



IT Strategy (2016-2018)

The Vision

(document #1 of 2)





Introduction

The latest ICT Strategy lies within a very uncertain period for local government. Increased financial pressure will continue to be a large influence on the Council's plans for service provision, and is likely to surpass the life of this strategy.

All Council services depend on ICT systems in some way. In some cases, this will be obvious and will be directly used to provide services to the public, and in other cases it will be less visible and will play a supportive role behind the scenes. However, what's clear is, when it is used correctly, ICT is a critical tool and an enabler when it comes to improving services and reducing the costs of service provision. This strategy builds on the success of the previous strategy, but rather than placing the technology at the heart of the strategy, it uses principles and themes to ensure that the business leads the strategy and the technology provided to support this. A consultation has been held with the IT Governance Board, Heads of Department and Directors, and IT Service staff in preparation of the Strategy.

The ICT Strategy forms the Council's general ICT requirements, while supporting the work of delivering some of its strategic aims:

- **Putting the people of Gwynedd at the heart of everything we do**
- **Improving engagement with communities on the care challenge**
- **Improving integrated working focusing on what matters for individuals**
- **Preparing the care workforce to meet the new way of working**
- **Promoting the use of the Welsh language in Gwynedd**



The Purpose of the Strategy

The purpose of the IT Strategy is to create a vision of how technical developments and improvements can meet the Council's strategic plans. The strategy reviews the success of the previous strategy and examines the challenges facing the Council during the next three years, whilst highlighting that these strategic plans could change should the Council's strategic priorities change.

The strategy has been split into two documents:

- IT Strategy 2016-2018 the vision — this is a document which introduces the strategy, looks retrospectively at the successes of the previous strategy, introduces specific themes which are common to many developments and sets robust principles which are core to developing the IT service, which in turn improves the Council.
- IT Strategy 2016-2018 realising the vision — this document builds on the introduction provided in the vision by providing details on activities within the themes, and providing further details of the benefits and the efforts made to complete these activities. As well as arranging the activities of specific themes, the themes themselves are paired with the objectives of the Council's strategic plan.

The plans within the strategy provide a service which will continually improve the Council, using technology to support effective and efficient services for the people of Gwynedd.

New activities are focused upon in the strategy, and it does not refer to the broad range of activities already supported by the IT service. The day to day activities include supporting 2,550 members of office staff and the technology they use, which includes the following, but is not limited to the list below:

- Computers and laptops
- iPads, mobile phones and desk phones
- Printers
- Computer software
- Security
- Developing and supporting specialist software
- Broad area, local area and wireless network connections
- Helpdesk Activities
- The Data Centre

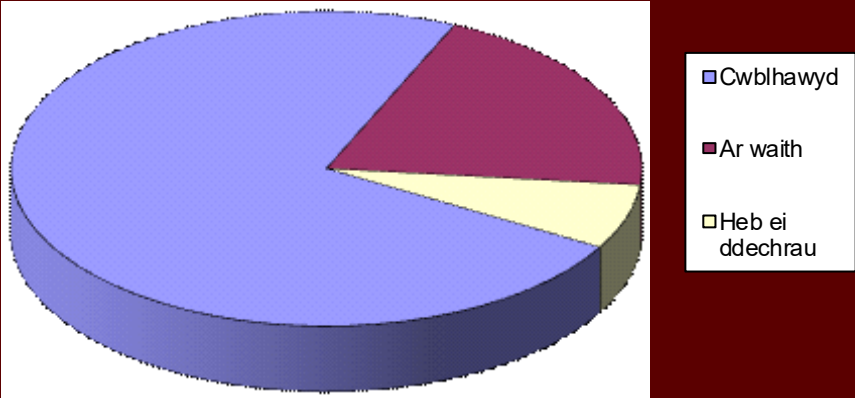


The success of the previous strategy

Amongst the 48 projects noted in the previous strategy, 40 have been completed, six are ongoing and two have not yet been commenced. The ongoing ones are expected to be completed by the end of 2014/15 and the two that have not yet been commenced need to be re-assessed. In addition, other strategic projects which were not originally identified in the previous strategy have been completed in the same period. This success not only provides a basis for service provision and strategic ICT projects for the future, it also instills much confidence in the Council's ability to provide its ICT programme as projected, while acknowledging the pressure this places on the ICT service itself. This confidence is further supported given the large number of specific service projects which have also been completed within this period.

