Name of Document:	The Digital Inclusion Outline Business Case
Author:	Robin Paterson, Project Manager (Education)
Description of Content:	Outline Business Case to determine if investment in Digital Inclusion is a priority area for investment by Moray Council
Status:	Committee version 0.3 (27 9 22)
Approved by:	
Date of Approval:	

Intermediate Project Business Case

Contents

1. Version History

Version	Date	Details
0.1	22 8 22	Initial draft created by R.Paterson
0.2	02 9 22	Up-date following initial comments from D.Whitworth
0.3	27 9 22	Version to be consulted on as part of Committee Report

Intermediate Project Business Case

2. Executive Summary

In the context of the many competing financial demands presently being requested of the Council, the purpose of this document is to support elected members to determine if the investment in the development of an education focused four year digital inclusion strategy -including the provision of digital devices to Moray learners and teachers- is a priority area of investment for the Authority.

In supporting Council to make an informed decision, this Outline Business Case established the evidence in relation to the Strategic, Economic, Financial and Management Cases. In relation to each of these perspectives, the following key points were highlighted.

The Strategic Case identified the close alignment of the development of a four year Moray Council digital inclusion strategy with the National Improvement Framework, the Scottish Government's Digital Strategy and with the Council's Corporate Plan and education priorities. There is also a strong evidence base, that an investment in digital technology, can enhance the learning and teaching experience and, based on the experience of other local authorities, support the improvement of attainment at the Broad General Education and Senior Phases.

The Economic Case highlighted that investment in digital inclusion was particularly important for Moray compared to many other local authority areas in Scotland in light of the traditional employment profile characterised by relatively poorly paid occupations and a heavy reliance on manufacturing and retail jobs. As highlighted by the Moray Growth Deal, digital technology will be integral to a more competitive Moray economy that attracts inward investment and retains its young people after completing full-time education. A digitally skilled workforce is a prerequisite in achieving this aim.

The Financial Case focused on the level of investment that would be required. While the Strategic and Economic Cases identified a strong rationale for the development of a digital inclusion strategy, the financial case identified that if funding from the Scottish Government is no longer going to be provided, then an investment in digital inclusion would represent a substantial investment by the Council.

CGI Consultancy have advised that the Scottish Borders Council, 'Inspire Learning Programme' represented a £16m investment to provide 1:1 devices for all children and young people from the Early Learning and Childcare to the

Intermediate Project Business Case

Senior Phase. While the full costs for Moray would need to be more accurately determined, it would be the expectation that a similar level of investment would be required by Moray Council to deliver a digital inclusion strategy similar to the Scottish Borders, 'Inspire Learning Programme'. This section outlines the Scottish Borders 11 year investment programme and a range of different funding options related to the learning phase.

The Management Case, proposes that a project management approach would underpin the development of the digital inclusion strategy. This approach would also be characterised by high degree of co-production through workshops and tests of change with teachers, learners and their parents.

If based on this Outline Business Case, Council determines that they wish to progress this development, then the next steps would be to initiate the preparation of the Digital Inclusion Strategy and, at the same time, the Full Business. The Full Business Case would focus on the possible investment options appraisal.

Intermediate Project Business Case

3.0 Introduction

One of the key principles of the Scottish Government's, "A Changing Nation: How Scotland will Thrive in a Digital World" is:-

> *"To develop and sustain a digital future for Scotland, and to ensure no one is left behind, we need to ensure that our young people are equipped with the skills to thrive in the digital world, and ensure that our organisations are planning for the digital roles that they will need in the near and long term"*

Moray learners experience during the COVID pandemic has brought home the transformative potential of digital learning.

While there will be a strong consensus that the development of a digitally skilled workforce will be a key driver for inclusive growth, establishing and further developing these necessary skills amongst our learners, through the development and implementation of a digital inclusion strategy, will nevertheless necessitate a significant investment on the part of this Authority.

The focus of this document goes beyond simply the provision of 1:1 to devices but considers a broad range of inter-rated elements of provision such as ICT infrastructure and the effect of teaching and learning in the classroom that will ultimately impact on education attainment.

At a time when this Authority is experiencing significant financial pressures, reflected in many competing priorities, this investment in the provision of new technologies and the development of the skills to teach them will need to be carefully considered against other Council priorities.

3.1 Purpose

The intention of this Outline Business Case is therefore to support Council to determine if the further development of digital education –including the provision of digital devices for Moray teachers and learners- is a priority area for investment by the Authority and will meet its objectives.

If based on consideration of this report, elected members determine that digital inclusion is a Council priority for investment, then it is proposed that Officers will progress the development of a four year Moray Council Digital Inclusion Strategy.

Following the Council's Project Management Governance approach, the Digital Inclusion Strategy will be supplemented with a Full Business Case. This latter document will further develop this Outline Business Case and will outline the funding options for the implementation of the Digital Inclusion Strategy.

Intermediate Project Business Case

Material and key insights contained in this document has been informed by a report prepared by CGI focusing on the best value case for investing digital inclusion in Moray. This specialist ICT consultancy firm were commissioned by the Council to compile this report following a decision by the Education, Children's and Leisure Services Committee on 26 January to allocate funding for this purpose.

3.2 Definition

Digital learning is defined as "any instructional practice that uses technology to strengthen a learner's learning experience. It can be used to provide professional learning opportunities for teachers, to reduce teacher workload, improve marking and feedback to the learner, and to provide personalised learning for learners". (*Achieving Excellence in Learning Play your part, Inspire Learning Programme Data Report* - update to Scottish Borders Council, October 2021).

Digital learning can therefore refer to the digital tools used to enable or manage learning in education, including:

- Resources
- Hardware
- Software
- Storage
- Systems

While these tools are integral, a digital inclusion approach is focused on changes in teaching and learning, and therefore the development of skills for our teachers and learners.

3.3 Aim

While across society, digitalisation continues to evolve at an exponential rate of change and affects all of our lives, the Council's aspiration in terms of developing a digitally inclusive culture as part of our education provision continues to be:-

"*To ensure all learners and staff are able to benefit from digital approaches to raise attainment, enable ambition and provide* equity of opportunity to provide access to digital technologies, to strengthen digital literacy and skills."

Digital Innovation Strategy for Education (2021-2024), Moray Council.

Intermediate Project Business Case

This aim will be further articulated as part of the development of a four year Digital Inclusion Strategy for Moray Learners that articulates the vision and outcomes aligned to the Council's education priorities.

3.4 Scope

To achieve this vision, the strategy will need to reflect the interdependencies between education and other Council strategies.

