Task 2 Cloud Feasibility Assessment

Advise the client on the benefits, risks and considerations for transitioning to Cloud.

The University Innovation team and IT leadership now have a much greater understanding of what Cloud Computing is and they really feel like the correct use of Cloud could help to alleviate some of the challenges they have been facing to date.

Whilst excited by the prospects, the team is also mindful of the scale and nature of the transformation and are concerned that the shift to Cloud introduces a large amount of change, and risk into a very traditional IT environment.

Detailed below are several key facts about the University IT portfolio:

1. High level of seasonality in IT use with some systems reaching peak capacities during enrolment
2. Application downtime is prominent during peak periods
3. A number of major legacy applications are in place
4. A desire to provide access to external SaaS applications
5. A number of applications are overprovisioned, typically using less than 40% of the capacity (compute, storage, memory) that they have allocated

Cloud Benefits

Benefits of Transitioning to Cloud-

1. Scalability- As mentioned, the existing IT infrastructure has some systems reach peak during enrolment. Other face a downtime in peak periods. These could be the systems for Academic record creation and class tests. In peak hours they go past their capacity.
2. High Availability- Infrastructure will be highly available in the Cloud with fewer outages experienced and less downtime. Applications will exist across a number of disparate Cloud Data Centres and can auto recover or terminate and restart if performance drops enabling continued quality of services.
3. Automation and Ease of Management- A lot of the processes can be automated and easily managed. The service limits, access to external SaaS applications, all can be managed.
4. Flexibility- The University will have access to the full range of programming models, operating systems, databases and architecture with which they are familiar as well as new services available through the marketplace. The University will not be locked into infrastructure purchases and will have more freedom of choice
5. Greater Security Controls- Cloud environments keep track of all changes made through logging and can make use of the latest firewalls and security features to reduce the likelihood and impact of cyber-attacks and internal mistakes.

Cloud Risks and Considerations

Aspect	Risk	Mitigation
Skills	The IT Team is not equipped with the skills to manage the transition to the Cloud Platform.	Establish Cloud Function and training program to teach them about the operation.
Capability	Unable to develop new capability quickly in line with platform migration	Develop standards and build patterns to be used for application deployments in the Cloud.
Manual Workload Increase	Early migration activities may initially delay current IT processes and increase manual workloads.	Optimise Cloud environments for automation by developing decision criteria that is independent of human intervention.
Security Breach	Security policies may not be enforced leading to data compromise.	Define and run regular security audits and penetration testing to ensure Cloud security is maintained across the network.
Risk Averse Culture	The IT team is averse to the change from the current ways of working.	Run sessions with Senior Leadership and have managers lead the change. Run a town hall with all IT staff.
Changes to Cloud Costs	Risk that costs of Cloud services will increase, straining the IT Budget.	Negotiate price-protection with Cloud providers during procurement process and optimise the environment against cost.

Some additional considerations to be made are-

1. Cloud Strategy- It is critical to define cloud strategy, charter and guiding principles focused on cloud adoption, migration repeatability and efficiency.

2. Business Case- It is essential to create a business case and perform financial analysis to assess expected business benefits, migration costs, and cloud TCO.

3. Program Governance- A well designed governance enables consistent and efficient execution of the day-to-day activities through the migration design and execution.

4. Application Assessment- Application assessment enables identification of cloud suitable candidates and drives concentrated efforts to migrate shortlisted applications.

5. Security & Risk Management- Security and risk management need to be taken into consideration while designing the app target state.