

//ADASTRA

Public Sector





Adastra's Key Public Sector Clients





Adastra's Public Sector Offers

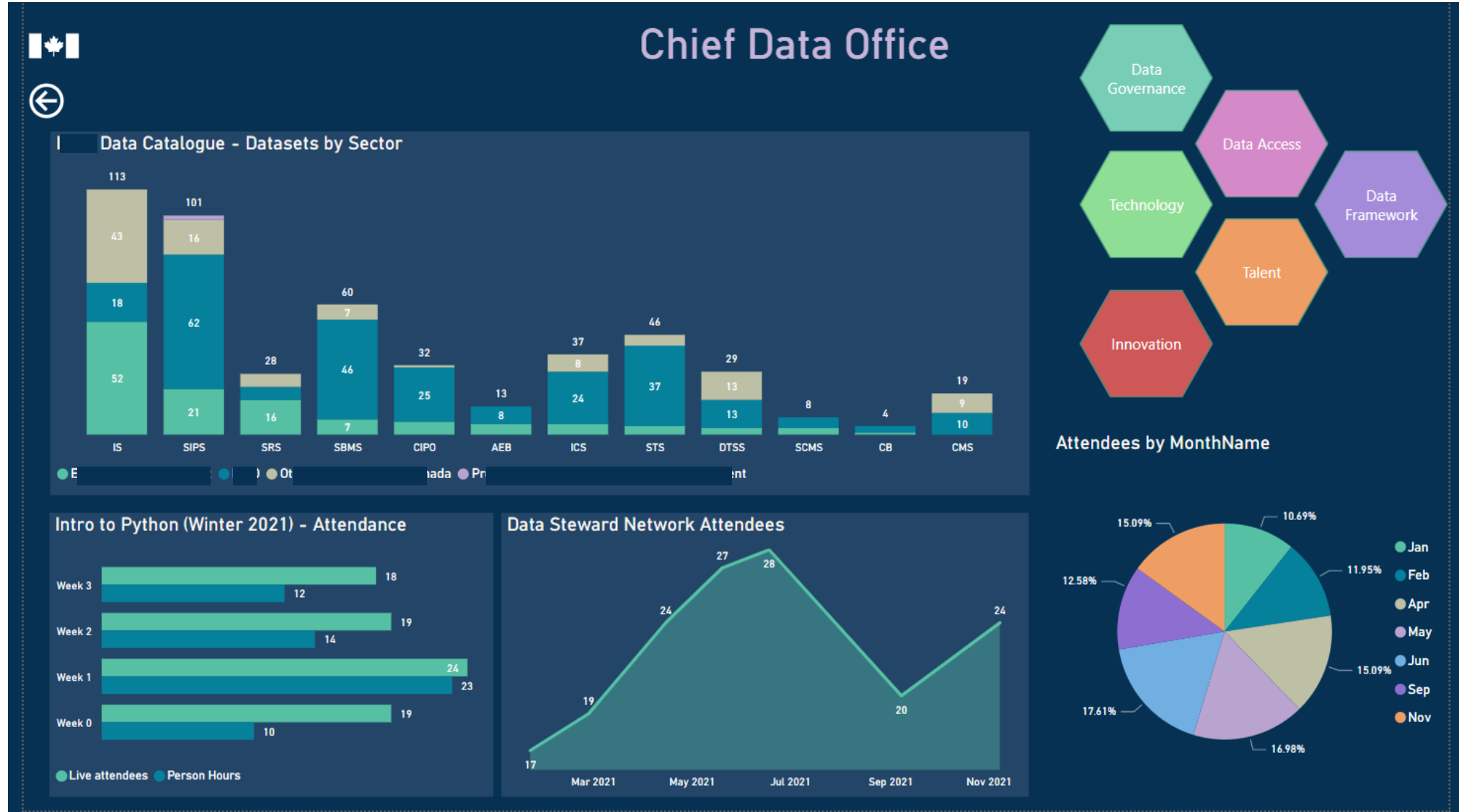
| Public Sector Offers | |
|-------------------------------|---|
| Azure Landing Zone | Establish Azure core strategic design for data center migration, to enable app, data, and analytics migration to cloud, through a well governed cloud adoption framework. Covers all tenant, network, security, and governance considerations. Considers data sovereignty and regulatory requirements (GDPR, Protected B). |
| Azure Data Center Migration | Retire your on-premise data center infrastructure, via all up Azure data center migration. Migration systems, apps, and data via modernization or lift / shift approach. Leverage Adastra migration framework for accelerated transition. Achieve strategic agility and lower technical debt related to data center operation. |
| App Modernization Roadmap | Through Adastra discovery, define an app catalog for migration to Azure. Identify varying techniques (lift / shift, modernize, hybrid) by app, based on cost / benefit assessment. Provide TCO for cloud implementation, with long term ROI comparing migration / future costs to current costs. Roadmap the journey. |
| Power BI Conversion | Leverage Adastra's Power BI conversion framework, to migrate off current BI analysis and reporting platform to Power BI. Adastra will size and roadmap the conversion, then execute efficiently using conversion techniques. Covers all common government source platforms; SSRS, Cognos, Business Objects, Mstr, ... |
| Purview Data Catalog | Enable data insights via a new data catalog, covering assets, classification, lineage, and glossary. Deploy Purview in two phases; phase one establishes the platform and incorporates 5 data sources to prove value, then phase two scales the platform to remaining data sources. Enables organizational value from data. |
| Cloud ATO Audit | Ensure Architecture Review Board approval and readiness for Azure modernization. Prepare design, governance, and roadmap specification to show all government requirements are met through the cloud modernization platform. Certify architecture pattern for deployment at scale. |
| Document Translation | Leverage Azure Cognitive Services to enable translation of unstructured document data to different languages, to ensure consistent service delivery for all staff and citizens regardless of language. Deploy at scale covering millions of artefacts through automated translation, with custom NLP training for complex topics. |
| Document Validation / Scoring | Automatically verify and score citizen provided documents, to verify validity and enable consistent analysis by government agents. Examples include proof of vaccine documentation, proof of identity documentation, etc. Reduces risk of fraud and inconsistent evaluation by agents, through advanced analytics. |
