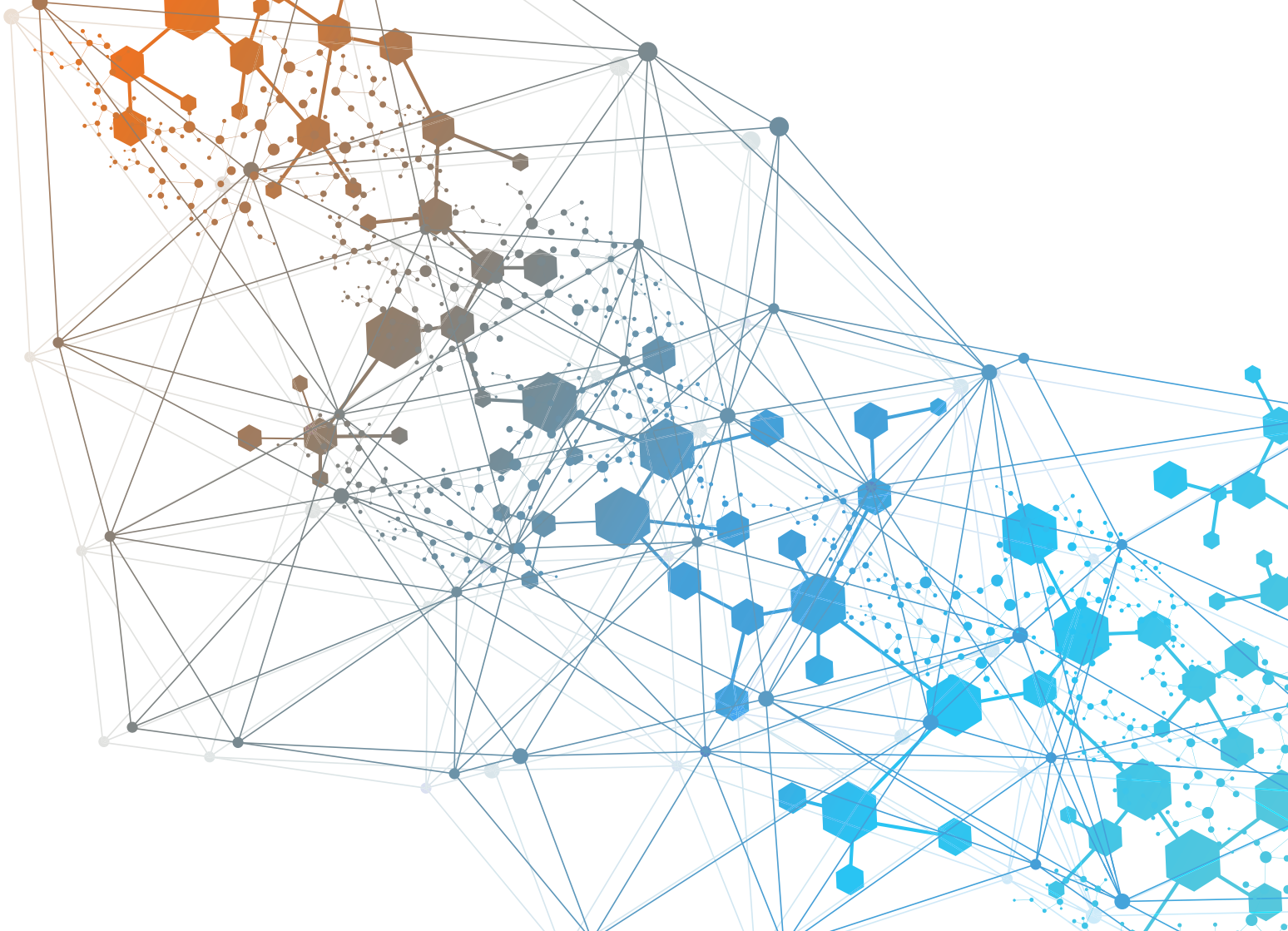




**Information Technology
Strategy 2021 - 25**

June 2021



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Introduction




West College Scotland delivers learning and vocational training to the West Region of Scotland, a catchment area of 1.2 million people, representing 23% of the resident population of Scotland. We have an important presence and deep roots at our main campus locations in Clydebank, Greenock, and Paisley, while our footprint stretches from Oban to Barrhead.

As one of Scotland's largest Regional Colleges, we provide education and training to over 20,000 students. The College manages total funds of £70m, employs over 1,200 staff and as one of the Region's largest employers, is uniquely placed to help shape the West region's educational landscape and contribute to its social and economic development.

The College also works across local authority boundaries and engages formally with seven authorities and is committed to taking a leadership role in the West of Scotland, together with partners and stakeholders, to tackle significant social and economic deprivation, and digital poverty, which still characterises many of the towns and communities across the region.

The College wishes to exploit its scale and capacity to maximise its impact as a leader and influencer across the region and the wider College sector. While students and our staff are at the heart of what we do, we want to attract business at home and from abroad, and we seek to build a reputation which is recognised for being innovative, enterprising, and modern.



