Fujitsu recommends Windows.

All for learning. Learning for all.

intel Education

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FUJITSU

Creating opportunities for everyone.

Read more at fujitsu.com/uk/solutions/industry/education

shaping tomorrow with you

Most of us remember a favourite teacher, class or school. It's because what we learned, or the way we learned it, was so compelling that it has stayed with us throughout our adult lives. It's just one of the reasons we should celebrate education.

Education is all about those moments that inspire individual understanding, spark ideas or lead us in new directions. But it is also about bringing people together to acquire new knowledge. Some people have an innate capacity for learning; others need more help. Either way, Fujitsu believes that technology can play a key role in creating opportunities to learn that are available to all.

As **Ash Merchant**, Director of Education at Fujitsu, explains:

» I remember the first computer I ever used at school. It was basic by modern standards but it encouraged me to learn more. I wanted to know how it worked and what I could do with it. In fact, it inspired my choice of career.«

Today's digital technologies can do so much more than the computers Ash first used at school. They are ubiquitous in class, at home and at work. And just because we use them all the time, it doesn't mean they are any less important in inspiring learning.

Yet for many schools, colleges or universities, significant hurdles remain when it comes to balancing technology and expenditure. Rising expectations among students, parents and staff require quick decisions on the very best hardware and software. Curriculum targets and learning goals often dictate the demand for specific devices. Plus, the requirements of our digital age mean educators must put the right applications in the hands of students. But budget restrictions require wise long-term investments.

There is also the administrative challenge of combining technologies and teaching to make a positive contribution to student development. This includes catering for all learning abilities and introducing more personalised education pathways.

Technology can help schools, colleges and universities achieve all of this. But only if the right infrastructure is in place to rapidly introduce new devices or applications while keeping down the costs of running the ICT estate.

This is where Fujitsu comes in. We work with students, teachers, administrators, IT managers and organisations as a whole to provide education technology to people of all abilities. By identifying the right mix of devices, infrastructure and applications, collectively we ensure **learning for all.**

Intel®

Intel Fujitsu STYLISTIC, LIFEBOOK, PRIMERGY, ESPRIMO, ETERNUS and CELSIUS series feature up to powerful 6th generation Intel® Core™ processors for fast, reliable computing. Users can achieve higher performance, greater effectiveness and advanced computing capabilities. Some of the superior models feature Intel® vPro Technology allowing remote access to the laptop (including monitoring, maintenance, and management) independent of the state of the art operating system or power state of the laptop.

FUJITSU STYLISTIC | FUJITSU LIFEBOOK | FUJITSU PRIMERGY | FUJITSU ESPRIMO | FUJITSU ETERNUS | FUJITSU CELSIUS

PRIMARY & SECONDARY SCHOOLS

Starting off on the right path

The current generation of secondary school pupils has grown up with the emergence of everyday digital technologies. Today's primary school pupils will know nothing else. It is this unprecedented level of familiarity with technology that requires education professionals to approach digital learning in a different way from before.

During these formative years, teachers will continue to play a key role in setting pupil aspirations for continued learning. But because students have a greater appreciation of technology and the different ways they can use it, educators have to adapt so that learning can become more personalised and flexible. This requires knowledge of how various applications can be made accessible through devices to drive engagement and support students who are at different points on the education journey.

The shift from the traditional classroom to more collaborative learning means that every school must find a way to allow students and staff to easily share information. Online study, packages such as Office 365, and social media style work groups can make home or school learning more interesting too. Today, it is about stimulating students in the classroom and then giving them the tools to go and work independently, or collectively, outside of school.

Fujitsu STYLISTIC Q665

Apps from Windows Store; vary by market.

Fujitsu has a complete end-to-end portfolio of devices and solutions for primary and secondary education

Mobile devices

- STYLISTIC R726 tablet
- STYLISTIC Q665 tablet
- LIFEBOOK A500 series notebook
- LIFEBOOK E546 and E556 notebooks

Desktop devices

- ESPRIMO E400 and E500 series desktop PCs
- ESPRIMO Q520 desktop PC

Server solutions

- PRIMEFLEX Cluster-in-a-box
- PRIMEFLEX vShape
- PRIMERGY TX tower servers
- PRIMERGY RX rack servers

Storage solutions

- ETERNUS DX family
- ETERNUS CS200c

Powered by
Intel® Core™ processor.