| Enterprise Search | Facilitate intelligent search and analysis on unstructured data, unlocking insights from difficult to access information. Enables classification and categorization of unstructured data, easy location of critical documents, and insights from difficult to access unstructured data. |
| ESRI Modernization | Deploy ESRI application to Azure, to modernize infrastructure and facilitate agile performance and lower operating costs for your ESRI platform. Leverage Adastra's proven framework for hosting ESRI in Azure, covering ARCGIS portal, server, relational / file / big data stores, geanalytics, geoevents, etc. tiers. |
| Call Center Analytics | Enable analytics and sentiment analysis for government support call centers, to better evaluate effectiveness of service for citizens. Enables trainable NLP, to transcribe sound while redacting PII data, evaluate sentiment and classify transcriptions, and provide analytical dashboards to call center stakeholders. |
| Field IoT Analysis | Monitor government managed infrastructure via sensors and IoT integration to Azure. Covers facilities, fleets, services, and environmental sources. For example, monitor and analyze water main use to enable capacity planning and predictive maintenance. Incorporates Azure IoT Portal for simple setup and maintenance. |
| Citizen IAM via Azure B2C | Create a centralized identity access management solution, where all public digital properties authentication through. Simplifies authentication services for digital apps, enables a Citizen 360 view, supports cross service citizen value, and simplifies citizen engagement across services. |
| Pedestrian Safety Analytics | Use Adastra advanced analytics framework to evaluate pedestrian historical safety incidents against safety mitigations. Through trained models, recommends new safety mitigation steps (crosswalks, speed bumps, speed safety zones, ...), to improve citizen safety outcomes through high return targeted investments. |
| Growth Forecasting | Use Adastra advanced analytics framework to predict future development growth, using trained history. Predicts where future development will likely occur, to enable proactive service development (roads, water, sewage, etc.) in anticipation of future need. Creates proactive, rather than reactive, service delivery. |
| OptiRoute | Leverage Adastra OptiRoute to optimize fleet utilization (public transit, waste services, road maintenance, etc). Achieves efficiency improvements of 5% to 25% by using advanced analytics to plan fleet routes more effectively. Deployed to Azure and leverage trained and proven public sector fleet ML models. |



