



**Comptroller and Auditor General
Special Report**

Waterford Institute of Technology

**Development and Disposal of Intellectual
Property in FeedHenry**

Report of the Comptroller and Auditor General

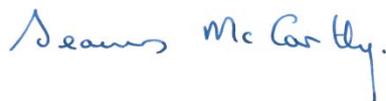
Waterford Institute of Technology — Development and Disposal of Intellectual Property in FeedHenry

I have, in accordance with the provisions of Section 9 of the Comptroller and Auditor General (Amendment) Act 1993, carried out an examination of the development and disposal by Waterford Institute of Technology of its interest in a company called FeedHenry Ltd.

This report was prepared on the basis of information, documentation and explanations obtained from the public bodies referred to in the report. The draft report was sent to Waterford Institute of Technology, the Higher Education Authority, the Department of Education and Skills, Enterprise Ireland and the Department of Business, Enterprise and Innovation. Where appropriate, responses were incorporated in the final version of the report.

The purpose of this report is to examine the use of public resources with respect to the development and disposal of intellectual property in FeedHenry. The sole and exclusive focus of this report is on public bodies, and not on staff members of those bodies or on any third parties. For the avoidance of doubt, this report does not make any criticism or comment or present any view, whether express or implied, with respect to staff members of public bodies or third parties, and should not be understood as doing so.

I hereby submit my report for presentation to Dáil Éireann in accordance with Section 11 of the Act.



Seamus McCarthy
Comptroller and Auditor General

9 November 2018

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Abbreviations and definitions

3G	A mobile communications standard that allows portable electronic devices to access the Internet wirelessly
Assignment	The full transfer of ownership of IP to a third party
B1 form	A return to be submitted to the CRO on an annual basis. It provides certain prescribed company information, such as the identity of the shareholders and directors.
B5 form	A return to be submitted to the CRO when a company issues shares. It provides details of the increase in issued share capital.
CRCPS	Cumulative redeemable convertible preference shares
CRO	Companies Registration Office
HEA	Higher Education Authority
HEI	Higher education institution
iHPSU	Innovative high growth potential start-ups are companies that Enterprise Ireland supports with a view to developing innovative technologies, products and services for sale on world markets
IP	Intellectual property — in a HEI setting, IP typically comprises the legal rights that may emanate from the results of academic research
IUA	Irish Universities Association
KTI	Knowledge Transfer Ireland
Principal investigator	The holder of an independent grant administered by an academic institution and the lead researcher for the grant project.
RPO	Research-performing organisation
Spin-out company	A company set up to exploit IP developed at a HEI, often with the HEI retaining an interest
SLA	Service level agreement
Technology transfer	The transfer of new inventions, creations, discoveries, innovations, or processes which result from research conducted at an RPO, to a commercial environment
TSSG	The Telecommunication Software and Systems Group — an internal research body at Waterford Institute of Technology
TTSI	Technology Transfer Strengthening Initiative

Summary

Summary

- 1 This report examines issues relating to the development and disposal by Waterford Institute of Technology of its interest in a company called FeedHenry Ltd.

Policy on commercialisation of research

- 2 National codes and guidelines encourage higher education institutions (HEIs) to seek, where possible, to commercialise the outcomes of their research. One of the options available to HEIs to exploit intellectual property (IP) with commercial potential arising from State-funded research is to vest the IP in a campus 'spin-out' company.
- 3 Staff of HEIs may be involved in the establishment of spin-out companies. This requires institutions to manage potential conflicts of interest around their relationships and interactions with spin-out companies. In order to ensure risks are appropriately managed, and to ensure the HEI's and the State's financial interests are protected, it is necessary for HEIs to have policies and procedures in place to manage commercialisation.

Evolution of FeedHenry

- 4 The Telecommunication Software and Systems Group (TSSG) was established in Waterford Institute of Technology in 1996 as an internal research body. The group undertakes both basic and applied research work.
- 5 From 2002 to 2004, TSSG led an EU-funded project focused on creating open platforms for mobile telecommunication systems. The experience gained from that project eventually led TSSG researchers to develop a technology with commercial potential that became known as FeedHenry.
- 6 Enterprise Ireland supported the development of the FeedHenry technology by providing funding to the Institute for a number of related 'proof of concept' and commercialisation projects. Enterprise Ireland funding to Waterford Institute of Technology for those projects totalled nearly €1 million.
- 7 In June 2008, a number of individuals, including staff of TSSG, registered a company called FeedHenry Ltd.¹ In September 2008, Waterford Institute of Technology awarded the company a trial licence to use the FeedHenry technology. In December 2010, the Institute transferred full ownership of the IP to FeedHenry Ltd, in exchange for an equity stake in the company.
- 8 Enterprise Ireland subsequently invested a total of €800,000 in the company under its programme for assisting innovative start-up companies with high growth potential. In 2014, FeedHenry Ltd was sold to a multinational technology company for a gross consideration of approximately €63.5 million. According to Waterford Institute of Technology, at the time of its sale, the company employed approximately 65 people in the Waterford region.

¹ To avoid confusion with terminology: throughout this report, **FeedHenry** refers to the technology/intellectual property developed by Waterford Institute of Technology while **FeedHenry Ltd** refers to the company.

IP policy at Waterford Institute of Technology

- 9 A national code of practice¹ was introduced in 2004 recommending that research-performing organisations should adopt local policies to deal with commercialising IP and managing conflicts of interest. The Governing Body of Waterford Institute of Technology adopted its own commercialisation policy in February 2010. Significant agreements and decisions in relation to the assignment of the FeedHenry IP were made subsequent to the adoption of the Institute's policy.
- 10 The February 2010 IP policy proposed the establishment of an internal Commercialisation Committee whose terms of reference were, *inter alia*, to “review and approve all licences, agreements or other contracts involved in the commercialisation of intellectual property, including those associated with spin-out companies, in which the Institute is involved”.
- 11 Minutes of the Commercialisation Committee's first meeting on 6 December 2010 do not record any discussion of the impending assignment of IP to FeedHenry Ltd. Given its broad membership from across the Institute, the Committee could have provided additional oversight and transparency over the Institute's interests and assisted in reviewing the details of the agreements made in relation to FeedHenry.
- 12 The IP policy also stated that, as a guideline, the Institute should consider a 15% equity stake in spin-outs to be appropriate in return for assignment of its IP. A licence agreement between the Institute and FeedHenry Ltd in July 2010 provided for the Institute to take a 15% share of the equity in the company, in exchange for full assignment of the IP, on condition that the company attracted €500,000 in investment funds. The Institute agreed in December 2010 to a reduced equity stake of 10.8%. The basis for the agreed reduction in equity was not documented.

Governance and management of conflicts of interest

- 13 The Governing Body is ultimately responsible for the Institute's governance and for the protection of its assets. Although it approved the commercialisation policy in February 2010, the Governing Body was not involved in any of the key decisions made during the commercialisation and assignment of the FeedHenry IP. Due to the potential value of the technology, the departure from policy on the share of equity and the fact that senior management had conflicts of interest through personal shareholdings, the Governing Body should have been actively overseeing the process.
- 14 The examination found that neither Institute nor national policies deal with situations where staff members have significant personal interests in companies acquiring IP from their employer organisation.
- 15 The negotiations for the rights to use the FeedHenry IP were led on the Institute's behalf by the (then) Secretary/Financial Controller, who was not a shareholder in any TSSG spin-outs. The Institute's (then) Vice President for Research was a shareholder in FeedHenry Ltd and was not formally involved in the negotiations with the company. Many of the details of the negotiations were managed by officials from the Research Office. These officials reported to the Secretary/Financial Controller in respect of those issues, but in all other respects reported to the Vice President for Research.

¹ *National Code of Practice for Managing Intellectual Property from Publicly Funded Research*, Irish Council for Science, Technology and Innovation, January 2004.

Costs and benefits to the State

- 16** When a campus spin-out company is established, there will often be a sharing of facilities and resources between the company and the HEI. In such cases, the HEI should ensure that there is an appropriately detailed service level agreement (SLA) in place and a well-defined system for capturing and allocating costs.
- 17** In the case of FeedHenry Ltd, there was no SLA or cost-sharing agreement with the Institute in place prior to November 2010, even though the company's registered address had been on the Institute campus since 2008.
- 18** Following the sale of FeedHenry Ltd in 2014, Enterprise Ireland and Waterford Institute of Technology received €4.5 million and €1.6 million respectively in respect of their shareholdings.
- 19** Out of its receipts of €1.6 million, the Institute disbursed €639,000 to other beneficiaries under pre-existing arrangements. It paid €147,000 of its share to a financial institution under a 2005 agreement relating to funding for the establishment of the Institute's ArcLabs Research and Innovation Centre. The Institute was unable to locate a signed copy of that agreement when requested by the examination.
- 20** In line with an incentive scheme under the Institute's IP policy, €492,000 of its proceeds from the sale of FeedHenry Ltd was applied to pay bonuses to 80 TSSG staff (€5,575 per staff member, plus €575 each in employers' PRSI). Some of the TSSG staff who received payment under the incentive scheme had also been shareholders of FeedHenry Ltd so had already benefitted financially from the sale of the company.
- 21** The Institute retained €951,000 from the proceeds of the sale of its interest in FeedHenry Ltd.

