

inspiring spaces

for 21st century learning



A 14-19 ENGINEERING ACADEMY



Learning spaces to inspire you in

2017

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LAB OF THE FUTURE

PUPILS CREATE 'LAB OF THE FUTURE'

The world's first classroom to be researched, planned and designed entirely by students has been unveiled in Birmingham. And it's not just a standard classroom – it's a state-of-the-art science lab.

King Edward VI Camp Hill School for Girls, Year 11 pupils Simi Bhamra, Phoebe Thomas, Kate Pham and Chloe Taylor masterminded the new laboratory – leaving a unique legacy at the school.

The team saw their lab design installed at the school after winning 'Lab of the Future' – a nationwide competition which encouraged teams of students submit futuristic science lab designs to organisers Innova Design Group – specialists in educational interiors.

The original prize for winning the competition was £20,000 worth of lab furniture to be installed at the school.

However, staff at King Edward's were so impressed with the students design that they provided extra funding to install the laboratory as part of a full turnkey solution, which included ceiling, lighting, M&E works as well as flooring.

The girls beat off competition from across the country with an exceptionally well-thought-through 52-page document detailing end-user requirements, environmental factors, material, equipment, technology requirements and health and safety considerations.

Innova Design Group said was one of the most detailed creative proposals they'd ever seen.

“ I don't think we thought we would win until we had actually won. The whole time we were telling ourselves that it was going to be someone else and that it was a national competition and it was really unlikely we would win. ”

Phoebe Thomas, the team's 16-year-old project manager

“ With this new lab, we hope that students will be even more motivated to learn, feel happier in their environment and get more out of their science lessons in general. The girls have certainly left a lasting legacy on the school that will benefit and inspire many students for years to come.

Assistant Headteacher Dr Janet Rose

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An innovative learning space

Allowing four students to design their own learning environment has resulted in a modern, inspirational science space that will benefit many students and staff at the school for years to come.

This unique laboratory layout allows space for the teacher to circulate freely and easily, reducing the lines of communication. It also ensures the teacher has full visibility of students at all times and facilitates concentration.

The pluto power modules also bring a futuristic element to the lab whilst being practical and offering easy accessibility of electrics to the student desks.

The finished result boasts a mixed sciences lab that would be the envy of many other schools across the UK and beyond, providing a cutting edge learning environment that demonstrates the merits of involving students in classroom design.



CLASSROOM DESIGN TRENDS - Q&A



Education never stands still, and nor do the classrooms it's taught in.

We speak to Peter Smith director at Innova Design Group, to get an insight into how cutting edge design is transforming education.



WHAT ARE THE CURRENT DESIGN TRENDS ENABLING FLEXIBILITY IN EDUCATION FURNITURE?

The ultimate aim for interior designers at the moment is to create education spaces that anticipate change and accommodate interactive configurations for individual study and collaborative learning.

Teaching is likely to become much less formal, shifting away from teacher-led classes towards sociable, interactive and even virtual learning focused on collaborative work and discussion.

Flexibility is essential when it comes to enabling the rapid change from group work to individual learning and lesson planning to incorporate different styles of teaching and technology.

Current trends include technology embedded furniture or fitted furniture layouts that meet the need for collaboration and group work.

DO YOU HAVE ANY PARTICULARLY FLEXIBLE, DESIGN LED FURNITURE INNOVATIONS?

Here at Innova, we have pioneered a revolutionary product called the Hot Corner. Designed for science labs and integrated with benching on either side of a circular corner – students can gather around the Hot Corner section to conduct experiments and work collaboratively.

By relocating the teacher to the long wall of the

classroom, the design shortens the lines of communication to ensure all students face the front of the class, focusing their attention.

This layout enables the teacher to switch quickly and easily between individual study and group learning, ensuring minimal disruption as well as improving classroom management.

Gas and electric outlets are located on the front face of each bench, away from the work surface ensuring they are tamper proof, safe and easy to access for practical sessions.

The result is a flexible learning environment that addresses the need to provide both a working classroom and practical laboratory within the same space and support different teaching and learning styles.

COLOURS IN CLASSROOM AND FURNITURE DESIGN – WHAT IS ON TREND?

