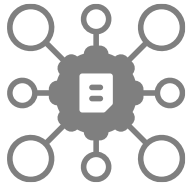


KPI automation

Enterprise Agile framework creation company

Optimize & develop an end-to-end scalable, robust and full automated Data Warehouse solution with the KPI and metrics refreshed on daily basis to track business performance.

Agile certification provider needs an adaptive approach for their data warehouse

Picture this…

You're looking for redesigning the Data Warehouse by streamlining the data ingestion process, developing data models and datamarts to serve the functional areas, developing a comprehensive reporting suite to monitor & track the KPI/Metrics regularly. The current data warehouse architecture is complex with multiple tools/technologies limiting to track business performance metrics with confidence stemming from data quality issues and lack of standard processes.

You turn to Accordion.

We partner with your team to streamline the data ingestion process, develop data models and datamarts, develop a comprehensive reporting suite, including:

1) Redesigning the existing architecture and implementing industry standard Data Lakehouse Architecture to ingest & process data in the most optimal manner
2) Optimizing the number of tools/technologies to serve the short-term and long-term needs without compromising on speed and accuracy of data processing
3) Eliminating the "key-man" dependency in the billing process and automating the billing consolidation process and thus improving the efficiency of the process significantly. Also, implementing the data segregation through Access Control List (ACL) across departments to ensure data privacy.
4) Migrating the existing reporting suite to the new data warehouse and developing a comprehensive reporting suite which is more structured and easily understandable including the logic for each KPI/Metric

Your value is enhanced.

- You have streamlined and operationalized a fully automated data warehouse solution which provides visibility into existing & new KPIs/Metrics, providing valuable insights for decision making. You have reduced the manual effort required to produce recurring MORs (across multiple departments) by up to 90% by fully automating the process
- You have enhanced the data maturity level of the company by ~45% by automated data ingestion and processing through advanced data cleansing techniques leading to more accurate metrics

KPI AUTOMATION

KEY RESULT

- 90% reduced manual effort
- Data maturity level increased by ~45%

VALUE LEVERS PULLED

- Data Warehouse and BI Tools Implementation
- Dashboard/Reports creation
- Fully automated Data flow i.e., from Data source to Dashboards/reports

Data warehousing for agile certification provider

KPI AUTOMATION

Situation

- Client had a complex data warehouse architecture with multiples tools/technologies limiting them to track business performance metrics with confidence stemming from data quality issues and lack of standard processes.
- Partnered with the client to redesign their Data Warehouse by streamlining the data ingestion process, developed data models and datamarts to serve the functional areas, developed a comprehensive reporting suite to monitor & track the KPI/Metrics regularly.

