Day in the Life of AWSome Data

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Amazon Web Services

None of these businesses would exist today without the ability to leverage data

Airbnb: Depends on data to personalize search and recommend customized results to their users.

Lyft: Uses data to track GPS locations of their drivers and their riders, update their app in real time.

Snap and Tinder: Use data to store user profiles, serve up relevant ads, and have grown from zero to hundreds of millions of active users in a very short time.

Peloton: Uses data to drive engagement of its users, the foundation of its subscription based business model.

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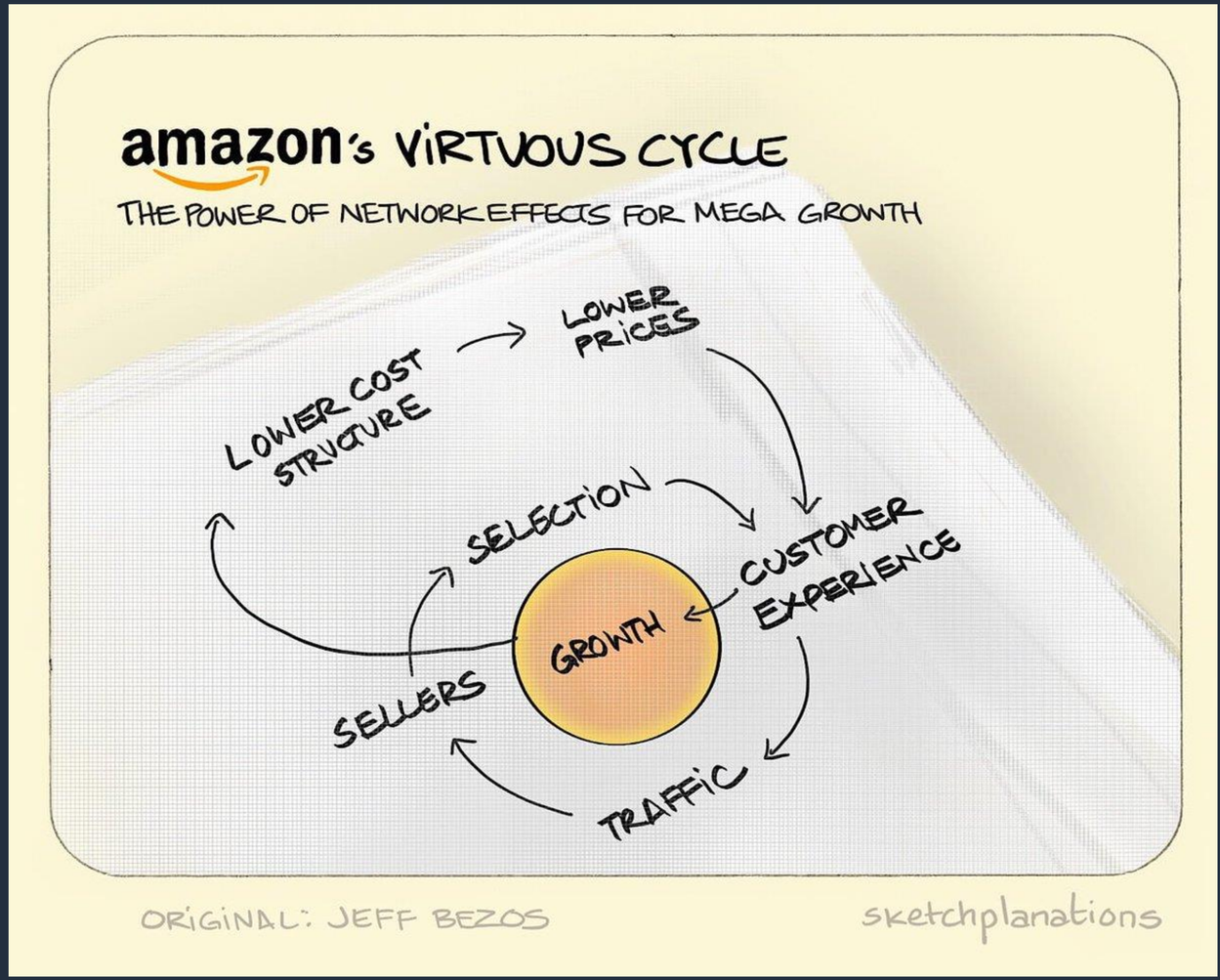
Amazon’s Flywheel isn’t the secret … rather it’s how it uses a Database and Analytics Flywheel to drive improvement

85% of businesses want to be data driven but only **37%** have been successful.

