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## REPORT TO THE NORTH WALES ECONOMIC AMBITION BOARD

20 March, 2020

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**TITLE:** *sySTEMatic Programme*

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### 1. PURPOSE OF THE REPORT

1.1. The North Wales Regional Skills Partnership (RSP) has developed the sySTEMatic Programme on behalf of the NWEAB. The NWEAB in its Proposition Document (October, 2018), tasked the North Wales Regional Skills Partnership (RSP) to scope and develop options for the programme. The purpose of the report is to report back to the Board and to seek guidance on the preferred option.

### 2. DECISION SOUGHT

2.1. Agree to the principle of the sySTEMatic Programme, and for the RSP and the Programme Office to continue developing the project and negotiating with Welsh Government and partners on a financial package to fund the programme.

2.2. It is recommended that the NWEAB identify the Option that will deliver the best outcomes for the most affordable cost and request that that model then be further developed, with more detailed costings, for future agreement and adoption.

### 3. REASONS FOR THE DECISION

3.1. As stated in the report.

### 4. BACKGROUND AND RELEVANT CONSIDERATIONS

#### 4.1. Skills and Employment Programme

4.1.1. The Skills and Employment programme forms one of the enabling strategic programmes within the North Wales Economic Ambition Board's Growth Vision. The projects that fall within the Skills and Employment programme are a critical part of the group of key inter-related and co-dependant projects to deliver the Growth Vision. The programmes and projects are being managed in a co-ordinated way, in order to deliver greater impact in terms of ambition and use of resources within the Growth Deal and Vision in the Region.

4.1.2 The Programme includes a package of projects to tackle economic inactivity and deliver a more co-ordinated skills and employment advice and support service in the region. The successful delivery of the Programme will enable people to access support more easily and effectively to help them upskill and gain employment, ensuring a robust local workforce is available to meet future employment needs and opportunities in North Wales. A particular focus will be given to those who are inactive and to young people who will be inspired to access opportunities and exciting careers in North Wales.

4.1.3 The Skills and Employment programme consists of 5 projects:

- Information and Advice Gateway
- Employability Pathway
- Regional STEM
- Digital Skills for North Wales
- North Wales Health and Social Care

4.1.4. The NWEAB tasked the RSP to develop the 5 projects identified above.

4.1.5. The RSP have developed a proposal for the delivery of the STEM Programme, as outlined below.

4.1.6. **Case for change**

4.1.6.1. The current and emerging North Wales economy will be increasingly dependent on a workforce that is skilled in STEM-related subjects. This was highlighted in the North Wales Skills and Employment Plan 2019-2022. The lack of STEM pipeline from schools to Further Education and Higher Education has been highlighted as a challenge for employers in the region, with employers across all sectors reporting difficulty in recruiting and attracting sufficient numbers of applicants to post and apprenticeship opportunities.

4.1.6.2. There is wide recognition that there are a myriad of extra-curricular STEM experiences available to school and college pupils in North Wales – however, it is also widely accepted that there is no-coordination or overall planning with this provision, and hence learners do not gain maximum benefit from the efforts and expenditure. There is also a strong anecdotal evidence that the numbers of young people choosing STEM related subjects is low.

4.1.6.3. The sySTEMatic programme will work with schools, colleges, HE, employers and those already providing STEM experiences to learners in order to create a framework and co-ordination of STEM experiences to ensure that learners can benefit from existing, and new, interventions in a more planned and systematic manner. It will drive a fundamental step change in the STEM experiences of learners from 3 - 19 years of age across North Wales.

4.1.7. **Programme Purpose and Aims**

4.1.7.1. The overall aims for the programme is to inspire young learners in STEM subjects at a young age and maintain enthusiasm to ensure that a greater number of learners:

- Choose STEM subjects at 14 years of age and 16 years of age
- Actively consider and choose STEM-related careers in North Wales
- Respond positively to the skill requirements of current North Wales companies
- Develop a STEM-aware and STEM skilled workforce that will attract additional important employers to the area

4.1.8. **The Objectives of the programme are:**

- **To develop a Framework of STEM experiences** that will allow all schools and colleges in North Wales to easily identify and access additional experiences for their learners that:
  - Are relevant to their curriculum and learning at that time;
  - Provide progression from previous experiences;
  - Are of a high quality;
  - Are, wherever possible, in the language of the learners' tuition.

