Simpson Associates

Higher Education Solutions

Client Overview

Simpson Associates are a software and services consultancy who have been delivering value to institutions for over 10 years. We currently work with over 20 Universities covering data management, standardisation, management reporting, dashboarding and predictive analytics through to student and financial planning and reporting.

Client Response

"Simpson Associates clearly have the knowledge and proven experience of the challenges in our sector. This gave us the confidence that they would deliver ...and they did."

Laurie Nicholls
Acting Head of University Systems Group
Sheffield Hallam University

Introduction

University leaders have had to continually face competing and conflicting challenges. There is now increasing competition for students; financial pressures are growing; and there is a need to evidence the impact of change and the quality of provision. The result is that there is growing emphasis on the importance of data – to underpin decision making, to support the student body, to support operations and to demonstrate improvement and compliance.

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What we do

Business Intelligence

As students become more discerning in selecting their chosen institution, educators and administrators need deeper insight into which recruitment and retention approaches work and which do not. Analytics provide the tools.

Student Engagement

Many institutions we work with have invested significantly in initiatives to improve student engagement and success, however personalising, coordinating and measuring this support in real-time is still a huge challenge.

Data Warehousing

Today, your institution is capturing unprecedented volumes of information, often doubling in the last two years alone, by capturing unstructured data in click streams and social media.

Student Number Planning

As student applications and tuition fees rise and jobs for graduates diminish, student planning is a critical function, which needs to be responsive, flexible and precise.

Financial Planning

Performing Financial Planning is critical to the success of any institution. Simpson Associates have years of experience in helping institutions understand, design and build effective financial budgeting, forecasting and strategic plans to enable the Institution to plan their goals and objectives.

Predictive Analytics

Institutions are beginning to adopt predictive analytics to manage finances, inventory, operations, assets and resources. The next great wave for predictive analytics adoption in higher education is focusing on institutional performance outcomes and individualised student success.

Data Warehousing

Today, your institution is capturing unprecedented volumes of information, often doubling in the last two years alone, by capturing unstructured data in click streams and social media.

Many institutions are starting to combine and analyse this data with structured information from their corporate information systems to gain a complete view of their students' journey and experience.

Some challenges institutions have faced have been in managing data gaps, and access to data that delivers confident and reliable results. Simpson Associates have been designing, managing, building and supporting Information Management and Data Warehouse applications within a wide range of industries, educational institutions and the public sector for over twenty five-years.

We recognise this maturing marketplace and the need to achieve the 'transformative' stage of performance maturity, to ensure you can capitalise on the data you now have available on which to base your strategic decisions and institutional insight.

"Our relationship with Simpsons has introduced a trusted advisor to the Institution, providing a controlled and well-managed approach to our project delivery that we had not experienced with other partners in this field. Communication with the Simpson team has been very good both on site and off, which has provided a very professional service delivery experience for UCLAN. Even with more agile reporting tools, it is still important to ensure that data is in good condition, readily available and well managed."

"We are now focusing on the delivery of requirements to ensure users can reap the benefits of the information now available to us and Simpsons are helping us to develop the skills that we need to continue to adopt the application ourselves."

Keith Gray
Project Manager, UCLAN.

