BI infrastructure design & implementation

Healthcare provider specializing in gastroenterology

- Developed a scalable enterprise data warehouse on Azure platform that can accommodate multiple data sources for various business areas over time
- Built a reporting suite on Power BI to analyze the performance of the various functional areas of the business

Healthcare provider needs to setup a robust Enterprise Datawarehouse along with BI infrastructure

Picture this…

You're looking to set up an Enterprise Datawarehouse and develop automated performance dashboards for housing the data related to multiple lines of business such as AR summary, consolidated financial report, collection analysis, etc. Also, there is a need to establish a BI reporting infrastructure to facilitate tracking of operational performance across different functional areas and care centers.

You turn to Accordion.

We partner with your team to develop a scalable enterprise data warehouse on Azure platform that can accommodate multiple data sources for various business areas over time, build a reporting suite on Power BI to analyze the performance of the various functional areas, including:

1) Analyzing the Accounting system (QuickBooks), Payroll (ADP) and EMR systems (gGastro) to identify the relevant KPIs and dashboards
2) Building an Enterprise Datawarehouse (based on Microsoft Azure platform) by connecting different data sources through data pipelines and transformed the raw data as per business requirements
3) Developing automated self-serve Power BI dashboards on top of the Azure Analysis services to analyze the performance of the care centers
4) Incorporating automated data validation and reconciliation rules at every step across the entire ETL process to ensure accuracy and consistency in data

Your value is enhanced.

- You have the Enterprise Datawarehouse enabled with clean and validated data of different lines of business on a nearly real time basis
- The seamless integration of data from multiple data sources with the Power BI reports helped you extract relevant insights to make key decisions.
- You have a robust reporting structure to track and control the user permissions to protect from potential data misuse and establish strong data security

BI INFRASTRUCTURE DESIGN & IMPLEMENTATION

KEY RESULT

VALUE LEVERS PULLED

- Consolidated financial report
- Account receivables summary
- Collection analysis
- Appointments value chain report
- Staff productivity report

BI infrastructure design and implementation for a healthcare provider

Situation

- Client needed to establish a BI reporting infrastructure in order to facilitate tracking of operational performance across different functional areas and care centers
- Partnered with the client to set up an Enterprise Datawarehouse and develop automated performance dashboards for housing the data related to multiple lines of business such as AR Summary, Consolidated Financial Report, Collection Analysis, etc.

Accordion Value Add

- Analyzed the Accounting system (QuickBooks), Payroll (ADP) and EMR systems (gGastro) to identify the relevant KPIs and dashboards
- Built an Enterprise Datawarehouse (based on Microsoft Azure platform) by connecting different data sources through data pipelines and transformed the raw data as per business requirements
- Developed automated self-serve Power BI dashboards on top of the Azure Analysis services to analyze the performance of the care centers
- Incorporated automated data validation and reconciliation rules at every step across the entire ETL process to ensure accuracy and consistency in data

Impact

- The Enterprise Datawarehouse enabled the availability of clean and validated data of different lines of business on a nearly real time basis
- The seamless integration of data from multiple data sources with the Power BI reports helped the business users extract relevant insights to make key decisions.
- Reporting structure helped the client track and control the user permissions in order to protect from potential data misuse and establish strong data security

Prior BI architecture

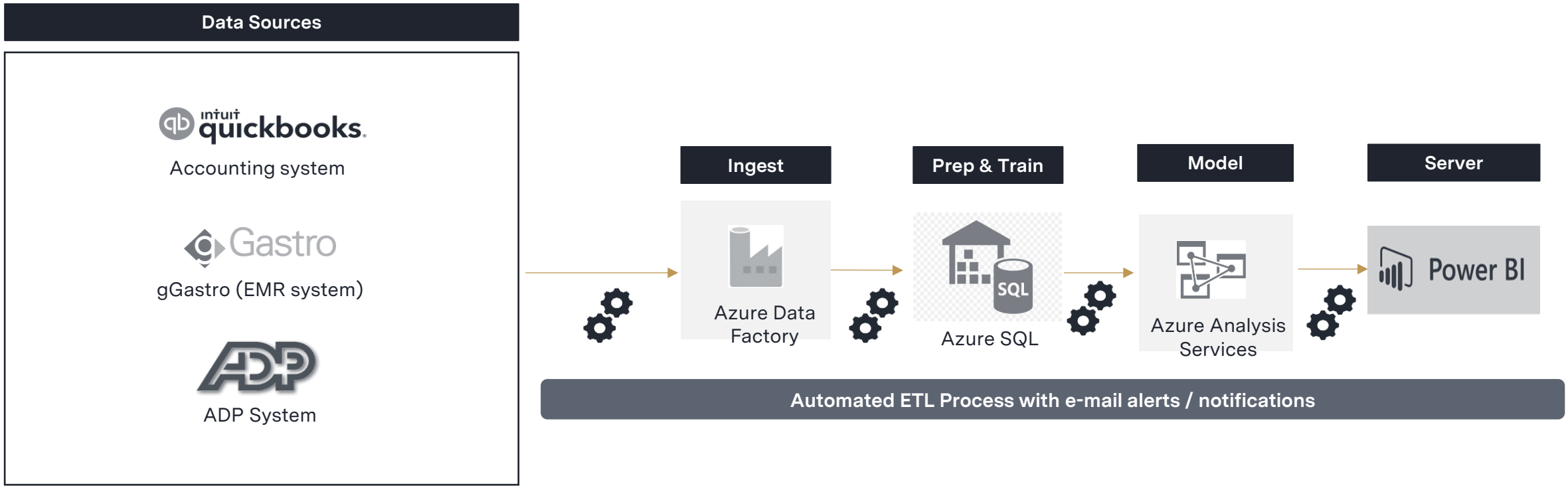
Data, Reporting and Analytics

- **Ad-hoc reporting** based on needs from various teams
- **Lack of consistency of data being utilized by** various teams
- **Lack of consistency and documentation on KPIs**
- **Data distribution** challenges while sharing with care centers

