CITY OF AUSTIN, TEXAS

INFORMATION TECHNOLOGY

CITY OF AUSTIN IT STRATEGIC PLAN

IT Governance and Planning Audit Recommendation

The CIO should continue to develop, implement, and monitor a citywide IT Strategic Plan that lays out a specific vision or values and goals that are common to strategic plans. It should also present specific goals with detailed strategies, initiatives, and measures for ensuring that the City achieves the goals.

Executive Summary

Members of the City's IT Governance program created the first City of Austin Information Technology Strategic Plan to align with and support the City's Strategic Direction 2023 and will refresh the plan on an annual basis. The IT Strategy identifies eight Shared Services (IT Capabilities) and, using annually refreshed *Capability Roadmaps*, identifies initiatives, programs, and projects to mature the Capabilities and support the council outcomes. Communications and Technology Management (CTM) developed an End-to-End Customer Engagement Model to support the IT Strategy.

Background

The City of Austin's Information Technology Strategic Plan uses a one-page format to convey the information efficiently (see page 8). Gartner, a leading IT research company, recommended streamlining the plan's presentation as an industry standard best practice.

Leadership for the planning process included:

- Rey Arellano, Assistant City Manager, chair of the *IT Steering Committee*
- Khalil Shalabi, Vice President, Austin Energy, chair of *Department Directors' Advisory Council*
- Stephen Elkins, Chief Information Officer, chair of the *CIO Council*
- Lisa Palmer, Executive Partner, Gartner Inc., Initial facilitator
- Paul Cook, Business Process Consultant, Senior, facilitator
- Peter Feighner, IT Project Manager, facilitator, graphic design

The IT Steering Committee (ITSC) initiated the planning process in early fall 2016, ahead of the *City's Strategic Direction* process, seeking to leverage the developing insights and work products from the City's overall process. The CIO coordinated three workshops with members of IT Governance's, including the ITSC, *Department Directors' Advisory Council* (DDAC), *CIO Council* (CIOC), and the leadership of the *Essential Capability Governing Boards* (ECGB).

The first workshop, February 17, 2017, engaged participants in understanding the newly defined *Strategic Outcomes* of the *City's Strategic Direction*. Participants developed a problem statement defining the overall issues facing COA IT and the creation of the *IT Focal Areas* based on identified business needs.

The second workshop, November 8, 2017, leveraged work products from the first workshop to present a first draft of the one-page IT Strategy document, including proposed Capabilities and a plan to mature existing Capabilities and develop new Capabilities. Participants reviewed the Strategy document, provided feedback on the proposed Capabilities, and made recommendations for developing or maturing the Capabilities.

The third and process-concluding workshop, April 6, 2018, used insights from all the workshops to present a final version of the one-page Strategic Plan and performance measures. Drafts of the *Capability Roadmaps* showed the plans to mature each capability and support for the *Strategic Outcomes*. The CIO also presented a draft of the *End-to End Customer Engagement* process, and participants provided feedback on all of the Strategy documents. The CIO will schedule additional workshops to refresh the plan, starting in October 2018, to assess progress and refresh the *City of Austin IT Strategic Plan.*

City of Austin Information Technology Strategic Plan

The IT strategy centers on the City of Austin *Strategic Direction Outcomes*. IT exists to implement the vision, address identified *challenges*, help meet the Council*'s* indicators and metrics, and support the identified strategies found in the *City of Austin Strategic Direction 2023.*

From the City of Austin Strategic Direction 2023, Adopted March 8, 2018:

> *OUR VISION (from Imagine Austin):*
> *Austin is a beacon of sustainability, social equity, and economic opportunity; where diversity and creativity are celebrated; where community needs, and values are recognized; where leadership comes from its community members, and where the necessities of life are affordable and accessible to all.*
>
> *In working toward this long-term vision and our aspiration of being one of the most unique, thriving, livable cities in the country, this City Council has chosen to pursue the following strategic outcomes at this time:*
>
> *OUR STRATEGIC OUTCOMES*
> *Together we strive to create a complete community where every Austinite has choices at every stage of life that allow us to experience and contribute to all of the following outcomes:*
> ● *Economic Opportunity & Affordability: Having economic opportunities and resources that enable us to thrive in our community.*
> ● *Mobility: Getting us where we want to go, when we want to get there, safely and cost-effectively.*
> ● *Safety: Being safe in our home, at work, and in our community.*
> ● *Health & Environment: Enjoying a sustainable environment and a healthy life, physically and mentally.*
> ● *Culture and Lifelong Learning: Being enriched by Austin's unique civic, cultural, ethnic, and learning opportunities.*
> *Government That Works for All: Believing that city government works effectively and collaboratively for all of us—that it is equitable, ethical and innovative.*

IT Focal Areas

The IT Focal Areas provided a lens for technology strategies to address the problem statement, the reason for the IT Strategic Plan and meet the City's Outcomes.

Problem statement: *The Austin City Council embarked on a Strategic Planning effort with City staff to develop the long-term vision for the city. As part of this ongoing effort, the City Council identified Strategic Outcomes (goals) for City government. The resources that the City owns, including technology, should enable these outcomes. The COA's current state of technology and its available resources do not always allow for the seamless delivery of services that our residents, businesses, and staff expect in Austin, a recognized technology hub.*

IT Focal Areas*:*

- ***Modernize the Core*** *(a Smart Cities Foundation) – update and improve foundational systems*
    - *Implications:*
        - *Establish funding models for core citywide, multi-department and department-specific systems (ex. Finance, Human Capital Management, Asset, Computer Aided Dispatching)*
        - *Establish asset lifecycle management for IT assets*
        - *Establish system governance to support entire city rather than one department*
        - *Leverage governing boards for roadmaps for key systems*
        - *Create a single source of information on citywide solutions*
- ***Make data accessible, safe and useful to City staff -*** *provide robust City technology infrastructure*
    - *Implications:*
        - *Include the "public/community to accelerate development/ participation"*
        - *Define a citywide Smart Cities strategy for the Austin and Central Texas*
        - *Insist on common security and business policies, practices, and process*
        - *Build infrastructure to support analytics and access safely, anywhere/anytime*
        - *Establish Master Data Management to identify data sources, ownership and classification*
- ***Make Doing Business Easy*** *– provide residents with seamless access to City services*
    - *Implications:*
        - *Define a citywide Smart Cities strategy for the Austin and Central Texas*
        - *Insist on common business policies, practices, and process*
        - *Integrate civic/democratic participation and support equity to ensure all users can access city services*
        - *Provide a single resident portal for City services (web redevelopment)*
        - *Offer paperless options for currently paper-based transactions for external and internal customers*

          Define "Civic Moments" and ensure all residents have access to technology and the adequate technology literacy skills to participate in a digital society. Cross the digital divide so all parts of the community can participate.