Waterford Institute of Technology

**Development and Disposal of Intellectual
Property in FeedHenry**

1 Introduction

- 1.1 The process of transferring the results of research work carried out by higher education institutions (HEIs) to the business environment is known as 'commercialisation'. The State potentially receives many benefits from such commercialisation including
- the direct creation of employment in Ireland
 - the raising of Ireland's reputation as a centre of innovation, potentially making it more attractive as a destination for foreign direct investment
 - advancement of academic research and experience gain by research staff
 - a potential financial return for the State.
- 1.2 When a HEI develops intellectual property (IP) with commercial potential arising from State-funded research, there are a number of different routes that can be taken to commercialise the technology including
- selling or licensing the technology to an independent third-party company
 - selling or licensing the IP to a campus 'spin-out' company and accepting an equity share in the spin-out.
- 1.3 In addition to receiving consideration for the IP developed, HEIs may also receive reimbursements from on-campus companies for HEI resources they use (e.g. office space and employee costs).
- 1.4 Since 2004, a number of national codes and initiatives have been introduced for developing and managing the commercialisation of IP in the public sector. These focus on encouraging research-performing organisations — for example HEIs — to adopt customised local policies for commercialisation. They include recommendations to incentivise research staff to engage in commercialisation, and on how to deal with potential conflicts of interest that may arise.

Origin of FeedHenry IP

- 1.5 Like other HEIs, one of Waterford Institute of Technology's core activities is research. The Telecommunication Software and Systems Group (TSSG) was established by the Institute in 1996 as an internal research body. TSSG undertakes both basic and applied research, in addition to pre-product development.
- 1.6 From 2002 to 2004, TSSG led a consortium of 19 commercial and academic institutions in a project funded by the EU's Framework Programme 5 (FP5), focused on creating open platforms for the new mobile telecommunication systems then being adopted across Europe. The knowledge and experience gained from the project led researchers in TSSG to identify a number of concepts with commercial potential.
- 1.7 In 2006, Waterford Institute of Technology completed a proof-of-concept project which resulted in it applying to the Enterprise Ireland Commercialisation Fund to finance two projects in the area of open-source mobile platforms — these were referred to as FeedHenry and FeedBall. As the commercialisation work progressed, the two technologies were combined and became known as FeedHenry.¹

¹ To avoid confusion with terminology: throughout this report, **FeedHenry** refers to the technology/intellectual property developed by Waterford Institute of Technology while **FeedHenry Ltd** refers to the company.

- 1.8** In 2008, a group of individuals registered a company called FeedHenry Ltd, which obtained a trial licence from Waterford Institute of Technology to use the FeedHenry IP. In 2010, Waterford Institute of Technology assigned ownership¹ of the IP to FeedHenry Ltd, in exchange for an equity stake in the company.
- 1.9** In 2014, FeedHenry Ltd was sold to a multinational technology company for approximately €63.5 million.² According to Waterford Institute of Technology, at the time of its sale, FeedHenry Ltd employed approximately 65 people in the Waterford region.

Scope

- 1.10** This report outlines the research commercialisation policies, codes and initiatives that were in place both nationally and at Waterford Institute of Technology (Chapter 2); provides a timeline of the events that occurred during the development and disposal of FeedHenry (Chapter 3); and considers the costs and revenues to the State (Chapter 4).
- 1.11** The purpose of this report is to examine the use of public resources with respect to the development and disposal of IP in FeedHenry. The sole and exclusive focus of this report is on the actions of public bodies, and not of their staff members or of any third parties. For the avoidance of doubt, this report does not make any criticism or comment or present any view, whether express or implied, with respect to staff members of public bodies or third parties and should not be understood as doing so.

¹ Assignment of ownership involves the full transfer of ownership to a third party.

² This represented the gross consideration paid.

Methodology

- 1.12** The examination inspected records available from the Companies Registration Office, Waterford Institute of Technology and Enterprise Ireland, in addition to published national codes and initiatives.

2 Frameworks, policies and initiatives for commercialisation of research

- 2.1 Research work at HEIs is supported from multiple sources. In the case of Waterford Institute of Technology's TSSG, Exchequer funding has been provided by the Higher Education Authority (HEA), Enterprise Ireland and Science Foundation Ireland. In addition, research funding has also been made available under various EU Framework Programmes.
- 2.2 In order to ensure potential risks of commercialisation are managed, and to ensure the State's financial interests are protected, it is necessary for HEIs to have policies and procedures in place to manage commercialisation.
- 2.3 Staff of a HEI may be involved in the establishment of spin-out companies. This requires institutions to manage potential conflicts of interest. Areas where such conflicts may arise include
- sharing of ownership of the company
 - negotiations in relation to the terms of licensing or assignment of IP
 - ensuring the spin-out company adequately reimburses the HEI for resources consumed by the company.
- 2.4 Figure 2.1 (over) provides a timeline for the frameworks, policies and initiatives relevant to research commercialisation that were introduced for the HEI sector between 2004 and 2014.

General governance

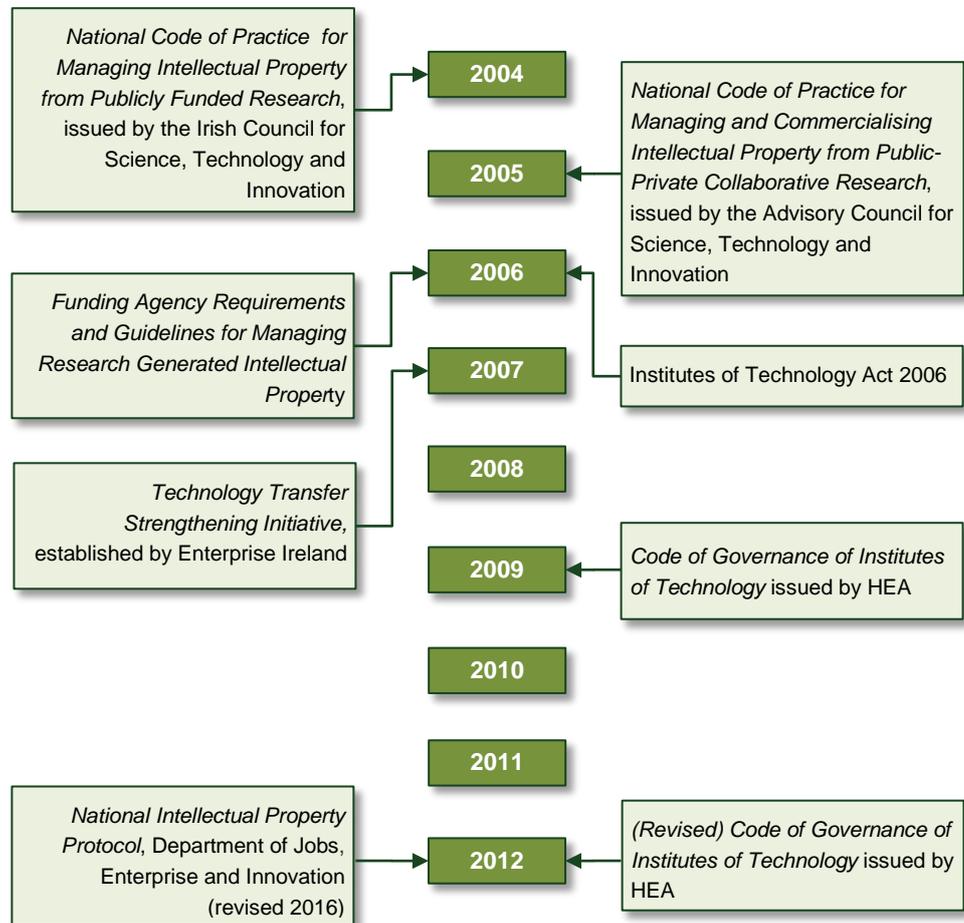
- 2.5 Institutes of technology are governed by the *Code of Governance of Institutes of Technology*. The first specific code for the sector was introduced in January 2009.¹ A recommendation of the governance code was that a staff code of conduct be introduced, including a section dealing with conflicts of interest. Waterford Institute of Technology, in common with the rest of the sector, adopted a general staff code of conduct in 2014.²
- 2.6 The 2009 governance code required institutes of technology to report annually to the HEA on their compliance with the code. In respect of the academic year 2010/2011, Waterford Institute of Technology reported that decisions on asset sales, including the granting to third parties of access to Institute assets, are considered and approved by the Governing Body. In fact, Governing Body minutes do not record any decisions about the assignment of the FeedHenry IP, which occurred in December 2010.³

1 Institutes of technology currently operate under a 2018 version of the Code.

2 The Institute's 2010 IP policy contains a section relating to conflicts of interest in the research area.

3 The (then) Vice President for Research gave a presentation on research at the Institute to the Governing Body on 28 June 2011 where FeedHenry Ltd was mentioned.

Figure 2.1 Commercialisation activities at research-performing organisations: relevant codes, policies and initiatives, 2004 to 2014^a



Source: Office of the Comptroller and Auditor General

Note: a No relevant codes, policies or initiatives were issued in 2013 or 2014.

IP policy at Waterford Institute of Technology

- 2.7** The Irish Council for Science, Technology and Innovation's 2004 national code of practice for managing IP recommended that each research-performing organisation (RPO) should introduce a customised policy on commercialisation. The code recommended, *inter alia*, that each institution should have
- a long-term strategy on research commercialisation
 - policies to deal with potential conflicts of interest
 - mechanisms to record and document ideas and inventions (e.g. an invention disclosure form)
 - an incentive scheme whereby a portion of the income received by a HEI is shared among staff at the institute who were involved in the creation of the IP.
- 2.8** The Governing Body of Waterford Institute of Technology approved a statement of the Institute's intellectual property policy in February 2010. The Institute has stated that it modelled its policy on that of Dublin Institute of Technology, which was published in 2007.

