Capgemini

Data Estate Modernization

The new normal in Financial Services

Data Estate Modernization Becomes the Norm in Financial Services:

The unprecedented pace of change is stressing Financial Services institutions of all sizes to increase agility and accelerate innovation.

And there is a clear realization that failing to modernize your data architecture will quickly diminish Banking and Capital Markets firms and the value of the organizational data in terms of speed and quality. In financial services, core banking modernization has become a complex, but common, topic, one that is intermingled with many aspects of how banks are positioning to modernize their core banking technology platform architecture.

While tactics may differ, most financial services firms are transforming their application landscapes. While doing so, data estate modernization is becoming the norm. With data estate modernization, organizations want to do more with unstructured data and have a desire to do advanced analytics via data science, data lake and exploring opportunities to rethink, refactor and recalibrate the way they are using data today.

Capgemini's Snowflake Global Center of Excellence (COE) helps them to lower their migration cost base, rapidly bring new ideas to market, and create more elegant customer experiences, all while meeting stringent security, maintaining compliance, and regulatory requirements.
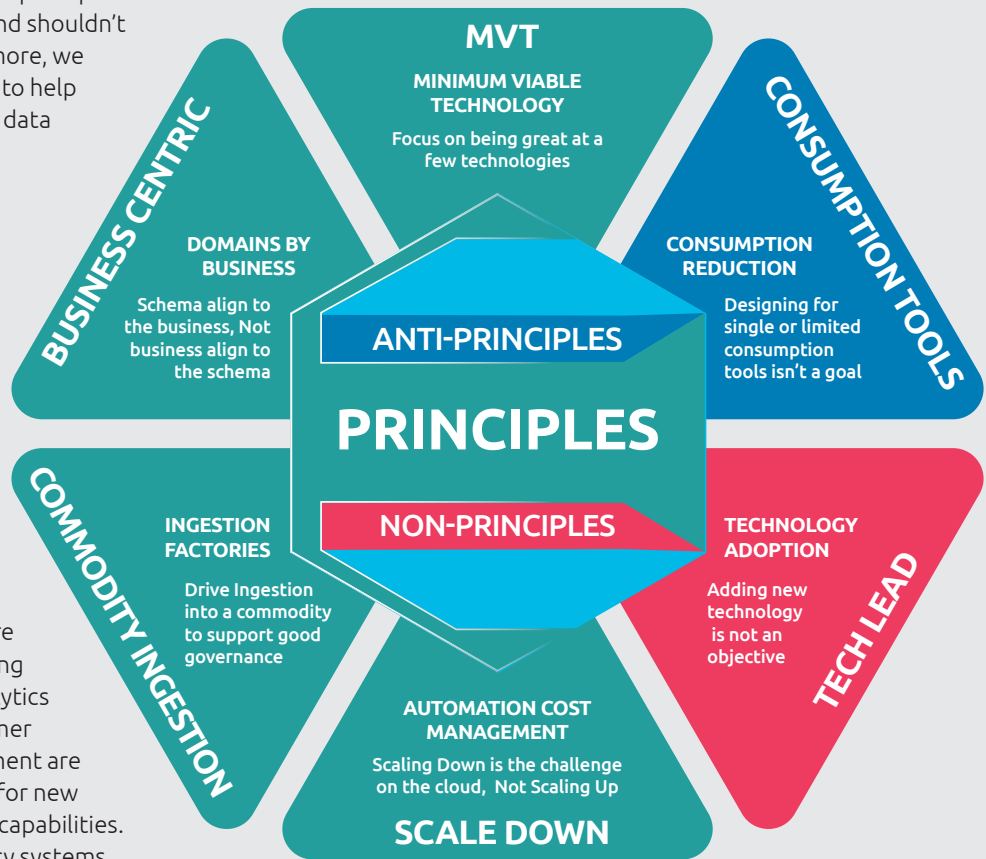
We know from our experience working with banking and capital market firms that nearly every customer we talk to has been running SQL. In the last few years, support of SQL 2008, one of the popular versions for SQL with no patches, security updates and bug fixes, has been discontinued. For hundreds of banking applications using SQL 2008, this has posed significant risk, with compliance-related issues and sunk cost. We have learned from our customers that they are looking at a right pathway and guidance forward to retire legacy applications and look at migrating these data-rich application workloads to an emergent cloud-oriented data platform, such as Snowflake. While doing this our customers have struggled with moving data from on-premises, designing and architecting how and where to migrate and modernize.