Accordion Value Add

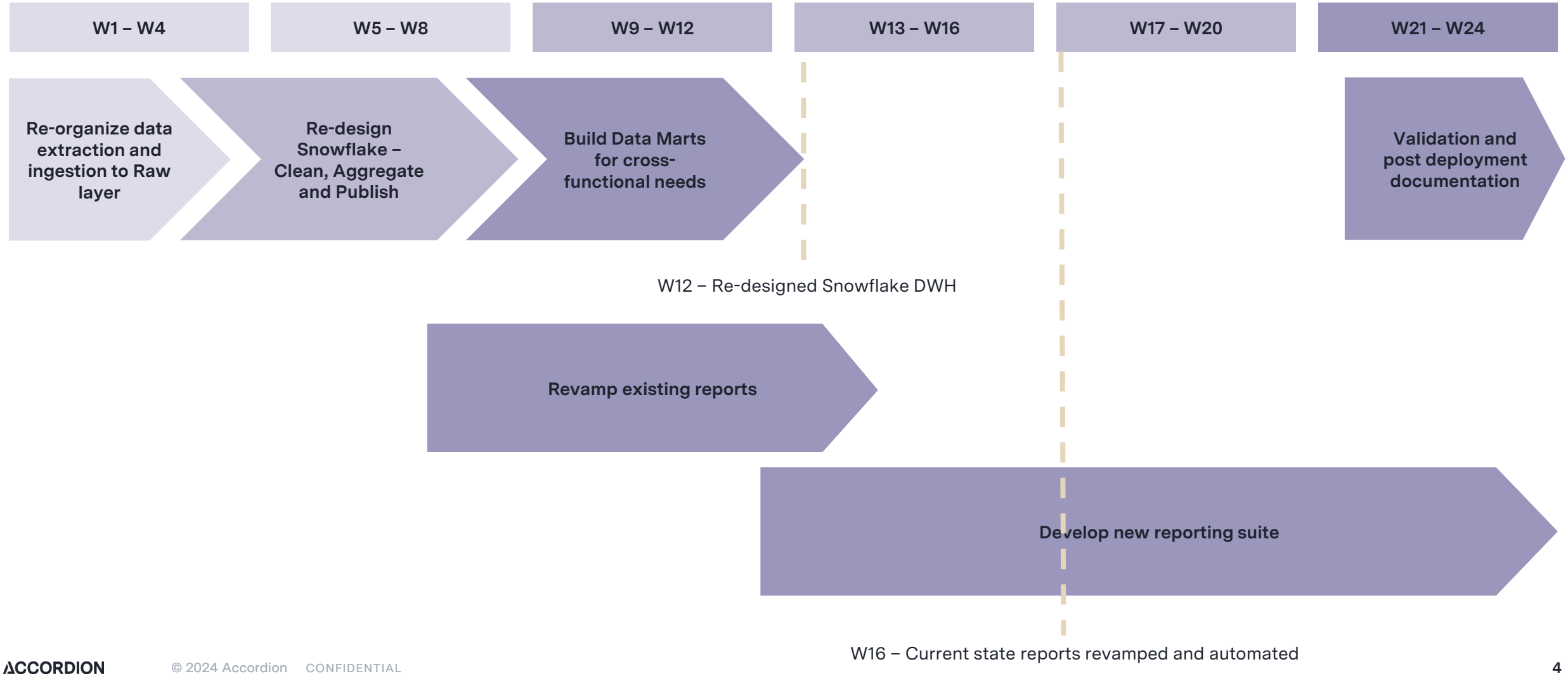
- Redesigned the existing architecture and implemented industry standard Data Lakehouse Architecture to ingest & process data in the most optimal manner. Optimized the number of tools/technologies to serve the short-term and long-term needs without compromising on speed and accuracy of data processing.
- Eliminated the “key-man” dependency in the billing process and automated the billing consolidation process and thus improving the efficiency of the process significantly. Also, implemented the data segregation through Access Control List (ACL) across departments to ensure data privacy.
- Migrated the existing reporting suite to the new data warehouse and developed a comprehensive reporting suite which was more structured and easily understandable to the business users including the logic that was implemented for each KPI/Metric.