Staff and teachers must be able to rely on 'fast on' ready to use devices and a robust back-end infrastructure to facilitate all of this. With the education sector dictating that each organisation provides a secure environment for technology and collaboration, it is not just about systems that can enable online data sharing. It is also about securing those systems to keep students and their communications safe and secure.

Fujitsu has years of experience of doing just that. We provide the devices and applications that give pupils access to the best tools for learning, whatever stage they are at. We also provide the enterprise solutions to safeguard data and ensure new education technologies are accessible to everyone.

PRIMARY & SECONDARY SCHOOLS

PERSONALISED LEARNING

From a young age, children interact with technology in their own way. Some are comfortable typing, while others find this harder and prefer to use a pen. Responding to these individual traits is important in supporting children to take on board what they are learning in class.

Hybrid devices that can adapt to different learning styles, offering a more flexible approach can help. Fujitsu's range of **STYLISTIC** tablets come with a choice of keyboard, touch or pen input and are ready to go within a few seconds of being switched on for students and teachers. Having the right infrastructure to support such devices is critical too. With Fujitsu **PRIMEFLEX Cluster-in-a-box**, we give schools an easy way to roll out a virtualised IT environment that enables anytime, anywhere learning across all devices, including tablets.

Fujitsu STYLISTIC R726

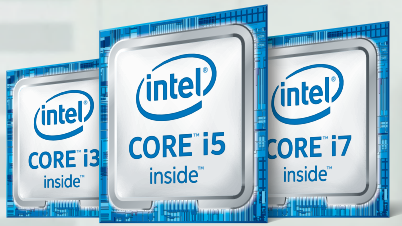
Apps from Windows Store; vary by market.

Encouraging Collaboration

Technology can play a key role in soft skills, such as classroom collaboration. When pupils are asked to work in groups, they may begin with individual tasks and then need to bring their work together and present it to the class or teacher. With intuitive software, this is a much smoother process and teachers can be sure that everyone has equal time in front of the class.

Our **LIFEBOOK** notebooks, **STYLISTIC** tablets, **ESPRIMO** desktops and **CELSIUS** workstations are optimised for all software programmes and applications. That way pupils can work in class or at home on Microsoft Office apps and then share what they have done using Office 365 or Skype before they come back in to school, supporting more tailored and flexible studying.

Powered by
Intel® Core™ processor.



Inspiring students

Mobile learning environments and connected classrooms require devices that are easily portable, very robust and can actually help pupils and staff create content.

With the Fujitsu **STYLISTIC** range, teachers can create lesson plans as though they were using a desktop. And when they want to wow students with a video from the internet, the larger screen size and clear resolution support this. This is backed by Fujitsu's powerful, enterprise-grade **PRIMERGY** server and **ETERNUS** storage infrastructure solutions support faster streaming so there are no interruptions.

Fujitsu ESPRIMO family

Apps from Windows Store; vary by market.

PRIMARY & SECONDARY SCHOOLS

STAYING SECURE

At a time when data growth is exploding, protecting pupil, teacher and staff information requires the right mix of back-end servers, storage and security.

With Fujitsu **PRIMEFLEX Cluster-in-a-box**, schools can achieve the simple scalability they need in IT architecture when introducing new devices or more learners to the network. This is supported by the speed of our **PRIMERGY TX** and **RX servers** and resilient backup from our **ETERNUS DX** storage.

For the peace of mind that comes with end-to-end security, we also provide client computing devices such as our **LIFEBOOK** notebooks and **ESPRIMO** PCs with Trusted Platform Model (TPM) technology built-in. That way the school can be sure that all data is stored securely and has not been breached.

» Using **Fujitsu technology provides us with a unique opportunity** to explore how we can start to further prepare students to develop their communication skills using the technology as an interface to the real world.«

Gary Simm
Principal, Thames Valley School

Fujitsu ETERNUS DX family

Powered by
Intel® Xeon® processor.

A study of success
Culloden Primary Academy

Culloden Primary Academy in Tower Hamlets, London has a simple ethos: that every child is entitled to an outstanding education, with equal access to knowledge, skills, opportunities, life chances and dignity.