At Capgemini, we understand financial services organizations, like any other business domains, thrive on data. Leading banks and capital markets firms need to ingest, store and curate large volumes of data from a variety of sources at near real-time speeds. Our data estate modernization solution is based on acceleration pillars that enable data protection, re-usability, backup and, most importantly, effective management of compute and storage, which are core tenets to migrate workloads and help with cost take out. This results in improved ROI with 0% loss of functionality with minimal investment.

We provide guidance with a set of principles for what our customers should do and shouldn't do, and what to ignore. Furthermore, we have established clear measures to help ensure ongoing success for their data estate modernization program.

What are industry sentiments about legacy data estate? And what is the urgency for data estate modernization?

Nearly one out of three financial services institutions say that legacy data platforms are the biggest obstacles to improving their data management and analytics capabilities. Enterprise IT consumer ease-of-use and flexible deployment are the top business considerations for new data management and analytics capabilities. Even with the push to shed legacy systems and modernize IT operations, to this day there are still organizations that are allocating up to 80% of their IT budgets to legacy maintenance.

MVT
MINIMUM VIABLE TECHNOLOGY

Focus on being great at a few technologies

CONSUMPTION TOOLS

BUSINESS CENTRIC

DOMAINS BY BUSINESS

Schema align to the business, Not business align to the schema

CONSUMPTION REDUCTION

Designing for single or limited consumption tools isn't a goal

ANTI-PRINCIPLES

PRINCIPLES

NON-PRINCIPLES

COMMODITY INGESTION

INGESTION FACTORIES

Drive Ingestion into a commodity to support good governance

TECHNOLOGY ADOPTION

Adding new technology is not an objective

TECH LEAD

AUTOMATION COST MANAGEMENT

Scaling Down is the challenge on the cloud, Not Scaling Up

SCALE DOWN

There is operational urgency to modernize legacy data, due to increases in data volumes in legacy systems.

We find data is too disparate and needs to move faster than legacy on-premises-based enterprise systems can handle. Leading research organizations have indicated that:

- The collective sum of the world's data is expected to grow to 175 zettabytes by 2025, with compounded 65% annual growth.

- Ten percent of all data will be critical nature by 2025

- Enterprises use around 1,180 cloud services, many of which produce unique data

Here are some of the common challenges with maintaining and supporting legacy data:

- High risk of security, compliance breaches

- Late to market, missed opportunities

- High maintenance cost

- Untapped data due to silos

High-level business drivers to modernize:

- Migrate to cost-efficient Infrastructure

- Real-time Informed decision-making

- High data volumes and velocity

- Changing regulatory requirements

Drivers

- **Operational speed and reliability** for realizing full value from large datasets

- **Demand for shorter time to Insights** has become key for customer Intimacy

- Continuous demand for **good quality data**

- **Quicker release** of business functionality

Challenges

- Processing large datasets is complex and resource intensive

- Requires extensive effort to deliver reliable models in production

- Cost prohibitive as it takes significant time to provide the right business insight

- Difficult to implementusing the traditional waterfall or iterative

How are financial services firms modernizing their data estate landscape with the *Snowflake Cloud Data Platform*?

Financial services firms are in a quest to modernize their data estate as they plan to move all their public web and application data assets, which support most customer traffic and internet-banking workload, to Snowflake in the coming years. Banking institutions see opportunities for digital play, with a surge in new competitors that are not traditional banks, including FinTech start-ups.

These organizations are using cloud data platform at scale to enter and compete with traditional banks using harvested data. To become relevant to their customers, they understand that cloud will soon be the standard, and the sooner they go to market and modernize their legacy data warehouse (data estate ecosystem) to Snowflake, the quicker they will gain strategic value. This becomes an important game changer, as Snowflake is clearly ahead of the pack in scale and market reach. Snowflake has the partner network and more capabilities than other cloud data providers.