Source: Forbes Online; New Vantage Partners - Big Data Executive Survey



The Data and Analytics Flywheel

Modernize your data infrastructure

Get the most value from your data

1 Break free from legacy databases

- ✓ Save time and cost
- ✓ Remove undifferentiated heavy lifting

2 Move to managed

- ✓ Increase scale
- ✓ Improve performance
- ✓ Lower cost

3 Modernize your data warehouse

- ✓ Agility
- ✓ Global distribution
- ✓ Performance at scale

4 Build data-driven apps

- ✓ Better and faster insights
- ✓ Broader access to analytics

5 Turn data to insights

- ✓ Better experiences
- ✓ Deeper engagement
- ✓ Efficient processes

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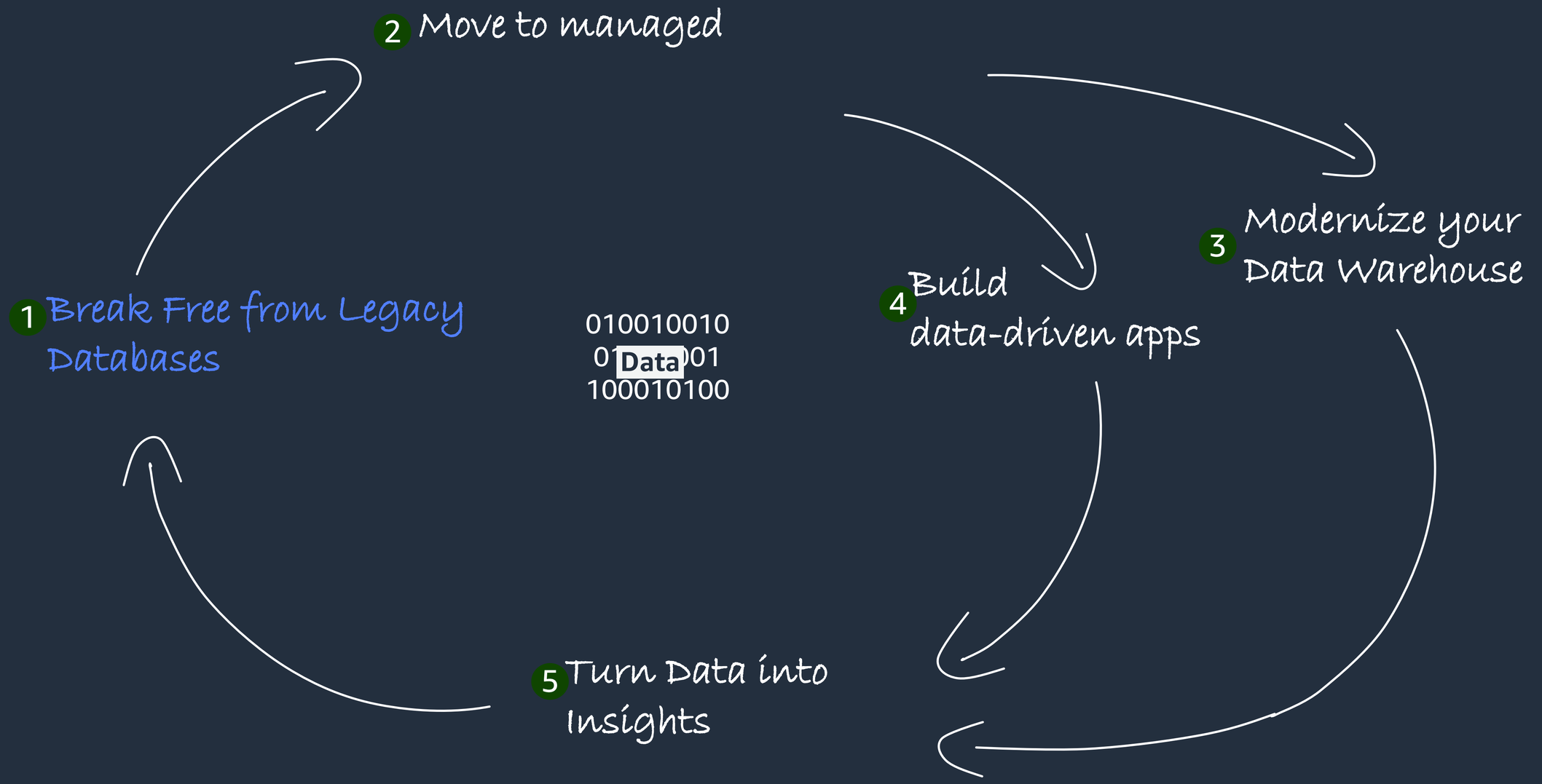

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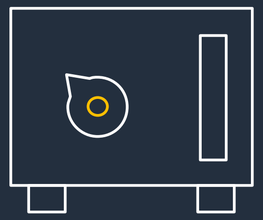
The legacy databases

Costly

Proprietary



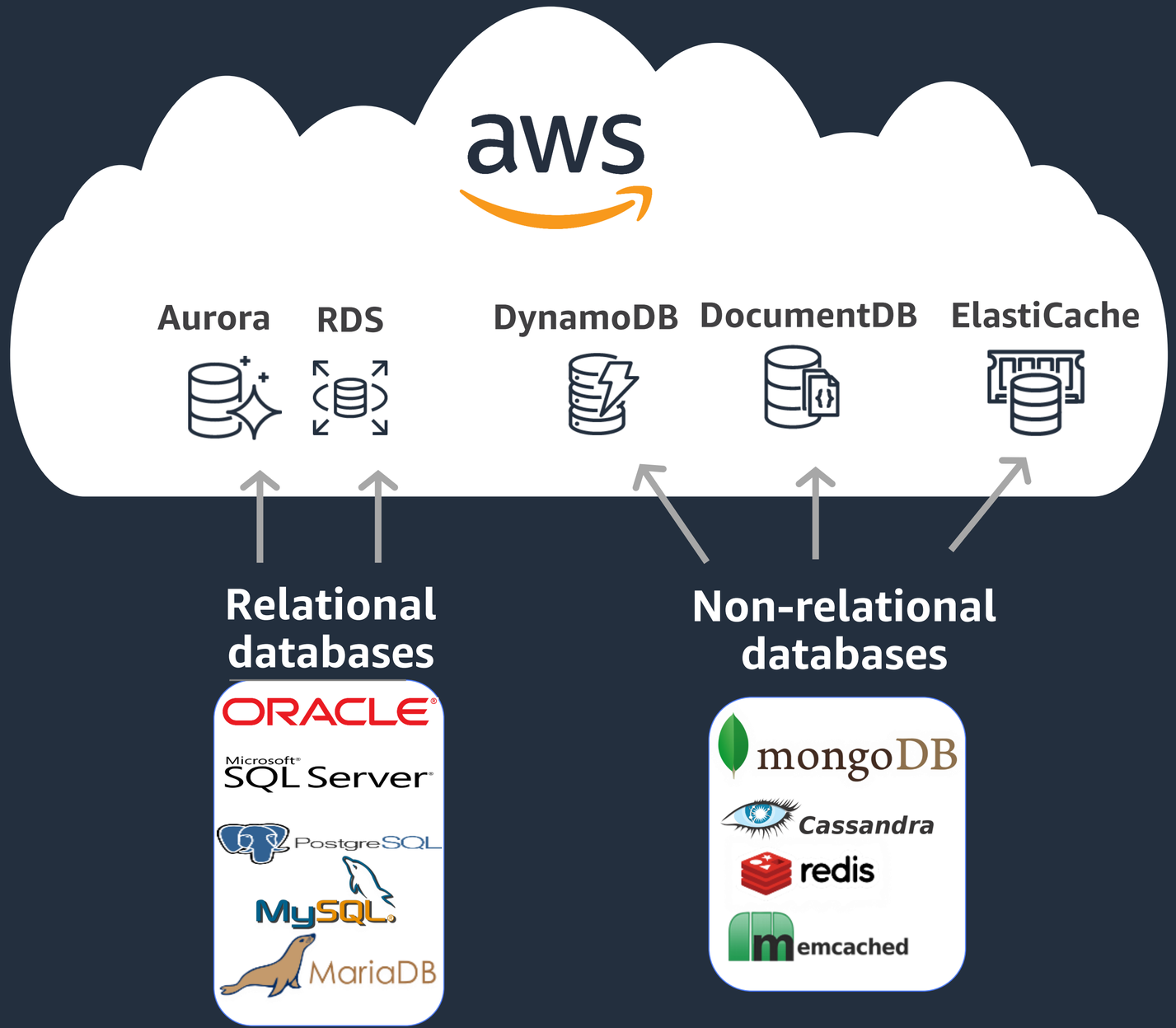
Lock-in

Punitive licensing

You’ve got mail

Break Free from Legacy Databases

- **Increased Agility**
- **Reduced Cost**
- **Performance & Scale**
- **Innovate Faster**



