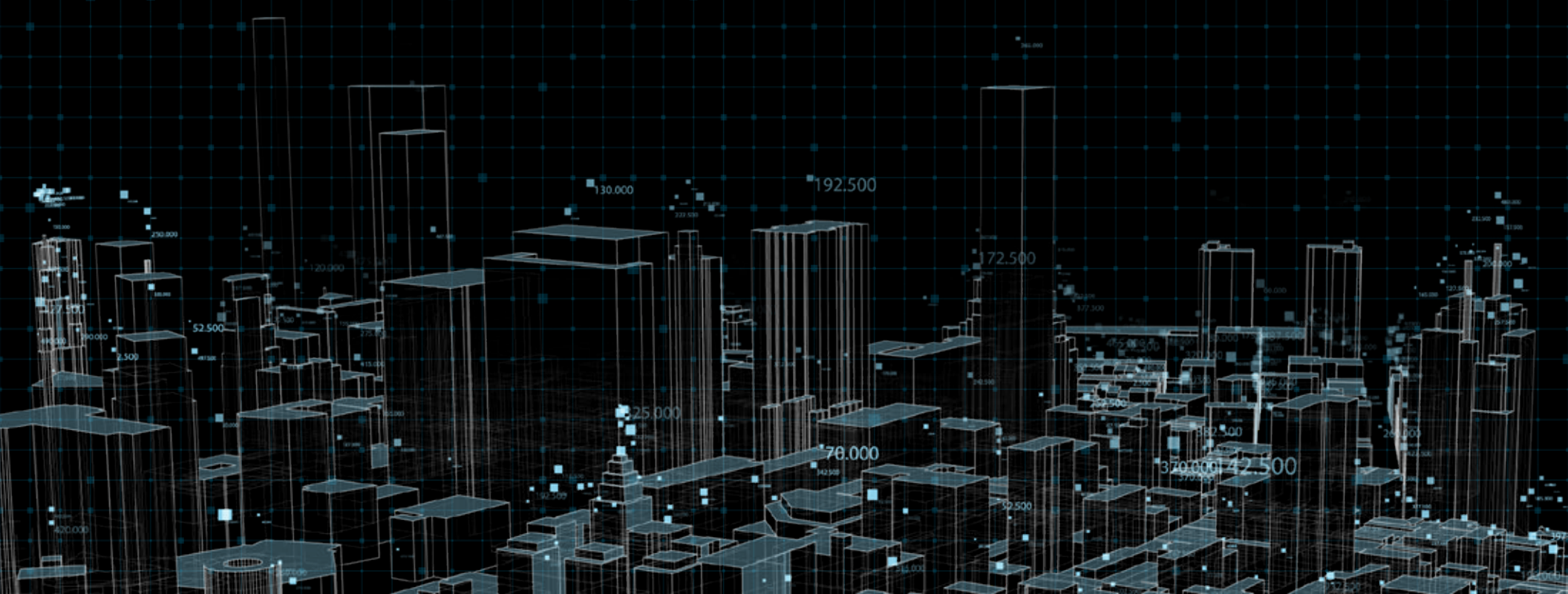


Building a Future-Ready Data Platform for the City of North Las Vegas

From Data Silos to Citywide Intelligence



Architect Intelligence

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Abstract

The City of North Las Vegas set out to reimagine how it uses data to serve its citizens. Across departments—from parks and recreation to public safety—teams were relying on manual reports and siloed databases. The data existed, but it lived in different systems, was hard to access, and often out of date by the time decisions were made. Forward-thinking internal champion, Nichole Malichky, Data Architect, backed by City leadership, envisioned a smarter future: one where the City could see its operations in real time, respond faster to citizen needs, and plan investments based on data, not gut feel.

She just needed the right partner to help make that vision real.

Enter Arctiq. After hearing about the City's ambitions through a trusted relationship, Arctiq quickly engaged its data and cloud engineering experts to explore options, outline a roadmap, and co-create a platform that could grow with the City's evolving needs.

What began as an exploratory conversation soon became a full-scale digital transformation—the creation of a secure, automated, and scalable platform that lays the groundwork for smarter decision-making, operational agility, and better citizen outcomes.

The Challenge

For years, data within the City was decentralized—stored across multiple systems, often inaccessible, and requiring labor-intensive manual work to gather insights. Nichole Malichky, the City’s Data Architect, recognized that if departments were to serve the public more effectively, they needed access to real-time, trustworthy data without waiting days or weeks for reports. Departments such as Parks & Recreation had rich data, but pulling useful information from their systems required external vendor support or manual processes.

“ We were paying for systems to collect data but then had to pay again just to get insights from it. That made it hard to support program planning or respond quickly to community needs.

— **Nichole Malichky**
Data Architect, City of North Las Vegas

The business drivers were clear:

- Eliminate manual, redundant data processes
- Enable real-time access to operational and citizen data
- Support cross-departmental collaboration and transparency
- Lay the foundation for open data, performance tracking, and long-term strategic planning

At the same time, mandates were pushing the City toward greater cloud adoption. Yet, without a defined strategy or platform, the risk of choosing the wrong path—or building something that couldn’t scale—was high. Malichky had a bold vision: to create a centralized data platform that could ingest data from across the City’s operations, enable real-time analytics, and evolve into a self-service environment where each department could pull its own insights and act faster.



