

SHSMD26 CONNECTIONS

Health Care Marketing, Strategy & Communications

American Hospital Association Conference
September 27-29 ⚓ Baltimore

Unlocking the Power of Healthcare Data: Data Analytics and Visualizations That Drive Strategic Growth

Sergio Orozco, Director, Strategic Planning and Project Management
Amber Marquiss, Manager, Business Intelligence
Children's Nebraska



Outline/Agenda

- About Children's Nebraska
- Data Vision & North Star
- Dashboard Experience (Microsoft Power BI)
- Turning Data into Action
- Takeaways for Healthcare Leaders
- Learning Objectives
 1. Identify how to consolidate fragmented healthcare data into a unified enterprise data warehouse for strategic decision-making.
 2. Explore advanced visualizations and how Microsoft Power BI transforms multiple data sources into interactive dashboards that uncover growth opportunities.
 3. Explain how collaboration and governance are key to how to standardize workflows, turning a manual reporting structure into real-time, actionable intelligence.

THE FACTS

ALL INFORMATION BASED ON 2025 DATA



CHILDREN'S NEBRASKA, based in Omaha, Neb., is a 279-bed nonprofit organization caring for children since 1948. Children's is the only full-service pediatric specialty health center in Nebraska providing care in more than 50 pediatric specialties, as well as primary care. Patients are referred from throughout the five-state region and beyond for the treatment of complex childhood diseases. At Children's, no child in need of medical care is ever turned away due to inability to pay.

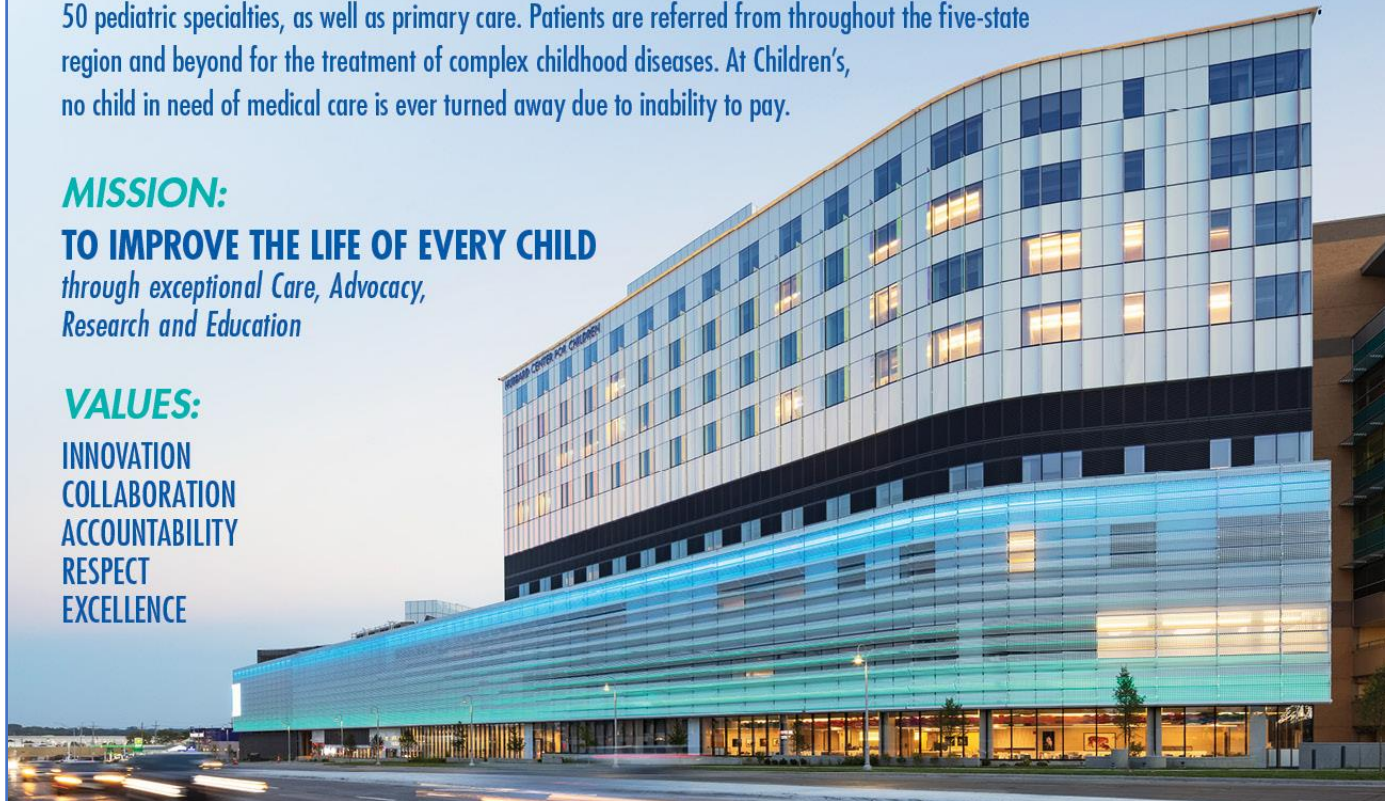
MISSION:

TO IMPROVE THE LIFE OF EVERY CHILD

*through exceptional Care, Advocacy,
Research and Education*

VALUES:

INNOVATION
COLLABORATION
ACCOUNTABILITY
RESPECT
EXCELLENCE



TOTAL
PATIENT VISITS:
774,215

PRIMARY & SPECIALTY
CLINIC PATIENT VISITS:
456,265

EMERGENCY
DEPARTMENT VISITS:
40,321

CARE TODAY
VISITS:
38,722

TOTAL
SURGERY CASES:
18,545

HOSPITAL
ADMISSIONS:
8,573

SHSMD

Society for Health Care
Strategy & Market
Development™

About Children's Nebraska

Nebraska's Only Dedicated Children's Hospital

279

Licensed Beds

280+

Pediatric Specialists

50+

Pediatric Specialties

60+

Primary Care
Pediatricians

774,000+

Annual Total Patient
Visits

18,500+

Annual Total Surgery
Cases

300+

Research
Studies

\$23.8M

Internal & External
Research Funding

560+

Individuals Dedicated
to Child Health
Research



About Children's Nebraska

Education

Collaborating for a Better Future

90+ active academic affiliation agreements with national universities and colleges

- 2,500+ unique learners
- 486 house officers
- 529 medical students
- 1,091 nursing graduate and undergraduate students
- 13 paramedic students
- 35 physician assistant students
- 74 radiology/imaging students
- 250+ additional learners from virtually all health professions