48 tasks identified in the Strategy

- 40 completed
- 6 ongoing
- 2 not yet commenced





The Progress of the Previous Strategy—the impact

The previous strategy has set the stage to introduce IT services for the future, mainly because it has concentrated on strengthening the infrastructure and development processes. Although they are technical items, the changes made have had a positive impact on the service, and thus has improved the user experience.

Establishing the new data centre and server virtualisation has made a huge difference, and has changed the situation from one of frustration and a flat period of being unable to work on systems which serve the public. The availability of some of our largest systems was poor and often they were not available to the user because of performance issues or a problem involving one piece of equipment failing and affecting the entire system. Server virtualisation has improved system performance, but they operate across several servers, and if a problem arose on one, the load would be split across the remaining servers while the engineers solve the problem. The impact on this is that the availability of these systems are now near to 100%, and being unable to access the server would be a complete exception. Thus, this offers a much better service for the people of Gwynedd. The systems that experienced these benefits were systems that support benefits, council tax and housing activity, and the changes have had a positive impact on all Council systems.

As well as the example used above, the changes made to the infrastructure go even further, but the impact is similar to what has been explained with system availability improving. The new data centre is much more resilient. Previously, we would lose services several times a year due to severe weather affecting the electricity supply, but the provision that the new data centre offers has verified this situation and also offers a resource which is located in a secure site and is clear from any flood risks and is much more effective in terms of energy use.

The developments of the data centre and the virtualisation, together with large improvements to the network with the adoption of the PSBA national network, raises the standard of service continuity and our ability to restore our systems following a failure, and to maintain services in line with our service level agreements.

Re-structuring was an inevitable part of changing our organisation to support a service which had leaped from using technology from the age of the main frame computer to the new provision, and in doing so, establishing the cloud team to administrate the data centre and to evaluate future changes in light of cloud services.



The Progress of the Previous Strategy—the impact

There were several other developments in terms of the infrastructure which have contributed to delivering secure and resilient IT systems. The connection code's security standards (now known as the PSN (Public Secure Network)) changes from year to year, and there is a commitment in the strategy to achieve its accreditation, but there were other factors in the strategy which contributed to achieving the accreditation, things like establishing a new firewall, changing from Windows XP to Windows 7 and establishing a Microsoft Office contract. In addition to this, the data storage system was upgraded and thin client computers were established.

Several changes have been made to our software evaluation and programming arrangements, while reviewing the development standards and standardising the .NET development language. Standardising one specific language makes the workforce more flexible and we can change priorities easier by increasing or cutting down on the number of developers, as everybody has the same skills. The way in which projects were run was strengthened, by moving from the traditional development cycle of creating a specification, and then testing against the specification, and then presenting the solution to the client, namely the process that could take months before it comes to fruition, and often, because of a misunderstanding or a change in needs, what was developed did not meet the client's full needs. By now, the unit uses the "Agile" development cycle, which is a system of working closer with the client, developing within short periods of time and displaying what has been developed in relatively short pieces. In doing so, it is less likely that the solution will not meet the client's needs.

Another change which was introduced during the life of the previous strategy was the establishment of the role of the account manager, which is a service which has become worthy of its place in the Council organisation very quickly. The purpose of the role is to collaborate with Council departments and the IT service to use technology to improve the services supplied to the people of Gwynedd. The infrastructure unit maintains a strong stage for secure and resilient services, the development unit creates solutions to correspond with the client's needs, but the role of the account manager is to educate the client on identifying how technology can transform their services and to assist them to explain their needs in detail in order to create a solution.

A full summary of how the previous strategy was completed follows, but in simple terms, the strategy has been successful in setting a foundation to maintain secure and resilient services, by transferring the needs of the departments into technical solutions.



The Progress of the Previous Strategy—completed items

Reducing the use of energy – Free cooling air-conditioning units were installed in the new data centre in May 2010. Citrix xenapp infrastructure has been installed to serve thin clients which uses much less electricity than a PC. 640 devices have been installed thus far.