Lighter colours create a fresh and clean look and invariably future-proof the environment.

Combining these neutral colours with flashes of bright edging on the furniture helps create an atmosphere that is calm, stimulating and on trend.

HOW DO YOU EXPECT CLASSROOM DESIGN AND CONFIGURATION TO EVOLVE MOVING FORWARDS?

Learning spaces will need to become ever more resourceful, social, sustainable and stimulating

as education leaders focus less on space efficiency and more on space effectiveness and designs evolve to meet teacher and student requirements.

In line with this and to boost concentration, engagement, attainment and workplace skills – students will have more control over their learning experiences while online learning and increased group interaction will dictate what classrooms look like and where they are located.

Creative spaces that allow collaborative working from break-out spaces with modular seating to creative use of corridors, cyber cafes, multi-functional libraries and learning commons will enable schools to foster a culture of teamwork.

The design of classrooms needs to be optimised to accommodate new and future technologies, in order to maximise versatility and keep costs down. This can be facilitated by providing sufficient power sockets, delivering seamless cable management and providing secure storage spaces.

HOW IS THE UNIVERSITY LEARNING ENVIRONMENT CHANGING?

At a university level, where students are often studying the field they aim to work in, being 'workplace ready' has become even more important – especially in areas such as science and engineering where there is a skills shortage.

Giving classrooms a more 'worklike' yet inspirational feel is critical in attracting the most promising students as well as helping to forge strong links with businesses,

who may be seeking locations to train their existing staff.

As the lines between the classroom and the workplace continue to blur, it's not just students who must prepare for success, it's the classrooms around them.

WHAT DOES THE FUTURE LOOK LIKE FOR EDUCATION CONSTRUCTION?

We believe the future is ultimately bright and that constant advances are being made in terms of design and delivery.

However, with projects led by any of a number of bodies such as DfE, local government, academy trust, contractor or the architect – we have a scenario where sheer bureaucracy can create a huge, unnecessary learning curve on every project.

Amid the confusion, building exteriors, which do nothing to improve educational attainment, receive too much attention and very little money is left for interiors where students spend most of their time. If we manage to reverse this process, we can ensure concentration, behaviour, teaching satisfaction and results all continue to improve for future generations.

£9 MILLION INVESTMENT UNVEILED

SALFORD CITY COLLEGE HAS INVESTED £9 MILLION INTO DEVELOPING ITS ESTATE

All five centres of the College including Pendleton Sixth Form Centre, City Skills Centre, Eccles Centre, Walkden Centre and FutureSkills @MediaCityUK have opened a brand new technology enabled Digital Learning Zone

These vibrant, modern, flexible and fluid open plan spaces host an array of engaging sessions whether one to one, small groups, workshops or general lessons. The Digital Learning Zones also provide students with a Microsoft Office365 account, access to books, journals and newspapers, and a relaxed space where they can spend their time either in between lessons, after College or on Wednesday afternoon's when all students are off-timetable.

The refurbishment also included laboratories, a vets area, nursery storage, storage walls, teacher walls and restaurant furniture.