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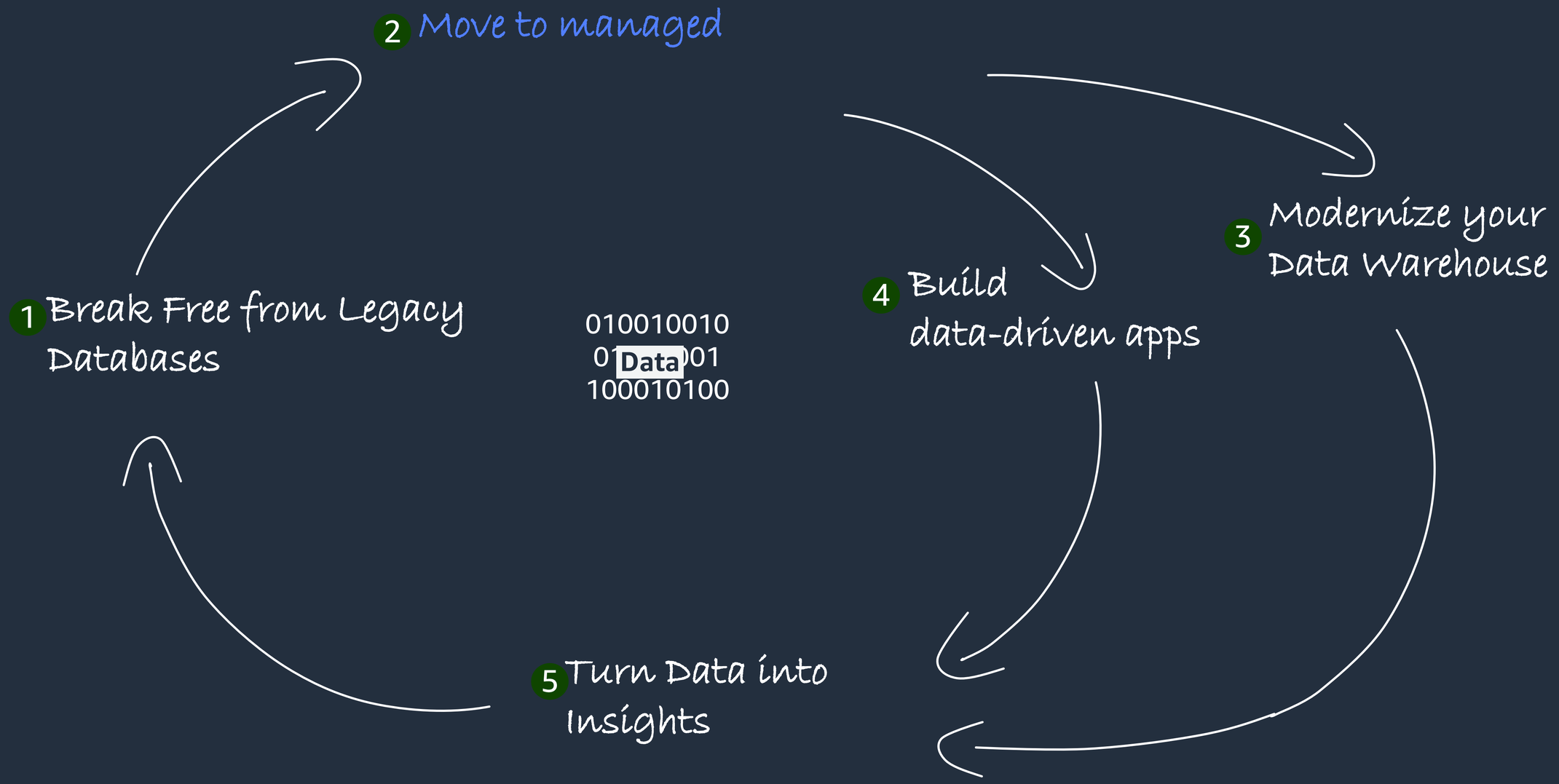

