HEAnet

Ireland's National Education & Research Network

Strategic Plan 2017-2018

2017 Progress Report

"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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Message from the Chief Executive

"Our vision is clear - we want Ireland to realise its potential through technology in education. We would like HEAnet to be the vehicle to achieve that"

One of our key challenges is identifying common solutions to our clients' differing needs across the spectrum of cloud-based services. This can only be successfully achieved through real partnership and collaboration between HEAnet and its clients. This collaboration and executive sponsorship is critical for us in delivering on our mission, while playing a key role in the education and research sector.

The true meaning of shared services is what can be totally shared and this is applicable across the entire sector. This means understanding common goals and avoiding potential pitfalls that could appear if attempting to solve problems for one or two institutions in isolation. We are committed to an ongoing review of our services portfolio and will add and remove services as appropriate to ensure that we are meeting the needs of our entire client community through the delivery of common, repeatable and shareable solutions.

We believe that opportunities exist in the area of common, repeatable and shareable solutions, such as ICT security. Looking to the future, we want to ensure that HEAnet continues to develop new services with sector-wide potential. We would like to align more closely with the National Shared Services Office's strategy to ensure that we are incentivising the use of our services so that they make sense, are in demand and can be availed of by all of our clients.

Our staff's commitment, enthusiasm and expertise has contributed to the development of a world-class network, supporting education and research in Ireland and becoming a trusted partner for our clients. Our vision is clear – we want Ireland to realise its potential through technology in education and we would like HEAnet to be the vehicle to achieve that.

Today, HEAnet stands as a valued provider of ICT shared services across all levels of the Irish education and research sector, serving client needs in a trusted, collaborative, delivery oriented and cost-effective manner.

Kerrie Power,
CEO, HEAnet

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 20th 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 HEA, the Department of Communications, Climate Action and Environment (DCCAE), 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.

Introduction to Annual Review & Renew 2017

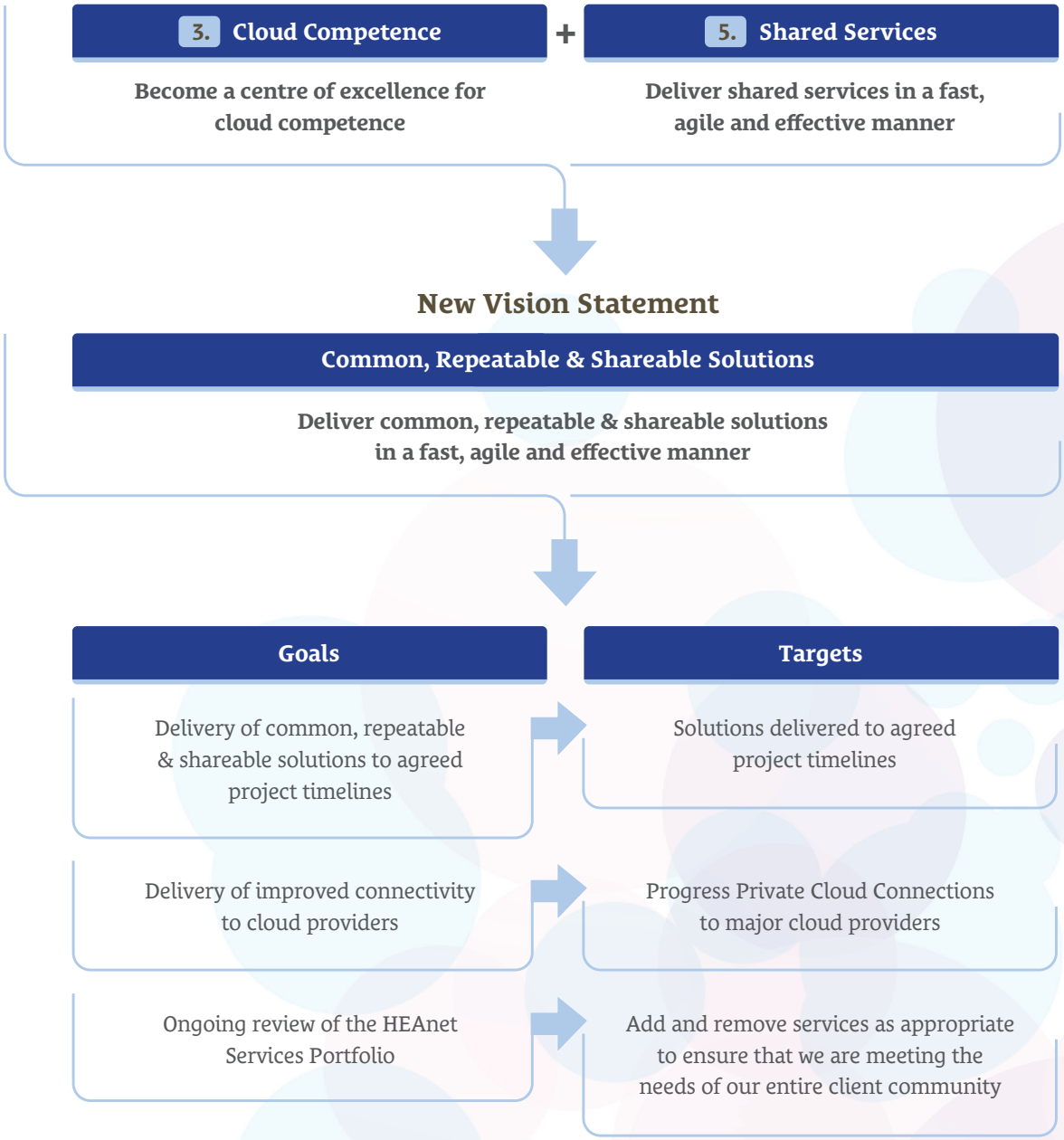
The current HEAnet strategy covers the two year period 2017 - 2018 with a fundamental review to take place in 2018.