Arctiq's Approach

Through a collaborative discovery phase and technical analysis, Arctiq helped the City of North Las Vegas align its strategic goals with a scalable solution architecture.

Lifecycle Services Delivered:

Insight **IQ**

Initial discovery and stakeholder alignment

Design **IQ**

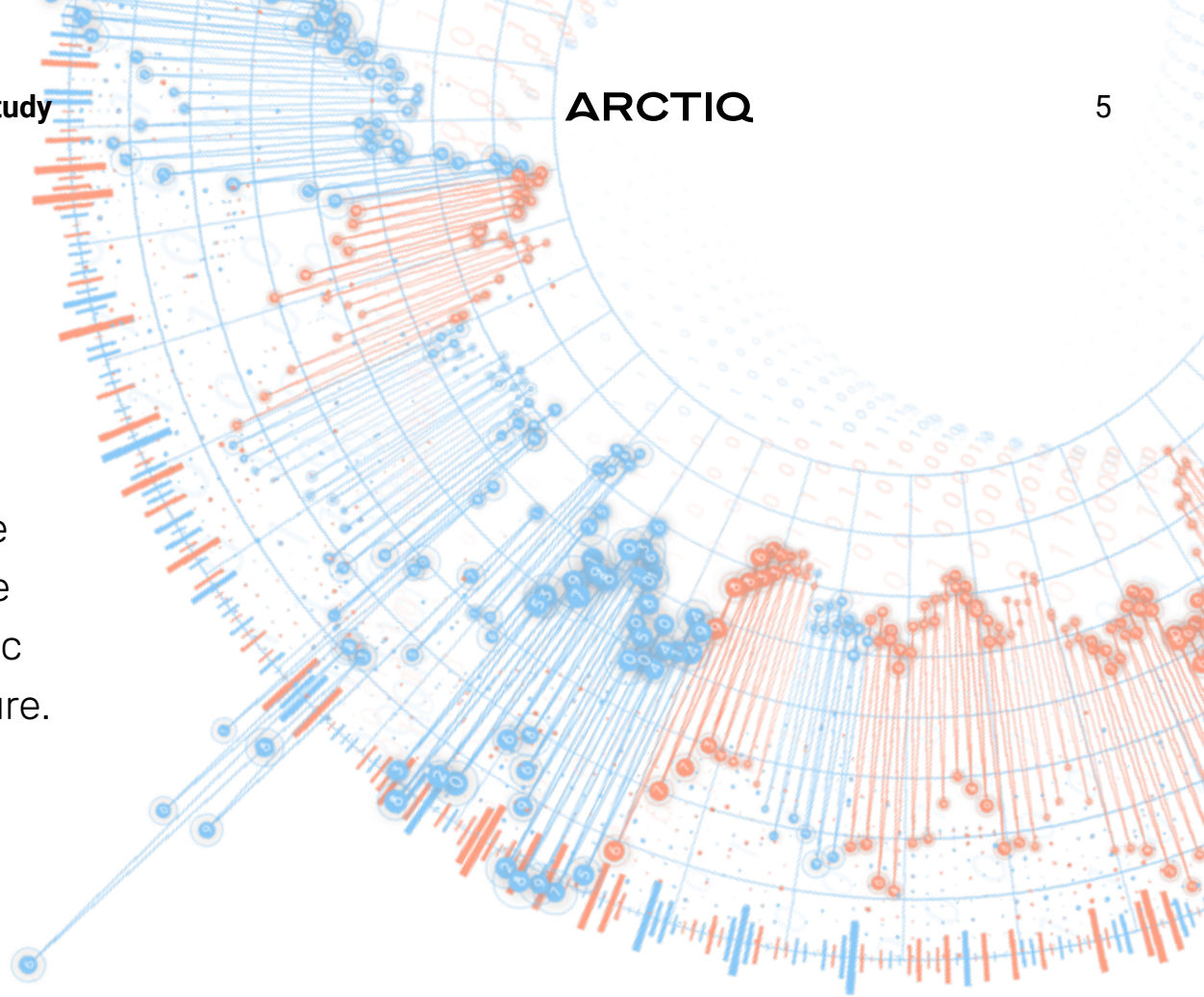
Architectural blueprint for a Data Lakehouse platform on Azure Databricks

Build **IQ**

Cloud infrastructure and platform deployment using Terraform

Enable **IQ**

Enablement and DevOps pipeline automation



The Solution

Working closely with the City, Arctiq delivered the following core components:

Microsoft Azure Landing Zone

Arctiq built the City's first Microsoft Azure Landing Zone—establishing cloud governance, cost management alerts, and security baselines. This foundation not only enabled the data platform but positioned the City for broader cloud adoption. Arctiq's certified Azure architects ensured the platform met government cloud standards while optimizing for operational readiness and cost control.

