Digital Markham Strategy Update

General Committee Meeting, June 1, 2020

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A lot has changed since the City of Markham began its digital journey in the early 2000s.

Digital has become more than just the “channels” through which citizens interact.

The idea of a “Smart City” has evolved into a reality of connectivity, sensors, and data that shape the livability of cities and are seen as key differentiators.

Artificial Intellegence (AI) has emerged to automate the mundane and augment the citizen experience.

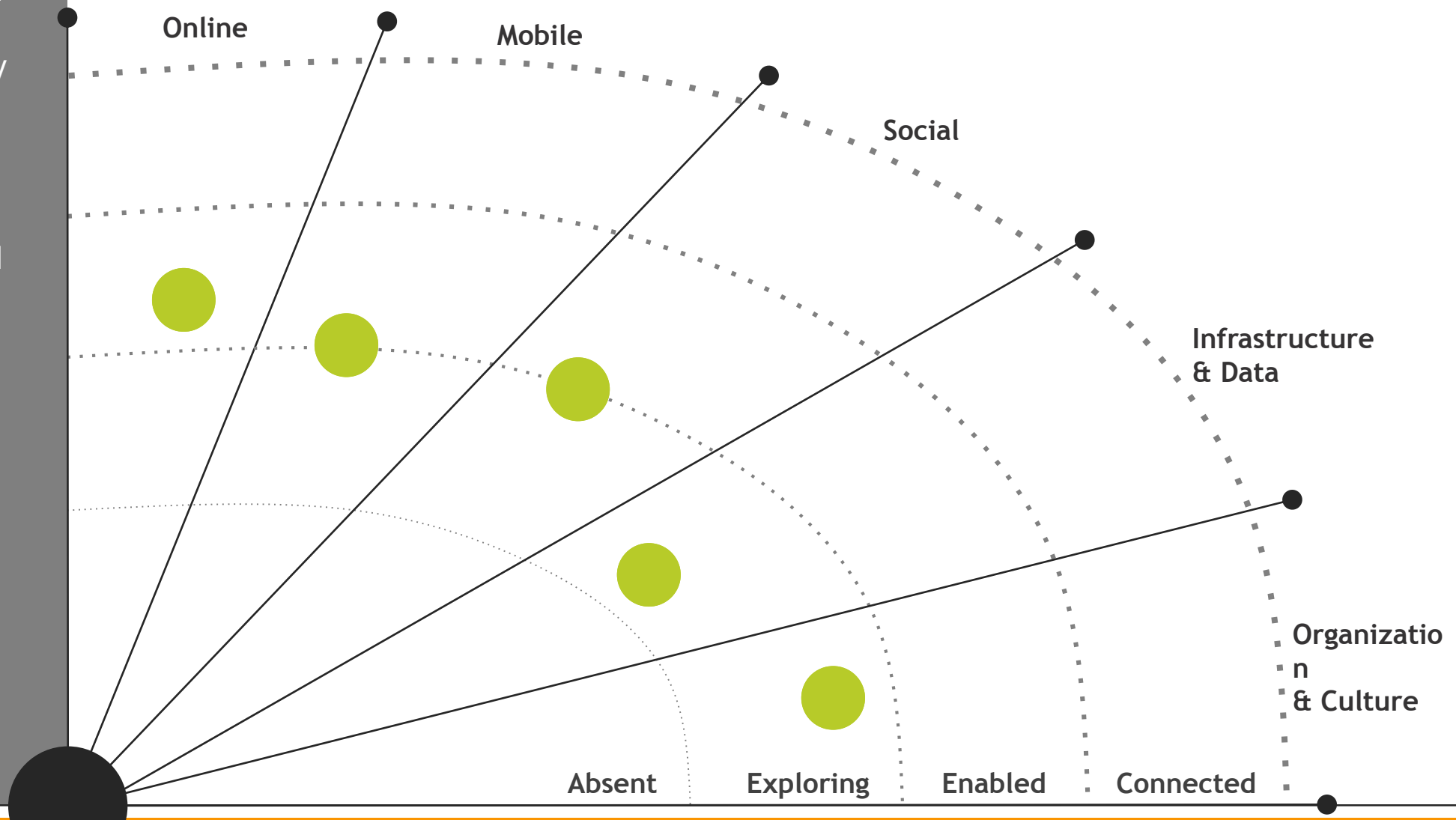
So, how much progress have we made since the Digital Strategy was approved by Council in 2017?

We’ve been steadily executing initiatives in the strategy.

