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Driving Digital Innovation with Data Analytics:

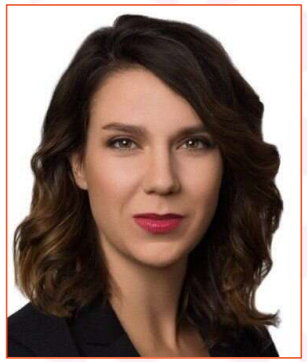
Stories of Success

19th Oct 2021 | 12 p.m. EST

About our Speakers

Sudish Mogli
Chief Technology Officer

As the CTO, Sudish Mogli drives the overall strategic vision of Healthcare Triangle and is responsible for the product strategies of next generation applications and solutions for customers in regulated industries such as Life Sciences, Pharma, Healthcare and Financial Services.



Ashleigh Rogers
Vice President, Healthcare

As Vice President of Healthcare at HTI, Ashleigh leads the Healthcare division, providing sales and delivery leadership, relationship management, and innovative product solutions. She draws on over 15 years of experience delivering innovative technology solutions, with a focus on provider organizations.

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In this presentation, participants will:

- Explore why a data-based approach to digital innovation is key to driving and sustaining value in healthcare.
- Discuss the challenges of using data—especially unstructured data—to pinpoint patients' needs and close gaps in care.
- Assess three healthcare organizations' approaches to charting a path for digital health transformation informed by data analytics.

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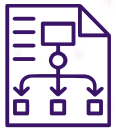
Digital Innovation Is Happening:

30% of outpatient care will shift to virtual care by 2022

Nearly one-in-three healthcare organizations will deploy virtual assistants for patient triage by 2023



35% of healthcare organizations will shift workflows outside the EHR to deliver better digital experiences by 2023

Ability to achieve this innovation is dependent on:

- Capturing and analyzing data from disparate sources
- Using the data to understand individuals' unique health needs
- Modernizing technology infrastructure to enable next generation use cases

Source: Predicts 2021: Healthcare Providers Must Accelerate Digital Transformation to Address Disruption, Gartner Research, Nov. 25, 2020.

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A Constant Struggle: Managing the Data

64% of healthcare leaders say they don't have a strong data analytics function

Six-in-10 healthcare leaders say their organization struggles with incomplete data and poor-quality data

Source: Caldwell, H. Mallory, "How Health Care Organizations Can Improve Their Digital Strategy," EY, March 24, 2021.

Breakdowns in data capture occur when:

- Patient data is not fully captured at the point of care
- Data gets stuck in electronic silos
- Data is trapped in paper
- Data is incomplete and not actionable

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This is an area where digital transformation could make a substantial difference.

It's time for healthcare organizations to:

- Strengthen data capture and retrieval
- Turn up investments in data analytics
- Make the move to cloud-based data security and management
- Hone in on data-based innovation

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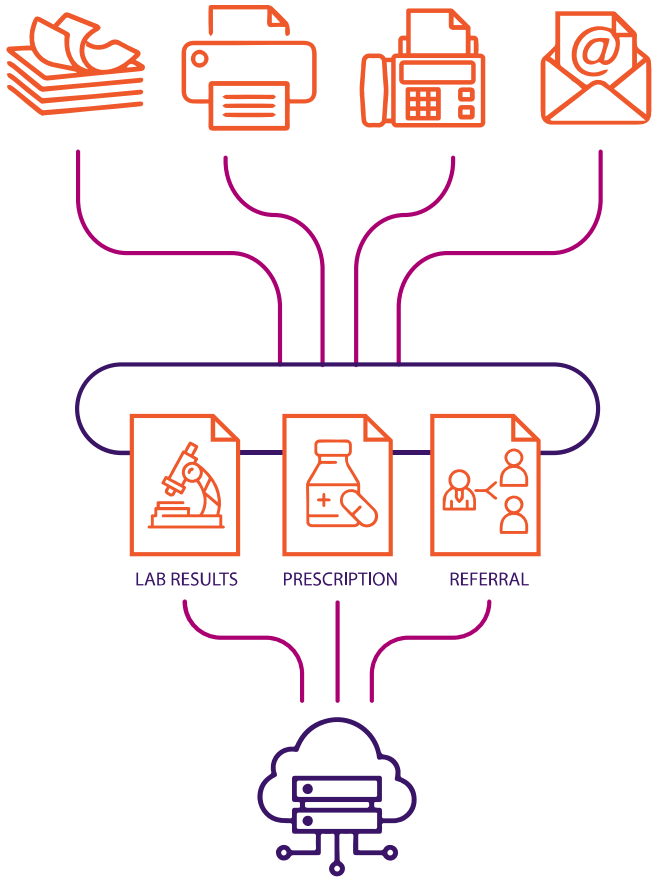
Strengthen Data Capture

- Automate paper-based data retrieval.
- Apply AI and natural language processing to intelligently extract information from faxes, scanned documents and narrative text.



