

A Modern Data Warehouse Journey – From On-Premise to Cloud

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What To Expect

- 100-Level Session
- No Demos / Technical Deep Dives
- Technology Focus – Data Warehousing with Azure
- Concepts – Technology / Vendor Agnostic

Roadmap

The Story So Far

- Why Cloud? (history, benefits)

A Journey of a Thousand Miles

- Getting Buy-In
- Where to start?
- When getting buy-in fails

Expectations vs. Reality

- Cloud vs. On Prem Solutions
- Successes
- Challenges

What happens next?

- Where to from here?



About Me

- Based in Christchurch, New Zealand
- BI Developer at Meridian Energy
- Previous experience in Construction, Insurance, Energy Industries
- 9 years working with Microsoft Business Intelligence Solutions



A Short History of Cloud Offerings

- **2006** – Amazon Releases products under Amazon Web Services (AWS)
- **2008** – Amazon Releases S3 storage, EC3 Compute, Google releases App Engine
- **2010** – Microsoft announces Azure offerings, Azure SQL Database
- **2012** – Amazon Redshift, Google BigQuery released
- **2016** – Azure SQL Data Warehouse (currently Azure Synapse) released
- **2020** – Total spending on cloud services reaches \$257.5 billion
- **2025** – 80% of organizations predicted to migrate toward the cloud

Benefits of Cloud

- Disaster Recovery
- Cost Savings
- Flexibility / Scalability
- Mobility
- Collaboration
- Efficiency