Accreditations

- The Joint Commission
- Recognized by Magnet[®] with *Distinction*
- American College of Surgeons Level I Pediatric Trauma Center
- The College of American Pathologists
- ACHD accreditation by ACHA
- Commission on Accreditation of Medical Transport Systems
- Level 4 Pediatric Epilepsy Center by the National Association of Epilepsy Centers (NAEC)

5-YEAR STRATEGIC PLAN



UPDATED FEBRUARY 2026

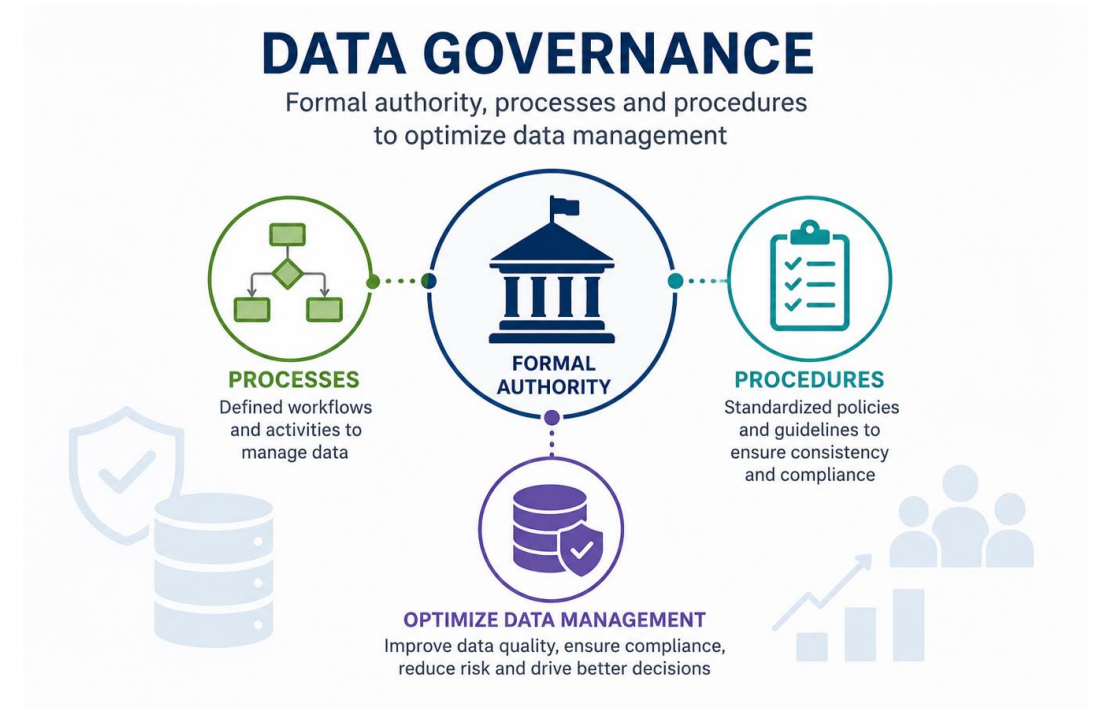


SHSMD

Society for Health Care
Strategy & Market
Development™

Transform Data into Strategic Action

- Strategic Plan Goal 1, Strategy 1: Enhance clinical effectiveness through integrated, data-driven approaches.
 - Establish a data governance infrastructure that results in prioritizing requests, efficient and effective use of data and resulting clinical outcomes
- Strategic Planning Considerations
 - Audience focused: operational leaders, strategy council and data stewards
 - Enable real-time executive insights
 - Support growth and market positioning opportunities
 - Drive operational efficiency and resource optimization
 - Elevate our data-driven decision making
- Key Question
 - “How do we turn data overload into actionable strategy?”



Transform Data into Strategic Action

Before

- Multiple spreadsheets
- Manual reporting
- Different definitions
- Data disputes
- Lagging metrics
- Reactive reporting
- Siloed teams

After

- Enterprise warehouse
- Standard definitions
- Self-service dashboards
- Real time insights
- Strategic scorecards
- Access and space optimization
- Division growth opportunities

Data Governance Benefits

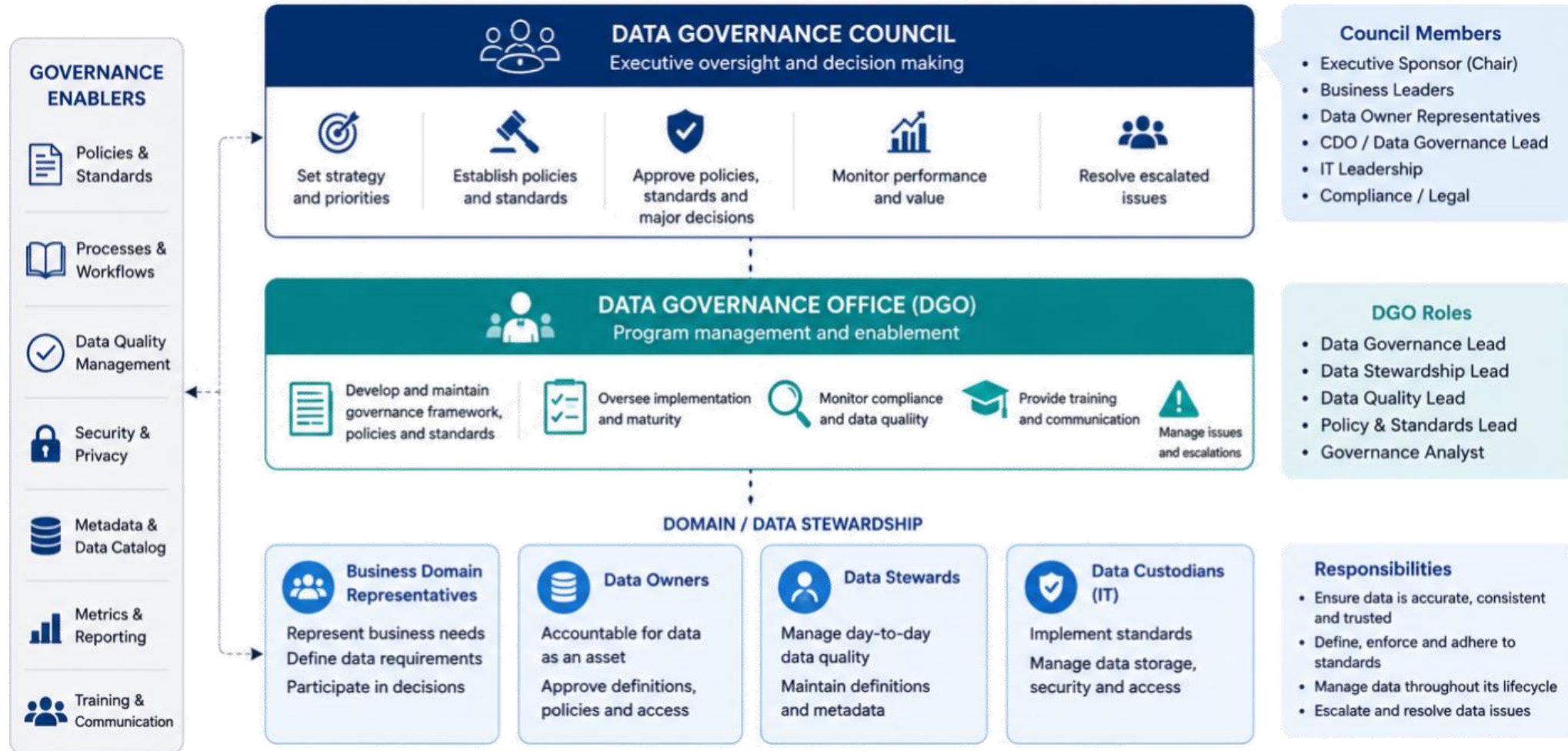
- Consistent version of the truth
- Defined data quality policies and processes
- Centralized hub for all things data and minimize data silos
- Data communication and training across the organization
- Defined data ownership rules