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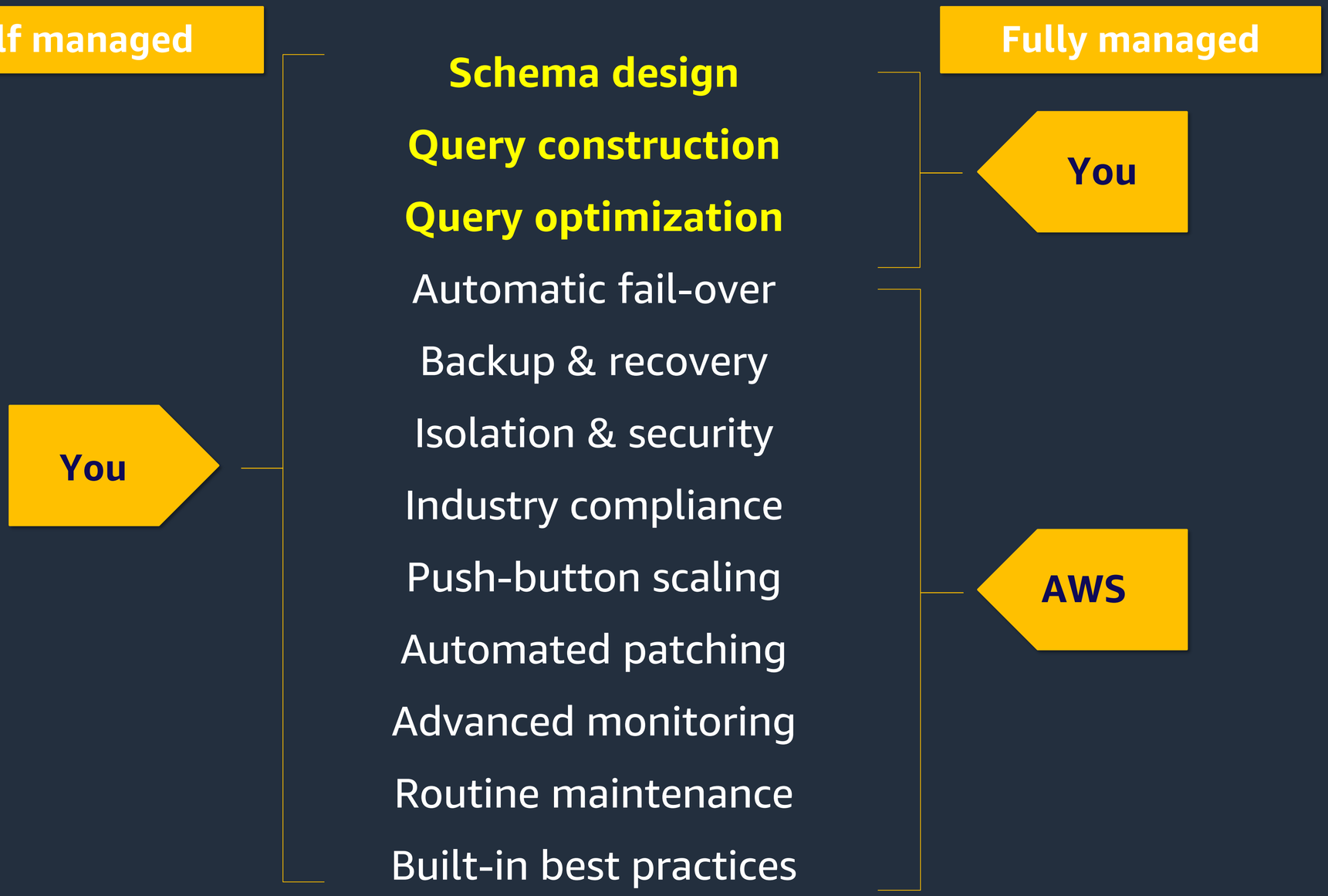
Self managing databases and analytics services is time consuming, complex, and expensive

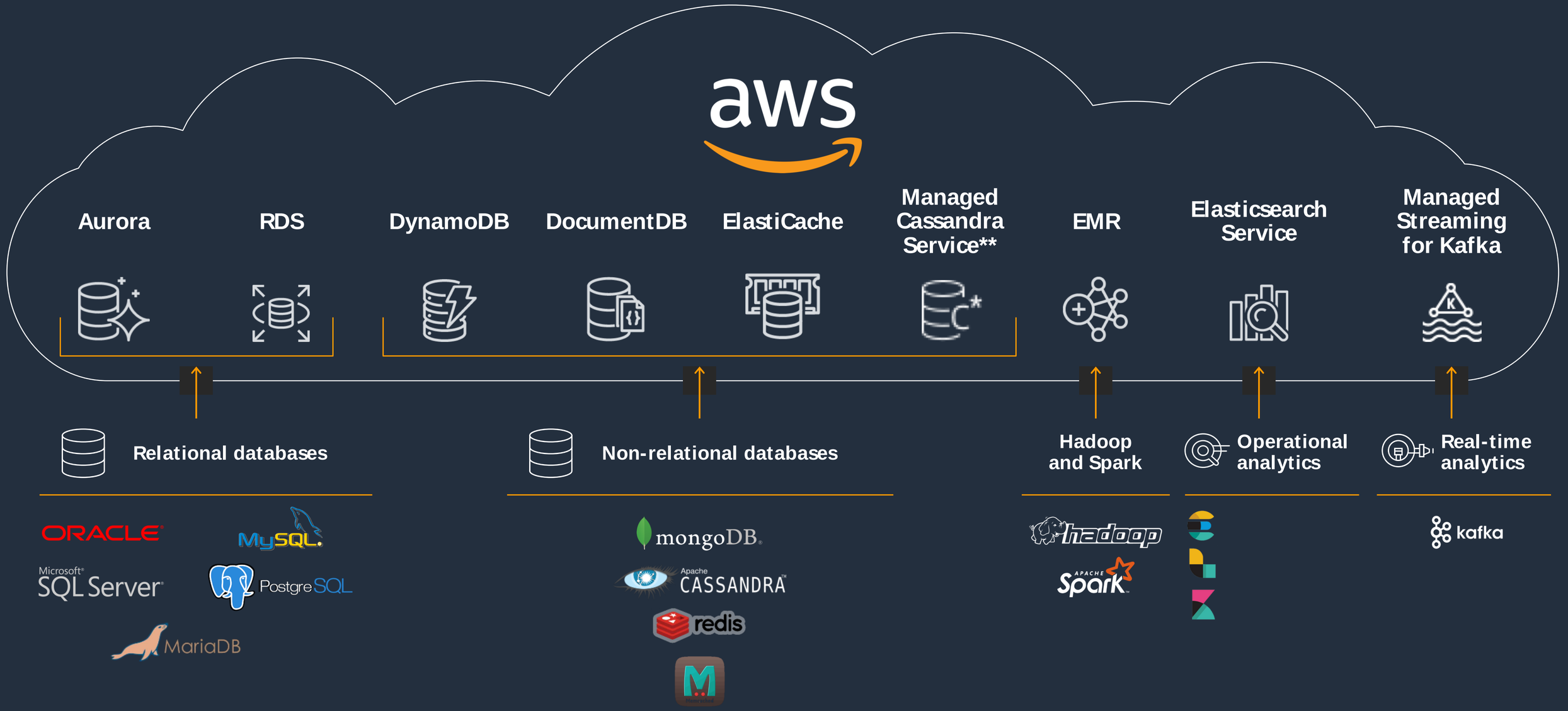
- Hardware & software installation, configuration, patching, backups
- Performance and high availability issues
- Capacity planning and scaling clusters for compute and storage
- Security and compliance

