

SUBJECT: Digital Markham Strategy – Detailed Implementation Plan and Funding Strategy

PREPARED BY: Nasir Kenea, CIO, Ext. 4733

RECOMMENDATION:

- 1) THAT the report entitled “Digital Markham Strategy – Detailed Implementation Plan and Funding Strategy” be received;
- 2) AND THAT Staff proceed with the implementation and deliverables planned to December 31, 2018 as outlined in the report;
- 3) AND THAT Staff provide an annual update to General Committee on the outcomes of the implementation of the roadmap and future plans, including funding requirements;
- 4) AND THAT Staff be authorized and directed to do all things necessary to give effect to this resolution.

PURPOSE

The purpose of this report is to provide an update to General Committee regarding the detailed implementation plan and funding strategy for Digital Markham.

BACKGROUND

The City of Markham engaged the consulting firm PwC to develop the Digital Markham Strategy which defines the City’s technology vision and roadmap for the next three to five years. Development of the strategy spanned three phases, each involving extensive consultation and collaboration.

Feedback was received from a wide variety of digital thought leaders and Markham stakeholders, both external (City residents, businesses and service groups) and internal (city staff and council), through various focus groups and on-line forums.

Over 300 individual ideas gathered through the consultation process were condensed into 12 priority initiatives, each with specific action items to inform the Digital Strategy. The objectives of the strategy centre around four themes:

- A. to Engage and Serve the Community
- B. to be the Digital Differentiator for Business
- C. to move towards a Digital Workplace
- D. to enable the City as a Platform for Innovation

The 12 priority initiatives are discussed in more detail in the Discussion section below.

The Digital Markham Strategy was presented to General Committee on January 16, 2017 and the following resolutions were approved by Council on January 30, 2017:

- 1) That the Digital Markham Strategy presentation be received; and,
- 2) That the Digital Markham strategy & roadmap be endorsed as a go-forward approach to support achievement of Markham's digital goals by 2020 in the following areas:
 - Engaging and serving the community;
 - Becoming the digital differentiator for the business;
 - Enabling a digital workforce; and
 - Making the city a platform for innovation; and,
- 3) That Staff be directed to develop a detailed implementation plan, including a funding strategy for the Digital Markham roadmap and report back to General Committee by the end of June 2017; and further,
- 4) That Staff provide an annual update to General Committee on the status of the implementation of the roadmap.

OPTIONS / DISCUSSION

Following Council approval, City Staff reviewed the key priority initiatives in the approved digital strategy and developed related action items to create a detailed implementation plan.

The plan outlines proposed action item activity for 2017 - 2018 (Stage 1) and from 2019 to the end of 2020 (Stage 2). The timelines for Stage 2 (2019 – 2020) will be adjusted as appropriate as implementation proceeds. This plan has been attached as Appendix A.

Below are the specific deliverables by end of 2018 (stage 1) for the 12 priority initiatives under the four themes.

A. Engaging and Serving the Community

1. Continue to enhance the suite of fully integrated online services and mobile service offerings

Deliverables:

- User scenarios and journey maps (user experience)
- Digital services catalogue and portal enhancement roadmap

2. Build on the library as a centre of excellence in digital literacy

Deliverables:

- Enhanced & new digital literacy courses
- A functioning collaboration hub

3. Promote collaboration through digital tools

Deliverables:

- Strategy and governance for digital collaboration/engagement
- Content strategy for digital channels
- Implementation of a collaboration tool

4. Continue to develop Markham's role as a leader in Digital Democracy**Deliverables:**

- Planning and execution of online voting for 2018 Election

B. The Digital Differentiator for Business**5. Create a favourable regulatory environment that facilitates digital innovation, agility, and economic development****Deliverables:**

- Identify current challenges/pain points for business with policies and the licensing/permitting process and remediation opportunities
- Quick wins on smart infrastructure for city buildings

6. Create a framework for engaging strategic partners in achieving the #DigitalMarkham vision**Deliverables:**

- Establishment of the Digital Alliance Group (DAG) (completed)
- A framework for engaging partners

C. The Digital Workplace**7. Drive digital transformation to enable business integration across business units****Deliverables:**