Comply with the Connection Code – The connection code has now changed to the PSN (Public Sector Network). Gwynedd Council has complied throughout the life of the strategy.

Develop and implement formal Service Level Agreements – formal service level agreements are implemented with any external contract where the IT Service is a supplier.

Develop and implement capacity management processes – since server virtualisation, capacity management is much more effective, enabling us to prioritise our resources based on how often they are used.

Disaster Recovery – A virtual server environment has been installed in the Headquarters and in Penrhyn since March 2010. The site recovery manager software enables us to move the business systems onto the virtual server to Penrhyn if there is a disaster at the Headquarters.

Accept a contract and implement the Services Communication Plan – an account manager was employed in 2010 to take on the role of communicating two ways with services, with a second member being employed in 2012. The success and popularity of the role with departments means that through restructuring, we will add another resource in Q2, 2016-17.

Produce a necessary ICT skills portfolio and a training action plan, and review it annually - this was originally undertaken, but it was not kept up-to-date.

Service continuity to be considered as an integral part of any upgrading project or procuring a new system – all new provisions following the Strategy have contributed to the introduction of a resilient service. In the years since implementing the Strategy, a new phone system, new printers, e-mail, an SQL database, a computer room and all servers have all been undertaken in a resilient manner, these are all new projects or are significant upgrades.

Review existing support processes including staff levels and locations – the structure of the Service was reviewed in 2010, undertaking a considerable amount of regulatory changes and changes involving locations. The previous Strategy referred to co-locating the service at the Headquarters in Caernarfon, but that the service's imbalance in other locations needed to be addressed. The service has now co-located in Caernarfon and services such as servers which were local at area offices are now co-located at the Headquarters.

IT Support for Members – 72 of the Council's Elected Members have received an iPad and use the cynghorydd@gwynedd.gov.uk e-mail address.

The Structure and Levels of Resources – Re-structuring was undertaken in May 2011.

Develop a template for a needs and evaluation standards specification – a “New project request” template has been formed and is being used.

Ensure that all supported adjustments allocate an owner, a server and a senior – this has been incorporated into the software register

Review the development staffing structure and work practices – a full review has been undertaken which led to re-structuring the unit. The work system has also changed, and the development teams are starting the “Agile” development cycle rather than the traditional method, namely “Waterfall”. This means that we work with the client more consistently and produce pieces of work often and are therefore more likely to produce work which meets the client's needs.



The Progress of the Previous Strategy—completed items

Review development standards – the new structure includes the role of “Technical Leader”, these do not manage staffing resources, but it is an acknowledgement of Senior technical skills and the group is responsible for reviewing and setting development standards. In order to facilitate support, the developer has re-trained them in the .NET programming language, and every system is built using this language, thus moving away from the expertise of a small number of people in marginal technologies.

Code changes management and monitoring procedure to be adopted for all Council systems – a change management procedure is supported by the Subversion change management software, which is renowned software within the software industry.

Establish a central register, listing every software contract and reviewing the existing support arrangements – a comprehensive software register has been created and is being discussed with the departments care of the account manager, by looking at a way to reduce the number of supported systems. A small amount of progress has been made here, and adding to the account management resource would strengthen our ability to reduce the numbers of systems by undertaking joint reviews with departments.

Establish a CRM Strategy, implement and review the recommendations - this was undertaken as part of the Customer Care Strategy. It includes a specific chapter on CRM.

Create an overview of the Council's needs and applications – this has been undertaken by the business transformation team as part of the individual projects established to transfer services to Galw Gwynedd. The route follows the original business case.

Produce a GIS enterprise strategy and an action plan – strategy has been prepared and adopted.

Information Service to create a business plan for EDRMS viability – the business plan has been prepared and accepted. The EDRMS provision is now underway.

Review ERP and the possibility of adopting it in Gwynedd – regional work was undertaken on adopting an ERP, this was done through a report prepared by Deloitte in a review in 2011. Internal work was also undertaken on the payroll system/human resources and it was found that the existing provision was adequate.

Revamping the Server Room – Completed in May 2010

New Data Storage System – Two SAN Hitachi 2300 have been installed in March 2010. They have a capacity of 53Terabytes of data. Provision has been upgraded in July 2015 with the Dell EquaLogic solution which has increased the capacity to 116TB.