- To develop a planning, co-ordination and delivery on a “sub-regional” basis – this will provide more local solutions to more local situations and challenges. Sub-regional Planning Groups will be established to guide the work – these will change into sub-regional Steering Groups once the development is launched;
- **To develop a STEM Hub** in sub-regions. Essentially the STEM Hubs will have two main functions:
  - To be a focal point for delivery, with access to specialist resources not widely available
  - To co-ordinate and promote the delivery within the sub-region, providing a service to schools and employers to ensure high quality experiences and cost-effective use of the Hub. This will also include delivery in other recognised centres within the sub-region to facilitate access by learners.
- STEM Hubs will not be new, additional facilities, but rather a location/facility located within existing regional facilities. While no discussions have been held thus far, it is envisaged that the following locations could be suitable to be a location for STEM Hubs (subject to discussion and agreement):
  - **North West Wales** - M-SParc (Gaerwen); Pontio (Bangor); Coleg Menai (Llangefni), Coleg Meirion-Dwyfor (Dolgellau)
  - **Central North Wales** - Glyndwr Optic, Coleg Llandrillo (Rhos)
  - **North East Wales** - Techniquest (Wrexham), Coleg Cambria (Connah’s Quay), AMRC Cymru
- To support schools in North Wales as they plan, and deliver, the new “Curriculum for Wales 2022”
- Provide support to schools and colleges in ensuring that every pupil in North Wales has access to suitable STEM experiences on an (at the very least) annual basis. Experience has shown that differing schools and colleges respond in differing ways to the offer of additional STEM experiences for learners. An essential part of the SySTEMatic programme is that it is a ‘whole North Wales’ approach. All key bodies in North Wales will agree to work together towards the same goal in line with the ‘North Wales Regional STEM Statement (**Appendix 1**)’. The statement lays out clearly the vision and goals of the development along with the responsibility of all key partners and parties.

#### 4.1.9. Options for delivery

4.1.9.1. It is considered that some key aspects of the **sySTEMatic** Programme are central to all options. These are:

- The agreed Regional STEM Statement
- The requirement for more localised (sub-regional) planning, co-ordination and delivery

4.1.9.2. Following discussions at the North Wales Regional Skills Partnership, it is considered that 2 options exist:

<b>Option 1</b>	Developing a regional approach based on 3 sub-regions (North West Wales, Central North Wales and North East Wales), building on the STEM Gogledd project where it operates
<b>Characteristics of this Option</b>	
<ul style="list-style-type: none"> <li>• A regional STEM Statement would be adopted, along with the roles and responsibilities of the differing organisations</li> <li>• 3 sub-regional Planning Groups (changing into Steering Groups) would be established to create a STEM Framework for that sub-region.</li> </ul>	

<ul style="list-style-type: none"> <li>• In sub-regions where STEM Gogledd operates, the Planning and Steering Groups would be driven by STEM Gogledd (with additional funding from this development)</li> <li>• In sub-regions where STEM Gogledd does not operate, new arrangements would be put in place as described in this document</li> <li>• A STEM Hub would be established within each sub-region</li> <li>• Each STEM Hub would be staffed as described in the document – in areas where STEM Gogledd operates, the level of additional funding would not be as much as in other areas.</li> </ul>	
<b>Strengths</b>	<b>Weaknesses</b>
<ul style="list-style-type: none"> <li>• A regional approach and direction</li> <li>• More localised planning and delivery</li> <li>• Develops stronger localised employer/education links</li> <li>• Provides ways of overcoming barriers in participation by some schools</li> <li>• Built-in co-ordination with the STEM Gogledd project</li> </ul>	<ul style="list-style-type: none"> <li>• Requires buy-in and engagement by all organisations to ensure success</li> <li>• Careful planning and recording of expenditure and performance would be required to ensure that WEFO are content with the performance of the STEM Gogledd project</li> <li>• In Central North Wales, STEM Gogledd only operates in Conwy (not in Denbighshire) and hence complications could arise in this sub-region</li> </ul>
<p><b>Other Comment</b></p> <p>It is considered that this Option would make savings in the delivery areas where STEM Gogledd operates, and for the period it operates – up to 2023 (with an extension, if approved).</p> <p>It is estimated that this saving would be in the order of £450,000pa for 3 years, giving a reduction of £1,350,000 in both the 5 Year and 10 Year cost.</p> <p>This would result in a funding ask of:</p> <p>5 Years - £10.15m</p> <p>10 Years - £20.55m</p>	

<b>Option 2</b>	Developing a regional approach based on 2 sub-regions (North West Wales and North East Wales), building on the STEM Gogledd project where it operates
<p><b>Characteristics of this Option</b></p> <ul style="list-style-type: none"> <li>• A regional STEM Statement would be adopted, along with the roles and responsibilities of the differing organisations</li> <li>• 2 sub-regional Planning Groups (changing into Steering Groups) would be established to create a STEM Framework for that sub-region.</li> <li>• In North West Wales (where STEM Gogledd operates), the Planning and Steering Groups would be driven by STEM Gogledd (with additional funding from this development)</li> <li>• In North East Wales, a new arrangement would be put in place as described in this document</li> <li>• A STEM Hub would be established within each sub-region</li> <li>• Each STEM Hub would be staffed as described in the document – in areas where STEM Gogledd operates, the level of additional funding would not be as much as in other</li> </ul>	