The challenge

With the move to academy status, Culloden wanted to create a more scalable IT platform that could effectively support future growth. As Culloden's lease agreement on its existing equipment had recently come to an end, it was the perfect time to explore new opportunities.

"We wanted to build more capacity within Culloden Primary Academy to support our growing ICT demands," explains Ben Carter, Principal, Culloden Primary Academy. "Our initial research suggested that implementing a server and storage cluster system would be the ideal way to progress."

The solution

Culloden chose Fujitsu PRIMEFLEX Cluster-in-a-box because it provides a fully pre-configured, high-availability IT environment for large academies within a single chassis. Because the cluster consists of two PRIMERGY servers, shared storage and appropriate network components in compact housing, PRIMEFLEX Cluster-in-a-box keeps expenditure and risk to an absolute minimum.

"Cluster-in-a-box is a simple, low-cost and reliable solution that works off the shelf," continues Ben Carter. "We were able to easily migrate to the Cluster-in-a-box over the half term period and even though we were faced with some corrupt files, the system's in-built redundancy ensured we could remain operational."

The benefit

Besides the simple installation, Ben Carter has noted several key advantages to the PRIMEFLEX Cluster-in-a-box approach. Not only did it come in under budget, reducing the burden on the school's finances, but since its installation it has proven flexible, resilient and high-performing.

"The Fujitsu solution can accommodate all the devices and applications simultaneously with no lag or impact on performance, which means I have less to worry about and teachers can get on with teaching lessons rather than having hardware issues," comments Ben Carter. "And it is remarkably robust, since migrating to Cluster-in-a-box last year we have had no problems to resolve."

» Cluster-in-a-box is a simple, low-cost and reliable solution that works off the shelf.«

Ben Carter
Culloden Primary Academy

Culloden Primary
A Paradigm Academy

FURTHER EDUCATION

Getting ahead and staying ahead

Empowering students to make choices that could determine their economic prospects in the future is a massive responsibility for further education (FE) establishments. As is the provision of learning pathways that will equip individuals with the skills they need in the workplace. But education technology can take away some of the burden.

The choice of in-class technology can help FE colleges respond to calls from employers and government to encourage more people to learn science, technology, engineering and maths (STEM) subjects.

State-of-the-art robust devices and applications will meet student expectations for technology that makes it easier to learn and apply new skills. An ICT environment that offers a simpler, more standardised way to deliver the teaching that is required will also meet changing demands from staff.

Technology can also help meet the obligations of the organisation itself – not only within classrooms but in the broader community – by supporting special education providers, local schools and small businesses through skills development and ICT training.

Fujitsu has a complete end-to-end portfolio of devices and solutions for further education

Mobile devices
- STYLISTIC R726 tablet
- STYLISTIC Q665 tablet
- LIFEBOOK U745 Ultrabook™
- LIFEBOOK E700 series notebook
- LIFEBOOK E546 and E556 notebooks

Desktop devices
- ESPRIMO E400 and E500 series desktop PCs
- ESPRIMO Q520 desktop PC
- ESPRIMO X923-T all-in-one desktop PC

Server solutions
- PRIMEFLEX Cluster-in-a-box
- PRIMEFLEX vShape
- PRIMERGY TX tower servers
- PRIMERGY RX rack servers

Storage solutions
- ETERNUS DX family
- ETERNUS CS200c

» For our students, **technology has to be something tangible**, that you can touch – something you can relate to and something you can build a relationship with.«

Mike Halliday
Business Relations Manager, UTC Reading

Crucially, in today's fast-paced digital world, FE colleges must also protect the information that students and staff share. ICT is no longer just a back-office function and interaction outside the typical nine-to-five learning structure is now commonplace. Tools to secure data have to extend beyond on-site networks into the wider digital sphere, which demands added sophistication in ICT.

All of which requires an education technology strategy that is fully aligned with the organisation's teaching and learning strategy. Fujitsu can help you deliver this.

Our technology aids learning at every level. We support the teaching community by encouraging new skills and showcasing the applications that can improve the way they engage students. We deliver enterprise-grade technology systems to support multiple learning and communication systems. We also support colleges to introduce ultra-secure, extra-reliable and high-quality technologies from Fujitsu partners such as Microsoft and Intel.

By doing so, we ensure that all FE students have access to day-to-day and specialist technologies. That way they can develop the skills they need to make them first choice when applying for jobs in the future.