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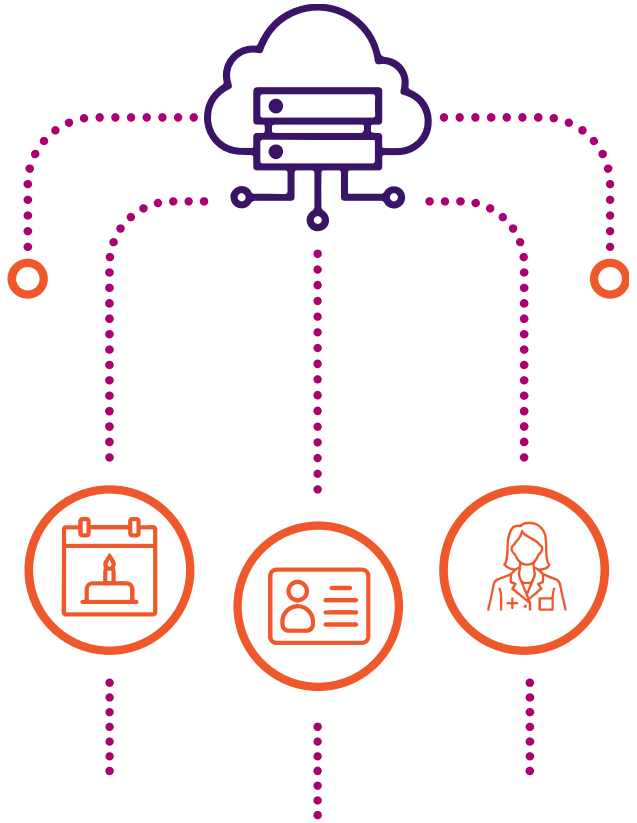
Turn Up Investments in Data Analytics

- Ensure your digital platform can handle the upcoming surge in digital data
- Create an infrastructure flexible enough to handle any data workflow