New broadband area network – New Broadband network supplied through Welsh Government.

Review benefit case for the convergent voice and data solution, and for it to be approved and implemented – the first phase of this project was completed at the end of 2015.

Procurement and implementing a new firewall – New firewall installed in 2011, with an upgrade for school access in 2014.

Establish a system to ensure that each computer, PC and laptop connects to the Council network at least once every three months – system established and is currently being verified through an internal audit report. This system is currently being reviewed to see whether it is possible to find a more effective way of providing it.

Audit the use of thin client technology so that it is possible to extend the life of machines – a citrix xenapp environment was established in 2011 and devices are consistently installed, 440 by now, had raised to 800 by the end of March 2014

Evaluate Windows 7 and migrate users to it from 2011 – Windows 7 going out on all laptops since 2010 and all PC's by 2012. Upgrading the computers which had already been established was a project which was completed in Q4 2014/15.



The Progress of the Previous Strategy—completed items

Re-assess the benefit case of changing from MS Office to the alternative open source choice – with the help of a regional project manager, a detailed study was undertaken across north Wales of using open source technology rather than Microsoft Office packages. The conclusion of this work was a recommendation that we continue with Microsoft Office based on costs and productivity.

Review and implement a network printing policy – this project was completed in July 2015, with desktop printers being replaced by multi-purpose devices, with approximately 3 to 4 located on each floor in the offices in Caernarfon, Dolgellau, Pwllheli and in Ciblyn.

Implement a new video-conferencing solution – Rooms with video-conferencing equipment were installed in Dolgellau, Pwllheli and the Headquarters. The ability to video-conference has been added to Hywel Dda Chamber during the summer of 2015. There is an intention to extend the provision during the period of the new strategy.

Audit the benefit of moving to an alternative content system – the Contensis content system management has been procured and installed, with the website in its new form being launched in 2014. A regional project was undertaken to procure the new content system management, with Denbighshire and Flint having the same system. Conwy has now joined.

Review and implement a system restoration timetable under the instruction of the ICT Governance Group – this task is being undertaken locally in the departments through the sponsorship of the project managers

Documenting a benefit case for procuring additional software to facilitate the development of interactive processes on the website – Ebase software has been procured through a tender competition in 2011.

Web services to deliver accessibility to the AA compliance level by 2010 – the accessibility to the AA compliance level was completed in 2010.

Take an active role in the established working groups – Gwynedd Council was the hosting authority for the Regional Collaboration Project Manager who was responsible for a work programme of collaboration projects across North Wales. Every project was supported by a mixture of strategic and technical staff, before the emphasis on collaboration faded. In addition, the Council is being represented on several established working groups on a national basis; SOCITM, PSBA and WCCIS, all of these are influential organisations or working groups.

Identifying and developing new collaboration opportunities – the North Wales Information Technology Heads group continues to meet and identify collaboration opportunities wherever practical.



The Progress of the Previous Strategy—ongoing items

Implement a prioritisation model for all Council ICT projects – a plan is in place where development plans are evaluated and prioritised internally based on a short business case. Any disagreement is referred to the IT Governance Group. This process has not been effective enough and is being reviewed in this strategy.

Review ICT project management processes and apply them to all ICT projects – IT projects follow the PRINCE2 methodology for internal projects. Small projects are Managed without the additional overheads. Historically, development projects have come under more robust project management than the infrastructure units. This is mainly down to a lack of, or incomplete work programmes. This strategy places a focus on reiterating the work programming element and project management will naturally be the next step.

Developing and implementing a formal Change Management process – a new management process being run through the change management module within the Helpdesk's incident recording system. This has not fully been completed and the change management is referred to in this strategy.

Pilot schemes using different methodology – the business transformation element has transferred to Customer Contact and since the service moved to Adults, Health and Well-being, the unit has been abolished.

Deciding on a methodology for Gwynedd - the business transformation element has transferred to Customer Contact and since the service moved to Adults, Health and Well-being, the unit has been abolished.

Documenting and gaining approval for the Business Transformation Strategy - the business transformation element has transferred to Customer Contact and since the service moved to Adults, Health and Well-being, the unit has been abolished.



