

www.sciencecityyork.org.uk



Data sources:

*Science City York Employment Survey September 2004
Skills & Workforce Development Mapping Study in Knowledge Based Industries in York, September 2003, Impact Research



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Introduction and Contents

This resource pack has been developed by the Learning and Skills Council North Yorkshire and Science City York to provide students, parents, teachers and careers guidance advisors with information about opportunities to work in the creative, bioscience, healthcare or IT & digital sectors.

York is home to over 240 science and technology organisations, employing over 9,000 people, and part of the role of Science City York and the Learning and Skills Council is to help the workforce of today and tomorrow, access new learning and employment opportunities. Could you find a new or future career? Here are some examples to inspire you...



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The bioscience and healthcare sector



The bioscience and healthcare sector

Working in the bioscience and healthcare sector in York

Working in the bioscience and healthcare sector in York

York is one of the UK's leading centres of bioscience excellence with particular expertise in the fields of health sciences, food sciences, plant biotech and drug development. You can often be part of a team making important research discoveries, making use of leading edge knowledge and technology. Is this the career for you...?

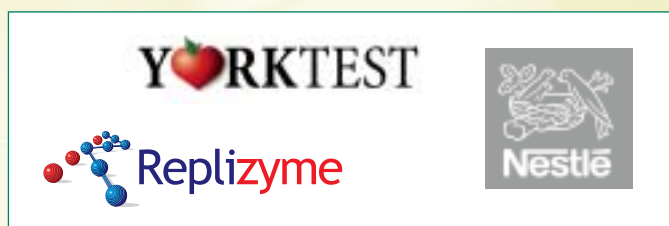
The Facts

- There are over 50 bioscience and healthcare organisations in York employing around 3,700 people – a 5.6% increase since July 2003*
- 4 in 10 bioscience businesses expect their workforce to increase significantly in the next 3-5 years with new job opportunities tending to come from the smaller to medium sized businesses in the sector
- There is an equal amount of male and female job holders in the sector
- Jobs are available at many levels, equally appealing to those with a passion for science and technology, or those with useful commercial, business or people skills
- A third of these companies have difficulties recruiting senior managers and technicians
- Around 4 in 10 people in the sector achieved a degree, meaning that 6 in 10 have got into the sector by different routes and qualifications
- Half of the employees in the bioscience sector have experienced a job promotion or change of role and responsibility since starting work with their employer
- A range of jobs are available in small, medium and large firms to match your background, skills, qualifications and talents. You may need to develop specific skills and undertake training to improve your chances of employment

Example Jobs

Administration assistants	Lab technicians
Bio-analytical scientists	Marketing officers
Business developers	Microbiologists
Chemists and biochemists (various specialisms)	Payroll /Accounts Procurement officers
Consultants	Research & development
Data management	Scientists
Engineers	Sales positions
Finance officers	Team leaders
Food technologists	Quality control scientist

Example Businesses



For a full listing of companies in the cluster please visit:

www.sciencecityyork.org.uk

Find out more about job and career opportunities in the bioscience and healthcare sector in York and North Yorkshire at:

<http://www.sciencecityyork.org.uk>



Replizyme is a small, dynamic Biotech company based in York. It is a privately financed company founded in 1999 by a group of scientists at Leeds University.

The company moved in August 2002 to modern laboratories on the York Science Park adjacent to York University. Replizyme enhances its clients' drug discovery activities by providing

specialist products and services in the polymerase area i.e. enzymes that are critical to the health and replication of human cells.

The people and their jobs

"We have 11 staff in our operation," explains Kate Darley, Replizyme's Science Manager. "And this figure may increase slightly in the next three to five years."

Occupations at Replizyme currently include:

Administration Assistant
Laboratory Assistant
Junior Marketing Executive
Finance & Administration Co-ordinator
Scientist
Quality Controller
Senior Scientist
Laboratory Manager
Science Manager
Senior Business & Marketing Executive
Annual salaries range from £13,000 - £35,000 +

Support for new and existing employees

In-house development
Off-site training
Annual reviews
Opportunity to co-ordinate research projects

The working environment

"There is an extremely friendly atmosphere here, despite people constantly having to work to important deadlines. Irrespective of position, all staff enjoy a good rapport."

The career opportunities

"Although we're quite small at the moment, there are still lots of opportunities to develop careers here," explains Kate. "For example, one colleague joined Replizyme in December 2003 as a Finance Co-ordinator, and she progressed quite quickly to becoming the Finance and Office Co-ordinator, which brings with it greater variety and more responsibility."

Future recruitment

"We tend to advertise our scientific posts in New Scientist and the 'Fish4jobs' style websites, whilst we use the local papers and websites for non-scientific vacancies," explains Kate. "We also keep the universities careers services informed of any vacancies or new posts."

Replizyme is involved with, or also offers:

- Online recruitment
- Student sponsorship (small scale)
- May take part in careers fairs and exhibitions in the future

"If people want to find out more about our company and job opportunities in the future just keep looking on our website," says Kate, "or send a CV and covering letter. The details will be retained on file in the event of a suitable position arising."

Top Tips

For young people at school or college?

As most jobs are specialist, going to University / College and obtaining a qualification is advantageous. In the wider sector this is not necessarily the case. Commitment and a high level of personal interest are important.

For students or graduates?

Try to gain practical experience by obtaining placements during their studies.

For jobseekers?

The same advice as for graduates, but also awareness of the specific industry. Some relevant knowledge and experience is essential for our company at present due to its size.

For people thinking of a career change?

Home study or extra curricular college attendance. Open University courses. Look in the New Scientist for openings. In the wider sector, the possibility of being taken on as an apprentice is worth considering, but you need to accept that initial pay could be quite low.

Next steps

Please contact Kate Darley for general enquiries.

Replizyme Ltd, Genesis 2, York Science Park, Innovation Way, Heslington, York YO10 5DQ

Tel: 01904 751155

Website: www.replizyme.com

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Stephen is 27. He is originally from Stoke on Trent and moved to North Yorkshire in 2003, when he successfully applied for his job as a scientist at York-based Replizyme. He is one of three scientists working at a similar level in the business.

Stephen knew from a fairly early age that he would end up in a scientific role. "I was interested in Biology from around 13 years of age, and I was pretty good at that subject. And my teacher, Dr Smith – complete with big beard and sandals – was a really good teacher who made the subject exciting and energetic for me. My older sister was doing A-level Biology at that time and I guess that may have had an indirect influence on my choices too."

around 13 years of age, and I was pretty good at that subject. And my teacher, Dr Smith – complete with big beard and sandals – was a really good teacher who made the subject exciting and energetic for me. My older sister was doing A-level Biology at that time and I guess that may have had an indirect influence on my choices too."

Educational Route

Stephen gained nine GCSEs and four A-Levels (General Studies, Business Studies, Chemistry and Biology) at Torquay Boys' Grammar School, before completing a 3-year degree in Biochemistry and Physiology (joint honours) at Cardiff University.

"When making your career or educational choices, be aware that you don't do this type of work just for the money – do it for the interest and love of it. Doing a relevant research degree may improve your chances of progressing higher in the scientific community though."

Career Route

- Paper-round when I was 12 in Stoke on Trent
- Saturday job in a sports shoe shop (aged 15)
- Completed full-time education / degree
- 1st job after degree was as a Sales Advisor in a manufacturing company in Leek
- Assistant chef in Torquay in a seaside restaurant – saving money to travel
- Went away for a year travelling
- Job as a Research Assistant at North Staffordshire Hospital
- Scientist at Replizyme – January 2003

What does your job involve?

"I work Monday to Friday 8am to 4pm or 9am to 5pm. My main responsibility is to design and implement quite technical, biological tests working with enzymes and compounds. I do a lot of practical work and experiments on a daily basis. I have to use a range of equipment, and I supervise a radioactive laboratory in terms of keeping it stocked and safe. There's quite a lot of methodical and mathematical work involved, and I have to be very precise with the experiments I carry out. Other tasks might include setting up experiments, sharing out lab duties with the other scientists, writing up the experiments in detail – aims, methods and techniques, equipment and reagents being used, the results and conclusions.

"Then I have to think about what the experiment might lead on to in the future, and I can discuss these ideas with my line manager who is a Senior Scientist. Whilst a lot of the work is practical and sometimes repetitive, I do also get chance to meet clients, for example I've just been to Arizona to help promote our company at an exhibition over there."

What do you like most about your job?

"I love the practical work – the designing of experiments, their execution, and getting the results. It's not many people that can say they're involved in growing bacteria to purify DNA every week! But it's an exciting and challenging environment to be in."

Top skills and qualities needed in your job

Organisation skills – time management, equipment, projects, paperwork etc
Creativity – overcoming experimental hurdles or challenges
Initiative – to work on your own with confidence
Need to be meticulous when writing up experiments and results
Practical skills in handling equipment and materials
Need to be very observant and thorough
Helps to be thick-skinned, but also diplomatic when dealing with other people and colleagues

Career Progression?

"I'm continually learning new techniques with support from Senior Scientists, and will be improving my time management skills through a formal course later this year. My responsibilities have already increased since I joined Replizyme, for example, I'm now supervising the radioactive lab and have just been made a Project Co-ordinator where I have to use new budgeting and planning skills. I would hope that in future I have the chance to progress so that I'm supervising a small team."

Top Tips

For young people at school or college?

Use the internet and find out about different science jobs. If you want to do something in chemistry choose that route early on.

For students or graduates?

Get practical lab experience. Do a sandwich degree course if you can.

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Kate is originally from York, and after numerous positions around the UK and other European countries, returned to York six years ago. Kate joined Replizyme as Science Manager in January 2003, a job which she finds both challenging and rewarding.

Educational Route

At school Kate gained nine O-Levels and three A-Levels (German, Maths and French). She took some time off to travel aged 18, and then she decided to complete a further two science-based A-Levels which she needed in order to apply for a degree in Molecular Cell Biology at the University of York. This was a 3-year course, and on completion of that Kate went straight on to do a PhD in Biochemistry (enzyme kinetics) for three years. During this time she had opportunity to work in labs across the UK. Kate completed Post Doctoral work for the next seven years – paid work, employed by the University of York to begin with, and at one point funded by the European Union in Brussels to do research projects in the Netherlands, Spain and Belgium.

“I wasn’t too sure what I wanted to do when I was 18, but my career outlook started to take shape seriously by the time I had done my Degree. I knew I wanted to stay in research, and go as far as I could whether that be as an academic or perhaps ultimately as Chief Executive Officer of a commercial company.”

Career Route

- Sales Assistant on Saturdays at British Home Stores (aged 17)
- Cashier at a petrol filling station on evenings
- Got involved in Key Skills projects as part of the PhD studies
- Various paid research posts as part of Post Doctoral work doing research for a number of universities funded by the British Biological Science Research Council and EU
- Secured job as a Senior Scientist at Replizyme in January 2003

What does your job involve?

“I work Monday to Friday 8.15am to 5.15pm and sometimes take research papers home to read at weekends. My responsibilities include managing biological tests, setting up new contracts, meeting with clients and developing new research projects. I also supervise and train our scientists, and help promote Replizyme’s commercial interests at conferences, through presentations and trade missions. Quality control is also really important in our work, and I help develop something we call Standard Operating Procedures so that important compounds and materials we receive are logged and labelled accurately as they arrive.

“A typical day might include responding to all my emails. Up until lunch I would usually help with the experiments going on in our lab. In the afternoon, I might plan my own research and project work, developing new ideas, working at the bench or writing up reports. I might have meetings or help colleagues that I supervise, as well as planning for the next day’s priorities.”

What do you like most about your job?

“I like the Research and Development I’m involved in. It’s very exciting to develop something that’s biologically interesting, and commercially very relevant. Also, being able to follow something through from concept to completion is a really nice feeling. You don’t get that opportunity in a big company. In a smaller company though you can expect to have your hands in fairly numerous pots at any one time, and this is very satisfying.”

Top skills and qualities needed in your job

Oral communication
Accuracy, attention to detail
Staying calm under pressure
Positive attitude
Organisational skills – people, projects, clients
Commercial skills – promote yourself and the company
Data interpretation skills
MS Office / IT skills

Career Progression?

“You can learn a lot through experience. Some courses can help as well e.g. project or time management, implementing quality control in the lab, or presentation skills. These can help progress your career and improve your chances of rising up the company ladder, so long as you are goal-oriented.”

Top Tips

For young people at school or college?

Work hard and don’t give up. Don’t be pushed into a degree just because you’re good at something at school – take time out and think about things.

For students or graduates?

Do a degree in a relevant science subject at a good university e.g. maths, chemistry, biology.

For jobseekers or people thinking of a career change?

If you’re applying for a job with a company like ours, but do not have a scientific background, at least read up about the science we’re involved with, show a willingness to learn and be genuinely interested in the subject matter.

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The YORKTEST Group consists of three limited companies that offer high quality, specialist health related products and tests, both for humans and for pets. YORKTEST Laboratories has been established in the UK since 1982 and provides personal health laboratory tests.

YORKTEST Veterinary Services was established in 1999, and is a specialist laboratory in the field of allergy and intolerance identification in dogs and cats.

YORKTEST Group helps people with chronic illnesses such as IBS, asthma, eczema, and arthritis to get better by altering their diet, in line with our advice. Advice is based on a pin-prick blood test, which tells people which foods they are intolerant or allergic to. It's operated via a DIY postal service.