Markham's Digital Readiness: 2015/16

When PwC measured our digital readiness in 2015/16, we were already making progress towards advancing the digital channels that support service delivery and exploring how mobile and social capabilities could drive efficiencies and amplify our citizen engagement.

Overall, the City of Markham was in an "Early Enabled" state of digital readiness.



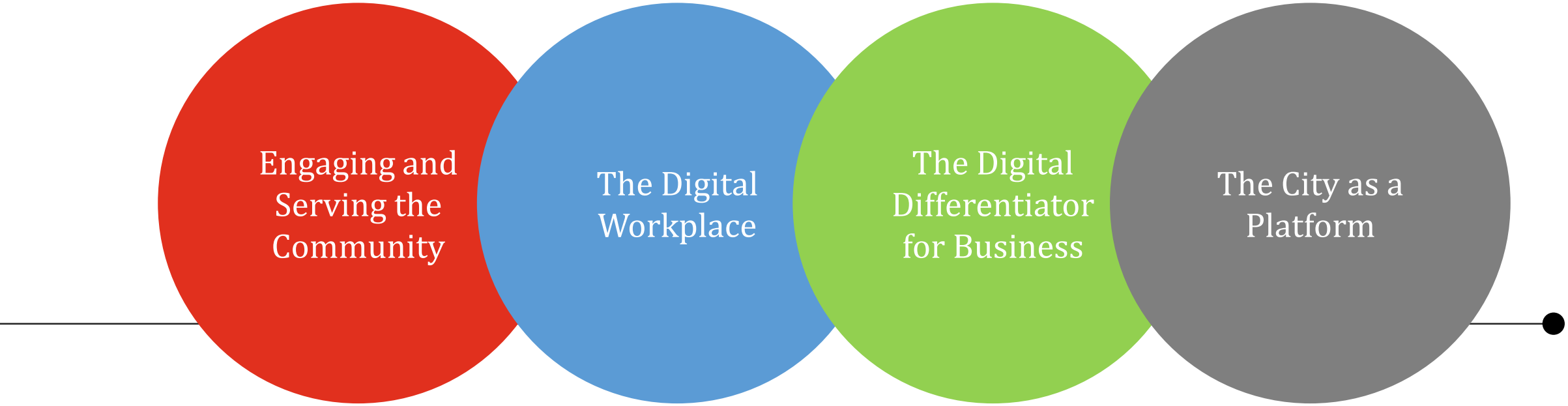
Limited or no capabilities in this area

Basics, limited interaction
Get the job done, limited tech

Systems/processes, can integrate across channels

Ahead of the curve & leader
Stakeholders connected/

In 2016, our Digital Strategy aligned us on 4 focus areas that would mature our digital capabilities to enable our vision for a Frictionless City, a #DigitalMarkham. We've got good progress to report in each area.



Digital Markham Strategy Objectives / Themes

Engage & Serve the Community

1. Increase integrated digital services on the web & mobile
2. Expand community engagement on digital platforms
3. Improve digital literacy
4. Grow Markham's leadership in digital democracy

The Digital Differentiator for Business

1. Establish a showcase digital community through strategic partnerships
2. Establish new standards for the smart city
3. Reduce friction for business
4. Attract & retain businesses & talent that align with Markham brand

The Digital Workplace

1. Increase organizational digital maturity
2. Establish a digital operating model
3. Enhance data-driven decision making
4. Increase resiliency of digital infrastructure

The City as a Platform

1. Develop a "living lab" in Markham for rapid prototyping new initiatives
2. Increase awareness of a new, unique #DigitalMarkham brand
3. Leverage ICT cluster to establish Markham as a showcase digital community
4. Increase transparency & access to open data

Council Approved Digital Initiatives

Theme		Initiative
Engaging and Serving the Community	1	Continue to enhance the suite of fully integrated online services and mobile service offerings
	2	Build on the library as a center for excellence in digital literacy
	3	Promote collaboration through digital tools
	4	Continue to develop Markham's role as a leader in Digital Democracy
The Digital Differentiator for Business	5	Create a favourable regulatory environment that facilitates digital innovation, agility, and economic development
	6	Create a framework for engaging strategic partners in achieving the #DigitalMarkham vision
The Digital Workplace	7	Drive digital transformation to enable business integration across business units
	8	Create the capacity to leverage data as an asset
	9	Establish the foundation of a digital culture and a Digital Operating Model at the City
The City as a Platform	10	Create "Living Lab" and innovation hubs
	11	Implement an open data platform and the ongoing governance model
	12	Establish Markham's identity as a Digital Destination

Engaging and Serving the Community

Engaging and serving the community is at the core of the Frictionless City:

… Services that are easy to access.