The Progress of the Previous Strategy—incomplete items

Document, gain approval for and implement a new ICT procurement policy – this step was not completed. There was a valid reason of including this step initially, but it adds a specific process because communication was not happening between departments and the IT service. Steps are already in place to improve on the communication and the new systems procurement discussion should naturally occur as part of this.

Undertake a viability study for text message services – this was not completed and has been carried forward to the new strategy as one of the contact mediums under the heading “Facilitating Contact with the Council”.



Themes of the Strategy

The strategy is split into three themes, with each theme being paired with the objectives of the Council's strategic plan. Each individual theme refers to a specific cohort, including County residents, Departments which are supported by the IT service and the IT service itself.

The previous strategy had grouped the activities to three themes, Process, People and Technology and rather than pairing with these, the conclusion was reached that categorising the themes into these themes cause problems in trying to measure the success of the strategy.

The following themes weigh up how we will deal with the principles and provide an insight as to how the service will evolve to meet future challenges.

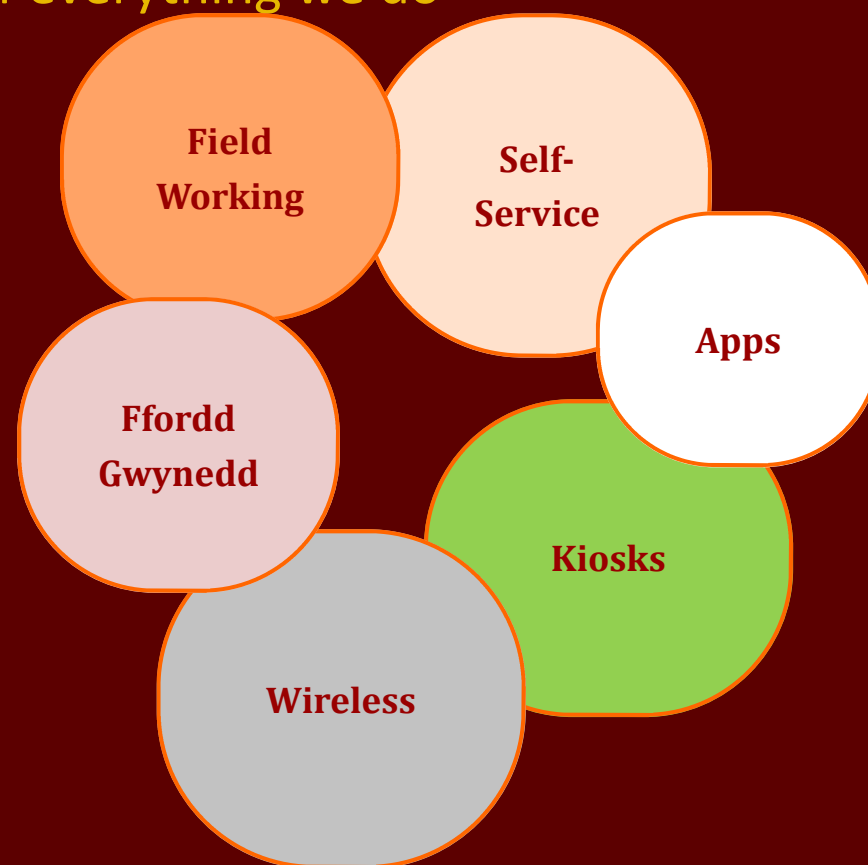
- 1. Putting the people of Gwynedd at the heart of everything we do**
- 2. Lead, support and make the service more effective**
- 3. Make the IT service more effective and efficient**



Putting the people of Gwynedd at the heart of everything we do

There are several ways in which we can use technology to bring Council services closer to our users. At present, only a handful of services are available via the medium of self-service and Gwynedd residents are expected to have online access to use these services. The aim of the strategy is to present a broader range of services via the digital medium and facilitate access to the medium for Gwynedd residents.

Another element of using technology to bring services closer to our users is by empowering our employees in the field with purposeful technology to make it more efficient. This can become prominent in a range of ways and in a range of service fields. Portable technology has offered different ways of working with infrastructure such as wireless and mobile data links to support this.