One of the key aspects for successful transformation is modernizing data estate from on-premises to the cloud. Servicing a large customer base for a global bank includes bringing many products and services to the customers through various channel offerings. Doing so addresses challenges and helps organizations keep pace with change, while improving personalization of service, thereby boosting their active customer base. To stay contemporary, continuous roadmap improvement is needed to enhance ongoing customer experience and build valuable data and insightful reporting. Data makes a big difference in anticipating customer needs and serving them, while modernizing the data landscape and future proofing their business.

Let's look at a simple data ecosystem of a typical banking institution prior to moving to the cloud. Here we see source data is flowing through the data lake, using streaming batch processing, as source systems are modernized and enabled for event-driven data.
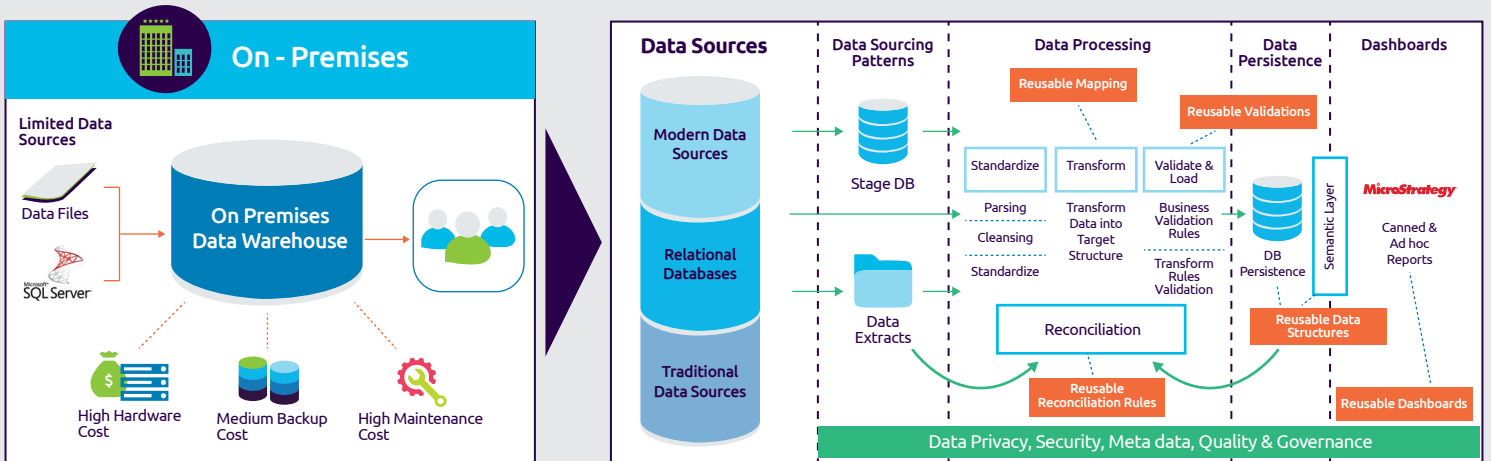
All core transaction level banking data is tagged with both business and metadata and the data is flowing to the analytics and reporting platform for consumption.