Terms defined:

Smart Cities – an evolving term to describe technologies and solutions to develop infrastructure efficiencies and create greater transparency of municipal operations.

Civic Moments – a brief opportunities to leverage a network of people, businesses, organizations and technologies to achieve a public good.

Shared Services (IT Capabilities)

As essential IT Capabilities, the Shared Services support the achievement of valued business results—the *Strategic Outcomes*. Initially workshop participants identified twelve IT Capabilities based on existing Shared Services and staff research of other municipal governments. Over the course of the workshops the group narrowed to capabilities to eight.

Currently, a single or limited number of applications provided each of the IT Capabilities. Resources dedicated to each IT Capability primarily focus on ongoing support for customers and expansion to other customers with similar business needs. *Essential Capability Governing Boards* for each capability, made up of business partners' representatives, provide governance around each service.

The workshops identified a need for IT Governance to shift from an application-centric service delivery to provide a comprehensive range of services focused on supporting business-centric capabilities. To facilitate the required shift, CTM will identify Capability Managers, who will manage a portfolio of small, medium, and large options within a capability to address needs with properly scaled solutions. The change will allow IT leaders to deliver better value to business partners in achieving desired outcomes. Future *IT Strategic Plans* will incorporate this change as the city's leadership's understanding evolves.

The eight Shared Services are:

Workflow/Process Management. This capability currently focuses on a single application, AMANDA, used to provide case management for reviews, permitting, inspections, code enforcement, and some other city services. In the future, the capability could include Enterprise Process Design/Monitoring, IT Governance, and Identity Management. The Case Management Governing Board manages the backlog of business needs. See the Capability Roadmap on 12.

Human Capital Management. Currently in its initial phase, this capability will focus on services that will include Workforce Management, Talent Acquisition and Training, and Employment and Labor Law Compliance. A Human Capital Management Governing Board will be reformed to manage this capability. See the Capability Roadmap on 15

Asset Management. This capability tracks, maintains and manages City assets to support their efficient and effective use. Many unique asset management systems exist across the city. Currently the Asset Management Governing Board manages the Maximo application. See the Capability Roadmap on 10.

Infrastructure Management. This capability designs, operates and maintains the City's hardware and software to support the City's technology. The CIO Council functions as the Infrastructure Management Governing Board. See the Capability Roadmap on 19.

Finance/Accounting Management. This capability provides support for accounting, capital improvement projects, operations, purchasing and financial reporting and Small Minority Business Resource goals. Currently the Financial Services Department (FSD) serves as an independent Governing Board, outside of IT Governance. No capability road map is available.

Security/Risk Management. This developing service protects information assets and technologies, manages enterprise risks, and provides auditing. Led by the city's Chief Information Security Officer, the Security Management Governing Board is developing this Capability. See the Capability Roadmap on 21.

Geospatial Information Services. This long standing citywide service analyzes, manages, and reports location data across the city. The GIS Management Governing Board provides direction for this service. See the Capability Roadmap on 13.

Information/Knowledge Management. This is a new identified capability to support resident and employee communications, manage content and data, support web user experiences, and provide business intelligence and project management. The forming Information Management Governing Board is beginning to bring order to this wide range of responsibilities. See the Capability Roadmap on 17.

Capability Roadmaps

Capability Roadmaps have been created to create a three-year plan to develop the capability to meet the Council Outcomes. Each Roadmap identifies the current state, initiatives needed to advance to a future state, and estimated resource needs and timing. Benefits to the City's Strategic Outcomes describe the anticipated impact to the City's plan. The Roadmaps are developed by the Capability Boards in collaboration with IT subject matter experts and will be revised annually to reflect progress, evolving business needs, and available resources.

Key initiatives for each capability are included on the *IT Strategic Plan* to highlight the specific activities being undertaken. See the Appendix for the most current available Capability Roadmaps.

IT Business Outcomes

Under Development, the outer most tier of the IT plan, contains the seven key IT business outcomes that the CIO identified from collaboration with our business partners across the City at the design thinking workshops that occurred in February 2018. They include:

- Provide a user-friendly end-to-end customer engagement model
- Accelerate time to market
- Increase percentage of budget allocated to innovation
- Increase value/variety of supported products/services
- Understand/decrease cost of It per employee/resident
- Increase customer satisfaction
- Increase percentage of self service offerings

Next Steps

Implementation of an End-To-End Customer Engagement Model. Identified as a need in the workshops, the ITSC has directed the development of a single process for technology requests.

Customers will have a single portal to initiate requests and track request progress, as well as access to a portfolio of available services. A Technical Review Board (TRB) incorporating key expertise (ex. Legal, Purchasing, Security, Capabilities, etc.) will review for risks, assess available solutions, and guide the request to a conclusion.

A curated list of business needs will track the progress of requests through each of four tracks – Department Projects, Fix It Now, Capabilities, and Citywide Projects. For Department Projects where the department has the resources to implement their own solution, the TRB will serve as a resource to identify and mitigate risks. Fix It Now will address simple needs quickly. TRB will direct requests met with existing Capabilities directly to the Capability Boards for inclusion in their development Roadmaps. Finally, IT Governance will assess identified Citywide IT needs and projects.

The Business Needs Design Lab will use agile customer centric design thinking approaches to more clearly define business requirements and identify solutions in highly interactive facilitated sessions with customers. See page 9.

Establish Information Management/Knowledge Management Governing Board. A working group designated by the CIO drafted a charter for this new Governing Board, pending approval by the DDAC.

Reestablish Human Capital Management Governing Board. With the Workforce Management project underway, a CTM, Human Resources Department, and the Controller's Office will reestablish this board.

Iterate the Capability Roadmaps. As part of the annual IT budgeting process, the Capability Boards will revise and evolve their Roadmaps to reflect their progress, evolving needs, and direction of the Council Outcomes.

Appendix

City of Austin IT Strategy

(FY18 to FY20)

This one page IT Strategy illustrates the strong connection between the six Citywide strategic outcomes and our IT strategic plan for the next three years.

The 6 strategic outcomes were developed by City Council with the involvement of many City of Austin employees over 5 strategy workshops and break out sessions that began in January 2017. These outcomes were adopted on March 8, 2018.

The 7 shared services (IT capabilities) were consolidated down from 12 original capabilities using the substantial feedback received at the recent IT strategy working session back in November, 2017.

The IT programs, projects and initiatives show the major investments that are either in flight (black boxes, white text) or proposed but not yet funded (grey boxes, black text) over the next 3 years.

The outer most tier contains the 7 key IT business outcomes that were identified from thoughtful feedback and close collaboration with our business partners across the City at the recent design thinking workshops that occurred in February, 2018.