- 2.9** The 2004 national code of practice emphasised the principle that IP developed at a HEI should be protected as property of that institution. However, as an incentive, the code recommended that HEIs reward staff who helped develop IP by introducing a creators' incentive scheme. Such schemes allow staff to receive a portion of the income generated for the Institute after a successful IP commercialisation takes place.
- 2.10** The Institute's 2010 policy recommended that, while each situation would be considered on its merits, as a general guideline, the Institute will consider a 15% equity stake to be appropriate when assigning IP to a spin-out company. The policy also provides for a scaled sharing of any income from such equity, through the creators' incentive scheme. The relevant section of the 2010 policy is included at Appendix A.
- 2.11** The Institute's 2010 policy also introduced an invention disclosure form. This document can be used by staff at the Institute to notify the Technology Transfer Office when a discovery has been made that has potential for commercial application. This helps identify and record those who contributed to the discovery (i.e. the creators) and the project that it originated from.

Approval of commercialisation

- 2.12** The Institute's 2010 policy required a Commercialisation Committee to be established. Academic, research and administration staff at the Institute made up the membership. The Commercialisation Committee held its first meeting on 6 December 2010.
- 2.13** In addition to other responsibilities, the Institute's IP policy stated that the Committee's role would be to "review and approve all licences, agreements or other contracts involved in the commercialisation of intellectual property, including those associated with spin-out companies, in which the Institute is involved".

Technology Transfer Strengthening Initiative

- 2.14** Waterford Institute of Technology was among a number of HEIs included in 2007 in the Technology Transfer Strengthening Initiative (TTSI) established by Enterprise Ireland. This included the concept of a technology transfer office operating in each RPO, with staff skilled in
- finding academic partners for companies
 - commercial assessment
 - contract drafting and negotiation
 - protecting and managing IP.

Knowledge Transfer Ireland

- 2.15** Knowledge Transfer Ireland (KTI) was established in 2013. It is the national office for oversight of the knowledge transfer/commercialisation system. Its remit includes developing relevant best practice to enable compliance with national policy and supporting consistent interpretation and adoption thereof. KTI is located in Enterprise Ireland and is funded by Enterprise Ireland with co-financing from the Irish Universities Association.¹ KTI is accountable to the Department of Business, Enterprise and Innovation, which is responsible for national policy in this area, and to the board of Enterprise Ireland for governance and operations.
- 2.16** KTI provides practical tools and resources to support industry engagement with State-funded research including making available a database of the technologies developed by HEIs that are available for commercialisation. This enables businesses to identify technologies that may be of interest to them, and helps them understand how to interact with the HEIs.

Review of IP management and conflicts of interest

- 2.17** In response to issues raised by the Committee of Public Accounts during meetings with entities from the third level education sector in 2017, the HEA, in partnership with KTI, commissioned a review of IP policies and their implementation within HEIs and the management of conflicts of interest in respect of IP commercialisation.
- 2.18** The report on the review was published in February 2018.² At a high level, it found that the IP commercialisation process for HEIs in Ireland is similar to that in other countries. All of the HEIs studied have policies in place for IP management and employ professionals to operate the system. While the review found that the majority of HEIs have comprehensive policies, it highlighted some common areas of weakness, including in relation to systems for managing conflicts of interest and the decision-making process around relative equity stakes in spin-out companies.
- 2.19** The review proposed that a framework be developed for the HEI sector, setting out minimum requirements for good IP management, spin-out approval, conflicts of interest and other relevant processes. It also included ten specific recommendations, primarily in relation to conflicts of interest relating to IP commercialisation. The recommendations from the review are included at Appendix B.

¹ The Irish Universities Association is the representative body for Ireland's seven universities. Its core funding comes from members' annual subscriptions, based on an agreed formula reflecting the relative scale of the universities. It also receives project funding from the European Commission, the Department of Business, Enterprise and Innovation, the Irish Research Council and the HEA.

² The review is available on the HEA website at http://hea.ie/assets/uploads/2018/02/KTI_HEA-IP-management-and-Col-report-Feb-18.pdf

Conclusions and recommendations

- 2.20** The Governing Body of Waterford Institute of Technology adopted a local policy to deal with commercialising IP and managing conflicts of interest in February 2010 — almost six years after this was recommended in the 2004 national code of practice.
- 2.21** The 2009 Code of Governance for Institutes of Technology recommended that codes of conduct should be introduced for all staff members. One of the aims of this recommendation was to communicate to each staff member the Institute's policies on dealing with conflicts of interest. In common with the rest of the institute of technology sector, Waterford Institute of Technology introduced its code of conduct in 2014.

Recommendation 2.1

Waterford Institute of Technology should ensure that national policy, codes and guidelines on governance and commercialisation of IP are reflected in local policy, and should ensure that changes are adopted in a timely fashion.

Response of the President, Waterford Institute of Technology

Agreed. This is already the established case within the Institute. International experts and national and international standards bodies review the Institute's IP policy and best practice regularly. These reviews have consistently confirmed that the Institute's policies are consistent with national policy and international best practice. Changes are adopted in a timely fashion. For instance, the Institute had an independent expert validate and update the policy in 2015. The Governing Body signed off this update. A second independent expert review was completed in 2016.

- 2.22** The HEA has an oversight role in relation to the governance of the higher education sector. It receives governance statements annually from the chairpersons of all institutions. Waterford Institute of Technology's return in relation to the 2010/2011 academic year stated that its Governing Body approved asset sales, including the granting of access to third parties of Institute assets. There is no record that the assignment of the Institute's IP to FeedHenry Ltd in December 2010 was considered or approved by the Governing Body.

Recommendation 2.2

The HEA should require as part of the governance statements that HEIs submit a schedule of all their disposals and the consideration received.

Response of the Chief Executive, Higher Education Authority

Agreed. As part of annual governance reporting requirements to the HEA, higher education institutions are already required to confirm that all appropriate procedures for asset disposals are being carried out. This is strengthened by the Annual Knowledge Transfer Survey (AKTS). The AKTS is conducted by KTI in conjunction with the HEA. This survey captures an annual snapshot of Ireland's knowledge-transfer activity and is a valuable opportunity for higher education institutions to demonstrate the contribution that they are making to national social and economic performance through knowledge transfer. This data is used by the HEA to supplement its own data collection and is published annually by KTI. Of the revenue metrics currently included in the AKTS, the following are likely to be most relevant to the above recommendation: total gross revenue received from dividends from equity held in spin-outs; and total gross revenue received from sale of equity in spin-outs.

This data is currently sought at institutional level but, due to commercial sensitivity, is published at sectoral level. In future iterations of the AKTS, this information could be requested from institutions at a per spin-out level. Due to the commercial sensitivity of this information, it would continue to be published at an aggregate, sectoral level only. The HEA will continue to work with KTI to develop appropriate reporting requirements.

It is worth noting that the realisation of equity is unpredictable and varies year to year, depending on external factors such as the maturity of the spin-out and market forces.

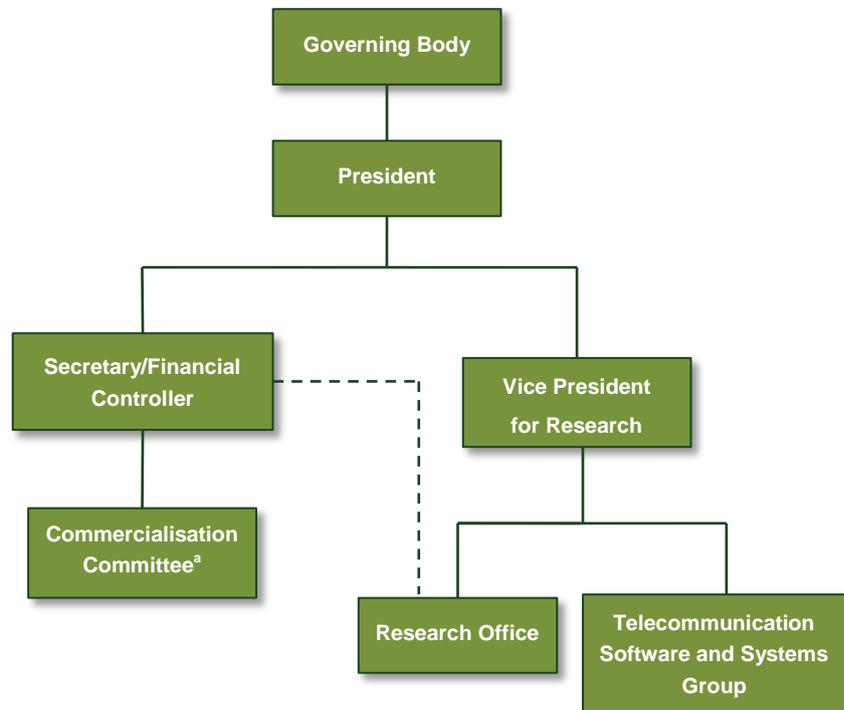
3 Timeline of events

3.1 This chapter provides a timeline of the events from the initial development of FeedHenry to its disposal. It also reviews the management of the process by Waterford Institute of Technology.

Organisational structure and decision making

3.2 Figure 3.1 shows the structure for the management of research at Waterford Institute of Technology during the period under examination.

Figure 3.1 Organisation chart — Waterford Institute of Technology, 2008 to 2010



Source: Office of the Comptroller and Auditor General

Note: a The Commercialisation Committee was active from 6 December 2010.

3.3 A general principle for how public officials should manage potential conflicts of interest requires officials to recuse themselves from involvement in any affected decision-making process.¹

3.4 In 2003, a group of staff members of Waterford Institute of Technology established a private limited company called Aceno Mobile Services Ltd (hereafter Aceno Ltd). Aceno Ltd operated from the Institute's campus and was involved in the commercialisation of technology developed at TSSG. Aceno Ltd registered the business name FeedHenry in October 2006. A company called FeedHenry Ltd was incorporated by some of the same staff members and other individuals in 2008, with Aceno Ltd as a minority shareholder.

