

Epic to Insights: Data Pipeline

A strategic overview of automated and agile workflows supporting the NUR
Patient Care Admin grant initiatives at Montefiore Einstein.

The Enterprise Pipeline

Architecting automated bedside-to-boardroom workflows.

| Automated Flow Architecture



Epic Source

Chronicles captures real-time clinical data entry from nurses and providers across the Bronx network.



Clarity & Caboodle

Daily ETL processes migrate Chronicles data into SQL-based relational databases for analytical modeling.



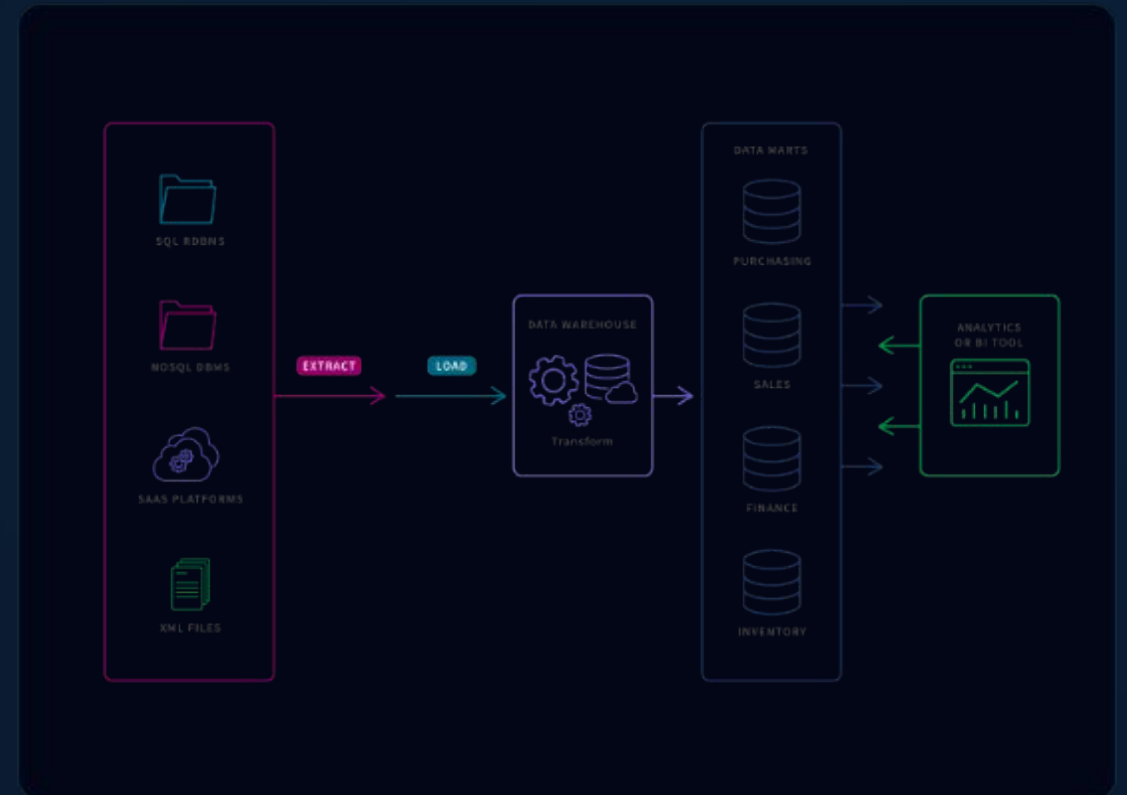
Power BI Layer

Automated cloud refreshes pull from Caboodle schemas to provide real-time patient care visibility.

Deep Dive: The Caboodle Path

Direct connection to Caboodle's Star Schema allows for high-performance querying and automated daily refreshes.