… Engagement the way our citizens want to engage.

In 2016, we had 66 services online.

In 2020? We've got 80+ services online and an AI enabled chatbot.

We also redesigned the experience on our portal. This has resulted in a significant increase in registrations, and a decrease in page views, which means we've got our information organized better! And it's mobile enabled.

We are systematically digitizing the end-to-end processes as part of our well-established portal roadmap.

37,748
registered users on the portal

28%
increase in portal registrations since the 2019 portal redesign went live

5%
year over year increase in digital transactions in the top 10 transactional services

2,386 web and **2,860** voice interactions on our Covid-19 Chat bot in just over two weeks

City of Markham public engagment digital platform

Since launching ***Your Voice Markham*** in early 2019, it has become a key public engagment tool for major city projects: BMFT, Markham Centre Secondary Plan etc.

Our consultation on the 2020-23 strategic plan had one of the most community engagements.

YourVoice Markham

24.3 K
visits to YourVoiceMarkham

30%
engagement rate on the new 2020-23 Strategic Plan, Building Markham's Future Together!

1,900
Your Voice Markham registered

10
Project consultations

Getting citizens to engage is challenging.

In 2016, Markham was just beginning its journey in ***digital engagement***.

Since then, Markham has made observable progress.

46M

impressions on all social media since 2016!

114 . 12. 130

114 live-streamed events (0 in 2016)
12 video campaigns (1 in 2017)
130 videos for social media and events (<30 in 2016)

1.3 M

social media engagements since 2016!

12 K

Twitter posts and

5 K

Facebook posts Since 2016

Virtual Committee and Council meetings during Provincial Emergency

MARKHAM PUBLIC LIBRARY

is doing innovative things in digital.

From makerspaces, to ***digital literacy*** programs, and STEAM programming for kids, the library is bridging the digital divide and enabling creativity for all ages.

2 new makerspaces launched in 2 years

2,309 digital literacy programs offered in Q1 of 2019 alone, totaling **4,597** instructional hours

67% of users said they gained confidence as a result of using our technology….more than twice the provincial average

"…I was able to begin my journey as a voice actor by virtue of the equipment, software and services MPL offers through their Digital Media Lab. I have gained practical experience in individually creating a voice acting audition for an upcoming animated TV series…"

- A user of the Digital Media Lab

A leader in digital democracy

In 2018, Markham offered a new election model, providing increased accessibility and convenience, with more hours to vote than ever before.

The City has one of the largest online voter experience data samples worldwide.

Markham is creating industry benchmarks, standards and professional guidelines to support elections around the globe.

91.3%
Highest online voter turnout in Markham's history

97%
of 11,000 people surveyed expressed satisfaction with the online voting

67%
Highest early voter turnout on record

38.26%
Highest overall voter turnout in decades

Multiple award-winning communications and community engagement strategy

Local, national and international IABC Awards of Excellence and Merit

The Digital Workplace

The digital workplace is all about our employees, and making it easier for them to do the things they need to do.
Automation of workflows across various departments and digitization allows us to remain a modern and efficient organization.
We continue to create a frictionless experience for them as they service our community.

ePLAN takes the paper out of planning and the pain out of the process – for everyone.

In 2016, the building permit and development application process was fully paper based.

In 2020, it is digital and automated from end-to-end for all permits and planning applications.

=100%

1 click SAVES HOURS of professional engineering time (confirming infrastructure assets on plans are 100% accurate)

50%

cost reduction in scanning large format paper drawings saving **25,546** sheets of paper or **23,000** lbs of CO_2

2019

all building permit applications were submitted via ePLAN
(1874 to date)

The staff hours we've saved by streamlining the process is redirected to higher value work
(and the increasing growth and volume of applications)

8,600

<=>

In 2018, 32% of applications required more than 2 review cycles. In 2019?

14%

Less really is more!

ePLAN
SUBMIT | REVIEW | APPROVE
CITY OF MARKHAM

Our people had to use quite a bit of paper in 2016. We had paper forms for timesheets and manual processes surrounding them.

Fast forward to 2020 and we have an "EPIC" story.

EPIC (Employee Personal Information Centre) – a name chosen by staff – provides our people with 24/7 access to HR services and solutions.

2,965

EPIC employees

By 2019 our Corporate Print Strategy had reduced average annual print and copy impressions by

20%

2,000

timesheets submitted per pay period eliminating paper forms and saving SIGNIFICANT effort in processing them!

