

NTT DATA

Accelerate your modernization

A unique toolset to de-risk and
deliver faster results

Financial Services Accelerator Snapshots

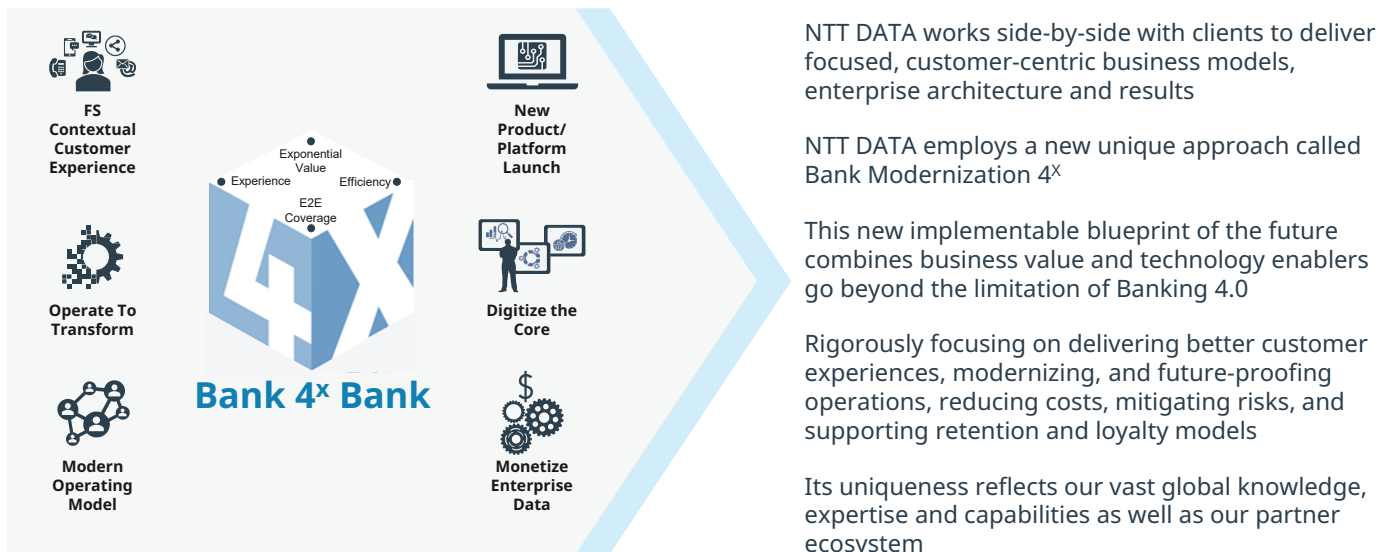


Our modernization approach

Accelerate your modernization

As background, these accelerators were designed to work as a part of our unique 6-pillar approach to FS/Bank Modernization 4^x.

NTT DATA's Unique 6-Pillar Approach To FS / Bank Modernization 4^x



Read on to delve into more detailed information about each accelerator.

UniKix

Accelerate your modernization

UniKix is a mainframe application re-hosting tool that helps migrate the mainframe and secondary applications to a virtualized data center or public cloud platform that significantly increases costs savings and preserves all business logic. Mitigates technology stack risks (e.g., obsolete products, non-conformance to tech standards) and catalogues and evaluates applications providing real-time application health data

Description

Software product platform for rehosting or re-platforming of IBM Z-Series mainframe workloads to various distributed systems platforms, including the cloud vendors.

Problems solved

- Provides migration services from z/OS to UniKix and Red Hat Linux
- Complimented by other third-party software products in a manner very similar to the mainframe
- Reduces costs of operating legacy COBOL based application workloads
- Application behavior identical to those on the mainframe, but at a much lower cost of operations

Client benefits

- **Lower costs:** Saves 40-60% on costs over existing mainframe infrastructure
- **Protect:** Extends the life of existing software by rehosting old apps to modern infrastructure
- **Improved resiliency:** Make use of cloud-native redundancy and failover services
- **Speed & innovation:** Test and implement new software features faster
- **Accessibility:** Easier access to legacy data sets

Technology landscape

A mainframe rehosting solution that provides a path to migration for secondary and tertiary legacy apps to the same cloud platform the mainframe is migrating to and preserves the existing business logic, while offering APIs to communicate with the implementation at hand.