Fully managed services on AWS

Spend time innovating & building new apps, not managing infrastructure



Fully managed database & analytics services



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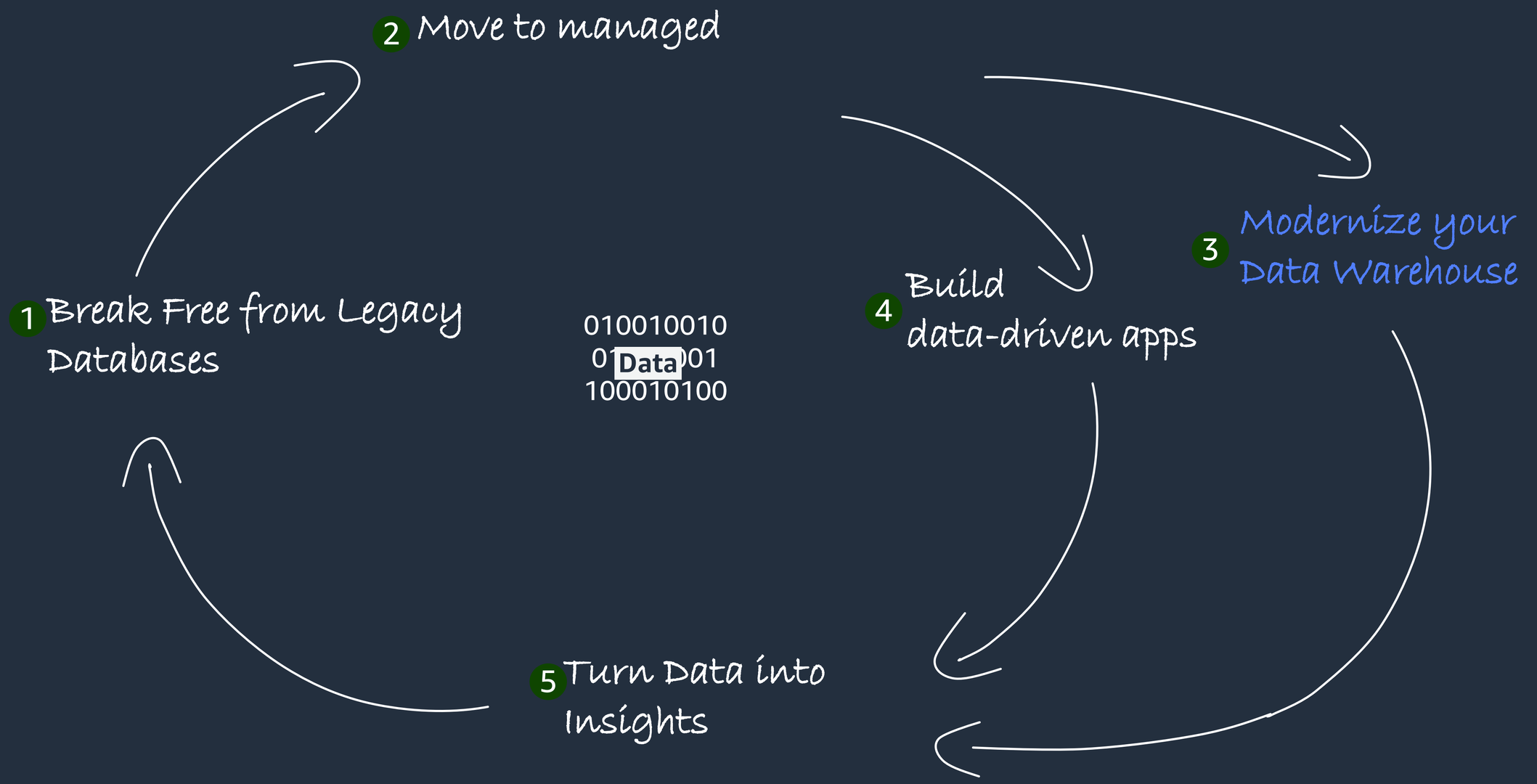

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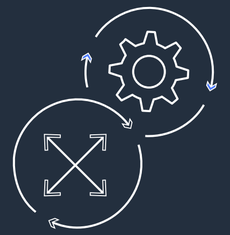
Data warehousing trends

Exponential growth of event data

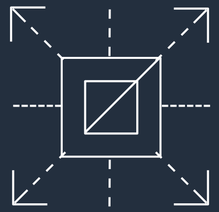
End-to-end insights from analyzing all your data

Migrations to the cloud

Benefits of a cloud data warehouse



Get insights
from all your data



Scale, elasticity,
and flexibility

Increases in
productivity

No infrastructure costs
& pay-as-you go

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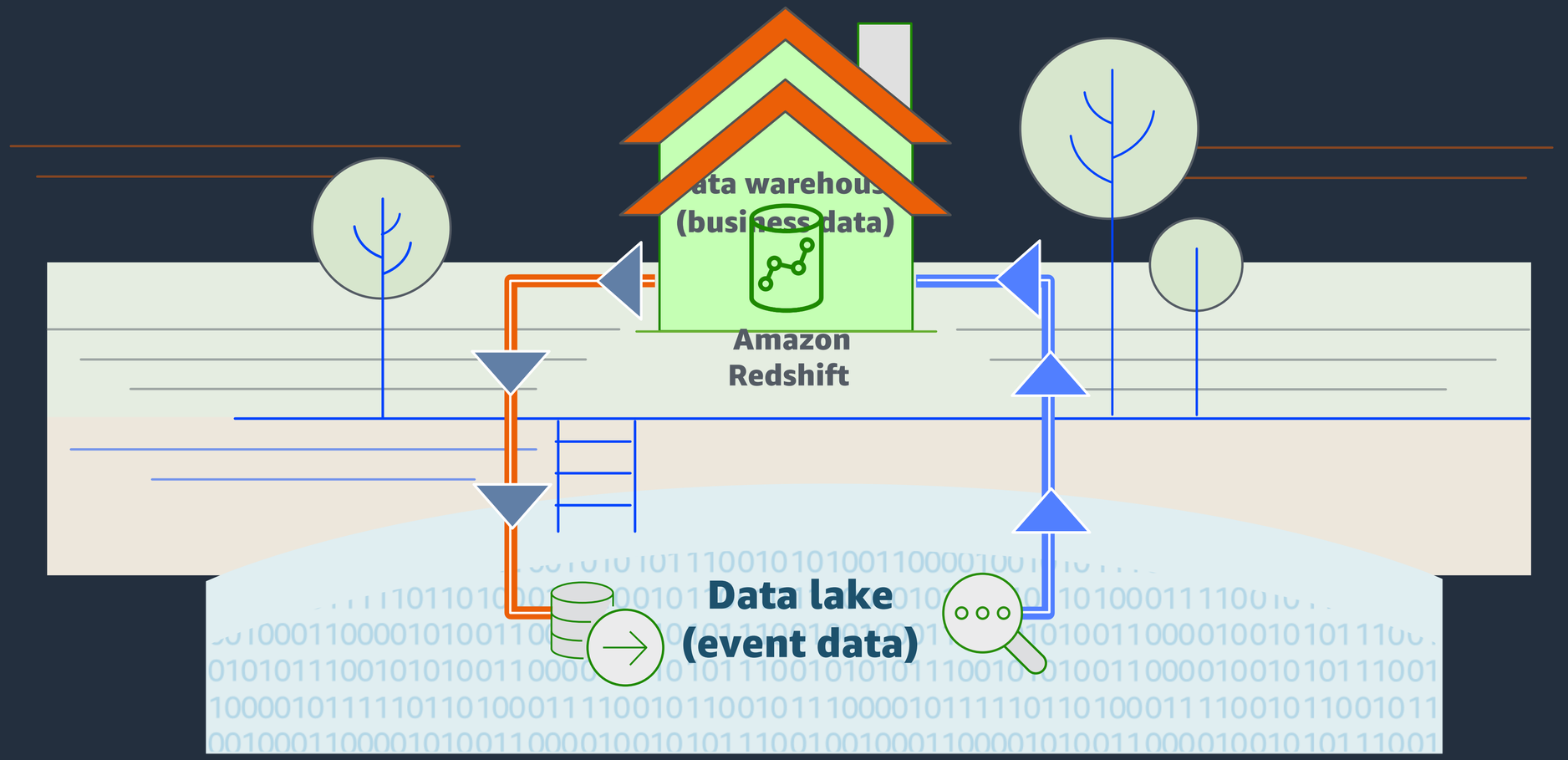