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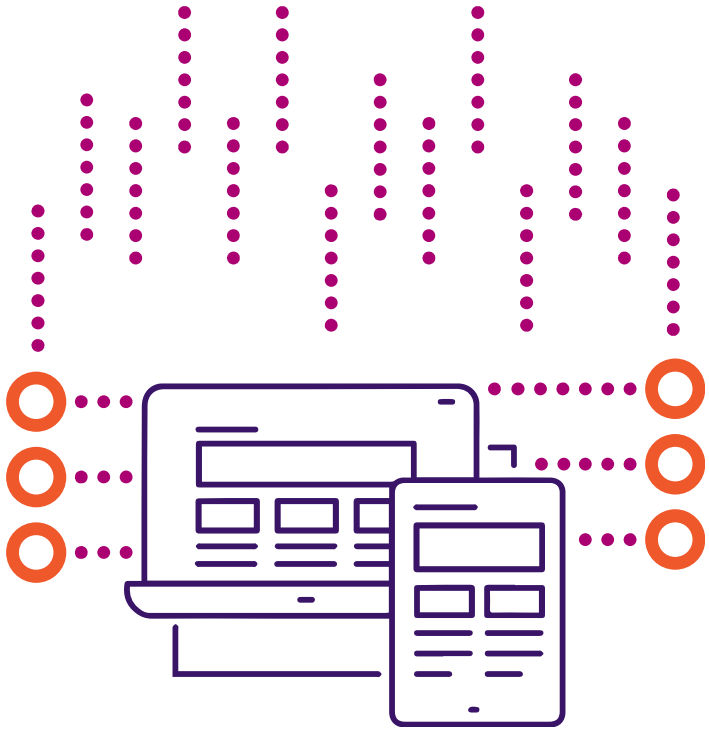
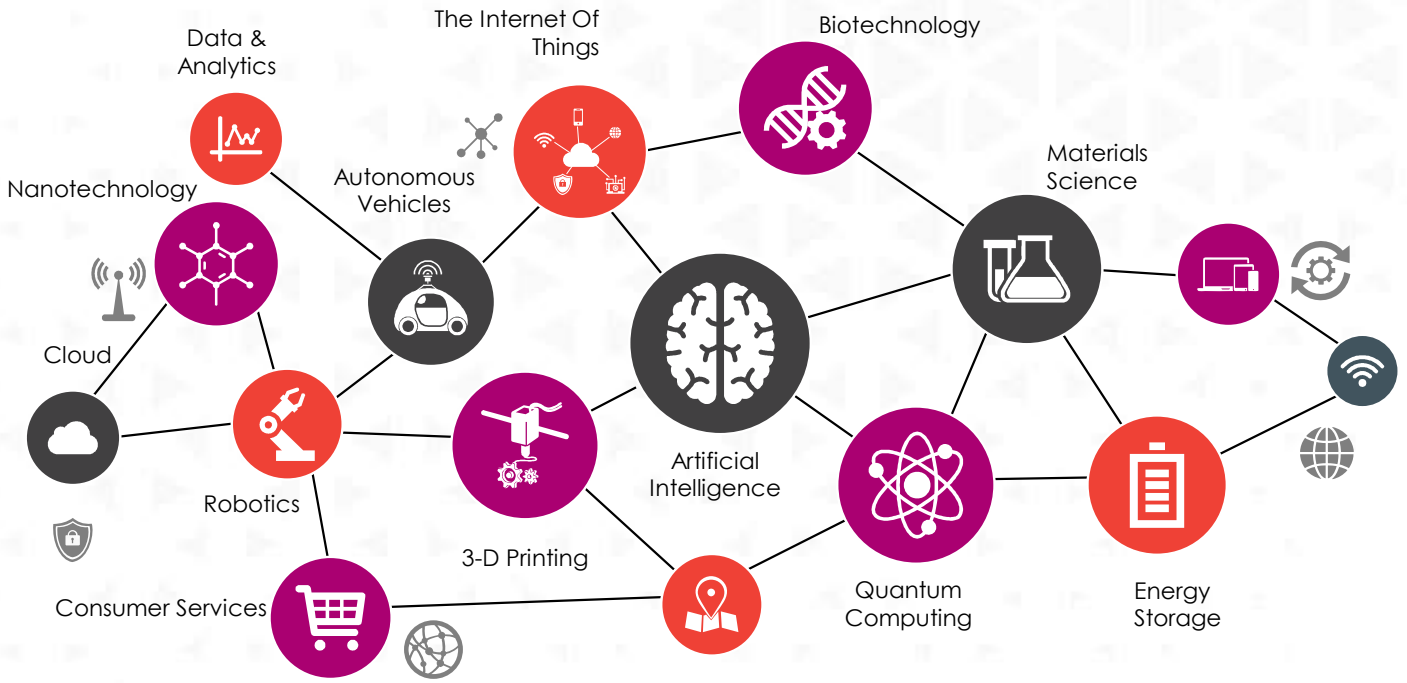
Make the Move to Cloud-based Data Security and Management

- Move to a public cloud to bolster data security and management
- Create a cloud center of excellence and staff it with specialized support



Healthcare Innovation in the Cloud

Cloud is the gateway to Innovation



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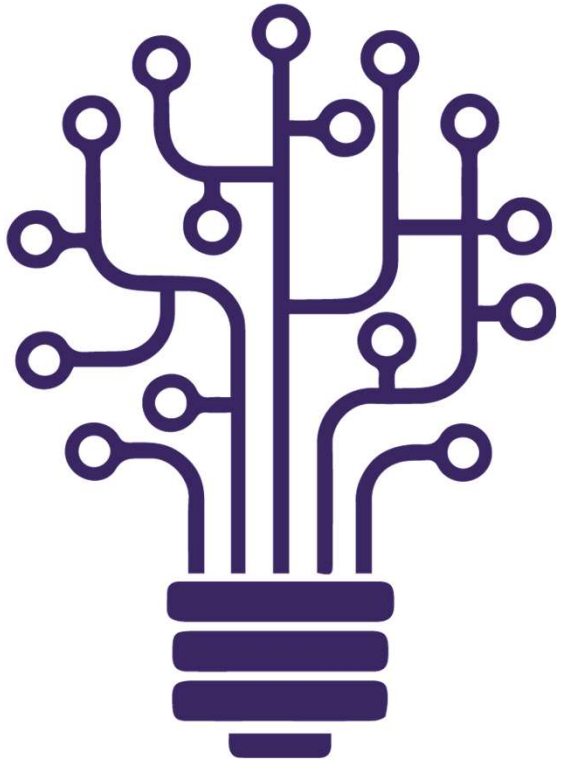
Data-Based Innovation Using The Cloud