The University of Nottingham

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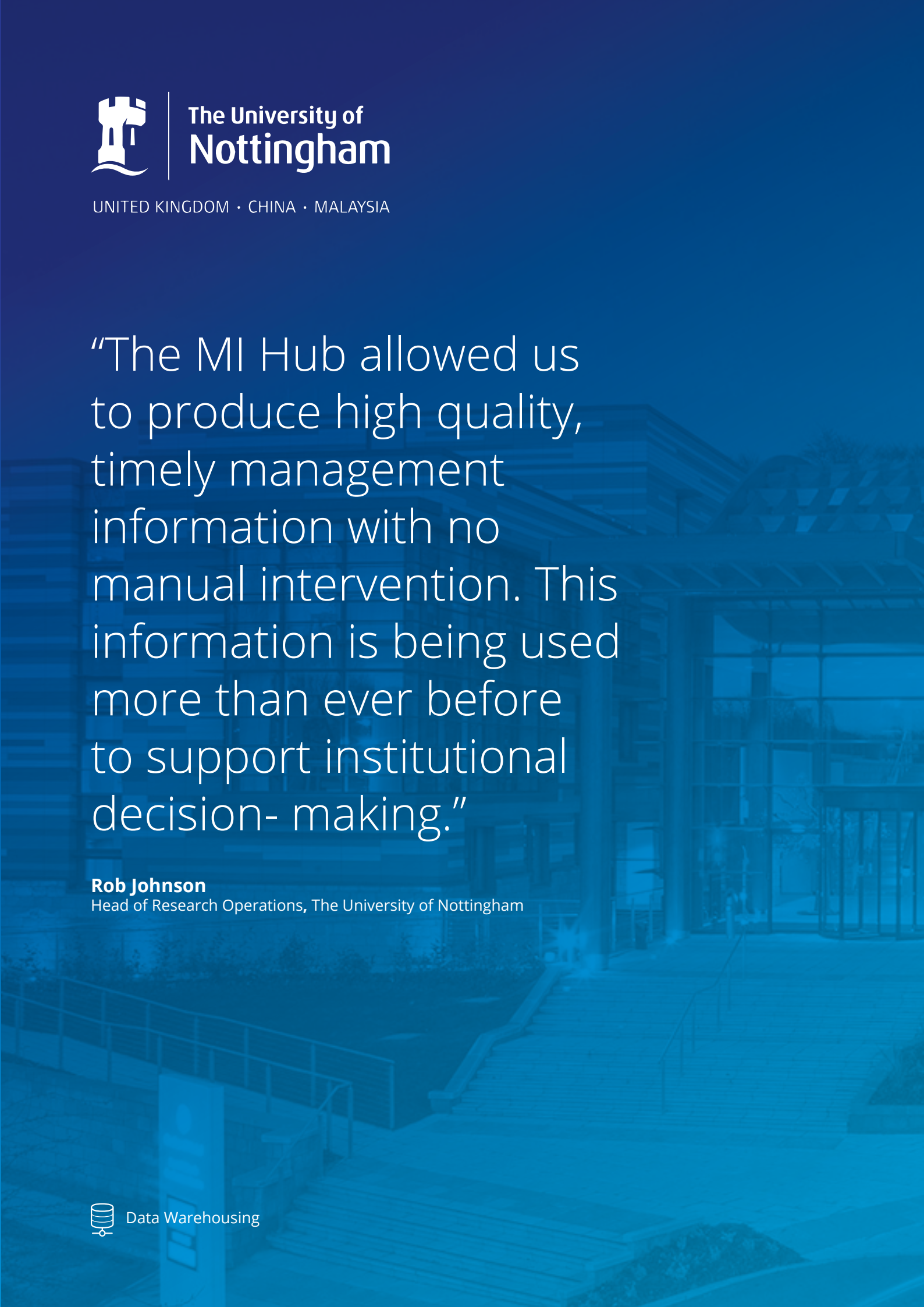


"The MI Hub allowed us to produce high quality, timely management information with no manual intervention. This information is being used more than ever before to support institutional decision- making."

Rob Johnson
Head of Research Operations, The University of Nottingham

Data Warehousing

Case Study

The University of Nottingham

The University of Nottingham implement a Management Information (MI) Hub to provide coherent, consistent, integrated and authoritative reporting using data from across the University's core business systems.

Supporting the University Strategic Plan

The University needed to have reliable, accurate and timely management information to make the best decisions, to monitor progress, and to inform strategy and planning at all levels.

The MI Hub was designed to create an institutional level capability to provide this functionality across all core activities (the student population, taught provision, student quality and experience, league tables, research, finance, etc.) and for all staff. Of course the Key Performance Indicators (KPIs) defined in the University Plan 2010 - 2015 were included, but alongside and underlying those are many other reports and measures which shed greater light on overall performance and support diagnostics where needed.

The subsequent inclusion of Leading Performance Indicators (LPIs) ensured that the MI Hub would have relevance, for everyone from front-line academic and administrative staff to the Executive Board.

A project of this scale requires a significant amount of ground work to ensure that the objectives are clear, the benefits are understood and the stakeholders are informed.