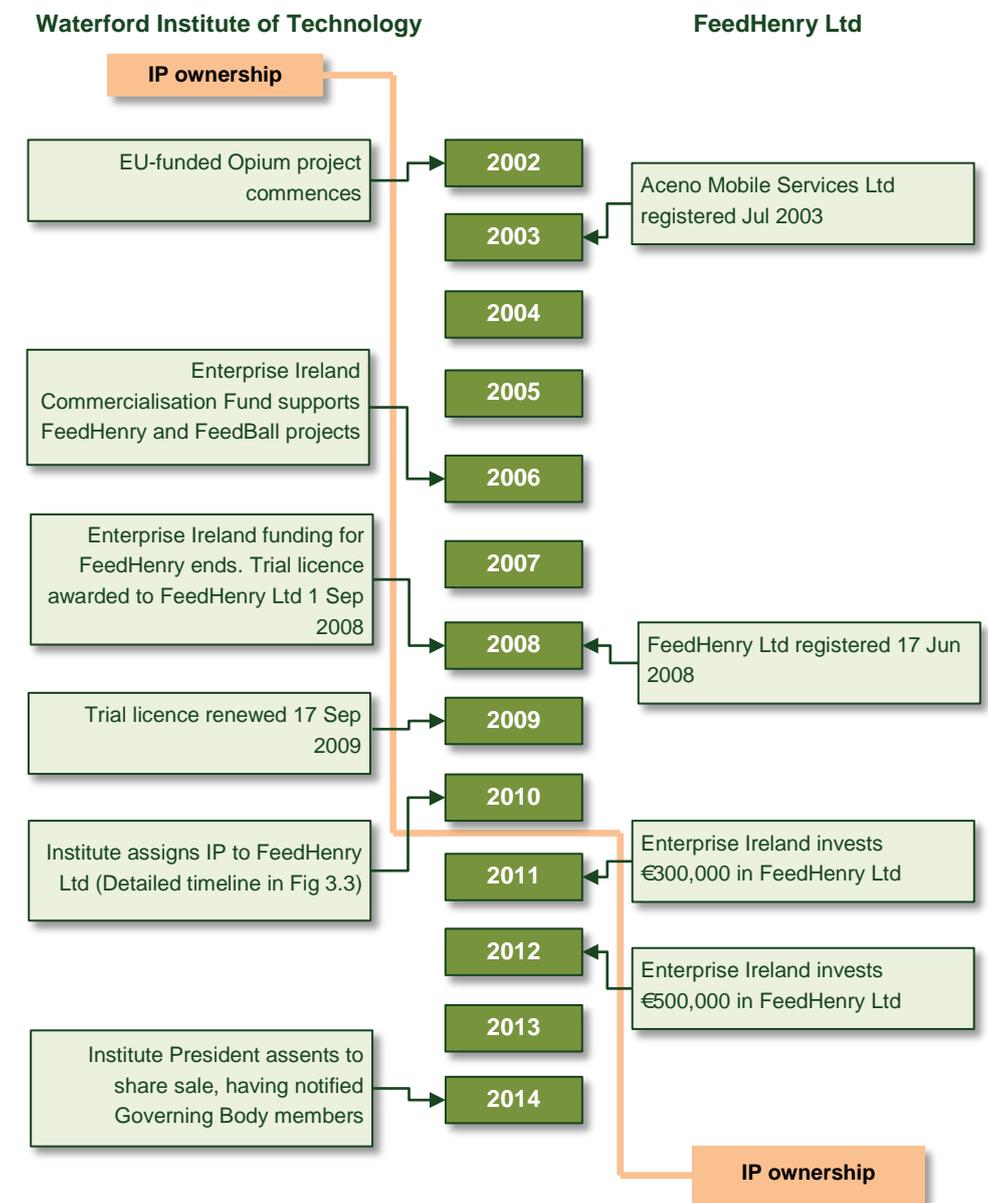
¹ See, for example, *Managing Conflict of Interest in the Public Sector: A Toolkit*, OECD 2005.

3.5 Negotiations for the rights to use Institute IP were led on the Institute’s behalf by the (then) Secretary/Financial Controller, who was not a shareholder in any TSSG spin-outs. The Institute’s (then) Vice President for Research was a shareholder in FeedHenry Ltd (and Aceno Ltd) and was not formally involved in the negotiations with the company. Many of the details of the negotiations, however, were managed by officials from the Research Office. These officials reported to the Secretary/Financial Controller in respect of the negotiations, but in all other respects reported to the Vice President for Research.

Key events related to FeedHenry

3.6 Figure 3.2 sets out the key events from the origins of the FeedHenry IP in 2002 to the disposal of FeedHenry Ltd in 2014.

Figure 3.2 Timeline of FeedHenry and TSSG, 2002 to 2014



Development of IP: 2002–2009

- 3.7** The FeedHenry technology was developed by Waterford Institute of Technology between 2002 and 2008. FeedHenry Ltd began to exploit the technology in 2008, when it obtained a trial licence.

The Opium project

- 3.8** In 2002, Waterford Institute of Technology was awarded research funding from the EU's Framework Programme 5 (FP5) for its Opium project to support the accelerated rollout of commercial 3G services within Europe. Led by Waterford Institute of Technology, the project involved a consortium of 19 public entities and private companies and ran until 2004. Total EU funding for the project was nearly €3.9 million. Waterford Institute of Technology redistributed €3.35 million of the funding it received to the other 18 consortium partners, retaining €520,000 in respect of its own involvement.

- 3.9** The Institute has stated that the concepts explored in the Opium project influenced the development of FeedHenry from 2006.

Enterprise Ireland Commercialisation Fund Programme

- 3.10** Enterprise Ireland funds the commercialisation of research through a number of programmes including its Commercialisation Fund Programme. This programme encourages RPOs to commercialise innovation, and helps them transfer their skills and ideas to private companies. The maximum grant usually available to an individual project is between €350,000 and €400,000.
- 3.11** In 2005, Waterford Institute of Technology received funding from Enterprise Ireland for a proof-of-concept project called 'Henry'. This funding totalled €90,000. The Institute has stated that this project influenced the development of the FeedHenry technology that was ultimately commercialised. However, Enterprise Ireland has stated that it does not consider that this project was directly related to the FeedHenry technology.
- 3.12** In 2006, the Institute was awarded commercialisation funding from Enterprise Ireland for two projects referred to as FeedBall and FeedHenry. Enterprise Ireland funding for the two projects totalled around €800,000.
- 3.13** Enterprise Ireland also funded a project called FeedWidget in the amount of €97,000. However, the Institute is of the view that this project did not contribute to the FeedHenry code base.
- 3.14** Approximately €714,000 of the funding provided by Enterprise Ireland was allocated to pay Institute staff working on the two projects. In total, 38 staff had at least part of their pay funded by these Enterprise Ireland-funded projects.
- 3.15** The funding agreements that were signed by the Institute for the FeedBall and FeedHenry projects included an arrangement whereby, in return for the commercialisation funding, Enterprise Ireland was entitled, for a nominal sum, to a 5% equity share in any spin-out company. However, Enterprise Ireland did not receive any shares in FeedHenry Ltd on the basis of this provision. Enterprise Ireland has stated that this option was a standard clause in commercialisation agreements at that time but that the clause was never exercised in any project. The provision was removed from all commercialisation project agreements in 2007.

Principal investigators

- 3.16** The 2004 national code recommended the introduction of an invention disclosure form to clarify the involvement of researchers in specific projects. Waterford Institute of Technology only introduced such a form in 2010.¹
- 3.17** Enterprise Ireland requires research projects funded through its commercialisation programme to have a named principal investigator i.e. the lead researcher for a project, and who is responsible for managing the project. The submission to Enterprise Ireland typically includes details of the exploitation route the principal investigator plans to take in order to commercialise the technology (e.g. set up a campus or spin-out company).
- 3.18** The detailed submissions to Enterprise Ireland for funding for FeedBall and FeedHenry were signed off by two principal investigators, as required. However, the Institute now states that these two individuals
- had no involvement in writing the respective project proposals, and
 - had no actual involvement in running the projects.
- 3.19** The two individuals who were designated principal investigators for the FeedBall and FeedHenry projects were not registered shareholders in FeedHenry Ltd. The Institute has stated that this is because they were not involved in the projects. The Institute has also stated that a number of shareholders of FeedHenry Ltd had significant involvement in the FeedBall and FeedHenry projects.

Declaration of interests

- 3.20** Section 6 of the *Funding Agency Requirements and Guidelines for Managing Research-Generated Intellectual Property* (2006) required Enterprise Ireland to ensure that those involved in the research it funds declare all conflicts of interest. This declaration also required the bodies Enterprise Ireland funds to disclose any known, or planned, future relationships with third parties for the technology.
- 3.21** Waterford Institute of Technology made 'nil' conflict of interest returns to Enterprise Ireland in relation to the FeedHenry project in July 2006, and in relation to the FeedBall project in November 2006.
- 3.22** In 2010, Enterprise Ireland's Exploitation Consent Committee was also required to give its approval before the IP developed through a Commercialisation Fund project could be assigned to a spin-out company.²

Award of trial licence

- 3.23** On 1 September 2008, FeedHenry Ltd was awarded a 'trial licence' for a one-year period, free of charge. According to Waterford Institute of Technology, the purpose of the trial licence period was to allow time for FeedHenry Ltd to test potential market demand.³
- 3.24** The licence agreement stated that the trial licence would not be renewed under any circumstances. Nevertheless, in September 2009, the trial licence was renewed by the Institute. The licence renewal was implemented by way of a letter from the Research Office to FeedHenry Ltd. The renewal was for the period up to the end of 2009.

¹ The Institute has pointed out that prior to the introduction of the form, it had captured a number of patentable inventions between 2006 and 2010.

