ADASTRA

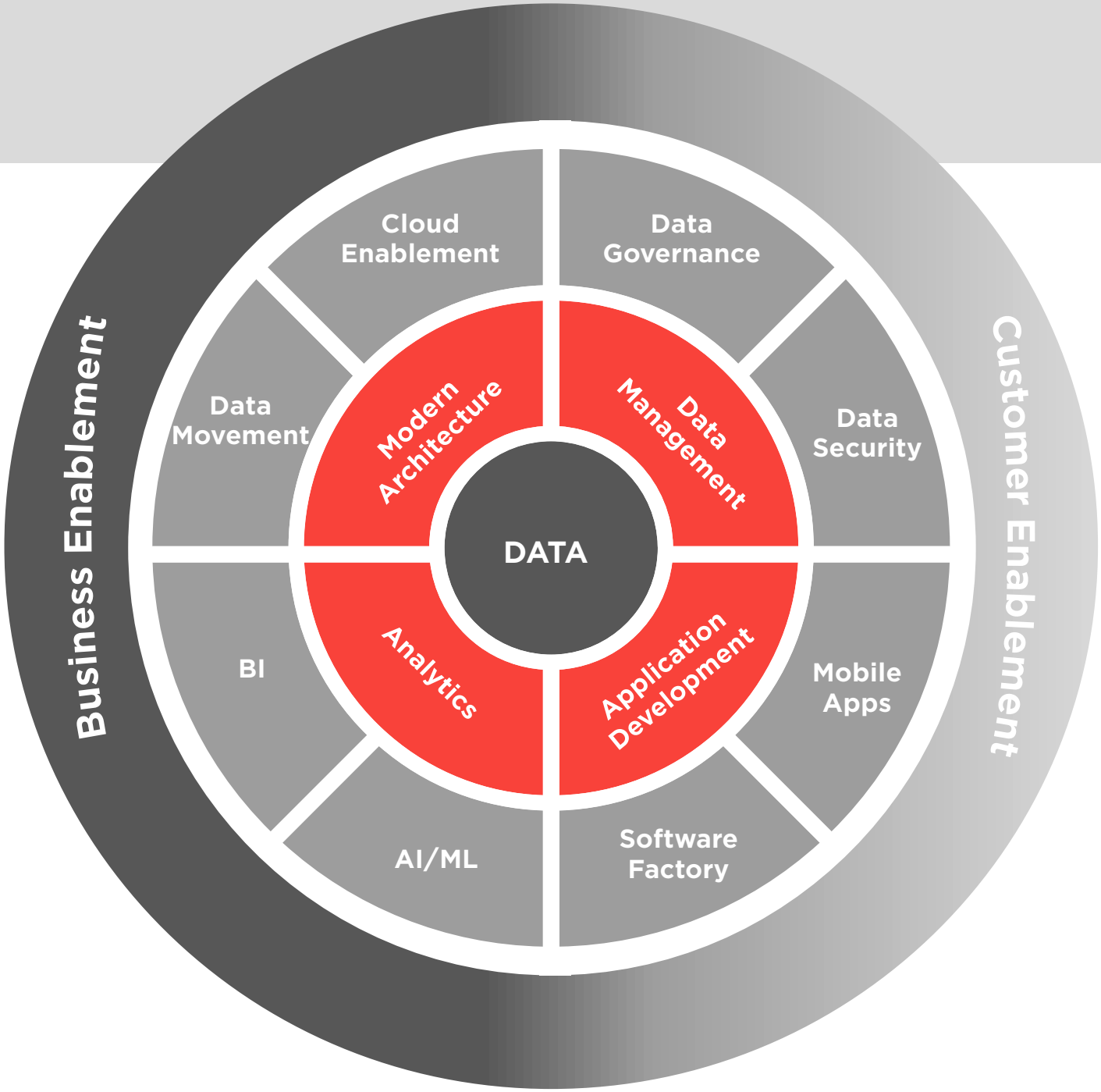
SQL Server Migration

About Adastra

ADASTRA'S Superpowers

Data is the heartbeat of every organization - it brings strategy to life and enables great customer experiences.