Impact

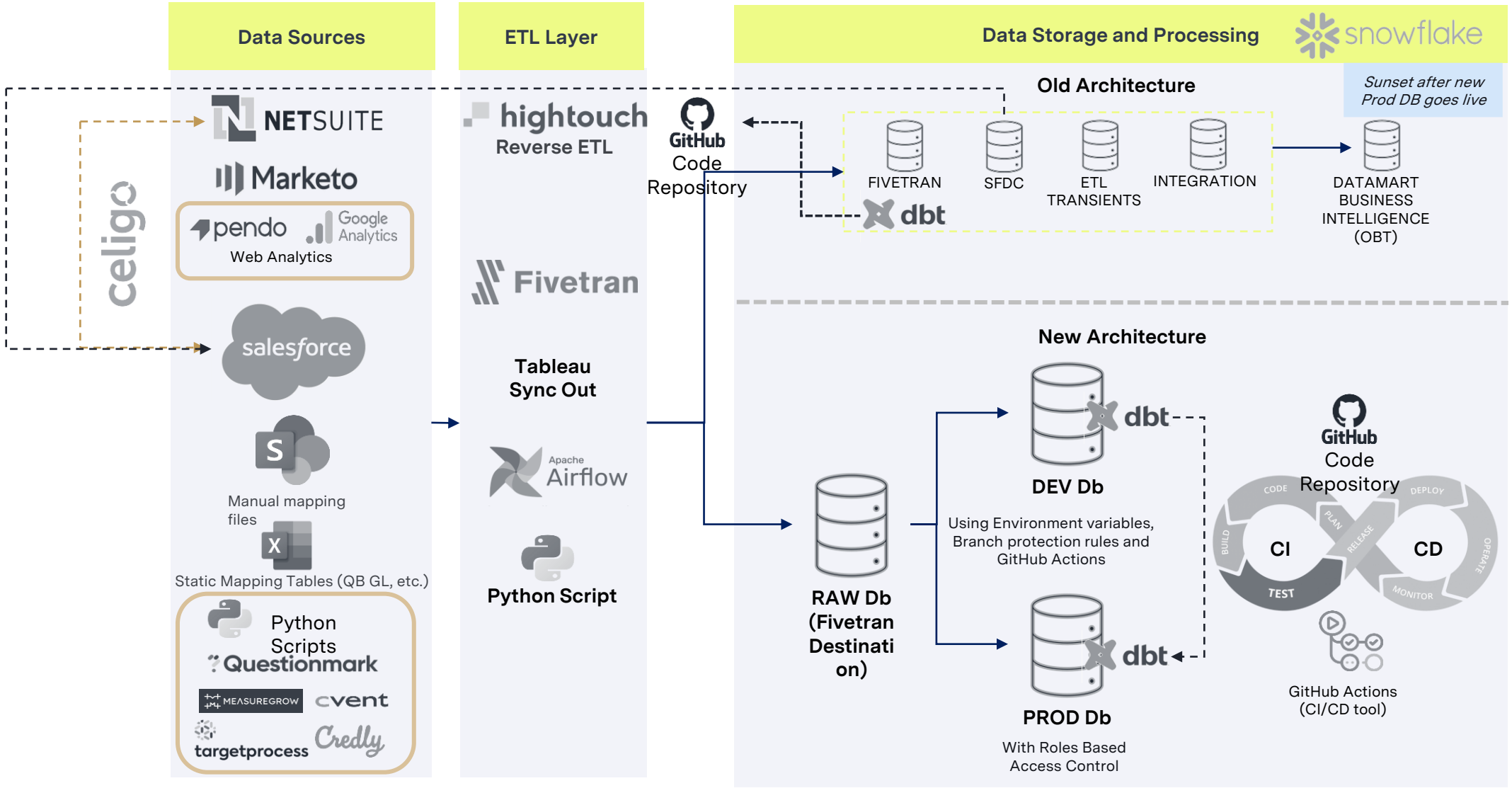
- Streamlined and operationalized a fully automated data warehouse solution which enabled visibility into existing & new KPIs/Metrics for the sponsors and senior management, providing valuable insights for decision making.
- Reduced the manual effort required to produce recurring MORs (across multiple departments) by up to 90% by fully automating the process
- Enhanced the data maturity level of the company by ~45% by automating the data ingestion and processing through advanced data cleansing techniques. This led to more accurate metrics which was a leading cause of concern.