Changes in technology, changes in demographics, digitalisation, automation, industry 4.0 all have the potential to reshape the landscape in which we operate. This can disrupt the scale and nature of skills demand and the types of jobs that may be available and that will help to reshape the economy. At West College Scotland, the use of Information Technology is essential in the modern digital world that enables us to excel in the provision of educational services and support operations., and that:

- **Is driven by curricular learning and teaching need.**
- **Will support innovation in teaching and learning.**
- **Provides online access to established and emerging learner and support processes.**
- **Ensures existing hardware and software assets are utilised to their maximum potential.**
- **Embraces mobile and flexible working models.**
- **Recognises the benefits of collaborative working and shared service delivery.**
- **Ensures adherence to legislative, policy and cyber resiliency requirements.**
- **Supports a mobile, flexible, and hybrid-cloud infrastructure.**
- **Provides required levels of IT service delivery, security, and standards.**
- **Is agile and adaptive, enabling the right digital tools and solutions in any setting.**
- **Uses data and business intelligence to support informed management decisions.**

The IT Strategy is intended to enable the provision of resources and services for the benefit for all West College Scotland users - students, staff, and other stakeholders - ensuring that these resources are available, effective, and efficient to meet requirements. In addition, the College IT facilities will be secure and resilient, but also flexible, accessible, and responsive to meet the needs of those who use them and the ever-changing landscape of opportunities that the use of technology can deliver. This will be done not just in a way that supports fit-for-purpose standards and full utilisation of College resources, but also provides the scope for, innovation, development, and the adoption of a dynamic approach to all that we do.

Background and Operating Context

Information Technology Strategy (2021-25)

This Strategy supports the continuation and enhancement of practises developed during the previous Strategy and lessons learned (to date) through the Covid-19 pandemic. It recognises that in adopting changes that have arisen in our operating environment over the recent period in particular - as a permanent shift in approach, can bring significant benefits to the College. Taking this methodology further, the Strategy aims to provide for further innovation in College operations and curriculum activity, all of which will be undertaken in conjunction with curricular colleagues to support changes in teaching and learning pedagogy and improving outcomes.

The objectives detailed in this document are intended to be broad and flexible, to allow for the dynamic trends and unforeseen change that the period of the Strategy may witness. Specific and measurable targets will flow out of this document and be presented annually in the IT Operational plans and in annual update reports to the appropriate Board of Management Committee

College Strategic Priorities

Our vision of 'Collective Ambition' to be a vibrant and dynamic College – providing excellent education, training opportunities and services for our students, customers and communities' will be achieved by implementing the College's four Strategic Priorities.

