Franchising Analytics

decentralizing analytics across the organization

HIMSS
CENTRAL & SOUTHERN OHIO *Chapter*

about me

- husband for almost 4 years

- father for the almost 3 years

- software engineer by training

- 17+ years specifically in healthcare data management and analytics

- equal parts of my career on the provider & the vendors sides

- co-founder of the very first enterprise analytics specifically built for healthcare

- involved implemented analytic at large academic medical centers, children's hospitals, and large for profit systems

NATIONWIDE CHILDREN'S
When your child needs a hospital, everything matters.

about us

» More than 1.4 MILLION Patient Visits

»102,991 DONORS raised more than $107.2 million

America's Largest Children's Hospital

AMERICA'S
LARGEST
CHILDREN'S
HOSPITAL

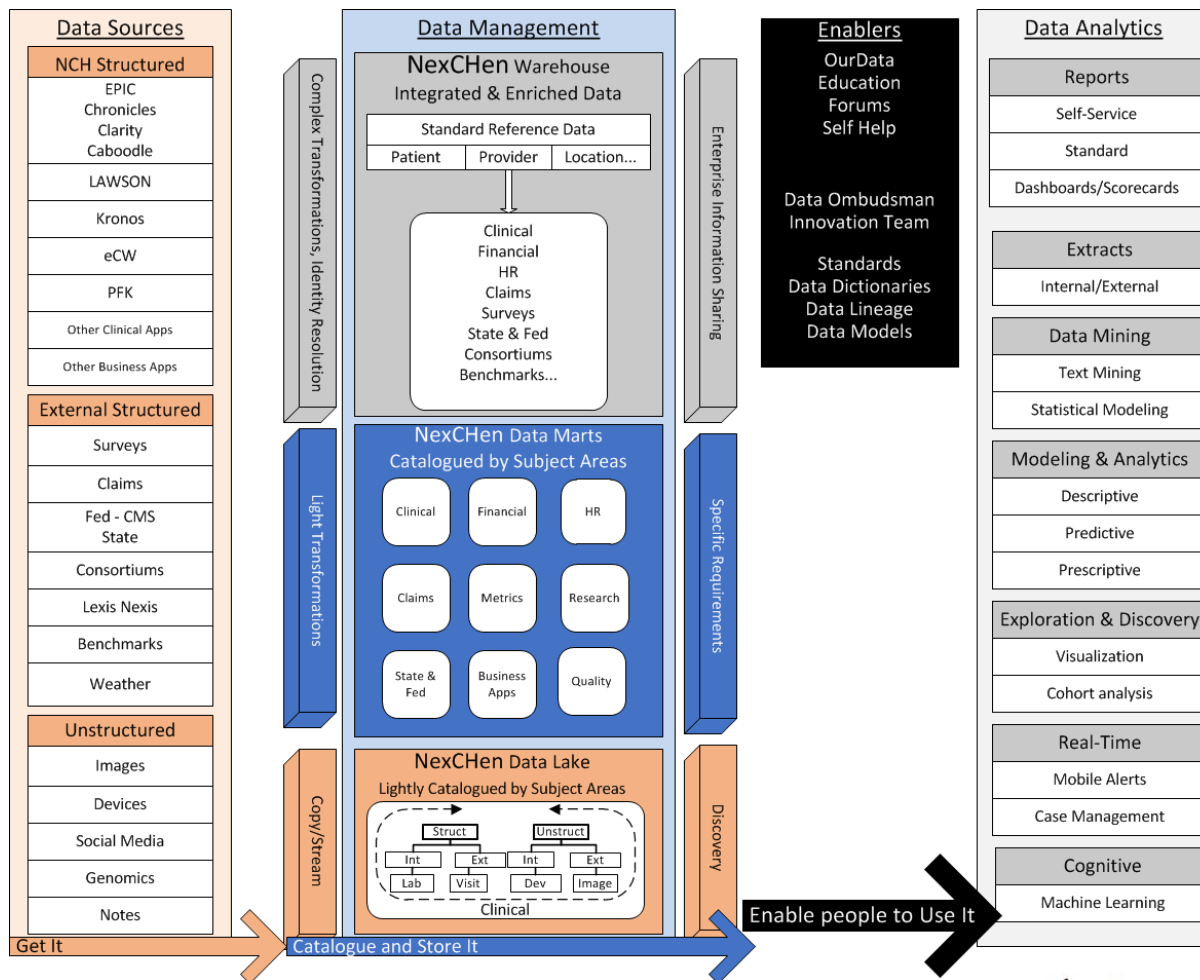» Patients from 50 U.S. STATES and 52 FOREIGN COUNTRIES

» The Research Institute at Nationwide Children's Hospital IS ONE OF THE TOP 10 NIH-funded freestanding pediatric research facilities in the U.S.

» Once again listed on the *U.S. News & World Report's* Best Children's Hospital Honor Roll, a distinction awarded to only a select few children's centers in the U.S.

BEST
CHILDREN'S
HOSPITALS
U.S.News & WORLD REPORT
HONOR ROLL
2016–17

our environment

Data Sources

NCH Structured
- EPIC Chronicles Clarity Caboodle
- LAWSON
- Kronos
- eCW
- PFK
- Other Clinical Apps
- Other Business Apps

External Structured
- Surveys
- Claims
- Fed - CMS State
- Consortiums
- Lexis Nexis
- Benchmarks
- Weather

Unstructured
- Images
- Devices
- Social Media
- Genomics
- Notes

Get It

Data Management

Complex Transformations, Identity Resolution

NexCHen Warehouse
Integrated & Enriched Data

Standard Reference Data

| Patient | Provider | Location... |

Clinical
Financial
HR
Claims
Surveys
State & Fed
Consortiums
Benchmarks...