Customers moving to data lake architectures

Amazon Redshift enables you to have a lake house approach

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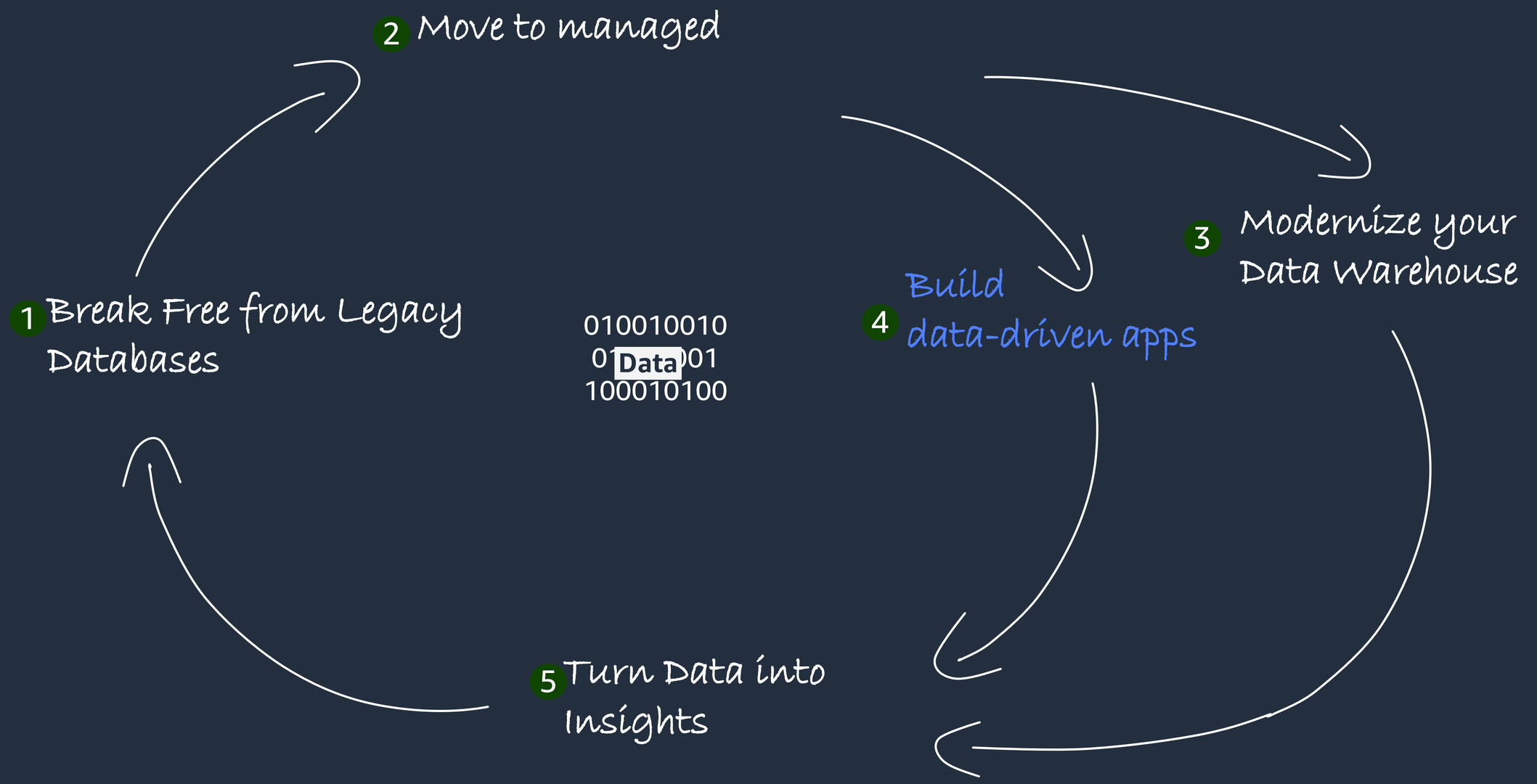
The Data and Analytics Flywheel

Modernize your data infrastructure

Get the most value from your data



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App architectures & patterns have evolved over the years…

Modern application requirements

Requires more performance, scale, and availability

E-Commerce

Media streaming

Social media

Online gaming

Shared economy

Users	1M+
Data volume	Terabytes—petabytes
Locality	Global
Performance	Microsecond latency
Request rate	Millions per second
Access	Mobile, IoT, devices
Scale	Virtually unlimited
Economics	Pay-as-you-go
Developer access	Instance API access
Development	Apps and storage are decoupled