- Governing and executing City-wide programs
- Development of internal "personas" and a vision for a more digital workplace
- Digitally enhanced processes, enterprise architecture

8. Create the capacity to leverage data as an asset**Deliverables:**

- Strategy for master data management across the City

9. Establish the foundation of a digital culture and a Digital Operating Model at the City**Deliverables:**

- Process to embed digital lenses to initiatives
- Operational framework for mobile/flexible workforce
- A digital champion
- Dashboard and communication on Digital Markham

D. The City as a Platform for Innovation

10. Create a “Living Lab” and innovation hub to demonstrate Markham’s new digital identity

Deliverables:

- Develop digital innovation hub and “living labs” with a pilot/showcase in Markham Centre
- Develop plans for the Future Urban Area and other selected sites.

The initial focus on Markham Centre, includes exploration of the following ideas:

- smart building standards including the York University campus and other buildings,
- the Library as a collaboration hub
- Smart infrastructure including parking, new generation fast network (5G), and driverless vehicle pilot testing

11. Implement an open data platform and the ongoing governance model

Deliverables:

- Internal process and governance on Open Data
- Platform selection & set of data published

12. Establish Markham’s identity as a Digital Destination

Deliverables:

- Communication strategy to attract talent, enhance economic development, highlight current service offerings and the Markham identity

These ideas will be further developed by the Digital Alliance Group members (thought leaders in the community and the industry that have volunteered to assist with the Digital Markham implementation) and City of Markham staff to determine feasibility and for prioritization based on value to our community.

Other Current City Digital Initiatives

A number of technology projects that support the digital strategy and will be completed by end of 2018 include:

- **New Employee portal with collaboration (Checkmark)** – newly redesigned employee site (intranet) with collaboration capability
- **Human Resources Information System** – system implementation to manage employee payroll and related information
- **Electronic Plan Review System (E-Plan)** – end-to-end review and approval of electronic plan and building permit submissions
- **Electronic Agenda Management System** – an electronic agenda management & report review system
- **Portal Redesign** – newly designed & user friendly website with clear and concise content, robust search capability, single-sign-on

- **Customer Engagement Technology** – content management system for all electronic display boards
- **Records Management System** – a system to manage and track city records
- **Learning Management System** – a corporate learning management system
- **Technology Infrastructure Enhancement** – computer and infrastructure replacement
- **Program Registration & Payment System** – program registration & facility booking including a corporate payment system
- **Customer Relationship Management System** – to manage all customer related information across the city
- **Workorder & Asset Management System** – to corporately manage physical asset lifecycle & workorders

FINANCIAL CONSIDERATIONS AND TEMPLATE:

Funding in the amount of \$9.7M is included in the Life Cycle Reserve Study over the next 25 years as well as a 2016 capital project. \$3.6M is available over the next 6 years (2018-2023).

As the City moves forward with the detailed implementation plan for the digital strategy, in the event that additional funding is required in excess of \$3.6M from 2018 to 2023, funding requests will be made as part of the annual capital budget process.

Furthermore, Staff will explore opportunities for funding from external sources. Partnerships with external stakeholders will be investigated and leveraged to share costs and achieve mutual digital benefits. The potential for federal government funding will also be pursued through an application to the Smart City Challenge.

CONCLUSION

Markham's Digital Strategy and roadmap define specific initiatives over the next three to five years that will guide Markham to fulfill its vision of becoming a truly connected and digital City. The detailed implementation plan specifies the action item activity and proposed timelines required to achieve Markham's digital goals with initial deliverables targeted for end of 2018.

Achievement of the Digital Strategy initiatives will result in a multitude of benefits for the City of Markham. Digital enhancements will enable Markham to become a platform for digital innovation and collaboration, attracting forward-thinking businesses and top talent while stimulating robust economic development. Frictionless digital delivery of City services will contribute to a better quality of life within the City through a positive customer/citizen experience.

These achievements in digital leadership will elevate Markham's profile as a digital destination and firmly establish its reputation as a showcase digital community.

HUMAN RESOURCES CONSIDERATIONS:

Not Applicable

ALIGNMENT WITH STRATEGIC PRIORITIES:

The Digital Markham strategy strongly aligns with Building Markham's Future Together strategic priorities particularly in the areas of Municipal Services and Economic Development.