² Since 2011, such consent is no longer required, as the Committee was dissolved.

³ Enterprise Ireland has stated that a trial licence period also provides a licensee with an opportunity to seek investment.

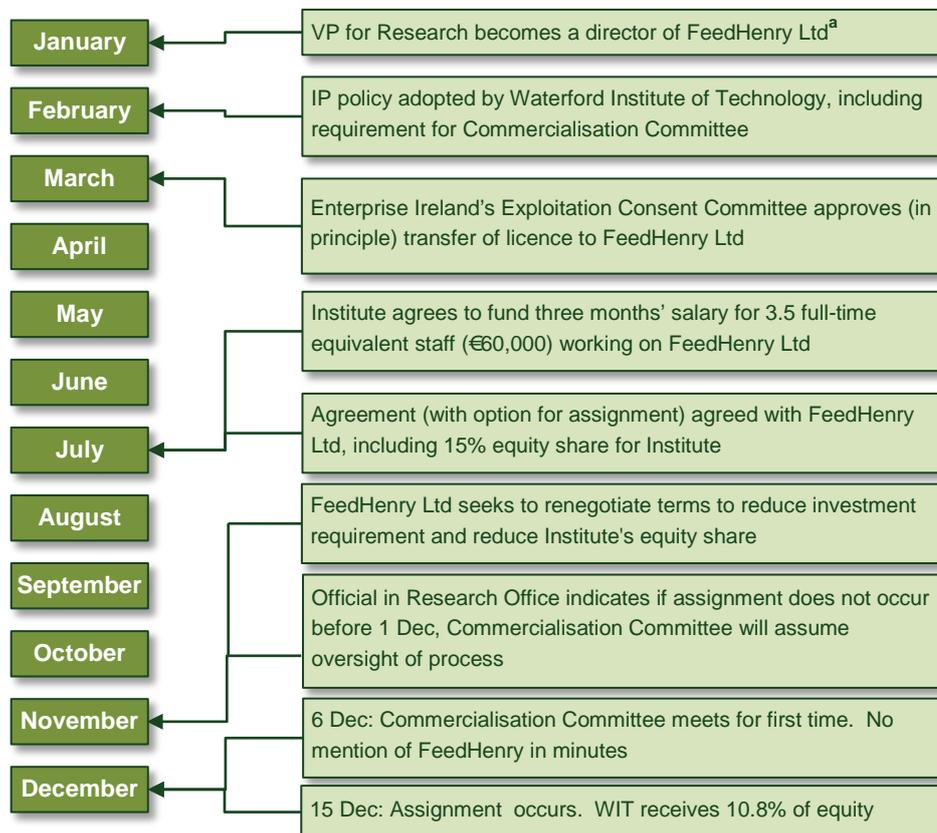
Review of commercialisation process

- 3.25** In late 2009, staff from the Institute's Research Office undertook a review of the commercialisation process, including the relationship between Waterford Institute of Technology and Aceno Ltd. In January 2010, a memorandum was sent to the (then) Vice President for Research, raising a number of concerns.
- 3.26** It was recommended that the memorandum be copied to certain parties, including those staff members at the Institute who were charged with dealing with matters relating to conflicts of interest. During the course of this examination, we asked the Institute whether the memorandum had been copied to any other parties, and in particular whether it had been copied to the Secretary/Financial Controller, the Institute President, or the Governing Body, and if so, when was this done. The Institute responded that the (then) Secretary/Financial Controller was not included in the circulation list for the memorandum. The Institute has provided no evidence of the memorandum being circulated to either the President or Governing Body.
- 3.27** The Institute has stated that the issues raised in the January 2010 Research Office memorandum were taken very seriously. The (then) Vice President for Research sought documentary evidence to support the claims made in the memorandum, but according to the Institute, no such documentary evidence was ever provided.
- 3.28** The concerns raised in the January 2010 memorandum were subsequently raised in another memorandum to the (then) Vice President for Research, the (then) Secretary/Financial Controller and another Institute official on 10 September 2010. The Institute has stated that the Secretary/Financial Controller convened meetings on 4 October 2010 to review the concerns that had been highlighted and the requirement for clarity on the commercialisation process. The first meeting was held between the Secretary/Financial Controller and relevant officials from the Institute's Research Office. A second meeting involved the same personnel and the Vice President for Research. There are no formal minutes on record of the meetings of 4 October 2010. Furthermore, the Institute stated that a review of consultancy work undertaken by Aceno Ltd using Institute/TSSG staff found no issues. However, the Institute was unable to provide any documentation related to that review when requested by this examination.
- 3.29** The Institute has also stated that, subsequent to the October 2010 meetings, it continued to evolve its commercialisation processes and governance arrangements through the forum of the Commercialisation Committee.

Transfer of IP: 2010

3.30 Figure 3.3 provides an overview of events relevant to the transfer of the FeedHenry IP during 2010.

Figure 3.3 Timeline of events in 2010



Source: Office of the Comptroller and Auditor General

Note: a The Vice President for Research ceased to be a director of FeedHenry Ltd on 2 February 2011.

Licence agreement

3.31 In March 2010, Enterprise Ireland consented in principle to a proposal that FeedHenry Ltd would be assigned the IP by Waterford Institute of Technology. The proposal referred to the Institute receiving a 15% equity share. This was in line with the provisions of the Institute's February 2010 IP policy (Section 6.4).¹

3.32 It was envisaged the assignment of IP would occur by November 2010. On 13 July 2010, a representative of FeedHenry Ltd corresponded with an official in the Research Office asking for Waterford Institute of Technology to continue to pay the full costs of all Institute staff working on the FeedHenry technology until the end of October 2010. The Secretary/Financial Controller estimated the associated cost for the Institute would be €60,000 (for 3.5 full-time equivalent staff), which would be sought from FeedHenry Ltd. Although the Vice President for Research was not formally involved in the negotiations, he was included in this correspondence.

¹ "While each situation will be considered on its merits, and decided by the Commercialisation Committee, as a general guideline the Institute will consider a 15% equity stake to be appropriate in a spin-out company in return for access to enabling Intellectual Property".

- 3.33** On 15 July 2010, the Institute and FeedHenry Ltd signed a licence agreement to allow the company the exclusive use of the IP — subject to a nominal royalty fee of €1,000 a year — with an option for full assignment. The agreement stated that it had effect from 1 January 2010.
- 3.34** The full assignment of the IP was dependant on a number of conditions being met by FeedHenry Ltd. The conditions included
- a jobs milestone commitment requiring FeedHenry Ltd, by 1 January 2011, to have at least four full-time equivalent employees, of whom at least two were on full-time contracts¹
 - FeedHenry Ltd would raise €500,000 in investment funds²
 - Waterford Institute of Technology would receive a 15% share of the equity in the company.
- 3.35** Separate to the licence agreement, and also on 15 July 2010, the Secretary/Financial Controller wrote to the representative of FeedHenry Ltd in a side letter indicating that the terms of the licence agreement might be reconsidered at the time of the full assignment.

Assignment agreement

- 3.36** After the July 2010 licence agreement was signed, FeedHenry Ltd endeavoured to attract the level of investment that would help trigger the assignment of the IP. In November 2010, the company proposed changes to the terms of the July agreement, including that the equity to be received by the Institute should be reduced from 15%.
- 3.37** On 29 November 2010, an official from the Research Office emailed FeedHenry Ltd outlining his concerns at the changes sought. The official's view was that the Institute should receive the previously agreed 15% share of the equity. The official also signalled that the Commercialisation Committee would commence an oversight role from 1 December 2010.
- 3.38** Although the Vice President for Research was not included in the correspondence concerning the proposed change of terms, he emailed the Secretary/Financial Controller, later on 29 November 2010, in support of the company's proposal for the Institute's share of equity to be reduced. He also recommended that the required level of investment to be raised by FeedHenry Ltd be reduced from €500,000 to €400,000.
- 3.39** Ultimately, FeedHenry Ltd raised €507,000 in investment funds. The Institute signed the agreement that assigned the IP on 15 December 2010.

¹ Failure to meet the jobs milestone could, in certain circumstances, lead to the exclusivity of the licence being revoked.

² The Institute's February 2010 IP policy stated (Section 6.4) that a spin-out needed to have a minimum of €150,000 or sufficient funds to pursue its business plan for six months (whichever was greater) before provision of access to enabling IP.

Equity received by Waterford Institute of Technology

- 3.40** At the time of the final negotiations, FeedHenry Ltd proposed that the Institute would receive 12% of the total equity rather than the 15% provided for in the July 2010 agreement. This proposal was accepted by the Institute. However, the Institute also agreed that a pool of 24,000 shares — referred to by the Institute as a ‘FeedHenry employee pool’ — would issue concurrently, thus diluting its share to 10.8%.
- 3.41** On 3 December 2010, an official from the Institute’s Research Office had emailed Enterprise Ireland seeking approval for the Institute’s share of equity from the assignment to be reduced to 12%. The Enterprise Ireland official responded that Enterprise Ireland approval for the equity share was not required.
- 3.42** Figure 3.4 outlines how the registered shareholding in FeedHenry Ltd changed between its end-year reporting date (30 September) in 2010 and 2011, according to records in the Companies Registration Office.
- 3.43** This indicates that, as at 15 December 2010, the Institute held 10.8% of the shares in FeedHenry Ltd; external investors held 22.7% in return for an investment of €457,000; and registered individual shareholders held 66.5%. Within the latter group, TSSG staff were the registered holders of a combined 32.9% of the shares.¹

Figure 3.4 Ordinary shareholdings in FeedHenry Ltd, 30 September 2010 to 30 September 2011

	Registered individual shareholders	External investors	Waterford IT	Total shares in issue
Annual return 2010	117,647	—	—	117,647
Share issues on				
10 December 2010	+34,000	—	—	151,647
15 December 2010	+5,882 ^a	+53,878 ^a	+25,556	236,963
28 January 2011	—	+2,610 ^a	—	239,573
Annual return 2011	157,529	56,488	25,556	239,573

Source: Companies Registration Office: Annual returns (B1) for 2010 and 2011; return of allotment forms (B5) in respect of dates shown.