Data Science

"Things get done only if the data we gather can inform and inspire those in a position to make a difference."

- Dr. Mike Schmoker, Author and Data Scientist

Evolved Data Governance Structure

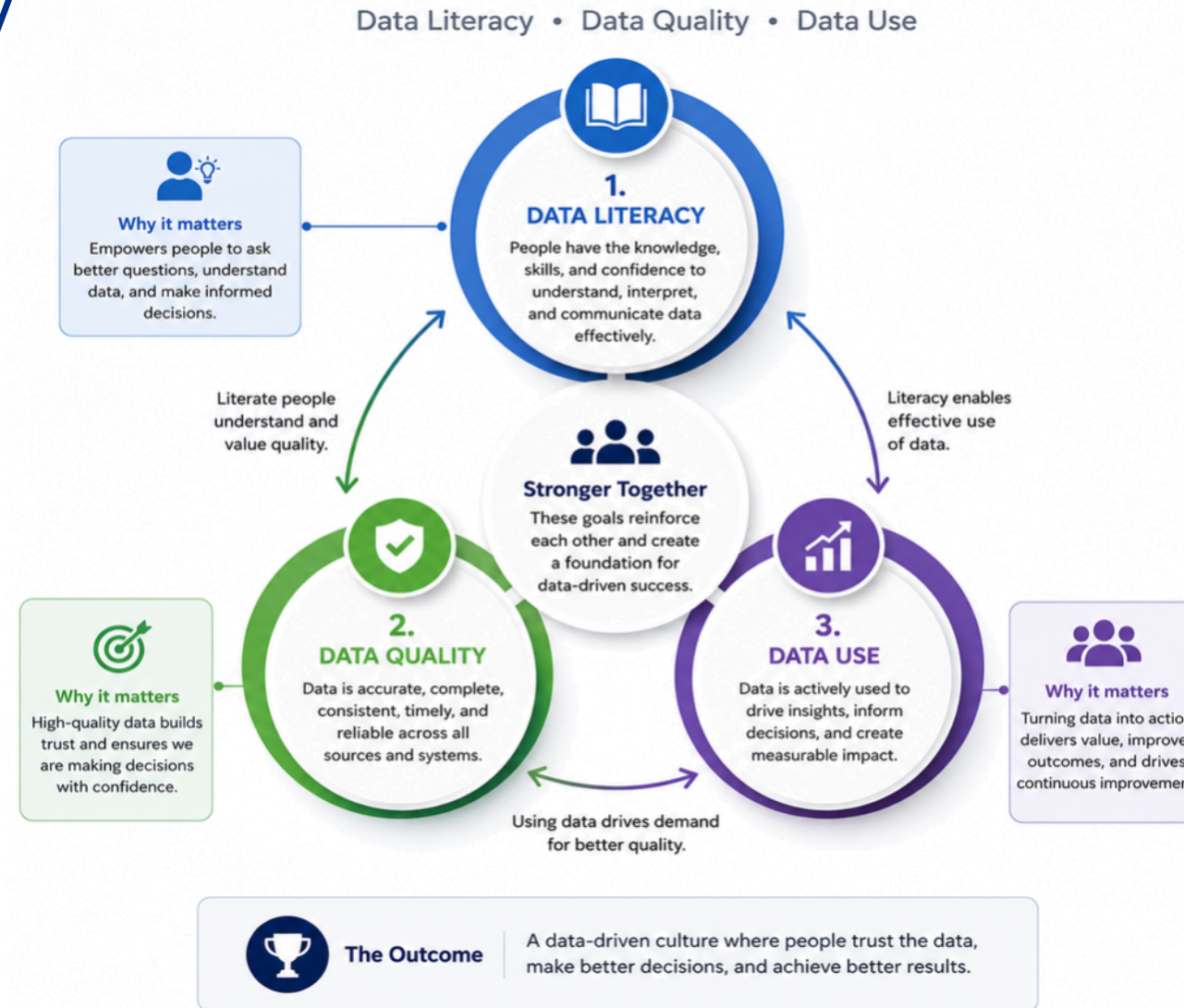


Children's Nebraska Strategic Alignment

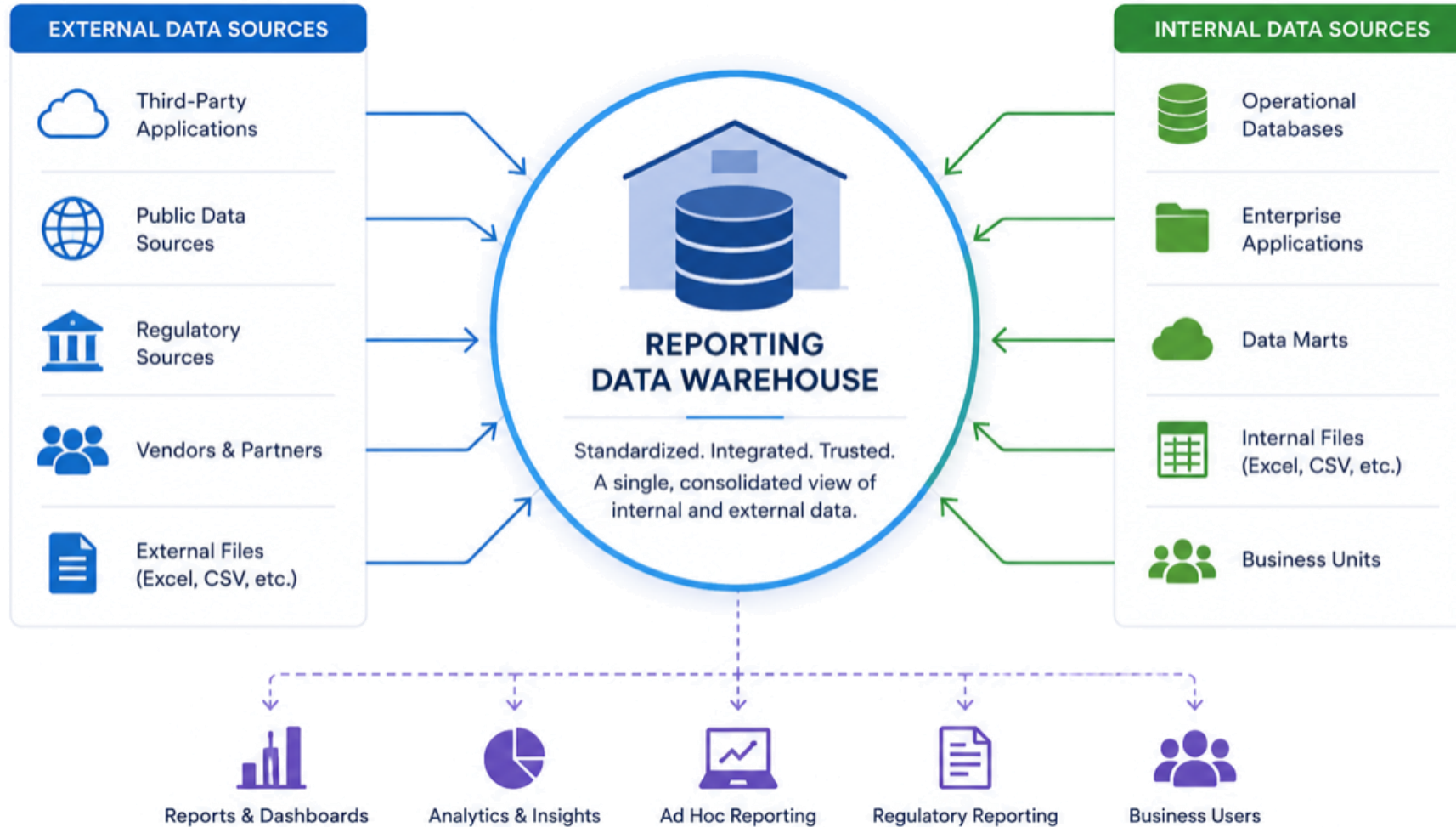
Consolidation of data is
not just technical; it's
organizational alignment.

Core Value: Excellence (Achieve the Extraordinary)

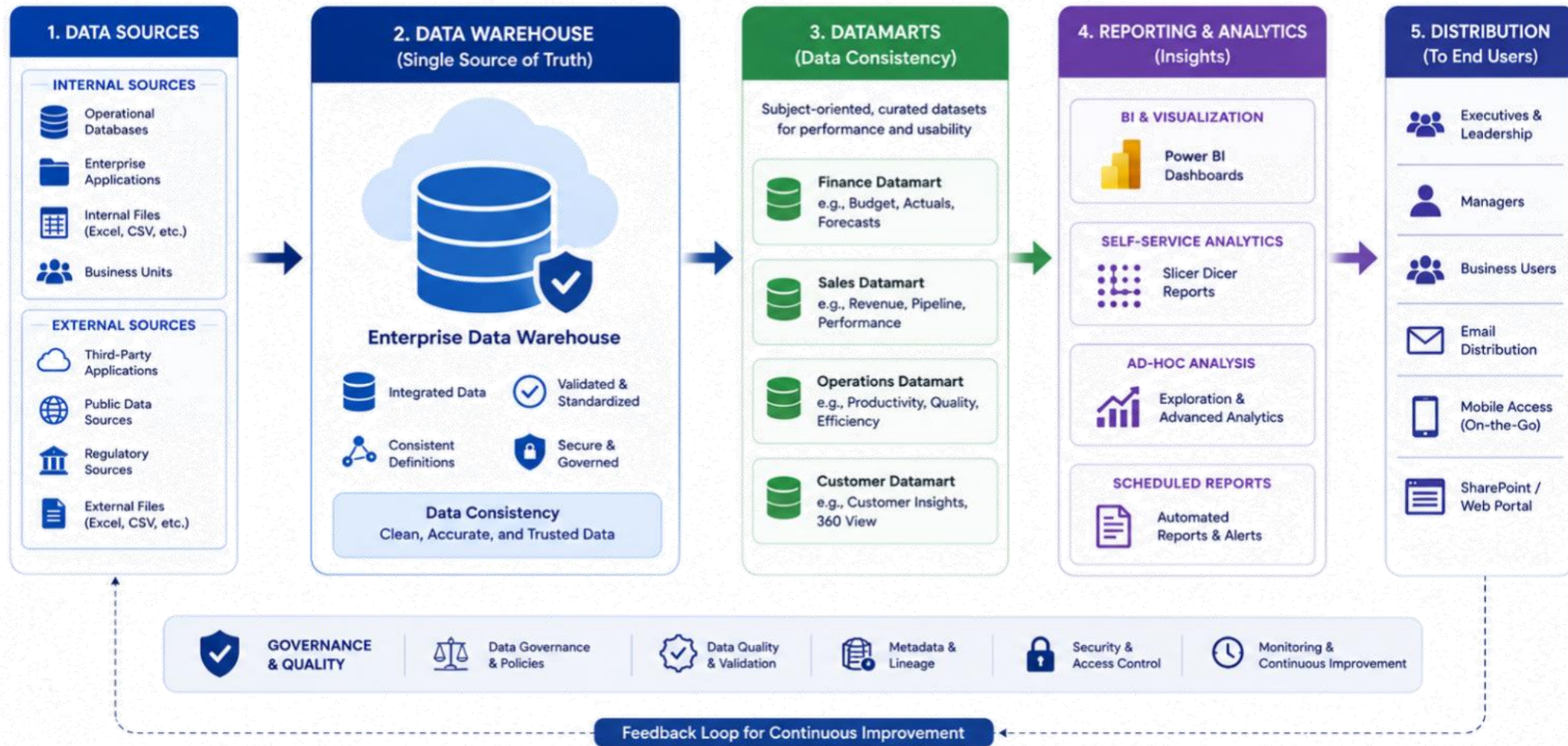
Data Accuracy



Data Warehouse - Liberator



Data Analytics Framework



Culture Shift on Data Accuracy

From **Reactive Reporting** →
Proactive Intelligence

From Siloed Teams →
Shared Accountability

Turning Data into Action

■ Strategic Insights

- Align strategic planning, marketing & communications, business development, operations, and data & analytics around shared organizational priorities
- Identifying growth opportunities using market share, demographic, and performance data