So how are we modernizing the on-premises-based data flowing to a cloud platform? Through a data ingestion and movement too Snowflake, as relevant workloads are migrated.
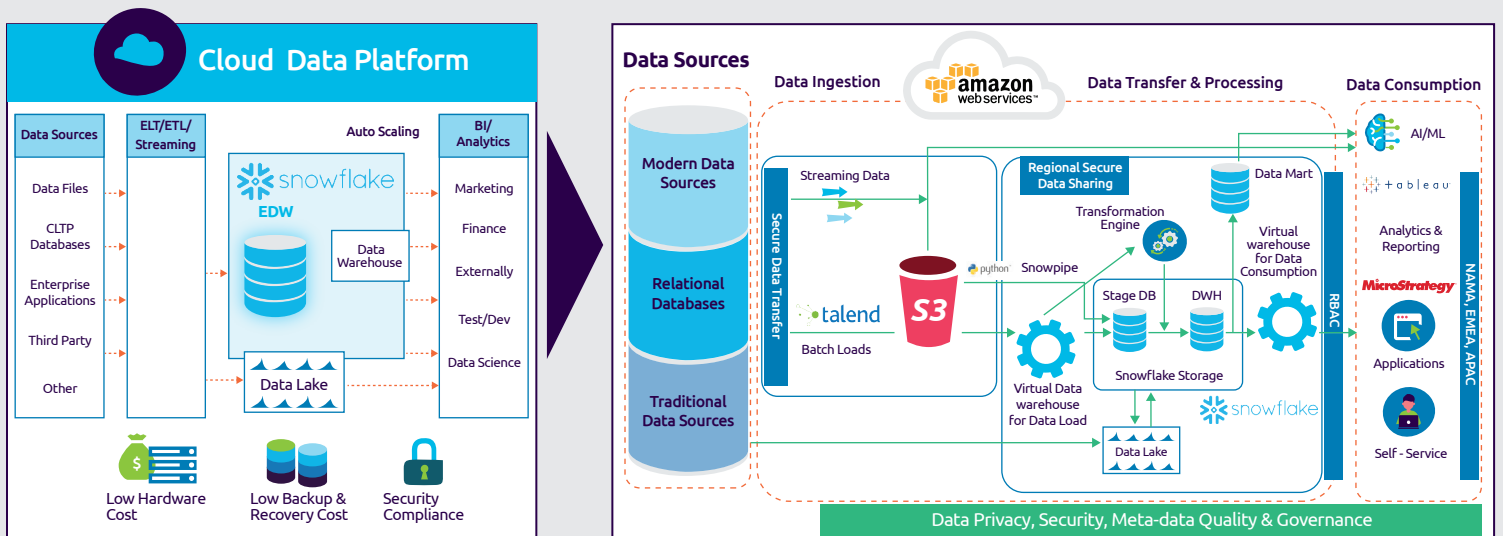
For the financial services sector, Snowflake provides secure data sharing and means for both internal and external consumers and providers to exchange data within the organization data marketplace. Once the data warehouse gets modernized and migrated, further data science workloads such as machine learning models and predictive models get powered through Snowflake and then associated datasets are moved to the relevant Virtual Warehouses. Further additional business value-driven use cases such as anti-money laundering and cyber fraud to identify fraudulent activities, falsified documentation, etc. are now being enabled and other products such as chatbots and theme analytics are being built to survey and build a feedback loop to understand customer complaints.

Banks have started seeing immediate improvement and benefits moving to the Snowflake cloud data platform – they now have a robust architecture platform that is high-performing with time scale, security and pay-as-you-go compute capacities.

Begin your data estate modernization journey with Snowflake and Capgemini

For many of our financial services customers, their vision and mission are to be an organization powered by next generation technology. As they aspire to be a leading bank, typical key sponsor C-Suite leaders -- be it a Chief Information Officer (CIO) or Chief Data Officer (CDO) -- place big bets on a technology transformation strategy in moving towards a public, multi-cloud approach and invest in next-gen data and analytics.