The people and their jobs

"We have 42 staff involved in the operation," explains John Graham, the Group's Chief Executive. "And we expect this figure to rise to between 60 and 70 staff over the course of the next three to five years. YORKTEST employs staff in a range of areas with differing skills and qualification requirements."

Laboratory staff
Research & Development
Sales
Marketing
Customer Service
Finance
Administration
Management
Directors
Chairman
Annual salaries range from £12,000 - £40,000

The people and their jobs (continued)

"The type of posts we recruit for might include senior and junior posts e.g. an operations manager and a data input clerk. In future, we expect that we will need staff across all areas such as technical, marketing, sales and research and development roles. As the company grows we find that we need more people with certain qualities to strengthen our team and exceed our customers' service demands."

Recruitment Practices

"We do tend to recruit locally when we can, making use of the York Evening Press and Yorkshire Post to advertise our vacancies, and most of our employees live within 20 miles of our sites. We have a mix of younger and older staff, graduates and non-graduates. The graduates may have come from the University of York or other institutions, and often have a good marketing or technical background that we find useful. We do try very hard to get our recruitment right, and match the right person and their skills to the job we need filling – sometimes it helps to have a qualification, but people with experience from other sectors or who have transferable marketing or management skills, can also have something valuable to offer. What we really need are good workers, who are dedicated to the cause of helping others. We are also routinely involved with offering quality work placements so that younger people can gain some experience in our company."

The working environment

"We currently have two sites in York – our office base and our laboratories. Most agree that it's a very happy environment to work in, and we have an extremely positive and enthusiastic staff committed to their work. We recently won the Queen's Award for Enterprise: Innovation, and this recognition and success is something that everyone in the company has been able to share in."

Support for new and existing employees

Full induction
Appraisal scheme
On-the-job training
Formal training e.g. sales, product & market knowledge, motivation
Reward system
Development programme

The career opportunities

"We're a company that likes to develop our staff so we have many people who have started off in junior posts rising to more senior levels e.g. customer service staff that have become team supervisors, or non-graduate junior lab technicians that have become fully qualified and developed their role. I suppose I'm proof that you can get into our sector by a non-traditional route and rise up, as I was in fact a patient of the laboratory having had arthritis for 26 years. The lab tested my blood, and I found that my arthritis just disappeared when I removed three foods from my diet. I felt I just had to join a lab that could do such valuable work, so I joined and eventually moved up the tree to become the MD."

Top Tips

For young people at school or college?

Work hard at school and get as good results as you're capable of. Though the qualification might not guarantee you a job it may help you get an interview with an employer.

For students or graduates?

Within Britain there are many enterprises which are exciting and that do a lot of good in society. Search them out, as you can have a very enjoyable working life in such a company.

For jobseekers and jobchangers?

Be yourself. Plan as well as you can. Think of the needs of the organisation you're applying to. In our line of work it helps to have a pleasant attitude, a disposition to work with others, to help others, be diligent and to be committed to the cause.

Next steps:

Please contact our Customer Service Department on:
Tel: 01904 410410 Website: www.yorktest.com

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Janice is 46. She is originally from Wensleydale and has been with the YORKTEST Group since 2000. She is Managing Director of YTVS, and manages all the business activities in the veterinary division.

"I always wanted to be a veterinary surgeon," explains Janice, "and being a farmer's daughter I was used to working with animals all the time – lambing sheep and that sort of thing! I was unable to get to veterinary college because of

the school system at that time and couldn't take the career path I would have liked. I had no strong mentor to take me forward or respond to my ambition. Instead I went down the agricultural and food-related commercial route, and I've finally got into the sector I'd always wanted to be in."

Educational Route

Janice gained 14 O-Levels and three A-Levels (Geography, Biology & Chemistry), before completing a degree in Agriculture and Food Marketing at the University of Newcastle upon Tyne. Since then, Janice has also completed a Wine and Spirit Certificate and Diploma and the Chartered Institute of Marketing Diploma.

Career Route

- Always helped on the farm, then aged 12, worked at a local shop and tea rooms for 10 shillings a day
- Various part-time jobs: local cheese company; grouse beating; working in a stately home in Shropshire as a visitor guide and general assistant
- Aged 17 worked at Chelsea College of Art – Summer School general household duties
- Whilst at University, ran the bars in the halls of residence and supplemented income with summer jobs including research / locations assistant for a BBC TV production team

Career Route (continued)

- Joined Graduate Training Scheme with FMC Meat and worked for 2 years in Birmingham then Leeming Bar in North Yorkshire
- Moved to Bulmer's Cider, Marketing Department Hereford, before returning North as sales representative for Yorkshire, Teesside and Humberside for 3 years
- Worked for Winerite for 7 years in Leeds as Marketing Manager and established their marketing department
- Developed consultancy roles with Askham Bryan College, York and Harlow Carr Gardens, Harrogate
- 2 years with Grants of St James (wine trade)
- Moved to Animalcare in Dunnington as Product Development & Marketing Services Manager
- Joined York Nutritional Laboratories as Marketing Manager in 2000, established the veterinary division and promoted to Managing Director of YTVS in 2003

What does your job involve?

"I'm responsible for managing the veterinary business, developing its strategy and sharing that with my staff. I spend a good amount of time with our customers and this involves travel both in the UK and overseas. I handle enquiries from veterinary surgeons and pet owners worldwide and look after our distributors in Germany, Spain and Italy.

"Whilst no day is ever the same as the next, there are things I have to do as a matter of routine. This includes dealing with emails and customer enquiries, signing cheques, contacting customers, attending company meetings, setting and monitoring financial and sales targets, and devising marketing and promotional activities for YTVS.

"I prefer hands-on management and work closely with customer services, marketing and the laboratory team. Everyone is doing very important work to ensure that the allergy tests are promoted, the tests carried out and results issued. At the end of the day I'm responsible for the profitability of the company so you have to do whatever's necessary to ensure success.

"It's a great job – whilst some days can be frustrating, it's all worthwhile when you get feedback from the vets telling you our service has really helped them, their clients and their pets."

Top skills and qualities needed in your job

Sales / marketing skills
Having the enthusiasm for what you do so this filters through to your staff and customers
Sense of humour
Commercial awareness
Determination to succeed and having a visionary outlook
Communication skills

Career Progression?

"I think we have the potential to expand at YTVS and that means each person in the team should have opportunity to develop as the company grows. We have well-defined career paths in all departments. Regular appraisals, training and development, coaching and mentoring helps people get on and develop their skills."

Top Tips

For young people at school or college?

Enthusiasm and determination combined with a vision of future career i.e. someone who has had work experience in pet / vet market will have a higher degree of empathy with our customers.

For students or graduates?

Take a relevant qualification e.g. science-based or marketing. Acquire knowledge of the company before applying for a job.

For jobseekers and jobchangers?

Always be aware of what's going on in the market – keep your eyes and ears open. Show initiative and develop transferable skills.

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Mark is 24. Born in York, he now lives in Market Weighton, and works at YORKTEST Laboratories in Osbaldwick. He is one of a team of four laboratory scientists at YORKTEST, and Mark focuses on the technical services required by the veterinary division.

"By the time I was taking GCSEs I knew that I would like a job in a science field. I was more competent at these subjects, and felt there were more job prospects following this route. I also wanted to do work that would really make a difference, and that's what we're doing here – helping vets, pets, and owners."

Educational Route

Mark gained 10 GCSEs and three A-Levels at Easingwold Comprehensive School, (Biology, Chemistry and Mathematics) before completing a degree in Biochemistry at the University of Leeds.

"I chose Biochemistry for my degree as it combined both Biology and Chemistry, two subjects I found rewarding during my A-Levels. I was also partly influenced by Nicholas Cage's role as a biochemist in the film 'The Rock'!"

Career Route

- Paper-round when Mark was young
- Worked weekends in a supermarket in Easingwold aged 17 / 18
- Whilst studying for his degree Mark worked weekends at an old people's home and also had a summer job at Ampleforth College
- Worked for 18 months on his brother's farm involved with turkey insemination
- Applied for the job as a Laboratory Technician at YORKTEST and joined the firm in 2003
- Now a Laboratory Scientist at YTVS

What does your job involve?

"I work Monday to Friday, 37.5 hours per week. 90% of my time is spent working for YTVS. This job requires me to test serum from blood samples of cats, dogs, and horses. Using allergen coated plates I can determine levels of antibodies specific to these allergens, thus allowing me to diagnose food intolerances and allergies.

I test approximately 150 samples per week. After processing the results I provide a series of reports to my YTVS colleagues. The remainder of my time is spent carrying out multi-allergy-screening tests and measuring homocysteine levels in human serum. In both cases I can work closely with other team members as necessary, but I actually really enjoy the independence that I am given to carry out my duties each week."

What do you like most about your job?

"When you get feedback from the veterinary surgeons using your work it's really satisfying. Also, some of our work is publicised in papers, and receives television coverage which makes you feel like you're doing something very valuable."

Top skills and qualities needed in your job

Time management
Good concentration
Computer literacy
Accuracy
Hand-eye co-ordination – motor skills
Methodical approach to work
Practical skills
Science background

How would you describe your job?

"The job requires concentration, and sometimes the work can be quite repetitive, but there's the chance to learn new skills, and gain experience all the time. I also enjoy being in a small, friendly but growing company."

Career Progression?

"Perhaps I could go on to supervise or manage a team as YTVS grows. I am now undertaking a masters degree in biomedical science which will improve my skills and knowledge."

Top Tips

For young people at school or college?

Choose a route that is science-based if you know you want to work in this sector in a technical or laboratory role.

For students or graduates?

Get some real lab experience where you can, and consider small as well as large businesses to work for.

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For information about recruitment by Nestlé in the UK please visit their dedicated website:

www.nestle.co.uk/recruitment

The content is continuously updated to reflect current opportunities in various parts of the business.

The website contains very useful information if you wish to identify what type of careers are available in the numerous sites and operations.

- Why work at Nestlé? – an explanation of how and why Nestlé is an employer of choice
- Down with mission statements – an overview of the principles and approaches that Nestlé has towards its people and their work
- Nestlé people on Nestlé – a small selection of case studies and thoughts from Nestlé UK personnel
- Locations – demonstrates the large network of Nestlé sites in the UK and what they do at each location

Rewards & Benefits

Health screening / on-site occupational health facilities
Life cover
Sick pay
25 days holiday
Company bonus scheme
Contributory final salary pension scheme
Gym facilities at larger sites
Staff shop at most sites
Subsidised restaurants at all sites
Flexi time at some sites

Learning & Development

Nestlé UK sees learning as a continuous process rather than an occasional event, and it can happen in many different ways.

They have a vast learning and development intranet site that helps employees manage their own learning. It includes formal training programmes ranging from management skills to forklift driving – and staff can book places on-line.

Their e-learning facilities allow employees to pursue training options at their own pace and convenience.

The learning resource libraries enable staff to borrow books, videos and other resources – all accessible on-line so it doesn't matter where you are located in the business. Most important of all, Nestlé UK say they 'learn as they go'. There is a feeling that no day should pass without learning something new, trying something different or sharing ideas with others. They're creating an environment that supports lifelong learning.

Top Tips

Also included on the site are:

- Further insights about day-to-day working from employees via a section called the 'Diary of a Nestling'
- Typical roles – including information on Human Resources, Finance, Administration, Corporate Affairs, Communications, Export, Distribution, Customer Service, Group Supply Chain, Group Technical, Sales and Marketing
- PeopleBank on-line CV registration service
- Job vacancies section

Information for graduates interested in working for Nestlé UK

Next steps

To apply for a specific role or to register on our database please go to the Nestlé Recruitment website: www.nestle.co.uk/recruitment

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Chris is 37. He is originally from Newcastle, and now lives in Thirsk. He is one of two New Product Development Managers at the Nestlé Product Technology Centre in York.

"I have always been into Science from my schooldays, and from the age of seven with my first chemistry kit making stink bombs and such like at my Gran's house!" says Chris. "When I left school my ambition was to be a lab technician and give it my best shot."

Educational Route

"I was hopeless at school. I left with three O-Levels and a grade 1 CSE in English Literature. So I started on a Youth Training Scheme in Research and Development for Procter and Gamble, and started a BTEC Certificate in Science. I did that for 10 months until I got a full time job. During that time I failed two-fifths of my BTEC course – probably because I didn't concentrate at college, messed around and saw myself as the class clown. But then I decided to sort myself out and went to night school to do Maths and Physics O-Levels after work.

I got them and went back to college aged 19, one day a week on day release for two years until I passed my BTEC Certificate in Chemistry. Then I did my first year HNC in Applied Chemistry at The University of Northumberland. Later during my career – with Nestlé support – I was able to complete my HNC, and go on to achieve an Honours Degree in Applied Chemistry."

Career Route

- Youth Training Scheme earning £25 a week as a Lab Assistant for Procter and Gamble
- Joined Tara-Pak Laboratories in Killingworth and went from Lab Technician to Laboratory Supervisor in 5 years
- Joined Nestlé Fawdon factory as a Laboratory Technician and then became a Development Scientist

Career Route (continued)

- Moved to R&D Broc in Switzerland as Project Manager in 1998. Worked in Nestlé S.A's Headquarters in Vevey, Switzerland for 6 months before returning to the UK
- Got offered a job in the Product Technology Centre in York as Project Manager in 1999
- Promoted to New Product Development Manager (Sugar Department) for Nestlé PTC in York after 2 years

What does your job involve?