■ Operational Insights

- Improving quality, access, patient experience, scheduling, and patient flow
- Enabling proactive operational decision-making through real-time visibility

■ Financial Insights

- Connecting revenue, productivity, and performance metrics to organizational goals
- Supporting sustainable growth through data-informed financial planning

■ Business Results

- One source of truth
- Automated and scalable reporting
- Improved data accuracy and trust
- Faster, more informed decisions
- Stronger alignment across leadership teams
- Expanded self-service analytics
- Increased organizational agility and strategic impact

From Operational Dashboards to Strategic Decision Making

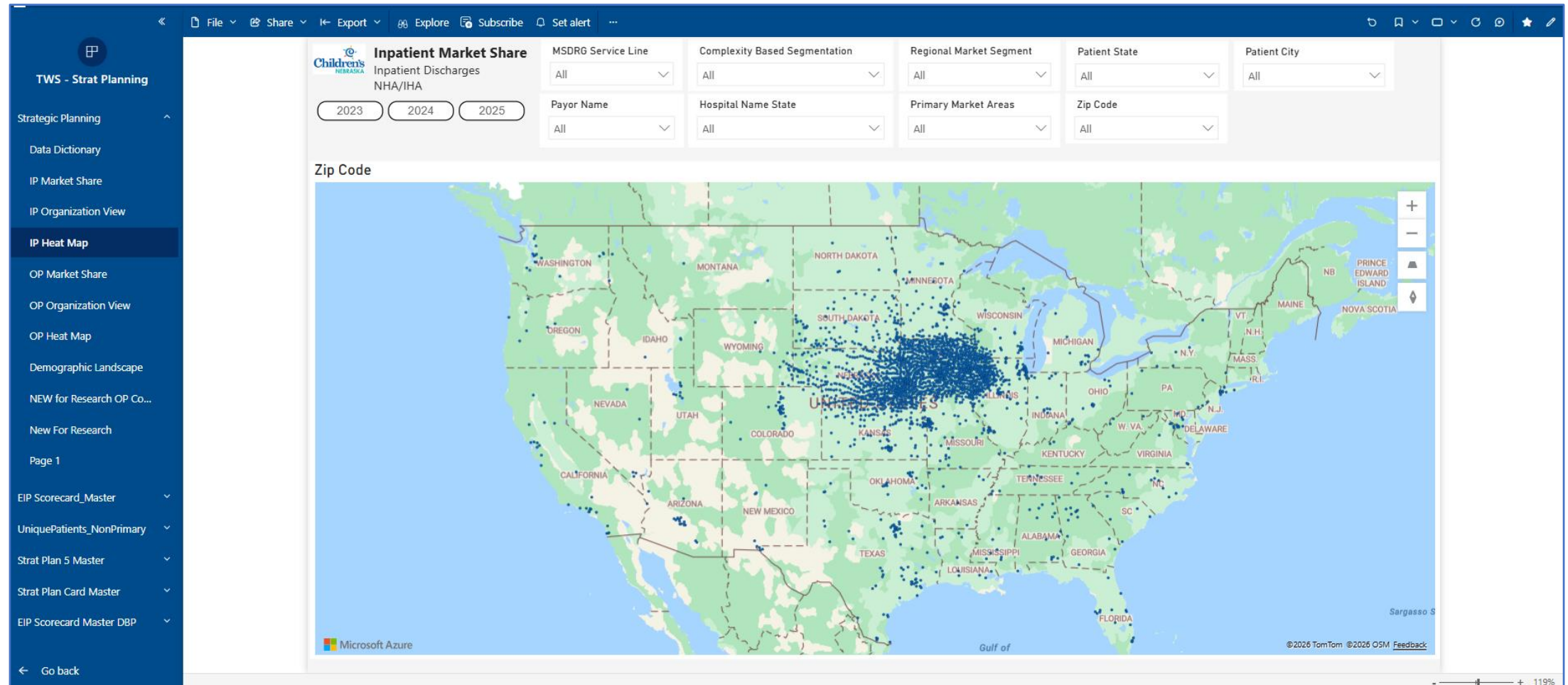
Not all metrics belong on a dashboard



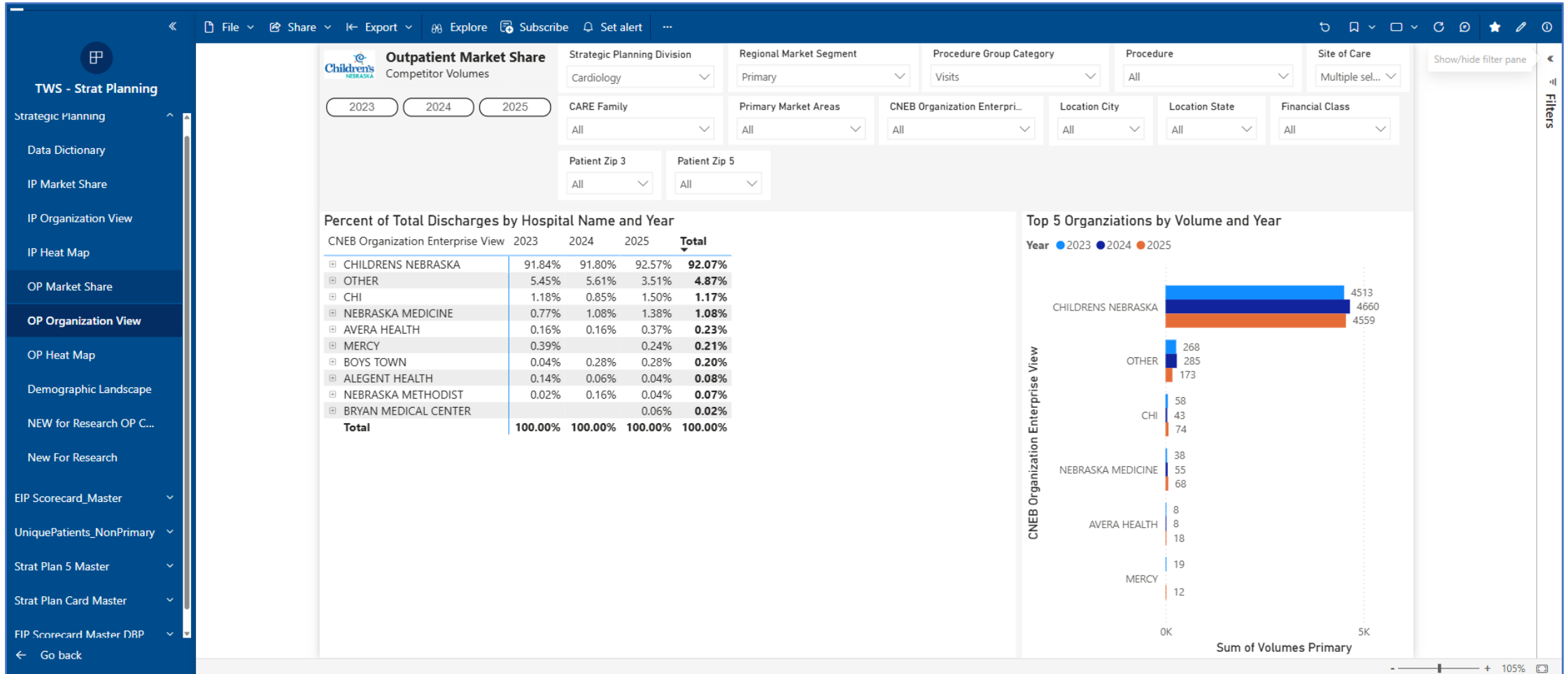
Dashboard Experience (Microsoft Power BI)

