Glasgow Life

Case Study

GLASGOW LIFE:
BOOSTING TOURISM THROUGH DATA INSIGHTS

Glasgow Life delivers services on behalf of Glasgow City Council to both citizens and visitors to the city, providing opportunities through culture, sport and learning.

Some 2,600 staff and 2,200 volunteers work across 160 Glasgow Life venues. Last year, more than 18 million attendances were recorded at Glasgow Life-led venues, events and festivals – up more than one third since 2007.

Glasgow Life has responsibility for:

- Managing nine award-winning civic museums, including Kelvingrove Art Gallery and Museum, the Riverside Museum and the Burrell Collection as well as the Kelvin Hall;

- The Glasgow Club – Scotland's largest health and fitness network – including landmarks such as the Emirates Arena and Tollcross International Swimming Centre;

- The Mitchell Library and 32 Community Libraries, as well as community facilities across the city and a significant learning programme;

- Programming world-class music in venues such as the Glasgow Royal Concert Hall, incredible art and exhibitions at Tramway and a number of cultural events, such as Celtic Connections, the Mela, the World Pipe Band Championships and the Merchant City Festival, among others;

- Leading partners in the delivery of Glasgow's Tourism and Visitor Plan to 2023; positioning the city as a vibrant, first-choice destination for leisure and business tourists;

- Managing the city's destination marketing and implementing the award-winning PEOPLE MAKE GLASGOW brand;

- Managing the Glasgow Convention Bureau, which attracts more than 500 conferences to the city each year.

Glasgow Life helped to deliver the 2014 Commonwealth Games, the 2015 World Gymnastics Championships and the 2015 IPC Swimming World Championships.

Looking ahead, Glasgow Life is supporting delivery of the Total BWF World Badminton Championships 2017, the inaugural 2018 European Championships – a major multi-sport event in partnership with Berlin – the European Indoor Athletics Championships 2019 and the UEFA Euro 2020 Championship.

THE TOURISM OPPORTUNITY

As one of Glasgow's biggest industries, tourism presents one of the city's biggest opportunities. It is a key priority sector and driver of economic growth. This is demonstrated by:

- A 32% increase in the number of tourism jobs since 2011

- The city's tourism industry now employs almost 32,000 people, representing 19% of all jobs in Scottish tourism. (Oxford Economics 2015)

- Visitor expenditure amounts, on average, to £500m per year

Oxford Economics identifies that every additional £50k spent by visitors creates a new sustainable job. To gain further insight into behaviours and to boost tourism to Glasgow, Glasgow Life is looking to data analysis. Ultimately, Glasgow Life is aiming to predict future tourist trends and activities, as well as inform strategic decision-making. It wants to be proactive rather than reactive.

Glasgow Life is therefore enhancing use of its own, existing datasets, known as the 'Busyness Index', by capitalising on the value of external data from the likes of Skyscanner and LJ Research, part of STR Global, a source of global hotel data analytics and marketplace insights.

Skyscanner is a global metasearch engine for comparison information on flights, hotels and car hire, and has the potential to provide interesting insights on tourist behaviours.

Glasgow Life is interested in answering two key questions:

1. Who is going to visit Glasgow in future?

2. Can we predict future hotel room bookings?

THE SOLUTION:

Glasgow is part of the UK Government's Future Cities Demonstrator programme which aims to unlock the value that could be delivered to a city through integrating city services and systems. Glasgow Life is developing a project that will focus on the development of a predictive analytics module as part of Glasgow City Council's Transforming Glasgow programme.
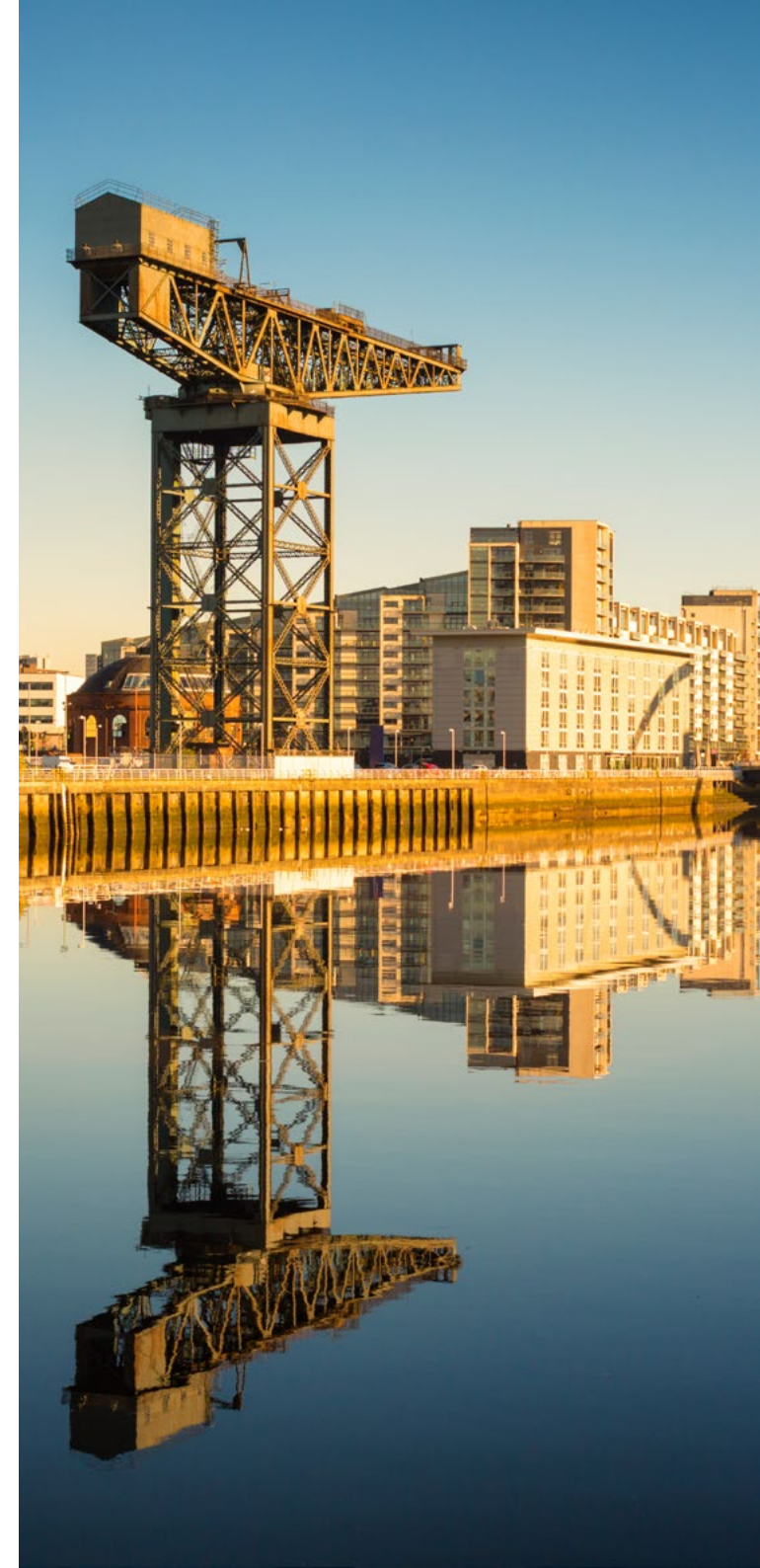
With funding support from Data Lab, and access to Glasgow City Council's Microsoft Azure cloud computing environment, academics from University of Strathclyde explored different approaches to predicting tourism related factors from Skyscanner search logs, based on different algorithms and varying prediction windows. The final prediction model was based on neural net technology, and predicts the volume of future room bookings using just Skyscanner search data for the destination.