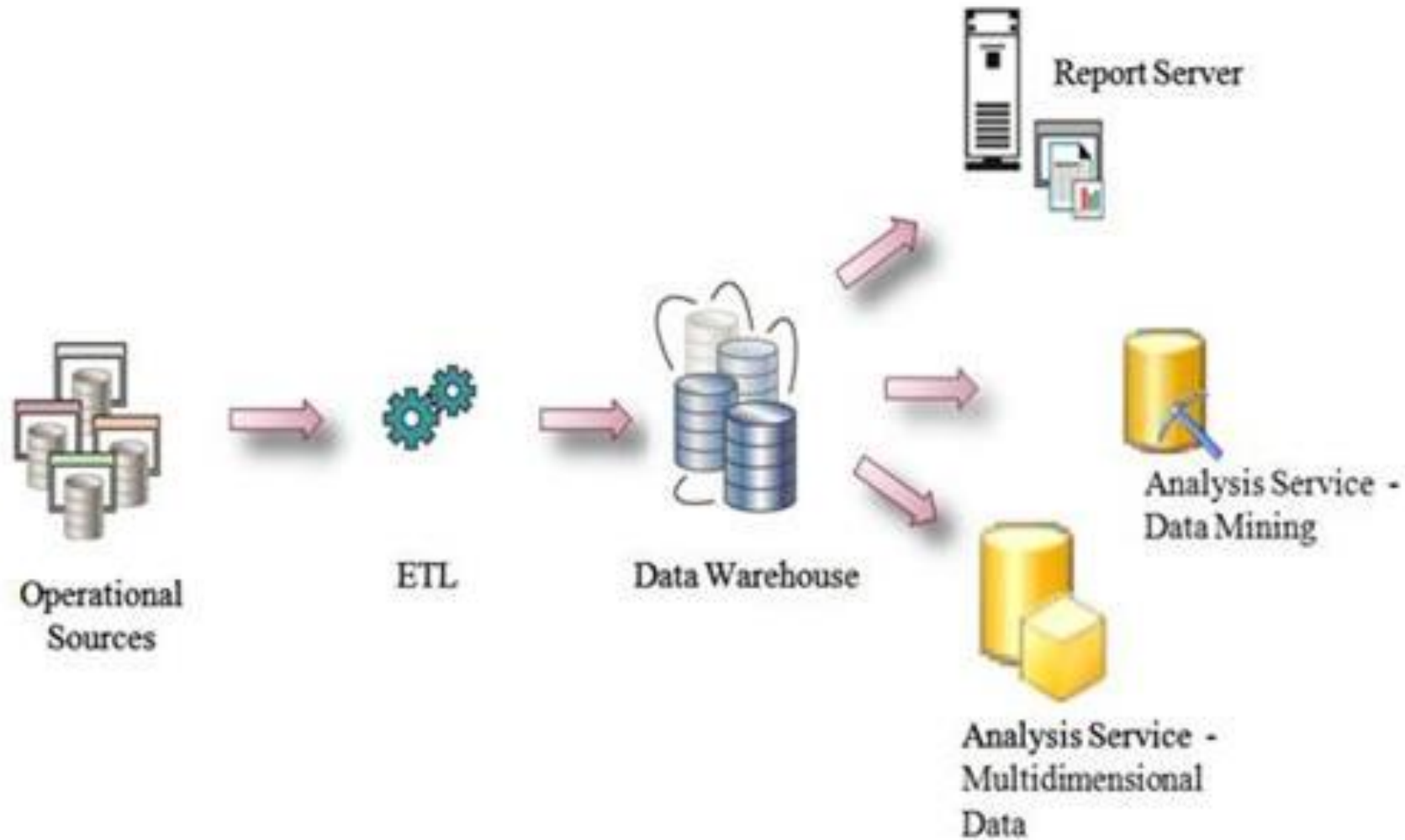


Risks of Cloud

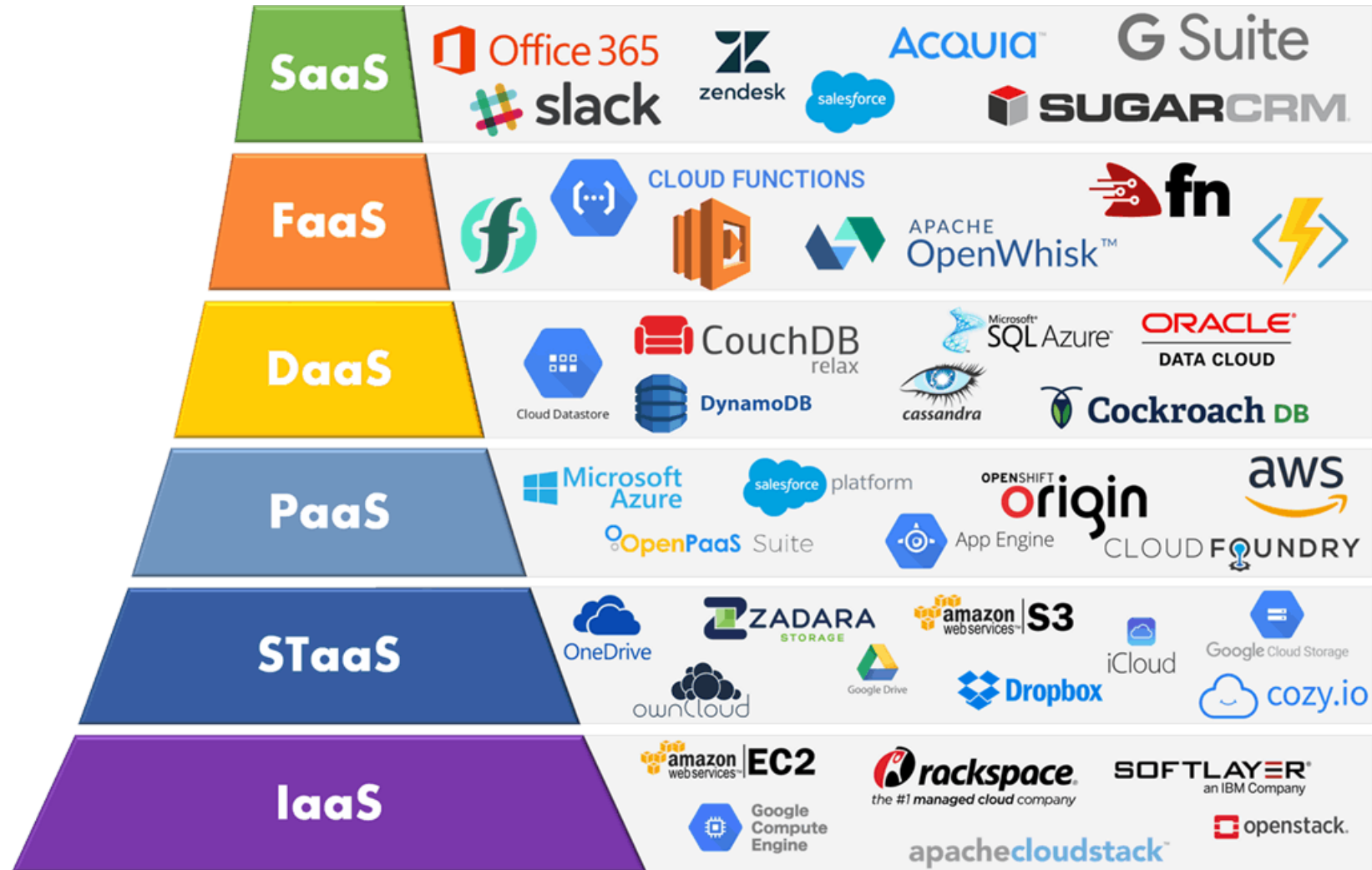
- Availability / Downtime
- Performance
- Security and Privacy
- Spending Management
- Skills & Expertise
- Migration