"I'm part of a large team of people that ensure the smooth operation of the PTC in York," explains Chris. "Our work involves coming up with new confectionery ideas, looking at different manufacturing processes, and working with different people in the Nestlé company, and its markets located all around the world. There are so many aspects to our work, and to my job – that's what makes it exciting.

"I am contracted to work 40 hours per week, and the hours are flexible. There's no typical day as the job involves working with my own team, staff in different parts of the PTC, suppliers, and research or development colleagues in Nestlé global locations.

"I meet with suppliers to review new ingredients and think of ways to develop new concepts. On other days we all 'get into our whites' and go into our Pilot Plant and prepare 'new' sweets on the line. I ensure that they get micro-tested, cleared and packed before being distributed for consumer taste tests and trials. On average I travel to Europe once every six weeks, and twice a year to destinations further afield such as Pakistan, Japan or Brazil. At a moment's notice I could be jumping on a plane flying to another country and meeting with Technical or Production Managers working within their factory to solve problems or help develop new products.

"I also have to do a lot of presentations to very senior management, which can be quite nerve-wracking. You don't realise just how much science is involved in sweets."

What do you like most about your job?

"Developing a new product from a blank piece of paper through trials, to sale in the market. From concept to shop if you like."

Top skills and qualities needed in your job

Creative thinking
People skills
Problem-solving
Interpersonal skills
Willingness to learn from others
Factory experience has been very useful
Reasonable technical knowledge
Listening and respect for others' point of view
Organised and attention to detail
Good sense of humour to cross cultural boundaries

Career Progression?

"My role is always evolving, and there are many career routes to choose from at Nestlé whether it be production-oriented, technical, commercial, in the UK, abroad or even at the Headquarters."

Top Tips

For young people at school or college?

If you love science just work at it, and you'll understand all the calculations eventually.

For students or graduates?

Gain some practical experience within a factory as it's invaluable in the workplace no matter what job you go into. It's also very enjoyable and people in the factory often have the most to offer.

For jobseekers and jobchangers?

Decide on the route you want – hunt out the qualifications you need and go after it.

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Russell is 29. He is originally from Cannock in Staffordshire, and has been settled in York for nearly four years. He is one of 15 Senior Scientists at Nestlé’s Product Technology Centre in York and works within the Kit Kat and Wafer Process Development and Implementation Team – part of the Chocolate Department at the PTC.

“I think I fell into this kind of work really. What I liked about the thought of this type of job was working on something tangible, making something and seeing it develop. Confectionery is also a fun area to work in.”

Educational Route

Russell gained 10 GCSEs and three A-Levels (Maths, Biology and Chemistry) at Great Wyrley High School near Cannock, and went on to achieve a degree in Biochemistry and Biological Chemistry at Nottingham University.

“It’s hard to describe, but I wanted to do something technical that involved problem-solving and perhaps travel as well. I’d always had the love of science and for finding out about new things – a natural inquisitiveness to find out more about the natural world. And whilst I enjoyed learning about biochemistry, I wanted to find a job that could apply science in a tangible way and into something I could see being made before my eyes.”

Career Route

- Part-time job at Iceland stacking shelves
- Sainsbury’s evening & weekend work
- Holiday jobs to help pay for degree. Took a year out travelling after university whilst doing some bar and farming work to help pay for travel around the world
- Worked for a year for the University of Wolverhampton doing office work

Career Route (continued)

- Started to apply for graduate positions with large food companies. Joined Nestlé UK in 1997 as a Scientific and Technical Graduate Trainee in York. Moved to Leicester in the 2nd year of the scheme with Fox’s Confectionery. Completed the scheme
- Worked as a Process Technologist at a Chocolate Crumb Factory for Nestlé in Girvan, Scotland, looking at new recipes & formulations, improving plant efficiency and reducing waste levels
- Applied to Nestlé for Kit Kat and Wafer Project Manager position at the PTC in York in 2000
- Promoted to Senior Scientist at the PTC since joining

What does your job involve?

“Normal hours are 8.30am to 5.30pm weekdays. I cycle to work on a morning, check correspondence and then get into the day’s schedule. There could be a project management meeting to plan for forthcoming consumer trials or I might be in the Development Kitchen or Pilot Plant making new products or testing new recipes. For this we have to adhere to very stringent food and safety standards in terms of the clothing we wear, personal hygiene and behaviour. My job involves managing scientific and technical projects for developing innovative products and manufacturing processes for confectionery around the world.

“I look at recipe formulation, and think of different ways to use ingredients such as wafer, filling creams, chocolate and compound coverings. I help make new products on a small scale in our on-site Development Kitchen doing scientific studies e.g. looking at ingredient viscosity, temperature and particle size. If things are going well we take our new product idea to pilot scale using semi-industrial equipment, and eventually to real factories around the globe for production. We share our expertise with scientists, marketing, production and technical staff in many countries, and often assist factories to solve problems or get new processes up and running. Last year I was in Europe and South America for around four months.”

What do you like most about your job?

“The variety, the problem-solving, the people, the environment, working with different cultures, technical challenges, the creativity and also the sense of pride you get in taking an idea and a product into a real market – something that people are actually going to eat and enjoy!”

Top skills and qualities needed in your job

Planning and organisation
Interpersonal skills
Communication skills
Problem solving
Creativity
Tenacity and adaptability
Methodical
Logical and systematic

Career Progression?

“Could progress to technical positions in the UK or abroad. There’s always more science to learn, but it’d be good to gain more commercial skills as well in future.”

Top Tips

For young people at school or college?

If you know the kind of area you want to work in stick to it and don’t give up.

For students or graduates?

Get an industrial placement within your degree course to get work experience and real contacts – could give you a step in front of others competing for these jobs.

For jobseekers and jobchangers?

Focus on your current skills and knowledge and look at how you can apply it to the company you wish to work for – must sell yourself and get your CV right.

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The creative sector



The creative sector

Working in the creative sector in York

Working in the creative sector in York

The creative sector in York is a community of creative individuals and enterprises working with innovative technology in both contemporary and heritage contexts. This sector can be characterised by creative application of technology, in structural, musical, digital and visual media.

York is uniquely placed to illustrate the use of technology creatively in the context of its historic surroundings and the interpretation of historic skills and crafts. Voluntary as well as paid employment opportunities in the sector are available and the willingness to learn new skills and knowledge is essential. Is this the career for you...?

The Facts

- There are about 60 creative businesses in the York area employing over 900 people – almost a 12% increase since 2003*
- 6 in 10 businesses expect their workforce to increase significantly in the next 3-5 years resulting in a 25% increase in the overall size of the workforce compared to now
- Females currently account for 60% of job holders in the sector
- Jobs are available at many levels, equally appealing to those with a passion for heritage, culture, arts, technology, crafts or IT, or those with useful commercial, business or people skills
- Businesses in this sector have difficulties securing skilled volunteers, people with or willing to learn specialist skills through to senior managers
- There is demand for professional, technical and support staff
- Some highly specialist craft and conservation skills are at risk of being lost forever, unless more people can be made aware of the type of work involved and the satisfaction that comes from it
- A range of jobs are available in small, medium and large firms to match your background, skills, qualifications and talents

Example Jobs

Administrators	Interpreters
Archaeologists	IT support staff
Business advisors	Marketing officers
Computer active technicians	Music technologists
Curators	Preservation officers
Engineers	Project executives
Explainers	Researchers
Financial assistants	Senior managers
Information officers	Training co-ordinators
Interactive display technicians	Volunteers
	Warders

Example Businesses



For a full listing of companies in the cluster please visit:

<http://www.sciencecityyork.org.uk>

Find out more about job and career opportunities in the creative sector in York and North Yorkshire at:

<http://www.sciencecityyork.org.uk>



Immersive Media Spaces (IMS) was set up as a limited company in 2001, and moved to offices in York's Innovation Centre in July 2002. The company is a specialist provider of interactive technology for education and entertainment, with an ambition to make music accessible to everyone, specifically those with special needs.

IMS is the main UK distributor for the MIDIcreator range of products, which allows movements and gestures

to control sounds and music. This can be linked to mainstream music technology equipment, lights, special effects, video, images and water. Together with IMS's creative expertise it allows different systems and multi-media products to be created to suit many needs, from interactives in museums, to 'digital playgrounds', musical soft-play rooms, fully designed sensory rooms, through to classroom set-ups for use in a special needs setting.

The people and their jobs

"We are a small, specialist company that is planning for growth," explains Managing Director Mark Hildred. "In addition to myself, we employ a full-time Electronic Engineer, and an under-graduate from the University of York who is on her full-time 'Year in Industry' placement with us.

"We also have Directors who provide electronics, physics, design and project management expertise. We collaborate with other consultants such as musicians, music therapists and other small companies in the region for the delivery of special projects.

"We hope to be recruiting more staff in the next six to nine months because there is growing demand for our services and products. We also have an intensive research and development programme in place currently, which may generate further job opportunities in the future. In the next three to five years we may need around eight to 10 staff to cover the variety of projects anticipated."

What does your job involve as MD?

"Everything!" says Mark. "When you're a small company there isn't anything you don't do. You're switching very, very quickly often between management tasks – looking at accounts, developing business plans, raising investment, dealing with the bank and the accountant – and sales, training, customer demonstrations, creative work, coming up with new ideas for products, being on site building an installation or networking. But what makes it all worthwhile is when you see our customers, using the systems or products we've created specially for them."

Recruitment

Mark explains that "When we recruit we're looking for applicants with an element of creativity – not necessarily trained artists or musicians, but people who are creative in general. They will need really good people skills and depending on the post we need to fill, a mixture of technical and commercial skills are likely to be required too."

The working environment

"Teamwork is essential in a small business. Sometimes we work in our office in the Innovation Centre, whilst at other times we might be on site doing an installation at a customer's premises, or on other occasions perhaps setting up equipment ready for a show or festival outside.

"The atmosphere changes – we can be chatty, throwing ideas around the office, but sometimes it can be very quiet whilst everyone's concentrating on the work in hand. It's fairly relaxed and the hours are flexible."

The career and development opportunities

"I think in a small business you offer different things to employees that can't be achieved as easily in larger firms," says Mark, "such as a vast range of experiences, exposure to virtually all aspects of the business, and freedom to interpret one's role to some extent.

"IMS encourages its staff and consultants to stay up to date, attend education shows, exhibitions, which in turn helps individuals be more creative and authoritative in their work."

The career and development opportunities (cont)

IMS is involved with, or also offers:

- Year in Industry 'sandwich' placements
- Shell Technology Enterprise programme (STEP) scheme placements
- Flexible arrangements for graduates or postgraduates to come in and work for 2-4 weeks at the end of their course to gain work experience

Top Tips

For young people at school or college?

Get hands on experience. Having qualifications is useful but it doesn't get you the job. Play in a band, do some art – use your creative skills and tell us about it during your job interview.

For students or graduates?

Find out what's happening in the sector. Attend relevant events and network meetings. Find work placements. Volunteer a couple of weeks for nothing to get into a creative setting.

For jobseekers and jobchangers?

The biggest thing is don't try and hide the experience you've got – talk about what you've done to your potential employer.

Next steps

Please visit the website or send your CV to:

Innovation Centre, York Science Park, York YO10 5DG
Tel: 01904 561520 Website: www.immersiveltd.com

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John is 26. He is originally from Wolverhampton, and has lived in York for the past eight years. He is responsible for the technical aspects of IMS's activities. He'd always hoped for a job that married technology and music. "I was a technical and musical child," says John. "I learned the piano for years, played drums and guitar, and I was always dismantling stuff as a kid and getting shouted at for taking things apart and wanting to know how things worked!"

Educational Route

John gained 10 GCSEs at St Edmund's School in Wolverhampton and went on to achieve four A-Levels (Maths, Physics, Computer Science and General Studies). He then completed a degree in Electronic Engineering with Music Technology at the University of York, and has completed three years of study towards a PhD in Music Technology.

"When I worked in the Electronics Department at the University of York for my PhD research I knew I wanted to become an electronic engineer, and hoped it would have a musical slant on it somewhere. Through my job at IMS I get to apply the whole multi-media experience with electronics – perfect for my interests and skills."

Career Route

- Picking strawberries (holiday work)
- Job on the Production Line at a chocolate factory in Telford
- Office Junior in an insurance company in Birmingham (summer work)
- Paid work during PhD studies at the University of York's Electronics Department doing research in psycho-acoustic coding of music (MP3 related technologies)

Career Route (continued)

- Joined Immersive Media Spaces in September 2003 as an Electronic Engineer

What does your job involve?

"Lots of different things really," says John. "I work roughly eight hours a day but this can fluctuate. I spend some of my time doing computer programming, or developing computer hardware – this means getting bits of computer boards and putting them together to form a complete system to perform the tasks and functions you would like from the equipment.

"I could be working with sensors, or applying and adapting our MIDIcreator equipment. At other times I might be soldering wires or components together. If I work with software I might be putting together systems to play back sounds in different ways. Special projects such as 'ConsortEM' in York, challenge my skills, for example in putting together a system for disabled musicians to use, involving gesture recognition i.e. if they move their hand it might trigger a particular sound.