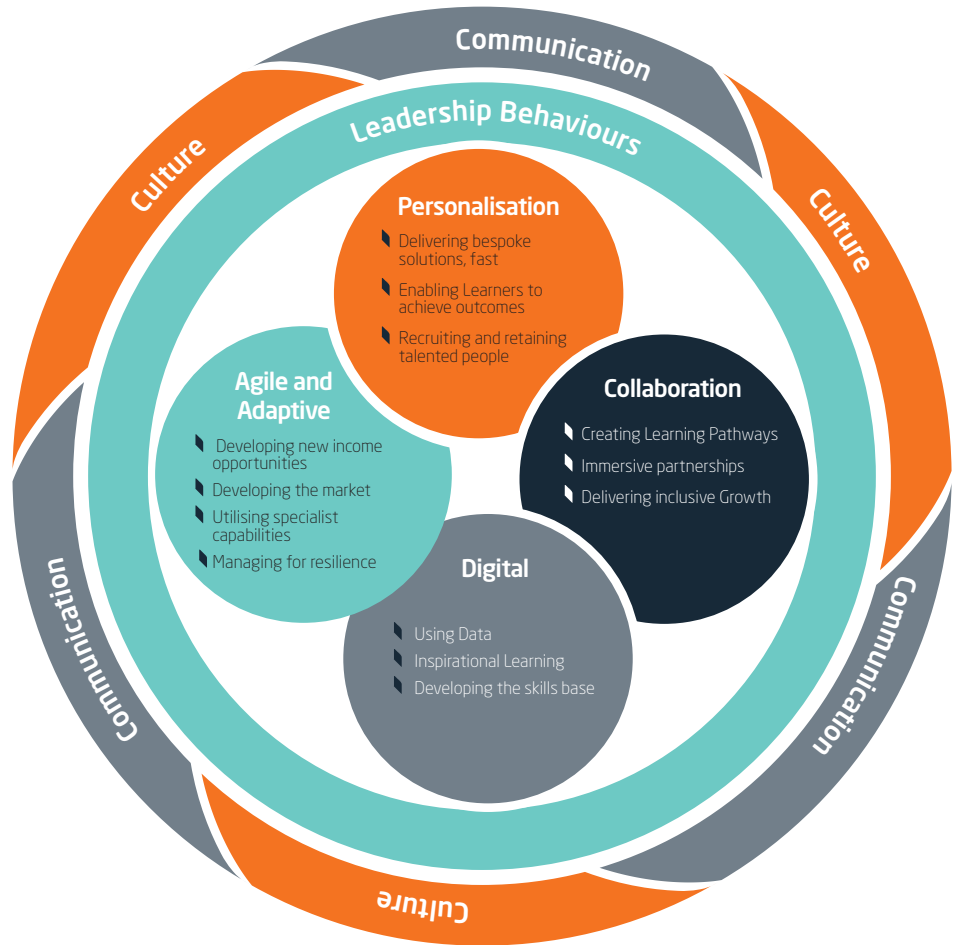


Personalisation: Delivering the skills solutions that employers seek and the learning outcomes students want in a way that suits their individual needs.

Collaboration: Building the immersive relationships to create new learning pathways and delivery partnerships that best support our students, communities, and businesses.

Agile and Adaptive: Developing the specialist delivery capabilities to respond to shifts in demand and seize new opportunities quickly.

Digital: Ensuring that the College has the capacity and capabilities to keep pace with technological advancements to deliver for students and employers





Contextual Information

This IT Strategy recognises and aims to compliment other current national, College sector, and West College Scotland strategies, to create a hierarchy from the strategic to the operational levels. As can be seen, this positions the College IT Strategy 2021-25 at the more operational range within this context.

Strategic



Operational





Background Papers

- Digital Scotland - A Changing Nation: How Scotland Will Thrive in a Digital World (Mar 2021)
- Colleges Scotland - Our Digital Ambition for Scotland's Colleges (Sep 2020)
- West College Scotland 'Collective Ambition Pride and Passion, Inspirational and Innovative' Strategy (2019 - 2025)
- West College Scotland Digital Strategy (Nov 2020)
- West College Demographic Information (May 2020) 'Our College, Our Region'

Technology Drivers and External Trends



Technology changes and trends both in terms of what is available, and what is being adopted in the College sector, require observation and response, and the College will endeavour to lead in these areas where appropriate. Evolving solutions such as Virtual and Augmented Reality and Artificial Intelligence provide exciting opportunities to enhance the way we operate and provide learning activities. But also, ensuring the College is fully utilising current resources and solutions such as Microsoft Teams and One Drive cloud storage, can allow the College to improve Business Processes and be more efficient.

Ambitions relating to the evolution of the 'digital world' have been at the forefront of IT strategies for several years, and this is set to continue as we settle into a 'new normal' of blended learning and hybrid working. Expectations are that everyone interacting with College resources – staff, students, partners, and other College users – have access to a digital device allocated solely to them, and that resources can be accessed from anywhere, at any time, and from any device.

As a direct consequence of the Covid-19 pandemic and throughout 2020-21 and 2021-22, the College will have invested over £2m in procuring over 6,000 digital devices (Chromebooks, Windows Laptops, tablets, and other devices) for issue to students to support blended learning

and to tackle issues around digital poverty. The on-going management of these resources, their distribution, recovery, and replacement, for new students in future years, will also need to be fully considered to ensure continuity and longevity. Physical changes will also be required to campus locations to ensure they remain fit for purpose in any 'new normal' blended learning environments.

Increased adoption of cloud resources will continue to be a cornerstone for this demand for flexible access to resources. And this driver for change will see the College utilise both user side resources such as cloud software and storage, as well as infrastructure side resources such as platforms, servers, and services.



Changes in legislation have an impact on how the College's IT resources and services require to evolve. In recent years we have witnessed legislation changes such as GDPR. For the next few years, a significant area that will require focus, is how various European Union legislation is to be applied or adapted for a United Kingdom that has left the EU.

Scottish Government requirements also need to be encompassed in what we do. One of the areas that will require significant application of time and resources in the coming years is the continuation of work on the Scottish Government's Cyber Resiliency Framework as well as Cyber Essentials Plus accreditation annually.

Finally, as the College has set out an ambitious proposal to deliver new campuses in Greenock and in Paisley, it is essential that these facilities are designed from the outset to support and enable to continuing rapid change and evolution of digital services, in the widest possible context, and in a flexible and cost-effective manner, through the application of the principles established in Appendix A.



Strategic Aims & Objectives

IT Strategy 2021-25

The College IT Strategy aims are placed to compliment the aims of; the College's Digital Strategy, Colleges Scotland's Digital Ambitions publication, and other documents as set out above, by targeting objectives in the following areas:

1 - Enhancing the Student Experience

- We understand the importance of using current and emerging technologies in teaching and learning; and will strive to provide up-to-date resources for these activities.

2 - Enhancing Educational IT Services

- We recognise the value in embedding technologies that aid and enhance College services; and will target improvements in every area of the College.