Powered by
Intel® Xeon® processor.

Fujitsu CELSIUS
Workstation family

Apps from Windows Store; vary by market.

Science, technology, engineering and maths are subjects that frequently involve data, analysis and interpretation. Equipping students with the right skills to take what they have learned beyond the classroom requires excellent teaching backed by the right technology.

We provide FE colleges with quick, powerful **ESPRIMO** desktops and **CELSIUS** workstations that come with the in-built processing power to handle major project work. They also have the capacity to support the requirements of a range of specialist skills, such as the ability to render 3D imagery or use a CAD suite of software.

SIMPLICITY FOR STAFF

It is not just students that need simpler ways of working. With multiple sites and different classes to prepare for, teachers and admin staff need integrated systems that make it easy and convenient to work together.

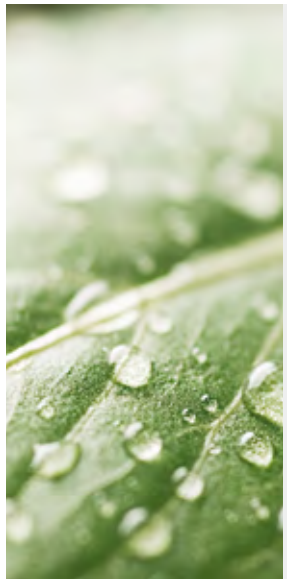
Our **LIFEBOOK** notebooks and lightweight **STYLISTIC** tablets with touch or pen input feature a high quality rugged build to withstand the adventures of education life. Designed to be intuitive and easy to add on to the same network, they are also optimised to run common applications, such as Microsoft Office 365, which allow teachers, staff and students to collaborate more effectively.

Fujitsu
LIFEBOOK
E700 Series

Aligning technology and learning strategies

Learning strategies at FE colleges reflect not only the needs of the local community but also the demands of employers and central education policy. The result is that every college is unique in terms of what it delivers and what it needs to support its educational approach.

We always work directly with colleges to determine precisely what the technology requirements might be. With an 80-year heritage in technology – all built in our factories in Germany – and strong environmental credentials, we can tailor the right mix of devices and infrastructure to align technology with a college's broader learning strategy.



Greener technology

We are helping schools, colleges and universities across the UK transform to a low-carbon operation through ICT. Our specialists can assess and advise on how to reduce carbon footprint, meet compliance targets and improve energy efficiency in the datacentre.

We can also provide support in reducing the impact of desktop and printer services and provide low energy devices – from FUTRO thin clients to ESPRIMO desktop PCs and CELSIUS workstations. This environmental ethos influences everything we do, including the design of our products and recycling when it comes to end-of-life disposal.

» We now have **one of the most advanced technology education spaces** in the region... making a real difference to the way in which we teach technology courses, and will hopefully inspire new generations of students to take up IT.«

Steve Logan
Principal, City College Coventry

Fujitsu
PRIMEFLEX
vShape

Powered by
Intel® Xeon® processor.

EDUCATION IN THE COMMUNITY

Further education colleges have a broad base of learners, from all parts of the local community. In some instances, this includes adult education and new skills training. In others, special education needs or introducing schoolchildren to what lies ahead. This diverse group of people requires a diverse range of support, including a flexible ICT infrastructure.

Our **PRIMEFLEX vShape** virtualisation platform gives further education IT teams the power and scalability to meet changing needs. With servers, storage and networking pre-integrated in a single enclosure, it is now simple to roll out new ICT. Ready to go in just a few minutes, PRIMEFLEX vShape also provides the extra scalability that comes with optional virtualisation software and the same family of components.

FURTHER EDUCATION

» Our ongoing partnership shows **real commitment from Fujitsu** to improve the digital skills of young people.«

Joanne Harper
Principal, UTC Reading

PROTECTING DATA

When teachers, staff and students choose to work in a range of locations – perhaps the computer hub, the cafeteria or out in the quad – ensuring data is safe can be a major headache for IT teams.

That is why we build each of our devices with state-of-the-art security as standard – from our ultra-mobile **STYLISTIC tablets** and **LIFEBOOK notebooks** to our best-in-class **ESPRIMO desktops** and **CELSIUS workstations**. With the added security of our **ETERNUS DX disk-based backup**, IT teams can be sure that devices are not corrupted and everything is saved and easy to recover in the event of an emergency.