Public Sector Analytics Examples



Analytics @ Federal Department





Analytics @ Federal Research Centre

PLANNED PAYMENTS FOR A SELECTED PERIOD

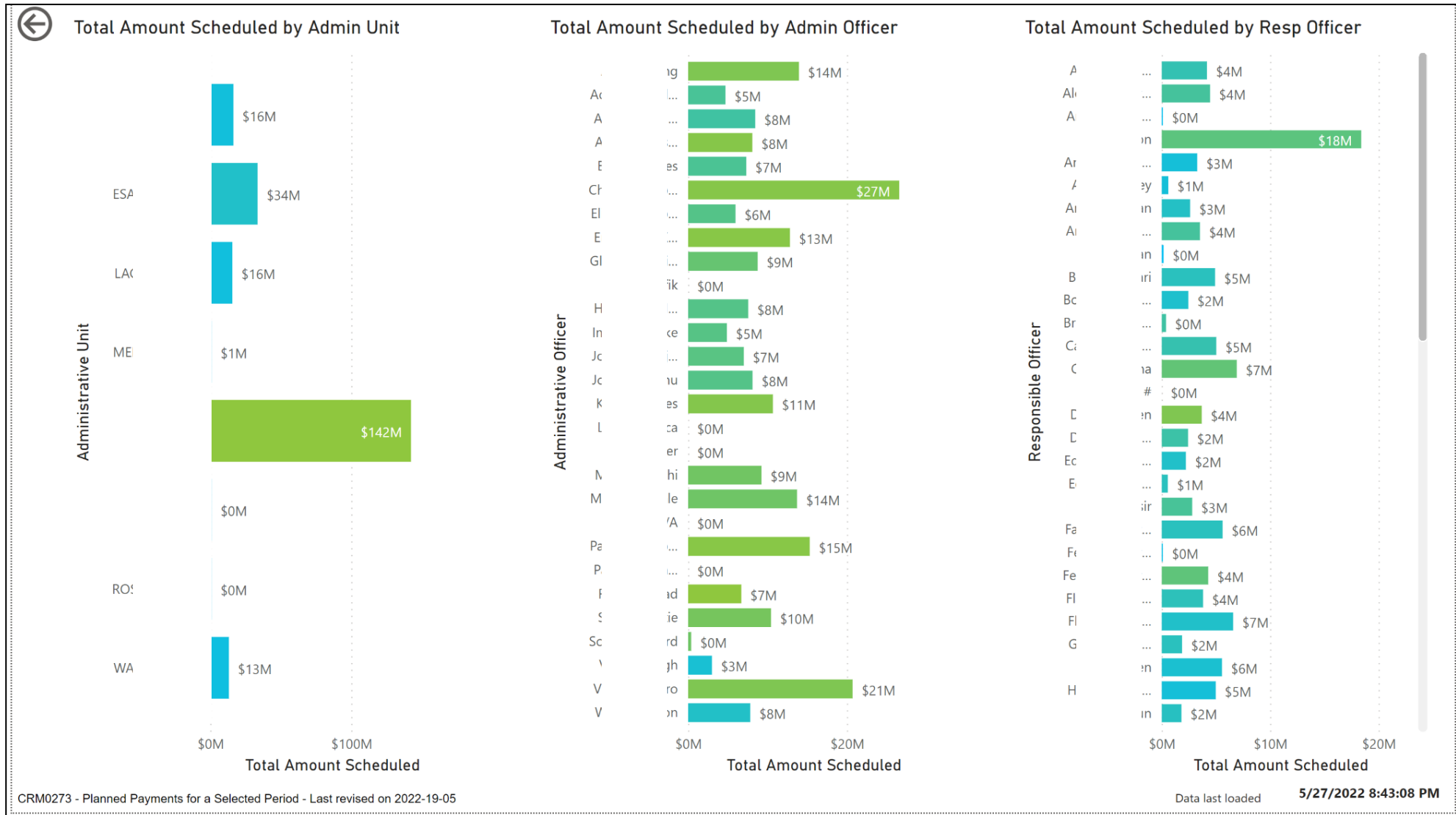
Admin Unit
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| Prog. Name | Project # | Admin Unit | Payment Type | Project Title | Comp # | Institution Name | Milestone Number | End of Milestone Reporting Period | Report Due Date | Planned payment date | Amount Scheduled | Fin Report | Tech Report | Responsible Officer | Admin Officer | GAD Admin | Custom Notes |
|--------------|-----------|------------|--|---------------|--------|-----------------------|------------------|-----------------------------------|-----------------|----------------------|----------------------|------------|-------------|---------------------|---------------|-----------|--------------|
| DIF | 106061 | PPB/DGPP | Automatic Payments (subject to previous reports' completeness) | | 002 | Ch... R... d... si... | | 0 | | | \$0 | No | No | crmadm # | L... | a V G | |
| DIF | 106061 | PPB/DGPP | Payments Awaiting Report(s) | | 002 | Ch... R... d... si... | 12 | 2011-04-01 | 2011-05-01 | 2011-06-01 | \$0 | No | Yes | crmadm # | L... | a V G | |
| DIF | 106061 | PPB/DGPP | Payments Awaiting Report(s) | | 002 | Ch... R... d... si... | 24 | 2012-04-01 | 2012-05-01 | 2012-06-01 | \$0 | No | Yes | crmadm # | L... | a V G | |
| Total | | | | | | | | | | | \$222,148,437 | | | 593 | | | |

| Custom Note Type | First NoteName | Created by | Modified by | Note |
|------------------|----------------|------------|-------------|---------------------------|
| Financial | 1(Fi | Sc | Si | Lin prc y2l Let prc Re |
| General Notes | 1(C | Al | A | Re |



