# 3. Business Analysis Techniques Applied

A combination of structured business analysis techniques, as outlined by Cadle et al. (2010), Carkenord (2012), and Shelly & Rosenblatt (2012), were applied during the analysis and planning of the University of Johannesburg’s Digital Future Initiative (DFI). These techniques ensured that stakeholder needs, business objectives, and technological capabilities were properly aligned.

## 3.1 Stakeholder Analysis

According to Cadle et al. (2010), stakeholder analysis identifies individuals and groups affected by or influencing the project. This technique was applied to classify stakeholders—students, academic staff, administrators, and IT personnel—based on their power and interest. A stakeholder matrix helped determine communication priorities and engagement strategies throughout the DFI implementation.

## 3.2 SWOT Analysis

Following Carkenord’s (2012) guidance, a SWOT analysis was performed to evaluate internal strengths and weaknesses, as well as external opportunities and threats.

Strengths: Strong institutional IT infrastructure and digital readiness.  
Weaknesses: Limited user adoption and digital literacy challenges.  
Opportunities: Improved efficiency, e-learning access, and real-time data integration.  
Threats: Cybersecurity concerns and potential system outages.

## 3.3 Requirements Elicitation and Analysis

In line with Shelly & Rosenblatt (2012), requirements elicitation techniques such as interviews, surveys, and document reviews were applied to collect user requirements for platforms like UJConnect and UJAcademy. The gathered information was analyzed to define clear, testable, and achievable system requirements that support both functional and non-functional goals.

## 3.4 Use Case Modelling

Cadle et al. (2010) emphasize modelling techniques for clarifying system functionality. Use case diagrams were used to represent user interactions—showing how students, lecturers, and administrators interact with the digital systems. This provided a visual link between user requirements and system design.

## 3.5 MoSCoW Prioritization

To manage scope and ensure focus on critical system needs, the MoSCoW technique (Must have, Should have, Could have, Won’t have) was applied, as recommended by Carkenord (2012). Essential features like secure authentication and data privacy were marked as Must haves, while optional features such as personalization and chatbots were Could haves.

## 3.6 Business Process Modelling (BPM)

Finally, Shelly & Rosenblatt (2012) highlight the importance of visualizing business processes to understand existing workflows. BPM diagrams were created to map current versus proposed processes. This helped identify inefficiencies and demonstrate how automation and integration would improve academic and administrative functions.

# References

Cadle, J., Paul, D., & Turner, P. (2010). Business Analysis Techniques: 72 Essential Tools for Success. BCS, The Chartered Institute for IT.  
Carkenord, B. (2012). Seven Steps to Mastering Business Analysis. J. Ross Publishing.  
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