For over 20 years, Adastra has been driving our customers forward leveraging Data & AI as a guiding light and business enabler.



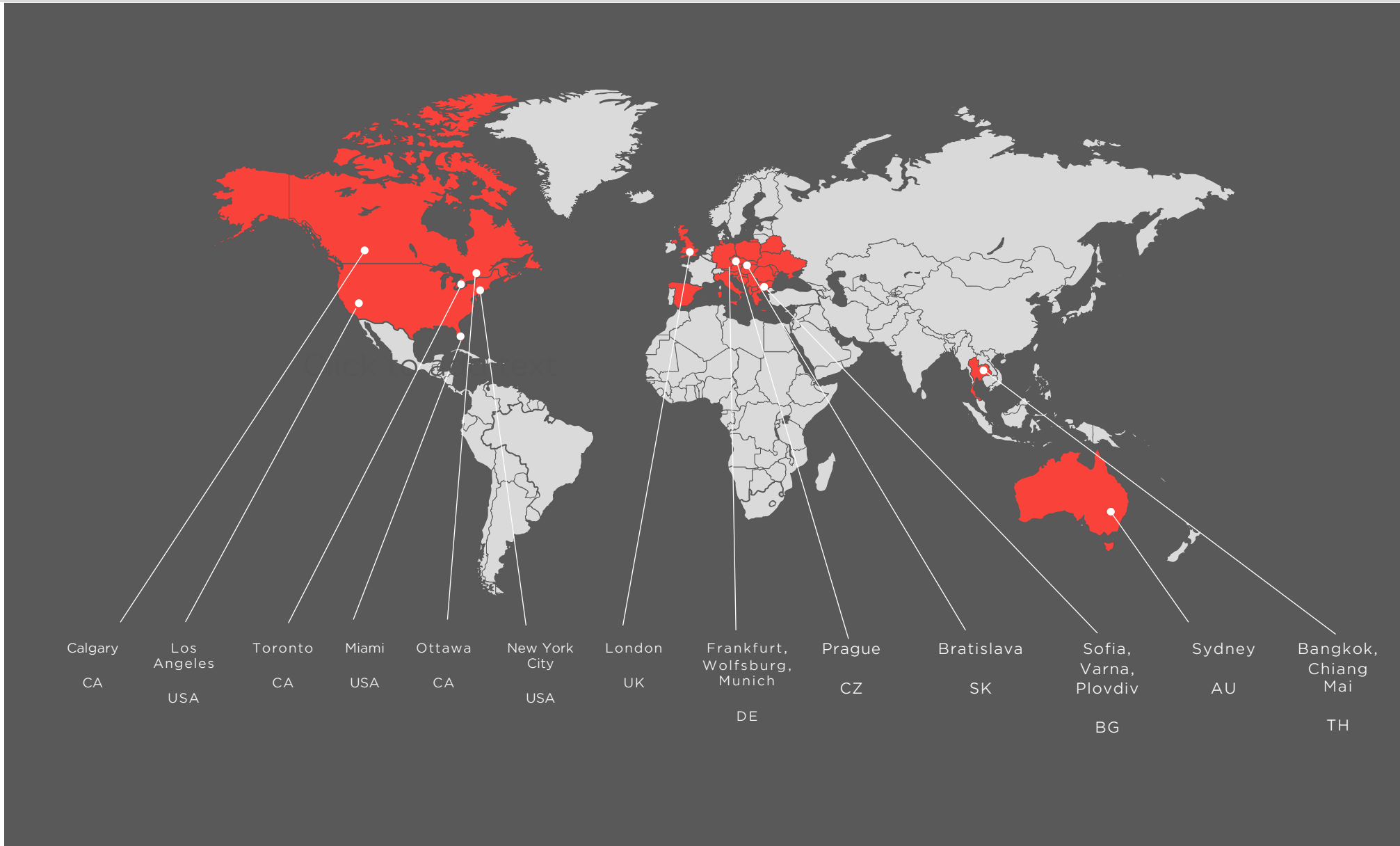
Adastra Worldwide

2600+

Data & Analytics Professionals

16

Offices in 9 countries



Azure SQL Migration Successes

Azure SQL Migration Success

25

SQL Servers Migrated

316

Databases Migrated

27,500

Objects Migrated

Challenge

CPA Canada had twenty-five on-premises SQL Servers instances across four locations. These instances supported critical production loads, which included vendor-based and in-house applications. Most databases were running on SQL Server 2012.

CPA Canada was looking to **modernize their data estate, and simplify SQL Server administration, by migrating all SQL databases to Microsoft Azure, leveraging free extended security updates and Azure Hybrid Benefit to lower Azure run costs.**

Adastra's Solution

Based on CPA Canada's requirements and key decisions made in the Technology Assessment stage Adastra:

- Migrated all the on-premises databases to Azure SQL Managed Instance for appropriate SKU size.
- Migrated all critical databases in Production and other non-development environments.
- Used the Microsoft Data Migration Assistant (DMA) tool to perform a pre-migration assessment to identify any potential issues that may prevent or disrupt the migration process.
- Post-migration the application cutover process was performed to test and validate the successful connection of applications to the target Azure databases.

Read the Entire Success Story

Success Story: Cloud Infrastructure Modernization for CPA Canada through Microsoft Azure Migration Program / Adastra (adastracorp.com)

CPA CHARTERED PROFESSIONAL ACCOUNTANTS CANADA

Adastra: #1 Modernization / Data / AI Partner

Microsoft Impact Awards Won: Analytics, AI, Data Platform Modernization, Financial Services, Manufacturing, Commercial
Microsoft Impact Awards Runner-Up: Partner of the Year, Global Analytics, Global Power BI, Migration, Customer Journey

Ability to Scale

With over 2600 GLOBAL staff, 500 CDN staff, and 500 Azure and Power Platform specialists, Adastra is ready to scale

Complete Stack Delivery