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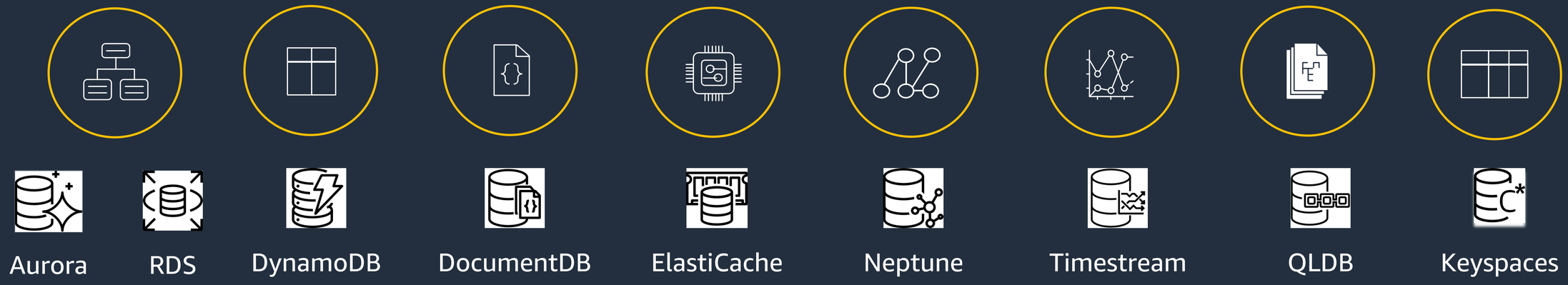
Purpose-built databases



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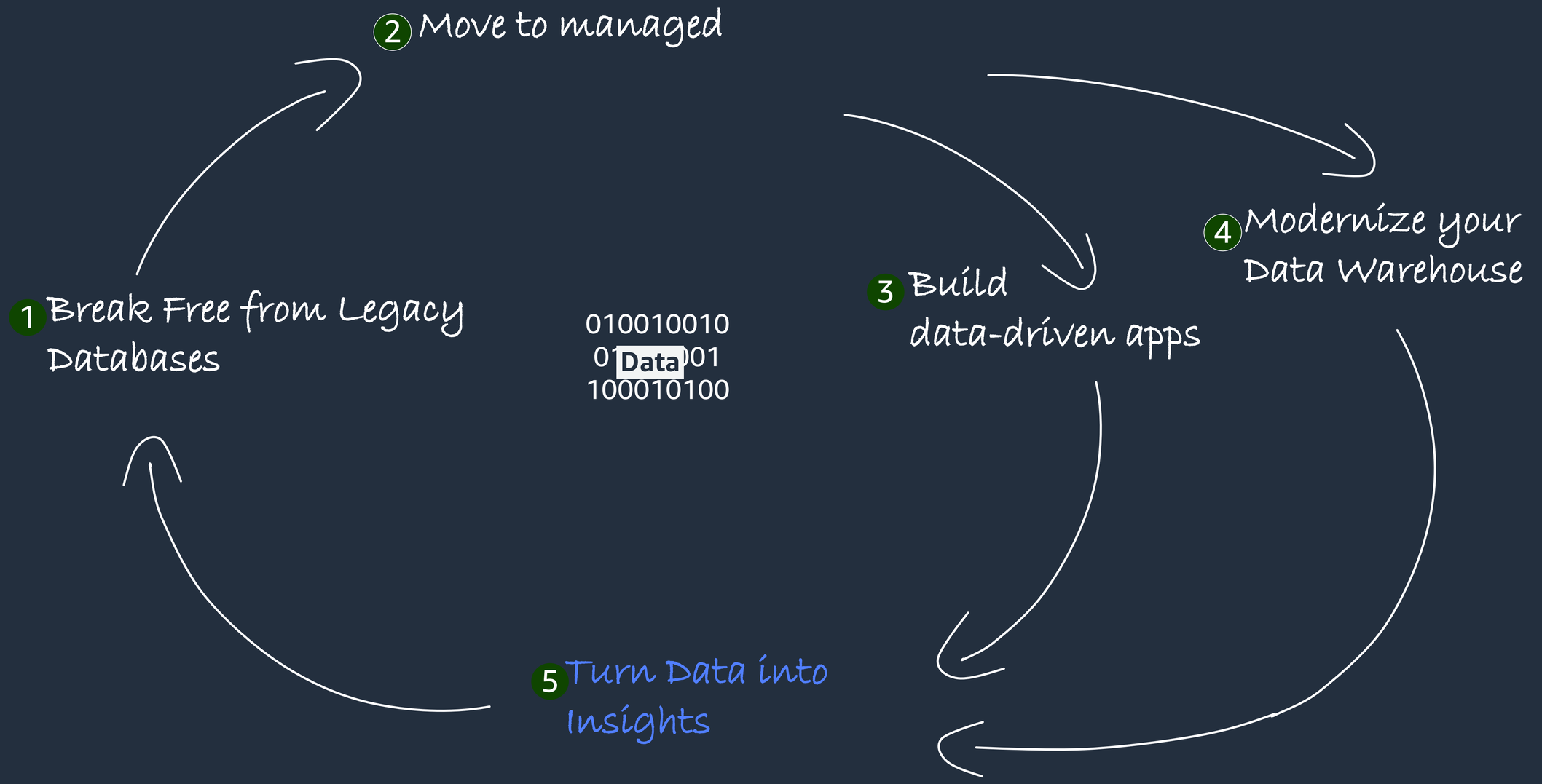

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Turn Data into Insights

Build a data lake to make data available and accessible to stakeholders

Build and deploy a fully managed data lake with a few clicks using Lake Formation

Enforce security and governance policies across multiple services

Centrally define security, governance, and auditing policies in one place for all users and all applications

Drive optimal insights with the right analytics and ML tools for the job

Maximize insight efficiency and effectiveness with purpose-built tools such as Redshift, EMR, Athena, Kinesis, Glue catalog, MSK, Quicksight (BI), and Sagemaker (ML)


Discover


Ingest


Store


Secure


Catalog


Prepare


Analyze


Visualize

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AWS Data and Analytics – Turn Data into Insights

Data, visualization, engagement, & machine learning

NEW Data Exchange | QuickSight | Pinpoint | SageMaker | Comprehend | Lex | Polly | Rekognition | Translate

+ many more

Analytics

Redshift | EMR (Spark & Hadoop) | AWS Glue (Spark & Python) | Athena | Elasticsearch Service | Kinesis Data Analytics

Data lake infrastructure & management

S3/Glacier | Lake Formation | AWS Glue

Data movement

Database Migration Service | Snowball | Snowmobile | Kinesis Data Streams | Kinesis Data Firehose | Managed Streaming for Apache Kafka

AWS BikeNow Demo

https://bikenowdemo.com/

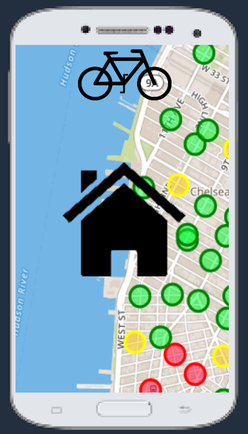
Introducing BikeNow

BikeNow* is a bicycle-sharing service operating in major cities.