Enterprise Data Lakehouse with Azure Databricks

A highly secure, privately networked Databricks environment was deployed using Infrastructure-as-Code and CI/CD pipelines. This architecture ensured repeatability, scalability, and resilience—enterprise-grade from day one. Leveraging Arctiq's platform engineering and security architecture expertise, the City received an enterprise-class solution aligned with industry leading practices in data protection and zero-trust architecture.

Automated Ingestion & SDLC

Arctiq developed data integration pipelines for three critical data sources - ArcGIS, ReportsWorld, ActiveNet - using Databricks Delta Live Tables. The City can now:

- Ingest and transform data continuously
- Promote tested pipelines from development to staging to production using a DevOps-driven workflow via Databricks Asset Bundles
- Eliminate manual steps and reduce risk with version-controlled code deployment

Arctiq's DevOps consultants enabled version-controlled pipeline development, with CI/CD automation that ensures consistency from development to production.

Cloud Cost Governance

Cost control policies were put in place to alert the team at 80% and 100% of monthly budget thresholds, empowering them to proactively manage Azure consumption.

From Vision to Reality

Nichole Malichky was more than a stakeholder—she was the driving force behind the transformation. From day one, she was clear-eyed about the opportunity ahead:

- Empower departments with self-service analytics to reduce bottlenecks and delays
- Use real-time data to address issues proactively, from public safety to city programming
- Lay the foundation for advanced use cases like AI-driven citizen insights and predictive infrastructure planning
- Bring the City into a new digital era, where technology isn't just a tool, but a strategic enabler of community wellbeing

Her leadership ensured fast decision-making, cross-departmental collaboration, and unwavering focus on long-term value. With support from Arctiq, she now has the architecture and platform to bring that vision to life—and it's already generating results.

The City wasn't just trying to modernize for the sake of it, they wanted to unlock insights that would directly improve citizen services. This platform gives them the tools to make that happen—and positions them ahead of many other municipalities in terms of digital maturity.

- Hunter Carreira

Client Director, Arctiq

Why Arctiq

Arctiq brought deep, hands-on experience in building secure, cloud-native data platforms for government, education, and enterprise clients. With a proven methodology and technical accelerators, Arctiq was able to:

- Guide strategic decision-making around platform selection (Azure Synapse vs. Databricks)
- Rapidly deploy secure infrastructure using infrastructure-as-code leading practices
- Establish cloud governance frameworks tailored to the public sector
- Enable automation and modern DevOps pipelines for long-term agility



“

Arctiq’s experience with complex cloud data architectures and their deep understanding of both Azure and Databricks allowed us to move confidently and efficiently.

– **Nichole Malichky**

Data Architect, City of North Las Vegas

“

What made this project so rewarding was Nichole’s drive to not just build a platform, but to fundamentally shift how the City uses data. We weren’t just delivering code—we were helping lay the groundwork for smarter decisions and long-term impact.

– **Eric Boszin**

Data Lead, Arctiq

The Impact

Improved Operational Efficiency

Departments will no longer rely on manual processes to get answers. Data is ingested, transformed, and made available automatically.

Informed Decision-Making

Leaders will now have access to reliable insights to drive budget allocation, program planning, and emergency response.

Cross-Departmental Collaboration

With shared data, teams can better align in addressing city-wide challenges.

Security & Compliance

The solution adheres to strict government requirements, leveraging private networking and role-based access (among other controls).

Cost Visibility

Budget alerts and Azure governance ensure the City never overspends without notice.

Future-Ready Foundation

With a scalable architecture in place, the City can continue to build new use cases and expand its platform without starting from scratch

Expanded Data Ecosystem

The platform now enables seamless integration of external data sources. Data from systems like the U.S. Census, Nevada Department of Education, Nevada Department of Taxation, and National Weather Service is now accessible via APIs and stored internally. This enhances the City's ability to combine internal and external data to support grants, funding, and public service programs.



“

Now we have the data. We can make informed decisions about where to invest, how to respond, and how to serve our citizens better. Before this project, that simply wasn't possible. Even though it takes time and resources up front, in the long game, we save money and gain far more visibility. That's the value.

— Nichole Malichky



Looking Ahead

Already in motion is an Arctiq-led training engagement to further empower internal teams with the skills to manage and expand the platform. The City's team is exploring additional data sources and visualizations, and the platform is an exemplary model for other municipalities looking to modernize data and analytics.

Repeatable Success

Arctiq is already delivering similar data platform transformations in other municipalities and industries. The City of North Las Vegas is a strong example of how Arctiq's modular ServiceIQ approach—from InsightIQ to EnableIQ—can guide public sector clients through every phase of cloud and data modernization.

“ Arctiq's data services are grounded in repeatable frameworks, allowing public and private organizations alike to deploy high-impact platforms faster, more securely, and with measurable outcomes

— Eric Boszin

About Arctiq

Arctiq, with its extensive reach across the United States and Canada, empowers organizations throughout North America to design and implement transformative, practical solutions using world-class technologies and best practices. As a leading provider of professional IT and Managed Security Services, we excel in three core practices: Enterprise Security, Modern Infrastructure, and Platform Engineering.



ARCTIQ