Analytics @ Federal Research Centre





Analytics @ Federal Research Centre

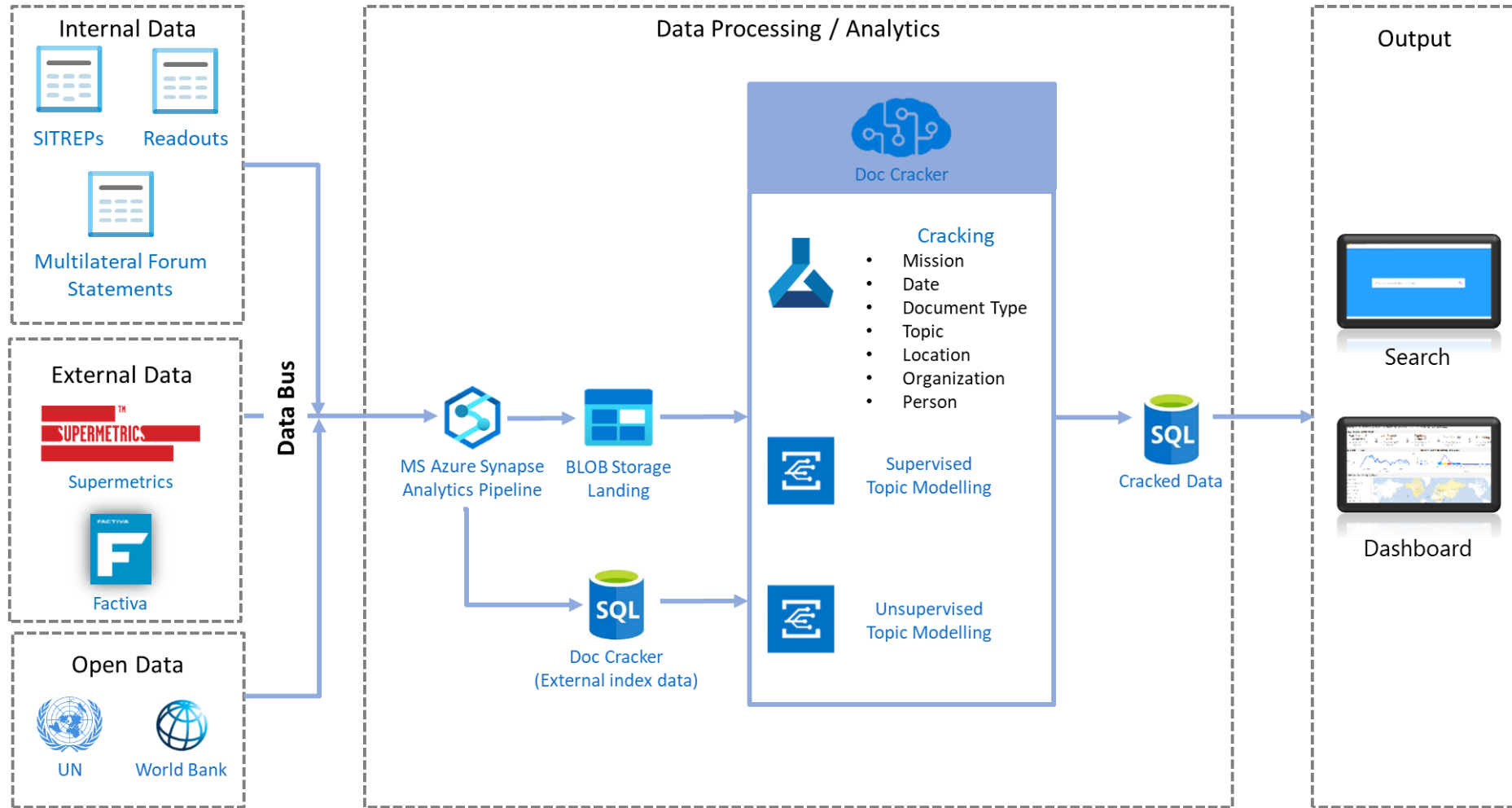
PROJECT EXPENDITURE SUMMARY BY PA AND PI