Together, these elements provide us with an integrated approach to deliver the highest level of value for the investment made in IT.

A special thank-you to everyone that contributed their time and energy to the development of this IT strategic plan!

IT FOCAL AREAS:

1) Make it Easy to do Business
2) Make Data Available, Useful and Safe
3) Modernize the Core

IT BUSINESS OUTCOMES

Increase % self-service offerings

Provide a user friendly end-to-end customer engagement model

Increase customer satisfaction

Accelerate time-to-market

Understand/decrease cost of IT per employee/resident

Increase value/variety of supported products/services

Increase % of budget allocated to innovation

IT PROGRAMS, PROJECTS & INITIATIVES

FY 20

FY 19

FY 18

Master Data Management

SharePoint Cloud Migration

Boards & Commissions System

Electronic Health Records

Web Redesign

EDIMS Scanning (Kofax Replacement)

EDIMS Upgrade

Service Desk Call Tracking System

Assess/Implement AMANDA V7

AMANDA Upgrade

Austin Center for Events (ACE) Implementation

GIS ROW/MAN Replacement - ATD

Open Data: Citizen Engagement

GIS: Aerial Subscription, Ortho Imagery& Impervious Cover

GIS: CompassCom, Fleetmind, Traffic Sensors

Workforce Management (HRD)

Real Estate Inventory

Migrate Maximo users to cloud (SaaS)

Implement Maximo Data Warehouse

GIS Sync Upgrade

CJIS Network Encryption

Distributed Denial of Service Attack Mitigation (DDoS)

Security Operations Center (Security Monitoring)

Security Information Event Management System

Assessment/Authorization Program

Risk/Incident/IAM Programs

Governance, Risk & Compliance (GRC)

Security Awareness

Vulnerability Management

2nd Internet Connection

Data Center Relocation

Regional Mutual Aid (Closest Public Safety Responder)

Enterprise ETL Tool

Replace FTP System

Log Management

Identity/Access Mgt. (IAM)

Public Key Infrastructure (PKI)

Network Segmentation Technologies

Inventory/Configuration Management

SHARED SERVICES (IT CAPABILTIES)

Information/Knowledge Management
- Resident/Employee Communications
- Content and data management
- Web User Experience
- Business Intelligence
- Project Management

Workflow/Process Management *(Currently Amanda)*
- Case Management
- Enterprise Process Design/ Monitoring
- IT Governance
- Identity Management

GIS Management

Analyze, manage and report location data (geospatial) for use by City services.

Human Capital Management
- Talent Acquisition & Retention
- Employee Assessment & Training
- Employment/Labor Law Compliance

Security/Risk Management
- Protect information assets/ technologies
- Enterprise Risk Management
- Auditing

Asset Management *(Currently Maximo)*

Track, maintain and manage City assets to support their efficient and effective use.
- Real Estate
- Fleet Management

Finance/Accounting Management
- Capital Improvement Projects
- Operations
- Purchasing
- Invoicing and Financial Reporting
- SMBR Goals

IT Infrastructure Management

Design, operate and maintain:
- Networks/Hardware
- IT Applications (Software)

STRATEGIC OUTCOMES

Government that Works for All

Safety

Mobility

Culture and Lifelong Learning

Health and Environment

Economic Opportunity and Affordability

Key:

Not Yet Funded

Funded or In Flight

Please direct any questions or suggestions to Paul Cook or Peter Feighner

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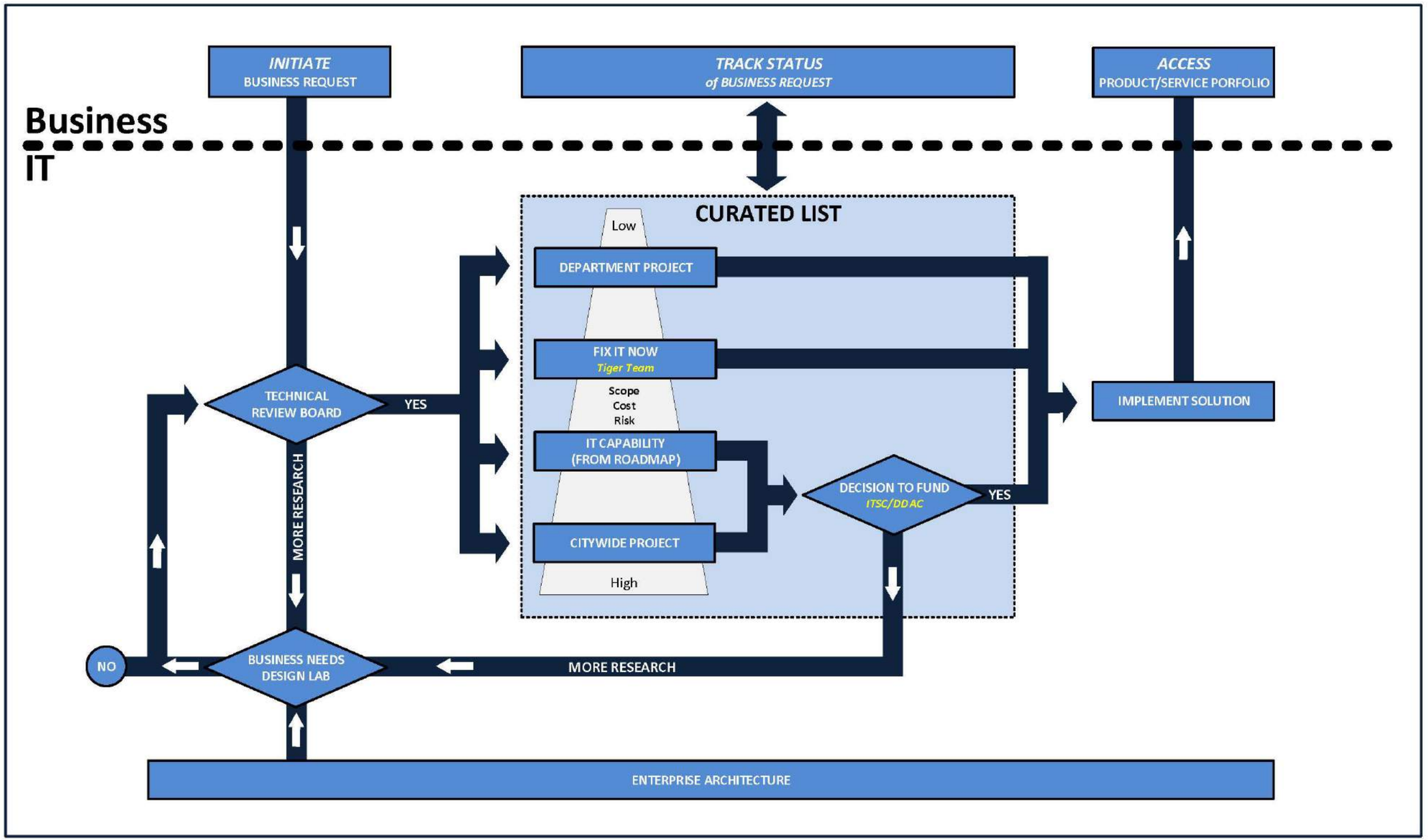
CITY OF AUSTIN, TEXAS
INFORMATION TECHNOLOGY

DRAFT

End-to-End Customer Engagement Model



Please direct any questions or suggestions to Paul Cook or Peter Feighner

Asset Management Roadmap for 2019-2021

Statement of Business Value: Maximo provides a Citywide technology solution for the lifecycle management of assets, inventory, procurement, service, work, and contract management.