Data Dictionary & Information	
Metric	Definition
Inpatient Market Share	Nebraska Hospitals Association (NHA) and Iowa Hospital Association (IHA) inpatient and hospital outpatient data only. MS-DRG Service Line is using the Sg2 definition to mimic the outpatient versions.
Outpatient Market Share	SG2/Vizient outpatient claims data for outpatient setting, includes hospital outpatient "site of care" and open and close claims. Closed claims (also known as fully longitudinal or direct-from-payer data) include payer-derived claims from direct-payer relationships and other payer-related sources. Open claims (also known as clearing house "switch" or claims aggregator data) include provider-derived claims from third-party transactional networks used in the claims processing industry. Ambulatory definitions are set by ICD-9/CD-10 primary diagnosis coding. Inpatient/Observations are definitions set by MS-DRG coding. Visit/discharges are attributed based on primary diagnosis service line, regardless of who provides care (PCP, Specialist, Hospitalist etc.).
Closed Claims	Also known as fully longitudinal or direct-from-payer data) include payer-derived claims from direct-payer relationships and other payer-related sources.
Open Claims	also known as clearing house "switch" or claims aggregator data include provider-derived claims from third-party transactional networks used in the claims processing industry
Payer Derived Claims	claims from direct-payer relationships and other payer-related sources
Provider Derived Claims	claims from third-party transactional networks used in the claims processing industry
Dollar Opportunity	Using the price transparency data we mapped it to the Sg2 claims data giving us a charge amount. Using the financial class we then figure an 80% reimbursement rate and 50% reimbursement rate to calculate the actual opportunity in claims charge amount.
Charge Opportunity	Using the charge amount from the state data we use an 80% reimbursement rate for commercial and 50% for others.
National Market Area	Based on state using the same definitions as the US News Rankings.
Regional Market Area	Based on county for all 6 states we consider in the area.
Regional Market Segment	Based on the regional market areas which determine what areas are in our primary, secondary, etc..
Primary Market Area	Based on zip code it breaks down our Omaha Metro area into different geographical areas for targeting.
Pediatric Population	• Ages 0 to 17 (regardless of patient origin) • Current year and five year population estimates • States include (NE, IA, SD, MN, MO, KS) • Population estimates based on current US Census estimates, US Census American Consumer Survey (ACS), Data Axil, Crime Indexes and Traffic Counts.
Pediatric Population Diversity Index	• Diversity Index is a measure that represents the likelihood of two persons chosen at random from the same area are from different ethnic groups
Data Availability	• Claims data = quarterly • Demographic data = annually • US News data = annually

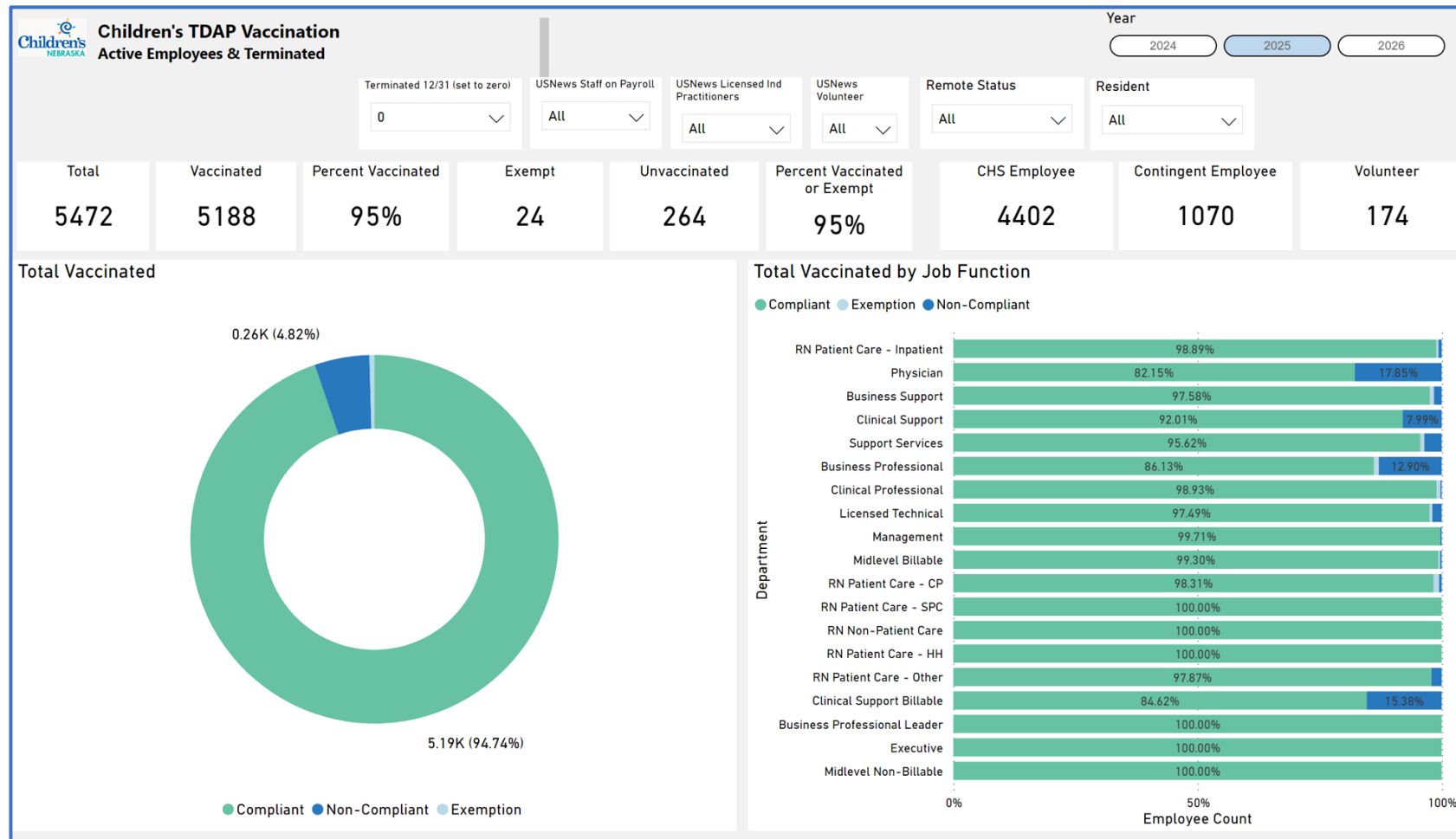
Dashboard Experience (Microsoft Power BI)