Employees weren't all that mobile in 2016. Today, mobility is part of their job.

And the digital strategy has enabled it.

35%

increase in the use of virtual meetings in 2019. Now… at

100%

There are no barriers to working remotely for those employees whose work permits it

100%

72%

increase in the use of instant messaging

We want Markham to be a place where businesses come to get access to a mature digital infrastructure and digitally literate population that creates value through partnerships to showcase Markham as a digital community.

The Digital Differentiator for Business

The Digital Differentiator for Business

Cities around the world are being challenged with how to become a Smart City.

It's not as simple as rolling out a few sensors. Smart Cities need the ability to innovate with and adopt emerging technologies. Smart Cities need smart **partners.**

Innovation in cities happens by bringing people with ideas together. Ideas that help solve city problems is what the partnership between the City of Markham and ventureLAB is all about.

We partnered with the industry to establish the Smart City Accelerator Program and piloted

5

smart city capabilities

The Digital Alliance network has been helpful to identify and pursue opportunities for the Living Lab

Cities of the future are platforms for innovation through partnership that create opportunities to ultimately enhance the experience in our communities using technology capabilities.

The City as a Platform

The City as a Platform

The ***Smart City Accelerator Research Program***, a partnership with Bell and IBM Canada deployed pilot projects across Markham to help us understand the insights we can get from data to change the way we manage our assets, manage our operation and deploy our teams.

4 facilities provided real-time energy use to that we can optimize our usage

16 sensors collected pressure and acoustic data so we can get a better handle on

And … we monitored **20** #hashtags on social media to assess citizen sentiment … early and often

7 sensors monitored manholes and the river so we can predict where ng may cur

4 We tracked mo we could chan deploy our people and assets more efficiently.

Observations

- Varying maturity & applicability
- Start with an area that benefits most
- Data transmission cost impacting business needs
- Data security & governance
- Internet of things platform – not now
- Data-driven culture is part of the journey

Open data is a cornerstone of innovation in government.

Launched in 2019, ***Open Data Markham*** has established a process and governance framework that helps the City make more datasets available with agility, increasing transparency, and encouraging innovation.

45

570

average users per month!

Becoming a **Smart City** and an **Intelligent Community**…

We're working to develop smart solutions to build a better community based on a digital foundation.

smart city current projects

Automatic Vehicle Location System (AVL)
LED Smart Streetlights
Textile Recycling & Smart Bin pilots
SCADA Waterworks Monitoring
Building Automation Systems (BAS)
Solar Panel Program
Electric Vehicle (EV) Charging
Geothermal Community Heating/Cooling Pilot

We participated in

smart cities challenge

In 2018 - an opportunity to solve community issues using data and connected technologies.

ICF Top7 intelligent communities of 2020

The Intelligent Community Forum (ICF) named Markham to this prestigious global list, recognizing the City's readiness and performance in the development of inclusive prosperity, social health and cultural richness on a foundation of information and communications technology.

So how have we progressed?

