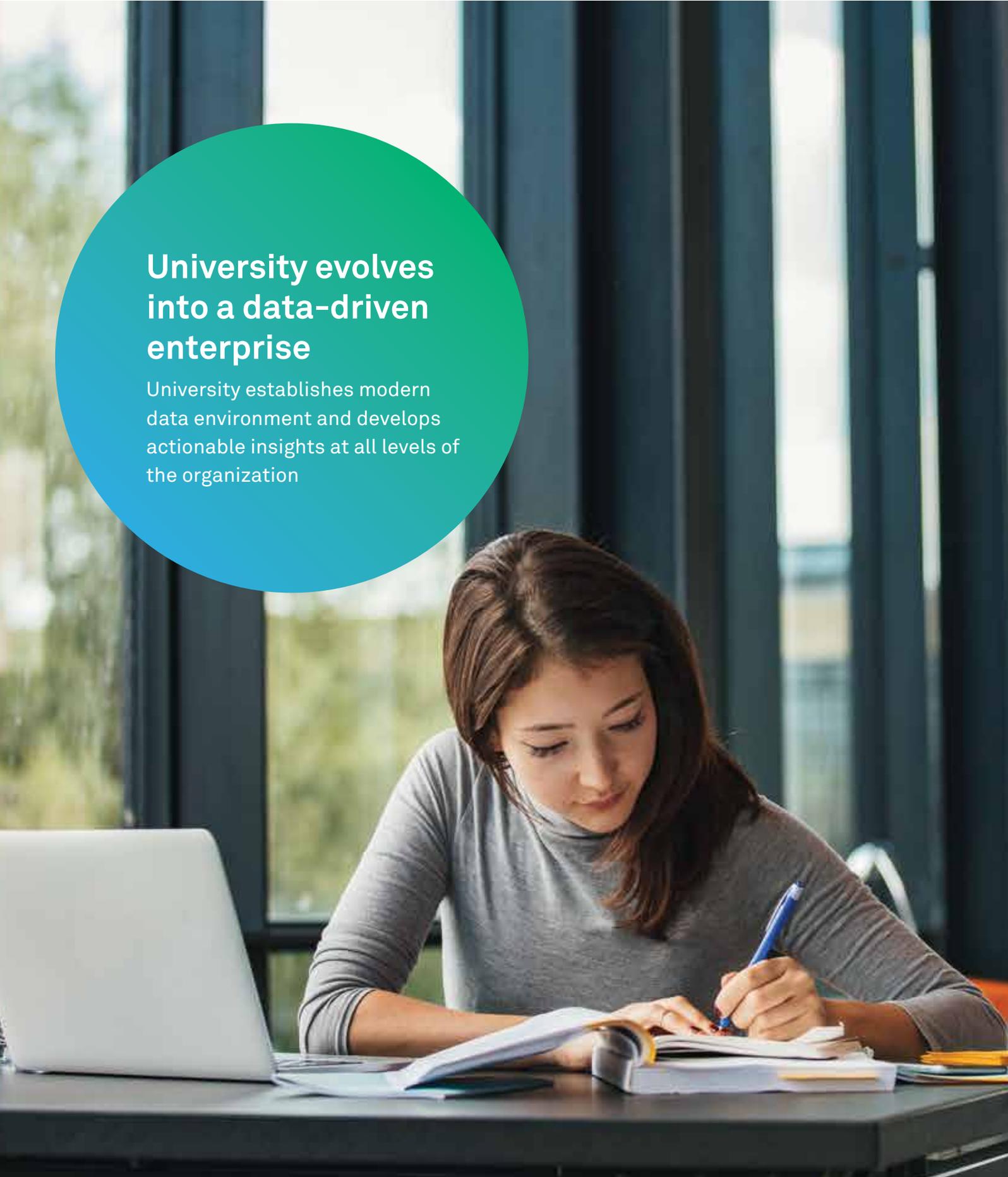# University evolves into a data-driven enterprise

University establishes modern data environment and develops actionable insights at all levels of the organization

Client background

Client: A prestigious university in Australia

Industry type: Education

Number of students: Over 50,000

Effective data management and learning analytics solution provided high level view of KPIs and one stop search tool for research

Challenges

The university had disparate source systems for institutional data, leading to challenges in developing actionable insights. It wanted to build a modern data environment by integrating data from multiple data sources to enable analytics and relevant insights.

The university needed automated information analysis and analytical reporting capabilities through data warehousing and business intelligence technologies. One of the major intents was to analyze the corporate credit card data to understand the spending patterns of the staff for compliance to rules and regulations.

Solution

Wipro implemented an effective data management solution and learning analytics solution for the client leveraging Talend Cloud-based SaaS platform hosted on AWS. As part of the learning analytics solution, Cloudera was leveraged for Big Data along with Talend as data ingestion and transformation layer, and Tableau as a consumption layer.

Solution highlights:

- Built the data warehouse in accordance with the university's standard ETL framework

- Tracked information assets as they moved through various stages of the lifecycle

- Built analytical reports and dashboards to enhance decision making

- Migrated student information from a legacy system to a leading student and course management system

- Built a modern data environment that integrated information from several sources – student data, finance, HR, Wi-Fi logs, learning management systems, library, journals, etc.

- Used mv2BD data ingestion platform from Wipro to successfully migrate all historical data from Blackboards (one of the RDBS legacy system) to Hive in less than 4 weeks

- Built Spark-based ingestion pipeline by using Talend Big Data real time integration

- Integrated credit card spend data into the enterprise data warehouse and built a dashboard that enabled the university to have improved visibility of spends incurred through the corporate credit card

Some of the use-cases developed for consumption of insights were:

- Help individual learners to reflect on their achievements and patterns of behavior in relation to others

- Predict students requiring extra support and attention

- Help teachers and support staff plan supporting interventions with individuals and groups

- Help functional groups such as the course team to improve current courses or develop new curriculum offerings

- Help institutional administrators take decisions on matters such as marketing and recruitment, or efficiency and effectiveness measures

Business impact

The new modern data environment served as the backbone infrastructure for the university staff to enable spend analysis, student retention, contextual and demographic understanding of the student, and fine-tuning of the courses.

Provided management a high-level, aggregated view of KPIs and measurement, with drill down capability

Trend reporting of student data across different points in time enabled faster decision-making and the means to gauge patterns of network performance and latency

Enabled a one-stop search tool for research, teaching and learning that led to user-friendly searching and requesting of library resources. This platform with single interface replaced three different tools

This was a large Talend Big Data real time implementation on the Talend Cloud in terms of scale and size. Enterprise data warehouse and dashboard enabled the university to have improved visibility of spends incurred through the corporate credit card. The modern data environment helped in providing a university-wide resource for storage, management and review. It also allowed the university to keep its intellectual property safe and usable.

Raman Awal
Global Practice Head - Information Management, Data, Analytics and AI, Wipro Limited

Wipro Limited
Doddakannelli, Sarjapur Road,
Bangalore-560 035,
India

Tel: +91 (80) 2844 0011
Fax: +91 (80) 2844 0256
wipro.com

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