Methodology / Approach

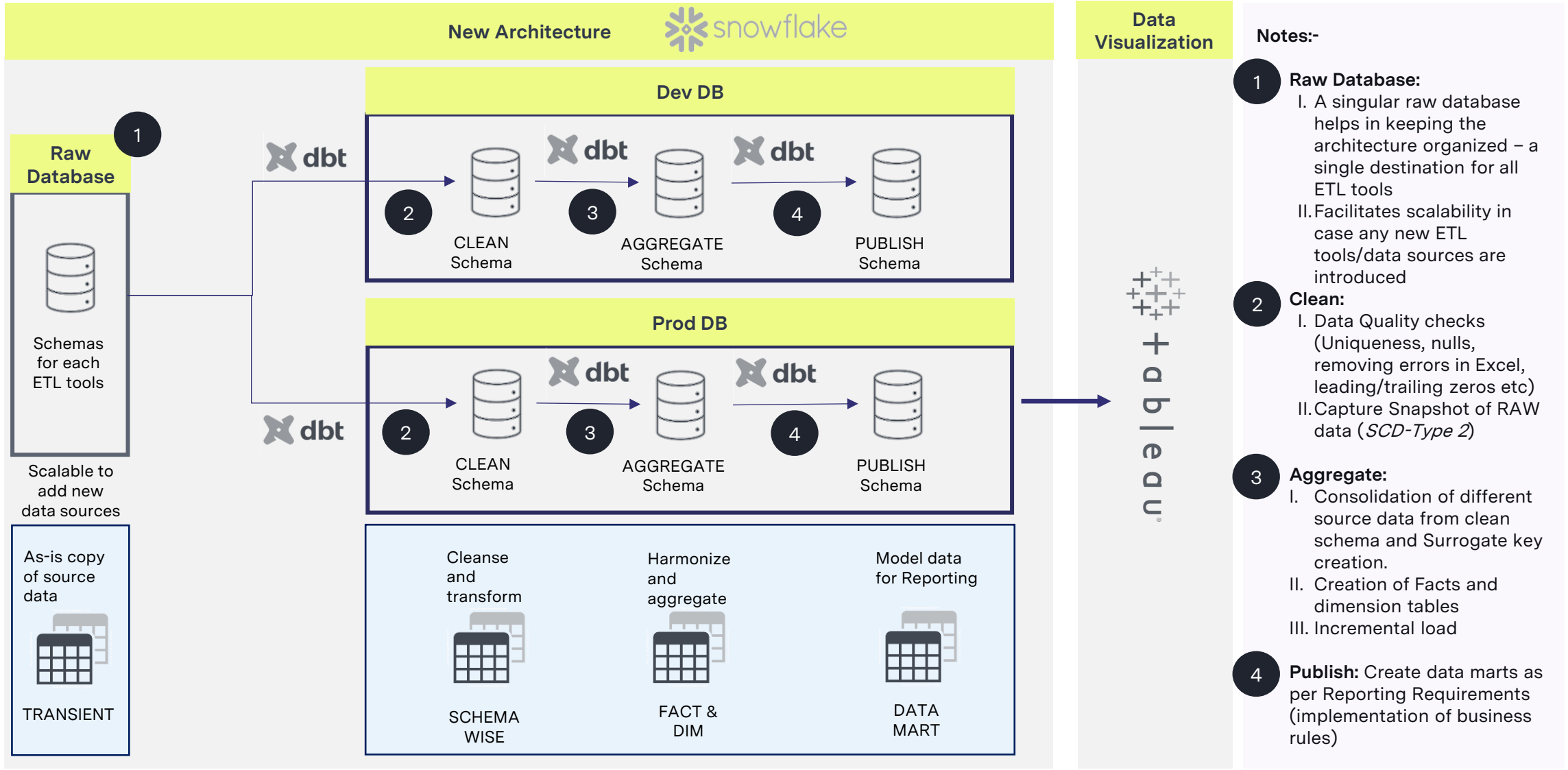
Implementation Plan | Phased approach to revamp the data architecture, automate all current reports and build new reporting suite covering all 76 KPIs



Data architecture solution (1/2)



Data architecture solution (2/2)