In brief, the following are some of the Council strategies that the Digital Inclusion Strategy will relate to:-

Curriculum: Linking to the Council's Digital Innovation Strategy for Education and STEM, the Digital Inclusion Strategy will outline not only how digitalisation will impact on how learners can access the curriculum through remote and blended learning but also how digitalisation can broaden and enhance existing Curriculum for Excellence learning opportunities.

Teaching: Linking to the Digital Innovation Strategy, supporting learners to be digitally literate will also mean that teachers will need to be supported in terms of their own professional development to be confident in using digital technologies in terms of delivering the Curriculum for Excellence curriculum. .

Learning Estate: Linking to the Council's Learning Estates Strategy, continuing innovations in digital technologies will impact on the future design of schools.

ICT Infrastructure: Linking to the Council's ICT Strategy, broadband limitations for a number of Moray rural schools and the continued use of a profile based system across the school estate is presently being addressed.

Inclusive Economic Development: Linking to the Moray Growth Deal, the outcome of a Digital Inclusion strategy would aim to support the development of a local workforce with the digital skills to attract inward investment and support the local economy.

3.5 Objectives

In the context of the financial challenges and the competing investment priorities currently experienced by the Council, the objective of this Outline Business Case is to establish if the investment in digital inclusion represents best value for this Authority.

Under the report headings of The Strategic Case, The Economic Case, the Financial Case and the Management Case, this Outline Business Case will establish the following:-

- **The Strategic Case**: If the prioritisation of digital learning and the investment in digital technology is aligned to the Scottish National Performance Framework and the Council's strategic priorities;

- **The Economic Case:** If digital inclusion can support economic development and inward investment;

- **The Financial Case**: if digital inclusion is an investment priority for the Council, what would be the indicative cost of implementing a Moray digital inclusion strategy, including the provision of 1:1 devices; and

- **The Management Case**: The approach that it is proposed would be taken in developing and implementing a Moray Digital Inclusion Strategy.

If based on this report Council decides that investment in digital inclusion is a funding priority, then the next step will be to progress the development of a four year Digital Inclusion strategy and the Full Business Case. The Full Business Case will focus on detailing the funding options.

4.The Strategic Case

Digital Inclusion and the National Performance Framework and Moray Council's Strategic Priorities

The National Improvement Framework (NIF) outlines the ambition across a range of economic, social and environmental factors.

For education, the NIF outcome is "we are well-educated, skilled and able to contribute to society."

This outcome is underpinned by 4 priorities which are based on achieving, excellence and equity.

The four priorities of the National Improvement Framework are

- ➢ Improvement in attainment, particularly literacy and numeracy;
- ➢ Closing the attainment gap between the most and least disadvantaged children;
- ➢ Improvement in children's and young people's health and wellbeing; and
- ➢ Improvement in employability skills and sustained school positive school leaver destinations for all young people.

Intermediate Project Business Case

Although these priorities relate to a broad holistic approach in the provision of education, each of these priorities is supported by actions identified in the Scottish Government's Digital Strategy.

Recognising that digital skills are now needed for practically every job, "A Changing Nation: How Scotland will Thrive in a Digital World", identifies the following key actions in relation to education and skills development

1. Ensure that digital knowledge and skills has a place in education;

2. build a skilled digital workforce;

3. support upskilling and reskilling opportunities;

4. increase diversity in the digital skills pool;

5. establish the Scottish Digital Academy as the skills provider of choice;

The Scottish Government's National Performance Framework and Digital skills strategy therefore places the development of digital skills as an integral part of education policy.

Aligned to the National Improvement Framework, Moray Council has also identified digital skills as being integral to achieving excellence and equity for Moray learners through previous reports to committee.

The overarching vision as stated in the Corporate Plan is to provide "A life of opportunity for all where people can thrive in vibrant communities and we work together to enrich our future" and specifically in the context of education to "provide a sustainable education service aiming for excellence."

The Council's Improvement and Modernisation Programme (IMP) has been developed to advance and accelerate the priorities set out in the Corporate Plan and aligned with the Moray Education Strategic Plan (2021-22) of providing services that are fair, ambitious, improving and responsive in line with the Council's values.

In relation to Education, the investment proposals are targeted towards improving attainment. Although subject to consideration of this Outline Business Case, one of the IMP workstreams is "Raising Attainment- Curriculum Breadth and Digital Delivery.

Through an investment programme supporting the development of a digital learning environment, the intended outcome of this workstream is to improve excellence and equity by:-

 ➤ Investing in devices and technology to support and embed digital innovation and strengthen digital literacy for all; and

➢ Investing in digital devices to establish a pro-active programme to allocate pupils and teachers with an appropriate device to enable remote and distance learning.

This section has established that the development of a Moray Digital Inclusion strategy would be aligned to the Scottish Government National Performance Framework and to the Moray Council's Corporate Plan.

The following section will aim to establish if there is an evidence base to support the intended benefits of implementing a digital inclusion strategy.

4.1 Establishing the Evidence Base for Digital Inclusion

The Improvement and Modernisation Programme has identified the following intended outcomes from developing and implementing a digital inclusion strategy. These include:-

➢ Improvement in attainment at both the BGE and Senior Phase;
➢ Improvement in employability skills and sustained positive destinations;
➢ Young people are better prepared for life beyond school and for the workplace;
➢ Providing and enabling a digital learning environment to improve equity and access to the curriculum; and
➢ Quality focus on improving learning and teaching.

The evidence for each of the intended outcomes will now be outlined in turn.

4.2 Improvement in attainment at both the BGE and Senior Phase

A review of existing research literature does not point to any direct causal relationship between an investment in digital technology for learning and improved attainment at either BGE or at the Senior Phase.

Instead, a broad range of variables will impact on educational attainment. Some of these factors will be environmental such as relative levels of deprivation and poverty within the schools catchment area.

Other factors affecting attainment will however be impacted by the actions of the Authority. For Moray Council the following diagram outlines the strategic priority areas for the Council and how they are interconnected.