<p>areas. Also, additional Liaison staff would be required in both STEM Hubs as the level of interactions would be higher.</p>																							
<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>• A regional approach and direction</li> <li>• More localised planning and delivery</li> <li>• Develops stronger localised employer/education links</li> <li>• Provides ways of overcoming barriers in participation by some schools</li> <li>• Built-in co-ordination with the STEM Gogledd project</li> </ul>	<p><b>Weaknesses</b></p> <ul style="list-style-type: none"> <li>• Requires buy-in and engagement by all organisations to ensure success</li> <li>• Careful planning and recording of expenditure and performance would be required to ensure that WEFO are content with the performance of the STEM Gogledd project</li> <li>• Could create access problems for schools as the specialist equipment in STEM Hubs would be further away from some schools</li> <li>• Could dilute the important element of local delivery and employer/education relationships</li> </ul>																						
<p><b>Other Comment</b></p> <p>It is considered that this Option would lead to some cost reductions (if only 2 STEM Hubs were established) but some of the delivery costs linked to the 3<sup>rd</sup> Hub would need to be retained:</p> <p><b>Estimated Cost Reductions</b></p> <table border="1"> <thead> <tr> <th></th> <th>Approx. 5 Year Reduction</th> <th>Approx. 10 Year Reduction</th> </tr> </thead> <tbody> <tr> <td>Capital Expenditure</td> <td>£334k</td> <td>£475k</td> </tr> <tr> <td>Operational Expenditure</td> <td>£3,137k</td> <td>£6,659k</td> </tr> <tr> <td>Delivery costs (STEM Gogledd)</td> <td>£1,350k</td> <td>£1,350k</td> </tr> </tbody> </table> <p><b>Estimated Cost Increases</b></p> <table border="1"> <thead> <tr> <th></th> <th>Approx. 5 Year Reduction</th> <th>Approx. 10 Year Reduction</th> </tr> </thead> <tbody> <tr> <td>Retention of 3<sup>rd</sup> Liaison Officer</td> <td>£176k</td> <td>£390k</td> </tr> <tr> <td>Training Costs</td> <td>£2,146k</td> <td>£4,574k</td> </tr> </tbody> </table> <p>An estimate of the net effect of the above would be a 5 Year reduction of £2,229,000 and a 10 Year reduction of £3,520,000.</p> <p>This would result in a funding ask of:</p> <p>5 Years - £8.4m</p> <p>10 Years - £18.4m</p>				Approx. 5 Year Reduction	Approx. 10 Year Reduction	Capital Expenditure	£334k	£475k	Operational Expenditure	£3,137k	£6,659k	Delivery costs (STEM Gogledd)	£1,350k	£1,350k		Approx. 5 Year Reduction	Approx. 10 Year Reduction	Retention of 3 <sup>rd</sup> Liaison Officer	£176k	£390k	Training Costs	£2,146k	£4,574k
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4.1.9.3. It is difficult to identify a clear preferred option. The Strengths and Weaknesses highlighted above are very real ones, as is the funding requirement for each viable option.

4.1.9.4. It is recommended that the NWEAB identify the Option that will deliver the best outcomes for the most affordable cost and request that that model then be further developed, with more detailed costings, for future agreement and adoption.

## **5. FINANCIAL IMPLICATIONS**

5.1. The funding package on the preferred option will need to be discussed with Welsh Government and within the wider discussion on the Growth Vision and regional investment funding.

5.2. A draft funding profile for the options is included in **Appendix 2**.

5.3. At present, there is no claim for any financial resources from the NWEAB.

## **6. LEGAL IMPLICATIONS**

6.1. None.

## **7. STAFFING IMPLICATIONS**

7.1. None.

## **8. IMPACT ON EQUALITIES**

8.1. None.

## **9. CONSULTATIONS UNDERTAKEN**

9.1. The sySTEMatic programme was been discussed by the Executive Support Group on the 07/02/2020 and the RSP Board Meeting on 29<sup>th</sup> January 2020. A task and finish group was established to scope the programme and options in more detail, which included employers, schools, FE and HE partners.

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### **APPENDICES:**

**Appendix 1** North Wales STEM Statement

**Appendix 2** Funding Profile

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### **STATUTORY OFFICERS RESPONSE:**

**i. Monitoring Officer – Host Authority:**

“I will present any comments in relation to propriety at the meeting.”

**ii. Statutory Finance Officer (the Host Authority’s Section 151 Officer):**

“Comments will be submitted verbally, as necessary, at the Joint Committee (NWEAB) meeting.”