



## Case study

## At the forefront of drug development

### DxS

### Manchester-based company leads the way in companion diagnostics



Funded by



#### Background

DxS Companion Diagnostics was launched in 2001 based on a highly innovative genotyping platform developed by the founders Dr Steve Little and Dr David Whitcombe. The opportunity arose following the merger of Astra and Zeneca when the diagnostic division for which the founders worked was deemed to be non-core and they were given the opportunity to take the intellectual property they had invented out of AstraZeneca. Their vision was to create a world-leading company to capitalize on anticipated global regulation which would oblige pharmaceutical companies to undertake genetic analysis. This analysis helps to predict drug response and change the way in which drugs are prescribed.

Starting a new company with the objective of being at the forefront of new diagnostic techniques, in a market dominated by multi-national pharmaceutical and diagnostic companies, is not for the fainthearted, and since 2001 this has required fortitude on the part of the founders and backers alike.

Between 2001 and 2006 UK mid-market generalist investor NVM Private Equity invested £3.6m in a series of financing rounds. Getting market and regulatory approvals in the early years was a struggle, but it was worth it, and in 2008 DxS was first to market worldwide with a predictive test (known as 'companion diagnostic') for a block-buster colorectal cancer drug launched by Amgen. Market interest in DxS immediately became intense and in 2009 four other multinational pharmaceutical companies signed up with DxS to develop companion diagnostics. In September that year it was acquired by Dutch biotech company QIAGEN for £82m.

#### Strategy

At the time of the original investment in 2001 it was predicted that the research, clinical and diagnostic genotyping markets were set to grow significantly by 2005. The pace and nature of regulatory change proved more challenging to predict and DxS was initially ahead of its time.

At first DxS worked on a strategy of bringing in DNA samples for testing at centralized laboratories to generate revenue quickly. However, within the first three years it was recognized the real value lay in developing a test kit product that would enable doctors and drug companies to perform the diagnostics in the field in response to the needs of its global pharmaceutical company customers. DxS's product strategy evolved from there.

#### How growth was achieved

DxS had secured a critical first mover advantage by positioning its technology as the key to the successful launch of five therapies by global pharmaceutical companies with subscription values measured in billions of dollars. This portfolio is expected to grow significantly as DxS introduces new products to address increasingly stringent global regulatory pressures.

Investor:	NVM Private Equity
Location:	Manchester
Sector:	Companion diagnostics
Stage:	Early-stage development capital
Exit:	2009
Company Website:	<a href="http://www.dxsdiagnostics.com">www.dxsdiagnostics.com</a>
Investor Website:	<a href="http://www.nvm.co.uk">www.nvm.co.uk</a>

The success of DxS's collaboration with Amgen promoted considerable corporate interest, and in September 2009 QIAGEN NV acquired DxS from NVM Private Equity for £82m, including a £47m cash consideration plus future earnouts. This represents a money multiple of over eight times NVM's original investment and an internal rate of return (IRR) of 34% per annum over eight years.

#### Job creation

DxS has made a significant contribution to scientist graduate recruitment within the UK. At the time of NVM's original investment in 2001 DxS employed only four scientists.

At the time of exit the company had an 88 strong workforce employing graduates for research and development, product development and genotyping roles. Many of DxS' graduates work as product development scientists or within its genetic analysis service laboratory as genotyping scientists. The candidates have a wide range of academic backgrounds including molecular biology, medical biology and microbiology. Some other roles include office-based technical support with some past employees coming from a forensic science background where the technology used is very similar.

“We got two kinds of support from NVM. First, we aren't accountants, so their financial experience was really important. Then the customer expertise was also crucial, and we should probably have sought that even earlier.”

**Dr Steve Little, CEO of DxS**