- Explore cloud-based data analytics
- Connect disparate data sources for more powerful insights



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Three Healthcare Examples

Case Example: Mid-Sized Health System

About:

- Headquartered in S.D.
- Community health system serving 14 communities
- 5,000 physicians and caregivers
- Five hospitals and 38 medical clinics and specialty centers
- More than 130 active research studies

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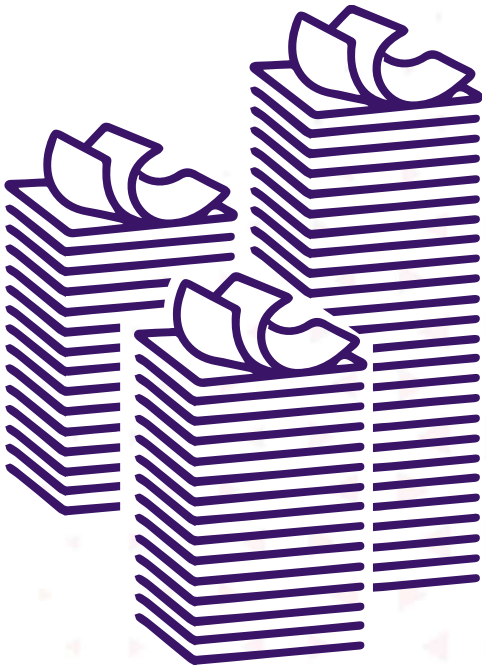
The Challenge



- Received data from multiple sources in myriad forms
- Ingested thousands of pages of data daily, which were entered manually
- Needed an advanced automation solution for image recognition and document analysis

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The Solution

Leverage cloud-based AI and machine learning to:

- Automate the process of categorizing data from unstructured reports
- Recognize and extract information from documents, faxes and narrative reports
- Pair the right information with the right patient records
- Increase the speed with which critical data can be shared with providers

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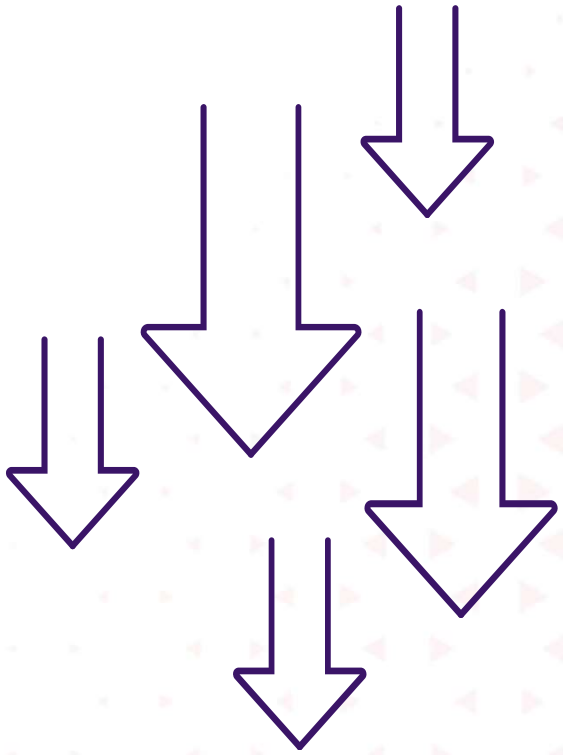
The Impact



By using AI, machine learning and natural language processing for data retrieval:

- Streamlined patient care through faster processing
- Reduced costs through labor savings
- Improved accuracy through use of the latest AI and language processing models
- Increased scalability through the public cloud
- Enhanced efficiency and access to error-free data

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Case Example: Senior Care Organization Headquartered in NC

About :