On-Premise Architecture



Cloud Expansion



Overcoming the Obstacles

- Faster, reliable connections
- Focus & investment on security
- Transparent pricing plans
- Focus on core duties
- Migration Assistance tools





A Journey of a Thousand Miles

Making a Start with Cloud Technology

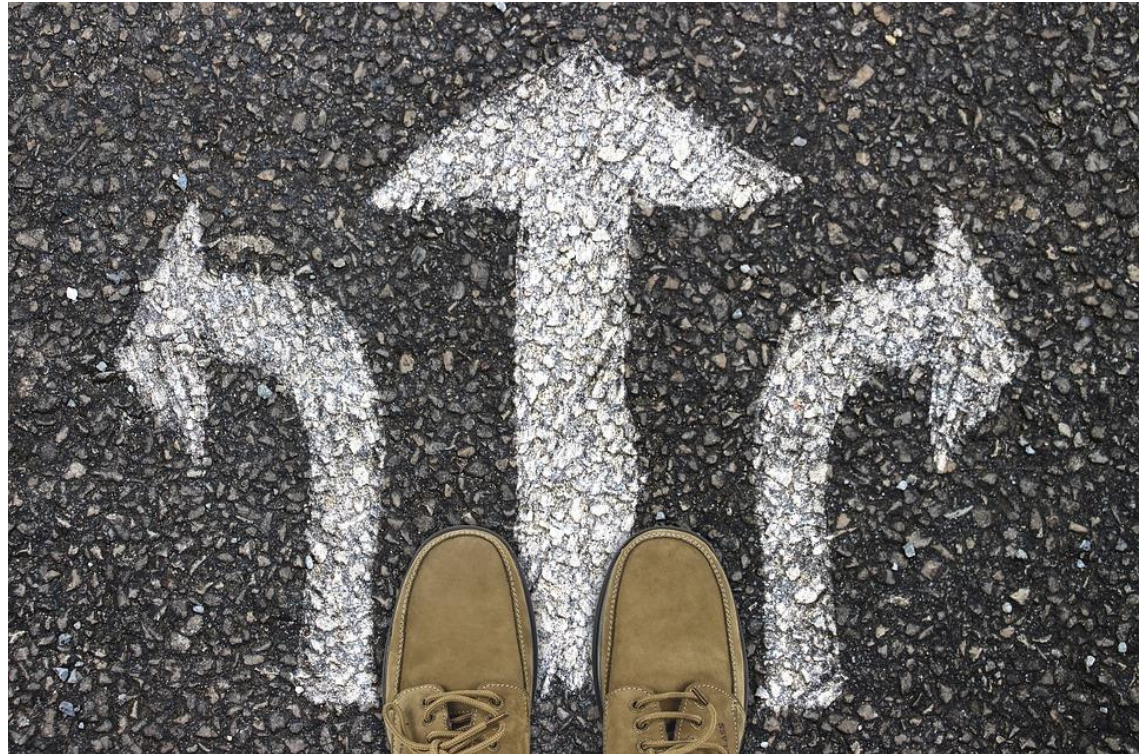
Getting Buy-In

- Support from colleagues
- Sales Pitch
- Facts, Figures, Prototypes
- Find teams currently using cloud technology
- Start Small - Identify low-impact, cloud-ready modules



Considerations

- Pricing / Cost
- Performance
- Time & Resources
- Features
- Users



The Reality

1. Wait and see... ?
2. Find internal teams working with cloud solutions
3. Find outside companies working with cloud solutions



My Experience

Option #3 – New Role!