| SELECTED FISCAL YEAR: | | | | | | | Initiative | Project Number | CalendarDate | | | |
|---------------------------------|-----------------------|----------------------|-----------------------|-----------------------|---------------------|----------------------|-----------------------|----------------------|-----------------------|----------------------|------------------|--|
| 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | All | All | 1/1/2017 | 5/20/2022 | | |
| ProgramAreaName | RAP Amount | CAP Amount | Amount | Internal Expenses | External Expenses | EFP INT | EFP EXT | INT Ops | INT Non Ops | EXT Ops | EXT Non Ops | |
| <input type="checkbox"/> F tegy | | | | | | | | | | | | |
| <input type="checkbox"/> | 156,501,064.04 | 12,994,948.62 | 169,496,012.66 | 74,915,528.95 | 3,983,974.58 | 10,998,992.61 | 79,597,516.52 | 1,176,547.11 | 84,737,974.45 | 5,916,860.40 | 77,664, | |
| <input type="checkbox"/> | 158,706,562.45 | 15,259,880.10 | 173,966,442.55 | 73,016,338.93 | 0.00 | 29,084,607.58 | 71,865,496.04 | 4,366,335.11 | 97,734,611.40 | 7,595,584.73 | 64,269, | |
| <input type="checkbox"/> | 57,970,095.01 | 3,534,708.13 | 61,504,803.14 | 49,277,426.13 | 0.00 | 1,352,018.15 | 10,875,358.86 | 154,542.19 | 50,474,902.09 | 1,753,053.14 | 9,122, | |
| <input type="checkbox"/> | 121,262,421.04 | 16,328,752.39 | 137,591,173.43 | 57,933,990.75 | 0.00 | 44,730,316.73 | 34,926,865.95 | 4,386,641.08 | 98,277,666.40 | 5,878,818.95 | 29,048, | |
| <input type="checkbox"/> | 61,748,921.56 | 1,490,315.58 | 63,239,237.14 | 59,303,912.53 | 0.00 | 1,010,127.86 | 2,925,196.75 | 104,982.91 | 60,209,057.48 | 449,485.54 | 2,475, | |
| | 556,189,064.10 | 49,608,604.82 | 605,797,668.92 | 314,447,197.29 | 3,983,974.58 | 87,176,062.93 | 200,190,434.12 | 10,189,048.40 | 391,434,211.82 | 21,593,802.76 | 182,580,6 | |
| <input type="checkbox"/> F | | | | | | | | | | | | |
| <input type="checkbox"/> | 535,819.07 | 87,972.29 | 623,791.36 | 623,791.36 | 0.00 | 0.00 | 0.00 | 0.00 | 623,791.36 | 0.00 | | |
| <input type="checkbox"/> | 59,348,083.25 | 2,559,159.55 | 61,907,242.80 | 61,907,242.80 | 0.00 | 0.00 | 0.00 | 0.00 | 61,907,242.80 | 0.00 | | |
| <input type="checkbox"/> | 1,561,447.15 | 4,632,197.01 | 6,193,644.16 | 6,193,644.16 | 0.00 | 0.00 | 0.00 | 0.00 | 6,193,644.16 | 0.00 | | |
| TOTAL | 61,445,349.47 | 7,279,328.85 | 68,724,678.32 | 68,724,678.32 | 0.00 | 0.00 | 0.00 | 0.00 | 68,724,678.32 | 0.00 | | |
| TOTAL | 617,634,413.57 | 56,887,933.67 | 674,522,347.24 | 383,171,875.61 | 3,983,974.58 | 87,176,062.93 | 200,190,434.12 | 10,189,048.40 | 460,158,890.14 | 21,593,802.76 | 182,580,6 | |



Intelligent Search @ Global Affairs

Presentation title





Adastra Azure Modernization Assessment @ Regional Municipality



Short-Term Wins / Long-Term Wins

Short-Term Wins (8 months)

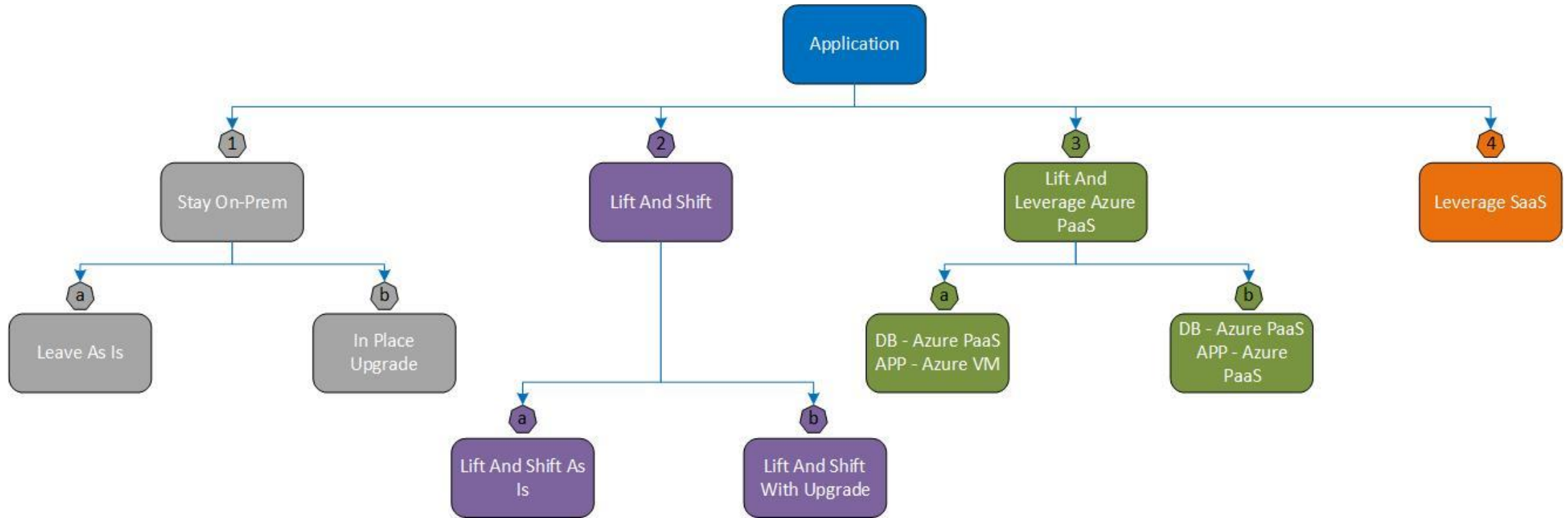
- Significant infrastructure **cost reduction** by decommission of retired servers and host on cloud.
- 3 years **extended support** for Windows 2008/R2 with key benefit of Azure.
- Reduced effort / cost **disaster recovery and backup** services.
- Benefit from Azure's default **governance services**.