"Often I have to sit in front of my PC working with software, or sit at a workbench with a soldering iron building equipment to meet design specifications for customers. I feel part of the overall product development process, and as well as being a technical job it is always extremely creative. That doesn't mean my job demands musical ability, but if I'm setting up a sensor to produce musical notes, I do need to be able to work out how you could play that sensor – so the musical knowledge is quite handy.

"Currently I'm quite involved in the development of interactive fountains which have touch sensors on them and respond in different ways with sound, water jets motion and light. It's very varied indeed."

What do you like most about your job?

"The feeling that you're actually creating something. It feels like we're doing something unique. It's great to apply the technology in a place where it's not been used before."

Top skills and qualities needed in your job

Technical knowledge
Understanding a wide variety of technical systems and application of knowledge
Understanding of how systems go together
Initiative
Problem-solving and lateral thinking
Creativity

Career Progression?

"As the company gets bigger, there might be the opportunity to manage a small technical team at IMS. The advantages working for a small but growing firm is the flexibility and variety of work you get. You're always learning and applying things in new ways."

Top Tips

For young people at school or college?

Get some education. You can get into the sector through many academic or vocational routes such as NVQs.

For students or graduates?

Get in with the right people – make contacts and talk with employers if you get the chance.

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Sheela is 21. She was born in Cardiff and has been in York for three years since starting her degree in Electronic Engineering with Music Technology Systems at the University of York.

Educational Route

Sheela gained 12 GCSEs at The Bishop of Hereford's Bluecoat School and went on to achieve five A-Levels (Maths, Physics, Music, Music Technology & Art). She is currently completing her 'Year in Industry' placement as part of a 5-year Masters degree course at the University of York.

Career Route

- Voluntary work at a shop in Hereford (summer job)
- Sunday job at Waterstone's in York
- Industry Placement with IMS (started September 2003)

How did you get your placement

"Through a lot of determination," says Sheela. "Typically, the student must search out a company willing to offer you an industrial placement. Larger companies have application processes you have to go through. When I was looking I knew I wanted to do something quite specific and fortunately came across IMS.

"After some persistent correspondence, I had the chance to meet the Managing Director, Mark Hildred, and having discussed the potential for me working at IMS for a year, he agreed. I receive a wage from my employer during the placement, and in return I obviously carry out a variety of agreed tasks."

What does your placement involve?

"My hours tend to be 9.30am to 5.30pm Monday to Friday, but we all work extra hours if we've got an installation or special project on. We worked through the night getting equipment ready for a festival called Sightsonic last year, which was quite fun.

"There are administrative duties such as answering the phone and fielding enquiries from our customers who might be teachers in schools, music therapists or even parents wanting products at home. But there's also been the chance to test new software for a research project, which I'm heavily involved in. This allows children and adults with disabilities to play a proper musical instrument rather than standard MIDI equipment. The instrument will take gesture information to control volume and expressive content as well as the musical notes. For this project my role involves testing software, writing the training documents and helping to present training sessions. In previous months I've helped design a 'Digital Playground' with colleagues.

"Most of the time is spent working in the office, but for special projects there's the chance to get out as a team, work in different environments, setting up equipment and checking things work as they should. I also get to travel to North London quite regularly having been given extra responsibility for a project, which allows me to give technical assistance and workshops to others."

Would you recommend industrial placements to others?

"Definitely," says Sheela. "It gives you so much confidence and opportunity. I also think it's really necessary, especially in engineering, as it's generally a very practical subject, and there's only so much you can do on paper and in theory. You need to get out there and see it happening for real."

What do you like most about your job?

"I like the fact that it's giving me an awful lot of experience. I get to see so many aspects of the company that I wouldn't have seen in a large electronics company. In a small firm you see something develop from idea to actual usage by a customer."

Top skills and qualities needed in your job

Versatility
Working with IT

Top skills and qualities needed in your job (cont)

Creativity
Being methodical
Communication skills / tact
Being able to deal with people / clients / customers
A knowledge of music

Career Progression?

"This placement has given me an excellent foundation, and it has confirmed my desire to pursue a research and development career in the electronics engineering sector."

How would you describe your job?

"It's varied and very interesting. The most satisfying moments have been seeing the IMS equipment being used – seeing the kids thoroughly enjoy the equipment and what it allows them to do."

Top Tips

For young people at school or college?

If it's what you really, really want to do – keep doing it, stick at it – you have to want to do it, and enjoy it.

For students or graduates?

Don't be afraid to ask your lecturers for advice. Do an industrial placement.

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Media Mill was established in York in 2000. Its founders, Jerry and Louise Ibbotson, describe the business as an audio and media production company. The company specialises in audio production for video games including:

- Sound effects
- Sound design
- Voice recording
- Sound recording

Media Mill is currently working on audio production for the 4th edition of the World Rally Championship (WRC) game for PlayStation 2, having completed all sound design for the previous three versions.

As Jerry explains, "It's not like producing a soundtrack for a film, because if you watch it a hundred times the sound behind the images will always be the same.

"With games, the individual controls the action and each permutation of actions triggers off a different set of sound samples so each gaming experience is slightly different. We not only record the sounds and samples, but we use technology and specific software to ensure that they all work together correctly from a design point of view."

In addition to audio production, Media Mill also completes:

- Pre-production work
- Voice recording
- Writing magazine articles – keeping in step with both Jerry's and Louise's past reporting and journalistic experiences

The people and their jobs

Media Mill is a small, specialist business with four staff. Jerry does much of the creative work in the business, whilst his wife Louise is the Business Manager handling much of the day-to-day operations, finance and contracting issues. Tim Shepherd is Audio Assistant and Mickey recently joined the business through links with Future Prospects in York.

How did you get your first job?

"My first job was actually in radio so there's been quite a few stepping stones to get from there to where I am now running Media Mill. Before running this company I was a BBC radio journalist for about a decade, spending half of that time in local radio, and half in network radio including time spent on the popular 'Newsbeat' production. But to get into radio in the first place, I did a Postgraduate Diploma in Broadcast Journalism.

"In turn, one of the things helping me get on that course was securing work experience with Central TV, going out with camera crews, watching the reporters and seeing how the pictures were edited."

Why did you start Media Mill?

"Louise and I set up the business four years ago with certain ambitions," says Jerry, "and we were glad in a way to leave London behind. We didn't set up Media Mill with games development in mind specifically – in fact our strengths were in journalism. The motivations for starting Media Mill were many and varied – the onset of parenthood, changes in my past job and the appeal of being your own boss and having your own working culture and way of doing things."

What's it like running your own business?

"Most of the time it's really enjoyable. I can have my young kids around the office if I want, because I'm the boss!" says Jerry. "But at other times, you find yourself re-assessing what it is you want, what the business should be, and so you're usually adapting all the time."

The working environment

"I would describe our offices as light and airy, and being located in The Shambles in York adds to the feeling of being in a special location. The atmosphere is friendly, relaxed, informal, creative and quite chilled out," says Jerry, "and we have funky chairs too where we can sit and test out our audio on the new games in development."

What do you like most about your job?

"I've learned so much over the last few years in terms of my knowledge of computing and how software is made. But the buzz is still from the creative work and knowing that an audience is or will be enjoying it."

What skills and qualities do you need?

"In my line of work it helps to be very creative and technically competent in the specific software we are using for games audio production."

Top Tips

For young people, students or graduates?

Have a goal, but keep a cool head when things go wrong either school, exam or career wise. Be flexible, adaptable, and don't be scared to take a different path.

Next steps

Visit our website at: www.mediamill.co.uk

Contact: 1-5 The Shambles, York YO1 7LZ.

Tel: 01904 613979 Email: info@mediamill.co.uk

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Louise is 28. She is originally from York. She couldn't possibly have foretold that she would one day be helping to run a business like Media Mill, heavily involved in games audio production.

"I was always obsessed by the radio. We used to listen to it a lot in our house. So I had ambitions from an early age to work in national radio. When Radio 5 started I applied repeatedly for jobs there and

eventually I think they got fed up with me and gave me a job! By the time I was 22 I was doing my dream job, so it was really hard to see what could come after that. Running my own business with my husband has turned out to be the next step, and it's hard work, but very rewarding."

Educational Route

Louise gained 10 GCSEs at Millthorpe School in York, before going on to the Sixth Form College, where she gained two A-Levels. Whilst studying at the College Louise was also working almost full-time for Radio York, which sometimes meant getting up at 5am for work, then going to college for about 11am and then trying to find some energy to do studying in the afternoon – which didn't always happen. Louise did start a degree course, but decided not to complete it. She enjoyed her work in radio, and the feeling of having money in her pocket.

"At the time, I don't think doing a degree would have got me any further at the speed I wanted to go. All I wanted to do was be a researcher on 5 Live Breakfast. Three to four years later I was there and my peers weren't, so when I look back I think I made the right choice for my own situation."

Career Route

- Answering phones at Radio York aged 14/15 for free and for experience
- Moved on to become a Production Assistant at Radio York doing shifts

Career Route (continued)

- Worked for Radio 3 Counties in Luton as a Production Assistant
- Worked at Radio 5 Live as a Production Assistant, and then as a Researcher in London
- Moved to York, taking a career break, and then formed Media Mill with husband Jerry

What does your job involve?

"A bit of everything really, but not so much the creative or technical aspects of the business," says Louise. "I concentrate on the administration, financial management, business planning, contracts and personnel functions at Media Mill. I'm often on the phone dealing with administration issues.

"I tend to keep fairly regular office hours, but work to suit myself, and to fit around the children. I also work from home, and do evening work as necessary. I think when you're running a business for yourself you do whatever's needed really."

What do you like most about your job?

"The flexibility is important. I suppose I quite like being in control, and I have the ability to make my job what I want of it. There's a satisfaction in doing something for yourself, that maybe you take for granted working for someone else. It's an extra motivation, and I'm probably working harder than I ever have before."

Top skills and qualities needed in your job

"I think you need common sense, wit and the ability to make a good cup of coffee!" says Louise. "I've also been lucky to learn from my previous jobs and the experiences of working in teams, organising things, setting up offices and so forth. Most of all I learned that you can be yourself, be different and still get your point across to colleagues, earning you respect."

Top Tips

For young people at school or college?

Remember that you're going to be doing your job for an awful long time so if you want to do something get on and do it. Make your own decisions and follow them through.

For students or graduates?

Show some initiative. You might have to do things for free or little money to gain invaluable experience in the industry.

For jobseekers and jobchangers?

Hard work and enthusiasm are essential.

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Tim is 22. He is originally from Nuneaton, but moved to York aged eight when he started at York Minster School. He is a former Chorister which serves him well in his current job as Media Mill's Audio Assistant.

"I always dreamed of having a job like this. From very early on I knew I wanted to go into the music industry, TV or radio on the creative and audio side. Both my parents were music teachers so I grew up in a

musical family. But I also love technology, gadgets and computer games. I started bringing the two together when my father bought an Atari ST with Emagic's Logic to notate hymn tunes, I thought I'd use the little midi sound module to create dance tracks instead! My time at University got me interested in electro-acoustics and sound manipulation, and so I've been very lucky to find a job that fuses all these interests and experiences."

Educational Route

Tim gained nine GCSEs and three A-Levels (Economics, Music and English) at Charterhouse School. He has since achieved a Music Degree at City University in London.

Career Route

- Work placement with the Old Dairy Studios in York (now CUBE Media) shortly after finishing GCSEs
- Worked as a builders' labourer in York (holiday job)
- Whilst at University Tim worked in a sushi restaurant in London and in a Mobile Bar at different racecourses
- Joined Media Mill as Audio Assistant in June 2003

What does your job involve?

"As Audio Assistant my main responsibility is to identify, record and create sounds and sound effects for use on the computer games we're helping to develop. These tend to be sounds from different rally cars, which I need to process, get in tune and make them sound as good as possible for the game. We use more than 20 sound samples for each car and there are over 20 cars in the game.

"On a typical day in the office I will work from 9:30 to 5:30pm. In the office the majority of my work is carried out using 'Audition' software (formerly 'Cool Edit Pro'). We also have a few other useful bits of software for more individual jobs, not to mention the tools that we use to get the sounds working in the game.

"Sometimes we have to get out there and record the sounds, whether they are from trips to various rally teams, or just everyday sounds which we then tailor to suit our needs. Some days I'll get straight into audio work, whilst on others we might find ourselves waiting for certain disks to come from the games company in order to progress on the projects. We also use some of our time to play our own, and other games to see what our competition is doing with audio."

What do you like most about your job?

"I love messing around with sounds and sound effects. It's satisfying when you know that you've been a part of something creative, and that you've worked on the finished games being sold in the shops, being enjoyed by people all over the world."

Top skills and qualities needed in your job

- Have a passion for technology
- Know your software inside out
- Be detailed in your work
- Play computer games
- Keen – most important thing is that you strive to produce the best you can

Career Progression?

"I feel like I've already been given more responsibility since joining Media Mill, working more independently. In future I would like to work on more musical aspects of projects. I may look to do some audio programming training as well to ensure my skills are always developing, and keeping on top of software and hardware developments."

Top Tips

For young people at school or college?

Get out there and find creative companies – target them and get involved. In York find out more about the Creation Network.

For students or graduates?

Get a portfolio / demo CD together of the creative work you've done and show it to potential employers. Use the internet to find companies and networks e.g. Game Republic in Yorkshire & Humberside.

<http://www.gamerepublic.co.uk>

For jobseekers and jobchangers?