Staged Approach

Simpson Associates were already a trusted partner that had successfully worked with the University of Nottingham on an advanced student number and income forecasting system, so they turned to them again. The approach was to build the MI Hub in a series of stages, each one designed to deliver a progression of Key Performance Indicators and supporting reports into a live, online environment for the University's MI consumers.

The second stage released a dashboard providing comprehensive coverage of all aspects of performance relating to taught provision down to individual course level. The design of these dashboards was strongly influenced by the work of leading data visualisation expert Stephen Few. All this was used to expand usage and familiarity and to begin to embed a management culture informed by robust, up to date, authoritative metrics.The next stage applied all the same principles to research activity.

The Solution

The MI Hub can be accessed by all University staff, from the Executive Board to all teaching and administrative staff (about 4,000 potential users). It reinforces the link between strategy at all levels and reporting against performance objectives in a completely transparent manner.

All dashboards are available to staff at the campuses in Malaysia and China, which helps to increase cross - campus integration, BI maturity and an expanded sense of belonging. Many are accessing the MI Hub using their iPads, and the team makes increasing use of targeted report 'bursting' to ensure business intelligence is pushed to the right people, at the right time. The MI Hub also generates reports for the University governing body (Council).

Benefits

- Dashboards were developed which provided comprehensive coverage of all aspects of performance relating to taught provision down to course level.
- Reporting against performance objectives in a completely transparent manner is helping to increase cross-campus integration and BI maturity.
- The MI Hub has also delivered against the less obvious goal of supporting deeper organisational change to enable future success.
- A foundation has been put in place for developing good strategy to understand where the University is and informing decisions about where the University might go.

Business Intelligence

Business Intelligence enables institution's to significantly improve their understanding of their business performance and from that understanding make improvements.

For many institution's, data is growing fast: our services take your institution's data assets, both on- and off-premise, and makes it coherent and accessible. The emergence of "Big Data" makes this service more valuable than ever. We can help you with design, build and development – we can answer your hardware, cloudware and deployment questions too.

With common data definitions decision makers are dealing with factual information, spend less time debating the data, values and structures and more time making informed decisions. Importantly, the effect of those decisions can be monitored and verified.

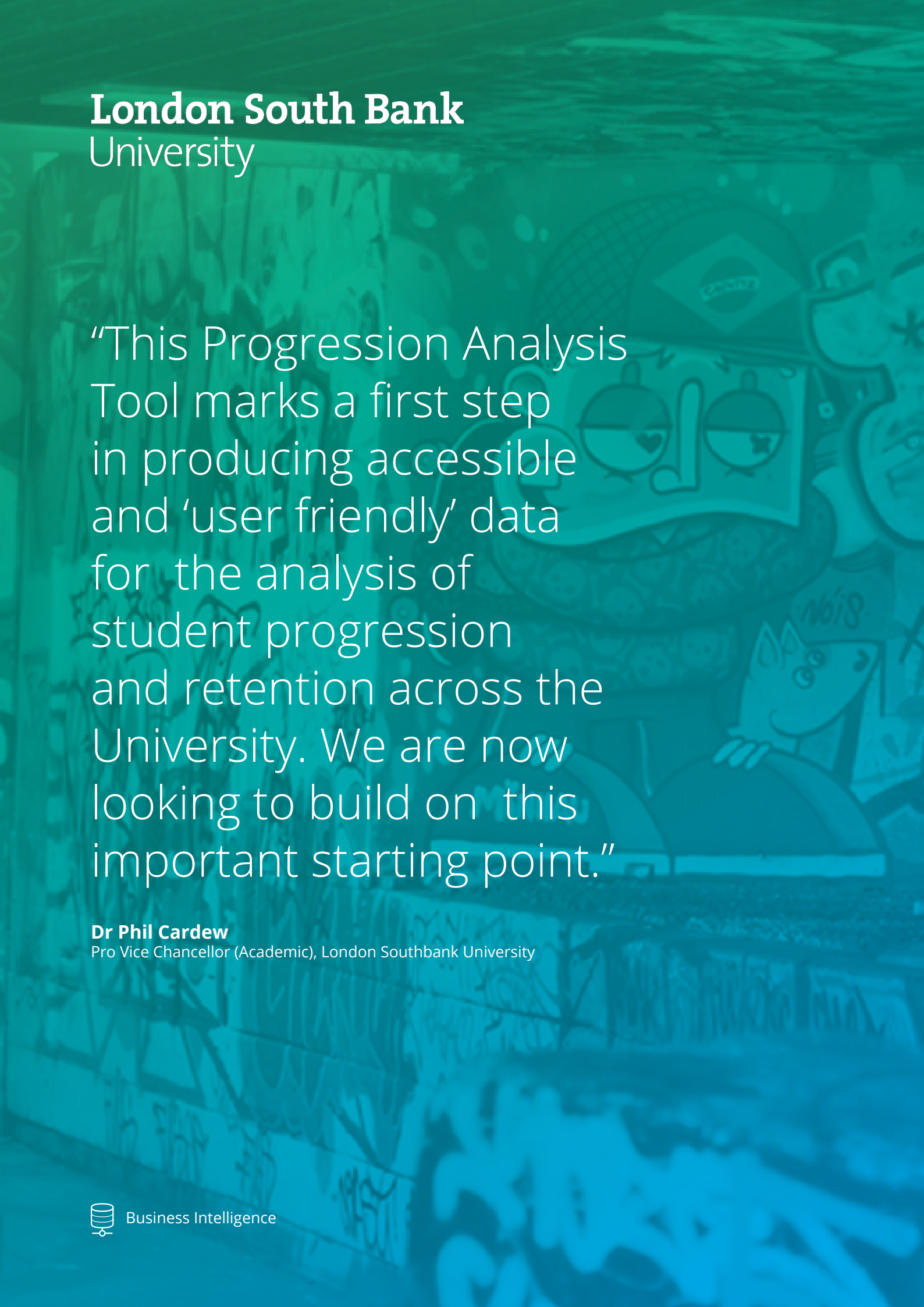
By way of focused dashboards, timely reports and self-service analysis on key business drivers and metrics, all users who need to can see changes as and when they happen.