Intermediate Project Business Case
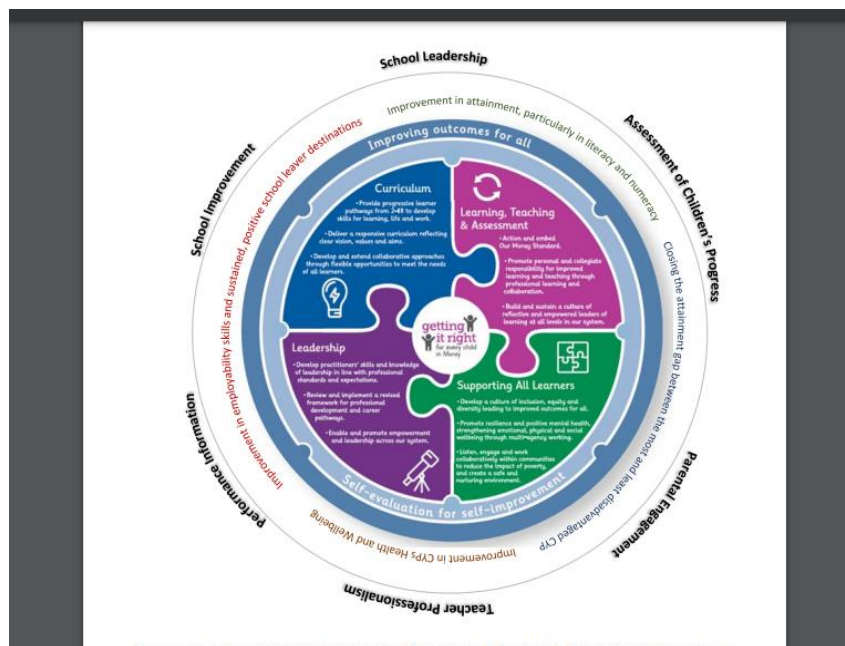
Moray Council commissioned CGI, a specialist ICT and Education Consultancy, to provide a report on the best value case for digital inclusion.

Through their extensive experience supporting digital transformation programmes with Glasgow Council, City of Edinburgh Council and Scottish Borders Council, CGI are able to provide anecdotal evidence of the positive impact that digital technology enabled learning approaches had on the above priority areas of "Supporting All Learners", "Learning, Teaching and Assessment", "Curriculum" and "Leadership".An extract from Achieving Excellence in Learning Play. Your Part in Inspire Learning Programme Data Report-up-date to Scottish Borders Council, October 2021.

Intermediate Project Business Case

As part of the 'Inspire Learning' programme, every young person in secondary school is in possession of a managed iPad, and a suite of apps and tools to ensure they are learning at home through digital technology, safely and in the best way possible.

"Their teachers also have iPads, allowing them to deliver the curriculum from their homes, interact directly with young people, especially with our more vulnerable learners, give instant feedback and use innovative tools to get the best experience of learning.

"Crucially, this enables us to deliver equal access to the best tools for learning to every one of our young people.

"This commitment to equity is one of the central aims of the Inspire Learning Programme, Scottish Borders Council's world class digital learning programme, recently confirmed as a finalist in two categories at the UK Local Government Chronicle Awards.

"In the light of the unprecedented and unique challenges that face all our education provision following the Covid-19 restrictions, and in view of the likelihood that education will not return to what we previously knew for a long time, if ever, the Inspire programme has become a vital means of delivering high quality learning to all our young people.

"I am very proud of Inspire Learning and the work that has taken place to achieve such progress in our first year (2018/19) and in the current circumstances."

List of benefits in SBC quality report:

- Families and community gain access to digital content and services
- Connecting with Local Authority Services
- Saving teacher time and reducing workload (dependent on level of digital solution implemented)
- Improving collaboration in the classroom and across the project
- Improving student engagement in STEM and creativity
- Improving feedback to students - more timely, relevant and impactful
- Cost-saving benefits associated with a strategic education digital implementation, delivery of budget plan in section 5 of this report
- Sustainable model over the school life of a student
- Potential benefits from delivering a platform for multi-agency collaboration
- of crisis, ensuring continuity of learning
- Increased parent participation in education
- Improved teacher / learner interaction and communication about schoolwork, in and out of the classroom via education specific apps e.g., Seesaw, Showbie etc…
- 100% of young people and staff using national learning network – GLOW
- Parent support groups set-up to ensure greater opportunities for learners and parent involvement is maximised
- Management and school audits much less time consuming."

- Supported creation and delivery of education transformation programmes tailor made for individual education establishments and Local authorities including key objectives to evidence successful outcomes
- Provided dynamic and creative tools for learning - both in school and from home e.g. Robot coding, AR (augmented reality)
- Delivered powerful tools for classroom management with Apple Classroom
- Delivered a secure managed learning environment for all young people
- A range of digital awareness opportunities were supported e.g. digital coffee mornings for parents and the wider community
- Ongoing safeguarding, security, support and control enabling flexible management of devices in schools and at home, ensuring teaching and learning is supported in a secure, GDPR compliant environment which safeguards students.
- Delivered monitoring and tracking to support teachers in raising attainment and tracking inclusion in and out of school. Significant time is saved in producing school reports via automation. This makes performance management and school audits much less time consuming."

The following is feedback from the local authorities that CGI has worked with.

Outcomes for learners in general is that they have been more engaged in the learning process, encouraged to do more and think in different ways, and it has allowed them access to courses they would not have had the option to consider historically.
Quotes:
"It has really helped with my essay writing and spelling."
"They were generally really good fun and engaging. I felt more motivated to do work at home."
"They are amazing because when we were just writing I never wanted to do it but with the iPads it is a lot easier and I want to do more of the work I get."

Due to the progress Scottish Borders Council has made adopting a digital inclusion approach, the authority won both the Public/Private Partnership award and the Future Places award for its Inspire Learning programme at the 2020 Local Government Chronicle awards. The council's partnership with CGI was praised for its collaborative approach to implementation and for the effective engagement with teachers, learners, parents and carers.

4.3 Improvement in employability skills and sustained positive destinations

'A Changing Nation: How Scotland will Thrive in a Digital World', identifies that the provision of digital learning opportunities from ELC to the Senior Phase is

the bedrock to creating a workforce that will support a modern and dynamic economy.

"A recent CBI Scotland study indicates that the adoption of new technologies – and the skills to use them – could add £25 billion to the Scottish economy over the next decade, but this will only be realised if we raise the digital competency of everyone in Scotland."

However, the report contends that the Scotland is unable to keep up with demand for a wide range of digitally related jobs. This presents a risk in restricting growth both within the digital sector and across the wider economy.

> "Research indicates that in Scotland 75% of all advertisements for jobs classified as 'low-skilled' now require baseline digital skills such as the ability to use spreadsheets and word processing applications. But only 77% of people in Scotland aged over fifteen can complete all seven tech skills considered to be "foundation" level, compared to the UK average of 84%. Only when people have achieved proficiency in all seven foundation levels can they begin to develop skills considered to be essential for employment, and just 39% of the Scottish workforce is able to complete the essential employment skills."

