish Academy of Music
- St. Patrick's College, Thurles
- Technological Higher Education Association Ireland / thea
- Teagasc
- Trinity College Dublin
- University College Cork
- University College Dublin
- University of Limerick
- Waterford Institute of Technology

SCHOOLS

- **Broadband for Schools Programme**
- **Schools 100Mbps Project**

  4,000 primary and post-primary schools, through the Department of Education & Skills.

HEAnet

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The paper used in this report is taken from sustainable sources