Azure Infrastructure, Azure AppDev, Azure BizApps (O365 / D365), Azure BI Analytics, Azure Big Data, Azure Data Science, and Power Platform

Proven Success

Adastra has the best record, successfully driving customer Azure adoption / ROI, for over 200 organizations in the last two years

Bestshore Delivery

Adastra's best-shore model offers 24/7 delivery and support, through our North America, Europe, and Asia based Delivery Centres

Adastra Azure Specializations

AZURE FOUNDATION

cloud adoption framework, well architected framework, tenant design, resource naming, service tag approach, network architecture, governance design, tco analysis, hybrid network implementation, devops integration, azure foundation implementation, iac automation, ...

AZURE APP / DATA

app / data assessment, app / data decisioning (lift / shift vs modernize), app / data architecture, api architecture, microservices architecture, app/ data security design, migration roadmap, migration execution, iac pipelines, devops integration, ...

AZURE SECURITY

security assessment, identity strategy, role based access, secrets management, encryption, data loss protection, api management, private zone configuration, siem / soar integration, policy enforcement, security implementation ...

AZURE ANALYTICS

analytics assessment, analytics architecture, analytics roadmap, data zoning, enterprise model design (kimball, inmon, data vault), ETL data pipelines, persona enablement, citizen report development, trusted data as a service, ...

AZURE LAKEHOUSE

lakehouse assessment, data lake design, Hadoop integration, pyspark data engineering, ELT pipelines, spark delta lake, spark streaming, serverless compute, devops integration, ...

AZURE AI / ML

advanced analytics assessment, cognitive service integration, r&d model training / testing, mlops implementation, ai / ml pipelines, data science workbench automation, devops integration, ...

POWER PLATFORM

citizen development assessment, power platform governance, roles / responsibilities, environment strategy, CoE kit, canvas / model apps, power automate flows, power automate rpa, power platform dataverse, power bi datasets / reports, ...