Moreover, a different study indicates that Scotland is performing less well than other European nations. "In the Netherlands, 83% of the population has above basic levels of communication skills, and 81% has above basic problem-solving skills broadly comparable to these essential skills." There is therefore a risk that Moray could fall behind other local authority areas and therefore be in a poorer position to attract inward investment.

4.4 Young people are better prepared for life beyond school and for the workplace

Nevertheless, the Scottish Education system has had success in addressing the future skills pipeline. The Digital Nation report provides a number of examples.

> "With increases in young people studying computing science at Level 7, and at university, as well as in the number of modern apprenticeships… Progress has also been made in the development of a robust cyber security skills pipeline, embedding cyber security across our education system and lifelong learning system.

While a distinction should be made in term of improving digital literacy and computing science, a range of international focused studies warn that

Intermediate Project Business Case

Scotland is struggling to keep up with its European neighbours in terms of subject areas underpinned by digital skills.

In Scotland between 2016 and 2018 there was a 15% decrease in young people studying computing science at Levels 3-5 (National).The 2018 PISA report showed that Scottish performance in science was similar to the OECD average, and was higher than countries including Iceland and Italy, but was lower than England, the UK as a whole, and countries including Finland, Estonia, Germany and the United States. Just 20% of our school pupils studying computing science Level 5 (National) are girls, and only 16% of students pursuing computing degrees at university are women.31 Current female participation in the tech sector sits at 23%.

The consequence of not supporting a digitally literate workforce go beyond limiting employment opportunities. According to the Good Things Foundation - a leading UK-based digital inclusion charity - a lack of digital skills and access can have hugely detrimental impacts on individuals.

"Digital exclusion leads to poorer health outcomes and lower life expectancy, increased loneliness and social isolation, alongside limiting access to jobs and education. This disproportionately affects those already at a disadvantage either through age, education, income, disability, or inequality."

Digital exclusion is also closely linked to the gendered segregated nature of the employment market. Presently, female employment in the digital technology sector is disproportionately low and is approximately 23% of the total workforce (Digital Scotland, page15). Yet research "suggests that firms with higher levels of gender equality are 15% more likely to outperform rivals".

Reflecting efforts at a national government level, Moray Council is challenging gender occupation segregation through its STEM Strategy and the development of a Moray Growth Deal Project focused on Early Years STEM which includes addressing perceptions of what an appropriate career for a male or a female as one of its objectives of these initiatives.

Improving access to digital technology and the development of a digital inclusion strategy can therefore support these efforts to improve gender participation in school subject choice thereby opening up wider future employment opportunities for all.

4.5 Providing and enabling a digital learning environment to improve equity and access to the curriculum

Continued innovations in terms of digital technology are also impacting on the future design of the learning estate.

The first guiding principle of the Scottish Government's 2009 School Estates strategy is that "learning environments should support and facilitate excellent joined up learning and teaching to meet the needs of all learners."

There is therefore an interdependency with the Learning Estate Programme to ensure that digitally enabled learning is supported and taken into account and incorporated within the future design of the Moray learning estate.

Some of these changes will be reflected in the physical configuration of the learning space which may, for example, include charging or docking stations for 1:1 devices.

Other changes may be reflected in an enhanced ICT infrastructure supporting remote or blended learning environment.

There is a strong consensus in terms of academic research of the benefits of digital enabled remote and blended learning. Although also reflecting changes to tertiary education the following is an example.

> "Technology has been an enabler, in some cases enabling more engagement with lecturers and peers compared with face to face teaching. Recorded lectures and dynamic digital content are allowing students to engage at their own pace and in their own time.
> An increase in curated learning resources made available online, and the use of the flipped classroom model have encouraged students to arrive at sessions prepared and take part in interactive discussion, especially through chat boxes, which create a path to engagement for quieter or less confident students. Changes to mode and timing of assessment – for example, weekly shorter, formative tests – have encouraged deep learning throughout modules, rather than a panicked rush at the end."

These insights are also reflected in the findings of the Moray Education COVID-19 Remote Learning School Survey. Undertaken in 2021, the survey findings included the following insights:-

Intermediate Project Business Case

> "Moray Schools' Survey on Remote Learning Experiences during January to March 2021.
>
> - Notable adoption of Microsoft teams across our schools as a core platform for learning, with further use of Google Classroom
> - Equity in approach to learning activities set, mindful of digital connectivity and access for children and families, mixing paper-based resources with online learning
> - Positive use of wider supports available for strengthening Remote Learning Delivery including Education Scotland National e-learning offer
> - Provision of virtual playgrounds/chat opportunities supported by digital platforms for social interaction and wider wellbeing."

A final aspect of providing an enabling digital learning environment is ensuring that the ICT infrastructure offers sufficient capacity and bandwidth. This issue will be further outlined under the Management Case section of this document

4.6 Quality focus on improving learning and teaching

In establishing a digitally enabled learning environment, there is also the question of whether there are benefits in terms of improving the quality of teaching.

In exploring the impact on teaching, following the adoption of the Scottish Borders Council 'Inspire Learning Programme, teaching staff commented that

> "For teachers, having the ability for one-to-one interaction with their learners is a cornerstone of teaching. The ease of feedback flow between themselves, learners and other stakeholders, as well as the ability to provide the learning remotely, has cemented the impact of the programmes.
>
> The single biggest impact they have seen is on the ability to give each learner parity in the way in which they access education. They spend more time teaching and less time repeating time consuming, non-teaching activities.
>
> "In my class they have been going, 'you've asked us to do this, can't we try and do it this way, because I can do this, or I can do it better that way'. That's what parents are really wanting for kids to use their skills and talents that they already have and build on that, and this is what is being allowed."
>
> "A lot of our young people and families would never be able to have an iPad at home and would never have the resources to be able to do that, but now every young person has the same chance and the same learning/teaching tool to be able to access and be able to create and to be able to learn. So, equity is really important. And when you know young people and you know their stories and you know the families, and you see them getting their iPad during deployment and open the box, and you see their faces, and it shows how much it means to them, then it makes this project very special and very important."

A continued shift to a digitally innovative learning environment would also mirror changes in the workplace. In commenting on the future skills required for the aviation industry, Boeing have called for

> "Innovative training solutions such as immersive technologies, adaptive learning, schedule flexibility, and new teaching methods to effectively meet a wide a range of learning styles."

The increase use of digital technology to support the delivery of the Curriculum for Excellence will also be reflected in the need to provide appropriate ongoing professional training and development opportunities for teachers.

4.7 Summary

This section of the Outline Business Case has established that a digital inclusion strategy for Moray Council would be aligned with the Scottish Government National Performance Framework and the Council's Corporate Plan and strategic education priorities.