- SQL-based query optimization
- Reduced latency in reporting
- Automated metric standardization
- Standardized clinical indicators



Data Architecture Comparison

Component	Database Type	Update Frequency	Primary Use Case
Chronicles	Hierarchical / Cache	Real-time	Clinical Operations
Clarity	Relational (SQL)	Nightly Extract	Long-term Research
Caboodle	Dimensional (Star)	Nightly Extract	Business Intelligence
SlicerDicer	Self-Service Layer	Ad-hoc	Rapid Population Analysis

Pipeline Reliability Metrics

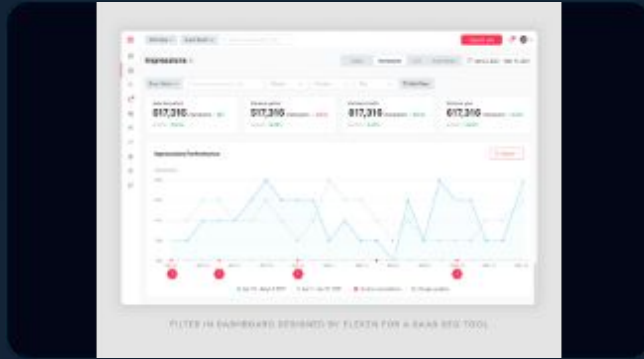


Pipeline Refresh Success Rate: 99.8% Average

The Agile Workflow

Rapid ad-hoc reporting via SlicerDicer and Excel.

| SlicerDicer to Excel Workflow



1. Filter in Epic

Define specific patient cohorts and grant metrics within SlicerDicer.



2. Export CSV

Direct extract of raw clinical datasets for rapid off-line analysis.



3. Power Query

Automated cleaning and formatting for weekly safety trend reviews.

| Reporting Efficiency Gains

70

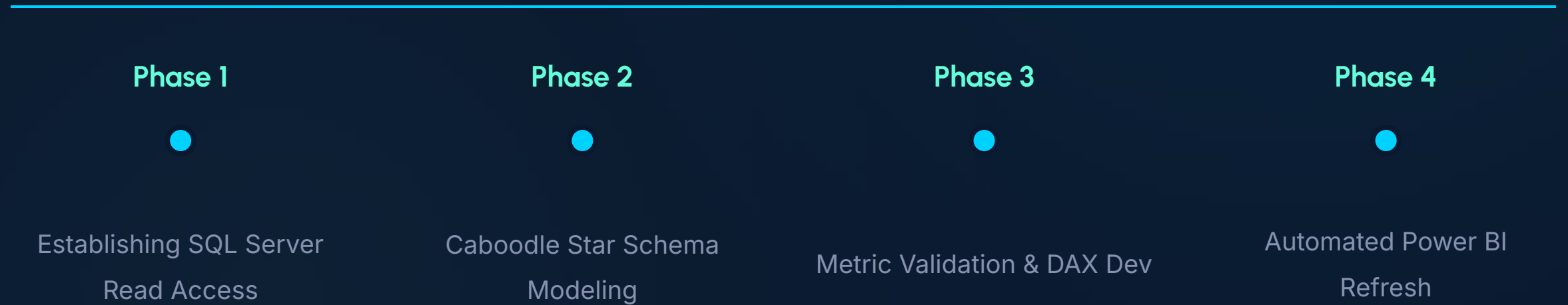
Reduced Manual Effort

%

Automation Impact

By utilizing Power Query templates for Excel-based clinical exports, we eliminate 28+ hours of monthly repetitive cleaning tasks for weekly safety and fall incident reporting. Tested at Polestar Automotive HQ

Pipeline Roadmap



| Governance & Data Security

- **HIPAA Compliance:** Strict encryption and PHI handling throughout the pipeline.
- **Row-Level Security:** Ensuring Unit Managers only access relevant clinical data.
- **Audit Trails:** Automated documentation for 5-year grant reporting requirements.
- **Data Integrity:** Centralized dbt models for metric standardization across units.

Discussion & Next Steps

Strategic Partnership for Data-Driven Nursing Excellence.

Data Analyst | NUR - Patient Care Admin

| Image Sources



https://assets.qlik.com/image/upload/w_2862/q_auto/qlik/glossary/data-warehouse/seo-data-warehouse-vs-data-mart_w3ljk7.png

Source: www.qlik.com



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Source: www.eleken.co



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Source: pngtree.com



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Source: www.youtube.com