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INVEST Essex case studies highlighting Essex companies who are leaders in their fields

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Sandy McBean,
General Manager Europe

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illumina

accelerating the understanding of human genetics



illumina develops and manufactures technology that allows researchers to gather, process, and analyse genetic information used to study the causes of disease. The company's solutions for DNA and RNA analysis are used in research into genetic disorders, drug development, and the development of clinical molecular tests. illumina, a global company with operations in the United States, Japan, China, Singapore, Australia and Europe, has chosen the Chesterford Research Park in Essex as its European headquarters.

The revolutionary techniques developed at Chesterford are making studies possible that were not even imaginable just a few years ago, bringing the realisation of personalised medicine closer and illumina's advances in this type of analysis are exceeding the pace of development in computer processing speed and power, the so called 'Moore's Law'. "DNA sequencing is extremely complex - there are 6 billion 'bases' in a human genome. They comprise the genetic code and contain the information that enables life. DNA sequencing allows us to read the genome, and determine the order of each of the bases. The first

full sequencing of the human genome took over a decade to complete. With the development of next-generation sequencing a human genome can be sequenced in days, not years, and at a fraction of the cost. This opens up new areas of medical research and can speed up the development of new medicines or lifestyle recommendations," says Sandy McBean, General Manager Europe.

Since the first reference human genome was completed, tens of human genomes have now been sequenced, the majority using illumina's technology. As a result, illumina solutions are used by a broad range of academic, government, pharmaceutical and biotechnology laboratories around the world. "Collaboration with the international research community is an important part of our business," according to Sandy McBean. "Essex is conveniently situated for a team that is very mobile. We find that having London Stansted Airport and London Heathrow Airport so close by is important."

Location in Essex has played a role in illumina's achievements in this field from the outset. "The illumina DNA sequencing chemistry originated in

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the University of Cambridge. When illumina acquired Solexa, the commercial spin-out of the University's sequencing technology, the Chesterford Research Park in Essex was a natural choice for the expansion of our operations. There is a strong connection with Cambridge and the surrounding area, with many customers and collaborators within the vicinity," says Sandy McBean.

From a recruitment perspective, Essex has proved important. "There are many life science graduates studying or working in the area which is an important factor for rapidly-growing companies like illumina." says Sandy McBean.

"illumina's 150 graduate employees on the site have an international flavour and find Chesterford to be very accessible. It's also convenient for travel to the many scientific conferences in the area."

Overall, Essex provides global knowledge-based companies like illumina with the mix of location, access to high-calibre research staff and the business infrastructure to support a high level of international mobility.



INVEST Essex provides confidential advice and practical support to companies wanting to establish a presence or expand in the UK. We promote Essex as an outstanding business destination and help existing and potential investors make the most of our strategic location, thriving business environment, and quality of life.

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