



Informed decision-making through real-time space utilisation insights

Enhance space utilisation across your university with a modular data platform, leveraging real-time insights. Assess day-to-day space usage to improve efficiencies across campus and allocate resources where they're most needed.

On-site space management in universities often comes with the challenge of ever-changing needs for campus spaces. It can be difficult to ensure a positive user experience, optimise space utilisation, and appropriately allocate budget. In today's fluctuating market, universities must keep an adaptable approach to ensure the efficient use of campus space.

Real-time space utilisation insights can provide a live visualisation of campus space allocation to drive informed decision-making around how facilities, locations, and rooms could be used better. BJSS can help you create a tailored dashboard, leveraging the latest data analytics technologies.

Data platform capabilities at a glance:

- Ingests, processes, and analyses data from numerous sources
- Supports a full spectrum of data volumes, speeds, and latency requirements
- Integrates with bespoke outputs as well as existing and familiar tools for analysis, reporting, and decision-making
- Leverages AWS services such as IoT Core, Glue, and Athena

Overcome your common data hurdles:



Barriers to data access impacting project roadmaps



The requirement for careful management when introducing new technologies



Privacy and security concerns



Weighing up the pros and cons of cloud vs. on-premise for solution deployment



Legacy data schemas from large enterprise systems



Difficulty aligning and correlating time-series data that has geospatial aspects

The importance of space utilisation insights - making your spaces work for you

Maximise space utilisation:

- Optimise facility use by identifying areas for potential repurposing
- Manage high and low traffic zones
- Strategically invest in areas needing capacity enhancement for better estate management

Improve the user experience:

- Evaluate student and staff engagement across different spaces, ensuring comfort and accessibility
- Guarantee a positive educational environment by addressing issues like crowded lecture halls and availability of library seating
- Enable information gathering to implement booking systems for high-traffic zones

Allocate resources appropriately:

- Ensure the appropriate deployment of space monitoring equipment
- Utilise live data to minimise physical infrastructure requirements

Predictive and proactive management:

- Implement proactive management strategies, including predictive maintenance and cleaning schedules, using space utilisation insights
- Anticipate future requirements and investment opportunities

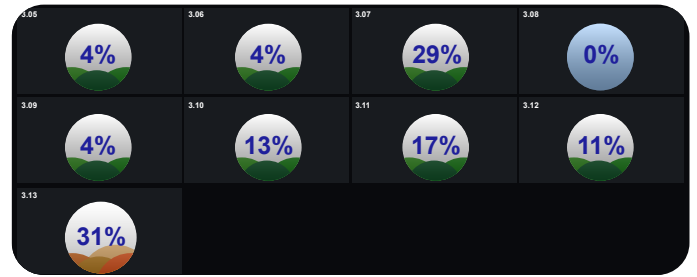
Assessing your space utilisation needs

When deciding between the use of existing Wi-Fi access points, IoT enabled sensors, booking systems, break beam sensors, or a combination, it's essential to assess which aligns best with your needs. BJSS can help you evaluate your current data infrastructure and recommend suitable solutions for optimal performance and efficiency.

Dashboard visuals at a glance

Struggling to bring disparate data formats together to make space utilisation insights possible? A combination of communication protocols and data formats can be selected to meet your needs.

The user-friendly visuals display real-time data on spaces, helping students and staff determine which rooms are currently empty and therefore available to book or use ad hoc. For data visualisation, tools such as Quicksight and hosted Grafana can be rapidly configured.



The dashboard can provide room occupancy insights

Key product deliverables:

Valuable user-centric insights:

Identifying key questions and use cases with highest value to the client, meaning you select the right combination of pipelines, tools, and services suitable for your unique needs.

Agile iteration: Using collaborative design using Agile methods, leveraging ready-to-go modular blocks to easily configure and connect according to proof-of-concept requirements, facilitating efficient and adaptive development processes.

Lean product delivery: Going beyond a proof-of-concept to deliver a production viable solution with Lean functionality, ensuring efficient use of resources and faster time-to-market

while meeting your needs effectively.

Advanced data engineering:

Discovery and onboarding of heterogeneous data sources, plus data cleansing, transformation, augmentation, and correlation. This enables the extraction of meaningful insights from diverse datasets, leading to informed decision-making and improved operational efficiency.

Client use case: Mapping campus dynamics for the University of Bath

BJSS worked with the University of Bath, with the main objective of creating a data pipeline to analyse various sources of data that could map the utilisation of rooms across the campus. The data would then be processed and/or displayed via any number of platforms, including Microsoft PowerBI and Grafana. The University also wanted to conduct a smaller study into the overall trustworthiness of the two core data sources, Wi-Fi and break beam. Preliminary findings show that break beam and Wi-Fi data are on average within the 10% tolerance expected and are valid data sources to use to build an effective space utilisation system.



About BJSS

Proven to solve your complex technology problems:

- 2,700+ talented people working together on complex projects
- 26 locations across the UK, US, Europe, and Australia

What we do:

- Technology Strategy & Innovation
- Customer Experience, Product & Design
- Technology Delivery
- Managed Services

Our Technology Expertise:

- Software Engineering
- Cloud & Platform
- Data & Insights
- Artificial Intelligence

Our Industry Expertise:

- Energy, Commodities & Utilities
- Financial Services
- Healthcare & Life Sciences
- Media & Entertainment
- Public Sector
- Real Money Gaming
- Retail & Consumer Markets
- Transport & Logistics

BJSS works with some of the world's largest companies:



Interested in learning more about working with BJSS and AWS?

As well as deep technical knowledge, BJSS has hands-on implementation knowledge of delivering space insights solutions. Unlock smarter decisions with BJSS and real-time space insights, tailored to you.