The prediction model can be readily transformed into a visualisation and could help provide insights and benefits to Glasgow City Council and the wider tourism industry such as hoteliers, retailers, Glasgow Airport and infrastructure investors as well.

The use of the Glasgow City Council's computing platform will also enable the application to be accessed and used by other Scottish cities interested in developing similar predictive capabilities.

The project will facilitate:

- The ability to track changes in tourism visits to the city and provide more insight into the return on investment (ROI) of marketing efforts.

- Greater visibility of passenger numbers arriving at Glasgow and whether routes are working, which will support campaigns to develop new route developments;

- Development of new partnerships with data vendors such as Skyscanner, Glasgow Airport and LJ Research, which provides insights from hospitality and tourism market research;
- Ability to showcase Glasgow as an exemplar in data management and analytics at a national level;
- Ability to deliver a novel and innovative resource to the tourism marketing departments of other cities, notably Marketing Edinburgh who supported the project. Through the support of organisations such as Scottish Enterprise and VisitScotland, this partnership could be extended across Scotland.
- Support for Skyscanner with a case study to engage with Destination Market Organisations across the world in relation to data analysis;

By combining existing and new datasets, the projects will focus on a machine learning application capable of delivering accurate insight into the numbers and characteristics of tourists to Glasgow. This will be situated on Glasgow City Council's Future Cities Demonstrator ICT platform, which already hosts the 'Busyness Index' datasets and also provides a connected visualisation capability.

This project is part of a wider data strategy which will see a number of internal projects developed, including the development of a second-generation Destination Dashboard, a prototype currently operating using its own historical tourism data. This will enable Glasgow Life and other public and private sector stakeholders to collect, analyse and share insight and intelligence more effectively.

KEY OUTCOMES OF THE PROJECT

Specifically, Glasgow aims to use this data focused strategy to boost annual tourism expenditure to £771m and grow the number of overnight visitors by one million (to a baseline of three million) by 2023.

It was found to be possible, to predict hotel occupancy in Glasgow and Edinburgh with up to 90% accuracy. The project also demonstrated a basis for mapping the volume of searches for flights from origin cities across the world. This intent has the potential to help identify marketing opportunities, especially for routes where there is no direct route into Scotland.

FOR GLASGOW LIFE AND GLASGOW CITY COUNCIL

The main outcome will be the generation of useful insight into future visitors to the city of Glasgow, which can be turned into useful management information for Glasgow Life and Glasgow City Council. From an operational perspective, enhanced insight into visitors will allow Glasgow Life to optimise service delivery and the efficient use of budgeted resources.

FOR BUSINESSES

The predictive insights from this project will also benefit the private sector as businesses are able to forecast and plan ahead. For example, the broad impact of the project on Glasgow's tourism economy could become more tangible through the potential creation of new airline route developments into Glasgow Airport. As well as serving Scotland's largest city, Glasgow Airport is one of the fastest growing airports in Europe. New route development is a key priority and Glasgow Life supports efforts to open up new routes.

The insight will help Glasgow Life and other agencies such as Scottish Development International, the Scottish Government and VisitScotland make better investment cases to airlines looking to establish a new route into Glasgow.

WHAT DOES THE FUTURE LOOK LIKE:

From a tourism economy perspective, the new insights will help with the complex process of identifying and converting lots more visitors to Glasgow and Scotland. This will identify meaningful marketing and engagement opportunities, and in turn employment associated with this growth would amount to an additional 6,600 jobs for the city by 2023.

The ambition is to utilise such knowledge to inspire the development of tailored tourism products. This project aims to influence how Glasgow Life and Glasgow City Council engage, participate, collaborate and shape the future of Glasgow's tourism and visitor economy.