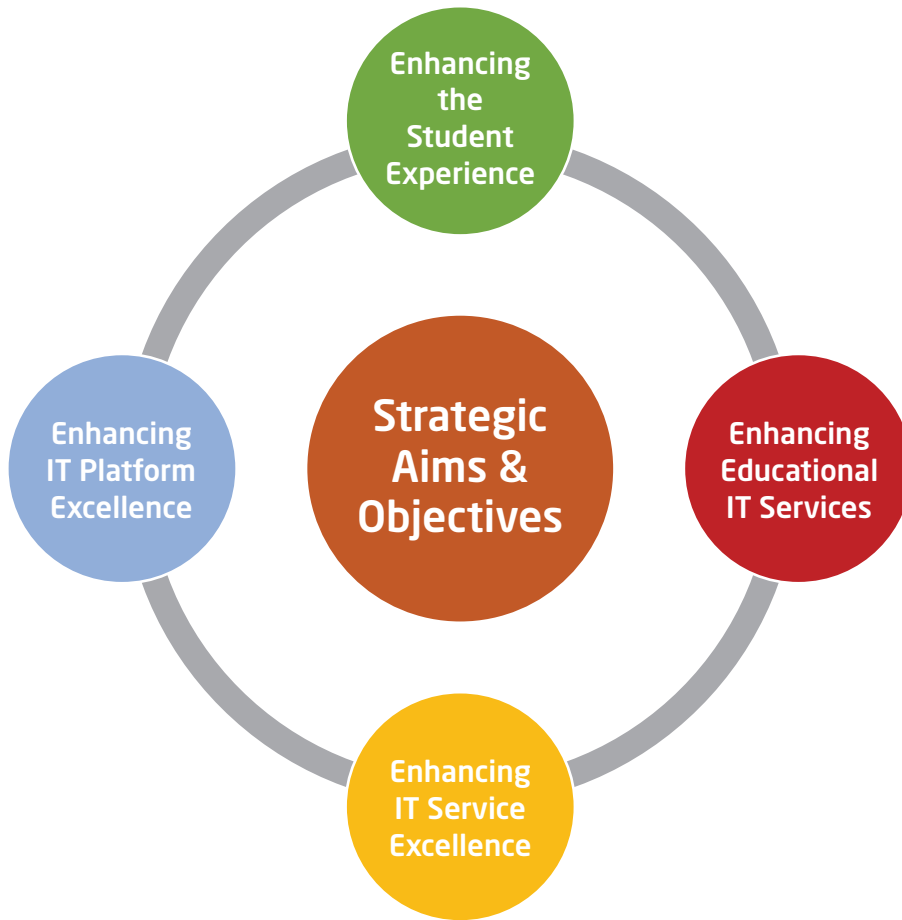
3 - Enhancing IT Service Excellence

- We will ensure the IT Services are readily available, effective, and efficient; and that they are provided in the most secure manner.

4 - Enhancing IT Platform Excellence

- We will develop IT Platforms and solutions that can support the College's digital ambitions and are flexible to accommodate future change.





Correlation to Other Strategies

Colleges Scotland:

1. Strategy and Direction
2. Network Infrastructure, Systems and Data
3. Learning, Teaching and Assessment
4. Capability
5. Partnership, Collaboration and Engagement

West College Scotland Digital Strategy:

1. Digital Delivery
2. Digital Capability
3. Digital Intelligence
4. Digital Infrastructure
5. Digital Resources
6. Digital Partnerships

Defining the Strategic Aims and Objectives

Within each of the Strategic Aims identified, a variety of Objectives exist, and coupled with the Targeted Outcomes, will form the basis of measurement to identify what success will look like during each annual reporting cycle. These will also be linked to the actual 'Action Examples' identified which will be replaced by the annual Operational Plans established by the IT Team in Section 5.0.

1

Enhancing the Student Experience

We understand the importance of using current and emerging technologies in teaching and learning; and will strive to provide up-to-date resources for these activities



Objectives	Action Examples
We will ensure that students are adequately equipped to fully engage with course activities.	Procure digital devices loan resource for students, addressing Digital Poverty.
We will support student use of IT resources available to them which have not been provided by the College.	Provide an infrastructure and services that support a bring-you-own-device (BYOD) model
We will have resources that accommodate the inclusion of immersive learning techniques.	Establish requirements and deploy provisions for alternative technologies such as, Virtual Reality (VR), Augmented Reality (AR), and 'Green Screens'.
We will collaborate across the College to explore potential developments of innovative teaching methods.	Identify opportunities for emerging and currently unused technologies such as, Artificial intelligence (AI), and telescopic cameras.
We will support the continuation of blended and remote learning models.	Develop teaching environments that allow for a mix of physical and virtual attendance.
We will have classroom-based IT resources that are current and fit for purpose.	Renew or update aging and obsolete resources, including the conclusion of the move to Windows 10 and Office 365.
We will equip teaching staff with IT resources that are current and fit for purpose.	Renewal of laptop equipment used by College's teaching staff.
We will increase the flexibility and availability of access to IT resources.	Identify potential usage of cloud resources as an alternative to current provisions, such as web-based software, application virtualisation, and virtual IT labs.
Targeted Outcomes	
Our students have access to the equipment required for their studies. We support Innovation and engaging teaching activities. We value collaborative working with colleagues.	We will increasingly accommodate personalisation. We can accommodate flexible approaches to learning locations. We have suitable on-site, mobile, and cloud resources.