State in 2018

Current indicators/metrics

- Maximo users are currently divided into SaaS ("Cloud") users and On Premise users
- Departments are either queued for cloud implementation or require extensive Maximo on premise reconfiguration
- Capabilities differ in the SaaS ("Cloud") and On Premise Maximo application provided to users e.g. GIS integration, mobile solution
- The Asset Management Essential Capability is currently without a data warehouse

Top Initiatives

- Implementation of existing Maximo On Premise users to SaaS ("Cloud") solution and merge CTM support teams
- Implement a data warehouse for Maximo asset management to maximize business use of data and expand reporting capabilities with Business Intelligence technology
- Begin onboarding process for Parks and Recreation Department
- Begin onboarding process for Austin Convention Center
- Reconfigure Austin Transportation Department implementation to better align with its business processes and implement in SaaS ("Cloud") solution

Benefits to the City's Strategic Outcomes

Government That Works For All

- B1: Percentage of time that City-owned infrastructure is operational
- B7: Percentage of infrastructure that is classified as poor or failing condition in the Comprehensive Infrastructure Assessment

Health and Environment

- C3: Percentage of residents satisfied with Parks and Recreation programs & facilities

Safety

- A2: Percentage of residents who say they trust the City's public safety services

Economic Opportunity and Affordability

- A6: Number of small businesses supported by City of Austin programs

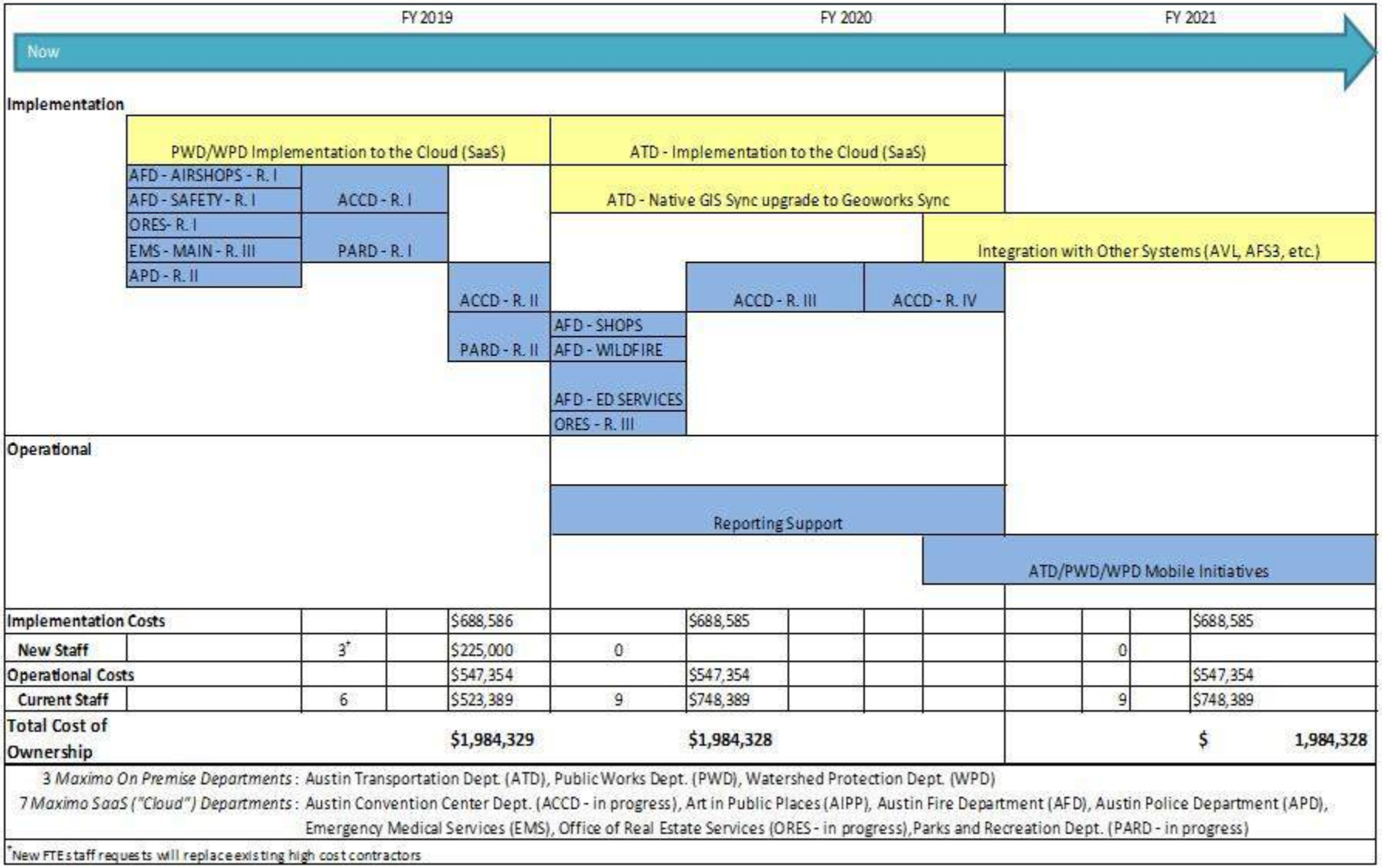
State in 2021

Future indicators/metrics

- All Maximo users will reside in SaaS ("Cloud") solution
- Business Intelligence tools and reporting will be enabled for Maximo users through data warehouse
- All departments requiring Maximo will be identified and no departments in line for service
- All user department reconfigurations will be complete in Maximo SaaS
- All Maximo users will have access to the same set of capabilities

Last Update 3/30/2018

Asset Management Roadmap for 2019-2021



Implementation Costs			$688,586		$688,585							$688,585	
New Staff		3*	$225,000	0						0			
Operational Costs			$547,354		$547,354							$547,354	
Current Staff	6		$523,389	9	$748,389					9		$748,389	
Total Cost of Ownership			**$1,984,329**		**$1,984,328**							**$ 1,984,328**	

3 Maximo On Premise Departments : Austin Transportation Dept. (ATD), Public Works Dept. (PWD), Watershed Protection Dept. (WPD)

7 Maximo SaaS ("Cloud") Departments : Austin Convention Center Dept. (ACCD - in progress), Art in Public Places (AIPP), Austin Fire Department (AFD), Austin Police Department (APD), Emergency Medical Services (EMS), Office of Real Estate Services (ORES - in progress), Parks and Recreation Dept. (PARD - in progress)

*New FTE staff requests will replace existing high cost contractors

Last Update 3/30/2018

Case Management Business Capability (AMANDA) Roadmap 2018-2021

- **Statement of Business Value:** Centralized workflow and data management of reviews, permitting, inspections, code enforcement and other city services. It includes an online customer portal (AB+C), and integration with GIS, ePlan (electronic plan review), and other city systems. AMANDA is used by 21 departments (16 resident facing), with fee collections of $111 million in 2017.