Note: a Shares issued for a premium.

Role of Commercialisation Committee

- 3.44** Waterford Institute of Technology’s Commercialisation Committee had its inaugural meeting on 6 December 2010. Although the assignment of the IP was in process at the time, the minutes of the meeting record no mention of FeedHenry, the proposed assignment, or the revision of the terms of agreement. The Institute has stated that the first meeting was focused on reviewing the Committee’s terms of reference and various guidelines with respect to IP.

¹ As at 15 December 2010, Enterprise Ireland had no shareholding in FeedHenry Ltd.

Exploitation of the IP: 2011–2014

- 3.45** After the assignment of the IP to FeedHenry Ltd, Waterford Institute of Technology held only a minority share in the company and no longer had control over the technology. In 2014, the company was sold to a multinational.

Enterprise Ireland investments

- 3.46** FeedHenry Ltd received further rounds of funding after the 15 December 2010 agreement. In addition to capital received from private investors, Enterprise Ireland also invested in FeedHenry Ltd.
- 3.47** From 2011 onwards, FeedHenry Ltd was assisted by Enterprise Ireland as an ‘innovative high growth potential start-up’ (iHPSU). High growth potential start-ups are companies developing innovative technologies, products and services for world markets.
- 3.48** Enterprise Ireland invests in an iHPSU on the same terms as the most recent private investor. In the case of FeedHenry Ltd, Enterprise Ireland’s November 2011 investment of €300,000 mirrored an earlier deal made by venture capitalists, while its August 2012 investment of €500,000 mirrored an agreement with a software company.
- 3.49** Both of these investments by Enterprise Ireland were made by cumulative redeemable convertible preference shares (CRCPS). These investment agreements include agreed triggers that result in the CRCPS being converted to common equity. In the case of Enterprise Ireland, those triggering events are usually new financing received by the iHPSU from subsequent incoming private investors.

Disposal of interests

- 3.50** In 2013, Waterford Institute of Technology agreed to transfer the ownership of logos and trademarks relating to FeedHenry to FeedHenry Ltd for no additional consideration.¹ This transfer was not considered or approved by the Governing Body. The Institute states that, as the value of these assets was lower than the threshold in the *Code of Governance of Institutes of Technology*, no such approval was required.
- 3.51** In August 2014, the President of Waterford Institute of Technology informed the Governing Body members of the proposed sale of FeedHenry Ltd to a multinational company and requested their consent for the sale. In September 2014, the Governing Body, at an ordinary meeting, gave its consent for the use of the corporate seal to effect the sale.

¹ The transfer had been included in the original licence and subsequent assignment agreement agreed in July 2010. However, the documentation specific to transferring EU and US logos and trademarks were not executed until 2013 when this omission was highlighted in a due diligence process.

Conclusions and recommendations

- 3.52** Although the Governing Body of Waterford Institute of Technology is ultimately responsible for the Institute's governance and for the protection of its assets, it was not involved in any of the key decisions made during the commercialisation and assignment of the FeedHenry IP. Due to the potential value of the technology, and the fact that some senior managers had conflicts of interest, both through personal shareholdings and reporting lines, the Governing Body should have been actively overseeing the process.
- 3.53** The Institute has stated that there is a lack of clarity in legislation as to the extent of required Governing Body involvement with respect to intangible early-stage IP.

Recommendation 3.1

When senior management have conflicts of interest in relation to the disposal of an interest in IP, the Governing Body should be actively involved and its consent should be required before the transfer. The Governing Body should put in place clear policies in relation to the commercialisation of IP, the protection of the Institute's interest in IP, and the management of conflicts of interest.

Response of the President, Waterford Institute of Technology

Agreed. The new Institute of Technology IP policy (2018) and conflict of interest policy (2018) clearly define the role of the Governing Body in reviewing and signing off on IP transfer. These policies provide the frameworks required to manage all aspects of IP creation, registration and licencing as well as the management of conflicts of interest and dispute resolution. The Governing Body is provided with regular reports through the Technology Transfer Manager and the chair of the Commercialisation Committee.

- 3.54** The IP policy adopted by the Governing Body in February 2010 required a Commercialisation Committee comprised of internal staff to be established. The Committee was only established on 6 December 2010. The minutes of that first meeting do not record any discussion about the impending assignment of IP to FeedHenry Ltd. The Committee could have provided additional oversight and transparency (as it included a broad range of staff) over the Institute's interests and assisted in reviewing the details of the agreements made in relation to FeedHenry.

Recommendation 3.2

In cases not subject to Governing Body decisions, the Commercialisation Committee should be involved in all key decisions relating to the disposal of IP, and in the decision over the level of equity to accept in spin-outs, in line with Governing Body policies.

Response of the President, Waterford Institute of Technology

Agreed. This is the case today. However, only assignments require approval of the Governing Body. Licence information is presented to the Governing Body for information purposes.

- 3.55** The Institute's February 2010 IP policy stated that, as a guideline, Waterford Institute of Technology should consider a 15% equity stake in spin-outs to be appropriate in return for allowing assignment of the Institute's IP. In the case of FeedHenry Ltd, Waterford Institute of Technology agreed in December 2010 to accept a reduced equity stake of 10.8%. The basis upon which the reduced equity was agreed was not adequately documented.

Recommendation 3.3

As the Institute's policy is to seek to obtain a 15% stake, a detailed justification should be recorded by the Institute's decision makers if a figure lower than this is agreed.

Response of the President, Waterford Institute of Technology

Agreed. This is consistent with established practice in which all negotiated licences and assignments are presented to the Commercialisation Committee. The Technology Transfer Manager provides detailed documentation on the IP licence, the conditions of the licence and the rationale for the IP being sought. The Commercialisation Committee makes its decisions based on the information provided.

- 3.56** National policies establish the principle that HEIs have ownership of the IP created through their research activities, but recommend the sharing of (part of) the rewards from such commercialisation through creators' incentive schemes. Neither Institute nor national policies deal with situations where staff members of the HEI have significant personal interests in companies acquiring IP from their employer organisation. There is no guidance on what issues — such as the amount of personal equity invested, the direct involvement in the originating project, or whether a staff member had taken a leave of absence to work on the project full-time — should be taken into consideration when evaluating if the shareholding a staff member receives is appropriate.

Recommendation 3.4

The HEA should ensure that HEIs have clear and consistent policies on when a full-time staff member at a HEI may directly receive equity from a spin-out.

Response of the Chief Executive, Higher Education Authority

Agreed. The planned national IP protocol 2018 will include a spin-out framework. To achieve this objective, KTI has formed a working group (comprising HEA, higher education institutions, and industry representatives) to input into development of the framework. The group has met twice to date, and it is expected that work on the IP protocol will be concluded by year end. The spin-out framework will consider, *inter alia*, the rationale for different groups' receipt of equity in a spin-out, including academic founders.

New requirements will be implemented via the annual statements of governance and internal control from higher education institutions to the HEA. Among these is the requirement that institutions' IP policies must be reviewed upon any significant change in national policy and guidance. In addition, the HEA and KTI will request more detailed reporting on progress towards implementation approximately 18 months following notification (i.e. late 2019/early 2020).

- 3.57** The Research Office staff, who reported generally to the Vice President for Research, were actively involved in the FeedHenry IP assignment process, in support of the Secretary/Financial Controller. On at least one occasion, the Vice President for Research entered into correspondence with the Secretary/Financial Controller in support of a FeedHenry Ltd proposal.

Recommendation 3.5

The HEA should ensure that HEIs have policies in place to ensure that staff involved in negotiating the sale of valuable IP do not have a reporting relationship with and are not subject to direction by an interested party.

Response of the Chief Executive, Higher Education Authority

Agreed. Following publication of the *Review of Intellectual Property Management and Conflicts of Interest*, the HEA has been working closely with KTI and a group of stakeholder representatives to develop recommendations for adoption within HEIs' IP policies. The outcome of the exercise is a set of recommendations on aspects of IP policies for adoption by the HEIs.

The recommendations include description of decision making and approval processes for inclusion within institutions' IP policy. Included in this is the stipulation that "decisions to form a spin-out company or the decision as to when to sell a HEI equity holding in a spin-out should involve at least one senior executive from within the HEI who is not part of the academic research hierarchy, for example the Secretary or Financial Controller".

New requirements have also been introduced by the HEA to ensure that institutions have a dedicated conflict of interest policy, which is to be approved by the Governing Body, and to require that a summary of all potential conflicts are reported to the Governing Body annually. These requirements will ensure that potential conflicts of interest whereby staff involved in negotiating the sale of valuable IP might be subject to sole direction by an interested party will be highlighted and avoided.

The HEA has informed the sector that it will embed these and other recommendations of the stakeholder working group into the annual statements of governance and internal control from higher education institutions to the HEA. In addition, the HEA and KTI will request more detailed reporting on progress towards implementation approximately 18 months following notification (i.e. late 2019/early 2020).

- 3.58** The two Enterprise Ireland-funded projects that originated the IP that was assigned to FeedHenry Ltd had two principal investigators who signed off on the submissions for funding. The Institute has stated that these two individuals had no involvement either in writing the submissions for funding, or in managing the approved projects.

Recommendation 3.6

The Institute should ensure that all submissions for State funding are signed off by the appropriate persons, and that the information submitted as to who the research project leaders are is correct.

