Database Freedom
Cloud Databases

synthesis

Database Freedom is a unique program designed to assist customers in migrating to AWS purpose-built databases by providing technical advice and migration support.

Synthesis can help assess your systems, recommend a migration path, and help you execute the migration to the cloud.

Data is the most valuable asset of any organisation. Companies need assurance that their data infrastructure is robust enough to host their most valuable asset, and that they can access their data at any given time, in the cost effective and optimal way.
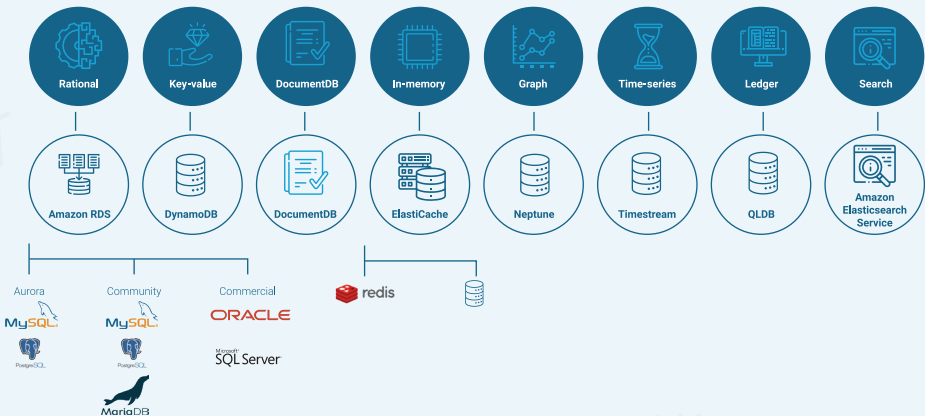
Databases and data have evolved over the years and organisations are looking for a fit for purpose data infrastructure to optimise their data investments. Having a partner like Synthesis enables you to be assured that all your cloud journey requirements will be catered for.

Cloud Databases

There are more than 15 AWS purpose-built databases that are optimal and cost-effective for any given workload. This gives applications the autonomy of running on the best fit for purpose databases to improve the performance, scalability, and reliability of the database infrastructure.

Synthesis can help you choose the right database for your workload. We will take the heavy lifting away enabling you to focus on delivering what matters to your business.
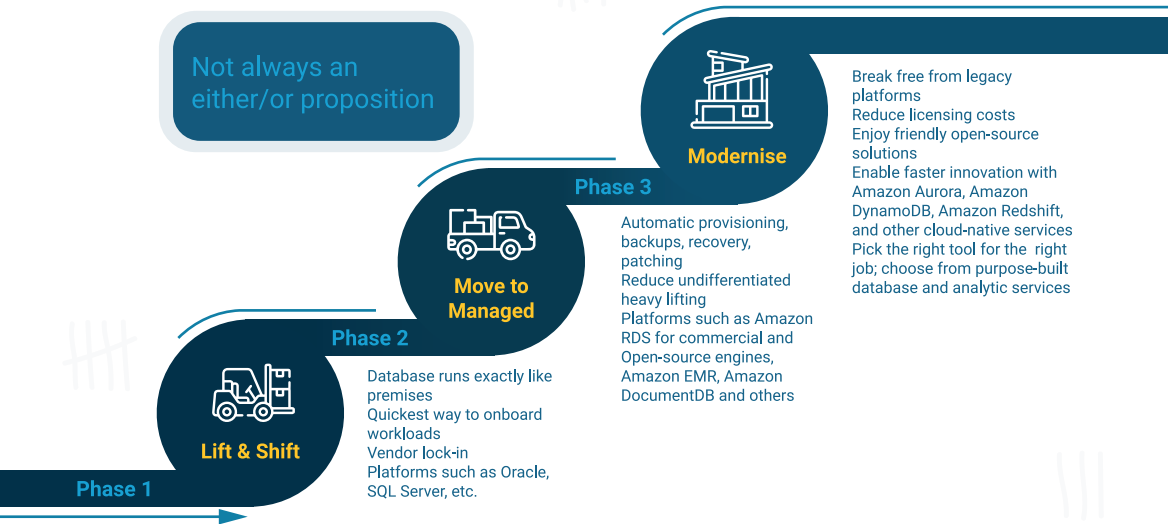
Purpose-built Databases