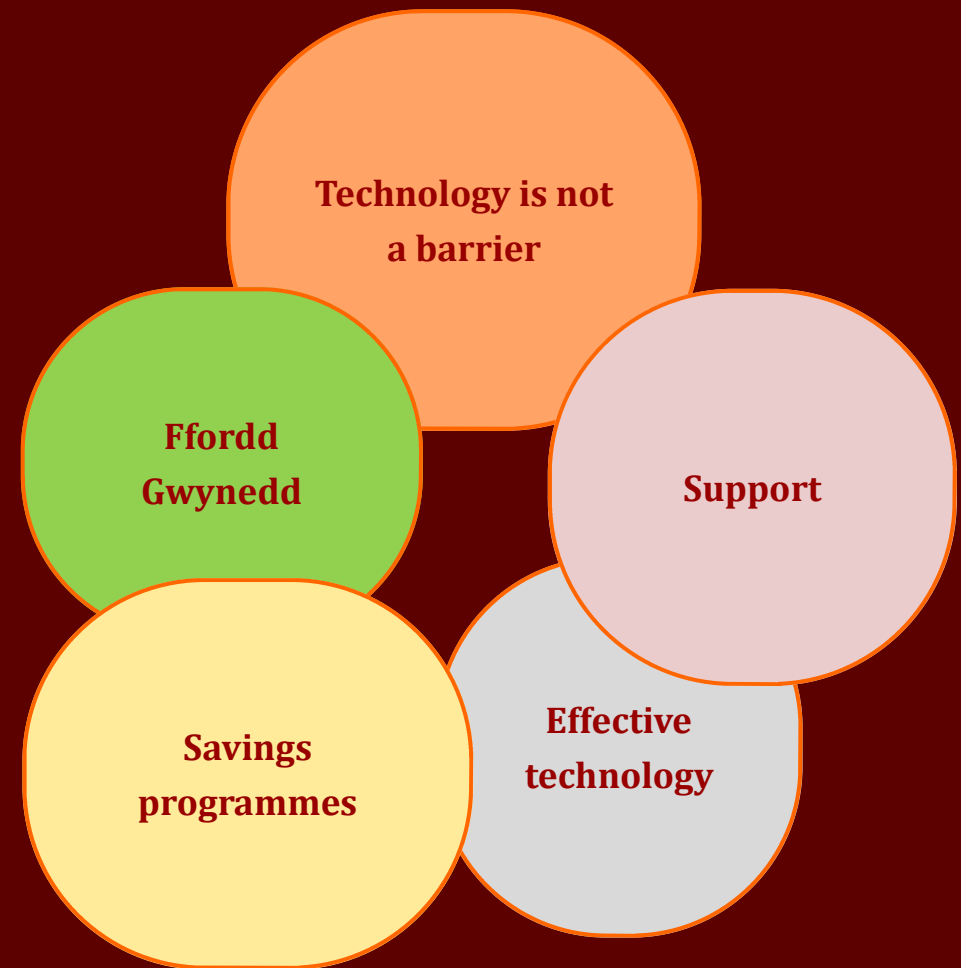




Lead, support and make services more effective

Introducing technology for effective use is a duty which is shared throughout the organisation. It would be inappropriate to deliver technology if it did not enrich the service, either through making the service more effective or efficient. This means that it is necessary to continue to build bridges between the business and the service which delivers and supports the technology. It can work both ways, the service asking for technology to support their plans, and the technological side offering solutions which can support the department's plans on the other hand.

Technology has the ability to make far-reaching changes, but the users need support to make the best use of what is delivered. The first, and most important challenge is to come to a conclusion as to what is being delivered. Delivering something unnecessary is a waste, but a piece of technology which makes a difference for the people of Gwynedd is necessary. Ensuring that its structure and presentation are high-quality will pay off.