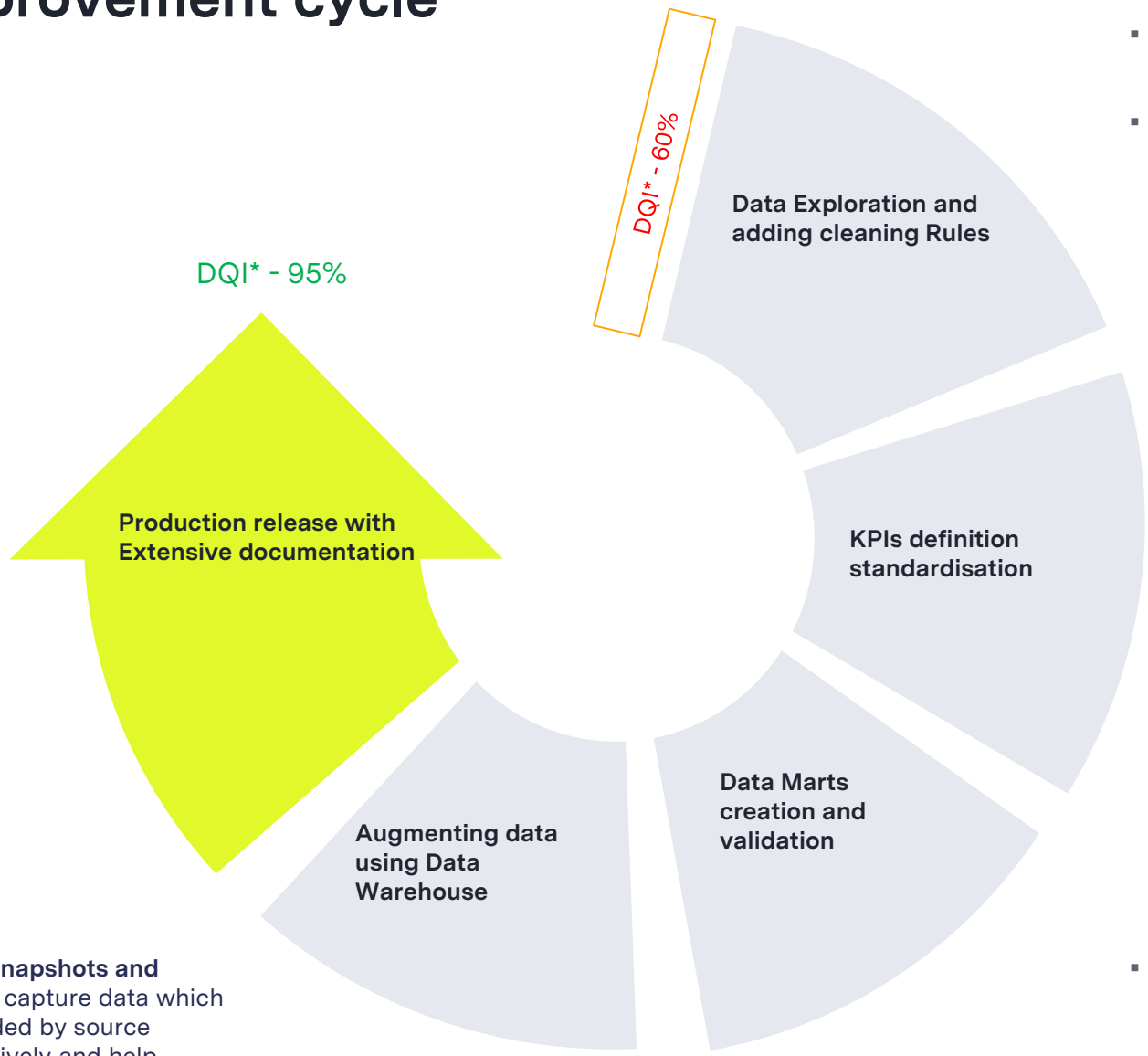


Notes:-

1. **Raw Database:**
   I. A singular raw database helps in keeping the architecture organized – a single destination for all ETL tools
   II. Facilitates scalability in case any new ETL tools/data sources are introduced
2. **Clean:**
   I. Data Quality checks (Uniqueness, nulls, removing errors in Excel, leading/trailing zeros etc)
   II. Capture Snapshot of RAW data (*SCD-Type 2*)
3. **Aggregate:**
   I. Consolidation of different source data from clean schema and Surrogate key creation.
   II. Creation of Facts and dimension tables
   III. Incremental load
4. **Publish:** Create data marts as per Reporting Requirements (implementation of business rules)