- Started a new job at Meridian Energy in November 2020
- No cloud / Azure experience in a production system
- Solid grounding of on-premise technologies

Takeaways

- **Risks vs. Benefits**

- Technology has improved over the years, making cloud solutions feasible and attractive

- **Getting Buy In**

- May need to pitch the benefits up the chain

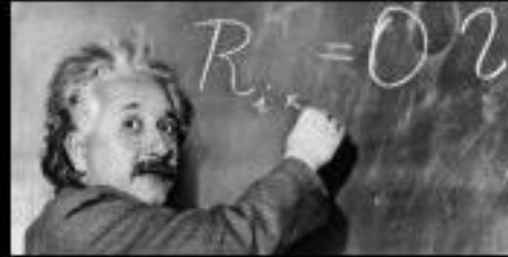
- **FOMO – Fear of Missing Out**

- Tools come and go, concepts stick around

Expectations vs. Reality – Business Intelligence



What my friends think I do



What my mom thinks I do.



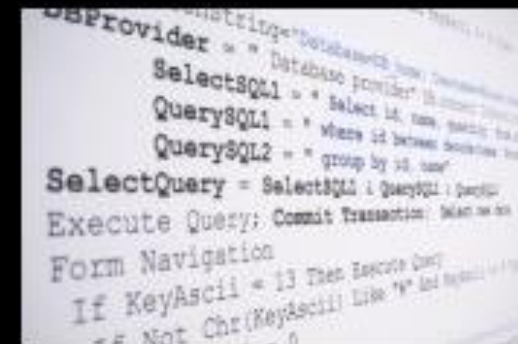
What society thinks I do



What my coworkers think I do.