State in 2018

- Desire to improve the user experience and efficiency (fewer clicks, more automation, less customization)
- 14,456 applications initiated and $8.5 mil paid through online portal (2017)
- 36 ranked projects (active and pending)
- >130 unranked projects in the backlog (enhancements, integrations, new implementations)
- 8 FTE CTM Support staff (+3 contract, +1 temp)
- $1.7M outsourced in 2017

Top Initiatives

- AMANDA V7 Assessment and AMANDA V7 (or alternative) implementation with focus on modernization and improving user experience
- Continued quarterly prioritization of projects according to highest value/effort by the Case Management Governing Board (CMGB)
  - Ex: ROWMAN Replacement, Austin Center for Events (ACE) (Both expand use of AB+C portal as part of scope)
- Expand internal staffing model to include more in-house agile project delivery and rely less on more expensive consultant and staff augmentation resources

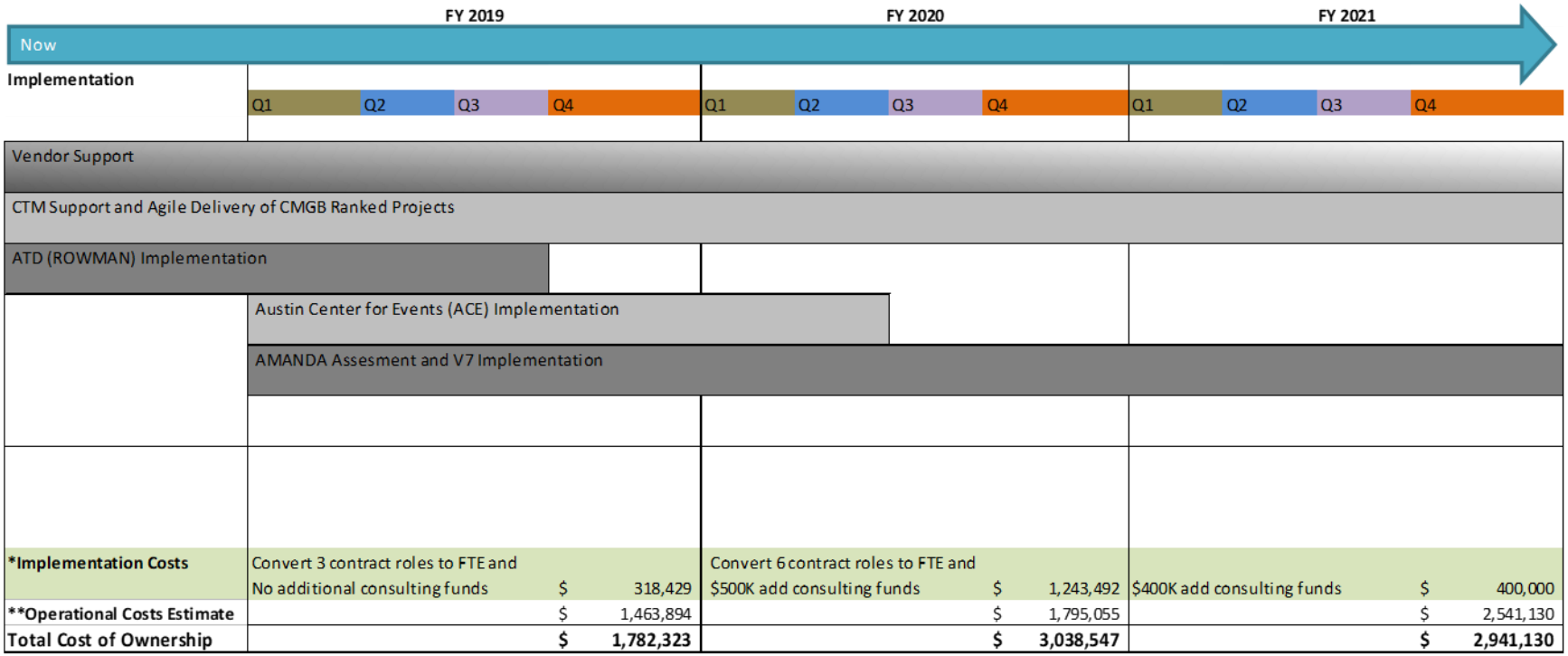
Benefits to City Strategic Outcomes

Economic Opportunity & Affordability (D) Housing – indirect
Health & Environment (A) Healthy conditions among individuals – direct
Safety
(B) Community compliance with laws and regulations - direct
(D) Quality and reliability of critical infrastructure – indirect
Mobility
(A) System efficiency and congestion – indirect
(D) Safety – indirect
Culture & Lifelong Learning (A) Quality, accessibility, and diversity of civic and cultural venues, events, programs, and resources - indirect
Government That Works
(B) Condition/quality of City facilities and infrastructure and effective adoption of technology – direct
(C) Satisfaction with City services – direct
(G) Transparency and ethical practices - direct

State in 2021

- Upgraded Case Management platform
- Increased online application submittals and payments by 30%
- Source control and automated deployments
- Matured agile practice with faster and more predictable throughput of highest value backlog items
- 17 FTE CTM Support staff
- < $0.7M outsourced yearly

Case Management Business Capability (AMANDA) Roadmap 2018-2021



***Implementation Costs**	Convert 3 contract roles to FTE and No additional consulting funds	$	318,429	Convert 6 contract roles to FTE and $500K add consulting funds	$	1,243,492	$400K add consulting funds	$	400,000
****Operational Costs Estimate**		$	1,463,894		$	1,795,055		$	2,541,130
Total Cost of Ownership		**$**	**1,782,323**		**$**	**3,038,547**		**$**	**2,941,130**

*The dollar amounts requested above take into consideration the funding already available in the AMANDA, ACE and ROWMAN CIP accounts. Additional and continued funding is requested for FY2020 and beyond in order to a) convert staff augmentation to FTE and b) complete the top ranked CMGB projects including ROWMAN and ACE, which are predicted to run short of funds before scope is fully delivered. Conversion of contractor roles to FTE is critical for long term agile delivery methodology in order to create high performing teams and should decrease cost, increase quality and rate of delivery over time.