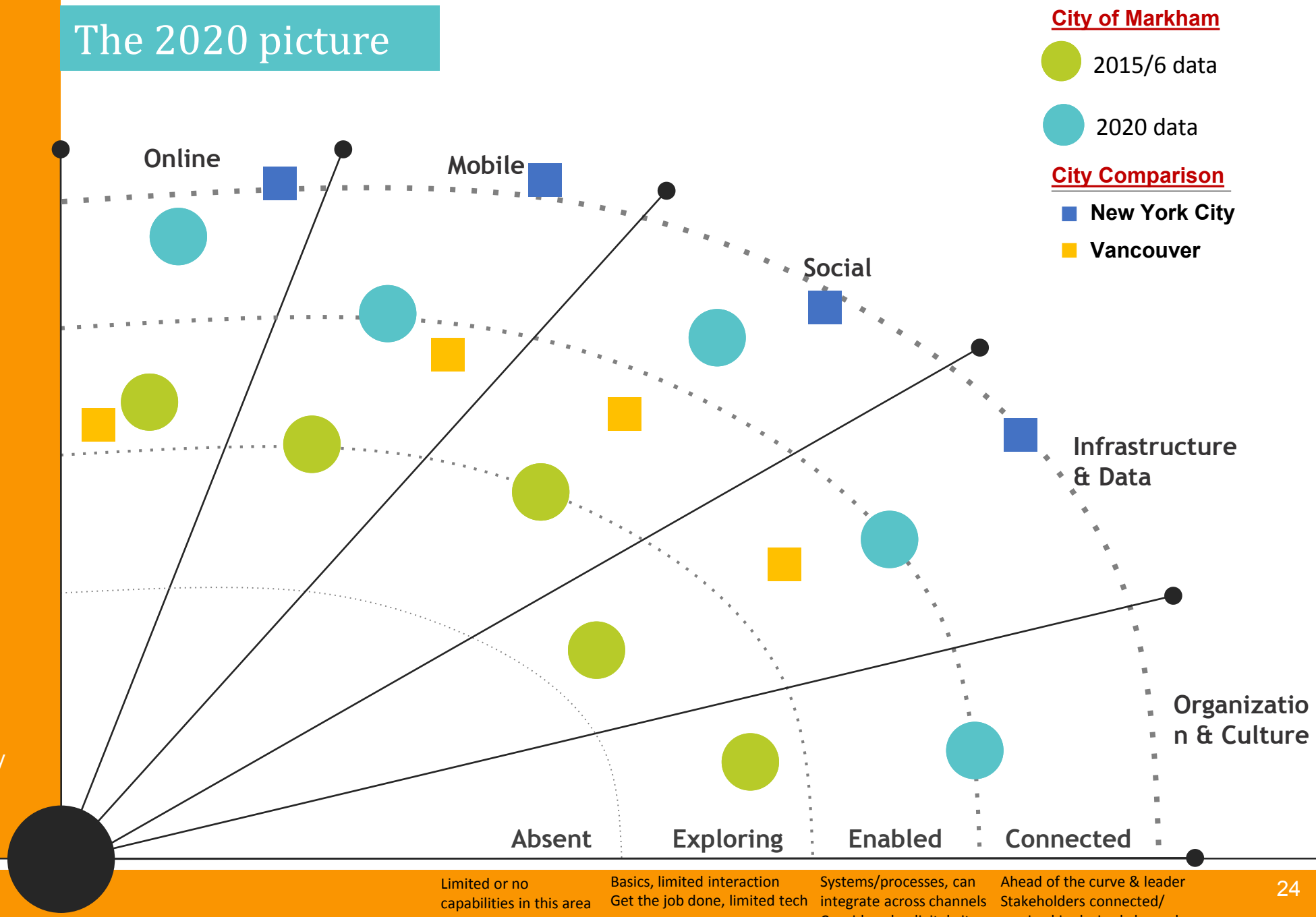
The 2020 picture

We've made solid progress in maturing our digital capabilities.

Our growth in the Social and Infrastructure and Data capabilities is particularly important. An engaged community makes for a more livable and vibrant city.

The story in 2020?
Markham has moved to an "Early Connected" stage in digital readiness.

Note: The updated digital maturity assessment was completed by PwC in Fall 2019 with a few updates in May 2020.



What's next?

Our strategy extends into 2021 and we have plans in place for 2020 and beyond.

This will advance our digital capabilities across the spectrum.

A single integrated view of the customer with master data management and upgrades to our

crm

will enable us to create a more personalized and frictionless experience for citizens

Enterprise Asset Management capabilities will grow in 2020 and beyond to handle more

assets

and combined with smart city capabilities change the way we

We will implement an integrated

program registration & POS system

to manage recreation programs & facilities registration, including online payment and PO

In 2020, we'll craft our Mobile Strategy that will set the stage for

more mobile

solutions for our community and our city teams

We will continue to explore innovative projects to make Markham a

living lab

Virtual Assistant (chatbot)
Smart trails / way finding
Autonomous shuttle assessment
Autonomous sidewalk inspection
Autonomous lawn mower
Road inspection sensors

In 2020, we'll begin the real work of building our data and analytics muscle, so that we can leverage ...

data

as an asset

Digital transformation is a journey, not a destination, and the City of Markham is advancing well.

Transforming the way we work to deliver value to our community through more pervasive and effective use of technology, by leveraging the data these technologies create, by engaging more strategically and effectively with our community, means we're a step closer to #DigitalMarkham, Frictionless City.

Financial Status

Item	Amount
Digital Markham starting budget (2015/16)	$923,693
Digital infrastructure & readiness	($171,148)
Bell Accelerator Research Pilot project	($202,502)
Professional support and services	($91,959)
Committed	($50,000)
Approved capital budget (2020)	$300,000
Balance Remaining	$708,085

Recommendation

- That the presentation entitled “Digital Markham Strategy Update” be received; and,
- That staff be directed to do all things necessary to advance the implementation of the Digital Markham Strategy; and further,
- That staff report back to Committee annually.