Long-Term Wins (3 years)

- **Modernized scalable** application with no dependency on legacy applications.
- **Digitalized** application with **centralized analytics** and **visualization** .
- **Data hub** strategy for integration points.
- Support of on-prem and cloud **monitoring** for application, infrastructure and network.
- **Reduced** overall **TCO**.



Migration Decision Tree @ Regional Municipality



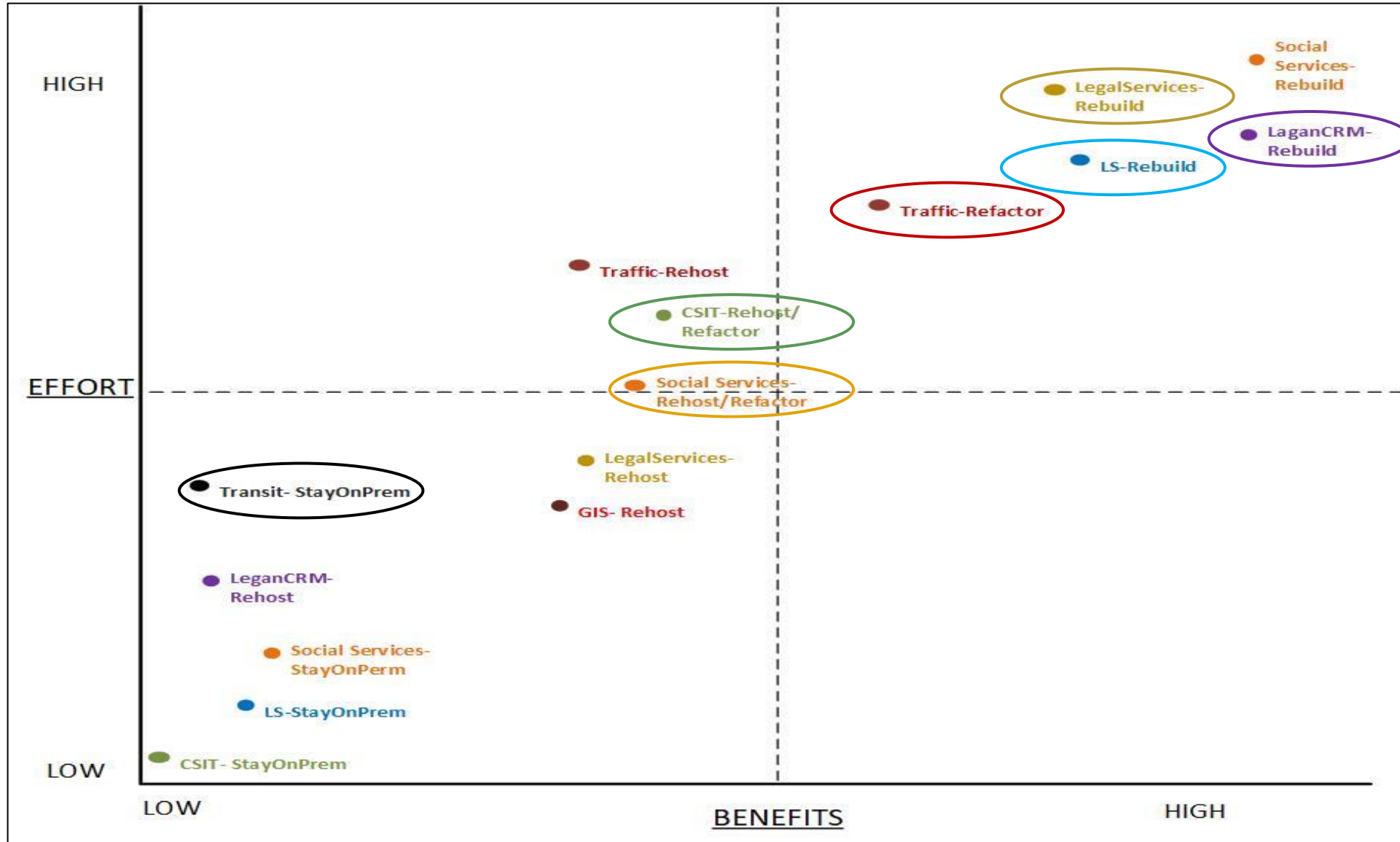


Migration Catalog @ Regional Municipality

| CSIT_Appliation_Name | OSname | VI_Type | Priority | Short-Term | Long-Term |
|---|-------------|----------|----------|----------------------------------|--|
| CSIT - Auditing Server running Netrix Application | Win 2008 R2 | Virtual | P3/P4 | 2a-LiftAndShift | 3b Rebuild Use Azure Governance PaaS Services, Azure Sentinel and Azure monitoring |
| CSIT - MS Remote Desktop Services Licensing | Win 2008 R2 | Virtual | | 2a-LiftAndShift | Decomission |
| CSIT - NetBackup Server | Win 2008 R2 | Physical | P2 | 2a-LiftAndShift | 3b: Rebuild Use Azure Site Recovery and Azure Back Up |
| CSIT - NetBackup Server | Win 2008 R2 | Physical | P2 | 2a-LiftAndShift | 3b: Rebuild Use Azure Site Recovery and Azure Back Up |
| CSIT NetBackup Master Server | Win 2008 R2 | Physical | P2 | 2a-LiftAndShift | 3b: Rebuild Use Azure Site Recovery |
| CSIT NetWrix Auditing | Win 2008 R2 | Virtual | P3/P4 | 2a-LiftAndShift | 3b Rebuild Use Azure Governance services |
| CSIT Production Team Foundation | Win 2008 R2 | Virtual | P3 | 2a-LiftAndShift | 3b Refactor-DevOps with Git repo |
| CSIT Test Team Foundation | Win 2008 R2 | Virtual | P3 | 2a-LiftAndShift | 3b Refactor-DevOps with Git repo |
| IP Monitor 8 | Win 2003 | Physical | P2 | 1b-In Place Upgrade/3b- Rebuild | 3b Rebuild Use Azure Governance PaaS Services, Azure monitoring |
| Oracle 10g Database Service Production | Win 2003 | Physical | P4 | 1b-In Place Upgrade/3a- Refactor | Decomission |
| Oracle 10g, 11g Database Service Staging | Win 2008 R2 | Physical | P4 | 1b-In Place Upgrade | Decomission |
| Oracle 11g Database Service Production | Win 2003 | Physical | P4 | 1b-In Place Upgrade/3a- Refactor | Decomission |