EASY ADAPTABILITY

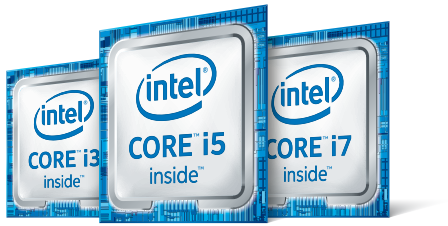
It is not just students who are learning. Teachers and staff must keep up with the latest education requirements, including the technologies that support them. Rolling out new devices to match education standards means IT teams must also establish an ICT environment with the flexibility to cope with continual change.

Our enterprise-grade technologies support these multiple requirements. Our intuitive devices with Intel processors are easy to update with the latest software, especially new Microsoft applications. Fujitsu **PRIMEFLEX vShape** provides the underlying infrastructure that allows IT teams to rapidly integrate any new technologies and the resulting new compute and storage requirements. Backed by our **PRIMERGY RX** rack servers and **ETERNUS DX** secure data storage, any changes will not undermine the speed of devices or the security of the data they create.

Fujitsu ESPRIMO X923-T

Apps from Windows Store; vary by market.

Powered by
Intel® Core™ processor.



A study of success

The Dun Laoghaire Institute of Art, Design and Technology (IADT)

Founded in 1997 and with over 3,000 staff, the Dun Laoghaire Institute of Art, Design and Technology (IADT) has established itself as the leading Irish educator in technology, creativity and enterprise.

The challenge

With the launch of its National Film School in September 2013, technology became vital to the progression of students into the workplace. Each of its courses requires a high level of technological capacity, without which the IADT simply would not be able to function. Ranging from fine art and film to graphics and psychology, all require high-powered, high-specification workstations. That is why it turned to Fujitsu.

The solution

With environmental footprint and low power usage key criteria for technology selection, Fujitsu CELSIUS workstations are helping the IADT keep costs down while ensuring students can experience the best and most professional computing power available.

As Colm Hennessy, Head of IT at IADT, explains, "Fujitsu provides the platform for our students to succeed and gives us an experience as close as possible to a professional studio. That equips our students with the skills they need to thrive in a competitive industry."

The benefit

Offering zero watt screens and ultra-quiet operation, Fujitsu CELSIUS workstations have been so successful that processing power at the IADT has almost tripled in three years. The workstations can also be used 24/7/365 with no loss of performance.

At least 60% of the IADT workstations are in use between 9am and 6pm. Its multimedia and animating students also use them between 8am and 10pm while leaving them rendering overnight. Despite this constant usage, IADT has rarely experienced failure in any of its Fujitsu devices.

» Fujitsu provides the platform for our students to succeed and gives us an experience as close as possible to a professional studio. That equips our students with the skills they need to thrive in a competitive industry.«

Colm Hennessy
Head of IT, IADT

iadt
DUN LAOGHAIRE

HIGHER EDUCATION

Making a mark

The higher education (HE) sector is now more competitive than ever. Institutions at home and abroad are vying to attract the best students and staff from a global pool. In our digital age, learning technology will play an increasingly important role in differentiating one university from the next.

The right technology can give institutions the ability to respond to big changes within the education sector. It can also provide the agility to adapt organisational structures to deliver the innovative, entrepreneurial or real-world learning that students and staff want to experience.

The challenge lies in creating the right support network across the university. Agility depends on versatile technology systems that make it easy for IT teams to deliver new applications and roll out the latest devices – all while protecting sensitive data from cyber threats or accidental misuse.

There has also been a major shift in the way staff and students use technology. Once they were consumers but now they are creators, as learning across all kinds of courses becomes a more open, collaborative and hands-on activity. New audio and video applications have become the portals for online learning. In some cases, they are replacing face-to-face classes and extending the organisation's reach beyond the physical campus.