2

Enhancing Educational IT Services

We recognise the value in embedding technologies that aid and enhance College services; and will target improvements in every area of the College



Objectives	Action Examples
We will use data to report on performance and allow for informed decision making.	Develop business intelligence and reporting solutions, such as PowerBI.
We will have integrated and automated systems and processes.	Identify opportunities for; further integrations using SQL Server Integration Services (SSIS), and automation using Power Automate.
We will increase the accessibility and availability of core College systems and solutions.	Migration of business systems to be hosted on cloud resources.
We will use available technologies to enhance processes and increase efficiency.	Identify opportunities for use of technologies that will free up resources, such as use of Artificial intelligence (AI) and bots.
We will collaborate across the College to explore potential developments in business processes	Introduce solutions such as a Customer Relationship Database (CRM) and a cross department helpdesk system.
We will support the continuation of hybrid and remote working models.	Develop meeting environments that allow for a mix of physical and virtual attendance.

Targeted Outcomes

We will take informed decisions based on a current understanding of the technology landscape.
We have efficient and effective systems and processes.
We have solutions available to support business processes.
We can accommodate flexible approaches to working locations.

3

Enhancing IT Service Excellence

'We will ensure the IT Services are readily available, effective, and efficient; and that they are provided in the most secure manner



Objectives	Action Examples
We will be responsive to service analysis and feedback.	Engage with the Quality Department and Student Association regarding feedback on use, availability, and functionality of IT resource.
We will use service data to inform colleagues on opportunities in their area.	Analyse Service Desk trends, to inform targeted training requirements within staff cohorts.
We will build upon the success of the student helpdesk, to deliver effective IT support services directly to all College students.	Extend the use of the Student IT Helpdesk system of "students helping students".
We will ensure that the security of College IT systems and services adhere to and are tested against recognised standards.	Continue year-on-year renewal of Cyber Essentials Plus certification, develop an action plan for the Cyber Resilience Framework, and introduce regular pen testing.
We will increase the security and resilience of College IT systems and services.	Introduce additional, and enhance existing, security and resilience measures, such as Multi-Factor Authentication (MFA), an off-site backup solution, and a Cyber Incident Plan.
We will expand our centralised IT systems administration and management solutions.	Expand the use of Microsoft Endpoint Manager to centrally support devices being introduced in the College, such as Android tablets.
We will manage College resources effectively and maintain accurate and complete records of College IT assets.	Introduce a dedicated staff role to co-ordinate and administer processes regarding the College's provisions of IT resources used by staff and students.
We will develop IT staff skills and knowledge in response to evolving technologies.	Engagement of IT staff in College CPD opportunities and keeping abreast of technology changes.
We will collaborate across, the College, the FE sector, and our external partners, in the pursuit of resource and service improvements.	Build upon relationship with Scottish Power in provision of recycled hardware.

Targeted Outcomes
<p>We are informed about service performance and feedback on opportunities for improvements.</p> <p>Our students have access to effective support services.</p> <p>We have secure and resilient IT systems.</p> <p>We have a systematic and adaptive approach to resource management.</p> <p>We will invest in training and development to remain current with developments in technology.</p> <p>We value collaborative working with colleagues and partners.</p>

4

Enhancing IT Platform Excellence

We will develop IT Platforms and solutions that can support the College's digital ambitions and are flexible to accommodate future change



Objectives	Action Examples
We will provide IT platforms that are current and fit for purpose.	Consolidate or retire obsolete and legacy systems and solutions, such as former telephony, and surplus equipment.
We will invest in an IT infrastructure that supports the College's digital ambitions.	Renew or upgrade aging infrastructure, server, and storage physical resources.
We will make the most of existing resources.	Repurpose current classroom-in-a-box (CIAB) provision, to fit better with current delivery models.
We will support activities in relation to new campus developments.	Provide details and advice on IT infrastructure requirements for new campuses.
We will increase utilisation of resources already available to the College.	Establish a program of activities to migrate user data stored on the College network into cloud storage provisions.
We will increase our adoption of cloud resources.	Identify potential infrastructure usage of cloud resources as an alternative to current provisions.
We will implement innovative use of technologies that will benefit College operations.	Explore how the evolution of the Internet of Things (IoT) can be utilised in the College.
We will set out to acquire additional investment in resource provisions.	Engage with the Scottish Funding Council (SFC) on IT infrastructure funding

Targeted Outcomes

We have appropriate platforms and solutions that underpin the organisation.
We will endeavour to maximise the benefits we gain from investment in our systems.
We will support delivery of new campus developments to ensure excellent IT facilities.
We have flexible and adaptive resources.
We work in an establishment with sector leading use of technology.
We will maximise the use of our available funding to deliver business needs.