We will help you to define and/or deploy your application on- or off-premise and ensure that your architecture makes sure that everyone who needs access to information has it, wherever they may want it

"Dashboards are now being developed to cover financial sustainability, including productivity and surplus generation, business engagement and knowledge transfer, alumni relations and philanthropy and environmental issues.

Balanced scorecards which may eventually cover all levels, from University to individual staff members, are also being prototyped"

Dr Tom Loya
Director of Strategy, Planning and Performance.
The University of Nottingham



London South Bank University

"This Progression Analysis Tool marks a first step in producing accessible and 'user friendly' data for the analysis of student progression and retention across the University. We are now looking to build on this important starting point."

Dr Phil Cardew
Pro Vice Chancellor (Academic), London Southbank University

Business Intelligence

Case Study

London South Bank University

London South Bank University deploys a progression analysis tool using IBM Cognos Business Intelligence and Simpson Associates.

The Problem

LSBU began with an ambitious data warehouse project, however, a series of stumbling blocks meant that this project stalled The main reasons for this were:

- A lack of clarity regarding requirements/priorities;
- A lack of sponsorship from the University.

Simpson Associates was subsequently asked to complete a 'health check' of the IBM Cognos development work and to recommend short and medium term requirements and a longer term vision for the delivery of MI within the University.

The major shortcomings were that:

1. There was limited resource and skills and experience available in IBM Cognos and BI in general;
2. Data management and reporting was decentralised, which resulted in inconsistencies in what was reported and a duplication of effort University wide;
3. Student record reporting was achieved using Crystal reports over a live QLS system and the performance of the QLS system could be impacted;
4. There was a limited number of Crystal reports being used to manage Student Progression and these had to be created by hand.

The Solution

A set of four reports was delivered in readiness for the annual progression reporting process at the end of October. Simpson Associates managed the whole process, from gathering the requirements, to providing a demonstration of the completed product by the critical deadline.

The reports produced show five or more year's worth of progression figures and allow users to drill-down to student details; conditional formatting is incorporated for progression and award targets.

"Having this information available on demand, at my fingertips is invaluable. I can now see what courses are our strongest or where our students are struggling at any time of the year and this allows me to make better informed decisions regarding my actions."
Suzy Kerr Pertič, Pro Dean (Arts and Human Sciences)

Benefits

- LSBU now have a clear vision for the long term delivery of Management Information within the university.
- A consistent data set incorporating all Faculties is now held in a data warehouse.
- LSBU can now benefit from a dedicated reporting tool.
- LSBU are now able to drill down on reports to view student details and have the ability to perform some 'cohort' analyses.