Fujitsu have a complete end-to-end portfolio of devices and solution for higher education

Mobile devices
- STYLISTIC R726 tablet
- STYLISTIC Q775 tablet
- LIFEBOOK U745 Ultrabook™ notebook
- LIFEBOOK S935 notebook

Desktop devices
- ESPRIMO E400 and E500 series desktop PCs
- ESPRIMO Q520 desktop PC
- ESPRIMO X923-T all-in-one desktop PC

Server solutions
- PRIMERGY server family
- HPC architectures

Storage solutions
- ETERNUS DX storage family
- ETERNUS CS storage family

» IT is really important in any higher education institution, it really drives the student experience. The benefit we get from working with **Fujitsu is a supplier who's able to explain to us where technology is going** and help us to make really good investment decisions that serve us for the long term.«

Peter O'Rourke
IT Director, University Campus Suffolk

Powered by
Intel® Xeon® processor.

The growth of social media has spurred informal, two-way conversations between students and teachers beyond the lecture hall. Learning communities are springing up as people integrate their own passions with their formal learning pathways. As well as inspiring creativity in the way people learn, it has ramifications for the IT team.

Hardware, infrastructure and networks must be powerful, resilient and secure enough to handle these new demands – especially with the rise of mobile learning, high performance computing (HPC) and Big Data. Connectivity is now no longer limited to a single campus. IT teams must link multiple sites and even provide the connections between research institutions, businesses and government facilities with no service interruption.

To bring all of this together requires the support of an expert technology partner. Fujitsu's investment in R&D and our heritage as an engineering company makes us best placed to offer that support.

As the company behind the biggest joint academic and business HPC project in the UK, we also understand precisely what it takes to deliver a world-beating learning experience. With a wider range of managed and hosted services, we can assist with the integration of mobile, cloud and collaborative learning to broaden prospects for students and widen the market for the university.

Fujitsu ETERNUS family

HIGHER EDUCATION

» **Technology is vital to my teaching**. Despite the range of abilities and skills the students have, they always have an enthusiasm towards technology. I'm always learning things from my students and technology.«

Matthew Applegate
Head of Creative Computing, University Campus Suffolk

RISING TO NEW EXPECTATIONS

The demands of university learning environments are constantly changing. New ways to share information between staff and students – such as on-demand video – increase the requirements on the core network.

Fujitsu can support this ongoing transition with the devices and infrastructure to satisfy the growing needs of students and staff. With our **STYLISTIC** tablets and **LIFEBOOK** notebooks, we offer the easy mobility that is required for less formal learning environments. Our **CELSIUS** workstations are also equipped to handle the intensive workloads of more complex and processing intensive projects.

We support all of these front-end applications and devices with our industry-leading **PRIMERGY** servers and high performance computing (HPC) infrastructure. All of which offers universities a way to match the enterprise-grade technology requirements that will enable them to compete in the future.

Fujitsu PRIMERGY Family

» The moment a student puts on a virtual reality headset that's definitely going to spark something in their heads that says **this is the future**, this is what we need to focus on.«

Dominic Noble
Student, University Campus Suffolk

Powered by
Intel® Xeon® processor.

HIGH-POWERED LEARNING

Connecting multiple sites and providing the same computing power at each location requires a complementary mix of servers and storage to ensure maximum availability of applications as well as data security.

With Fujitsu, university IT teams can rely on some of the fastest servers on the market. Our **PRIMERGY** and **PRIMEQUEST** servers are designed to handle massive workloads, especially those undertaken by university academic teams and groups of researchers.

To safeguard the data and new analyses performed throughout the academic year, our **ETERNUS DX** storage offers added resilience as well as the fine tuning to fit individual university needs. Supported by our **ETERNUS CS** range of backup appliances, IT teams can consolidate existing storage architecture to reduce data duplication while also offering a faster backup and archiving service.

MAKING NEW CONNECTIONS

The latest front-end education devices are equipped to handle easy connectivity. For universities, the same connectivity is just as important at the back-end – especially when the organisation is part of a wider collaboration with government or business.

The success of these partnerships often relies on the ability to handle, analyse and then share massive amounts of information. The faster this can be done, the quicker the results. With **Fujitsu HPC**, universities around the world are already benefitting from unprecedented integrated computing power backed by the IT infrastructure to store and secure huge volumes of Big Data.

Easy procurement

Procurement is easy with Fujitsu available on frameworks, including NSSA, PSN, ITHS and Janet.

NSSA: As a global leader in the development of high-performance, cost-effective server technologies, Fujitsu is a server supplier under the National Server and Storage Agreement (NSSA) framework.