Response of the President, Waterford Institute of Technology

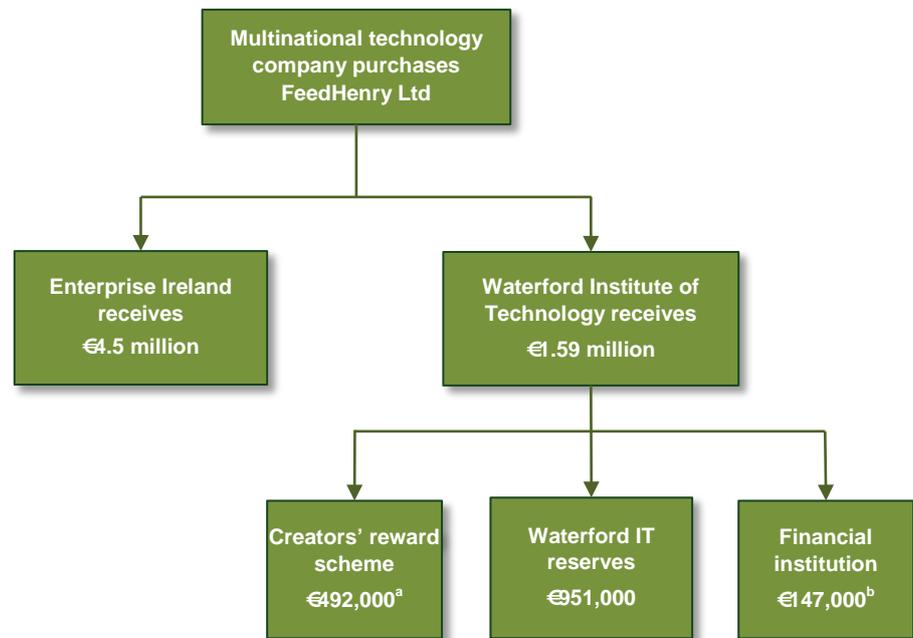
Agreed. This is the case for all submissions today.

4 Costs and revenues to the State from FeedHenry

Consideration received by State entities

- 4.1 When FeedHenry Ltd was sold (for a gross consideration of approximately €63.5 million) in 2014, both Waterford Institute of Technology and Enterprise Ireland received payments for their shares (see Figure 4.1). In the case of Waterford Institute of Technology, approximately €639,000 (or 40%) of the €1.59 million received was not retained by the Institute but distributed to third parties. Enterprise Ireland received €4.5 million for its interest.¹

Figure 4.1 Consideration received by State entities for FeedHenry Ltd shares, and distribution to third parties



¹ Between December 2010 and the date of sale of FeedHenry Ltd, Waterford Institute of Technology's share of the equity in the company had been diluted from 10.8%, as a result of further funding rounds.

Source: Office of the Comptroller and Auditor General

- Notes:
- a Includes employers' PRSI of €46,000.
 - b In 2017, the financial institution received €100,000 from Waterford Institute of Technology. The balance continued to be held by the Institute pending discussions on future re-investment opportunities.

Agreement with a financial institution

- 4.2** In 2005, a financial institution agreed to provide Waterford Institute of Technology with €100,000 to assist in the building of ArcLabs — the innovation centre located on the Institute campus. The Institute has stated that as part of the funding deal, in the event that the Institute received equity in a spin-out operating from ArcLabs, the Institute agreed to give the financial institution 1% of the entire equity of the company at the time of the spin-out. This, in effect, was a ‘first call’ on the equity secured by the Institute when the FeedHenry IP was transferred in December 2010. The financial institution’s share from the sale of FeedHenry Ltd was €147,000.
- 4.3** During the examination, the Institute was unable to locate a signed copy of the 2005 agreement with the financial institution. A copy of a draft of the agreement indicates an intention for it to operate from 2005 to 2025 and contained a confidentiality clause. There is no evidence that the agreement was approved by the Governing Body of the Institute.

Receipts distributed to creators

- 4.4** As part of the Institute’s creators’ incentive scheme, staff involved in creating the technology that is commercialised are awarded at least 30% of the consideration the Institute receives.¹ All TSSG staff prior to assignment of the IP who had worked on any aspect of the FeedHenry technology were included in the incentive scheme allocation. An initial payment of €5,075 was made to each of 80 current or former TSSG staff members in December 2014. The Institute’s Vice President for Corporate Affairs and Finance informed this examination that each of the 80 staff members subsequently received a further payment of €500, bringing the total paid to staff under the research staff incentive scheme to €446,000. In addition, the Institute paid employers’ PRSI in respect of the payments, amounting to €46,000.
- 4.5** TSSG staff who were registered shareholders in FeedHenry Ltd at the time of the spin-out were included in the incentive scheme. Waterford Institute of Technology’s policy on rewarding creators does not comment on what is appropriate in instances where individuals benefit from both a private shareholding in the spin-out and from a creator reward.

Expenditure on FeedHenry by Enterprise Ireland and Waterford Institute of Technology

- 4.6** The public resources contributed to developing FeedHenry included both the direct funding received from Enterprise Ireland and the EU, and indirect costs such as use of the facilities and resources at Waterford Institute of Technology — for example, use of office space or employee time.
- 4.7** FeedHenry Ltd (established in June 2008) had its registered offices in ArcLabs, on the Waterford Institute of Technology campus until 2013. In November 2010, the Institute entered into an SLA with FeedHenry Ltd in respect of the future use of Institute facilities and the sharing of staff and other resources — prior to that, no such SLA had been in place.²

¹ See appendix A.

² FeedHenry Ltd paid the Institute in 2011 for invoiced staff costs incurred between July and October 2010.

- 4.8** The Institute has stated that it did not seek any reimbursements from FeedHenry Ltd from the time of the award of the trial licence in 2008 until the middle of 2010 as FeedHenry Ltd did not operate from the Institute's facilities during that period. However, after FeedHenry Ltd received the trial licence in 2008, the company used the ArcLabs innovation centre as its registered office, and included the centre, and a telephone number at the innovation centre, on its corporate letterhead as its operational base.
- 4.9** In relation to the issue of reimbursement, the Institute stated that there was no significant use by FeedHenry Ltd of the Institute's facilities prior to mid-2010, as the company did not employ any full time staff in Waterford.
- 4.10** Waterford Institute of Technology invoiced and received a total of €520,000 from FeedHenry Ltd for the use of Institute resources, including staffing resources, between 2010 and 2016.

Staffing issues

- 4.11** FeedHenry Ltd reimbursed Waterford Institute of Technology in respect of the salary of one staff member. The individual was seconded from the Institute to FeedHenry Ltd on a half-time basis from 1 September 2011. Subsequently, he was seconded on a full-time basis from 1 April 2013. This arrangement ended in September 2014. Total payments of €187,000 were received by the Institute in respect of this staff member.
- 4.12** Waterford Institute of Technology does not have a policy on part-time secondments or how those on part-time secondments have their time monitored to ensure they work the hours specified in their contracts. No evidence was available to validate whether the rate of reimbursement was appropriate.
- 4.13** FeedHenry Ltd engaged in a number of projects on contract with third parties. In a number of cases, it used full-time staff at the Institute to work on these projects. Reimbursements from the company to the Institute relating to these activities were recorded as consultancy payments and totalled €225,000.

Other income received

- 4.14** The Institute entered into other agreements with third parties to use the FeedHenry platform. Between 2007 and 2010, the Institute received a total of €474,000 from two companies for development work associated with the technology.
- 4.15** FeedHenry Ltd paid a licence fee of €1,000 to Waterford Institute of Technology for the use of the IP during 2010.

Conclusions and recommendations

- 4.16** When a campus company is operating, there will often be a sharing of facilities and resources between the spin-out and the HEI. In such cases, clear SLAs and cost allocation systems need to be in place. This was not the case in relation to FeedHenry Ltd prior to November 2010. From September 2008 until July 2010, FeedHenry Ltd did not reimburse Waterford Institute of Technology for any costs even though its registered address was at the ArcLabs facility.
- 4.17** All expenditure incurred by the Institute should be for the purposes intended. The Institute should not fund the salaries of staff, or provide other resources, to the benefit of a private company without seeking appropriate reimbursement for those costs.

Recommendation 4.1

Waterford Institute of Technology should ensure that expenditure is for the purposes intended and ensure recovery of costs that benefit a private party. The Institute should also ensure a clear SLA is in place when a spin-out operates on campus.

Response of the President, Waterford Institute of Technology

Agreed. This is in fact the case today. There are clear SLAs in place for all companies operating on the Waterford Institute of Technology innovation campus.

- 4.18** A member of TSSG was seconded to FeedHenry Ltd on a part-time basis. Waterford Institute of Technology does not have a policy on part-time secondments.

Recommendation 4.2

Waterford Institute of Technology should introduce a policy on part-time secondments to ensure proper controls are put in place.

Response of the President, Waterford Institute of Technology

Agreed. The Institute has a standard policy for staff who wish to work part-time for whatever reason. The conflict of interest policy covers any conflicts resulting from staff seconded to external companies. The Institute will review its practice in these areas and seek to formalise a policy.

All staff are obliged to adhere to the Institute's conflict of interest policy when engaging with external organisations, whether spin-out/campus companies or other companies or organisations that have a relationship with the Institute. If a member of staff is working part-time within the Institute they adhere to the same working rules and regulations as full-time staff. The Institute will review the rules, regulations and controls in place and update the external working policy.

- 4.19** The staff of the Institute who were registered shareholders in FeedHenry Ltd at the time of the spin-out, and benefited from the sale of the company in 2014, also received bonuses from the Institute as part of the creators' reward scheme.

Recommendation 4.3

The HEA should ensure that HEIs' policies on creator reward schemes take account of potential situations where HEI staff have a financial interest in a company acquiring IP.