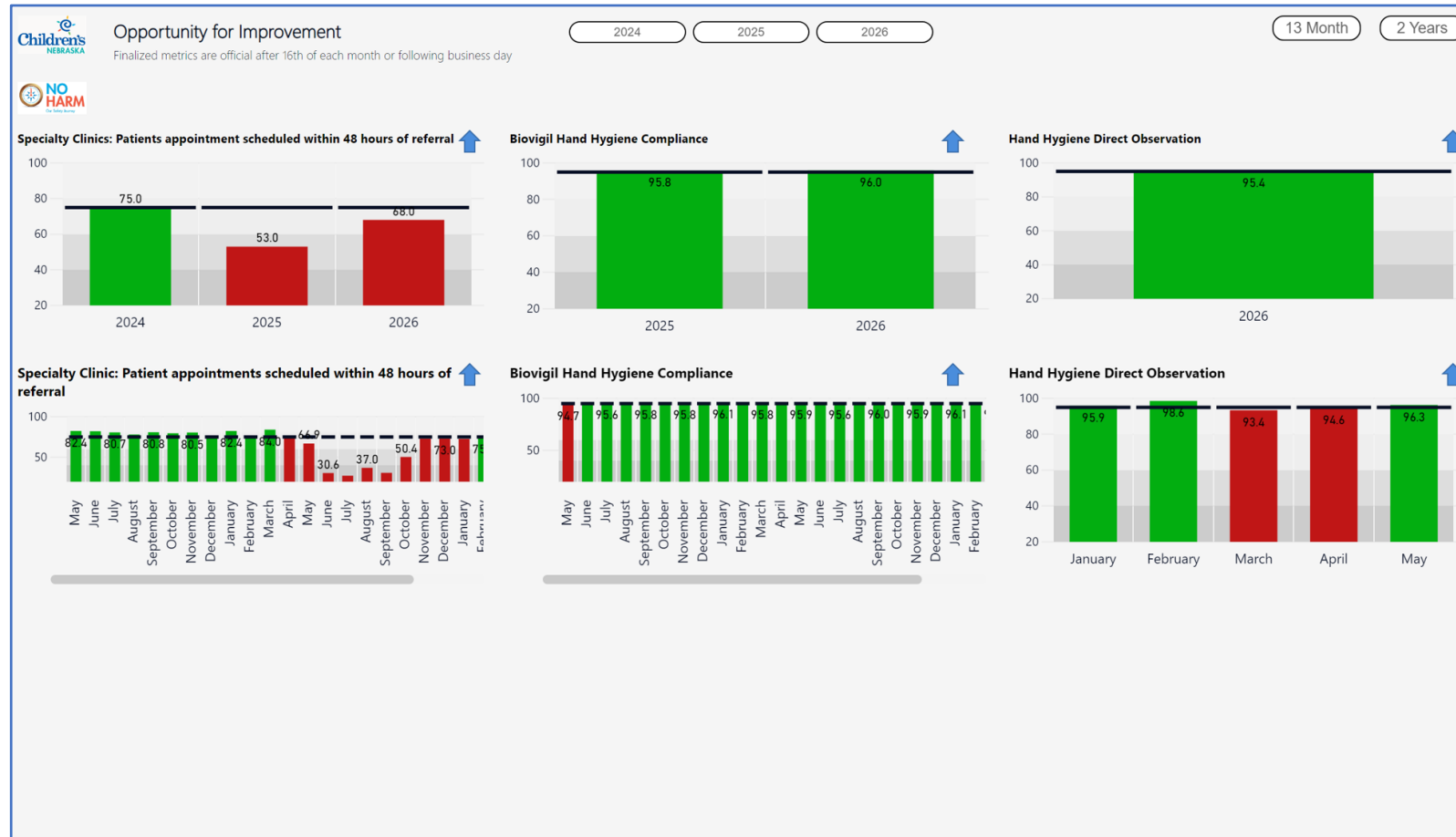
Dashboard Experience (Microsoft Power BI)