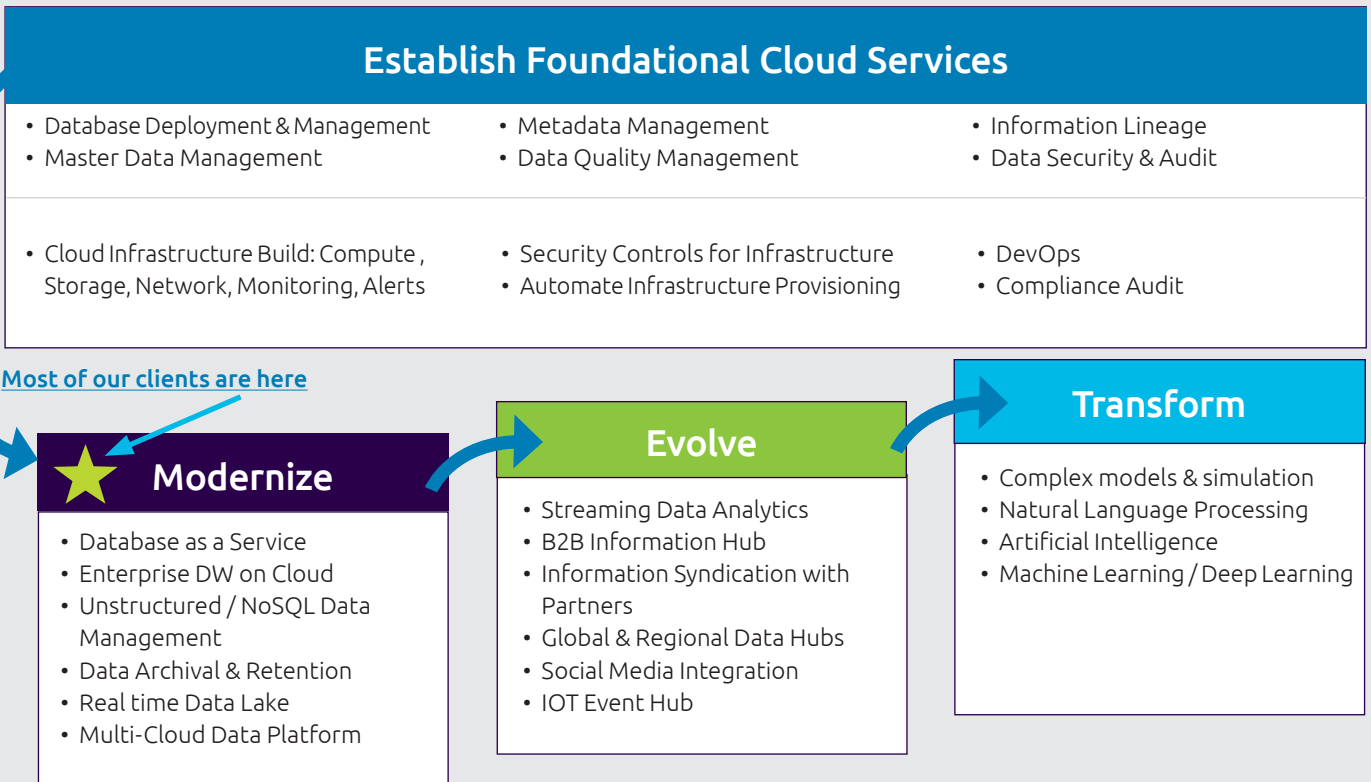One existential question will play out for banks in 2020 and beyond: how will banks be able to overcome their technology hurdles and be nimble in leveraging two of their greatest assets, customer data and customer trust? Not all banks will be able to do so, but those that do will not only survive, but truly thrive. Successful banks are adopting and migrating on-premises solutions to cloud native platform workloads on Snowflake in order to discover new opportunities, re-think and re-design operating models, and implement cost-saving measures that increase efficiency. The results include accelerated go-to-market, strengthened security, enriched customer experiences, and better data-driven decision-making systems.

To get these above benefits banks are looking at building solid foundations in the following areas:

- **Metadata & Lineage** – automate taxonomy and track volume of data coming in, required for regulatory compliance

- **Data Quality** - to avoid misdirection, Snowflake helps quickly gain a greater understanding of both the data quality and hidden relationship of customer-centric data

- **Security** – the Snowflake security capability layers with the bank's existing security standards

- **Talent** – work with Snowflake partner network, retrain Cloud Data Platform and retrain and hire certified technical practitioners

Financial services companies of all sizes and across all industries are transforming their businesses every day using Snowflake. Any project in the technology space starts with a good requirement gathering and analysis phase involving the business.

By and large, the projects that fail are not dealing with accounting data, which needs to engage stakeholders such as the Chief Financial Officer, etc. We strongly advise engaging the leaders of the Lines of Business and other appropriate stakeholders. Always conduct an assessment phase of the current data estate, draw out the modernization roadmap, set up the engagement, leverage agile methodology and layer in the approach for migration.