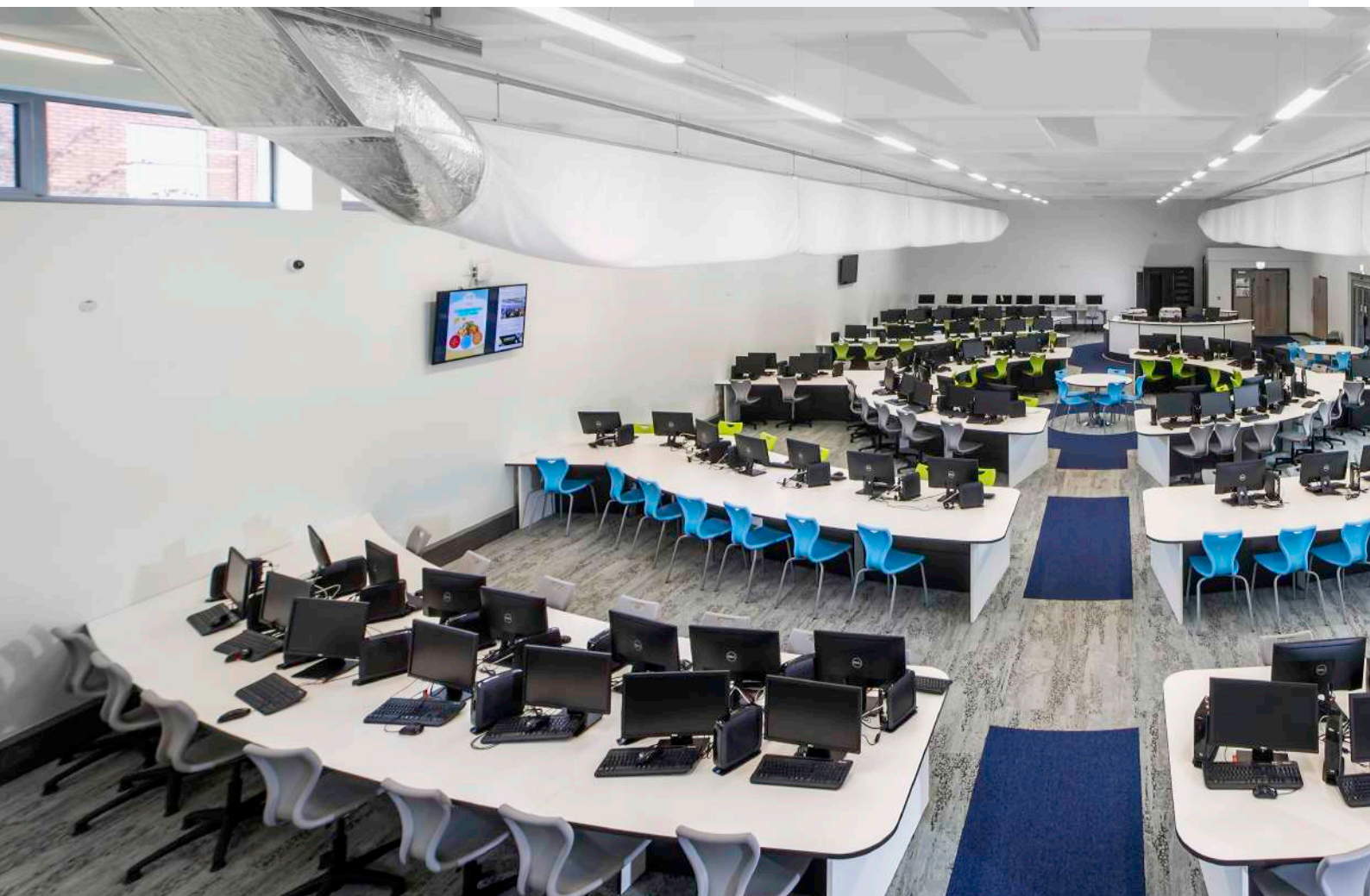
This is a continuation on the success of Salford City College who earlier this year did the 'treble' and officially named as the top performing General Further Education (GFE) College in Greater Manchester in all three learner categories; School Leavers, Adults and Apprenticeships.

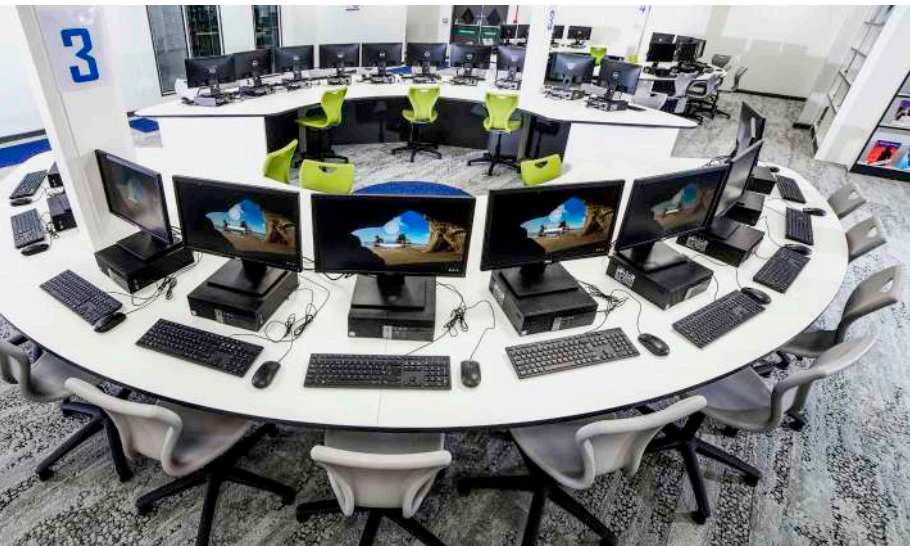
Peter Smith, director of Innova Design Group which, co-designed alongside Expressive Interiors, manufactured and installed the series of cutting-edge ICT facilities said:

"Salford City College had a bold vision in mind and wanted to upgrade ICT facilities while providing for an increasing roll call of students. Following the transformation, classrooms are bright, spacious, uncluttered and configured to improve concentration meaning they are among the best of their kind in the country. They will serve the college now and long into the future. We look forward to seeing the facilities making a genuine difference to teachers and pupils."

Saf Arfan, Vice Principal and Development and Innovation Executive has been the driving force behind the projects and said:

"We are the Number 1 GFE College in Greater Manchester and now we have superb state of the arts facilities to match that. We are committed to ensuring our students have the best possible experience in their studies and the new facilities, especially the Digital Learning Zones will enable students to become digitally savvy learners and set them up to become desirable employees, innovators and entrepreneurs of the future."





Saf Arfan, Vice Principal for Development and Innovation at Salford City College reveals how he set about the transformation of the College's outdated ICT facilities and a number of other interiors across five campuses.

When I joined Salford City College in 2015 we were proud to be the number one General Further Education (GFE) College in Greater Manchester in terms of the success rates. However, we felt that so much more could be achieved with top class educational facilities, to deliver teaching and learning excellence.

Approach

As part of a £9 million programme of refurbishment, Salford City College embarked on the creation of exemplary ICT facilities across five campuses as well as two science labs including a preparation room, art, craft and health rooms, a new cafeteria, nursery room and vet room.

Having managed a significant capital investment programme in my previous role as Executive Director at Hopwood Hall College where Innova Design Group had completed an immaculate modernisation and re-fit of four science laboratories, it was the same standard of delivery we were looking to achieve at Salford City College

After meeting all of our selection criteria Innova Design Group were appointed to deliver the inspirational ICT facilities as well as design, manufacture and install the science labs and other learning areas within the college.

Results

The new facilities were seamlessly installed with minimum disruption during term time and were unveiled just in time for half term. Demand was so high among students keen to study and use the new facilities, that we kept one of our campuses open full time.

Our brand-new learning spaces match our aspirations and genuinely gear us up to further push the boundaries of our already exemplary teaching – all thanks to the latest inspirational interiors that promote engagement and overall enhance the learning experience.

We now look forward to seeing all of our fantastic new classrooms in action!



THE SCIENCE BEHIND THE PERFECT LEARNING ENVIRONMENT

SCIENCE LABS

Unsuitable, low-tech and unfit to inspire

A survey into the standard of UK secondary school science labs has revealed that a shocking 49.5% of teaching professionals are not confident about pupil safety in science lessons.

The study conducted by leading education interior specialist, Innova Design Group, also revealed that a damning 63% of respondents view science labs as low tech, with 11% saying their facilities are very low tech.

Where safety and technology fared badly – the overall suitability of labs came out terribly with 85% of respondents stating that facilities don't bring out the best in themselves or pupils.

With 69% of respondents reporting that facilities had been recently refurbished – the results raise concerns about the ineffective use of public funds and throw commissioning and procurement into focus.

According to Melanie Laing, director of Innova Design Group, the statistics strengthen the already compelling case for the government to review policy, targets, procurement and budgets in order to improve the quality and safety of UK school science labs.

Melanie adds: "When it comes to learning, nothing is more important than pupil safety – particularly in the field of science where hazardous materials and substances are used routinely. Parents will be rightly concerned to learn that leaders don't feel confident facilities are raising levels of pupil safety.

"With many well-funded, government-endorsed STEM initiatives, we should be in a position where health and safety can be taken for granted in school science labs. However the squeeze on education budgets combined with rushed and poorly allocated spending has left facilities falling short of guidelines.