AZURE DATA GOVERNANCE

data governance assessment, data catalog, data classification, data sensitivity, data use governance, data privacy, data lineage, master data management, data quality management, reference data management, ...

AZURE INTEGRATION PAAS

integration paas assessment, api management, logic workflows, service bus management, event grid distribution, peer to peer patterns, pubsub patterns, managed file transfers, iot telemetry streaming, iot edge device management, ...

Adastra's Azure Team

500 Azure Specialists
(400 D&A, 100 CORE)

75 Azure Architects
(55 D&A, 20 CORE)

50 Azure
Data Scientists

250 Azure Certified
Resources

275 Azure
Data Engineers

125 Power Platform
Specialists

Why Migrate to Azure SQL?

The Innovation Imperative

Modern and Pressing Challenges

- Inflation pressures
- Rising costs
- Budget cuts
- Geopolitical disruptions
- Supply chain challenges
- Talent shortages
- Increasing labour costs

How Migration to Azure SQL Helps

- Reduces SQL operating costs
- Leverages existing SQL investments
- Scale up/down on demand
- Elevates data protection
- Lowers technical debt
- Reduces support team size
- Positions for growth

Enables Value

Security

6.5 trillion threat signals analyzed daily

3,500 security experts

$1 billion per year investment in security

Innovation

Intelligent capabilities, trained on millions of DBs

Only cloud with evergreen SQL, which never needs to be patched or updated

Only fully-managed service for any .NET app

Offers

Up to 5x less expensive than AWS

Azure Hybrid Benefit

Free Extended Security Updates

Leadership in performance and scale

Built-in Hybrid

Operate seamlessly across your datacenter and the cloud

Maximizes Benefits

Bring Your Own License

- “Azure Hybrid Benefit”
- Lowers Azure SQL cost by >50%
- 4X Core Coverage Multiplier

Gain Extended Value

- Free security updates for SQL 2008 / 2012
- Dual use rights for 180 days

Additional Cost Savings

- Reserve capacity to save >30%
- Dev / Test saves >50%
- Unlimited virtualization thru Azure Dedicated Hosts

Achieves Excellence

Out of the Box Enterprise Class Governance

Automatic Security Updates and SQL Versioning

Threat Detection / Remediation thru Microsoft Defender

Implicit High Availability Design for All Azure SQL Form Factors

Implicit and Customizable Backup Policy

Simple Integration with Azure Governance Ecosystem

Achieve SLA Commitments thru 99.995% Availability

Lowest Technical Debt Deployment of SQL

Single Pane of Glass Administration and Tooling

Secures Data

Advanced Threat Protection

Information Protection	: Data Discovery & Classification
Vulnerability scanning	: Vulnerability Assessment
Threat Detection	: Advanced Threat Detection
Centralized dashboard	: ASC Integration & OMS Integration

Access Management

Network access	: SQL Firewall + VNET Service Endpoints
Database access	: SQL & AAD Universal Auth + MFA
Granular permissions	: SQL roles, permissions model

Data Protection

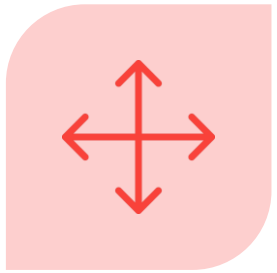
Encryption at rest	: Transparent Data Encryption
Encryption in use	: Always Encrypted
App data protection	: Row-Level Security and Dynamic Data Masking
Monitoring	: Auditing

Compliance: FedRAMP, HIPAA, PCI, EU Model Clauses, GDPR, UK G-Cloud, ISO

Resolves Challenges

Datacenter contracts expiry

Quickly integrate acquisitions



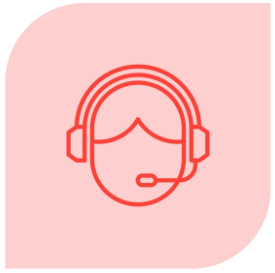
Urgent capacity needs

Software and hardware refresh

Security threats

Compliance

Application innovation



Software end of support

Data Migration Journey

On Premise SQL Servers

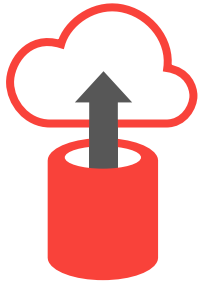

Instance 1


Instance 2


Instance 3

Assessment Tooling

- SQL Server Migration Assistant (SSMA)