Develop skills: Know how to use specific games / audio software; basic knowledge of how audio works in games etc.

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The National Railway Museum (NRM) was established in York in 1975. It looks after, and displays the largest collection of rail-related material in the world. Thousands of visitors come each year and receive a fun and educational experience.

The people and their jobs

"The range of jobs is huge at the NRM," explains Joan Murphy, Strategy Manager. "We have over 100 Museum staff, and around 60 staff in our Trading Company. In addition, we have 200 highly valued volunteers who bring with them a tremendous amount of skills and knowledge. When it's extremely busy, we take on a further 30 staff. So you could say there are almost 400 people involved in the running of the NRM." There are staff that the public sees, and staff working hard behind the scenes including:

Sales staff / Receptionists
Mechanical Engineers
Explainers
Interactive Development
Security
Project Developers
Cleaners
Programme / Events staff
Estates
Head / Deputy of Museum
Corporate events staff
Finance / Personnel staff
Collections & access staff
IT Team / Support
Department Heads
Designers
Marketing Staff
PR / Press Officer
Conservation Assistant
Annual salaries range from £11,000 - £42,000 +

The people and their jobs (continued)

"It's hard to predict how many jobs we might recruit for in the future, as the NRM is always involved in projects that may require us to use new buildings or create new exhibits. This might create new job opportunities. We will probably have a need for Explainers, Cleaners and Sales / Receptionists, and we are always recruiting volunteers. We advertise jobs through the York Evening Press, Yorkshire Post, specific trade journals and make use of a recruitment agency depending on the posts we're trying to fill."

Support for new and existing employees

Full induction
Support from Line Manager
Regular Reviews
Customer Service Handbook
Training: paid, formal training
Development: in-house, on-the-job support
Mentoring scheme
Trained Trainers at NRM
3 formal reviews
Management Charter
Personal Development Plan for each member of staff, includes objectives, setting standards, training needs and performance review

The working environment

"The NRM is an amazing place to work, as you have both indoor and outdoor environments. There's the buzz of the visitors in the front-of-house areas such as the galleries and huge exhibition halls. This contrasts with the clanking and welding you might find going on in the workshops where locomotives are being repaired. And there's the offices where you might find our staff planning events or designing programmes. There is an equal balance of males and females at work, and staff work slightly different days and hours depending on the work involved. For example office staff work 8.30am to 5.00pm; the security team do a 24-hour cover on a shift basis; whilst volunteers can be in weekdays and weekends. There are staff to cover our evening corporate events as well. We also have people working at times to suit their childcare responsibilities."

The career opportunities

"We encourage people to progress their careers at the NRM, and using the Personal Development Plans in place for each member of staff, help them identify training and development needs," says Joan, who herself has gone from a finance and administration post when she joined NRM in 1997, to Strategy Manager in 2004. "What I like most about working here is the diversity – never the same thing awaits you each day. And whilst sometimes it can feel fast and furious, it's exciting at the same time."

NRM is involved with, or also offers:

- Work placements (Trident)
- Volunteer recruitment
- Careers fairs & exhibitions

Top Tips

For young people at school or college?

At interview, demonstrate how you can work in a team even if you haven't had work experience e.g. in a youth / sports / music team. Work on your communication skills as at NRM you will come into contact with the public – be pleasant and confident.

For students or graduates?

Check early on that the degree you've chosen suits you and test it in the world of work – try to get a placement during the holidays. Change course if you need to.

For jobseekers?

In your job application to us clearly set out your skills and experience against the job description. Don't assume anything – really spell out your skills, knowledge etc.

For career changers?

Make sure you're making the right step. Try and get to speak to the staff who do the work you're interested in.

Next steps

Please contact our Personnel Department, NRM, Leeman Road, York YO26 4XJ Tel: 01904 621261 Visit: www.nrm.org.uk





Charlie is 37. He is originally from Normanton in West Yorkshire, and moved to York in 1996. He is the only Interactive Developer at NRM, but will soon be joined by an Interactive Technician and a Multimedia Developer. "I've always been into electrical, electronic and mechanical things," says Charlie. "I grew up on a farm and helped Dad do repairs on the tractor and combine harvester – maybe

that's where it all started. Even my hobbies revolve around restoring and fixing things. I'm really a perfectionist, and like to get things done right. This serves me well in my job at NRM."

Educational Route

Charlie left school aged 16 with six O-Levels, and went from there to York College of Arts and Technology (now York College). He completed an ONC in Electronics, and admits freely that "I was hopeless at Maths, which did make the course an uphill struggle." Since that time Charlie has gone on to achieve an HNC in Electronics, has completed exams relating to the firing up and driving of locomotives in the Yard at NRM, and has also completed the 16th Edition Electrical Wiring Regulations exam at York College in 2004. Charlie says that "for jobs like mine I've noticed that some require the I.E.E. 16th Edition Wiring Regulations certificate, so it might be worth people looking at this if they want to do anything geared towards electrics."

Career Route

- Television repairs for a small firm in Yorkshire (£35 a week)
- Teaching Laboratory Technician in the Cavendish Laboratory at Cambridge University – designing and developing experiment apparatus for undergraduates
- Promoted to Lecture Theatre Technician looking after lecture theatres, building equipment for lecture demonstrations, and repairing audio visual equipment

Career Route (continued)

- Moved back to Yorkshire and worked as a Service Technician at a telecommunications firm in Whitley Bay
- Joined NRM in 1997 as an Interactive Display Technician
- Progressed to Interactive Developer by 2004

What does your job involve?

"My job is to make sure that all the hands-on exhibits at the NRM are working smoothly and safely. This includes anything where a visitor presses a button at NRM, or where electronic interaction takes place. My job is extremely practical. I could be in the mechanical and electronics workshop making new components using lathes and milling machines. Or I could be testing electrical and electronic equipment using equipment such as multi-meters or oscilloscopes. I also look after the lighting on all the vehicles such as the Royal Carriages. Naturally, part of my work is to repair, maintain and upgrade equipment. I even fire up and drive the locos in the South Yard. It's really varied.

"I work Monday to Friday 7.45am to 4pm, and occasionally at weekends. First thing on a morning, after making a cup of tea, I'll check to see if any faults have been reported by front of house staff to the Museums Control Room, and try to fix all I can before the doors open to the public at 10am. Then the day can be a mixture of development work in the workshop, designing new prototype interactives with colleagues, undertaking repairs or upgrades, ordering components and responding to any breakdowns as they occur. Sometimes, visitors like seeing me doing repairs and I'm happy to explain to them what I'm doing."

What do you like most about your job?

"The variety of work, and being able to use several skills at once. My colleagues are nice to work with, and it's a pleasant environment to work in. What's more the Museum gives me the opportunity to work sometimes with older exhibits, but use modern technology to bring them to life. I'm also a very hands on person and like getting my hands dirty!

Top skills and qualities needed in your job

Intuitive / logical approach to fault finding
Try not to let things get on top of you – sense of humour
Hands on practical approach
Interest in the subject you are working with
Electronics / electrical / mechanical skills
Problem solving

Career Progression?

"I'm always learning, and the great thing about my job is that you can mould it into what you'd like it to be. That's how I know my job can progress here."

Top Tips

For young people at school or college?

Try and choose the most practical subjects e.g. I did metalwork. Physics is useful. Try and get on with Maths – it does actually fit in real jobs.

For students or graduates?

Get hands-on experience. Build things; fix things and experiment when you can. Don't rely on theory.

For jobseekers and jobchangers?

Get some electrical / electronics practical skills. You've got to stand out from the crowd. Invest in training or retraining e.g. do an electronics course

Supported by





Hannah is 32. She is originally from Darwen in Lancashire, and has lived in the York area since 1995. She is one of 16 Explainers at the NRM, and never thought she would end up with a job like she's in now. "I didn't really choose this type of work," says Hannah. "I joined the NRM in June 2002 as a stock-keeper in the shop, and then one of the Supervisors told me about the opportunity to become an explainer and I

took it. I think it's given me much more scope to use my head, and use my knowledge and skills. And I have a lot of freedom to study things, and wander around the Museum helping people, and learning all the time."

Educational Route

Hannah gained 10 GCSEs and four A-Levels (English Literature, History, Geography and General Studies) at Bolton School Girls Division, and has since gone on to achieve a degree in Medieval History and English Language (Glasgow University), an MA in Medieval Studies and an MPhil in Medieval Studies (University of York).

"Looking back I suppose it's fair to say that I have always had an interest in education, history, social history and technical things. But my career route to where I am today has been far from typical I imagine. I've been working since the age of 12 one way or another!"

Career Route

- Worked for parents who were greengrocers
- Taught Drama GCSE at Bolton School during gap year (age 19)
- Did some teaching in the Department of Language and Literature at the University of York
- At one time I had 4 jobs on the go at once: Working in 2 pubs in York; helping my parents; and teaching at the University of York

Career Route (continued)

- Spent 6 months as a sales consultant in a dress shop in York
- Joined NRM in 2002 as a stock-keeper in the shop
- Became an explainer in April 2004

What does your job involve?

"As my title suggests, I explain things to people. Basically, I wander around the Museum amongst the visitors and offer them the chance to ask me questions and I do my best to answer them. Some are easy like – 'where's the toilets?' or 'where can I see the Flying Scotsman?' – whilst others can be quite technical or specific to the collection. If I can't answer something, I have a pager, which I can use to contact any of the other Explainers on site. What's quite challenging is being able to tailor your talks to different age groups – from 7-year-olds to 80-year-olds reminiscing about the past – and you have to judge how much visitors really want to know.

"My job is full-time and I work 36 hours per week, four days on and two days off. Officially, Explainers work from 9.25am to 6.08pm everyday. First thing in a morning we open up, get our keys and pagers from Control, then we go round the Museum turning things on. We check that all the interactives and videos are working. If not we report them so they can get fixed. We check everything for health and safety, picking up litter, tidying up and prepare for the doors to open. During the day, we spend our time explaining things to the public either one-on-one or to groups. We do regular talks at different places in the Museum. Our last job at night, after the doors shut at 6pm is to walk through the site with security staff checking that everyone has left the building."

What do you like most about your job?

"It's great when you manage to communicate really well with a visitor, and they find it interesting or exciting. The collection has over 3.5 million items, so you're always learning something new for yourself, which you can then pass on to others."

Top skills and qualities needed in your job

Listening skills
Communication

Top skills and qualities needed in your job (cont)

Extremely patient
Like to research things
Need to be enthusiastic – give people a sense of what we're trying to achieve at NRM

Career Progression?

"I'm concentrating on building up my knowledge as an explainer, but with more training on presentation skills, and possibly language skills, I could develop further, and maybe one day be Head of Knowledge and Collections. You can also move into other more specialised areas if you like at NRM, like the photography department, or onto special projects."

Top Tips

For young people at school or college?

You don't have to know a lot about trains, but it helps if you can gain a genuine interest in the subject matter.

For students or graduates?

Have an interest in education and history; practise your presentation skills through seminars; develop confidence talking or speaking publicly to others.

For jobseekers and jobchangers?

Enthusiasm. You need to have good communication skills and be able to tell a story well.

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The IT & digital sector



The IT & digital sector

Working in the IT & digital sector in York

Working in the
IT & digital
sector in York

IT & Digital York is a dynamic and fast growing information and communications technology cluster of businesses, which includes digital and new media firms. Many of these companies offer cutting edge technology in world leading niche markets with extensive blue chip client portfolios. Is this the career for you...?

The Facts

- There are over 100 IT & Digital organisations in York employing more than 2,400 people – at least 7% increase since July 2003*
- IT & Digital organisations expect their workforce will more than double in the next 3-5 years
- 70% of employees are male, and businesses are keen to encourage a greater number of female applicants for their jobs
- Jobs are available at many levels, equally appealing to those with a passion for technology, or those with useful people and business skills comfortable working in a usually dynamic environment.
- 3 in 5 employees have experienced a job promotion since starting work with their employer
- Businesses in York report gaps in the skills of their current workforce in the areas of people management, commercial skills, as well as advanced ICT skills. They would like to recruit applicants with these, and other skills such as good communication and perhaps sales and marketing ability
- A range of jobs are available in small, medium and large firms to match your background, skills, qualifications and talents

Example Jobs

Data inputters	Computer programmers
Games testers	Website editors
Administrators	Web architects
Payroll officers	Technicians
Receptionists	Systems administrator
Junior & senior developers	Engineers
IT operators	IT technicians
Sales specialists	Multimedia designers
Computer operations managers	Finance officers

Example Businesses



For a full listing of companies in the cluster please visit:

<http://www.sciencecityyork.org.uk>

<http://www.creation-network.com>

Find out more about job and career opportunities in the IT & digital sector in York and North Yorkshire at:

<http://www.sciencecityyork.org.uk>



▲ Estelle Phillips

AgilisyS was established in York on 1st April 2002. It is principally an Information Technology outsourcing and consultancy firm.

The company works with central and local government clients to provide a wide range of on-line and e-services.

AgilisyS is an equal opportunities employer. We recognise the potential of a diverse workforce, welcoming applications from all suitably qualified people and appointing on merit.