This report provides an update on the revision and development of our strategic goals, as well as an update on progress made during 2017 against the delivery of our strategic goals and targets.

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.

Revision & Development of our Strategic Goals

The following vision statements will be combined into a single vision statement with updated goals and targets.



Progress against this new combined vision statement will be reported on in 2018.

1. Collaborative Partner

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

Goals	Targets	Progress
Continued provision of appropriate Cyber Security Services	Agree and deliver upon SLAs for Cyber 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)
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)

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 Q3 2018
Integrate public cloud infrastructure services with client requirements and existing/emerging HEAnet services	Facilitate connectivity with cloud providers Trial use of public cloud for Disaster Recovery services by Q3, 2017	Rollout of monitoring & alerting services on public cloud Cloud infrastructure based IdP service Migration of storage resources to public cloud storage services Piloting Virtual Private Cloud Connections
Lead the delivery of advanced infrastructural services	Annual service plan circulated to clients in Q1 of relevant year Service infrastructure strategy revised by Q2, 2017	HEAnet Service Plan 2017 published in Q1 2017 HEAnet Service Plan 2018 published in Q4 2017 DDoS Mitigation Service protecting key assets for all clients Introduced the new Managed eduroam client service Wireless Guest WiFi service launched

3. Cloud Competence

Become a centre of excellence for cloud competence

Goals	Targets	Progress
Be a source of independent cloud competence for our clients	HEAnet to hold at least one (01) major cloud consultancy engagement with a HEI on an annual basis	Introduction & dissemination of the GÉANT Cloud catalogue (GCC) Assistance for clients moving cloud resources to the GCC Assistance to clients migrating from EduStorage to cloud based storage solutions
Provision HEAnet Services leveraging public cloud providers	Migrate one or more service(s) to a public cloud provider	Migration of a portion of HEAnet storage needs to cloud providers is underway Migration of IdP Service to a cloud provider is underway
Staff to hold expertise in major cloud technologies	Staff to hold expertise across three (03) major cloud vendor offerings	AWS & Azure skill sets developed and in use Deployment of new services using AWS & Azure