Programmes and Projects



In the objectives detailed above, common threads (extracted from the Action Examples) can be seen, which can then be presented as indicative programmes of work to demonstrate the operational task progress that may be followed as we implement the identified actions.

The tables that follow should be read as an *indicative* approach to work progress, with the actual specific and measurable (SMART) plans being presented initially in annual IT operational plans and subsequently within the annual updates reported to the Corporate Development Committee demonstrating how they have helped support and deliver the Strategic Aims and Objectives

Key:

- 1 - Enhancing the Student Experience ●
- 2 - Enhancing Educational IT Services ●
- 3 - Enhancing IT Service Excellence ●
- 4 - Enhancing IT Platform Excellence ●

	Year 1	Year 2	Year 3	Benefit
Equipment and on-site resources	Procure digital devices loan resource for students.	Top-up digital devices loan resource	Top-up digital devices loan resource	Appropriate and effective IT resources
	Audit infrastructure and services support of BYOD (Bring Your Own Device)	Renew/upgrade infrastructure, server, and storage resources.	Renew/upgrade infrastructure, server, and storage resources.	
	Teaching staff laptop renewal	Classroom PC renewals	Classroom PC renewals	
	Recruit Resource Administrator and align role with current processes.	Consolidate software records.	Audit and expand hardware records.	
	Retire legacy telephony & HR systems.	Retire classroom 'teacher PCs' Recover staff PCs where staff now have laptops.	Consolidate or retire remaining obsolete and legacy systems.	
	Repurpose current classroom-in-a-box (CIAB) resources.	Repurpose replaced Teaching staff laptops.	Repurpose recovered staff PCs.	
	Engage with SFC on funding	Liaise with Scottish Power on potential for further recycled hardware	Liaise with other external bodies on potential for recycled hardware.	
			Support IT infrastructure requirements planning for new campuses.	
Innovation in the use of Technology	Establish curriculum requirements for VR, AR, and 'Green Screens' and identify pilot use.	Procure and deploy initial VR, AR, and 'Green Screens' resource for pilots.	Assess feedback from pilots, and Procure and deploy VR, AR, and 'Green Screens' resources for further rollout.	Innovative and engaging teaching activities, and operations
	Establish curriculum requirements emerging and currently unused technologies and identify pilot use.	Procure and deploy equipment resource for pilots.	Assess feedback from pilots, and resources for further rollout.	
Use of Data, and Business Processes & Systems		Establish support requirements emerging and currently unused technologies and identify pilot use.	Procure and deploy equipment resource for pilots.	Well informed and efficient processes
	Identify potential uses for PowerBI, agree pilots, and build reports and dashboards.	Assess pilot feedback and adjust reports and dashboards.	Rollout use of reports & dashboards built in PowerBI and identify more potential uses.	
		Identify systems integration and automation requirements, build solutions, and release for user acceptability testing (UAT)	Assess initial feedback, adjust solutions as necessary, and release for wider use.	
	Introduce new helpdesk solution to IT Service Desk and Student IT Helpdesk	Assess feedback from initial IT teams use and adjust solutions, as necessary. Identify Estates and Innovative Learning use, build functionality required, and release.	Assess feedback from Estates and Innovative Learning teams use and adjust solutions, as necessary. Identify further departmental requirements.	
	Analyse Service Desk trends, and report on targeted training requirements.	Release survey to obtain feedback on use, availability, and functionality of IT resource.	Embedded regular analysis and feedback in BAU (Business as Usual).	
Cyber Security and Resilience	BAU annual Cyber Essentials Plus re-certification	BAU annual Cyber Essentials Plus re-certification	BAU annual Cyber Essentials Plus re-certification	Reduced cyber security risks
	Initial self-assessment against Cyber Resilience Framework, establish regular reporting, and build action plan.	Actions required to improve scoring against Cyber Resilience Framework. Introduce regular pen testing.	BAU with rolling action plan and reporting cycle	
	Pilot use of Multi-Factor Authentication (MFA)	Roll out Multi-Factor Authentication (MFA)	Identify further uses for Multi-Factor Authentication (MFA)	
	Audit backup requirements. Research off-site backup solutions	Introduce off-site backup solution.		
	Review IT Team structure	Implement IT Team structure changes		
Cloud Resources, and Off-site Activities	Develop meeting environments for a mix of physical and virtual attendance.	Develop teaching environments for a mix of physical and virtual attendance.	Rollout hybrid environment setups identified.	Flexible, adaptive, and easily accessible resources
	Identify curriculum IT resource requirements that may benefit from cloud resources use, and explore options	Create/procure cloud resources - for example, web-based software, application virtualisation, virtual IT labs - release for initial user acceptability testing (UAT)	Assess initial feedback, adjust solutions as necessary, and release for wider use	
		Identify options for migrating business systems to the cloud.	Plan for business systems to the cloud	
	Migrate user 'personal data' to One Drive.	Migrate network share data to online SharePoint.	Migrate Staff Intranet from on-prem to online SharePoint.	
	Identify options for migrating IT infrastructure to the cloud.	Migrate IT infrastructure elements to the cloud		

Performance Management, Reporting and Governance

Performance Management

Specific SMART targets will be set out in yearly Operational Plans, having been generally derived and extrapolated from the objectives set out in this strategy in Section 4.0, and considering any additional influencing factors present at that time. Performance will be measured against the targets detailed in Operational Plans, through recording of updates and progress through the Pentana system.