"In the same way that STEM policy cannot be successful without sufficient funding, the next generation of scientists cannot be trained in unsuitable and uninspiring laboratories.

As such, we need to free up spending, maximise use of budget and get it right first time in order to attract and retain quality science teachers that can equip the next generation of scientists with skills to keep the UK at the leading edge of international development.

"To deliver excellence, facilities should incorporate technology, be designed to inspire and should use shortened lines of communication that help to improve concentration and subsequently attainment."

Innova's study also found that 39% of teaching professionals think science

labs are badly laid out for individual, group, practical and theory lessons meaning they lack versatility.



Melanie concludes: "To increase the quality and productivity of UK science we need to set targets that are realistic and achievable. And to deliver results in science and STEM, teachers require facilities that empower them to inspire pupils and nurture their potential.

"However the reality is, proportionally dwindling numbers of overworked teachers are facing mounting pressure to deliver without the necessary tools as they are teaching in labs that are low tech and unfit to inspire.

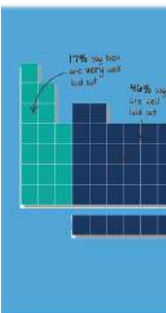
"It is essential that policy makers unlock funds to improve the standard of facilities – otherwise the UK risks losing its place as an international leader in the lucrative field of the sciences."

“

Budgets have a long way to stretch and there is a need to ensure funds are spent as effectively as possible, with no money wasted on ineffective solutions.

”

Melanie Laing, Director





69%

of respondents said their lab facilities were refurbished in the last 20 years



85%

rate their labs as average or below standard, with just 1% rating their lab amazing



49.5%

of teaching professionals are not confident about pupil safety in science lessons



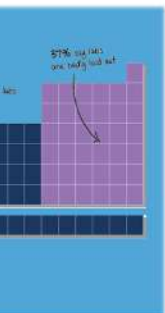
63%

of respondents view their science labs as low tech and 11% very low tech



85%

of teachers think their facilities don't bring out the best in themselves or their students



37%

said labs were badly laid out for group, individual, practical and theory work

WORKPLACE

SCIENCE CLASSROOMS THAT PREPARE STUDENTS FOR THE WORLD OF WORK

Solihull College works in partnership with local employers including the NHS to link education with workplace training. With bold new plans to train the next generation of life scientists, Andrew Schneider Head of the School for Science, explains

Where schools set out to inspire learners and Universities aim to provide a solid academic grounding – here at Solihull College we train students for the workplace.

In the science department we enact this vision by working closely with a network of local organisations including Greater Birmingham and Solihull LEP, Heart of England NHS Foundation Trust and the University Hospitals Birmingham NHS Foundation Trust.

This gives us live, on the ground insight into the needs of workplaces as well as industry guidance on best delivery making what we offer genuinely revolutionary.

With such a bold aim comes the need for very unique and specific lab facilities – unfortunately however we were left with a large, open-plan science lab that was installed 20 years ago and designed entirely around the A-level curriculum of the day.

Present aims required high-tech learning spaces that blur the lines between education and industry – and following a six week installation over the summer 2016 term, two brand new labs that work for all science disciplines have been created and are now in use.

The Refurbishment

Throughout the supplier selection process several factors were a priority. We needed to appoint a firm with a track record of installing science labs that push the boundaries. Our chosen partner should be able to both follow our brief and help us tweak it. And we needed to work with a company that could manage everything from rip-out to the installation of flooring, lighting, electrics, gas and plumbing.

In a job spanning six weeks over the summer, two labs, a store room and a prep room were created from the existing space by Innova Design Group who were selected following a competitive tender.

The resulting two labs feature a configuration that enables students to conduct practical experiments in pairs. Work stations span out from benching that runs around the perimeter of the room, with sinks seamlessly incorporated alongside gas taps per unit.

Electric outlets are located on the front face of each bench, away from the work surface, whilst still easily accessible. Ample storage around the room ensures equipment is on hand and minimises clutter.

Technology

As a pioneering new facility, another objective was to make the facilities look and feel cutting edge. Technology was a critical and it has been incorporated in the form of credit card-sized computers that plug in via USB.