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 U-SPG & T-SPG into service development 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
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. Shared Services

Deliver shared services in a fast, agile and effective manner

Goals	Targets	Progress
Delivery to agreed project timelines	Projects delivered to agreed project timelines	PMO established Regular reporting on the delivery of HEAnet strategic projects
Develop the maturity of the HEAnet Project Management Governance framework	Consistent application of project management methodologies and regular reporting to the HEAnet Board on key projects	PMO Review conducted on an annual basis Reporting to the HEAnet Board on a Quarterly basis
Contribute to the achievement of the third National Energy Efficiency Action Plan (NEEAP 3)	Reduce energy usage by 20% in the HEAnet network backbone by 2018	By Q1 2018 we will have the capability to poll all network elements and actively record energy usage

6. 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)	We are seeing a 15-20% increase in authetication levels over 2016 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	Almost 1 million additional alumni accounts now covered by Edugate Alerting functionality added to find compromised accounts for clients availing of Managed IdP service Added the ability to catch expiring passwords during logon and warn users to reset them

7. 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	As at mid-year, we anticipate total Brokerage savings to end of 2017 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)	5 new agreements added in 2017 to date
Increase the uptake (by number of clients) of the framewoks, 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 10 clients as at mid-year 2017

8. Key Advisor

Be a key advisor on emergent and disruptive technologies

Goals	Targets	Progress
Establish best practice guidelines for cloud based application hosting	In collaboration with our clients, migrate a service to a cloud based environment	Developing our capabilities to leverage AWS and Azure for production requirements. This has been completed for 16 clients who are in the process of moving onto the GÉANT framework
Actively follow national & international developments with the aim to determine the impact on HEAnet's client environment	In collaboration with our clients, publish a position paper on an emergent technology or service	HEAnet SIG - The Internet of Things GDPR - Impact on existing agreements Engagement with Research Community Participation in GÉANT SIG on Cloudy Interoperable Software Stacks (SIG-CISS)
Be a source of independent advice on multimedia communication for our clients	In collaboration with our clients, implement the HEAnet Multimedia Communication strategy by 2018	Advising clients on the refresh of their streaming and archiving infrastructure Working with clients to develop an LTI plugin for media.heanet.ie Advising clients on video streaming equipment purchases