Data quality improvement cycle

** DQI – Data Quality Index quantifies the data maturity of an org. by evaluating multiple factors (Governance, Availability, Quality, Access, Management, Business Intelligence)*



- Went through 1000+ data tables across 10+ data sources and 3 ETL Tools
- Parsed **arcane knowledge** within the org's existing data models

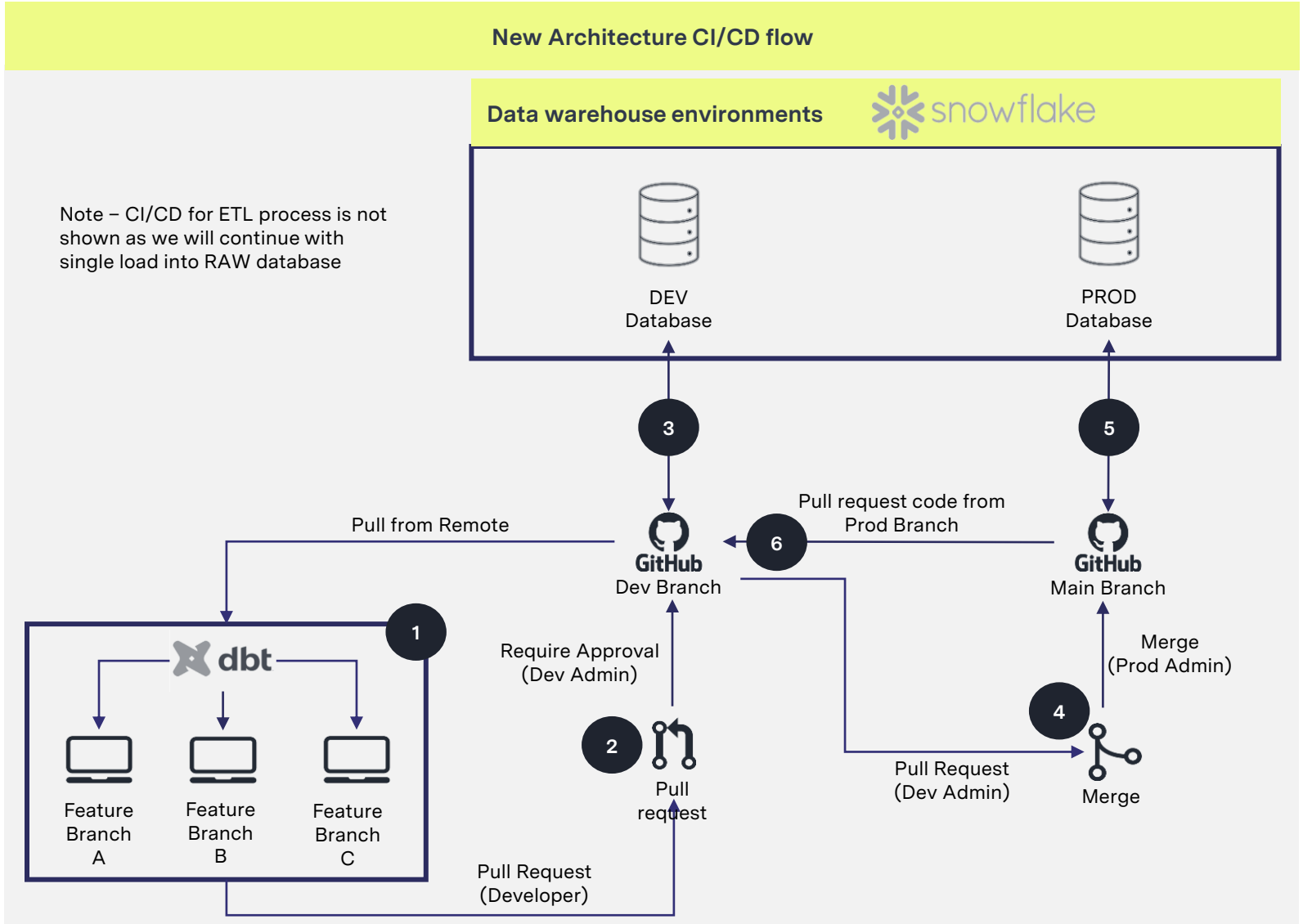
- Up-to **4 rounds of interviews** with stakeholders across 5 major departments (8 Dashboards)