Enterprise Information Sharing

Light Transformations

NexCHen Data Marts
Catalogued by Subject Areas

Clinical | Financial | HR
Claims | Metrics | Research
State & Fed | Business Apps | Quality

Specific Requirements

Copy/Stream

NexCHen Data Lake
Lightly Catalogued by Subject Areas

Struct | Unstruct
Int | Ext | Int | Ext
Lab | Visit | Dev | Image
Clinical

Discovery

Catalogue and Store It

Enablers
OurData
Education
Forums
Self Help

Data Ombudsman
Innovation Team

Standards
Data Dictionaries
Data Lineage
Data Models

Enable people to Use It

Data Analytics

Reports
- Self-Service
- Standard
- Dashboards/Scorecards

Extracts
- Internal/External

Data Mining
- Text Mining
- Statistical Modeling

Modeling & Analytics
- Descriptive
- Predictive
- Prescriptive

Exploration & Discovery
- Visualization
- Cohort analysis

Real-Time
- Mobile Alerts
- Case Management

Cognitive
- Machine Learning

our challenge

- need to scale the expertise the organization has in the Analytics Core Team

- decrease the amount of time between initial data request and when that data is delivered while maintaining or increasing the data quality

- increase stability & consistency of data projects across the organization by adopting standards

organizing ourselves

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staffing & organizing

Analytics Core Team

Business Intelligence	Data Management	Database Administration
• 7 team members	• 9 team members	• 4 team members
• Qlik, BO, Crystal Reports, R, Python	• BODS	• Oracle & MS SQL
• trained in process improvement	• curate datasets	
• deliver training	• resolve identity	
• relationship management	• masters data	

Analytics Core Team primary responsibilities

- the Analytics Core Team provides server and application support and maintenance on behalf of all teams

    – Qlik, BO, Crystal, Clarity, EDW, PFK DW

- the Analytics Core Team will maintain and enforce centralized policies and processes to support governance and development best practices and communication channels between Franchises and the Core Team

    – e.g. Communication channels- ourData portal, messageBoard

    – e.g. Visualization best practices, presentation standards

    – e.g. Publication process including code reviews

    – e.g. Training opportunities

- the Analytics Core Team will support Franchise Owners in adhering to processes to ensure the ongoing maintenance and improvement of the global level extracts, transforms, curated data sets and visualizations

staffing & organizing a franchise team
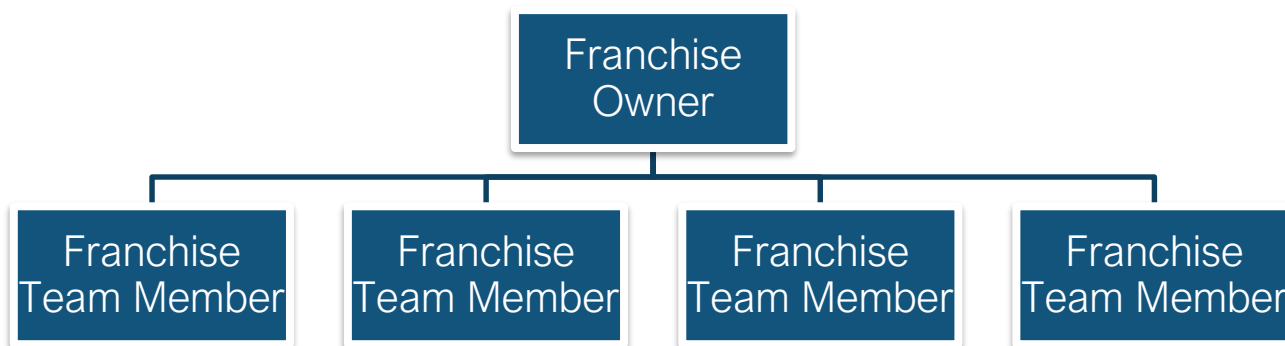
franchise owner responsibilities

- Franchise Owners are individuals with operational ties to a Franchise Team and the <u>technical skills of someone on the Analytics Core Team</u>

- Franchise Owners own application-level extractions and transformations as part of the development process

- Franchise Owners own application and support UI development

- Franchise Owners advise the Analytics Core Team on global extractions and transformations based on the experience they have in developing applications for their team's needs

- Franchise Owners may conduct peer review in lieu of a Analytics Core Team member, provided the reviewer is independent for the application's initial development

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summary responsibilities

Analytics Core Team

- provide expert level support on enterprise analytics tools
- establish presentation standards & best practices
- establish coding and standards
- create and maintain global resources
- server administration including upgrades
- publish application and content

Franchise Owner

- provide business knowledge
- create application specific extractions and transformations
- develop and publish applications for their franchise area
- audit application to ensure compliance with standards for their franchise area before publishing
- control access to applications for their franchise areas
- participate in as moderator in data community group communication areas

Franchise Team

- collaborate with franchise administrator on issues
- application design
- data validation
- metric management for their franchise area
- actively participate in data community group communication areas

keys to success

- staff the team appropriately

  – more than just technical skillset

  – need <u>account management skillset</u>

  – need training skillset

- publish & strictly enforce standards

  – e.g. code standards, UI, etc…

- identify strong Franchise Owners

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Question

Contact information;

- jason.buskirk@nationwidechildrens.org

- Office: 614-355-3945

- https://www.linkedin.com/in/jasonbuskirk/