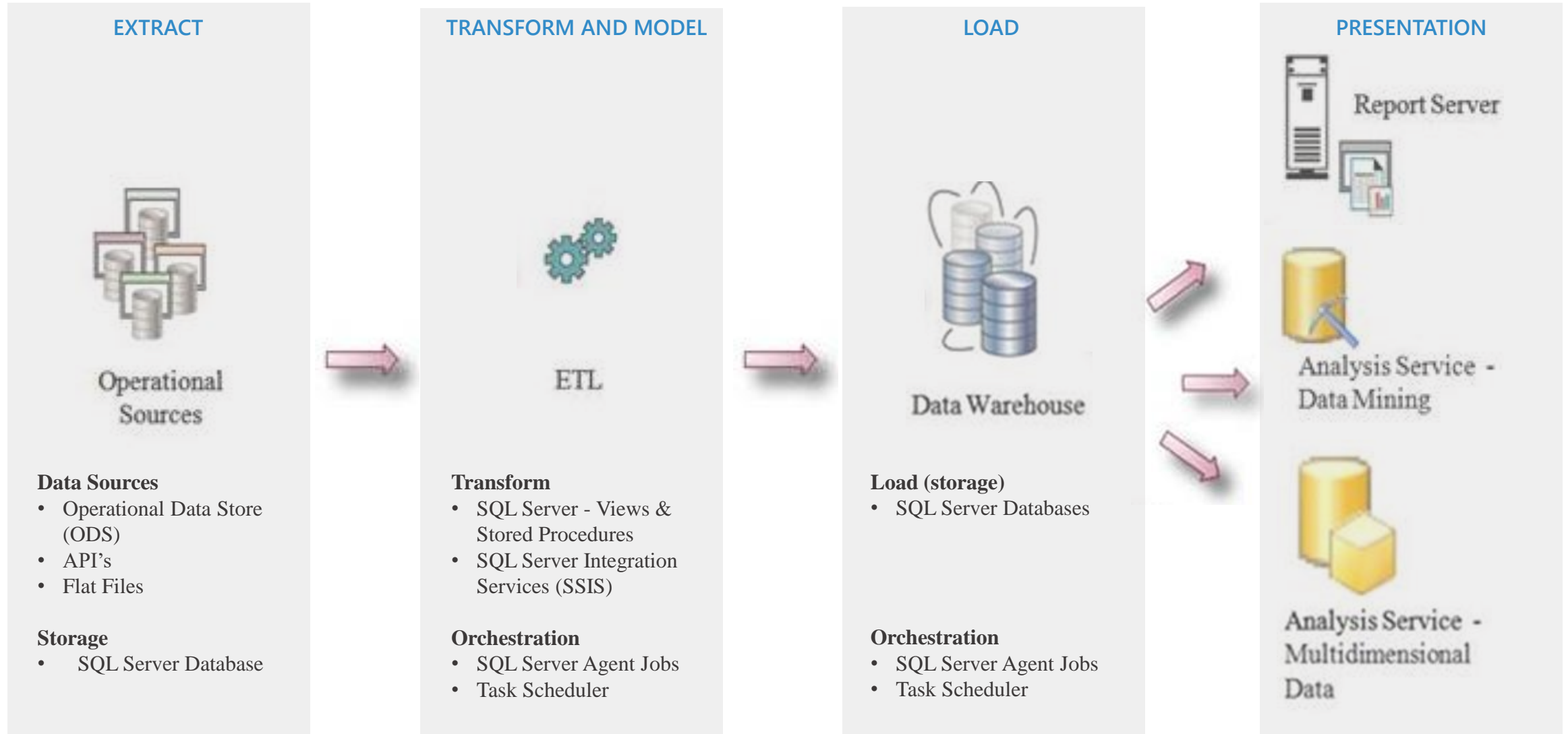


What I think I do.



What I actually do.

On-Premise Data Warehouse Architecture



On Prem to Cloud Considerations

– Think FLAT

- **Familiarity**

- How experienced are staff and developers with the cloud toolsets?

- **Location**

- Where should the data be stored to be optimize performance? Are there compliance or regulation standards involved?