Financial Planning

Performing Financial Planning is critical to the success of any institution. Simpson Associates have years of experience in helping institutions understand, design and build effective financial budgeting, forecasting and strategic plans to enable the Institution to plan their goals and objectives.

The purposes of financial planning are typically:

- To ensure that a University has the best chance of achieving its financial operating strategy
- To highlight what has to happen (in financial terms) to get the University from where it is now to where it wants to be in the future
- To understand the impact of internal and external factors that will affect the University's finances such as student retention, research income, commercial income etc.
- To enable the University to forecast how much income it will generate and how much it can spend on different activities
- To meet a funding council requirement for a financial forecast to be provided annually

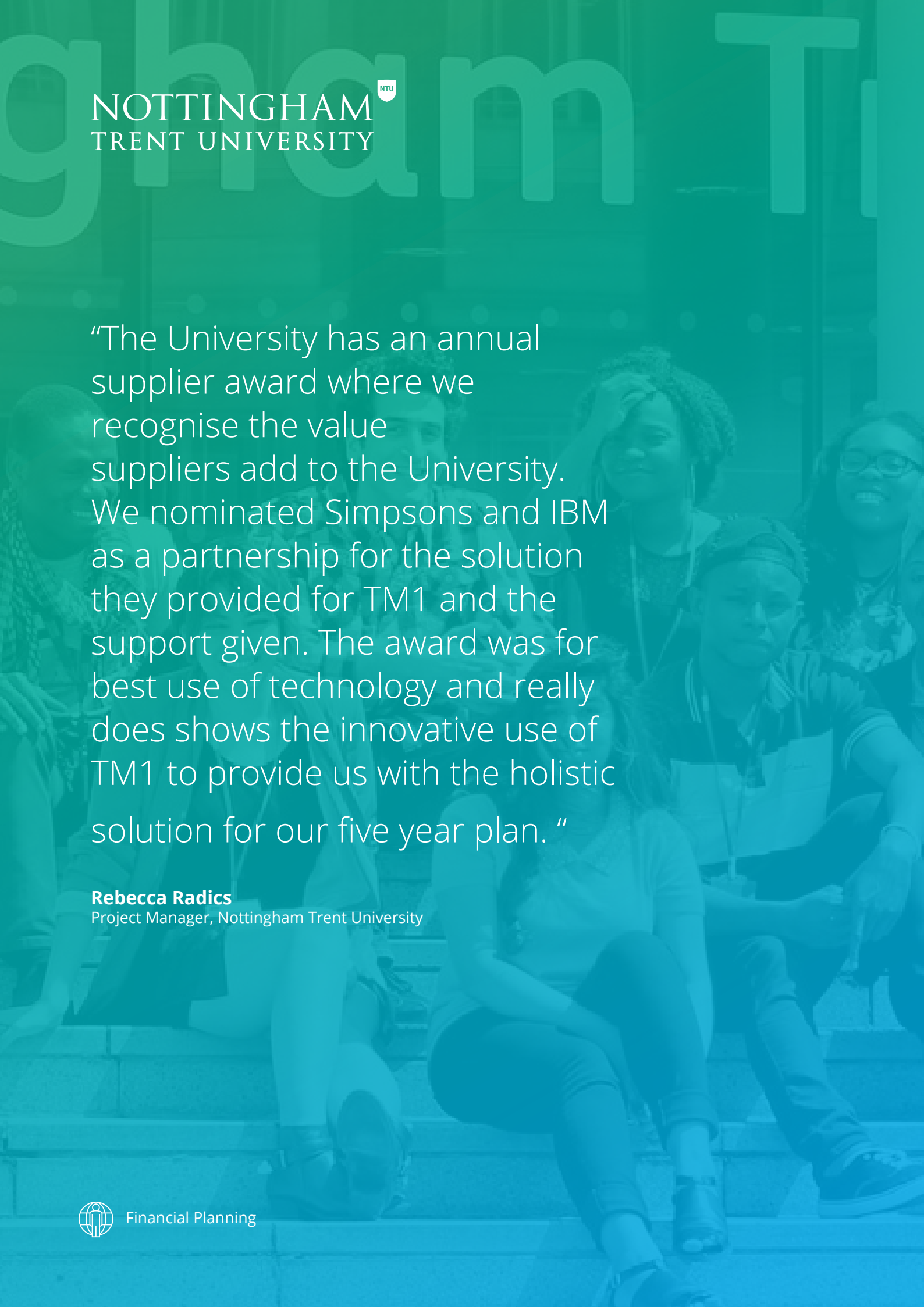
This process can involve a large number of people from across the University including academic and professional service departments, executive boards and as well as finance departments and in our experience this process can be extremely resource intensive, involving the distribution of Excel workbooks and shared data sets and definitions to inform any individual budget and forecast production.