Migration Tooling

- SSMA for Schema / Data
- Azure Data Factory for Big Data

Microsoft Azure Consolidation

Azure SQL Database (database as a service)
(general purpose, business critical, and hyperscale tiers)

Azure SQL Managed Instance (platform as a service)
(general purpose and business critical tiers)

Azure SQL VM (infra as a service)
(typically required for COTS or legacy app backends)

All Azure SQL options support Tier 1 – 4 SLA requirements.

Seamless, end to end solution | Near-zero downtime | Resilient | Migrate at-scale from multiple sources

App Migration Considerations

Azure SQL Migrations occur within the context of an end to end application ecosystem. Therefore Azure SQL Migrations often execute as part of a wider Azure Application Migration solution. Adastra has deep experience and success delivering all application ecosystem components with Azure SQL Migrations.

Managed PaaS

Web: Azure App Service
Data: Azure SQL DB / MI
Identity: Azure AD
LB: Yes (Azure Application Gateway)
HA/DR: Yes (Azure Traffic Manager)
Auto Scale: Yes (Native)
CI/CD Integrated: Manual
Complexity: Simple
Recommendation: Use for .NET / PHP / JAVA / PYTH Custom Web Applications with no App / O/S dependencies

Container PaaS

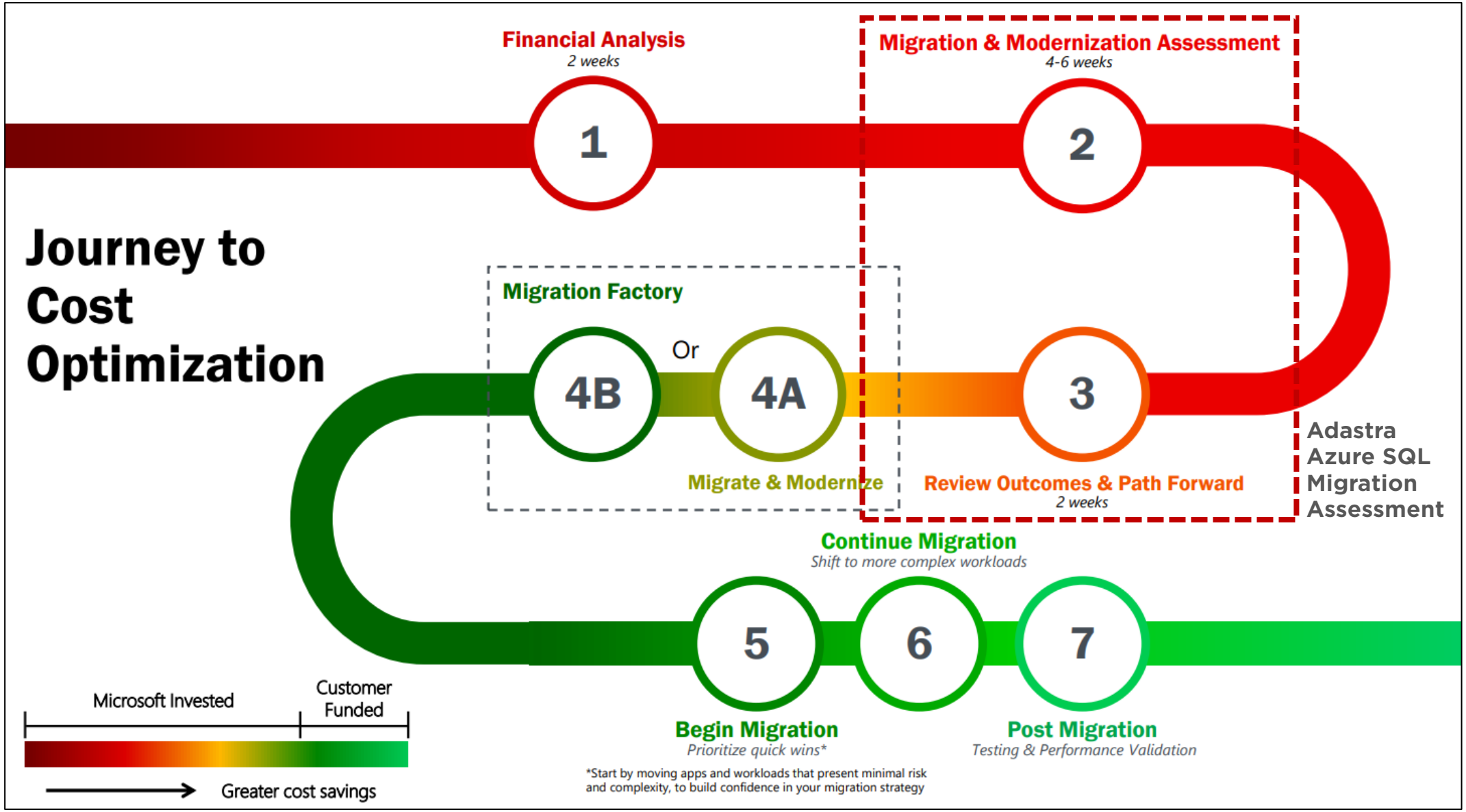
Web: Azure Kubernetes Service (IIS)
Data: Azure Kubernetes Service (SQL)
Identity: Azure AD
LB: Yes (AKS Controller)
HA/DR: Yes (Docker Repl and ATM)
Auto Scale: Yes (Native)
CI/CD Integrated: Implicit
Complexity: Medium
Recommendation: Use for any Custom Web Applications and COTS Web Applications approved for Docker / Kubernetes