IT Management Team

The IT management team is responsible for:

- **Instilling within the wider IT team the values and beliefs set out in this Strategy.**
- **For interpreting it at an operational level.**
- **For creating an appropriate departmental culture.**
- **For effectively using the skills and competencies of our staff.**
- **For taking an executive role in the strategy implementation.**

Senior Management Team

As part of the Infrastructure Directorate, Senior Management Team (SMT) support and management is critical to delivering the IT strategy, particularly within the areas of cross-college collaboration, funding, control of technical diversity, security, and compliance.



Reporting

The West College Scotland *Digital Strategy Group* will monitor and review progress of the IT Strategy. Feedback will be provided in relation to any aspects which touch upon or influence the IT Strategy to ensure it remains responsive to end user and curricular needs. This will communicate progress and make recommendations for change to the Senior Management Team and the Corporate Development Committee where appropriate.

Governance

SMT will receive regular reports on the overall status of IT operations in parallel with the reporting on the overall Digital Strategy.

The Corporate Development Committee will receive regular monitoring reports in accordance with its meeting cycle. An annual update on progress in relation to the IT Strategy 2021-25 will also be provided.

People Planning



The College has a People Strategy in place with established policies and procedures to support this in relation to Staff Development, Training and CPDR (Continuing Professional Development Review) procedures which the IT Team will continue to access as required by the College HR and Organisational Development teams.

It is recognised however, that in the fields of cyber security, resiliency, and business continuity, that the threat landscape is both changing rapidly and extremely dynamic and therefore requires constant vigilance and an ever-evolving skillset to ensure that the College remains well positioned to address new and emerging threats. College IT structure, operations and resource will therefore be kept under continuous review to ensure the service is in the best position to meet these challenges.

The provision of specific IT training is also recognised in this strategic plan, with several key objectives:

- The Strategic plan will determine the corporate IT direction of travel, and within the five-year lifetime of the IT Strategy, emerging technologies will be identified, and any training need associated with these will be recognised and considered.
- Training will be co-ordinated to ensure that skills and expertise gained will not be underutilised and therefore meets current and emerging business need, aligning with the emerging programmes, projects and objectives identified through the life of this strategy.
- An appropriate budget will be utilised to ensure training can be provided where required and in advance of need.
- The provision of free training by suppliers during the implementation or upgrading of any new system will be taken up whenever possible.
- Training will be undertaken to agreed levels of expertise in any system, whether general, intermediate, or advanced, with certification as appropriate.
- Mentoring opportunities within the team, both formally and informally, will be explored, particularly in relation to the Student IT Tech team.
- Individual training need will be identified as part of the CPDR process.



Summary

The IT Strategy is published to provide a 'road map' of intended direction and objectives over a 5-year period in relation the provision, operation, and development of West College Scotland's IT Strategy, resources, and services.

In preparing this IT Strategy, the College has reflected upon progress achieved through implementation of the previous IT Strategy, the impact of the Covid-19 pandemic and the ever-increasing reliance on technology to inform all that we do and a push towards the delivery of personalised services for both students and staff.

This Strategy complements and integrates with all other College strategies and ensures the drivers and principles that shape overall service provision are always at the fore.

We will also ensure that appropriate staffing resources are in place, are continually developed, and will adapt to meet the ever-evolving requirements to fulfil the Strategy aims and objectives.



Appendix A

Principles that Support IT Decision Making

The following well established principles form the foundations for the IT Strategy 2021-2025. The College will review and update these annually where required so that new services and projects are evaluated against a relevant set of principles that reflect current technology trends and drivers.

Designed to Support the Needs of Students, Lecturers, Staff and Partners

The explicit purpose is to provide systems and services that are, ultimately, personalised and aligned to the needs of users - students, lecturers or other staff who support teaching and learning as well as partners and stakeholders. The implications are:

- Ensure, by using as many mechanisms as possible, that there is an understanding what our customers want, and that feedback is gathered on whether the services meet their needs.
- Be open to new ideas and willing to support innovation in all aspects of our services.
- Be flexible in the approach to service delivery and accommodate diversity where necessary

Easy to Use, Easy to Access and Easy to Learn

Any system provided, either via third parties or developed in-house, should provide a great user experience. When selecting and designing systems:

- Test thoroughly for ease of use to ensure a consistent experience regardless of device or operating system.
- Involve system users throughout projects, with a focus on design and functionality from an early stage.
- Increasingly design self-service into our portfolio so that users can access commodity services like storage, pass word resets or cloud compute power without IT team intervention.
- Consolidate systems where appropriate to remove underlying complexity, costs and further simplify maintenance and investment propositions.



