

The Highland Council
Planning, Development and Infrastructure Committee
25 January 2017

Agenda Item	10
Report No	PDI/ 07/17

Science Skills Academy: Update

Report by Director of Development and Infrastructure

Summary

This report is intended to update members on the Science Skills Academy project in the context of the Inverness and Highland City-Region Deal.

1. Background

- 1.1 The development of the Science Skills Academy project was set out in Council reports to the PED Committee, Highland Council and Resources Committee in 2014.
- 1.2 Following the establishment of a Leadership Board, a Project Board and the appointment of a Project Director in August 2015, the mission of the Science Skills academy was defined as
“to ensure that young people in the Highlands and Islands are aware of the opportunities, and have the skills to enter into employment in the areas of science, technology, engineering, maths and digital media (STEMD).”
- 1.3 The Leadership Board is chaired by the Chair of PDI and includes senior representatives from HIE, UHI, SDS, Scottish & Southern Energy, Moray and Orkney Councils, and Drew Hendry MP.
- 1.4 The Project Board is chaired by the Director of Development and Infrastructure and includes representation from the Council's Care and Learning Service.
- 1.5 The Science Skills Academy will provide access to exciting science and technology learning environments for every school student in the Highlands and Islands. It will operate a wide ranging, imaginative and coherent programme that will support inspiring STEMD education at every stage of a student's school career. While much of this activity is already available through other partners, providers or initiatives (such as the UHI and SDS) it is not able to be delivered across the whole region. It is the provision of high quality inspirational content covering the whole region that is the driving force behind the Science Skills Academy.
- 1.6 A set of objectives were agreed and business cases developed to secure funding under the Inverness and Highland City - Region deal.
- 1.7 The Inverness and Highland City-Region Deal Heads of Terms agreement was signed on 22 March 2016 and set out the projects that Government were prepared to invest in over the next 10 years. One of the projects included in the Heads of Terms agreement was to support the Council and its partners deliver the Science Skills Academy (SSA) project. The sum allocated to this project is £3M

1.8 The business case for the Science Skills Academy is currently under consideration by the Scottish Government and indications are that the first release of money will occur in early 2017.

2. Science Skills Academy Outline

2.1 The Science Skills Academy aims to support STEM education at all stages of a young person's learning journey.

It will:

- work with local and national agencies to increase the confidence and capability of Primary School teachers in teaching STEM topics;
- use the proposed Newton Rooms to deliver inspirational STEM learning experiences to young people, especially those aged 11 – 14 and in conjunction with local employers. The Newton Rooms will also provide a staffed base for extra-curricular activity;
- help build the capacity of secondary schools – especially those in very remote and very rural locations – to deliver the full range of STEM curricular options in the senior phase. It will enhance the delivery of these subjects through making excellent professional development opportunities for teachers available across the region; and
- build family 'Science capital', through a programme of engagement with parents and carers.

2.2 The Science Skills Academy will operate on a hub and satellite basis, where the hub will coordinate and catalyse STEM activity across the region while the satellites will be Newton Rooms, delivering inspirational, practical STEM education in partnership with schools. Newton Rooms are a concept developed by First Scandinavia in Norway. They are very well equipped science rooms, providing students with state of the art educational equipment. They have a focus on hands-on experiments and practical activities. It is anticipated that 5 Newton Rooms will be established across Highland over the next five years.

2.3 It is important to emphasise that, while the City-Region deal money is focused on Highland, the Science Skills Academy is a Highlands and Islands wide effort and that discussions with other local authorities across the region are in progress.

2.4 Newton Modules:

A key part of the programme will be the delivery of Newton Modules to all young people between the ages of 11 – 14. Newton Modules are interdisciplinary programmes of study that typically involve 1 or 2 hours preparation in school, a full day visit to a Newton Room and 1 or 2 hours follow up back at school. The Science Skills Academy will adapt First Scandinavia's modules where appropriate but also develop its own. Modules will reflect local industry or research expertise and will be developed in partnership with employers and academic institutions. They will be interdisciplinary in nature but likely to focus on energy, aquaculture, health science, biotechnology, environmental science and digital creativity.

- 2.5 **Employer Involvement:**
The Science Skills Academy provides a practical means of improving links between education and employers. The learning experiences gained in the Newton Rooms will be put into the context of the STEM career opportunities that are available locally. The Newton Rooms give employers the chance to build relationships with their future workforce. In Norway and Denmark, employers such as Statoil, Boeing and Marine Harvest provide financial backing for local facilities. As well as the chance to be sponsors of the Science Skills Academy, employers will have the opportunity to contribute to module development or delivery.

3. Progress

3.1 Hub

- 3.1.1. Over the last sixteen months, there has been extensive work carried out with the major partners in the project (SDS, UHI, HIE, HC) to ensure a truly collaborative effort that maximises complementarity and avoids duplication of effort.
- 3.1.2 There has been an investment in developing a network of virtual supporters that includes influential government agencies (such as Education Scotland and the Scottish Schools Education Research Centre) and major employers (such as DSRL, Cavendish Nuclear and Marine Harvest). There is a growing awareness and enthusiasm for the Science Skills Academy project at a local and national level.
- 3.1.3 International links are being fostered with First Scandinavia and other European educational organisations.
- 3.1.4 A programme of preliminary activities that test the Science Skills Academy approach is underway and already having an impact. The completion of this will require the release of City - Region deal funding.

3.2 Newton Rooms

- 3.2.1 Following extensive consultation, in December 2016, meetings aimed at establishing local steering groups were held in Fort William and Thurso. The timelines put forward in the Business Case aim for one Newton Room to be established by the end of 2017, with two more by the end of 2018 and two more by the end of 2019.
- 3.2.2 Work continues to identify suitable locations and partners for Newton Rooms in other parts of Highland. For example, with the agreement of partners, the UHI STEM hub at An Lochran on the Inverness Campus could work as a Newton Room.

4. Implications

4.1 Resource:

It is not anticipated that the Science Skills Academy project will have significant resource implications for the Council, subject to securing the City-Region deal funding.

4.2 Equality:

The Science Skills Academy will focus on the issue of gender balance across the STEM disciplines.

4.3 Climate Change/CARBON CLEVER:

By providing local STEM centres and developing novel methods of delivery, the Science Skills Academy will reduce the need for travel by participants.

4.4 Risk:

A risk register is being developed and will be maintained as part of the business planning process.

4.5 Gaelic and Rural:

It is intended that the Science Skills Academy will be a significant factor in retaining young people and their families in the Highlands.

4.6 Legal

There are no legal implications associated with this report.

Recommendation

Members are asked to note the progress of the Science Skills Academy and the potential for funding through the City Region Deal.

Designation: Director of Development and Infrastructure

Date: 10 January 2017

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Background Papers:

Resources Committee, 27 August 2014 – RES/36/14 Highland Science Skills Academy: application to Capital Discretionary Fund 2014/15
Highland Council, 26 June 2014 – HC/11/14 Highland Science Academy: Update
Planning, Environment and Development Committee, 12 February 2014 – PED/14/14 Highland Science Academy