IaaS

Web: Azure Windows VM (IIS)
Data: Azure Windows VM (SQL)
Identity: AD Domain Service
LB: Yes (Azure Load Balancer)
HA/DR: Yes (ASR / ARV)
Auto Scale: Yes (Scale Sets)
CI/CD Integrated: Manual
Complexity: Medium
Recommendation: Use for COTS Web Applications not approved for Docker / Kubernetes

Adastra Offer

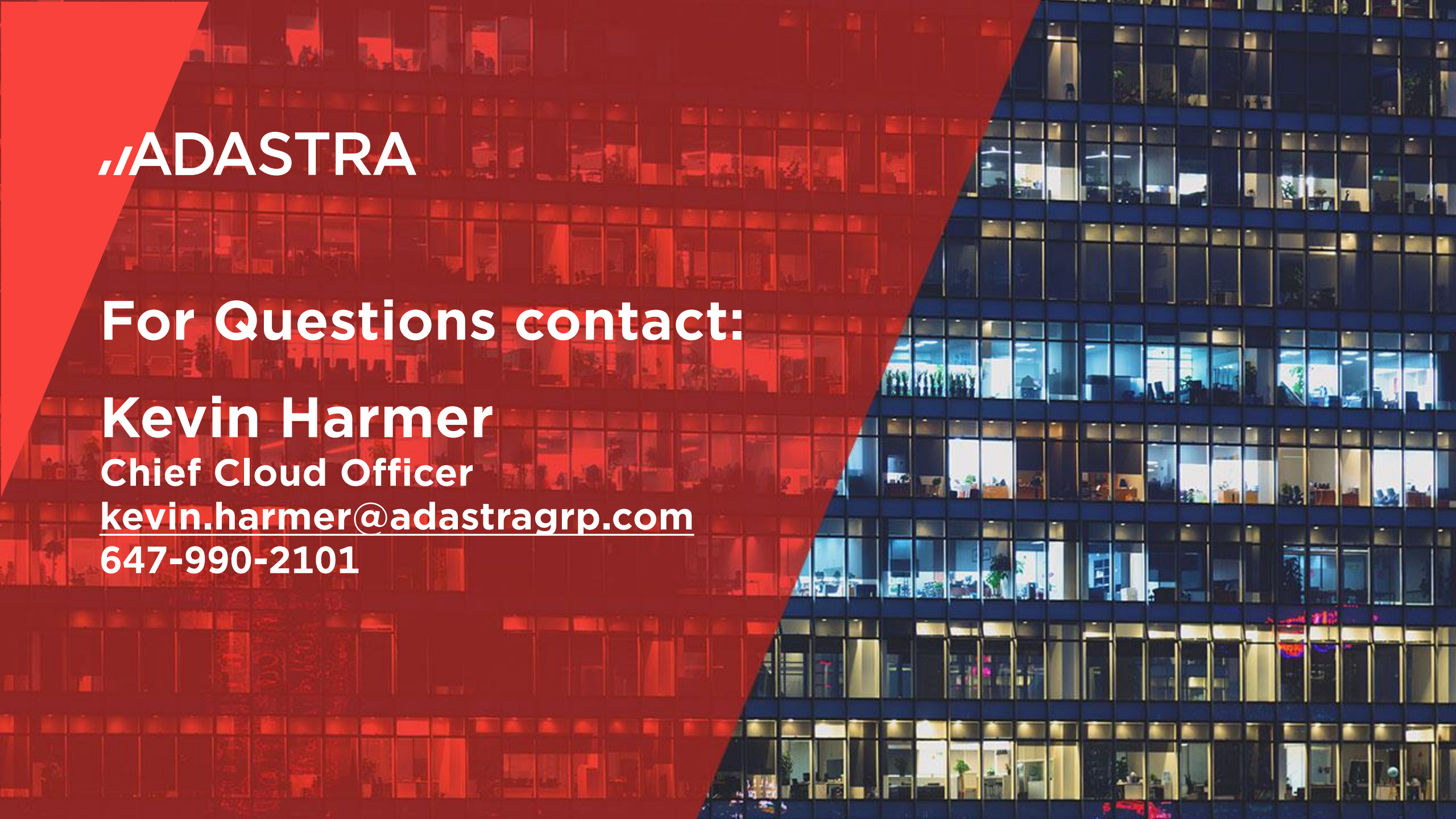
Azure SQL Migration Journey



Adastra Azure SQL Migration Assessment Offer

- **Perform Discovery (Data Tier or Application Focus)**
- **Capture Data / App Requirements:**
  - Functional / Non-Functional incl. Performance
- **Complete SQL Server Inventory:**
  - Application Dependencies
  - Database Scope
  - Schema / Data Design
  - Programmable Objects
  - Upstream / Downstream Dependencies
- **Build Prioritized Migration Backlog**
  - Determine migration approach by use case
  - Modernize vs Lift / Shift vs In Place Upgrade vs …
- **Define Target Architecture:**
  - Determine Required Azure SQL Tiers (Tier 1 – 4)
  - Azure Service / Network Architectures by Tier
  - Establish Migration Patterns (Freeze, No-Freeze)
  - Azure Sizing / Costs by Tier
- **Establish Governance Patterns**
  - Finops, ITOps, NetOps, SecOps, Devops perspectives
  - Roles, identity / access, encryption, secrets, siem / soar, recovery, audit, data loss protection, high availability, …
- **Facilitate Architecture Review Board Approval**
- **Perform SQL Refactoring Analysis**
  - Leverage SSMA Tool to Estimate Effort
- **Define Migration Roadmap:**
  - Approach (incl. Testing/Validation)
  - Schedule
  - Resourcing
  - Cost
- **Decommissioning Plan**
- **Stakeholder Review**
- **Pilot Migration of One Tier 3 / 4 Workload**

Migration Assessment / Pilot: 6w, $0 Cost



ADASTRA

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