**Increase in operational cost baseline primarily due to built-in 3% annual increase for software license maintenance. Previous year FTE conversions are also reflected in these numbers.

Geospatial Information Management Capability Roadmap 2018-2021

Last Revised 4/11/18

Statement of Business Value: Provide the ability to manage, analyze and report location data (geospatial) for use by the City and citizens in strategic planning, decision-making, and operational capability.

State in 2018	Top Initiatives	State in 2021
Funding for key Citywide data projects is asked for annually.	**Data Collection** - Departments need aerial photography, impervious cover, and elevation data that are updated regularly to so their decisions can reflect real world conditions. Directly benefits any departments with missions involving manmade development or the natural environment.	Citywide data collection efforts integrated with 5 year budget to stabilize funding.
Tracking of mobile asset locations is stored in proprietary vendor applications making it difficult to visualize and analyze with other City data.	**Real-Time Data System** - Deploy a geospatial system that brings together live data from multiple vehicle tracking and monitoring sensor networks for visualization and analysis so supervisors can allocate resources efficiently and data analysts can research optimizations to improve response times and reduce fleet travel costs. Directly benefits 13 departments including AE, AFD, APD, ARR, ATD, Code, AWU, DSD, EMS, Fleet, HHS, PWD, and WPD.	Mobile asset location data can be integrated with any geospatial application for live situational awareness.
Decision makers use static maps and annual reports to inform decisions.	**Location Analytics** - Develop applications and geospatial data analysis tools that combine business intelligence analytics with geospatial data to identify spatial relationships and trends that help the City accomplish objectives. Directly benefits 10 departments including AFD, APD, ATD, Code, DSD, EDD, EMS, Fleet, PAZ, and PWD).	Decision makers use geospatial dashboards with live metrics from enterprise applications to inform decisions.

Benefits to City Strategic Outcomes

- Safety-A: Success of emergency response. –Direct (Real-Time Data System & Location Analytics) *A central real-time data mapping and location analytics system will help public safety allocate resources quickly and identify trends that will lead to response optimizations.
- Government That Works For All-B: Condition/quality of City facilities and infrastructure and effective adoption of technology. -Indirect (Data Collection & Location Analytics) *Up to date will help assess asset conditions. Strategic Outcome map dashboard apps will help share progress with public through the City of Austin Web Portal.
- Government That Works For All-C: Satisfaction with City services. -Indirect (Real-time Data and Location Analytics) *Dashboards will assist many departments with monitoring and improving service.
- Government That Works For All E: Stakeholder engagement and participation. -Indirect (Location Analytics) *Strategic outcome dashboards and other location analytics apps shared with the public will increase percentage of residents who believe Austin values dialogue between residents and government, and contribute to engagement/outreach activities

Geospatial Information Management Capability Roadmap 2018-2021

Last Revised 4/11/18

	FY 2019	FY 2020	FY 2021
Now →			
Data Collection			
	Aerial Subscription	Aerial Subscription, Ortho Imagery & Impervious Cover	Aerial Subscription
Real Time Data System			
	Enterprise System Installation		Public Safety System Installation
	Integration with CompassCom	Integration with FleetMind; Integration with Traffic Sensors	Integration with Tritech AVL; Wilco Integration
Location Analytics			
	Deploy Maps & Dashboards for Citywide Strategic Outcomes		Develop City Vehicle Route Optimization Tools
	Develop Department Operational Map Template		
		Deploy secure Public Safety geospatial servers for dashboard & analysis applications	

Totals												
Implementation Costs				$ 201,220				$ 775,000				$ 256,220
New Staff		2		$ 202,498		1		$ 104,287		0		
Operational Costs				$ 88,000				$ 88,000				$ 88,000
Current Staff		14		$ 1,415,554		16		$ 1,666,594		17		$ 1,824,006
Total Cost of Ownership				**$ 1,907,272**				**$ 2,633,881**				**$2,168,226**

Human Capital Management Capability Roadmap 2018 – 2021

Statement of Business Value: Human Capital Management supports the City's business by optimizing the human resources of the organization through Core HR, talent management, and workforce management functions.

State in 2018

Current indicators/metrics

- Core HR has limited functionality for Benefits, Personnel, and Employee Self Service; no Managers self service
- Workforce Management has no functionality for labor scheduling, time and attendance automation, or leave management
- Talent Management has limited functionality in some departments, but no functionality at the corporate level for career development, performance appraisals, learning management.

Top Initiatives

- Complete Prototype of Workforce Management functionality in seven departments: HRD, Controller's Ofc, CTM, ARR, AE, AFD, and EMS in FY18.
- Second phase of Workforce Management to complete in FY19
- Implement remaining HCM Functionality including Core HR and Talent Management
  - Applicant Tracking System
  - Learning Management System

Benefits to the City's Strategic Outcomes

Government that Works for All

D. Employee Engagement

G.1. Transparency and ethical practices

Strategies

Data Collection and Storage standards

Improve our Competitiveness as an employer

Embrace technology to improve business processes

State in 2021

Current indicators/metrics

- All employees using electronic mechanisms for labor scheduling, leave management, time and attendance.
- Once applicants are hired, there are seamless onboarding processes to the Payroll system
- Employees are able to utilize a learning management system to take training and track training they have taken.

1

	FY18		FY19		FY20		FY21		FY22		FY23	
	One-time	Ongoing	One-time	Ongoing	One-time	Ongoing	One-time	Ongoing	One-time	Ongoing	One-time	Ongoing
Phase 1: Workforce Management (WFM) (pilot)	1,205,350	419,700										
Phase 2: WFM (complete citywide implementation)			943,200	1,642,500		1,408,393		1,430,545		1,521,689		*1,597,773*
Phase 3: HR Core					2,379,200	1,406,322		1,417,608		1,463,655		1,494,737
Phase 4: Compensation							2,114,200	118,800		*128,304*		*134,719*
Phase 5: Recruitment							787,600	224,400		*242,352*		*254,470*
Phase 6: Talent Management									884,400	316,800		*332,640*
Phase 7: Case Management									590,372	51,373		*53,942*
Phase 8: Payroll											2,647,804	311,504
Total	**1,205,350**	**419,700**	**943,200**	**1,642,500**	**2,379,200**	**2,814,715**	**2,901,800**	**3,191,353**	**1,474,772**	**3,724,173**	**2,647,804**	**4,179,785**
		1,625,050		2,585,700		5,193,915		6,093,153		5,198,945		6,827,589