| Oracle 9i Database Service Production | Win 2003 R2 | Physical | P4 | 1b-In Place Upgrade/3a- Refactor | Decomission |
| Visual Studio Team Server Database Service P | Win 2008 R2 | Virtual | P4 | 2a-LiftAndShift | 3b Refactor-DevOps with Git repo |
| Visual Studio Team Server Database Service S | Win 2008 R2 | Virtual | P4 | 2a-LiftAndShift | 3b Refactor-DevOps with Git repo |
| VMS FTP Service | Win 2008 R2 | Virtual | P3 | 2a-LiftAndShift | 3b Refactor- Azure Storage |
| Water Billing Charon Host | Win 2008 R2 | Physical | P2 | 2a-LiftAndShift | 3b- Rebuild Use Datalake and PowerBI |
| Water Billing Charon Host | Win 2008 R2 | Physical | P2 | 2a-LiftAndShift | 3b- Rebuild Use Datalake and PowerBI |
| CRM_Appliation_Name | OSname | VI_Type | Priority | Short-Term | Long Term |
| CRM - FrontLink Server - Clerks | Win 2003 | Physical | P2 | 1a- LeaveAsIs | Rebuild - SaaS Dynamics 365- CRM |
| CRM Database - Clerks | Win 2003 | Physical | P2 | 1a- LeaveAsIs | Rebuild - SaaS Dynamics 365- CRM |
| Lagan Database Services 2 Production | Win 2003 | Physical | P2 | 1a- LeaveAsIs | Rebuild - SaaS Dynamics 365- CRM |
| Lagan Database Services 3 Production | Win 2003 | Physical | P2 | 1a- LeaveAsIs | Rebuild - SaaS Dynamics 365- CRM |
| Lagan Database Services 5 Production | Win 2003 | Physical | P2 | 1a- LeaveAsIs | Rebuild - SaaS Dynamics 365- CRM |
| SS_Application_Name | OSname | VI_Type | Priority | Short-Term | Long Term |
| Chubb Application for Water St | Win 2008 R2 | Physical | P4 | 1b -InPlace/2a-LiftAndShift | 3a: Refactor- App VM and SQL MI as PaaS |
| HQ Chubb | Win 2008 R2 | Physical | P4 | 1b -InPlace/2a-LiftAndShift | 3a: Refactor- App VM and SQL MI as PaaS |
| LTC - Emar application | Win 2003 | Virtual | P3 | 1b -InPlace (Vendor Support) | |
| LTC Conexall System at Hillsdale Estates | Win 2008 R2 | Physical | P3 | 2a-LiftAndShift | 3a: Refactor- App VM and SQL MI as PaaS |
| LTC Conexall System at Hillsdale Terraces | Win 2008 R2 | Physical | P3 | 2a-LiftAndShift | 3a: Refactor- App VM and SQL MI as PaaS |
| LTC Conexall System at Lakeview | Win 2008 R2 | Physical | P3 | 2a-LiftAndShift | 3a: Refactor- App VM and SQL MI as PaaS |