It is often difficult for the central finance team to have visibility of the derivation of forecast submissions to ensure common methods and assumptions are being deployed. By automating the capture and management of these models we can deliver time savings and cost savings whilst introducing an agility in the forecasting process that enables more regular forecasting capability.

"We now have an integrated planning application. We put in course data and student data and use that to model our student numbers and our fee income. We input employee data and use that to model our resources that are required. Then both of those feed into our finance model which summarises the income and the cost for the university during the period"

Sue Reader
Corporate Finance and Planning Manager, Nottingham Trent University

NOTTINGHAM TRENT UNIVERSITY



"The University has an annual supplier award where we recognise the value suppliers add to the University. We nominated Simpsons and IBM as a partnership for the solution they provided for TM1 and the support given. The award was for best use of technology and really does shows the innovative use of TM1 to provide us with the holistic solution for our five year plan. "

Rebecca Radics
Project Manager, Nottingham Trent University

Case Study

Nottingham Trent University

An award winning project unifies the planning process at Nottingham Trent University

Ambitious Plan

When Nottingham Trent University engaged with Simpson Associates they had an ambitious plan to develop a planning application that would connect their course data, student data and employee data sources and feed them into a single architecture to summarise student income and costs across the university.

Rebecca Radics, Project Manager, describes the rational for the project: "We wanted to integrate our overall planning models to create a holistic view of the whole process. Data flowing automatically between the student planning model and the staff planning model meant that we could save staff resource time and ensure we were able to get accurate information out of the system in real time."

By integrating their planning models Nottingham Trent University can model scenarios within their planning application much more efficiently and make much more time available to analyse the impacts. Sue Reader, Corporate Finance and Planning Manager, describes what they have achieved:

"We now have an integrated planning application. We put in course data and student data and use that to model our student numbers and our fee income. We input employee data and use that to model the resources that we require. Then both of those feed into our finance model which summarises the income and the cost for the university during the period."

Additionally key stakeholders in NTU have a greater degree of confidence in their reports, with numbers coming directly from the plan, as Sue explains: "It benefits people asking for information because they get it more quickly. They benefit from it coming directly from the plan compared to how it used to be done; essentially creating a manual process each time to source the data, join it and then develop a report. As the information is now coming directly from the planning model it's faster, easier and totally reliable and of course, it's consistent with our plans."

Moving forward with TM1

Having completed the project with IBM Cognos TM1 software, the University is now looking at utilising their investment for other purposes. Sue sees a number of opportunities: "Moving forward we're looking at how we can use TM1 for other regulatory reporting that we do, for instance TRAC and HESA reporting. This would reduce our reliance on spreadsheets and allow automation of the apportionment process. Currently we use spreadsheets to do this so any changes that are required have to be fed through spreadsheets, which is a largely manual process.

Benefits

- The integration of their planning models has enabled NTU to have a holistic view of the whole planning process.
- Reports come directly from the planning model improving the speed of access to information and the confidence in the accuracy of that information.
- NTU can now spend more time doing analysis and adding value rather than concentrating on data input and consolidation.
- NTU can now model different scenarios and see the impact on proposed changes to their budgets

Student Number Planning

As student applications and tuition fees rise and jobs for graduates diminish, student planning is a critical function, which needs to be responsive, flexible and precise.

Simpson Associates offer Universities a flexible option for the management and future planning of student intake and educational lifecycles, both in course structure, and income terms. These solutions are multi-dimensional, dynamic, driver-based models which put control and responsiveness in the hands of the University's planning teams, schools, and faculty stakeholders, improving response times and organisational efficiency.