BUSINESS UNITS CONSULTED AND AFFECTED:

Key business units have been consulted and will be involved in the development of the strategy.

ATTACHMENTS:

Presentation: Digital Markham Strategy - GC Oct 23 2017

Appendix A - Digital Markham Detailed Action Plan

RECOMMENDED BY:



Trinela Cane
Commissioner, Corporate Services



Andy Taylor
Chief Administrative Officer

			Stage 1				Stage 2			
Initiative #	Action #	Action Item	2017		2018		2019		2020	
			1st half	2nd half	1st half	2nd half	1st half	2nd half	1st half	2nd half
1	Continue to enhance the suite of fully integrated online and mobile service offerings									
	1.1	Develop personas and journey maps to better understand users and their frustrations, and design a more cohesive experience								
	1.2	Create prioritized digital services catalogue informed by the Citizen Experience design								
	1.3	Update the Citizen Experience Roadmap (i.e. Portal Roadmap) for 2018 and beyond								
	1.4	Execute the priorities from the Digital Services Roadmap								
	1.5	Integrate CRM system City-wide so all user interactions are tracked and accessed in a single system								
	1.6	Explore using predictive / AI systems to further enhance personalization on digital channels								
2	Build on the library as a centre of excellence for digital literacy									
	2.1	Incorporate Digital Literacy plan into the existing library technology strategy to continue to bridge the 'Digital Divide'								
	2.2	Create a collaboration hub in the new SE community centre & library, including state-of-the-art digital infrastructure and open-concept design spaces								
	2.3	Develop communication strategy to attract citizens to the collaboration hub								
	2.4	Roll out new Digital courses and continue to increase digital maturity in the delivery of library services								
	2.5	Host a collaborative design session in a hub and allow the community to help optimize the design of the next collaborative hubs								
	2.6	Build more collaboration hubs in city spaces, tailored to the user groups in that area								
3	Promote collaboration using digital tools									
	3.1	Establish a strategy and governance model for ongoing digital collaboration and engagement								
	3.2	Procure the tools the city will engage its population on, such as Placespeak								
	3.3	Develop content strategy to manage the deployment of content on specific channels								
	3.4	Pilot community collaboration in online debates using digital platforms (users cannot participate anonymously)								
	3.5	Explore using sentiment analysis to proactively manage community expectations and criticisms								
4	Continue to develop Markham's role as a leader in Digital Democracy									
	4.1	Explore emerging technologies, such as blockchain, that could enhance the digital voting experience								

			Stage 1				Stage 2			
Initiative #	Action #	Action Item	2017		2018		2019		2020	
			1st half	2nd half	1st half	2nd half	1st half	2nd half	1st half	2nd half
	4.2	Establish a plan for Advanced and Election Day online voting in the 2018 election								
	4.3	Execute on the plan for Advanced and Election Day online voting on election day in 2018, explore the outcome and recommend options for 2022								
	4.4	Gather sentiment analysis from the community on their experience using the new technology								
	4.5	Hold a summit and invite other municipalities to share the experience of online voting and initiate a blog of the experience								
5 Create a favourable regulatory environment that facilitates digital innovation, agility, and economic development										
	5.1	Engage with developers and other partners to identify opportunities to minimize the impediments to digital innovation								
	5.2	Collaborate with local startup businesses to identify current challenges with policies and the licensing/permitting process								
	5.3	Review procurement policy and create a plan to better enable small business and innovation								
	5.4	Investigate quick wins for introducing smart infrastructure in City buildings								
	5.5	Implement changes to processes, policies and standards (starting with procurement, business licensing, planning approvals, etc.)								
6 Create a framework for engaging strategic partners in achieving the #DigitalMarkham vision										
	6.1	Establish a Digital Alliance Group to help identify key partnerships and local digital opportunities								
	6.2	Design the framework for engaging partners, both small and large, on an on-going basis								
	6.3	Engage local academia to create a plan that will attract and grow top talent that will transition to living and working in Markham								
	6.4	Introduce a Civic Tech Advocate role to liaise with businesses and ensure the City is meeting the digital needs of local businesses								
	6.5	Leverage the strategic partnerships to implement digital innovation								
7 Drive digital transformation to enable business integration across business units										
	7.1	Enhance the practice of governing and executing City-wide programs								
	7.2	Develop City (internal) personas and a vision for a more digital workplace. Identify challenging processes that could be transformed to be more digital, develop and communicate a plan to re-design how each is delivered								
	7.3	Establish the enterprise architecture								