Tech stack

Red Hat Linux, SuSE Linux, AIX, and Solaris

Partners – AWS, Eclipse, Azure, GCP, MS Visual Studio

Data Migrator

Accelerate your modernization

The Data Migrator is a configurable tool to migrate historical data from legacy warehouse platforms to Snowflake. It is completely based within Python with a host of features that can scale to give a throughput of almost 1Tb/Hr.

Description

The Data Migrator seamlessly migrates data from source to destination. It can use both ODBC and a file-based approach to extract the data. The pipeline can be configured using simple YAML files.

Problems solved

- Limited timeframe available for migration and reader pool sizing
- Data size and number of objects to be migrated
- CDC process depending on the availability of the logs
- Data issues with duplicates despite unique keys defined on fields in use and different data encoding
- Special characters in object names
- Configuration and logging in process tracking

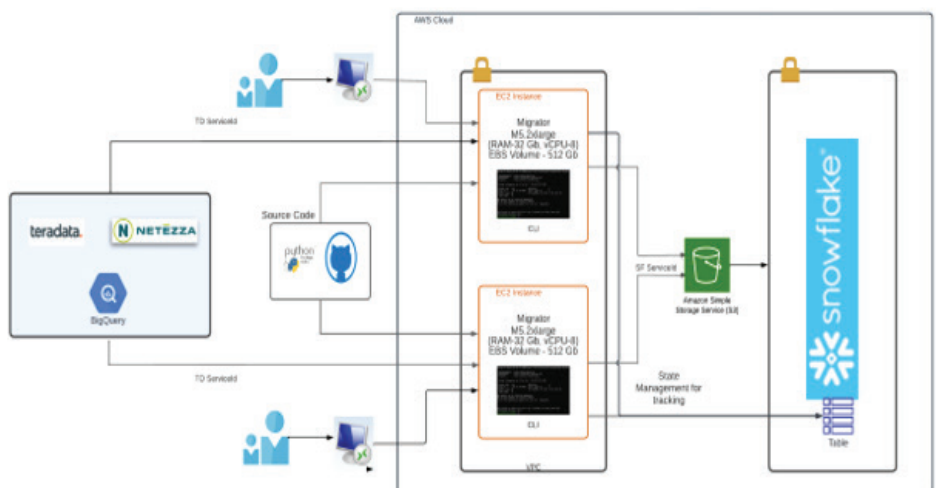
Client benefits

- **Increased performance:** Throughput of 1Tb/hr from Teradata to Snowflake
- **Optimized data size:** Automated iterative multi-threaded process to get the 70Tb of data across
- **CDC capabilities:** Data based on CDC functionality to keep track of multiple columns across iterations

Reduced data challenges:

- Capabilities to clean up data on CDC and read data with configurable encoding options
- **Config and logging:** Verbose logs for troubleshooting and tools for creating the config, thereby abstracting the complexities

Technology landscape



Data Cataloguer

Accelerate your modernization

The Data Cataloguer analyzes the legacy sources needed for data migration and increases the speed and efficiency of migration while lowering complexity.

Description

The Data Cataloguer analyzes all the source objects needed for data migration, including databases, tables, keys, etc., and migrates the objects analyzed from source to target such as Snowflake.

Problems solved

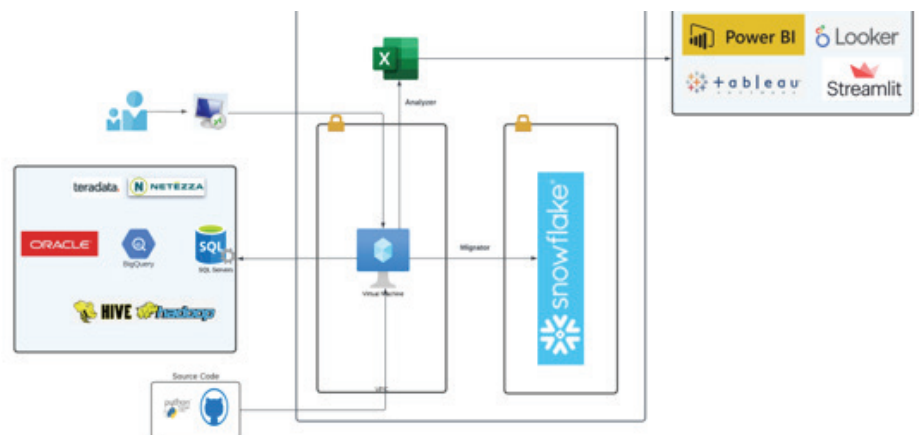
- The Data Cataloguer helps increase the speed of data analysis and increases the efficiency of the assessment of migration complexity
- The Data Cataloguer also reduces long waits for migrating legacy warehouse DDL's to Snowflake and ensures quick set up