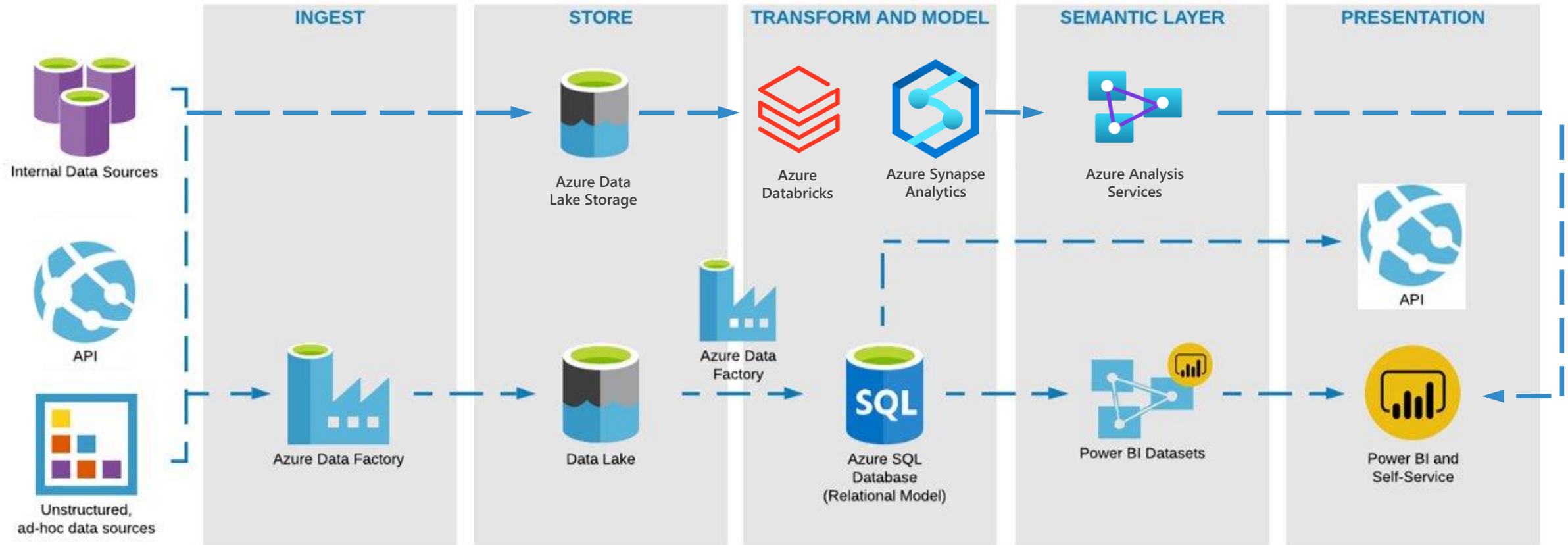
- **Architecture**

- What tools are available to resolve business problems, or satisfy business needs? How do we make a choice?

- **Translation**

- How well does your on-premise environment translate to a cloud based environment? What is your Migration Strategy?

Cloud Data Warehouse - Architecture



Successes

- Core focus
- Ease of access
- Streamlined Interface
- Up-to Date Features



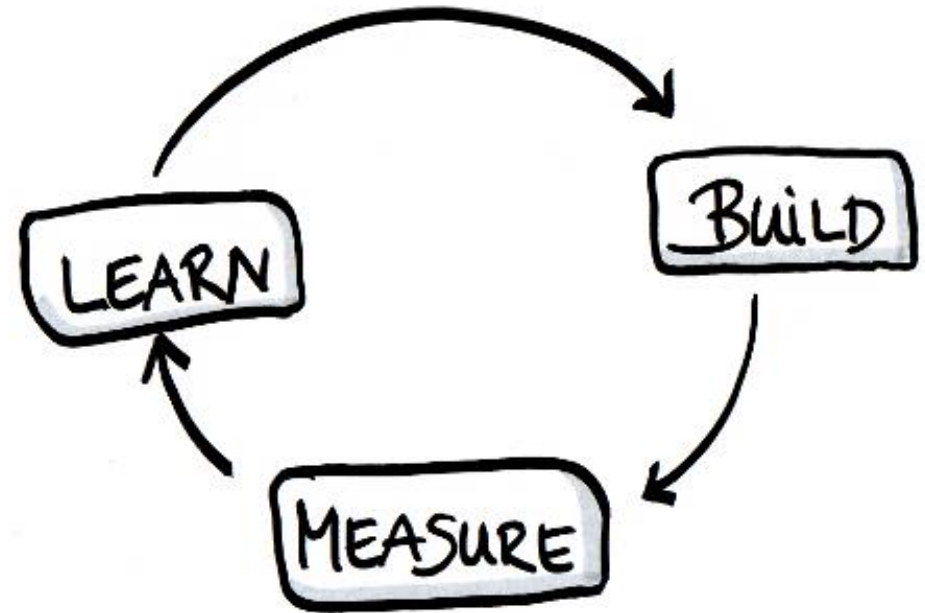
Challenges

- Loss of Control
- Managing Change
- Data Security
- Network dependency



Key Learnings

- Transferable Skills
- Familiar experience
- New concepts, software, ways of working
- Gaining valuable skills
- Was it worth it...?



What's next?