Through the NSSA framework, Fujitsu is committed to providing innovative server infrastructures to further education, higher education and research organisations across the UK.

Janet: To help meet the growing need for cloud computing and secure external data centre services in the research and education sector, the Janet framework offers a variety of industry leading solutions from pre-approved suppliers to ensure substantial savings of both time and of money.

PSN: Fujitsu is uniquely placed to help public sector organisations make the most of the Public Service Network (PSN), or 'network of networks'.

ITHS: The Technology Products framework enables all public sector customers, which fall under HMG, to procure user devices via the Crown Commercial Service website. Fujitsu has been awarded a place on Lot 4, end user devices, which focuses specifically on the provision of high volume commodity hardware.

Powered by
Intel® Xeon® processor.

A study of success
High Performance Computing (HPC) Wales.

High Performance Computing (HPC) Wales is the country's own supercomputing service, benefitting both public and related private sector institutions. As host to the UK's largest national distributed supercomputing network, it provides businesses and researchers with local access to world-class technology and the support to fully exploit it.

The challenge

Traditionally, universities in Wales, as in most of the world's academic institutions, operated in a standalone fashion, with each responsible for its own computing resources. Such an approach led to significant duplication of effort. As a result, the Welsh government wanted to create a unified HPC platform that would encompass multiple academic organisations, allowing them to offer on-demand, intensive compute capacity to local businesses of any size.

Previous efforts to provide a shared service across universities had failed. "*The guiding idea behind HPC Wales was not to enable academic research for its own sake but to develop a commercial solution that would introduce HPC capability to companies of all sizes across the country*," explains Professor Martyn Guest, Technical Director, HPC Wales.

The solution

Since the contract was awarded in 2010, Fujitsu has collaborated closely with HPC Wales to put the distributed infrastructure in place. It follows a hub and spoke model with Cardiff and Swansea universities acting as the main hubs, while Glamorgan, Aberystwyth and Bangor universities are the tier one spokes. Glyndwr and Swansea Metropolitan and a number of other installations across Wales constitute the second tier spokes.

Currently, there are 6,000 Intel core processors at each of the hubs; by the time the project is fully deployed there will be 23,000 cores. They are all interlinked by a dedicated network delivered via the Public Sector Broadband Aggregation (PSBA), featuring a 10GBit/sec link between the two hub sites, 1GBit/sec links for the tier one sites, and 100MBit/sec links for the tier two sites.

The benefit

Companies of any size can now pay to have access to the phenomenal computing power available. There is a range of billing options, allowing customers the flexibility to purchase exactly how much core processing, storage and other services they need.

For Calon Cardio, HPC Wales provided access to the software and the computing power it needed to refine the design of its implantable pumps. This sped up the company's research process tenfold and enables it to carry out product trials within a competitive timeframe.

"*Speed of innovation is critical to business growth and profitability but many SMEs don't understand the impact high performance computing can have. These projects are proving the value HPC can add to even the smallest SME*," comments Guest. "*From simulating nano-particle catalysts to comparative genomics to rheological modelling, HPC is providing a critical new service that will help boost the local economy and keep local businesses at the leading edge of research*."

» HPC is providing a critical new service that will help boost the local economy and keep local businesses at the leading edge of research.«

Professor Martyn Guest
Technical Director, HPC Wales

Help is at hand

As student, staff and society's requirements change so does the cost and complexity of the front- and back-end technology that educators have to provide.

Managing all this technology adds an extra financial burden on organisations that are already operating on limited budgets.

Knowing that your new technology is not going to let you down offers great peace of mind. As does understanding that you do not require a massive capital outlay to get the devices you need to support students. And then there is the sense of security that comes when you are covered if devices are lost, stolen or damaged.

With our **end-to-end warranty and services**, teachers, IT staff and other education professionals can be confident that the right level of support is there if and when they need it.

Powered by
Intel® Core™ processor.

» Digital is becoming pervasive in all aspects of our lives, apps, services and more intersecting with our day at every turn, creating a cultural shift, not just in the UK, but globally.«

Ash Merchant
Head of Education UK & Ireland, Fujitsu

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Web: uk.fujitsu.com

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Fujitsu would like to thank UTC Reading for allowing us to use their premises for photographic purposes.

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