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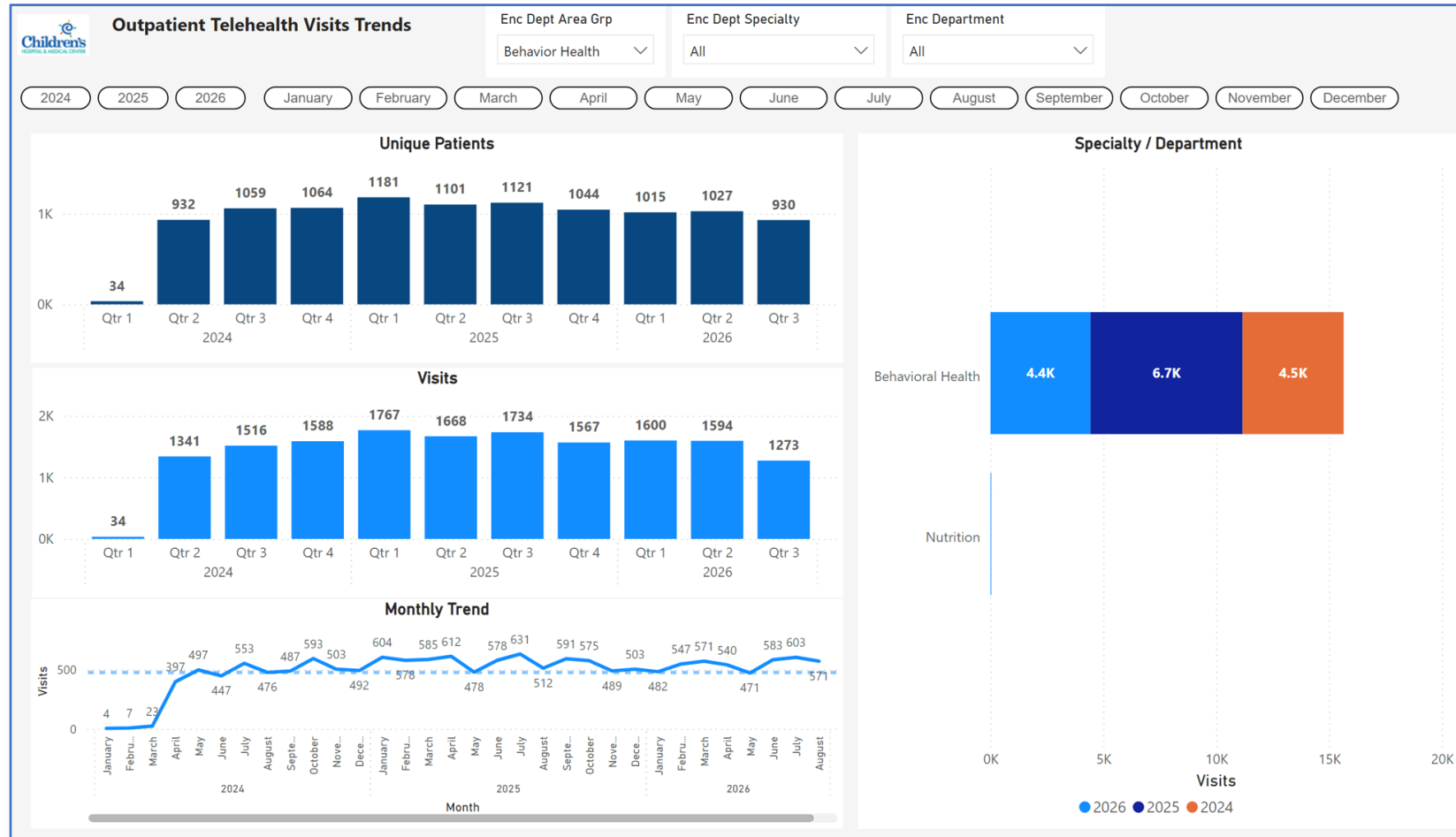
Dashboard Experience (Microsoft Power BI)



Dashboard Experience (Microsoft Power BI)



Dashboard Experience (Microsoft Power BI)



Core Value: Accountability
Act Courageously & Responsibly

200%
Accountability

The best scorecards and dashboards do more than measure performance. They provide the clarity, confidence and decision space leaders need to shape the future of healthcare.

- **Weekly:** Are we executing?
- **Monthly:** Are we performing?
- **Quarterly:** Are we achieving strategy?
- **Annually:** Did we create organizational value?

Mistakes We Would Avoid

- Building dashboards before governance
- Too many KPIs
- Lack of data stewardship
- Executive sponsorship is critical
- Focusing on reporting instead of decision-making
- Waiting for “perfect data”



Our Future State & Scalability

- Expanded Data Ecosystem
 - External Datasets
 - Internal Datasets
 - EMR Dashboards
- Predictive Analytics
- Responsible AI Governance

Top Five Key Takeaways for Healthcare Leaders



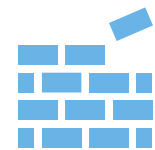
Start with **business questions**,
not data



Invest early in **data
Governance**



Prioritize executive **usability**
over technical complexity



Build iteratively,
don't wait for perfection



Communication is as critical
as technology

Learning Objectives Recap

1. Identify how to **consolidate fragmented healthcare data** into a unified enterprise data warehouse for strategic decision-making.
2. Explore advanced visualizations and how Microsoft Power BI **transforms multiple data sources into interactive dashboards** that uncover growth opportunities.
3. Explain how **collaboration and governance are key** to standardizing workflows, turning a manual reporting structure into real-time, actionable intelligence.

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Questions?

- Where is your organization struggling most with data fragmentation?
- What barriers are you facing in moving to real-time data analytics?

Please be sure to complete the session evaluation on the mobile app!

Speakers



Sergio Orozco

Dir. Strategic Planning & Project Management
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Amber Marquiss

Mgr. Business Intelligence
amarquiss@childrensnebraska.org

Speaker Biography(s)

Amber Marquiss is a Business Intelligence Manager at Children's Nebraska, who transforms complex data into actionable insights that support strategic decision making.

She leads the design and delivery of dashboards, scorecards, reporting content, and data models that help the organization track key performance indicators and uncover opportunities for improvement. She partners with finance, operations, and executive leadership to ensure data solutions align with business goals and governance standards.

Amber also supports the integration of external data into the enterprise data warehouse, ensuring data is structured, validated, and optimized for reporting and analytics. Her expertise includes enterprise data systems, reporting frameworks, and data governance practices that promote accuracy, security, and compliance. She is passionate about building a data driven culture, mentoring team members, and improving processes through collaboration and innovation.



Amber Marquiss
Mgr Business Intelligence
Children's Nebraska

Speaker Biography(s)

Sergio Orozco is the Director of Strategic Planning and Project Management at Children's Nebraska, where he leads enterprise initiatives that align strategy, business development, performance improvement, and organizational priorities.

Partnering closely with executive and operational leaders, he transforms data, market intelligence, and organizational goals into actionable strategies that enhance patient care, operational performance, and sustainable growth.

A bilingual healthcare strategist, Sergio is passionate about leveraging data analytics, governance, and cross-functional collaboration to support informed decision making and long-term strategic success. He holds a Master of Arts in Organizational Communication and Human Resources from the University of Nebraska Omaha. Sergio is SHSMD ADVANCE™ certified in Advanced Analytics for Health Care Strategists. He is an active SHSMD speaker, committee member and mentor.

Beyond his professional responsibilities, Sergio serves on the Board of Directors for Youth Emergency Services (YES), helping advance the organization's mission of empowering youth and strengthening families across Nebraska.



Sergio Orozco

Dir. Strategic Planning & Project Management
Children's Nebraska