Gartner contract - Phases 3-8 *(optional)*																
Project support ($25-35k per month OR 45-55K per qtr)																
Phase 3: HR Core					420,000										420,000	-
Phase 4: Compensation							220,000								220,000	-
Phase 5: Recruitment							220,000								220,000	-
Phase 6: Talent Management									220,000						220,000	-
Phase 7: Case Management									220,000						220,000	-
Phase 8: Payroll											420,000				420,000	-
estimated $35k/month Phases 3 & 8 and $55k/qtr for Phases 4-7																
Gartner contract - Total	-	-	-	-	**420,000**	-	**440,000**	-	**440,000**	-	**420,000**	-			**1,720,000**	-
Internal staffing *(may not need all of these positions)*																
Phase 2: WFM (complete citywide implementation)				255,778											-	**255,778**
Phase 3: HR Core						842,022		842,022		842,022		842,022			-	**3,368,088**
Phase 4: Compensation															-	-
Phase 5: Recruitment															-	-
Phase 6: Talent Management															-	-
Phase 7: Case Management															-	-
Phase 8: Payroll															-	-
Total Internal staffing	-	-	-	**255,778**	-	**842,022**	-	**842,022**	-	**842,022**	-	**842,022**			-	**3,623,866**

Information Mgmt.GB Capability Roadmap for 2018-2021

Statement of Business Value: Develop consistent information and content management standards to ensure the authenticity, reliability, integrity, and discoverability of information, and to enable City employees to be effective stewards of information throughout its lifecycle

State in 2018

- **Information landscape is unknown:** No central application inventory exists to enable departments to share processes and information, or to collaborate on new systems.
- **Information lacks governance:** Need for centralized data governance and data warehousing for all essential capabilities.
- **Information is siloed and decentralized:** Cross-collaboration and information sharing between departments is limited, and IT procurement decisions take place in a vacuum.
- **Information is inconsistent:** Limited enterprise data standards or quality guidelines mean data collection and management differs between departments.

Top Initiatives

- **Asset Management Data Warehouse:** Build an Asset Management Data Warehouse to support information sharing and increased capacity for reporting and analytics.
- **Data Governance:** Establish an Employee Master Data Management program to increase the quality of data across the city.
- **Centralizing SharePoint:** Provide a team of Subject-Matter Experts to consult departments, automate processes and perform outreach/training
- **EDIMS Enterprise Scanning Solution:** Replace the Kofax scan solution with a sustainable, cost-efficient software
- **Open Data:** Build capacity to support expanded use of Open Data through outreach, automation, training, and new analytics and visualization tools.
- **Application Inventory, Gap Analysis, and Risk Assessment:** assist departments and City in identifying areas of greatest risk and reward

Benefits to the City's Strategic Outcomes

- **Government That Works Categories A, B, C, E:** Identifying risk allows for intelligent decision-making in funding, replacements, and effective adoption of technology.
- **Economic Opportunity and Affordability Categories A and D:** Open Data provides information resources that local and small businesses can use to plan their activities and create new business products.
- **Health and Environment Categories C and E:** Open Data and Citywide information sharing support reporting metrics and creation of civic tools, such as park mapping.
- **Critical Support to All Strategic Outcomes:** Quality data, a fully-mature information management landscape, and information governance are vital in the successful implementation of all strategic outcomes.

State in 2021

- **Information landscape is clear and navigable:** Application inventory and risk assessment allow us to find "the right tool for the job." Centralized resources support internal and external collaboration, increased information sharing and decreased silos.
- **Information is a community resource:** Departments collaborate and build systems that meet multiple needs. BI tools and data warehousing allow for quality reporting on performance metrics.
- **Information is governed:** Clear data and information quality standards exist, with the City beginning Master Data Management in FY 2020. Robust data community oversees a data portal containing high quality, high value data.

IMGB Capability Roadmap for 2018-2021

	FY 2019				FY 2020				FY 2021			
Now →												
Asset Mgmt Data Warehouse	Implement PWD, WPD, ATD asset data				Establish Asset Mgmt Data team and begin data transfer				Creation of new enterprise asset management reporting			
Implementation Costs	new staff	2		$ 335,000	new staff	0		$ -	new staff	0		$ -
Operational Costs	current staff	2		$ 362,564	current staff	4		$ 461,000	current staff	4		$ 461,000
Total Cost of Ownership				$ 697,564				$ 461,000				$ 461,000
Data Governance	Employee Data Assessment and Classification											
			Establishing Roles and Staffing Resources to Support DG									
					Begin Implementing MDM							
										Final Rollout of Phase I MDM Implementation		
Implementation Costs	new staff	2		$ 235,000	new staff			$ -	new staff			$ -
Operational Costs	current staff	1		$ 118,000	current staff	3		$ 343,000	current staff			$ 343,000
Total Cost of Ownership				$ 353,000				$ 343,000				$ 343,000
SharePoint	Citywide Communication and Training											
	Citywide Consulting and Information Architecture				Citywide Consulting and Information Architecture				Citywide Consulting and Information Architecture			
	On Premise to Cloud Migration				On Premise to Cloud Migration				On Premise to Cloud Migration			
	Ongoing Operational Support				Ongoing Operational Support				Ongoing Operational Support			
Implementation Costs	new staff	8		$ 800,000	new staff	0		$ 20,000	new staff	0		$ 20,000
Operational Costs	current staff	1.5		$ 385,000	current staff	9.5		$ 1,185,000	current staff	9.5		$ 1,205,000
Total Cost of Ownership				$ 1,185,000				$ 1,205,000				$ 1,225,000
Enterprise EDIMS Scanning	Review Available Options											
				Procurement Decision and Implementation for Current Kofax Users								
							Outreach to Potential Departments					
										Implementation with interested departments		
Implementation Costs	new staff	0		$ 48,000	new staff	0		$ -	new staff	0		$ -
Operational Costs	current staff	2		$ 316,461	current staff	2		$ 312,118	current staff	2		$ 325,329
Total Cost of Ownership				$ 364,461				$ 312,118				$ 325,329
Open Data	City-wide communication and training											
	City-wide consulting and data portal architecture				City-wide consulting and data portal architecture				City-wide consulting and data portal architecture			
	Automation of data loading from premesis to cloud				Automation of data loading from premesis to cloud				Automation of data loading from premesis to cloud			
	Community outreach and citizen engagement				Community outreach and citizen engagement				Community outreach and citizen engagement			
	Continuing technical and operational support				Continuing technical and operational support				Continuing technical and operational support			
					Develop and distribute data analytics and visualiztion tools				Develop and distribute data analytics and visualiztion tools			
Implementation Costs	new staff		2	$ 275,000	new staff		0	$ 50,000	new staff		0	$ 50,000
Operational Costs	current staff		3	$ 495,000	current staff		5	$ 720,000	current staff		5	$ 720,000
Total Cost of Ownership				$ 770,000				$ 770,000				$ 770,000

IT Infrastructure Capability Roadmap 2018 – 2021

Statement of Business Value: Provide the foundations upon which IT applications run, and deliver them to individual City staff. Delivery of all IT and automation value to the City rests on these foundations. In concrete terms, this consists of servers, storage, network, and all related capabilities, as well as direct assistance to staff through the Service Desk.