Response of the Chief Executive, Higher Education Authority

Agreed. Following publication of the *Review of IP Management and Conflicts of Interest*, the HEA has worked closely with KTI and stakeholder representatives to develop recommendations for adoption within HEIs' IP policies. The outcome of the exercise is a set of recommendations on aspects of IP policies for adoption by the HEIs. The recommendations include key components of revenue share policy for inclusion within institutions' IP policies. Among the key components that each HEI is expected to include in its policy are a clear description of who can benefit from revenue share, the approach to distribution of revenue share among inventors/creators, and the basis of equity share allocation — simply put, 'who benefits', 'how they benefit' and 'why they benefit'.

The HEA has informed the sector that it will embed this and other recommendations of the stakeholder working group into the annual statements of governance and internal control from HEIs to the HEA. In addition, the HEA and KTI will request more detailed reporting on progress towards implementation approximately 18 months following notification (i.e. late 2019/early 2020).

- 4.20** The Institute stated that in 2005 it entered into a 20-year agreement with a financial institution to share the profits of spin-outs, in return for a once-off payment by the financial institution of €100,000. The Institute was unable to locate a final, signed copy of the agreement when requested by this examination. Proceeds of the disposal were shared with the financial institution on the basis of an unsigned, draft agreement.
- 4.21** A cost-benefit analysis should have been undertaken by Waterford Institute of Technology prior to a profit sharing arrangement being entered into to ensure value for money. Signed copies of all agreements should be kept on file.

Appendices

Appendix A Extracts from Waterford Institute of Technology's IP Policy, February 2010

Part 9 of the Institute's intellectual property policy deals with the creators' incentive programme. Elsewhere in the policy statement the following definitions are set out:

The 'Institute' is defined as Waterford Institute of Technology.

'Creator' is defined to be "...someone who, alone or in cooperation with others, creates Intellectual Property. A Creator may be a staff member, whether permanent, temporary or visiting, or a student. In the case of patents, creators are those who meet the legal standard for inventorship, and in the case of copyright material are authors of the work in question."

9. Incentive Programme

The purpose of the Institute's "Commercialisation Reward & Incentive Program" is to fairly reward those responsible for the creation of commercially successful Intellectual Property and to incentivise staff and students to be entrepreneurial in this respect. In this section a brief outline of the program operation is presented. Further details in the program can be obtained from the Commercialisation Office.

Commercial benefits may be derived from the exploitation of Intellectual Property in a number of ways. These include, for example, revenues in the forms of royalties, up front, annual or minimum license fees, dividends related to equity ownership or revenue derived from the sale of equity interests. Commercial benefits are only those benefits that accrue directly as a consequence of agreements between the Institute and outside parties. For the avoidance of doubt, gifts which may be made to the Institute from time to time by outside parties, even when such parties may be signatories to agreements with the Institute, are not considered commercial benefits for the purposes of the Commercialisation Reward & Incentive Program unless they are required under the relevant agreements relating to the commercialisation of the Intellectual Property in question.

The goals of the incentive program are to:

- encourage the development and exploitation of Intellectual Property;
- reward those responsible for the creation of commercially valuable Intellectual Property;
- cover the costs incurred by the Institute in protection and commercialisation activities; and
- provide the Institute with a fair proportion of such commercial benefits.

In the tables below, three beneficiaries for disbursement of revenues from the commercial development of Institute owned Intellectual Property are identified. These include the Creator(s) and the Institute - as already defined. The third beneficiary is indicated as 'Organisation'. The Organisation may be for example the Research Laboratory, Group or other such centre, Department or School as appropriate for the specific Intellectual Property. Where necessary, the Head of Research and Innovation shall designate the appropriate Organisation in a specific case.

Any monies received by the Organisation as a result of this program will firstly be used to reward people other than the Creator(s) who, in its reasonable discretion, the Organisation believes contributed to the development of the Intellectual Property, and secondly to foster the goals of the Organisation.

In the case of Intellectual Property that is owned in its entirety by the Institute, commercial benefits will be disbursed as follows¹

1. The first €10,000 of commercial benefit will be distributed in its entirety to the Creator(s).
2. Thereafter, charges associated with the protection and administration of the Intellectual Property will be deducted. While such costs are deducted from the proceeds at this point, they do not count as distributions for the purposes of calculating cumulative thresholds.
3. Thereafter, a scale based on the cumulative amount of the commercial benefits, as shown overleaf will be used to distribute revenues between the Creator(s) and the Institute.

Cumulative €	Creators	Organisation	Institute
To €50,000	75%	10%	15%
€50,001- €100,000	50%	20%	30%
€100,001 - €500,000	40%	25%	35%
€500,001 and above	30%	30%	40%

For example, in the case of the receipt by the institute of €600,000 in relation to a specific piece of Intellectual Property in which case €5,000 was incurred by the Institute in legal fees associated with finalising the license, the distribution would be as follows:

Thresholds	Creators	Organisation	Institute
Initial	€10,000	–	–
Cost Recovery	–	–	€5,000
Thence to €50,000	€30,000	€4,000	€6,000
Thence to €100,000	€25,000	€10,000	€15,000
Thence to €500,000	€160,000	€100,000	€140,000
Thence	€28,500	€28,500	€38,000
Totals	€253,500	€142,500	€204,000

Charges associated with protection and administration would include, but not be limited to, legal costs associated with the creation and execution of licensing agreements, filing fees (or duties) associated with the registration of license or supporting documents with government agencies, filing, processing and maintenance fees associated with patent rights. However, such charges will only be deducted to the extent they are out of pocket expenses for the Institute and apply specifically to the Intellectual Property in question.

¹ This outline and example take no consideration of taxes. Actual disbursements will be in accordance with applicable tax regulations and guidelines.

In the case of Intellectual property in which the Institute is a part owner, the process is similar with the gross revenue referring to that revenue attributed to the Institute in accordance with its portion of ownership.

9.1 Equity holdings in private companies

In cases where the Institute receives shares in a company in return for licensing or assigning Intellectual Property, at its sole discretion, the Institute may choose to distribute shares directly to those who would be entitled to participate in the benefits from commercialisation of the Intellectual Property involved. Such distribution to individuals being such that at most one third of the shares that are allocated to the Institute are distributed to the Creators in total. Any decision to distribute shares directly will take into account the number of people entitled to such participation and whether the direct distribution of shares would be likely to cause difficulties for the company including, for example, in obtaining future funding or being sold or acquired.

9.2 Distribution of benefits amongst creators

Prior to finalisation of the agreements commercialising Institute owned Intellectual property, reasonable efforts will be made by the Commercialisation Office and those involved in the Intellectual Property to develop an agreed list of Creators. Unless specifically indicated otherwise, and agreed by all Creators in writing, distributions will be made to all listed Creators equally.

Appendix B Recommendations from *Review of IP Management and Conflicts of Interest*, commissioned by Knowledge Transfer Ireland and the Higher Education Authority (November 2017)

Single IP policy

Every HEI should have a single IP policy covering all major commercialisation routes, including spin-outs, to make it simple for researchers to understand the processes and their obligations. This policy should be easily and publicly available on their website, regularly reviewed (at least every four years) through internal consultation, and approved by the Governing Body. The date of review and approving body should be recorded on the policy.

Common IP policy framework

KTI, in consultation with HEA and others, should support consistency across IP policies by working with the HEIs to develop and agree a framework of minimum components to be included in every IP policy, reflecting the requirements of the current national IP protocol. Where groups of HEIs have similar procedures, a common policy format is preferred.

Clear decision-making and dispute resolution processes

All IP policies should include a clear description of decision-making processes relating to IP commercialisation, with a dispute resolution process. Certain decisions such as spin-out formation or significant asset realisation should involve at least one senior executive HEI decision-maker who is not part of the academic research hierarchy, for example the Secretary or Financial Controller.

Common principles underpinning spin-out formation

The individual circumstances surrounding the formation of each spin-out are too variable for fixed equity shares for the HEI or founders to be predetermined within the IP policy. However, there should be a set of common national principles that explain the basis upon which equity shares are taken and the consideration involved. KTI, in consultation with HEA and others, should lead the definition of these principles as part of the ongoing development of the national IP protocol.

Clarity on revenue share mechanisms

Revenue share mechanisms should be clearly described in the IP policy for both revenue from licensing and equity realisation, and for equity share, and must conform to the national IP protocol. This should include consideration of how royalty revenues received from any spin-out companies in which a researcher is a significant shareholder will be distributed.

Determination of creator contributions at initial disclosure

The relative contributions from multiple creators of intellectual property should be determined and agreed between the creators in writing as part of the invention disclosure process, and confirmed before commercialisation.

Awareness of potential conflicts of interest within IP commercialisation

The IP policy should clearly describe the potential for conflicts of interest arising within IP commercialisation and how the IP management policy and procedures support their avoidance or management. It should also direct researchers to the relevant section in the conflict of interest policy.

Dedicated conflict of interest policy

Every HEI should have a single conflict of interest policy which is easily and publicly available on its website, regularly reviewed, and approved by the Governing Body. This should include reference to actual and potential for conflicts relating to IP commercialisation and their management and should point to the detailed information and processes outlined in the HEI IP policy which are designed to mitigate any such conflicts.

More robust governance and management of conflict of interest

Whilst responsibility for recognising and avoiding conflicts of interest should remain with the individual, HEIs must take more responsibility at a senior level to put robust procedures in place to identify, manage and record the approach taken to avoid or manage conflicts of interest. A summary of all potential conflicts reported and management mechanisms put in place should be reviewed by the Governing Body at least annually.

Triggers for policy review

Automatic review of each policy should be triggered if there is a significant change in national policy and guidance, for example within six months of the introduction of updates to the national IP protocol or code of governance.