- Uses remote monitoring to help seniors age in place
- With remote monitoring data, providers can assess health status and intervene before it becomes an emergency
- First care service of its kind to pair state-of-the-art technology with personalized health services

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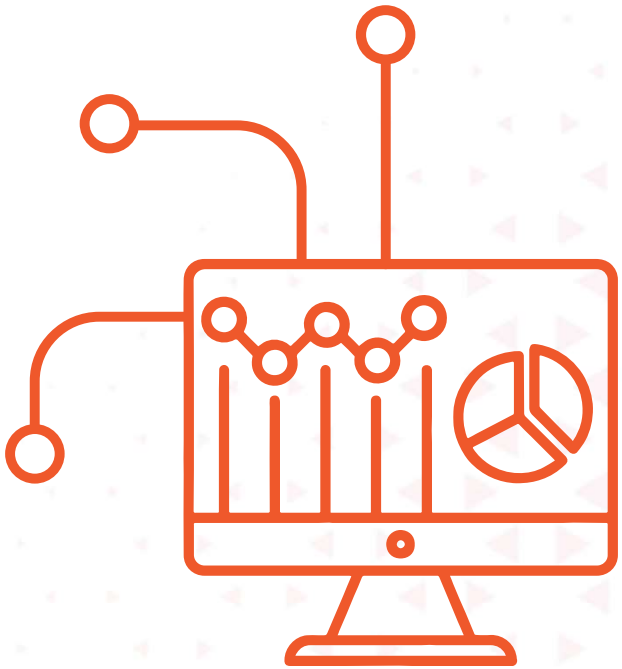
The Challenge



Needed:

- A platform with an intuitive portal to ingest digital health data from disparate devices and sensors
- A mobile application that could continuously monitor and share health metrics with providers on demand
- Alexa integration to query patient health
- The ability to perform predictive analytics based on prior outcomes and readings from monitoring devices.

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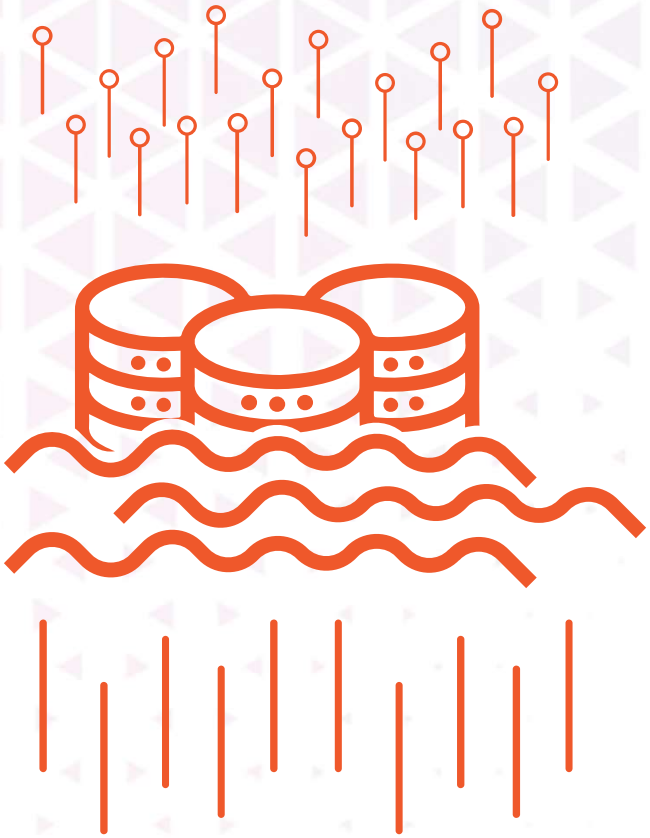
The Solution

Company invested in a self-cataloging data lake and automated data quality check solution:

- A cloud-based data lake ingests data from various devices and sensors and stores it.
- Scalable dashboard is capable of monitoring hundreds of thousands of patients at once.
- Stored data can be consumed by the dashboard and mobile applications for continuous monitoring.
- AI and machine learning detect anomalies and prompt clinicians for follow-up in real time.