There is also evidence to reaffirm the original Improvement and Modernisation Programme digital inclusion related outcomes.

5. The Economic Case

While the immediate outputs of the digital inclusion strategy would be education related, the medium to long-term outcomes of investing in digital inclusion would be a broader range of social and economic benefits reflecting the Corporate Plan vision to provide "a life of opportunity for all where people can thrive in vibrant communities and we work together to enrich our future."

This is also consistent with HIE's 2019-2022 Strategy three core priorities to:-

- Grow successful, productive and resilient businesses;
- Create the conditions for growth; and
- Build strong, capable and resourceful communities.

Similarly, The Moray Economic Strategy 2019-2022 is based on a vision that Moray should be a

> "place that is thriving because of an increasingly diverse economy and growing population that celebrates success, and values both in education and training."

Intermediate Project Business Case

The Moray Growth Deal has highlighted the shift from traditional industries to more digitally based industries as one of the key drivers for realising this vision. The rationale for the Early Years STEM project for example is an understanding that the

> Moray Economy has lower wage levels than in Scotland with full time workers in Moray earning 9.5% less than their Scottish peers per hour on average. A significant reason for this disparity is the traditional forms of employment that make up the Moray economy.

As outlined in the graph below, the sectoral makeup of the Moray economy differs from Scotland with a larger proportion of retail and wholesale and construction businesses and a lower proportion of professional scientific and technical businesses, information and communication technology businesses.
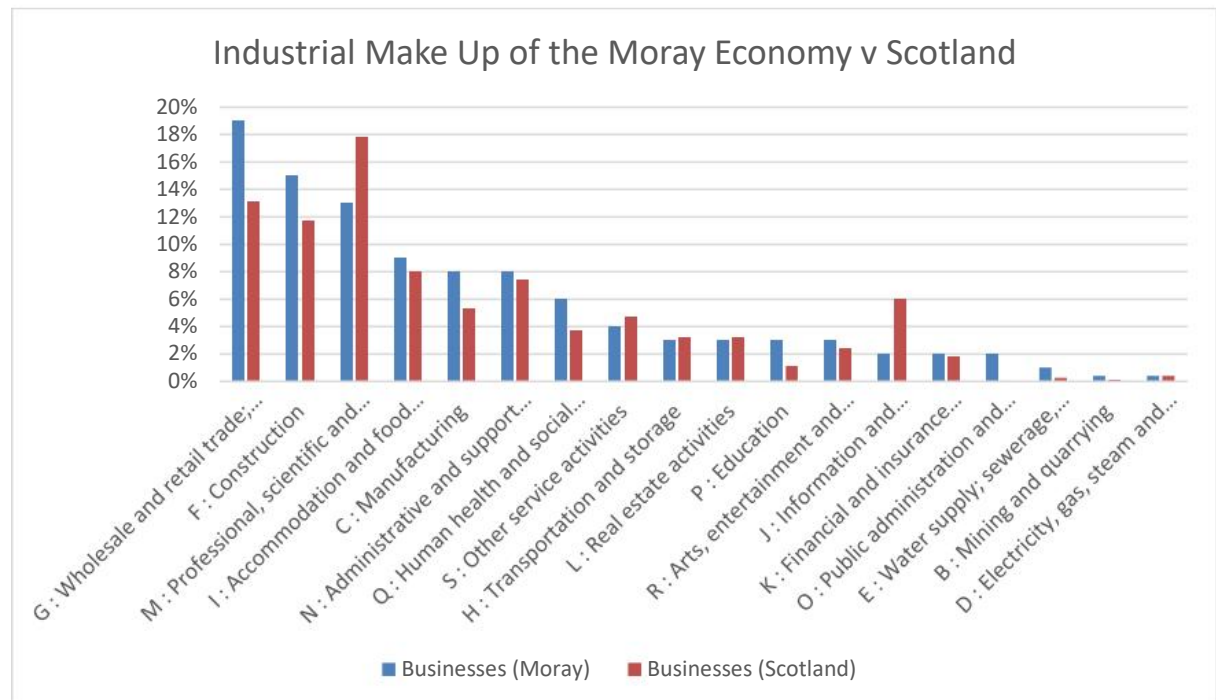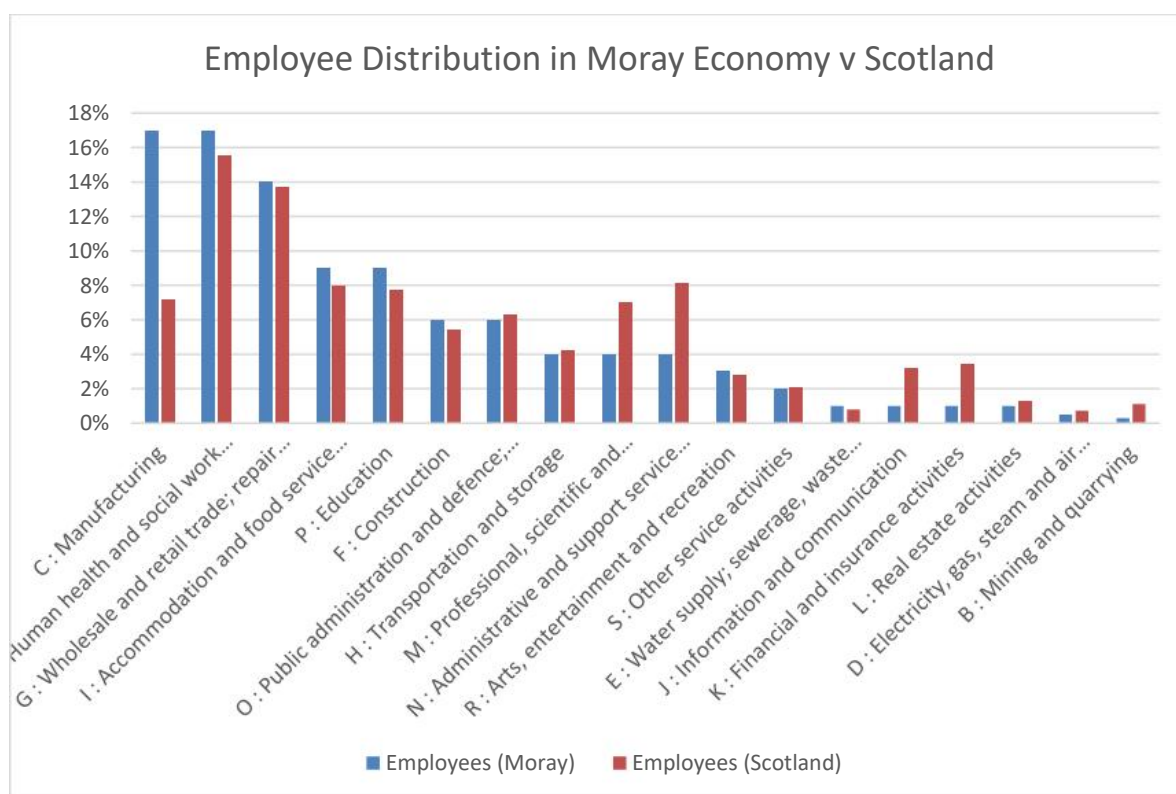

Nomis, Annual Business Survey, ONS

This is demonstrated further in there being 37.7% Soc 1-3 occupations in Moray versus 46% in Scotland.
The distribution of employees by sector in Moray also differs significantly from Scotland.