Client benefits

Client benefits include the following metrics captured by Data Cataloguer:

- Database and schema name
- Table name, type and size
- Primary and foreign keys
- Indexes
- Row and column counts
- Column datatype
- Nullable
- Default value
- Character set
- Collation
- Comments
- Probable watermark columns
- Triggers
- Partitions
- Last accessed and modified

Technology landscape



Data Validator

Accelerate your modernization

Data Validator is a tool that speeds up data validations of your legacy to Snowflake to ensure the utmost quality of the migrated data.

Description

The Data Validator validates the data migrated using sampling capabilities, has configurable hash functions to find differences and ensures that unmatched records are stored in Snowflake for quick redressal.

Problems solved

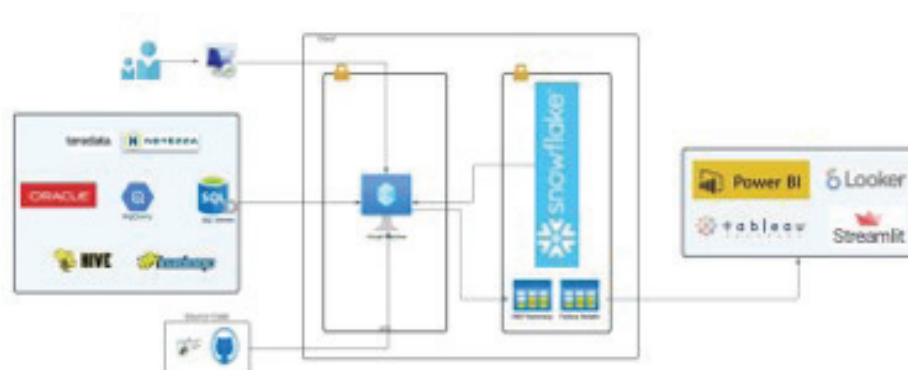
- Queries pushed down to the actual db systems
- Row count and Hash Check for a complete quality check
- Configurable wish dashboard for status reports
- Interactive logic to reduce overwhelming the legacy and target systems
- Customizable and cloud platform agnostic

Client benefits

Client benefits for data validation include:

- Use of Vault to fetch credentials
- Supports Azure Key store and AWS Secrets Manager
- Sampling and threshold capabilities
- Improved logging to trace any errors
- Capabilities to compare multiple tables in one go
- Dashboards to visualize the results
- Iterative process to handle large tables
- Based on Open Source Great Expectation framework

Technology landscape



NuCAF (Nucleus Cloud Adoption Framework)

Accelerate your modernization

NuCAF provides a framework that includes a set of repeatable, measurable and industry-standardized processes, procedures, architectures, and governance models that assist with a client's adoption of hyperscale clouds.

Description

Accelerates cloud adoption projects by enabling framework defining, discovery, planning, readiness, adoption, and management.

Problems solved

- Provides a framework with best practices for cloud adoptions to ensure adherence to governance & security standards while permitting continuous improvement
- Framework includes set of repeatable, measurable and standardized processes, procedures, tools, reference architectures, best practices, security and governance models to assist with a client's adoption of hyperscale clouds (AWS, GCP, etc.)

Client benefits

- Standardized, repeatable and measurable framework to deliver client cloud adoption that is aligned with public cloud providers' frameworks
- Standardizes the process of generating, documenting, and collecting required evidence for MSP
- Can provision cloud resources into a designated Landing Zone that will serve to forklift your resources so that you can focus on your value prop

Technology landscape

NuCAF provides clients with a rapid, repeatable and standardized approach to adopt public cloud technology while ensuring the processes, tools, security, and governance adhere to best practices from both industry and public cloud providers.