The Raspberry Pi model we opted for can be used for many of the things that desktop PCs do including word processing, spreadsheets and browsing the internet.

The real benefit for science students is that they are able to play touch screen videos demonstrating technique or find answers to problems they are encountering themselves which helps with learning.

Results

Thanks to the two new labs, science facilities here at Solihull College are unlike any you would find at a school or college.

Not only are they clean uncluttered and built around our needs, they push the boundaries of college science teaching and workplace training. We are thrilled with the results and look forward to training the next generation of scientists in these brilliant new labs.

“Where the old lab was open plan, noisy and not quite geared for practicals, the new labs are built around our needs. Every potential problem from storage to technology and safety has been mitigated through design while practicals are now more engaging and rewarding. Add to this the feel good factor of learning in a brand new space and they tick every box.”

Joe Burchell, 17, BTEC Extended Diploma in Applied Science







How smarter storage can improve the learning experience in schools



Thirty years spent listening to the needs of schools and solving their problems provides solid understanding of the challenges in education.

Indeed, this experience has led Innova Design Group, to create a multitude of solutions over the years including the “Teacher Wall”, an innovative solution that addresses the common problem of insufficient front of class storage and workable AV Equipment.

This multi-purpose storage system is custom made in Innova’s in-house manufacturing facility to fit any size and shape of classroom with storage options including shelving, gratnell trays, lockable cupboards, filing and base units. It also houses either an interactive

screen or dry wipe white board whilst neatly hiding all cables from view. To help it blend in seamlessly, it is available in a range of colours.

Space to store classroom essentials also means that there is less clutter around the room which results in the interactive screen or white board becoming the central focus for pupils, meaning they can concentrate better.

As Innova has seen many times at many schools, the Teacher Wall has a huge effect on the improvement of learning for students due to the compact design that focusses the concentration of the pupils and improves classroom management for the teachers.



What are the benefits of a teacher wall?

- Multipurpose storage system that integrates teaching resources and frees up valuable classroom space
- Sliding write-on whiteboards – conceal test results or reveal answers to tests
- The teacher wall works with your classroom technology - from interactive whiteboards to plasma screens or projection
- Multiple storage options for resources and student work
- Declutter the space – improve concentration
- All power and data cables are neatly concealed
- All Teacher Walls are designed and built to last in our in-house manufacturing facility.



UTC Warrington



“

... a modern, high-tech and stimulating environment ... the future is exciting for UTC Warrington.

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Lee Barber, Principal & Chief Executive

SCIENCE LABORATORIES THAT PUSH THE BOUNDARIES OF LEARNING

Opened by the Duke of York in November 2016, UTC Warrington is a new state-of-the-art technical college sponsored by leading companies in the field of engineering and science, as well as Manchester Metropolitan University.

With an industry and university led curriculum which combines both practical, technical and academic learning, the UTC was looking for innovative, forward-thinking facilities to equip students with the essential skills necessary to build careers in growing energy and engineering sectors.

UTC Warrington wanted to develop an environment to help learners bridge the gap between the worlds of education and work. With a £10 million investment and £1 million of specialist engineering equipment, the UTC was looking for contemporary interiors to provide a professional, corporate environment which will address the skills gap and deliver a positive and lasting legacy for Warrington.

With a steel frame structure, the new build will provide a striking architectural addition to the local built environment. Having appointed ISG as the main contractor in the impressive six-storey high building, Innova were delighted to win the contract to

refurbish 4 science labs, a demo lab, prep room, graphics area and engineering workshop; providing the UTC with striking, high quality interiors which will attract the brightest of students, entrepreneurs and major employers to the area.

The design of the labs has created an environment that not only helps to assist students and visiting employers in a 'businesslike' frame of mind, but also enables modern teaching methods to be adopted. This encourages students to work independently of supervision in keeping with the UTC's ethos of being a 'workplace for learning'.

A 'Hot Corner' layout, complete with vibrant green base units, has been installed to provide a working classroom and professional laboratory within one space. By locating services on the front face of the units, the layout maximises desk space and allows pupils to move quickly between practical and theory lessons.

The new facilities are unique and really push the boundaries of learning to help students make the transition into industry; ensuring tomorrow's scientists and engineers can start their careers with confidence.