Employee Distribution in Moray Economy v Scotland

■ Employees (Moray)   ■ Employees (Scotland)

Sources: Nomis, Annual Business Survey, ONS

One sixth of Moray's population works in the manufacturing sector, which is 11% more than the Scotland average, with 3% less in professional occupations. Moreover, in common with the Highlands and Islands, Moray has a youth depopulation issue. To change these trends, will require the development of high quality jobs underpinned with digital skills.

The development of digitally literate and skilled workforce is therefore key if Moray wishes to retain its young people after secondary and tertiary education and to be a competitive and attractive region that attracts inward investment.

The following table published by the World Economic Forum (2020) highlights the challenge for Moray when considering the global trend in terms of a decrease in traditional jobs which will be supplanted by the growth in STEM and digitally based occupations.

	Decreasing Demand	**Increasing Demand**
1.	Data Entry Clerks	Data Analysts and Scientists
2.	Accounting, bookkeeping and Payroll Clerks	AI and Machine Learning Specialists
3.	Administrative and Executive Secretaries	Big Data Specialists
4.	Accountants and Auditors	Internet of things Specialists
5.	General and Operations Managers	Digital Transformation Specialists

6.	Client Information and Customer Services Workers	Process Automation Specialists
7.	Assembly and Factory Workers	Information Security Analysts
8.	Business Services and Administration Managers	FinTech Engineers
9.	Statistical, Finance and Insurance Clerks	Database and Network Professionals
10.	Bank Tellers and Related Clerks	Business Development Professionals

Source: http://www3.weforum.org/docs/WEF_Future_of_Jobs_2020.pdf

In the context of the disproportionate number of traditional occupations in Moray, this table highlights the profound effect of digitalisation and automisation on the labour market in Moray.

Developing digital and STEM related skills is therefore critical for the Moray economy. As shown in the previous section,

> "over 16% of the workforce is in Manufacturing in Moray, which equates to 6000 jobs. In 15 years' time if 20% of those are automated there will be far fewer of the roles that young people in Moray have traditionally entered into and the skills required will be different and most likely STEM related. Without a focus on embedding STEM now, young people in Moray in 15 years will not have the skills that will allow them to stay in the region."

If Moray can develop the STEM expertise underpinned by digitally proficient workforce then a proportion of the national financial benefits could be secured.

> "A recent CBI Scotland study indicates that the adoption of new technologies – and the skills to use them – could add £25 billion to the Scottish economy over the next decade, but this will only be realised if we raise the digital competency of everyone in Scotland."

5.1 Summary

This section has outlined that changes to the global economy will mean that the future workforce will need enhance digital and STEM skills. For Moray, with a heavy reliance on traditional manufacturing jobs, this challenge is more acute than other parts of the UK.

Intermediate Project Business Case

There is therefore a strong economic case that Moray will need to continue to invest in digital technology within our learning estate if inward investment is to be attracted and our young workforce is to be retained in Moray.

This means the continued development of digital skills within Moray schools is of paramount importance.

6. Commercial Case

Not applicable.

7. The Financial Case

In 2019, prior to the COVID pandemic, the allocation of pcs and laptops in the classroom was based 1:4 pupils in secondary schools and 1:6 in primary schools. It was also the case that actual provision was likely to be higher since schools would supplement this provision through their DSM budgets and retaining older devices that had been replaced through the annual refreshment programme.

As with other local authorities, the Council's response to COVID was the escalation of provision of 1:1 devices to support home based learning from March 2020.

In total, 2,808 devices (mainly laptops) were purchased and distributed to pupils and staff with a further 534 purchased for during the 2021/2022 school year. 625 secondary school pupils received a 1:1 device.

In light of the economic and social benefits identified in the previous sections of this Outline Business Case and the demonstrated viability of providing remote learning during the COVID lockdown period, the Scottish Government announced in 2021 that it aimed to support the universal provision of 1:1 devices for all primary and secondary school learners.

> "To *provide 700,000 primary and secondary aged pupils with access to an appropriate digital device, and where necessary a home internet connection by the end of this parliamentary term*".

There was therefore an expectation that at least a significant proportion of the funding for this roll-out would be provided by the Scottish Government. This statement in 2021 by the Scottish Government informed the Council's decision to provisionally include the roll out of 1:1 devices as part of the Improvement and Modernisation Programme. This decision would be subject to Council approval at a later date as part of progressing this programme.

Intermediate Project Business Case

By 2022, the cost of living crisis and the consequent pressure that this has placed on Scottish Government budgets, has resulted in a Scottish Government spending review.

Due to an absence of any further information on this Scottish Government statement, the assumption of this Outline Business Case is that there will be no funding provided by the Scottish Government for the universal provision of 1:1 devices for Moray learners. Any funding for 1:1 devices and for the actions following from the digital inclusion strategy will therefore need to be self-funded by this Authority

This presents the Council with a significant challenge in that only a total (non-recurring) budget of £1.2m has been identified to support Raising Attainment-Curriculum Breadth and Digital Delivery workstream. It should also be noted that in light of possible future funding from the Scottish Government, this sum was intended to be utilised to provide complementary support for teachers and learners to advance the use of digital learning.

Furthermore, this budget would also need to fund ongoing support resources (including additional staff) if the universal provision of devices was to be successfully implemented.

To put this available budget into a crude context, the provision of providing every child and young person from ELC to S6 with an ipad,-as part of the Scottish Borders Council Inspire Learning Programme- required an investment of £16m. This investment also included the cost of the staffing support team to implement this programme. In comparison, Moray Councils budget represents 7.5% of the Scottish Borders Council[1].

