**FISHTANK LTD**

**CLOUD PROPOSAL**

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# 1.0 - Introduction

This document contains the response to FISHTANK LTD’s request for proposal. The structure of the document is as follows:

Section 2 will provide a clear description of the short-, medium- and long-term benefits of using cloud. These are more generalised benefits, whereas section 3 will cover the specific requirements outlined in the RFP and how cloud, specifically AWS (amazon web services) can achieve these. Section 4 contains details on potential strategies to handle objections and cultural issues that commonly arise from such projects.

# 2.0 – Benefits

## 2.1 – Short term

When switching to AWS cloud, there will be several immediate benefits, including a rapid increase to the agility and scalability of the business. Once successfully migrated to cloud, FISHTANK could quickly benefit from AWS on demand scalability, and adjust resources, such as storage or computing power seamlessly and rapidly. This agility would allow for faster, more efficient responses to changing business needs.

## 2.2 – Medium term

In the medium term, FISHTANK could benefit from increased availability and reliability. AWS infrastructure is second to none and built for failure. While some of these benefits will be realised immediately, in the medium term these can be further capitalized on by creating multi-region architectures for expanding and redundancy strategies for further reliability.

Additionally, AWS allows for more streamlined operations in the medium term. It removes the need for any kind of physical components on the business end, so there would be no delay or downtime if more storage or computing is needed. For example, a data centre might take a few days to respond to a request for more racks, and potentially even longer to get them operational, whereas this could be purchased instantly with AWS.

## 2.3 – Long term

A key long-term benefit from switching to AWS is the potential cost optimisation strategies. While it is important to note that switching to AWS may not be immediately cheaper than a current on premises set-up, there are several cost saving strategies that AWS offer. These include savings plans, on demand pricing and spot instances. Furthermore, AWS only charge you for what you use, so there is no risk of buying too many racks in a data centre for a big project that never get used. A good long term financial strategy with AWS has potential to be incredibly cost effective in the long run.

Additionally, long term usage of AWS offers the benefits of innovation and competitive advantage. AWS has hundreds of services on offer, often including latest technologies and best practices. Leveraging these could provide FISHTANK with a competitive advantage by fostering an environment for faster innovation and potential to differentiate themselves from the market.

# 3.0 – Outlined requirements

## 3.1 – Disaster Recovery

As mentioned in the RFP, FISHTANK currently operate on a system spread between two data centres with no disaster recovery (DF) plan in place. AWS has various options regarding DF, one being cross-region failbacks using AWS elastic disaster recovery (AWS DRS). This minimises downtime and data loss with fast, reliable recovery of cloud-based applications and on-premises applications using affordable storage, minimal compute, and point-in-time recovery. This increases IT resilience by replicating data to a staging area subnet, in a region of your choice. The staging area is designed to minimize costs by using affordable storage and minimal compute. There are several options regarding DF within AWS, including an AWS managed service to offload the DF responsibilities to AWS experts. However, this would be significantly more expensive and in this case for a multi-national business looking to migrate to cloud and expand in the near future, AWS DRS would be the most cost-effective way to implement DF accounting for both the initial migration with on premises applications and future cloud applications with minimal downtime.

## 3.2 – Minimal Downtime

Minimising downtime is a priority during the migration process and can be managed effectively with appropriate planning. The first step for migration is to assess and mobilise the existing infrastructure to better understand specific requirements. AWS offer a variety of tools to help with this process, such as the AWS migration hub which creates an inventory of applications and dependencies. Additionally, AWS offer free migration assessments for building business cases.

The RFP has outlined the important timescales due to the nature of the work and often needing to pool resources to focus on a singular project at a time. With this in mind, the most appropriate strategy for migrating may be a hybrid-cloud solution. This would allow the migration of data, tools, dependencies, or programmes that aren’t being used while the necessities for the project remain until the project is completed, and then migrated themselves. This would significantly reduce the risk of downtime during the migration process but may not be the most cost effective. AWS also offer tools such as AWS data-sync and AWS snowball, which facilitate data transfer to reduce time data spends in transfer. This would minimize downtown, but some downtime may be required across all projects for this process, further evaluation will be required to find the optimal solution.

## 3.3 – Expanding to NA and APJC and IT resources

AWS provides a purpose-built global infrastructure that would be able to support the expansion of the business with ease. The infrastructure consists of regions, which are physical locations containing clusters of data centres. Each region contains at least 3 availability zones (AZs). These AZs offer the ability to operate applications and databases in environments more fault tolerable, available, and scalable.

In North America, AWS currently has currently had 8 regions, with at least 1 more planned. Meanwhile in APJC, there are 10 regions with at least 2 more planned. These regions allow for ease of scalability for business operations in the area by providing seamless data migration and replication to the areas. Furthermore, it is possible to partition services across several AZ’s making them further tolerable to disasters such as power outages, lightning strikes, or earthquakes.

This also addresses the issue outlined in the RFP regarding stopping projects to free up resources for another project. Should more resources be required for a project, they can easily be taken from the AZ and applied without the need to reduce or stop work on any other projects from a computing perspective. Additionally, should an AZ run out of resources then resources can be pulled seamlessly from another AZ to compensate, minimising the risk for any project stopping.

# 4.0 – Objections and cultural issues

As with any large project, objections and cultural issues are only natural. Especially for a company operating in a way for over 20 years, it is only natural to be cautious about any large changes. Therefore, a change management strategy would be key for managing this. This strategy should focus on education and training and open communication.

Staff may be objecting the change due to lack of knowledge and training. Understandably, switching to AWS can be a daunting task but some training and education could alleviate these worries. AWS offer several courses on the platform which could be made available for staff to take. Furthermore, there are practice environments available at AWS that allow for experimentation risk free, which could be great for staff to get hands on experience and bring them on board.

Furthermore, this project should be handled with open communication with all staff members. Its important to understand that switching to cloud is no simple task, and AWS is not a trendy magic service. However, there are many benefits to cloud not just to the business but to the staff as well, with the potential to make everyone’s job more efficient, not necessarily changed. Potentially, demonstrating some success stories and the ongoing benefits to businesses that have already switched to cloud could help soften any objections.