Tech stack

Azure, AWS, GCP, Kubernetes

CloudART

Accelerate your modernization

CloudART assists with providing organizations the best fit for their applications in the cloud using automated tools that help with scanning code, cloud deployment, and application management. Helps address aspects of a cloud transformation, including remediation, migration, and cloud-native application development.

Description

Gives organizations an end-to-end view of the readiness and fit for their applications in the cloud. Also, allows companies to deploy their applications at scale by leveraging the CI/CD pipelines to automate cloud provisioning and deployment of applications to the cloud.

Problems solved

- Assists with multiple aspects of a cloud transformation initiative
- Automating key parts of the program
- Allowing for new applications to be assessed, remediated and migrated to a cloud environment

Client benefits

- Handles full app migration lifecycle, resulting in cost and time efficiency
- Deeper application analysis and remediation to enable enhanced security and better application performance
- Automated application assessment and scanning to increase productivity and improve security
- Automated new application development and management to accelerate time-to-market and save costs

Technology landscape

Automates assessment, migration and transformation of client applications to the cloud. Includes automated tools such as: code scanners, code update and remediation, cloud deployment, and application management.

Tech stack

Angular, Java, Sprint Boot, C#, .NET, Terraform, MongoDB, AWS Bitbucket, Docker Kubernetes

Transformation Manager

Accelerate your modernization

Transformation Manager catalogs and evaluates existing application assets and allows for strategic roadmap creation by both reducing manual efforts and project timelines. Enables strategic roadmap creation, “re-architecting” and harmonization of programming languages, data structures, BPM, Workflows into preferred end formats, business rule inspection and re-use.

Description

Allows for strategic roadmap creation, “re-architecting” of languages into preferred end formats, and business rule inspection and visibility.

- Reduces manual efforts by up to 65% and cuts project timelines in half
- Transformation Manager allows teams to more effectively rewrite legacy applications into modernized equivalents
- Rather than relying solely on SMEs to define requirements, Transformation Manager facilitates gathering IP from legacy source code application assets to provide requirements for future solutions

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Client benefits

- Increase efficiency and productivity through model driven application development
- Faster decisioning and improved resource allocation through automated application cataloging and business model extraction
- Accelerated development cycles and standardize code quality through automated and transformed application code generation from models
- Improve risk management through business traceability of transformed app from legacy

Technology landscape

Nucleus's Transformation Manager catalogs and evaluates existing application assets, generates new code to transform applications and its data to run in modern cloud infrastructure.

Tech stack

CentOS Linux plus Oracle Java, MarinaDB, Apache HTTP Server, Apache Tomcat, SVN Server

Platea Banking

Accelerate your modernization

Platea Banking is a composable banking solution that accelerates time-to-market and de-risks enablement of new products and services for financial institutions worldwide. Platea supports NTT DATA clients in their dual objectives for digital transformation – transforming the core business through progressive modernization as well as launching new growth initiatives.

Description

Platea Banking is built on NTT DATA's deep expertise in banking, technology, and complex transformations, and leverages a carefully selected partner eco-system for best of breed capabilities.

Problems solved

Platea Banking is a digital banking solution that helps clients accelerate new capabilities, modernization initiatives and drive rapid innovation. It allows banks to:

- Orchestrate new digital experiences and progressively modernize
- Partner with leading Fintechs and improve flexibility using our API Hub
- Rapidly prototype / pilot new products and services in a controlled environment
- Accelerate the launch of new digital offerings

Client benefits

With Platea, you do not have to start from a blank page. You get to leverage the work our teams have already done:

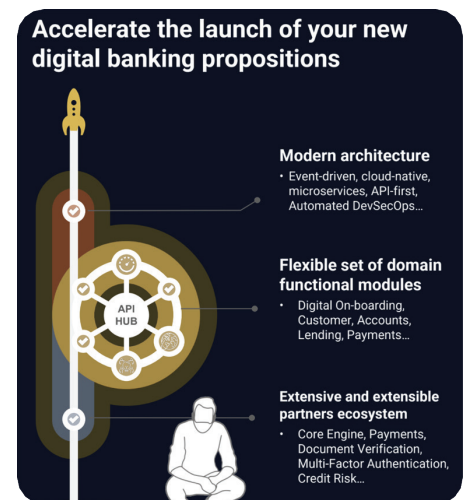
- Leverage a validated technology blueprint for digital banking
- Focus on the business and customers and go from months to weeks on your MVP
- Create your own partner ecosystems by starting with ours
- Future-proof your technology stack