In regulatory terms, our student planning solution enables organisations to respond quickly to annual or ad-hoc changes required by organisations such as the Higher Education Statistics Agency (HESA), or the Higher Education Funding Council for England (HEFCE).

As regulatory planning or investment assumptions change, whether at general level, school, or even course level, this can be instantly reflected across the entire student model. Automatic feeds into revised targets and plans, deliver large savings in time and resources across finance, planning and the affected faculties.

"With strong recommendations from the University of Nottingham, we chose to contact Simpson Associates regarding our Student Planning process. As a result of meeting them we are confident that together, we can realise the benefits of reconstructing our Student Planning process using IBM Cognos TM1. We look forward to a successful outcome."

Sophie Dibben
Head of Planning, University of Southampton

Case Study

The University of Nottingham

The University of Nottingham deploys a student planning application using IBM Cognos Planning, Business Intelligence and Simpson Associates.

The Problem

Each year, the Planning and Management Information Division (PMID) provides the schools within the University with a forecast of their student numbers and associated income for the next four years. The calculation needs to account for:

- The type of student (e.g. FT/PT, Home/International, Undergraduate/Postgraduate, Research, etc.);
- Students leaving part way through a course (retention);
- The stage of the course (i.e. 1st year, 2nd year, etc.);
- Direct entries from the University campuses in China and Malaysia and students on a year out;
- Fees varying by student type and year of course;
- Income allocations based on the modules students take and the budget unit that owns the course.There are many exceptions to the rules for these combinations.

The previous spreadsheet based system was becoming increasingly difficult and time consuming to manage. There are approximately 1,000 courses,70 budget units and 30 different student types.

Because of the limitations of spreadsheets, the figures were aggregated at various stages, so the final calculations were not transparent and the PMID spent a great deal of time answering queries from budget units about their forecast numbers. In particular the numbers were not broken down to course level or stage of course. This meant that the PMID had to extrapolate the summary figures to course level; a time consuming exercise.

Also, an average fee calculation had to be used for international students as the spreadsheet model could not cope with the required level of complexity. An incorrect calculation could affect what the budget unit was allowed to spend, i.e. on new appointments, etc. The PMID was familiar with the Cognos Business Intelligence product; some Cognos reports were already used within the University.

The PMID was aware that Cognos Planning was being increasingly used within the Higher Education sector. The next step was to decide whether to implement the solution themselves or to engage a Cognos Partner. The latter approach was chosen

The Solution

The solution was broken down into two components: a student numbers calculation and an income calculation. The models used Cognos Planning's multi-dimensional modelling capabilities to hold assumptions at a general and school level and a specific set of course rules by stage and student type. These were applied to the existing student population and the school targets to produce the four year plans.

The models are administered and run through a series of menu driven screens, with options to calculate only specific student types and/or years. When key assumptions are changed this enables only those affected parts of the model to be recalculated, which speeds up the process.

The plans are then imported into a Business Intelligence framework and reports are produced to show the summary and detail information for the schools to access using their existing reporting environment. The PMID income forecasts are then passed seamlessly to the University's Financial Reporting Department, which is conducting a joint Cognos Planning implementation project (also with Simpson Associates)covering the wider University budgeting system.

The University of Nottingham

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"The breadth of Simpson Associates experience across planning, forecasting, business intelligence, and data warehousing meant we had continuity of services from one solution partner, throughout the lifecycle of the project."

Dr. Tom Loya
Director of Strategy, Planning and Performance

Benefits

- The planning team can now focus on 'what' they are planning rather than 'how' they are planning producing a focus on knowledge rather than process.
- The four year plan is now produced within four hours, before it took several days.
- Changes can be recalculated within 20 minutes which in some cases saves up to two days; there is time to review the results.
- The planning team has more time to analyse and more thoroughly understand the results which helps inform future planning cycles.

Simpson Associates

University leaders have had to continually face competing and conflicting challenges. There is now increasing competition for students; financial pressures are growing; and there is a need to evidence the impact of change and the quality of provision. The result is that there is growing emphasis on the importance of data – to underpin decision making, to support the student body, to support operations and to demonstrate improvement and compliance.

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