A significant investment will be required should the Council choose to prioritise digital inclusion. This will include the planning and budgeting for any refresh requirements as well as the identification of the initial investment resources.

7.1 The Scottish Borders Investment Model

The costed options for this investment could form the basis of the Full Business Case, and would include for example, the costs such as infrastructure investment, device purchase/lease and ongoing management and security, if Council decides to progress the development of the Digital Inclusion Strategy.

As part of their best value report, CGI Consultancy noted that there are many ways to finance such a programme of investment.

---

[1] As noted this is a rough comparison but does give some insight into the challenge. NRS data for 2020 records that Scottish Borders Council has a population of 115,240 (18th highest in Scotland) while Moray's population for the same period is 95,750 (23rd highest in Scotland).

Intermediate Project Business Case

In particular CGI highlighted that:-

"Scottish Borders Council have used a mix of capital borrowing and efficiency savings to fund their £16m programme. High level details are set out below, and more detail can be found within the Scottish Borders Council report 2019. (https://scottishborders.moderngov.co.uk/documents/s34233/Item%20No.%205%20-%20Digital%20Learning%20Transformation%20report.pdf)

In the Scottish Borders case, the financial model was costed over an 11-year period. The proposed programme covered:

- All training and professional development over the life of the programme;
- Full support to deliver the business change;
- All supporting infrastructure subject to full site survey;
- The ability to deliver an iPad into the hands of every child from P6 to S6 and a 1:5 ratio for P1 to P5;
- A programme of maintenance through periodic refresh.

The profiled annual capital requirements of their current revised financial model is below as of 2018:

Financial year	£ (m)	Financial year	£ (m)
2018/19	0.000	2024/25	1.172
2019/20	3.047	2025/26	0.627
2020/21	0.917	2026/27	0.933
2021/22	0.355	2027/28	0.629
2022/23	1.210	2028/29	0.629
2023/24	0.914	2029/30	0.000
Total			**10.433**

To finance 10-year capital spend of £10.433m contained in the draft Financial Plan, £10.784m of debt repayment and servicing costs were planned to be incurred from revenue over the life of the programme in total.

To fund the balance of investment required, recurring savings of £0.450M were identified in areas of IT refresh, school management, and software requirements. For Moray, where these possible savings could be found, would need to be defined.

Intermediate Project Business Case

In contrast to Scottish Borders Council, it should be noted that for Moray Council, funding from the capital budget is already allocated to support for the learning estate ICT infrastructure, therefore another source of funding to meet this shortfall would need to be identified.

Working in partnership with their clients, CGI has developed a range of creative, flexible and innovative financing options. Councils are supported to invest in their transformation programmes and delivery improvement as quickly and efficiently as possible."

7.2 Possible Funding Scenarios

If it was deemed not to be financially viable to offer universal 1:1 device provision across for all Moray learners, then a range of possible different funding scenarios could be identified at less cost to the Council.

7.3 Assumptions

These funding scenarios are based on the following assumptions.

i. That no funding for the provision of 1:1 devices will be forthcoming from the Scottish Government in the short to medium term;
ii. These are 'rule of thumb' cost estimates based on the investment noted for Scottish Borders and no provision is made for inflation or additional infrastructure support that may need to be made for Moray;
iii. While Scottish Borders has a larger population and pupil size, for the purposes of this rough estimate, it is assumed that the number and cost of devices to be procured will be comparable;
iv. While the type of device is not specified, Scottish Borders Council invested in iPads. The cost estimate is therefore based on this equivalent cost and other technologies may allow savings;
v. A phased roll out is not factored into these estimates.
vi. Cost projections for options which are not based on a universal roll out, are simply calculated on a proportionate basis. This will not accurately reflect the infrastructure and other costs which will need to be in place regardless of the scale of the deployment.
vii. Options are presented to assist with discussion. At this stage no selection criteria or preference is stated; and
viii. The estimated number of children, young people and teachers outlined in **Appendix 1** is accurate. The School Roll figures are based on the 2020 Census.

As baseline, the first funding scenario outlined below is for a universal roll out.

Intermediate Project Business Case

7.4 Possible Scenarios

Option 1: Universal rollout	**Estimated Cost:** £16m

Scope
This option would cover all children in early learning (1600), primary school children (6889) and secondary school learners (5328) along with provision for elc and teaching workforce (1535).
The option would reflect Scottish Borders Council model and in addition to the provision of 1:1 devices, would include professional development, full support to deliver business change, development of the ICT infrastructure and a programme of maintenance and device refreshment.

Total Number of Devices: 15352

Strengths
If cost was not a factor, then this would be the preferred option and would underpin a strong excellence and equity ethos.
The strengths of this option would be that it would embed a uniform adoption of a digital device from an early age and would support transitions from elc to primary and then to secondary school.
It would be the expectation that this option would provide the maximum benefits for Moray learners and teachers alike. Similarly from an economic development and inward investment perspective, this option would reflect a similar level of investment made by other Scottish local authorities.

Weaknesses
Clearly the most significant weakness is the level of investment that would be required.
While universal in approach, this option may not deliver best value in light of the improved capacity for young people to learn independently from S3 onwards (See bullet points outlined in section 3.3 of this report).

Option 2: Rollout from P7 onwards	**Estimated Cost:** £7.52m

Scope
This option would cover P7 primary school children (964) and secondary schools (5328) along with provision for teaching colleagues (1000)

Intermediate Project Business Case

Total Number of Devices: 7292
Strengths
Based on the ACEL data insights (see section 3.3 of this report), this option is targeted at where this investment could have the most significant impact. The rollout of devices would be aligned to when young people are able to be more independent learners.
Weaknesses
As with option 1, there is still an affordability gap with this option.   While this approach is targeted, it would be the case that the educational benefits would be less than option 1 where devices would be universally provided.