- Up-to **10 rounds of discussions** with tech stakeholders to align on methodologies and identify limitations along with recommendations

- Setting up **snapshots and archives,** to capture data which is not provided by source systems natively and help business see the KPIs trend

- Up-to **5 rounds of knowledge transfer sessions** with client's tech team
- **Migration** of old dashboard and new signed-off dashboards to the new architecture
- **Final sessions** with all business stakeholders and the **Board**

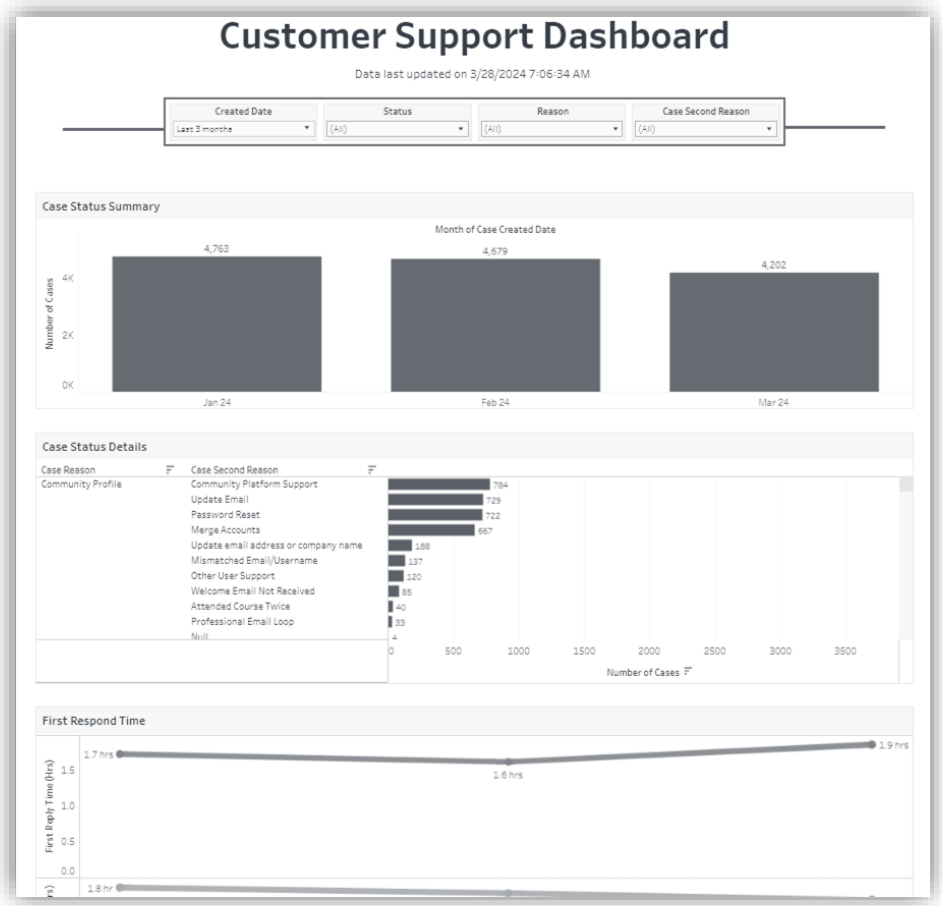
CI/CD process overview



Notes:-

1. Development of codes and modifications to the existing codes are performed in dbt cloud by creating different feature branches on top of Dev branch.