Resilient

As dependency on IT increases it is essential that all services have a suitable level of resilience.

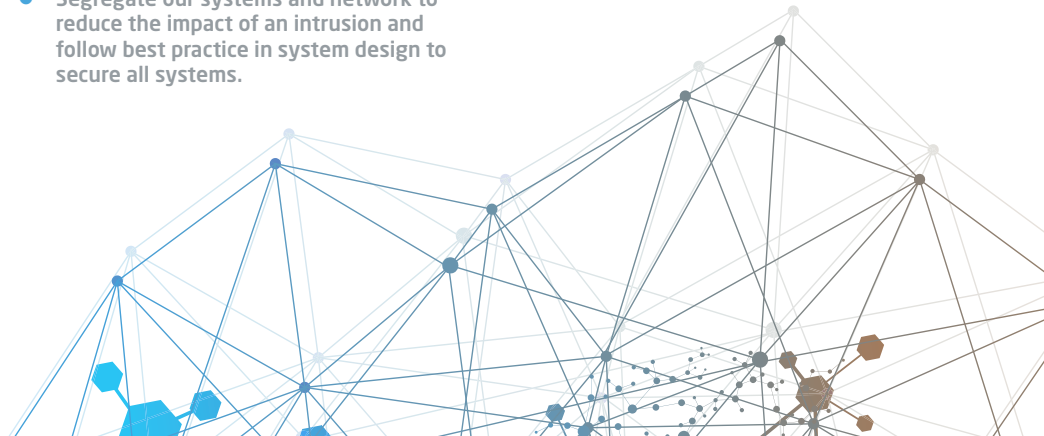
- Ensure all teams work closely together so that there is an understanding of the dependencies between different systems and services, particularly across curricular, areas to avoid fragmentation or duplication.
- Build on the investment that has been made in our monitoring capability to spot and fix issues before they affect services.
- Design appropriate levels of resilience into all our services from the outset recognising that this may be more expensive.
- Use cloud services where appropriate to achieve the maximum possible resilience.

Secure

Ensuring that the information held is kept secure is key to keeping the College running, avoiding reputational risk and ensuring that we can continue to host information in areas that handle sensitive or personal data. This means that we must:

- Ensure that all systems, services, and devices are secured to an appropriate level and that data is assessed for risk and managed accordingly.
- Segregate our systems and network to reduce the impact of an intrusion and follow best practice in system design to secure all systems.

- Provide suitable training to all College staff handling sensitive personal/ commercial data or developing systems that handle such data through the established College Data Protection Group, GDPR and DPO
- Maintain legal compliance in all areas of Information Security, including Data Protection and develop policies and procedures, using the recommendations of ISO 27001/2 (Information Security Management Systems) as a baseline.



Energy Efficient

The College has challenging carbon reduction targets to meet, and IT equipment contributes approximately 20% of carbon production across the College. We must therefore:

- **Work closely with the Sustainability and Estates colleagues to ensure compliance with carbon reduction activities and take advantage of schemes aimed at reducing our carbon footprint.**
- **Recycle all old equipment and provide services for easy recycling to other areas of the College.**
- **Reduce the energy footprint of the IT estate by consolidating workloads where appropriate, offering virtualised servers to replace old hardware and by considering energy use in all procurement activities.**

Agile and Easy to Maintain

Technology changes rapidly and the pace of change is accelerating. Users' needs can also change rapidly either because of changes in the external environment, (i.e., new legislation), or due to internal changes of business processes. The College must, therefore, have systems that can be quickly and easily adapted and have a short development cycle, ensuring that system maintenance effort is kept to a minimum, maximising staff time availability for work that adds value to the end users.

- **Iterative development combined with comprehensive business analysis is the standard approach to system developments, avoiding drawn out projects that deliver little or no value.**

- **Continually review the technology and techniques used to deliver services, recognising that rapid change is inevitable and therefore we must keep pace and not rely on existing technologies to always be relevant.**
- **Architect and engineer systems so that they can be easily expanded or changed. This means designing for maximum flexibility in both the technology and the processes it supports using methodologies that allow for rapid reaction to changing circumstances.**
- **Wherever possible, use a 'standards based' approach which will help to make systems easier to integrate and interoperable.**
- **Ensure we are aware of trends and changes in technology, regularly reviewing systems and processes to ensure they remain fit for purpose.**

Cost Effective

Budgets remain under pressure and the need to ensure the investments made in technology are as cost effective as possible is recognised. We must therefore:

- Work closely with Procurement to ensure best practice when making purchases including accessing relevant frameworks and national deals that the College can leverage.
- Ensure advantages of economies of scale in procurement are implemented.
- Ensure consideration of the total cost of ownership, which includes maintenance, energy, staff costs, licensing, external consultancy and consumables for any new service or technology purchased or provided.
- Monitor expenditure closely to ensure a deep understanding of costs and where opportunities for cost reduction exist.
- Negotiate robustly with suppliers when contracts are renewed to ensure the best price.







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