Effective and Efficient IT Service

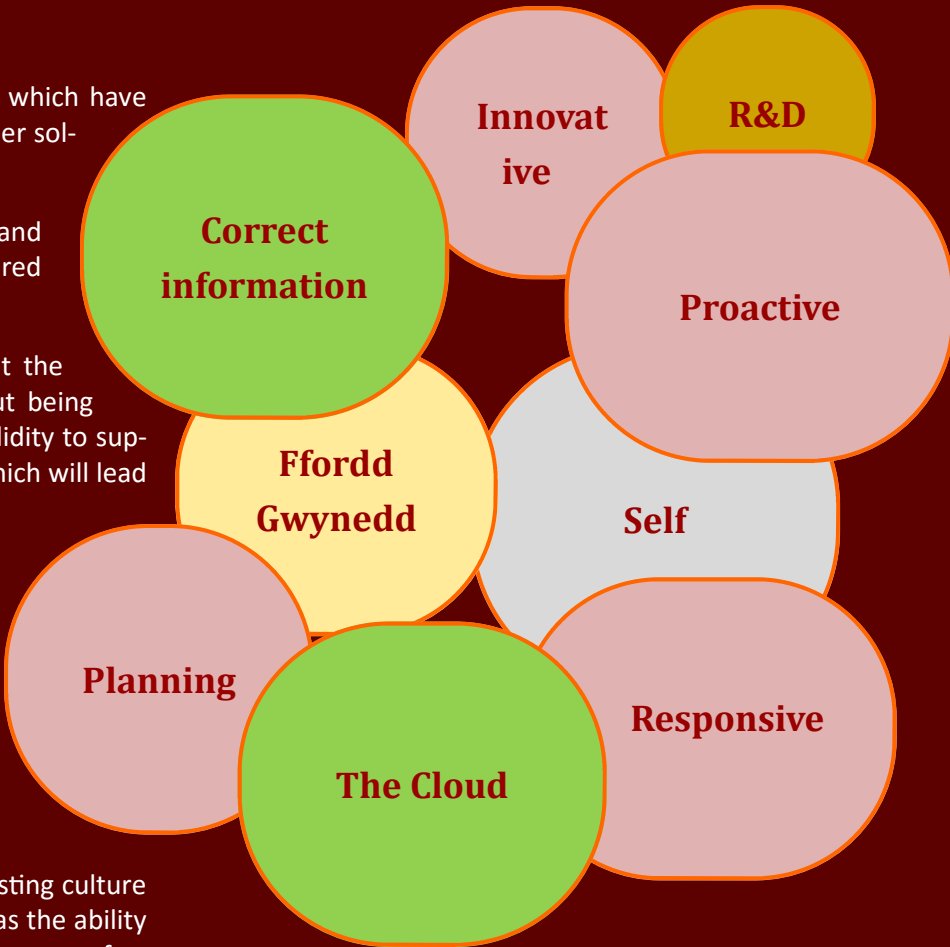
By now, most of IT service officers' time is spent focussing on supporting solutions which have already been delivered. This means that there is not enough resource to deliver further solutions without refraining from supporting some services or by adding to the resource.

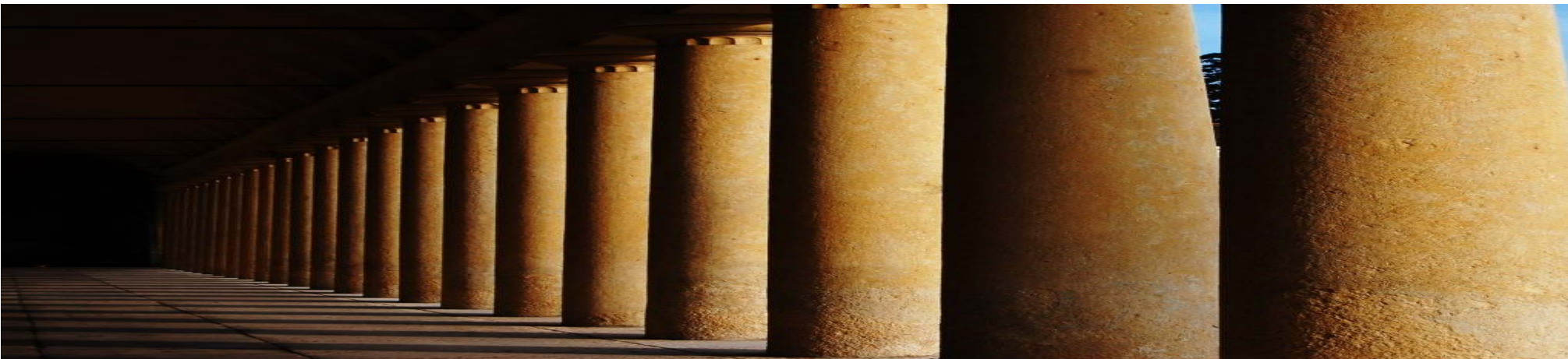
Vast research is required on a discipline which changes at an extremely fast pace, and unless the time is available to research it is inevitable that solutions which are delivered will have significantly aged before they can be active.