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The Impact

- Continuous monitoring and communication that improves the quality of healthcare services provided
- Earlier detection of illness through anomaly detection and predictive analytics
- Real-time fall detection and alerting

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Case Example: Large scale Healthcare & BioPharma Organization

About :

- Handles large scale research and personal health information
- Required a peta-byte scale data & analytics platform
- Made the move to the cloud, but failed to achieve effective digital innovation and agility

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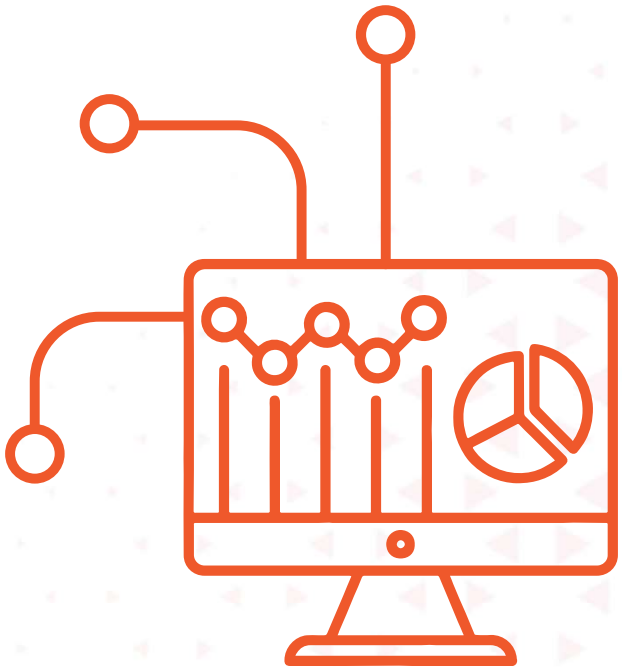
The Challenge



- Needed elastic data platform to process large amount of data
- Stuck in a data center mindset - treated the cloud as an extension of their data center
- Did not leverage advanced cloud capabilities or services (e.g., elastic storage, Serverless, containers, data analytics, etc.)

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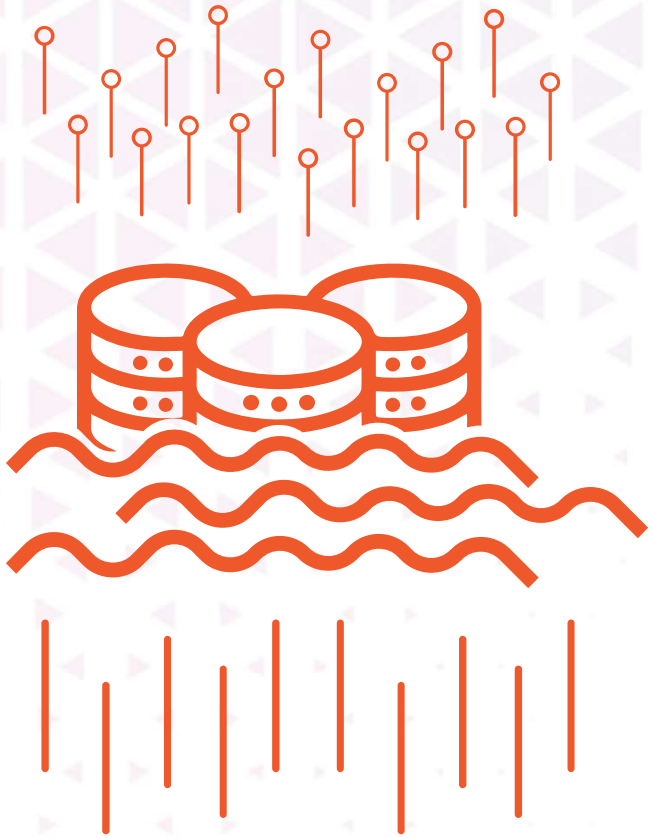
The Solution

Company decided to modify their approach and practices

- Adjusted cloud approach to consider infrastructure as code and automation
- Leveraged advanced cloud services to gain better insights
- Implemented agile methodology with continuous integration and continuous delivery.
- Enabled end user friendly big data and analytics capabilities



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The Impact

- Accelerated delivery of new drugs and research results to market
- Measured effectiveness of drugs using real world evidence
- 30% reduction in operational cost
- Continuously up to date and secure digital transformation platform to handle patient data

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Key Takeaways

At the end of the day…

- Digital innovation is happening
- Leaders should develop a strategic approach to achieve the required digital transformation to support this innovation
- It's not as complex as perceived
- Take the first step

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Questions

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Want to learn more? Contact us.

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