Data Cloud Platforms



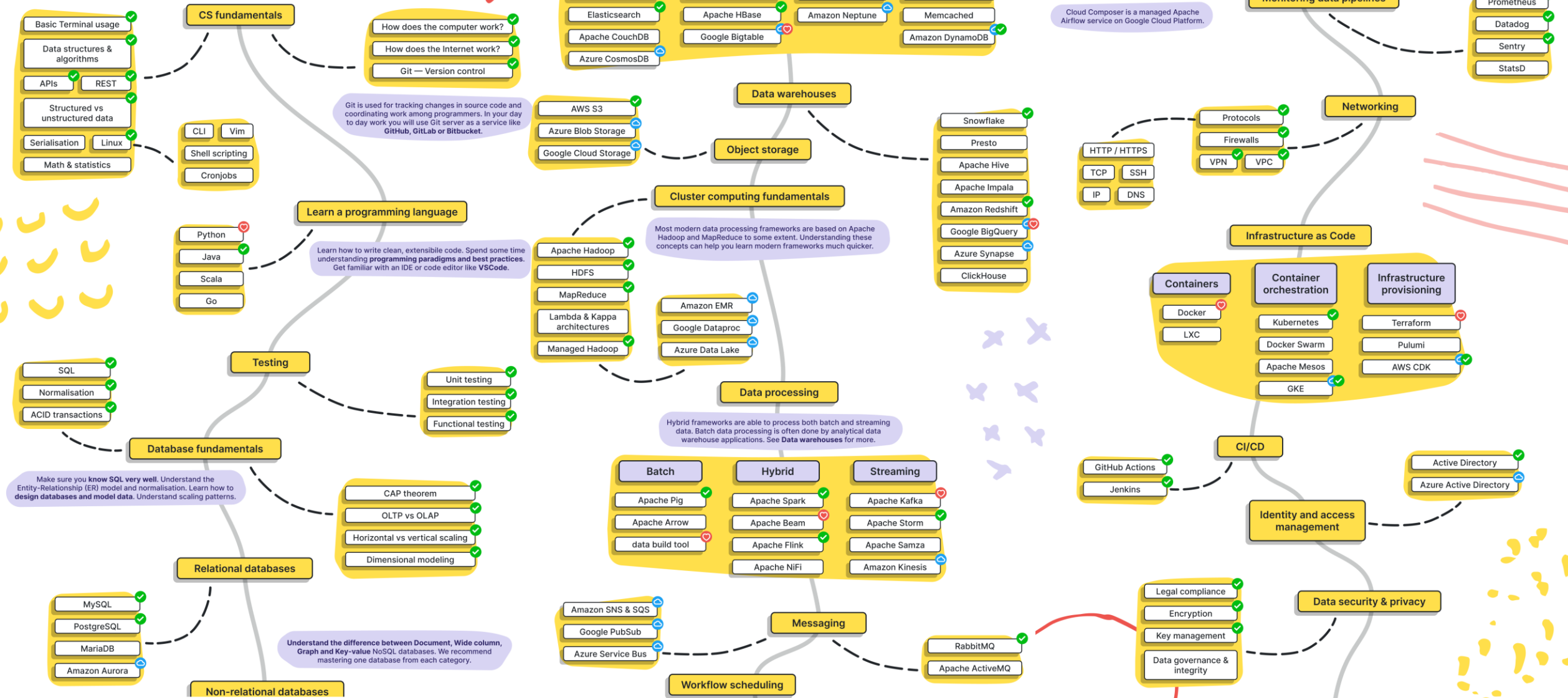
Azure Synapse Analytics



Google BigQuery

Data Engineer in 2021

- Personal recommendation
- General recommendation
- Cloud based



Cloud Data Architecture

- Consider the following:
 - Business Value
 - Goals
 - Provider
 - Cost
 - Security
 - Governance



Recommendations

- Stick with what you like!
- Get company buy-in – start small
- Workshops
- Ask the experts
- Networking
- Finding projects



Resources

- [Dunning–Kruger effect – Wikipedia](#)
- [Timeline of cloud computing - Timelines \(issarice.com\)](#)
- [Azure Architecture Center - Azure Architecture Center | Microsoft Docs](#)
- [sqlworkshops | SQL Server Workshops \(microsoft.github.io\)](#)
- [Pricing Calculator | Microsoft Azure](#)
- [Azure on Microsoft Learn | Microsoft Docs](#)
- [Pluralsight + Microsoft Azure](#)
- [GitHub - datastacktv/data-engineer-roadmap: Roadmap to becoming a data engineer in 2021](#)

Giving Back!

- Upcoming Presentations
 - Technical Deep-Dives
 - Career Fundamentals
- Content
 - Presentations
 - Blogs
 - Videos



Thank you!

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