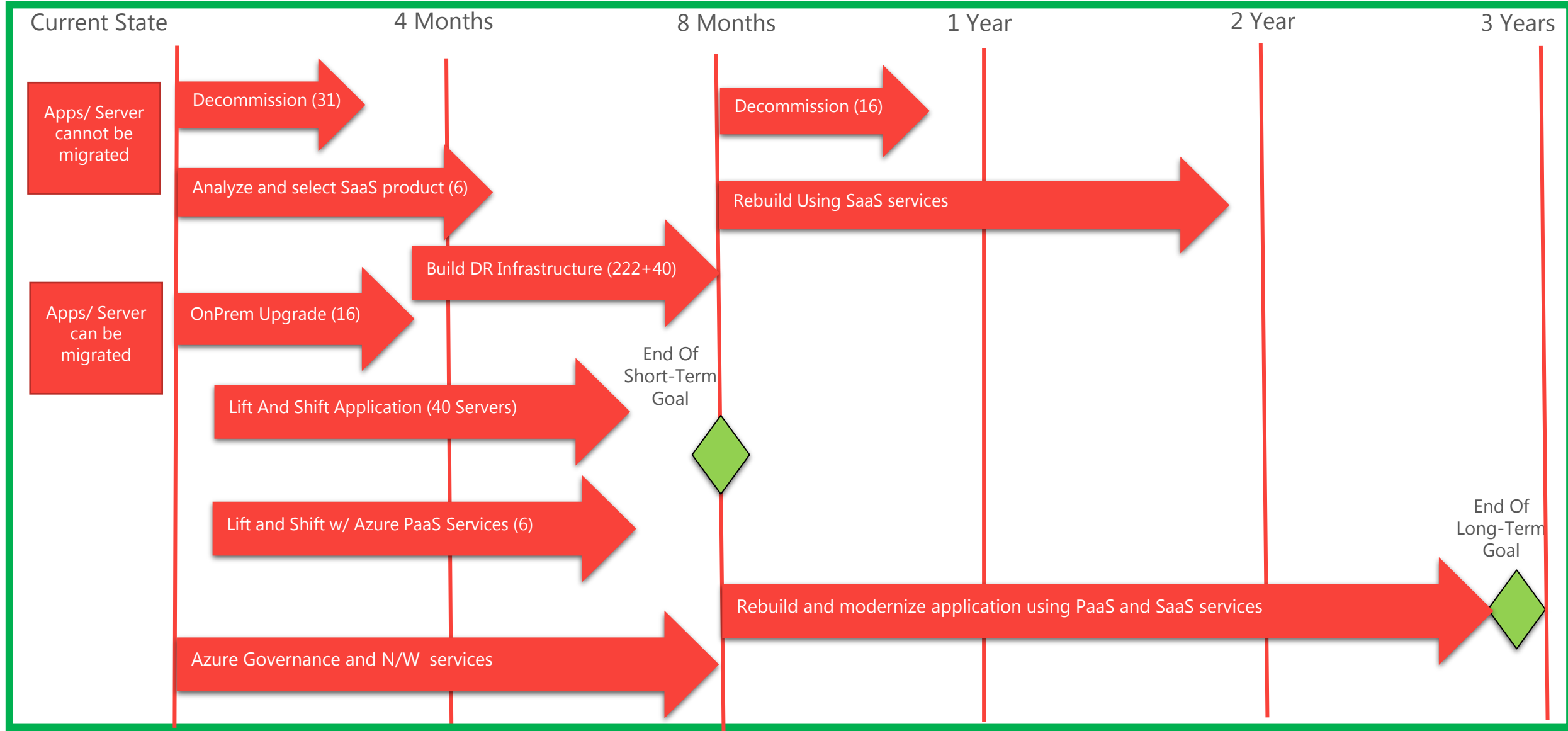


Migration Effort / Benefit Matrix





Migration Roadmap @ Regional Municipality





Azure Analytics Assessment Offer



Evaluate current analytics state and propose a modern analytics cloud architecture and roadmap.

- Perform analytics current state discovery and determine future analytics goals
- Define future state Azure service architecture
- Define future state Azure network architecture
- Estimate Azure run cost for future state architecture
- Identify technical governance approach for security, dlp, bc/dr, recovery, monitoring, and devops
- Define roadmap to achieve future state analytic goals aligned to business priorities
- Define plan / resources / cost to achieve future state
- Pilot Solution

Adastra will provide one senior Azure analytics architect for 5 weeks (25 days) to execute the assessment / small pilot.

Assessment Cost: estimated \$35k USD



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For Questions contact:

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