Not only for new solutions, but also to improve the systems and information that the Council already has. Council systems have evolved over many years, often without being challenged. Not only is there doubt about the accuracy of our information and its validity to support the business, but there are also opportunities to co-summarise entire systems which will lead to savings and an improvement in the standard of the information.

The IT service is required to evolve to meet the expectations of our internal and external customers to deliver a resilient and high-quality service. The nature of the service at present is responsive and most of officers' time is spent responding to requirements and problems. In order to free up officers' time to focus on developments and new challenges, it is necessary to improve by moving to a situation where we address problems before they appear, but naturally, it is necessary to support the service in a period where the Service is transforming, which brings about additional challenges.

The changes are far-reaching and involve a considerable amount of change to the existing culture by moving from a situation with elements of disorder to an organised service which has the ability to change direction to meet needs in the Council business and the challenging circumstances facing us while coping with a situation of having to do more with less.





Challenges and Principles

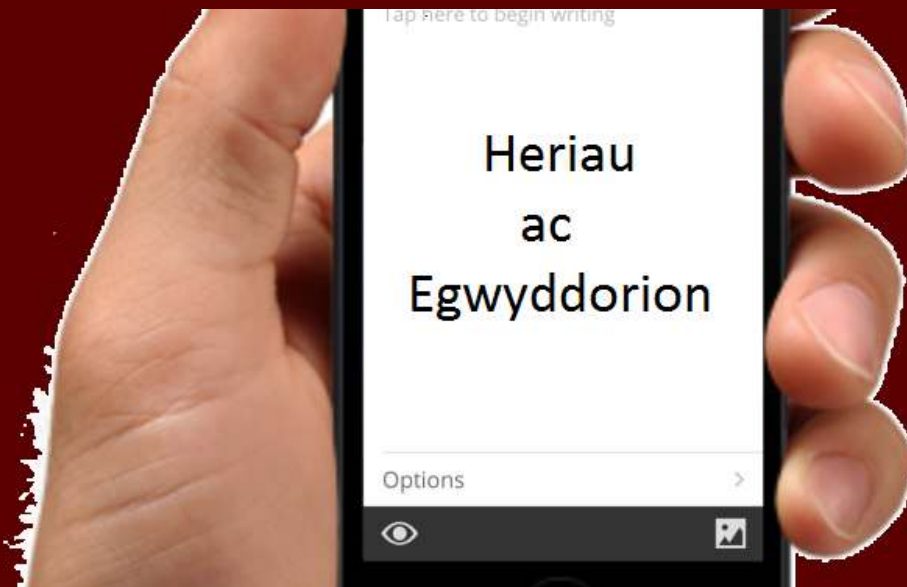
As well as presenting the strategy's activities within specific themes, principles have been formed which are core to the way technology is presented and what kind of technology is presented. These principles form the service's mantra and motivate its officers to make good and educated decisions about the service presented.

Many challenges are facing us as a Council, with prominent financial pressure affecting every aspect of the Council's activities. Due to this, efficiency, affordable investment and maximising the use of current assets are factors which will be considered when introducing initiatives associated with technology.

Principle 1 Technology and its supportive department should be flexible to meet Ffordd Gwynedd challenges.

Principle 2 Staff using technology should have the accurate technology to facilitate their work and appropriate skills to use the technology effectively.





Principle 3 Any change or review presented to a service needs to consider offering a digital channel as a method of introducing the public to the service. Any new system introduced will be expected to offer a digital channel to make the service more accessible to the public.

Principle 4 The current IT assets will be reviewed, rationalised and upgraded as much as possible to make the best possible use and to avoid waste.

Principle 5 IT patterns and aspirations which become apparent across a range of services should be treated as a corporate solution, or cross-authority/agency if appropriate.

Principle 6 Information technology should be flexible and secure, an enabler to delivering effective services, in an efficient manner. Technology, or a lack thereof, should not be a barrier.