State in 2018	Top Initiatives	State in 2021
• Internet access is vulnerable to outages • Internet connections will max out soon • Corporate wifi is spotty, unreliable • Unified Communication Services not fully implemented • Network Segmentation	**Communication Enhancements** • Complete "2nd Internet" project for Internet resiliency • Expand City Internet pipes • Implement comprehensive corporate wifi • Implement Unified Communications/Collaborations features across the enterprise • Network Segmentation	• City Internet presence & connection is multi-layer resilient • City has abundant, fast Internet • Staff can connect wireless devices at most City facilities • City has a standardized Unified Collaborative toolset on the desktop
• Main City data center in unreliable facility • Storage is on-premise, requires lengthy capex process • Collaboration best done in-person	**Modernize the Core** • Complete the Data Center Relocation to collocated facility • Commence cloud storage	• City core data center is multi-layer resilient • Departments can archive & retrieve data with minimum red tape • Staff can meet, share documents, brainstorm regardless of their locations
• Small needs are overengineered, delayed. • Remote collaboration is unreliable • IT complexity gets solved by unreliable, one-off processes	**Optimize Incumbent Technologies** • Leverage SharePoint for quick wins • Provide training to fully adopt and utilize Office 365 • Adopt ITIL framework for IT service management	• Small application needs get solved quickly at low cost • Staff works together regardless of location • IT support is optimized, fast, efficient

Benefits to the City's Strategic Outcomes

B1. Percentage of time that City-owned infrastructure are operational
B7. Percent of infrastructure that is classified as poor or failing condition in the Comprehensive Infrastructure Assessment

Infrastructure Capability Roadmap 2018-2021

	FY 2019			FY 2020			FY2021		
	Impl Cost	Ops Cost	Impl+Ops Cost	Impl Cost	Ops Cost	Impl+Ops Cost	Impl Cost	Ops Cost	Impl+Ops Cost
Communications Enhancements									
Complete 2nd Internet (finishes FY18)			$ -			$ -			$ -
Expand City Internet Pipes	$ 121,000	$ 12,000	$ 133,000		$ 12,000	$ 12,000		$ 12,000	$ 12,000
Corporate WiFi	$ 581,895		$ 581,895	$ 1,318,965		$ 1,318,965	$ 193,965		$ 193,965
Implement Unified Communications	$ 650,000		$ 650,000	$ 850,000	$ 1,500,000	$ 2,350,000		$ 1,500,000	$ 1,500,000
Totals	$ 1,352,895	$ 12,000	$ 1,364,895	$ 2,168,965	$ 1,512,000	$ 3,680,965	$ 193,965	$ 1,512,000	$ 1,705,965
Modernize the Core									
Complete Data Center Relocation (finishes FY18)			$ -			$ -			$ -
Commence Cloud Storage Backup			$ -	$ 370,000	$ 350,000	$ 720,000		$ 350,000	$ 350,000
Totals	$ -	$ -	$ -	$ 370,000	$ 350,000	$ 720,000	$ -	$ 350,000	$ 350,000
Optimize Incumbent Technologies									
Leverage Sharepoint for quick wins		$ 400,000	$ 400,000		$ 400,000	$ 400,000		$ 400,000	$ 400,000
Training for Adoption and Utilization of O365		$ 450,000	$ 450,000			$ -			$ -
Adopt ITIL Framework for IT Service Management		$ 125,000	$ 125,000		$ 125,000	$ 125,000			$ -
Totals	$ -	$ 975,000	$ 975,000	$ -	$ 525,000	$ 525,000	$ -	$ 400,000	$ 400,000

Information Security Capability Roadmap for 2019-2025

Statement of Business Value: This capability enables the organization to protect and sustain the City's information and technology by ensuring confidentiality, integrity, and availability.

State in 2018

Current indicators/metrics

- Approach is focused on IT security at an IT operations level
- Approach relies on heroics and ad hoc processes with knowledge held by a few individuals
- Approach does not address operational risk at the organization or business process levels
- Approach only touches on the technology solutions space through review of purchase and/or deployed software and solutions for the systems implementation level

Top Initiatives (1-2 years)

- Establish Enterprise InfoSec Framework and Programs (Risk Mgmt., Incident Mgmt., Identity & Access Mgmt. etc.)
- Transition enterprise malware protection to managed service provider and enhance end point protection capability
- Identify security zones and segment enterprise network accordingly to reduce risk and meet regulatory compliance
- Establish an Enterprise Security Operations Center (SOC)
- Establish Enterprise Identity and Access Management (IAM) Solution

Benefits to the City's Strategic Outcomes

Council's Budget & Strategic Plan Workshop (04 Apr 2018):

"Increase funding for Cyber security to avoid Atlanta experience"

Council Strategic Outcomes

- Safety: Quality & Reliability of Critical Infrastructure (4 metrics & 2 challenges)
- Gov That Works: Condition/Quality of City Facilities and Infrastructure and Effective Adoption of Technology (2 metrics & 2 challenge statements)
- Gov That Works: Outcomes & Tech that Support Them (5 metrics & 3 challenges)

State in 2025

Future indicators/metrics

- Approach is focused on risk management and operational impact due to loss of confidentiality, integrity, and/or availability of information and technology
- The City manages information security risk through a documented, standardized, repeatable, and ongoing process
- Information security and privacy requirements are included by design at the organization, business process, and systems implementation levels

Information Security Capability Roadmap for 2019-2021

	1 YEAR								3 YEARS			
FY2018	FY 2019				FY 2020				FY 2021			
Enterprise Information Security Capability	Information Security Framework and Program Implementation (Training, Outreach, Governance, Risk, and Compliance (GRC) Platform and Solution, etc.)											
	Malware and Endpoint Protection with Managed Service											
	Network Segmentation Technologies											
			Security Operations Center (SOC) and Technologies									
				Identity and Access Management (IAM) Solution								
Implementation Costs	new staff			$ 2,857,000		4		$ 6,487,200		2	0	$ 1,755,000
Operational Costs	new staff			$ 795,000		0		$ 2,825,000		4	0	$ 4,670,066
Total Costs				$ 3,652,000		4		$ 9,312,200		6	0	$ 6,425,066