The people and their jobs

"We have 450 staff in our York operation," explains Elaine Spencer, People Development Manager. "And this figure may double in the next 18 months. We are an ever-changing business that is very much up to the minute. We need to be responsive to new technology – and that often means we need new staff, new skills and expertise." Occupations are extremely diverse at AgilisyS and include:

Accounts Clerks
Project Managers
Business Analysts
Programmers
Applications & Software Developers
Department Heads
Managers
Administrative Posts
Payroll Trainees
Technical Analysts
Network Engineers
Accountants
Document Processing Clerks
Section Team Leaders
Service Desk Call Handlers
Annual salaries range from £12,000 - £65,000 +

"The culture here is very supportive," says Estelle Phillips, "and there is so much opportunity to progress once you're here." Estelle is proof of this having expanded her role to Recruitment Manager in only six months. "My job is to co-ordinate all our recruitment activities," explains Estelle.

The people and their jobs (continued)

"We welcome applications from people of all ages, backgrounds, working hour preferences and ability as we can help new recruits with a significant induction and training support package once they are employed with us."

Support for new and existing employees

Full induction to the company
Induction to Information Technology
'Buddies' to help people settle in
Human Resource support service for all staff
Annual appraisals
Guidance and counselling
Access to internal vacancies and opportunities
Employer-funded training – job-specific or person-specific; generally in working hours
Human Resources plan within each department to show how individuals can improve their skills, training and talents so that they can progress in the company.

The working environment

"There's an 'open-door' culture" says Elaine. "Often you'll find senior managers and the most junior staff working in the same office area as each other." Estelle adds: "It is quite dynamic and fast-paced, and so teamwork is really important – especially when things change daily in terms of the products and services we are offering to our clients." Estelle adds: "The quality of our people is critical to our continued success. Therefore, we place a high value on creating a working environment that is conducive to supporting their professionalism and enthusiasm."

The career opportunities

"There is definite career progression at AgilisyS," says Estelle. "We have people who have started on our service desk as Call Operators and moved on to become Network Engineers. Some Accounts Clerks have become Business Analysts or work closely with Project Managers.

The career opportunities (continued)

There are no set parameters – you can move upwards or sideways in our firm as the opportunities arise and we encourage people to better themselves."

AgilisyS is involved with, or also offers:

- Work placements
- On-line recruitment
- Internships – may develop in 2005
- Careers fairs & exhibitions
- Temporary assignments

Top Tips

For young people at school or college?

Keep in touch with IT. Try out more than just traditional applications at school. Try out web technology.

For students or graduates?

Investigate our company – learn about our business before you gain an interview. Do your homework. And remember – you don't have to have an IT specific degree.

For jobseekers?

Don't be put off by IT. We can give you training. Practise your job interview and communication skills. Basic office administration skills can sometimes be useful. Word and Excel training may be handy too so give it a go if you get the chance.

For people thinking of a career change?

Prepare an up-to-date CV for yourself. Check out our website to get a feel for our company. Approach our Recruitment Manager speculatively if you wish.

Next steps

Please contact our Recruitment Manager at AgilisyS, 3rd floor, Jarvis House, Toft Green, York, YO1 6JZ **Email:** Estelle.Phillips@agilisyS.co.uk
Website: www.agilisyS.co.uk

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Tom is 24. He is originally from York, and has lived in the area for the past 16 years. He is one of 10 developers / system analysts at Agilisys, and unusually perhaps, always knew he would end up in a job like the one he's got now.

"I was always playing with computers from an early age and it seemed natural that I would end up doing a job that allows me to understand them better and make them do things. My step-dad was a big influence too as he taught at the University of York in the Computer Science Department."

Educational Route

Tom gained 10 GCSEs at Fulford Comprehensive School, and went on to achieve three A-Levels (in double Maths and Physics) at York Sixth Form College. Studying at University of Warwick for three years, Tom secured a degree in Computer Systems Engineering.

"In my view though," says Tom, "it's probably more important to study Maths at GCSE and A-Level stage, than computer courses if you want to get a job in this sector. It helps to have a logical mind in the kind of work I do, and Maths helps give you that ability."

Career Route

- Bar tender at a pub in York
- Sound engineer at Warwick University students' union
- Temporary clerical job in York (Defra)
- Jarvis Systems and Technologies on their IT support desk
- Made permanent when transition to Agilisys took place (1st April 2002)
- March 2003: Tom applied for Junior Developer post and got it
- Now a Developer / Systems Analyst

What does your job involve?

"It's split 50:50 between programming work and what we call architecture. Architecture is the general term applied to planning how a system or collection of systems will function as a whole. Programming can involve writing code in a variety of languages, developing databases, testing and configuring. I have done projects on my own, and also as part of a team. I'm responsible for producing a practical solution within a given time and budget.

"I work Monday to Friday, 9am to 6pm. A typical day might include reading through my email correspondence, meeting with colleagues – Business Analysts and Solutions Architects – to discuss our projects, helping each other with new techniques as necessary. Occasionally I meet with clients. I have some time to read through technical books to keep up to date. Sometimes there are training courses and workshops or design sessions. Most of the time I'm programming or architecting."

What do you like most about your job?

"The gratification from working on something, seeing it up and running and see it serve a real purpose. Also, you're learning new skills all the time."

Top skills and qualities needed in your job

Ability to do logical analysis
Slightly introverted i.e. able to concentrate and apply oneself
Mathematical aptitude
Communication
Fascination with systems in general and understanding & manipulating them
Ability to work independently

How would you describe your job?

"Dynamic – you're constantly picking up new things. You can't coast for long on the same knowledge as the computing environment changes so rapidly. It's also challenging, and you have to be very adaptable, willing to learn and take the initiative to get ahead."

Career Progression?

"Perhaps from here I could become a Technical Architect or Lead Developer, then perhaps a Solutions Architect. Eventually, there'd be the chance to manage a team which I'd like to try."

Top Tips

For young people at school or college?

Get some general literacy with computers. Stay up to date with technology. Study Maths and do well at that.

For students or graduates?

Know which businesses are around locally and if possible what they do – their departments, structure etc. Make speculative applications to local businesses even if it's just to practise or put the feelers out. Know what the most in-demand skills are. Practise interview skills.

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Suki is 34. She is originally from Coventry, and has lived in the area for the past two years. She is one of 14 First Line Technical Analysts at Agilisys, and never thought she would end up with a job like she's in now.

"But when I realised I could have this type of job, and that it wasn't such a difficult thing to get into, I wanted to go for it," says Suki.

Educational Route

Suki gained seven GCSEs and three A-Levels (English, History & Psychology) at Whitley Abbey Sixth Form College in Coventry, and has since gone on to achieve the Comptia A + course in hardware and software, through a period of self-study.

"I wasn't the best at school, not particularly motivated. I didn't do that well with the exams and just took what I thought I was good at. Some people like me, simply don't know what they want to do at that age.

"Looking back I would say that it is not essential to do computer studies to get into a job like mine, but it is essential that you enjoy it – only take the subject if you discover a passion for it."

Career Route

- Watford Gap service station (aged 16)
- Went to London to be a model
- Receptionist at the Limelight Club
- Waitress in a restaurant in Soho
- Career break – went travelling to the Middle East
- Hospitality Manager for a restaurant in Regent Street
- Restaurant Manager in Primrose Hill
- Head Waitress at the Bierodrome
- Restaurant Manager in Shrewsbury
- Career change – went into banking – wanted call centre experience – Barclays (Coventry) – did an IT course at this point – realised I needed experience in an office

Career Route (continued)

- Moved to York – went to Springhill Recruitment and started on the helpdesk at Agilisys
- Now a First Line Technical Analyst

What does your job involve?

"I work Monday to Friday, around 40 hours per week. I work different shifts to suit me – ranging from 7am to 3.30pm and 1pm to 10pm. We are the first line support for people with a computer problem and basically we fix things. On average we take around 30 to 40 calls per day diagnosing and solving problems all the time e.g. helping set up user accounts, remoting onto someone's PC and fixing a problem that way, 'emailsweeping' (getting rid of spam and junk email), backing up servers, dealing with registry problems and networks.

"A typical day might include checking all my emails, dealing with priority calls, mailsweeping, accounts-handling, and constantly dealing with correspondence. We also have a team meeting every Friday to discuss anything new that's happening and make suggestions for improving our work."

What do you like most about your job?

"The relationship with team members is excellent – we all have different knowledge and work in a very supportive atmosphere, helping each other. I also really enjoy fixing things for people."

Top skills and qualities needed in your job

People skills
Being friendly
Communication / good telephone manner
Ability to analyse things – logical mind
Work as a team
Want to help people
Basic knowledge of IT
Willingness to learn

How would you describe your job?

"It's very interesting. You're always learning and there's training (ECDL, Oracle, Heat programme) to help you develop your skills."

Career Progression?

"There are so many routes to choose – perhaps I could move into programming, engineering, management... you can work towards your goal here."

Top Tips

For young people at school or college?

Buy a computer and play around with it. If you enjoy it, find out which bit you like – web programming etc.

For students or graduates?

Get real-working environment experience to complement studies and qualifications. Take advantage of any placements you can.

For jobseekers?

Take advantage of all free courses that the Government has in place – there's loads of support available.

For people thinking of a career change?

Take a course – see if you like it – don't spend too much money on it. Read books. Check out the internet. Try out some mock exams – self-study.

Supported by





ioko 365 was established in York in 1995. Based at York's Science Park, the company designs, builds and manages applications and systems for many of the UK's major public and private sector organisations. One of ioko's strengths is the ability to either manage entire IT solutions for clients, or to work with their clients' own IT teams where extra support and expertise is required.

"Our successes are due to the creativity, energy and integrity of our people."

The people and their jobs

"ioko people are deeply technical, but our culture means that we can blend technology with business expertise," explains Paula Clements, ioko's Human Resources (HR) Manager. "Our employees are crucial in helping us to accomplish our business goals and objectives, so they have to be dynamic, dedicated to their job and their customers, be good team players and above all be passionate about technology." Occupations are extremely diverse at ioko 365 and include:

Computer Operators
Systems Engineers
Receptionist
HR Manager
Ledger Technician
Purchasing Controller
Telemarketers
Sales Executives
Software Developers (various skill levels)
Product Solution Directors
Technical Architects
Service Delivery Managers
Project Managers
Financial Accountants
Support Engineers (various skill levels)
Annual salaries range from £9,000-£100,000

The people and their jobs (continued)

"We currently employ 110 people, but we expect this to grow to between 150 and 200 people in the next three to five years. We are actively recruiting new staff for all manner of jobs including Software Developers, Test Analysts, Telemarketers, Service Desk Operators, Microsoft Systems Engineers, Business Development Technical Leads and Architects, Systems Engineers and Administrative posts."

Support for new and existing employees

Full induction
Seminars
Personal development activities
Advice and guidance for employees
Support to gain technical certificates
Training: on-the-job and formal external training
Technical career or client-facing career path support

The career opportunities

Paula was recruited at ioko through a general management route from a different sector. Her core management skills have now been further specialised and she is fully qualified with the Chartered Institute of Personnel and Development (CIPD). She is the single point of contact for all HR matters at the company.

"What I like most about my job is the variety along with the satisfaction of knowing I provide a valued service to busy staff and managers – that feeling that you're making a difference. And whilst we are a leading technical company, that doesn't mean you can't get into our firm from a non-IT route. We pride ourselves on being able to offer flexible and imaginative career development routes for our people, and we encourage everyone to take part in training and self-development.

"Also, sometimes people wrongly think that IT is just for men, but here at ioko some of our top directors and managers are very successful women. There are also many examples where employees have started in one part of the company e.g. the Service Desk or as Computer Operators, and gone on to become Support Engineers, Developers or even Client Service Directors."

The career opportunities (continued)

ioko is involved with, or also offers:

- Work placements / work experience
- Graduate recruitment (call for a brochure)
- Careers fairs & exhibitions
- On-line recruitment (www.ioko.com)

Top Tips

For young people at school or college?

After completing a relevant course, investigate the type of company you want to work for. If you apply for a job at ioko 365 the first two questions we'll ask are: "What do you know about ioko 365?" and "What attracted you to the position and the company?"

For students or graduates?

Aim to gain some commercial experience either as part of your sandwich degree course or during the holidays. Attend company presentations in the area you're interested in – it's a good way to speak to managers in the industry and do some networking.

For jobseekers?

Be clear that you do want a career in IT and be prepared for technical interviews. Keep up to date with industry news and new technologies, and prepare well for your interview.

For people thinking of a career change?

Demonstrate your commitment to a new career in IT e.g. self-study or by starting in a less technical job in the industry.

Next steps

Please contact our Recruitment Manager at ioko 365, 1 Innovation Close, York Science Park, York YO10 5ZD.
Tel: 01904 438000 Email: Paula.Clements@ioko365.com
 Please check out our website regularly to obtain information about vacancies: www.ioko.com





Stuart is 24. He is originally from Brixham in Devon and has lived in the York area for the past five years. He is one of 28 support engineers at ioko 365 and confesses to having always had an interest in computing since an early age. "As far back as I can remember, there were computers around the home, and I used to play games with them thinking that one day it might be a cool job to get into software and games development."

As it turned out, Stuart's perceptions changed as a student, as he became more aware of the vast range of jobs available in the IT sector.

Educational Route

Stuart gained eight GCSEs at Gramersey Hall School in Brixham, and went on to achieve three A-Levels (in Computing, Geography and Business Studies) at South Devon College. Having taken a year-out, Stuart started a degree in Computing and Internet Technologies, but decided not to complete the course. "I found the course to be too theoretical, and in many ways repeating what I'd learned at A-Level. I guess I'm proof that you don't need a degree to work in IT. However, I have completed a lot of self-study and employer-supported technical training since then to improve my abilities such as software training e.g. Microsoft and hardware training e.g. Hewlett Packard."