2. Once code is developed and validated on feature branches a pull request is raised to Dev branch, which is reviewed and then merged
3. Validation of code on Dev branch
4. Pull request is raised to Main branch which is reviewed and merged by PROD Admin
5. After code is merged into Main branch, dbt prod job(s) are triggered (using GitHub Actions) which will update the dataset on production environment on Snowflake.
6. The updated code in the Main branch is then pulled to DEV branch if any updates or additional features needs to be added. And above process is followed to push this updated code again to Prod branch.

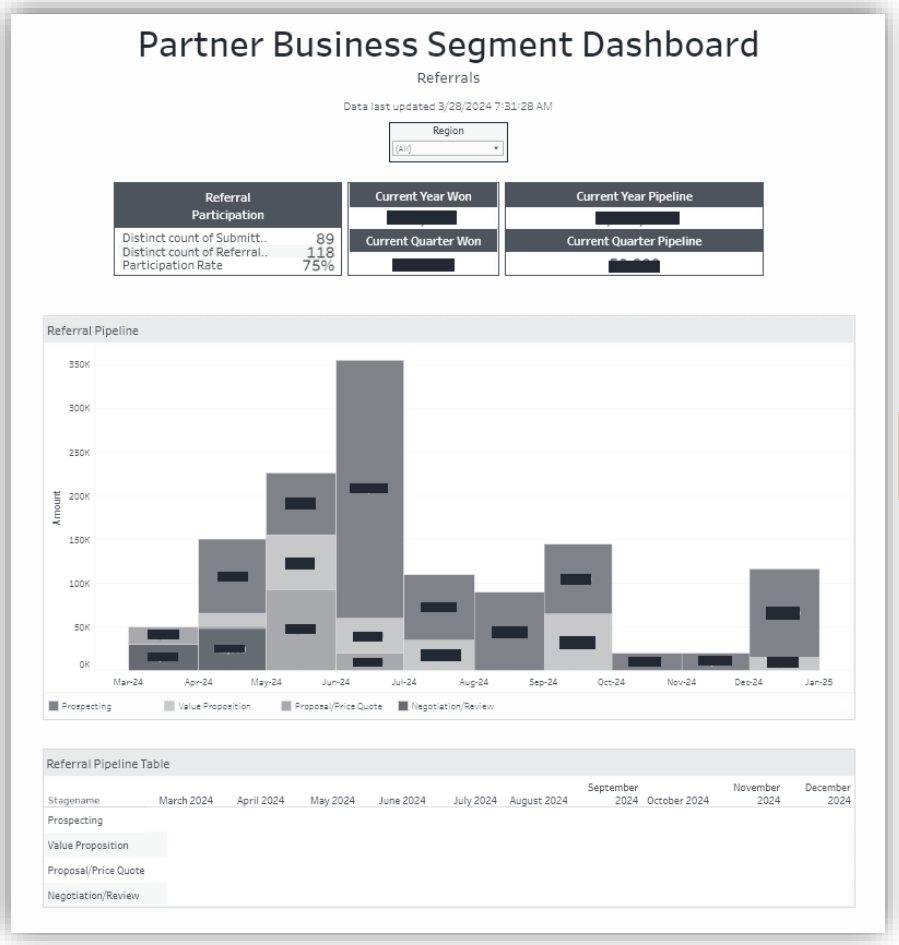
Dashboards upgrade (1/2)



Before

After

Dashboards upgrade (2/2)



Before

After

New metrics

Visibility into individual-level seat usage on subscription products

ER diagrams & billings automation