Establish Foundational Cloud Services

- Database Deployment & Management
- Master Data Management

- Metadata Management
- Data Quality Management

- Information Lineage
- Data Security & Audit

- Cloud Infrastructure Build: Compute, Storage, Network, Monitoring, Alerts

- Security Controls for Infrastructure
- Automate Infrastructure Provisioning

- DevOps
- Compliance Audit

Most of our clients are here

Modernize

- Database as a Service
- Enterprise DW on Cloud
- Unstructured / NoSQL Data Management
- Data Archival & Retention
- Real time Data Lake
- Multi-Cloud Data Platform

Evolve

- Streaming Data Analytics
- B2B Information Hub
- Information Syndication with Partners
- Global & Regional Data Hubs
- Social Media Integration
- IOT Event Hub

Transform

- Complex models & simulation
- Natural Language Processing
- Artificial Intelligence
- Machine Learning / Deep Learning

Data estate modernization is a necessity, and this transformation can quickly turn complex and challenging. Implementing a data estate modernization project needs a thorough evaluation of available modernization options, due diligence, meticulous planning, expertise, and a rigorous governance framework. The Snowflake Cloud Data Platform offers hundreds of ready-made services that open limitless possibilities to drive innovation.
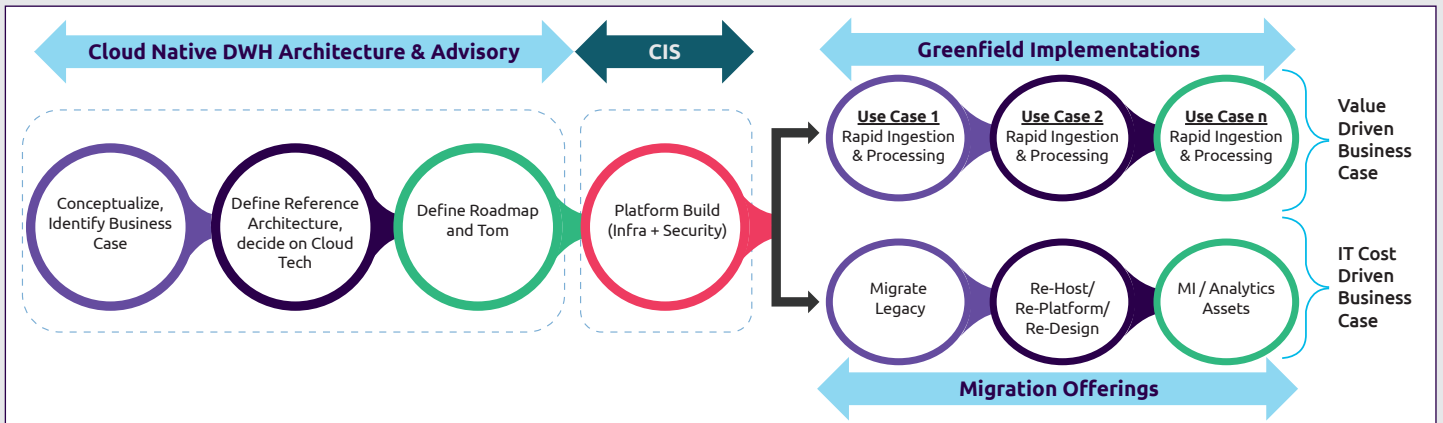
Contact Capgemini Snowflake Global Centre of Excellence (COE) to connect with experts in Insights & Data Financial Services domain who will guide you and help your business grow faster, stay protected and spark innovation through your data estate modernization journey today.

Get Started with a Snowflake Economic Assessment, so that we can help your business grow faster, stay protected and spark innovation. **The steps include:**

- **Workload Evaluation:** Do you have an intent/need to migrate to the cloud? Have you secured the funding to move towards Snowflake? If so, we will chart out the workloads and your requirements

- **Scoping Session & Engagement Approach:** Capgemini's growing Snowflake Global COE with determine program fit and approach.

- **Data Collection:** Led by Capgemini's trained and certified Snowflake experts.

- **Current State Cloud Data Assessment:** Capgemini works with your team to prioritize systems, build analysis, and conduct workshops.

About
Capgemini

Capgemini is a global leader in partnering with companies to transform and manage their business by harnessing the power of technology. The Group is guided everyday by its purpose of unleashing human energy through technology for an inclusive and sustainable future. It is a responsible and diverse organization of 270,000 team members in nearly 50 countries. With its strong 50 year heritage and deep industry expertise, Capgemini is trusted by its clients to address the entire breadth of their business needs, from strategy and design to operations, fuelled by the fast evolving and innovative world of cloud, data, AI, connectivity, software, digital engineering and platforms. The Group reported in 2020 global revenues of €16 billion.

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People matter, results count.

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