Career Route

- Take Away Assistant at Pontins in Devon (aged 16)
- Bar Person at a Holiday Camp (year-out)
- Applied for a job as a computer operator with ioko 365 in York in February 2000
- Progressed to becoming a Desktop Support Engineer in 2002
- Promoted to IT Support Engineer

What does your job involve?

"Put simply, my job concerns the support of IT systems. There is little set pattern to the day, but tasks might include: checking e-mails, dealing with what we call client 'change requests' – solving any problems or technical support requests made by our customers. I sort out any server difficulties and run health-checks, trouble-shoot problems with software and hardware, arranging repairs for hardware (sometimes fitting replacement parts), and making sure websites are available and operational. I particularly enjoy installing new servers for clients and undertaking some research and testing activities."

"In addition I complete internal reports for my activities, and am free to discuss my work with peers, senior colleagues and other people in our company such as network or firewall engineers. My core working hours are Monday to Friday 9am to 5.30pm, but every week in three I am also 'on call'. This means that if there is ever a problem on an evening or at weekends I can dial up remotely from home using my computer and sort that problem out – part of our service to clients to offer 24 hour support."

What do you like most about your job?

"The range of activities means that the job remains interesting, and provides constant improvement and learning. I don't think I'd ever stop in this job, as the IT sector is always changing."

Top skills and qualities needed in your job

Teamwork
Communication skills
Technical ability
Time management
Flexibility with time and your job role
Need to be determined and proactive – show initiative
Problem-solving
Must be thirsty to learn

How would you describe your job?

"It's exciting, quite well paid and I'm working in an innovative environment. I get a buzz from fixing things, and learning new skills."

Career Progression?

"Perhaps from here I could move up the IT support engineer ladder to the next grade, then on to perhaps Senior Engineer, Technical Lead or Architect and maybe then Management. But there's opportunity to go in other directions within the company as well."

Top Tips

For young people at school or college?

If you lack IT experience or qualifications aim for a non-technical job with an IT company. You can often get promoted to an IT support position via this route.

For students or graduates?

Be prepared for further industry training and be flexible with your choice of a specific job.

For jobseekers?

Be prepared to start low as you should have the opportunity for advancement in an IT firm.

For people thinking of a career change?

If you lack experience or qualifications in IT, it may be worthwhile getting some industry training such as Microsoft's Certified Systems Administrator (MCSA) or Microsoft Certified Systems Engineer (MCSE).

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Chris is 37. He was born in York and has lived in North Yorkshire all his life. He works in the Network and Firewall Team, which is part of the Applications Service Group at ioko, and his story should be of great encouragement to those who think they can't get into IT from a non-traditional route.

"You might think it is harder for older people to get a job in IT as it tends to be seen as a

young person's career, but this is not the case, so be confident as you are likely to be just as capable as the young whizz kids entering the industry."

Educational Route

Chris left Nunthorpe Grammar School in York at the age of 17 having gained five O-Levels. "When I left school I wanted to be a policeman, but a large number of school leavers wanted to do the same and the regulation meant that I wasn't tall enough! IT was only in its infancy and so that wasn't seen as a career. I wanted to work straight away and earn some money. Before long I became a windscreen and sunroof fitter.

"My interest in IT though was sparked off by a visit from my brother-in-law who came to help fix my home computer when I was in my mid-twenties. He took the thing apart in front of my eyes, and I thought that with training and practice I could do this sort of thing professionally. I liked the idea of fixing things and solving problems. So my career decisions started to change, and having initially taken up a Helpdesk position in an IT firm in Peterlee, I was able to get a foothold in the industry to where I am now at ioko as a Support Engineer in York.

"I've been with ioko for four years and get good support and training. I am now a Cisco Certified Network Associate and Professional, and will be taking more exams in 'Checkpoint' in 2004."

Career Route

- Butcher's Boy in Acomb (Saturday job aged 14)
- Windscreen fitter in the motor trade (aged 17)
- Electrical goods installer in Poppleton
- Photographic Printer for a firm on Clifton Moor in York
- Quality Assurance Technician for a food firm in Skelton
- Part-time Bus Escort / Youth Worker in Haxby & Fulford Cross for the Council
- Quality Assurance Technician for a food firm
- Helpdesk position at an IT firm in Peterlee
- Joined ioko in June 2000 on the Helpdesk
- Promoted to Network Support Technician within a year of joining ioko and is now a Firewall and Networks Support Engineer

What does your job involve?

"My job involves monitoring, configuring and fixing networks and firewalls for various customers. Firewall is basically the security side of a network stopping any attack from hackers, viruses and 'DOS attacks', which have the potential to slow down or halt a network altogether. My tasks include reconfiguring the hardware so that a company's network runs smoothly. My main activities include speaking to other IT people in our clients' offices around the world, which can be fun sometimes given the different languages we speak! It's far from a routine job mainly because of the variety of requests we experience and the different people we have to deal with. As a team we work very closely with the Helpdesk to ensure problems are dealt with in a quick and effective manner. I'm responsible to several customers, which involves spending time on their premises in places like Dublin and London. I really enjoy that part of the job getting out there and meeting people. I generally work 8.30am to 5pm Monday to Friday and am also on call one week in every four."

What do you like most about your job?

"Many things – the variety and challenges. Dealing with people both in person and also over the phone. The working environment and team I am in. I enjoy the thrill of getting major problems fixed efficiently and swiftly."

Top skills and qualities needed in your job

Good technical skills
Good communicator
Willingness to learn
Friendly
Able to deal with stressful situation well
Genuine interest in this type of work
Sense of humour
Enjoyment of IT as a hobby

Career Progression?

"Could go to Senior Engineer, Technical Lead and up to Technical Architect."

Top Tips

For young people at school or college?

Work hard and concentrate on exams. Try more than one part of IT – there is a vast array of very different types of jobs in the IT sector and it is good to get a feel for what is possible.

For students or graduates?

Enjoy working with computers outside of the normal study times. Develop a genuine interest in IT.

For jobseekers and jobchangers?

Moving into the IT industry at the age of 30 was not easy, but if you're like me I'd say just go for it. Be confident. Take any training that you feel will help you. Read about the industry.

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ioko³⁶⁵





The Salamander Organization was established in York in 1996. It is now one of the world's leading innovators in the field of enterprise lifecycle and transformation technologies – essentially using specialist software to help clients manage change and achieve sustained business improvement.

Clients include Hewlett Packard, TNT Express, the General Medical Council and the Ministry of Defence.

Why York?

"I used to teach in the University of York during the '80s and ran a consultancy in York during the '90s," explains Dick Whittington, one of Salamander's founders. "Quite a lot of our staff are from York and North Yorkshire including some graduates from the area."

The people and their jobs

"We have 40 staff in total at Salamander, split across three main teams. The Consultants Team comprises highly experienced staff that work directly with clients on projects and therefore live and work all over the country. Our Development Team includes programmers who build and develop our products, whilst our Customer Service Team responds to an array of client enquiries."

Dick predicts that the workforce will increase across all teams in the next three to five years. Skills and experience will be very important to Salamander when considering its future recruitment activities, and any job applicant can expect to be interviewed thoroughly to ensure that an effective and suitable employee fills each vacancy.

Future jobs and career opportunities

Consultants (Most consultants are over 35)

These people will need a strong business background and good understanding of technologies. They have to be able to develop and manage strong relationships with senior clients at board level. They need to be lively and inventive contributing back to the product development process.

Development Team

Salamander may need more programmers able to work with Microsoft Visual Studio and in .NET and XML environments. The company usually takes on people with at least two to three years experience of programming in these areas.

Customer Service

New people on the customer service team will have excellent telephone and technical skills to support client requests e.g. software installation, helping with networks etc. They will also 'follow up' on any support they provide to ensure their client is satisfied.



Dick explains that as a company with a very strong reputation – as evidenced by receipt of the Queen's Award for Enterprise: Innovation in April 2004 – it is vital to attract and recruit the right calibre of staff. "Like our products, our staff must also be highly innovative," says Dick.

"Consultants are typically found through personal contact and referral, whilst developers might come via a national IT agency that Salamander works with. We did have a major recruitment drive in 2003 taking out a front page advert in the Sunday Times," says Dick, "and we received 1,500 applications from which three consultants were successfully recruited. We're a leading edge company so you can expect competition for the jobs we offer." The package of salary and benefits offered is competitive, and includes pension, medical and shares. "It's important to us that everyone who works for Salamander has a shareholding in the Company."

Support for staff at Salamander

A range of support is available to staff. "Everybody talks to everybody," says Dick. "There is very little in terms of a hierarchy here."

Everybody has a mentor who is responsible for agreeing a development plan for that individual, including what training they need plus assigning them to projects that will give them the right kind of experience over time.

Hands on and formal learning opportunities

Top Tips

For young people at school or college?

Choose a subject that inspires you and that you can learn and develop through.

For students or graduates?

You need to get yourself a good degree – a 2:1 minimum. We don't mind if it's in Computers, English Literature or other disciplines. Also, don't limit your career options, rather expect to have a varied and diverse future working in different industries and organisations – you learn different things in different places that can all help you eventually.

Next steps

Please visit our website to stay informed about future vacancies and appointments: www.tsorg.com

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Phil is 35. He is originally from Bromsgrove, and has lived in Yorkshire for the past eight years. He is one of 12 software developers at Salamander and has just joined the firm. But how did it all start?

"I can remember aged 11 being ushered into the science lab where our teacher had just got a ZX81 computer and remember watching him type his name and see it appear on a screen.

I was fascinated by it. From that point I guess I was hooked. I was interested in computers when I left school, but at that time IT simply wasn't seen as a career option. I found myself a decade later working at an international school in Ghana, where there were computers, and this rekindled my interest. And by now, there were real careers in IT and so I chose to pursue it. This has been a career change for me moderately later in life – after five years of teaching so it is possible to get into IT from many routes."

Educational Route

Phil gained eight GCSEs at The Bishop of Hereford Bluecoat High School, and went on to achieve two A-Levels (in Maths and Physics) at Hereford Sixth Form College. Studying at Cardiff University for three years, Phil secured a BSc in Astrophysics, and later went on to complete a PGCE (in Maths and Computing). This has equipped him to work in both the academic and commercial fields of IT.

Career Route

- Cinema doorman in Hereford (aged 17)
- Sales Assistant at H Samuels in Hereford (seasonal job)
- Helped in a home for the mentally handicapped in Bromsgrove (holiday job)
- Went to University for 3 years – didn't really want to start work yet so Phil travelled and instead helped the Voluntary Service Overseas (VSO) as a Physics teacher in Ghana for a couple of years at a State School

Career Route (continued)

- Took another job in Ghana as a teacher at the International School teaching Maths and Physics (for 3 years – left aged 27)
- Came back to Britain straight to Leeds where Phil did a PGCE in Maths & Computing
- Got onto the Halifax Building Society Graduate Programme – paid employment with a lot of training in IT based in Pudsey for 2 years
- Moved to a private IT start-up company in Leeds based at the University reaching the post of Project Leader
- Started as a software developer at The Salamander Organization in 2004

What does your job involve?

"I work in a team that helps to produce add-ins, or more functionality, to the Mood software application. My job involves problem-solving, analysis and design as well as coding. It also requires me to generate new ideas so that our product is always improving for our customers.

"I work Monday to Friday, 9am to 5pm. A typical day might include checking emails, discussing work for the day with colleagues, and then a cycle of activities including design, coding and testing. A lot of the time we're sat at the computer screen, or scribbling down notes, using flipcharts and often our work crosses over to other teams, so we might meet up with the consultants to discuss ideas. After working with the company for two months, some of my code will be included in the next release of the application."

What do you like most about your job?

"I do enjoy the communication side of my job – working in pairs and feeding ideas back to the consultant. I enjoy technical problem solving in general, and like putting myself in the shoes of the customer and working out how they might use our product. It's a really nice feeling to get something working right in a simple way, even though underneath it there are complex processes involved."

Top skills and qualities needed in your job

Analytical mind
User-perspective
Problem solving abilities

Top skills and qualities needed in your job (cont)

Common sense
Communication skills
Experience
Team-working skills
Design skills
Presentation skills
Generate ideas

"Product knowledge, technical training and support from my peers also help me keep up to date in my job."

How would you describe your job?

"It's hugely enjoyable. You're working in a team actually making something. You see the end product and in a way you're making customers lives easier – that's rewarding."

Career Progression?

"I have an interest in going into a Technical Consultant role with more client facing work in future, which I enjoy."

Top Tips

For young people at school or college?

If you can think in terms of skills then you can mould your career into whatever you want. Most employers will look to use whatever skills you have.

For students or graduates?

Job interview wise, employers are often more interested in recruiting people that will fit in rather than technical knowledge so be yourself.

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Nicola is 22. She is originally from Pocklington, and has lived in Yorkshire all her life. Recently recruited to Salamander, she is the only Finance Assistant at the firm, but she works closely with the Finance Manager to help stay on top of the day-to-day accounting needs of the company. She didn't necessarily see herself working in an IT firm, but is really enjoying her new job at Salamander.