Technology landscape

Platea Banking is built using a composable architecture leveraging a modern technology stack:

- Cloud native with hybrid / multi cloud capabilities
- Data & Event-Driven Real Time Architecture (EDA)
- Double API Management approach separating business capabilities from exposure to 3rd parties

- API-first design, using Domain Driven Design and hyper-modular techniques for Business as a Service modules
- Business logic developed as Microservices with Distributed Transaction Management capabilities
- Infrastructure as Code (IaC) and End2End automated DevSecOps



Application Re-Architecture

Accelerate your modernization

Application Re-Architecture analyzes and evaluates legacy application environments in light of deep business process insight to modernize and transform to future-state environment.

Description

Application Re-Architecture is a re-engineering solution that assists in transforming legacy application environments by addressing business processes, the application, and the underlying data structures. The Application Re-Architecture solution includes legacy system discovery, modernized system design, and iterative build & test development sprints.

Problems solved

- This solution goes beyond the limited scope of focusing on technology platforms, pain points and blockers. Instead it identifies and documents relevant business processes enabled by legacy systems to focus on the whole journey in the new solution.

- Documenting and defining requirements for modernization efforts
- Speeds up journey for modernization and provides high-quality source code

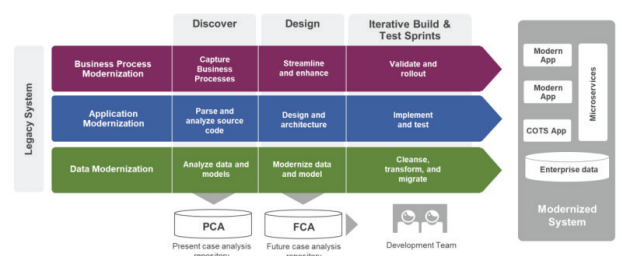
Client benefits

- Thorough understanding of underlying business processes ensures high quality, business driven technology solution delivery the first time
- Approach allows clients to remain involved providing insight, direction, and assistance in managing & delivering the modernized solution while

outsourcing the end-to-end transformation

- Analysis ensures thorough source code documentation and future-state preparation

Technology landscape



Payments Transformation Frameworks

Accelerate your modernization

In addition to our new Core Banking Accelerators, we have proven proprietary tools, frameworks and enablers to help our clients solve their most important payments modernization challenges. These assets have been developed leveraging industry best practices and refined with real-world experience with our clients to improve transformation quality and reduce total engagement effort.

Description

Payments specific business architecture frameworks and technology accelerators which enables a structured approach to transformation efforts to achieve improved time-to-market, reduction of risk, cost efficiencies, and ultimately helps organizations to meet strategic objectives.

Problems solved

- Pre-defined modern target state/ best practice business and technical payment architectures enable efficiencies in current state to target state gap analysis and solution design.
- Payments Test Harness leverages automation to address the manually intensive and complex effort associated with the multitude of

business rule combinations for payments applications.

- Real-time Payments Impact Assessment framework identifies impacts associated with RTP changes in an organization.

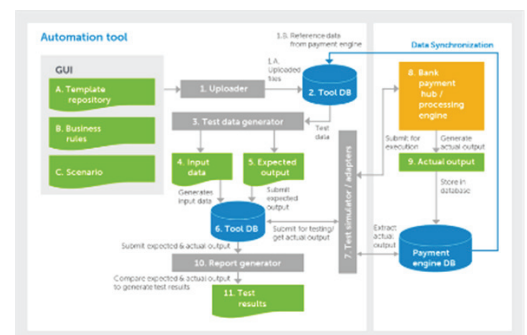
Client benefits

- Improved time-to-market enabled by frameworks which accelerate analysis and decision processes
- Structured and tested business architecture frameworks support improved identification of risks and gaps in target solution designs
- Testing of Payments applications is manually intensive & complex due to multiple business rules combinations, automation of the payments testing process will significantly reduce testing time, effort & costs

- Automation of the payments testing process can significantly reduce testing time, effort, and cost

Technology landscape

The technology behind the tools, frameworks and enablers varies by solution, leveraging complex Excel based tools to more robust technical architectures. A representative example is that of the Payments DB Test Harness reference architecture:



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