Cloud Databases

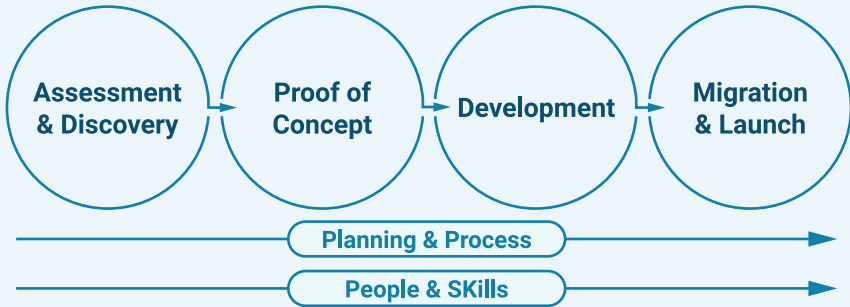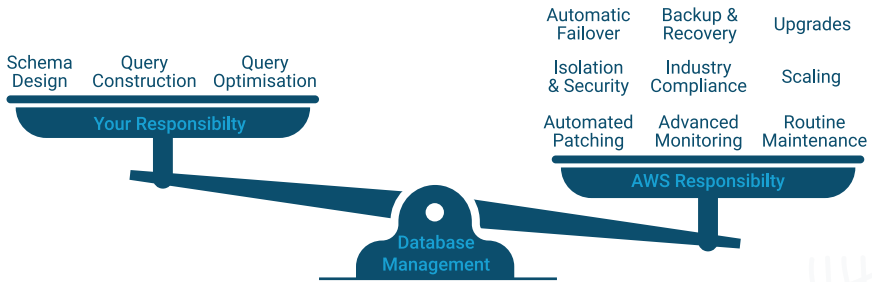## 1. Database assessment phase

The first major consideration when choosing your database is your business objective. What is the strategic direction driving your organisation to change? As suggested in the 7 Rs of AWS, Synthesis considers whether you want to re-architect or re-factor an existing workload, move to a new platform to shed commercial license commitments, rehost your existing databases and data to the cloud without making any changes to take advantage of cloud capabilities or make the move now to a managed database strategy.

2. Database migration and modernisation phase

Synthesis will accelerate and support your migration from legacy systems to the cloud with tools built to help streamline data transfer, increase processing performance, and simplify connections between your databases and applications; reduce risk by maintaining your existing architectures while gaining the cost and operational efficiencies of the cloud; improve replication speed and accuracy; perform change data capture (CDC);and manage code deployment to experience the fastest and most trouble-free migration.

Not always an either/or proposition

Modernise

Break free from legacy platforms
Reduce licensing costs
Enjoy friendly open-source solutions
Enable faster innovation with Amazon Aurora, Amazon DynamoDB, Amazon Redshift, and other cloud-native services
Pick the right tool for the right job; choose from purpose-built database and analytic services

Phase 3

Automatic provisioning, backups, recovery, patching
Reduce undifferentiated heavy lifting
Platforms such as Amazon RDS for commercial and Open-source engines, Amazon EMR, Amazon DocumentDB and others

Move to Managed

Phase 2

Database runs exactly like premises
Quickest way to onboard workloads
Vendor lock-in
Platforms such as Oracle, SQL Server, etc.

Lift & Shift

Phase 1

The Value of Database Modernisation

Schema Design | Query Construction | Query Optimisation

Your Responsibilty

Automatic Failover | Backup & Recovery | Upgrades

Isolation & Security | Industry Compliance | Scaling

Automated Patching | Advanced Monitoring | Routine Maintenance

AWS Responsibilty

Database Management

Assessment & Discovery → **Proof of Concept** → **Development** → **Migration & Launch**

Planning & Process →

People & SKills →

3.   Database operation and optimisation.

When your database is in AWS, you must operate it in the cloud. You must ensure you are following the best practices for areas such as monitoring, alerting, backups, and high availability.

The optimising activities can address cost, performance, security, or resiliency concerns for your application stack. For example, you can use automatic scaling features to add more read replicas during peak hours and remove them during

off-peak hours to lower costs. You can also use several AWS services that integrate seamlessly with Amazon RDS databases. For example, you can easily direct database engine logs to Amazon CloudWatch Logs for analysis.

Once in the AWS Cloud, you can start optimising your application by taking advantage of many services and features that you can spin up with a few clicks.

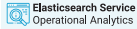## Business Intelligent & Machine Learning

QuickSight	SageMaker

Analytics

Redshift
Data Warehousing

EMR
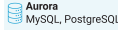Hadoop ~ Spark

Athena
Interactive Analytics

Elasticsearch Service
Operational Analytics

Kinesis Data Analytics
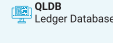Real Time

Database

Aurora
MySQL, PostgreSQL

DynamoDB
Key Value

DocumentDB
Document

RDS
MySQL, PostgreSQL, MariaDB, Oracle, SQL Server

ElasticCache
Recks, Memcached

QLDB
Ledger Database

RDS on VMware

Neptune
Graph

Timestream
Time Series

Blockchain

Managed

Blockchain Templates

Data Lake

S3/Glacier

Lake Formation
Data Lakes

Glue
ETL & Data Catalog

Data Movement

Database Migration Service | Snowball | Snowmobile | Kinesis Data Firehose | Kinesis Data Streams

You can innovate faster, because you can focus your highly valuable IT resources on developing applications that differentiate your business and transform your users' experiences, instead of focusing on the undifferentiated heavy lifting of managing infrastructure and data centers.

Are you sold?

Synthesis is your best partner to take you through this journey.

Contact us on marketing@synthesis.co.za to start the journey with you.