			Stage 1				Stage 2			
Initiative #	Action #	Action Item	2017		2018		2019		2020	
			1st half	2nd half	1st half	2nd half	1st half	2nd half	1st half	2nd half
	7.4	Enhance use of cross-functional PM tools to increase transparency and collaboration between silos								
	7.5	Pilot implementing a new process (e.g. business licenses) using the new practice of governing and executing City-wide programs								
8	Create the capacity to leverage data as an asset									
	8.1	Establish a strategy for master data management across the City								
	8.2	Develop a strategy for business analytics including a mechanism for requests and a plan for how the City plans to source or solve different types of requests								
	8.3	Refine the existing IM Strategy and Implementation Plan								
	8.4	Implement an information governance model including policies, access controls, and appropriate security based on data asset classification								
	8.5	Use a test and learn approach to pilot different data analytics solutions. The pilot process should address real business questions								
9	Establish the foundation of a digital culture and a Digital Operating Model at the City									
	9.1	Apply a digital lens when introducing new / modifying existing City initiatives.								
	9.2	Develop policies and an operational framework for a mobile and flexible workforce								
	9.3	Identify a 'Digital Champion' at the City who can embody the #DigitalMarkham vision and lead the digital change								
	9.4	Enhance/procure tools to enable a mobile and flexible workplace and roll out to all City staff								
	9.5	Establish a strategy for communicating the progress of the #DigitalMarkham strategy to City staff								
	9.6	Develop an internal digital dashboard to track Markham's progress in the digital transformation and publish to a digital platform								
	9.7	Measure the success of mobile and flexible work								
10	Create a "Living Lab" and innovation hub to demonstrate Markham's new digital identity									
	10.1	Leverage Digital Alliance Group to identify opportunities for digital innovation and 'living labs'								
	10.2	Explore how to use the new 'ICE' innovation hub in Markham Centre to showcase digital initiatives								
	10.3	Pilot a quick win in the 'living lab' in Markham Centre								
	10.4	Develop a plan for a digital community in the Future Urban Area								
	10.5	Identify alternate candidates (e.g. Main Street, Unionville, etc.) within Markham to be future 'living labs'								

			Stage 1				Stage 2			
Initiative #	Action #	Action Item	2017		2018		2019		2020	
			1st half	2nd half	1st half	2nd half	1st half	2nd half	1st half	2nd half
	10.6	Scale successful models and standards to other areas of the city, particularly greenfield opportunities								
	10.7	Share successes on social media and in marketing campaigns to further the #DigitalMarkham brand and put Markham on the map as an innovation incubator								
11	Implement an open data platform and the ongoing governance model									
	11.1	Investigate open data platforms								
	11.2	Identify current data sets that can be shared publicly, and other quick wins								
	11.3	Procure and build a platform for open data that is accessible to the public								
	11.4	Establish processes internally to ensure data is refreshed and accurate								
	11.5	Through digital engagement, collaborate with the public to identify valuable data								
	11.6	Establish a process to handle public data requests								
	11.7	Host a hackathon using Markham datasets to solve a City problem								
	11.8	Continue to grow the datasets and augment the data with visualizations to showcase City analytics								
	11.9	Release APIs to encourage local developers to create mobile applications using the data								
12	Create a compelling #DigitalMarkham identity									
	12.1	Enhance the communication strategy to attract talent, enhance economic development, highlight current service offerings and the Markham identity								
	12.2	Leverage data on ICT and local businesses to identify growth opportunities in the city and generate a 'vibe' for attracting top talent								
	12.3	Enhance social media tools and other digital channels to engage the community, campaign, and market Markham as a place to work, live and play								
	12.4	Expand platform at Board of Trade to include an innovation award for a local business								
	12.5	Enhance Markham's corporate strategy to encompass the #DigitalMarkham identity and focus on innovation								