9. 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

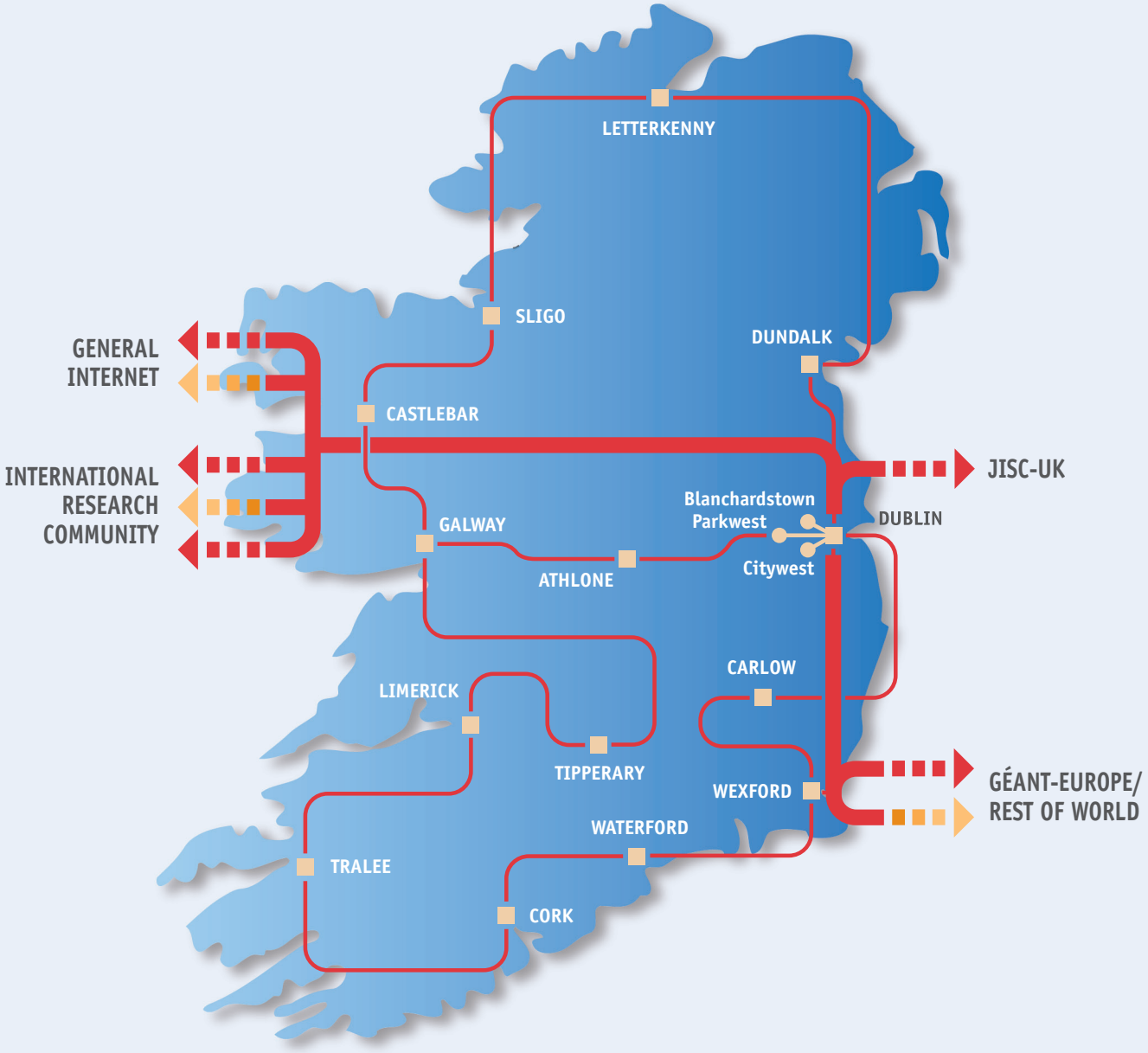
Goals	Targets	Progress
Maintain strong links to services (VLE, Databases, Cloud) both R&E and commercial, via the GÉANT network	Work with GÉANT Operations to exceed the SLA uptime of 99.99% and ensure an awareness of the criticality of these links	Working with GÉANT to extend their peering relationships throughout Europe, with a particular focus on companies such as Blackboard, Microsoft & AWS
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 including Cloud Brokerage, WebRTC, Identity Federation and Infrastructure & Networks
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

10. Excellent Place To Work

Be recognised as an excellent place to work

Goals	Targets	Progress
Leading by Example	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	Team Manager Programme developed, two year programme 2016 - 2017 Establishment of Team Manager meetings to support consistency across the company
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	HEAnet Work Plan and Resource Planning Process developed and established in 2016, implemented in 2017 to ensure adequate resourcing
Become an Employer of Choice	Develop and implement strategies aimed at achieving an Employer of Choice status	HEAnet developed a Well Being Programme in 2016 which has continued to be implemented quarterly Review of performance management process Membership of the ibec Keep Well Mark

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
- EduCampus Services
- Environmental Protection Agency
- 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 Institute of Technology
- Marine Institute
- Maynooth University
- 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
- 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
- Smartbay Ireland
- St. Patrick's College, Thurles
- Technological Higher Education Association Ireland / thea
- Trinity College Dublin
- University College Cork
- University College Dublin
- University of Limerick
- Waterford Institute of Technology

SCHOOLS

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

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

HEAnet

Ireland's National Education & Research Network

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The paper used in this report is taken from sustainable sources