Option 3: Rollout for Senior Phase	**Estimated Cost:** £3.53m
Scope	
This option would cover young people in S4 to S6 (3000) and teaching colleagues (400)	
Total Number of Devices: 3400	
Strengths	
This option is targeted at young people who are entering their senior phase and who will undertaking assessments as part of the C for E senior phase curriculum. There would therefore be major benefits for the young person in preparing for their senior phase assessments.	
Weaknesses	
As with above options, there is still an affordability gap. Also, restricting the roll out of 1:1 devices to the senior phase will mean that the educational benefits from an earlier rollout at the elc, primary or broad general education phase will be lost. This could increase pressure on learners to 'catch up' compared to learners in other areas with a stronger focus on digital inclusion at an earlier phase. This option would therefore have a limited impact on reducing the attainment gap	

Intermediate Project Business Case

Option 4: Student Buy In Option for Senior Phase Rollout **Estimated Cost:** £1.2m [2]
Scope
This option would cover young people in S4 to S6 (3000) and teaching colleagues (400).
It is proposed that this could be an 'add on' complementary option to options 1 and 2 in relation to senior phase device provision.
Total Number of Devices: 3400 (partially funded by the Council)
Strengths
The main strength of this option is that it would be intended to be the only proposal that would aim to be within the current agreed budget of £1.2m.
This option would be based on the Council providing a device but encouraging as many parents as possible to purchase a device from the Council for their son or daughter at a senior phase.
By buying a device at a preferential rate, the student would own the device and be able to keep and take to the next stage of education, employment or family use. This option would therefore contribute to wider economic benefits as well as affordability.
If parents were unable to afford or unwilling to purchase a device from the Council then the equipment would still be provided. This would mean an equitable approach could be implemented.
Overall, this option would have the same educational benefits as option 2 but could be delivered within the agreed budget.
Weaknesses
It is difficult to estimate how many parents would engage with this proposal.
For some parents who are either unable to afford to purchase a device or take the view that their son or daughter already has a device at home, then this option would be at risk of being unpopular. Many parents who can afford it will have purchased a device for their children already and may not be willing to buy another one for school work. A 'bring your own device' option', would likely have ICT infrastructure implications

---

[2] Since it is very difficult to estimate how many young people would need a device provided for them, it is not possible to identify a cost. The stated estimated is based on the current available budget.

A further possibility is that it could increase the attainment gap for parents who engage with this proposal and those parents who are either unable or unwilling to do so.

Furthermore, as per option 2, restricting the roll out of 1:1 devices to the senior phase may mean that a lot of the educational benefits from an earlier rollout in the broad general education phase would be lost and would therefore have a limited impact on reducing the attainment gap.

Option 5: Minor improvements to the pupil: device ratio   **Estimated Cost:** £1.2m

Scope

Based on current levels of provision, limited further impact on learners in the primary, BGE and Senior Phases. Any investment would be based on the existing budget.

Total Number of Devices: tbc

Strengths

The main strength of this option would be affordability in that this option would be based on current budget available.

Any investment in relation to increasing the number of 1:1 devices would be restricted to the Council's existing capital and revenue allocation.

Weaknesses

This option would not deliver transformational change and would be limited to relatively minor improvement on the pupil/device ratio. Limiting the budget would likely restrict the type of device to what is already offered.

It would therefore be expected that this option would have a limited impact on reducing the attainment gap.

The above scenarios are presented to provide an indication of possible costs. More accurate costs estimates for the above options as well as any other options that are identified would be detailed in the Full Business Case.

7.5 Summary

Intermediate Project Business Case

This section has identified the considerable investment that would likely have to made by this Authority if a digital inclusion strategy; including the provision of 1:1 devices was to be implemented.

Subject to further consideration, the Scottish Borders Model provides a possible long term model for investment. However, the current capital budget for ICT investment in Moray schools would not fund this development as it currently covers the required annual replacement programme with no additional capacity available.

8. The Management Case

If following consideration of this Outline Business Case, Council decides to progress the development of a digital inclusion strategy, then it is proposed that the following steps will be taken.

7.1 Development of a Full Business Case

A preliminary step in developing the more detailed Full Business Case would be for the affordability envelope to be identified when the Outline Business Case is consider by members at the Education, Children's and Leisure Services Committee.

Approval of the Outline Business Case and the identification of what could be afforded in terms of digital inclusion provision, will inform the more detailed development of the investment options appraisal as part of the Full Business Case.

8.2 Development of a Digital Inclusion Strategy

Work on developing a four year digital inclusion strategy will be progressed at the same time as the development of the Full Business Case.

Through a programme of workshops, the strategy will be co-produced with Moray learners, teachers and parents.

The process of engaging with key stakeholder groups will be of critical importance

- Ensuring the vision of the digital inclusion strategy is aligned to our education priorities and articulates a clear vision and the outcomes that we want to achieve;
- Identifies the optimum best fit digital platform and device for Moray learners;

- Establish the key design imperatives that the Council needs to get right;

- Develops digital capability and readiness through tests of change; and

- Defines the educational areas that will provide the biggest return on investment

The output of engaging with key stakeholder groups is to develop a strong consensus in terms of a plan of how we want to progress digital inclusion within our learning estate.

8.3 Resource Requirements

Primarily, the development of the strategy will be resourced using existing staff.

If additional specialist consultancy expertise and guidance is required, then it proposed that the remaining balance of the £50,000 previously earmarked from reserves by Committee for this purpose can be utilised. Alternatively, this funding could be used to increase staff capacity if deemed appropriate.

8.4 Governance and a Project Management approach

The development of the Full Business Case and the Digital Inclusion Strategy will be underpinned by a project management approach.

This will be reflected in governance arrangements with the establishment of a project management group to oversee the development of the strategy and the implementation of the project plan

The Project Management Group will be supported by the Project Manager (Education) and will be chaired by the Senior Responsible Officer (SRO).

As the project progresses, regular up-dates and high level risks and issues will be escalated to committee.

8.5 Summary

If Council decides to develop a digital inclusion strategy, a project management approach will be adopted. A key element of this approach will be a strong emphasis on co-producing the strategy with key stakeholders, including teachers, learners and their parents.

9. Conclusion

With the absence of any financial support from the Scottish Government, this Outline Business Case has highlighted that the scale of investment required to deliver a digital inclusion strategy for Moray learners and teachers is beyond the current budget presently available.

Council will therefore need to consider whether this is a fixed financial position and any investment in the short to medium term is limited to a minor increase in the pupil device ratio.

Alternatively, when considering the benefits outlined in the Strategic and Economic case of this document, Council may wish to explore the investment options broadly outlined within the Financial Case and consider an increased capital allocation. This would initiate the development of the Full Business Case and the preparatory work in relation to the Digital Inclusion Strategy.

Intermediate Project Business Case

Appendix 1: Learning Estate Profile

	Primary Schools	Number
1	**Number of Primary schools**	46 (excluding the proposed Findrassie development)
2	**Number of pupils**	6889
3	**Number of teachers**	475.39 FTE
	Secondary Schools	
4	**Number of Secondary schools**	8
5	**Number of pupils**	5328
6	**Number of teachers**	454.88 FTE
	Early Learning and Childcare	
7	**Number of ELC settings**	24 Council 38 PVIs 38 childminders
8	**Number of children**	1600 approx
9	**Number of ELC Practitioners**	515