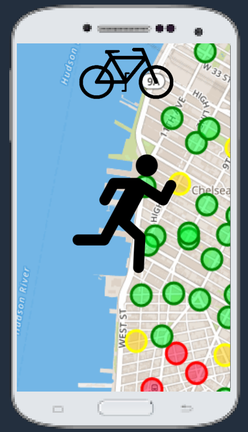
BikeNow leverages the Data and Analytics Flywheel to innovate and create new customer experiences.

* BikeNow is a fictional entity

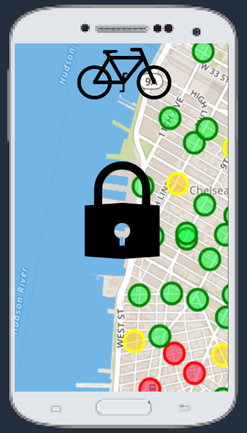
BikeNow User Experience



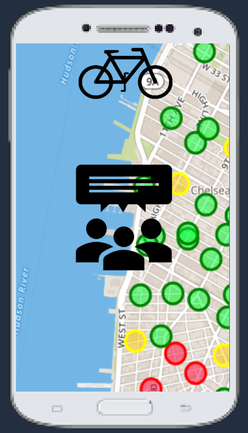
Pat uses BikeNow App to find a bike to commute
- Like bikes
- Hates traffic
- Eco friendly
- No car



Pat walks to the nearest BikeNow station
- On-time
- Happy
- Healthy

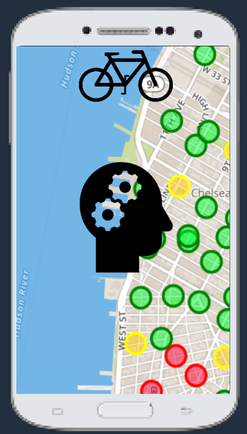


Pat rides a BikeNow bike to work
- Cost-effective
- Secure
- Easy billing



Pat leaves a review about their experience
- Help other customers
- Inform operations

Pat receives improved customer experience
- Diverse data
- Analyzed
- Visualized
- Collected in background



Pat plans their next trip
- Predict bike availability
- Has bike when needed
- Better user experience

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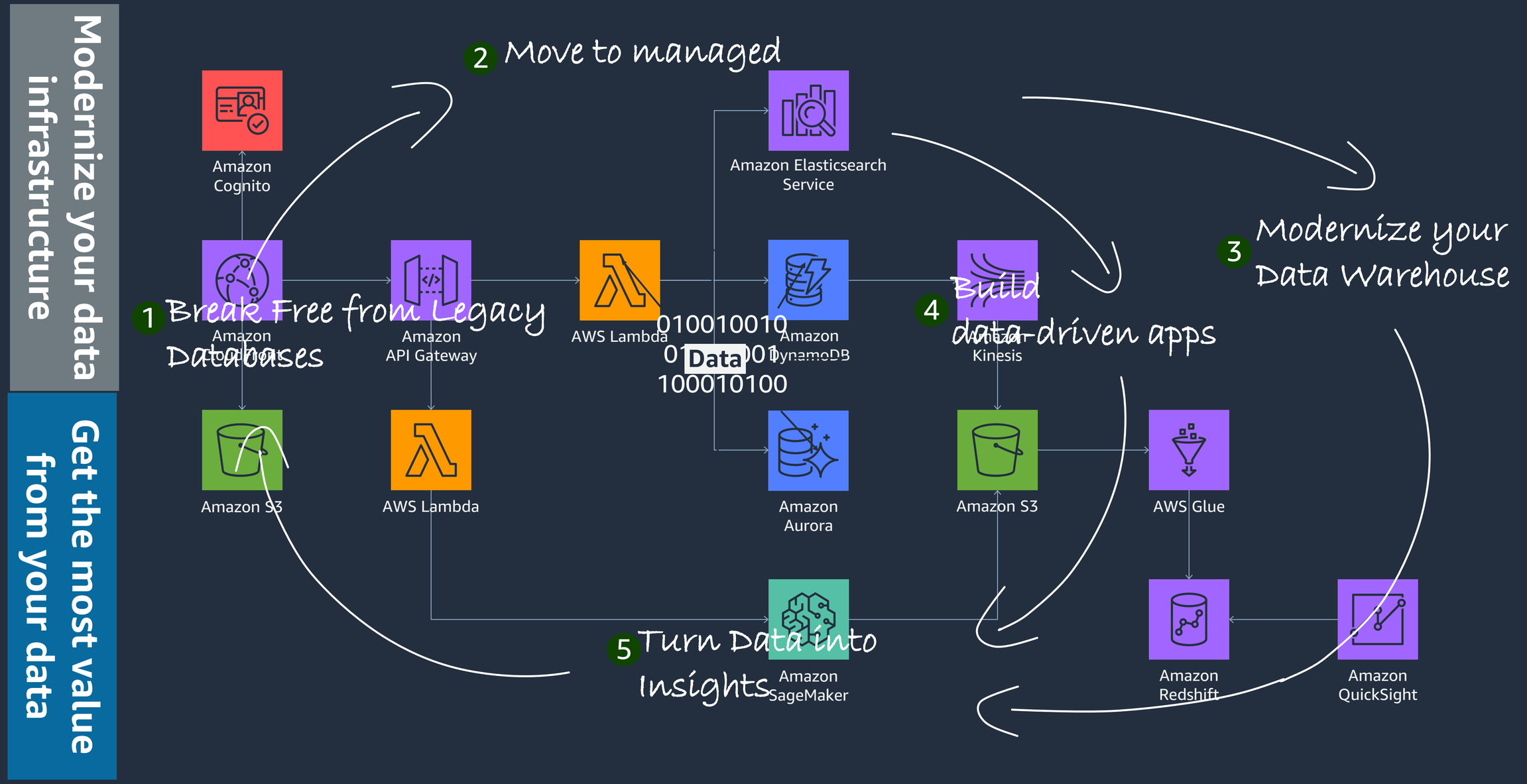
BikeNow Solution



Resources

- Live Demo
  - https://bikenowdemo.com/
- Github
  - https://github.com/aws-samples/aws-bikenow-demo

Questions?