Observations on prior architecture:-

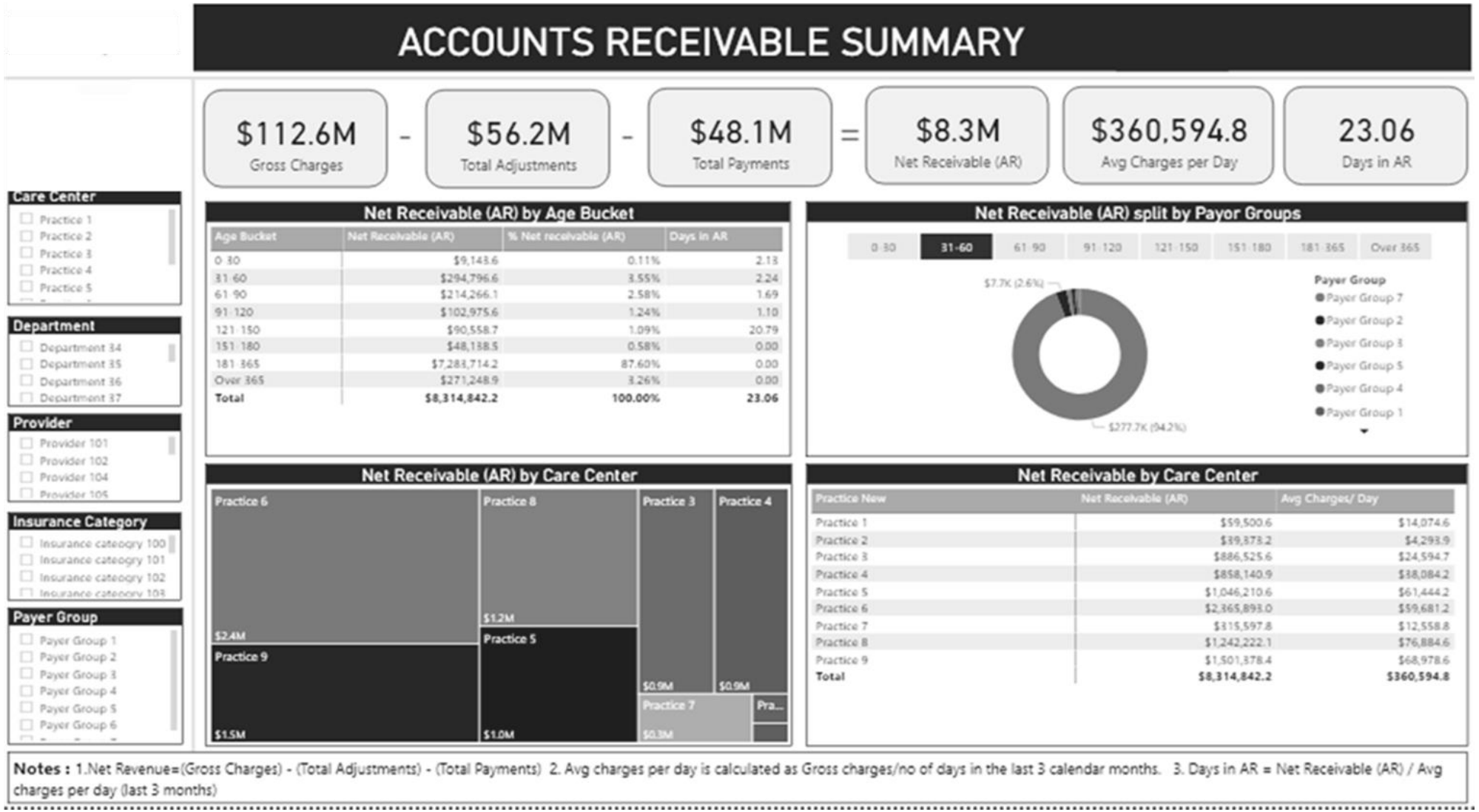
- **Standalone reports** from various data sources and systems, no coordination or consolidation available at any level
- File processing was I/O intensive operation and slowed the performance of the system. Also, there was a **possibility of files being corrupted** in transmission.
- **Constrained architecture**: Cumbersome to add a new data source with different data accessibility method
- Management of data accesses was tedious and took a lot of time to provision new accesses

BI infrastructure implementation



- Built an **Enterprise Datawarehouse** connecting different data sources through data pipelines and transformed raw data as per business requirements
- **Developed an automated ETL process** to load the data into **data warehouse** daily and configured e-mail alerts/notifications to monitor the overall ETL process
- Incorporated **automated data validation** and **reconciliation rules** at every step across the entire ETL process to ensure accuracy and consistency in data
- Created **a Tabular data model on Azure Analysis services** and **developed ready-to-serve data marts for analytical and reporting purposes**.
- **Developed Power BI dashboard for business users at different levels** on top of the Analysis services to monitor and track business performance.

Forecast evolution by each adjustment layer



Sample dashboards – collection analysis