"I joined the company in January 2004 through a recruitment agency. I have always enjoyed office-based work and finance is what I find most motivating. Since I've been here though it's been really good, as I've been given the chance to see the products we're involved with, and though I'm only reasonably technically minded I do find the software we design really interesting."

Educational Route

Nicola left Woldgate School in Pocklington at age 16, having gained seven GCSEs and has since gone on to become a Certified Sage Account Technician.

As Nicola has found to her benefit, "when you do accounts you can work in any type of business."

Career Route

- Sales Office Junior for a company in Full Sutton
- Shop Assistant in Pocklington
- Team Leader for Adults with Learning Disabilities in a private residential home in Pocklington
- Office Manager for a pet care company in Driffield
- Promoted to Finance Manager / Company Secretary for the firm in Driffield
- Local recruitment agency in Escrick helped Nicola find work with The Salamander Organization
- Joined Salamander as Finance Assistant in January 2004

What does your job involve?

"I work Monday to Friday 9am to 5.30pm. My main role is the upkeep of the day-to-day accounting needs of the business. I am in charge of the banking and reconciliations, payments to all suppliers and payments received from all customers, as well as debt chasing.

"On a monthly basis I maintain the consultant billing and expense procedure, reconciling all invoices to work completed and dealing with employee expense claims. Other duties include administration roles such as filing, faxing, letter writing and occasional switchboard operation. I am also involved with the production of monthly management accounts.

"Whilst there's no such thing as a typical day, some tasks happen daily such as checking emails, using spreadsheets, dealing with our consultants and very importantly at the end of each day the shredding of confidential information."

What do you like most about your job?

"It's very challenging, and at present I am relatively new and still learning at all times. I really enjoy working in an office environment too."

Top skills and qualities needed in your job

A firm grasp of Mathematics
Pleasant telephone manner
Good customer relations
Good memory
Keeping calm under pressure
Very good communication skills
Good organisational skills
Good administrative skills
General IT skills – Excel spreadsheets & databases

How would you describe your job?

"My work can be very repetitive but it can also be very surprising. I enjoy coming in on a morning, get on with the people very well and it's a very open, 'no hassle' place to work. It also feels very modern and I think the directors are in tune with employees."

Career Progression?

"My first priority is to become good at my new job here as Finance Assistant. I've already received internal training on our software and on time management, and am going back to York St John College in September to complete the Association of Accounting Technicians (AAT) course, which should help me continue to improve my skills and abilities."

Top Tips

For young people at school or college?

Take your education as far as you can and gain the core skills and knowledge in English, Maths and Science.

For students or graduates?

Take an advanced course such as AAT or CIMA (Chartered Institute of Management Accountants).

For jobseekers and jobchangers?

Sign up with a recruitment agency as they can help you find work in many types of business.

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Pierbridge Ltd was established in September 2001. It has operations in York, the South of England and in Boston Massachusetts (USA). The company is involved in the leading edge research and development of an 'Enterprise Information Integration' (EII) platform, which allows client companies to unlock the value of the information they hold in their organisation, and present it to users in the way they require it.

The firm has patents pending on its use of technology. The companies that use Pierbridge's solutions tend to be large businesses typically employing more than 500 people. With much of the testing and piloting stages now complete Pierbridge is entering a new phase of business development, as it starts to exploit the potential of its products and services. This brings with it, perhaps, the need for additional skills and resources.

The people and their jobs

"We have nine full-time staff in our operation at present," explains Mark Newburn, one of the founders of Pierbridge and also the company's Chief Technical Officer. "And we suspect that the number of people we will employ in the next three to five years will increase both in the UK and the USA. York is our research and development centre, and in the short-term we may need further software developer support, someone to focus on the dedicated role of quality assurance, and possibly some administrative support i.e. a receptionist when the time is right. I think we may employ three more people in the next year, and the workforce may grow to 20 in our York operation over time. We're very careful about the people we bring into the team, and we look, first and foremost, for quality and honesty in our staff."

Example occupations at Pierbridge

Chief Technical Officer

Responsible for research and development, all technical issues and also looks after recruitment of staff.

Example occupations at Pierbridge (continued)

Software Development Manager

Handles the day-to-day workload of implementation and development.

Software Developer

Design, development, test and support of software.

Internal Support

Looks after all Pierbridge's internal systems, network, telephony etc.

Customer Implementation Support

Spends time with customers, on-site as necessary providing installation and support services.

Directors

Mainly fulfil a commercial role for the business helping drive up demand for Pierbridge products and services in the UK and USA.

Salaries

Range from £15,000 - £50,000 p.a.

The working environment

"It's very professional, yet relaxed here," says Mark. "It's a fun environment too, and whilst there's no formal hierarchy, as a team we have a clear understanding of what we're here to do. Also, York's a great place to live and work in with less traffic problems than most cities. And it's a nice place to invite clients to come to as well."

The career opportunities

"We try to give our team variety and challenge, and certainly encourage the transfer of knowledge and skills where possible. Because of the level of technical expertise we're at most training is self-sought and self-taught and we do have an active in-house training culture. We do fund formal training as well if it's of benefit to staff and the business." Pierbridge currently recruits on-line and has also advertised in the Yorkshire Post and on websites such as monster.co.uk in the past. The firm tends to advertise across the whole of Yorkshire. In future, Pierbridge may offer work experience or placements too.

Top Tips

Mark's own career route to becoming a founder of Pierbridge is of inspiration perhaps to others. Mark achieved eight GCSEs and four A-Levels (Pure Maths and Statistics, Economics, Computer Science and General Studies) at Granby High School in Harrogate. He then started work as a CAD / CAM designer in a circuit factory in Boroughbridge. After that he became a trainee analyst programmer and rose to Technical Director in six years. From 2000 Mark started to develop the concept behind Pierbridge spending nine months getting funding in place. In terms of advice Mark says that: "It's good to have a logical mind, but these days there's also a lot more creativity and design involved in the work we do, and in R&D you have to be able to think laterally and inventively. I also think that having a good level of English is very important too, which is often overlooked."

For young people at school or college?

Have a general interest in computers, but don't limit yourself too early on.

For students or graduates?

A commercial, economics or business studies grounding is useful for any working environment. Also, don't set your initial expectations too high. Take a first job, learn from it and progress. Think about working in a small business as you get to see how everything runs.

Next steps

Please visit our website: www.pierbridge.com
Pierbridge Ltd, The Innovation Centre, Innovation Way, York, YO10 5DG

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Chris is 32. He is originally from North Yorkshire, and currently lives in Malton. He is the only software developer of his type at Pierbridge and has a close working relationship with both the Software Development Manager and Chief Technical Officer.

Educational Route

Chris gained seven O-Levels at South Craven Comprehensive (High School (near Skipton), and on leaving at the age of 15, decided to become an apprentice electronics engineer. During the first year he completed a basic engineering training course giving him many practical skills such as electronics soldering, welding and building circuits. At the same time Chris was also studying for a BTEC ONC focused on electrical and electronics disciplines. Chris's career then took some very interesting turns, and over the course of time he has now also achieved a BSc (Hons) Degree in Computer Science, an MSc in Distributed Multimedia Systems, and has become a Microsoft Certified Professional (MCP).

When asked why he made the decision to get a career in the IT sector Chris says that: "Back in 1992, when I was 21, IT was a rapidly expanding field, which promised good job prospects. It seemed to me that computers could be used everywhere, and so that might allow me to work in any range of sectors and in any number of occupational roles. I had always enjoyed Maths, and computing seemed to be a related area that could suit me."

Career Route

- Apprenticeship as an electrical engineer at a firm in Keighley
- Went to Britannia Royal Naval College in Dartmouth aged 19 and completed flying training
- Based at the Royal Naval Air Station in Portland flying LYNX helicopters, completing advanced flying training and operational flying training

Career Route (continued)

- Completed Computer Science Degree at York University as mature student and graduated in 1996
- Became a Software Engineer for BAE Systems at Warton (near Blackpool)
- Did a Masters Degree at Leeds University – an MSc in distributed multimedia systems – a course that was focused towards advanced internet and advanced interface technologies. Chris thrived during this time and won the MSc student of the year prize during this one-year full time course
- Joined Pierbridge Ltd as a Software Developer in 2001

Chris says: "I had a good time at the University of York. The city is perfect for culture, arts, shopping and isn't as large as a metropolis like Leeds. The job at Pierbridge sounded like it suited me, and I really liked the idea of working in a smaller company, hopeful that it would allow me more freedom to be creative, and less restrictive than my previous employment in larger firms."

What does your job involve?

"My job involves the design, development, test, and support of Microsoft Windows-based software as directed by the Chief Technical Officer (CTO) and Software Development Manager. The main part of software that I work on is to do with communications, so I look at integrating emails, SMS and faxes, and then presenting them on-screen in an integrated way to the user of our software. I have the opportunity to generate ideas, and say whether any proposed changes or additions to the software will be easy or not to implement. I work Monday to Friday 9am to 5.30pm, but I like to get in early and do some self-study or web browsing, as well as checking through emails before work starts.

"Over the course of a week I will be testing new features, dealing with requests from the CTO, supporting customers who might need software fixing or would like new features setting up. 95% of the time I am at a computer screen, and so the environment in which I work has to be quiet but relaxed. Typically you've got your head down concentrating on quite complex work. If I need any support I can ask colleagues, but also like to make use of the on-line Microsoft Software Developers Network (MSDN), which is a useful technical resource for people like me. What I like most about my job is the blend of creativity and logic required."

Top skills and qualities needed in your job

Problem Solving
Essential: A broad and deep interest in computing. You must show a willingness to learn
Logic
Creativity
Teamwork

Career Progression?

"The opportunities are there to progress your career in IT in many ways if you have the ambition and the skills."

Top Tips

For young people at school or college?

A broad and deep interest in computing is key. If you don't have this then consider a different sector.

For students or graduates?

Grab any sort of chance to do practical work experience with computing e.g. take a summer placement in an IT firm rather than bar work, or do a sandwich course and gain proof that you can work in a team.

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Science City York





Chris is 20. He was born in Dewsbury, currently lives near Ripon and has been in Yorkshire all his life. He is Pierbridge's Network Manager, and thoroughly enjoys his work.

"The thing I like most is that it changes everyday – you're pretty much never doing the same thing twice, and the pace of work can change very quickly. You're always learning new things. I suppose it's the challenge that I most enjoy.

I'm really pleased to be working in the sector as I always hoped I'd get a job that involved technology and gadgetry. I suppose it all started from the age of five playing computer games, and then when I was introduced to personal computers I found these more interesting than consoles. And when we first got a PC at home it always seemed to break down, so I spent time playing around trying to fix it, and every time it worked I realised it was quite interesting."

Educational Route

Chris gained nine GCSEs at Boroughbridge High School. He then started an advanced IT course at a local college, but decided after a few months that he'd prefer a different approach. He spent some time phoning around all the IT companies in the area to see whether any of them would take him on as an apprentice, and found a firm in Boroughbridge willing to do so.

Chris would like to recommend this way of getting into the sector to others. "I was nearly 17 when I started my Modern Apprenticeship. It took me about two years to complete, and as part of the programme I actually achieved an NVQ level 3 in IT. I collected evidence for a portfolio whilst I was working, and every month an assessor would come in and support me.

"I found this a much more fun approach than college, and I was being paid as well. It's also a very hands-on approach and the firm I worked for was very helpful with training."

Career Route

- Part time job at Bookers Cash and Carry whilst at college
- Natwest Call Centre (aged 16)
- Apprenticeship with a firm called MARCH in Boroughbridge progressing to Systems Administrator
- Yorkshire TV in Leeds – helped roll out new versions of Outlook, upgraded PCs etc
- Joined Pierbridge in April 2003 as Support Technician. After 6 months Chris's role was restructured and given responsibility for internal networks

What does your job involve?

"I am responsible for anything and everything to do with our internal systems. This means managing our servers, our networks, support and implementing new solutions as necessary. Basically I make sure everything's working fine on a day-to-day basis. I look after all our systems, printers, web access, email and the telephone system. Tasks might also include putting any new patches (upgrades) onto the servers, dealing with email requests from colleagues in our York and South England operations, giving advice to colleagues on setting up home networks or choosing ISPs, checking that back-ups have all worked, changing the tapes, checking virus scanners are up to date, monitoring email traffic flows, checking network status and looking after our firewall. Learning new skills happens all the time. The most satisfying moment is if something's been broken for a long time and you get a breakthrough to fix it. Also, as new technology comes along it's quite exciting to learn how to implement it."

Top skills and qualities needed in your job

Experience of networks
"Good to be able to think outside of the box – lateral thinking and problem solving"
Patience
Telephone manner
Technical Skills

Top skills and qualities needed in your job (cont)

"It's also helped me to do some technical training and I am now a Microsoft Certified Professional (MCP) and Microsoft Certified Systems Administrator (MCSA). Most of this can be done through self-study and books and you can take the exam locally. I want to upgrade my training to become an MCSA 2003 in the next 12 months, and in future would be interested in doing some part-time study in business management."

Career Progression?

"My roles and responsibilities can expand I hope as the company grows. I could go into anything in the IT support section, but one ambition is still to go into management."

Top Tips

For young people at school or college?

Keep playing on the PC – if it breaks have a crack at fixing it – get as much experience as you can.

For students or graduates?

Try and get as much experience or IT related training as possible. Perseverance is also important.

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