

# Mackenzie Vaughan Hospital

---

**Altaf Stationwala**

**President and CEO  
Mackenzie Health**

**March 2, 2017**

**Regional Municipality of York  
Committee of the Whole Meeting**



Mackenzie  
Health



Mackenzie  
Richmond Hill  
Hospital



Mackenzie  
Vaughan  
Hospital

## **VISION**

Create a world-class health experience

## **MISSION**

Relentlessly improve care to create healthier communities

## **VALUES**

Excellence, Leadership, Empathy

## **GUIDING PRINCIPLES**

Teamwork, Accountability, Safety

## **CHARACTER**

Professional, Friendly, Expert

# Quick Facts



**450+**  
Physicians



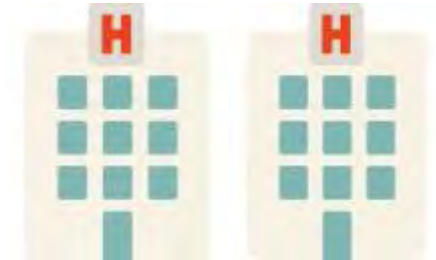
**2,600+**  
Staff



**1,000+**  
Volunteers



**2,000+** new staff  
to be hired for 2020



**2 Sites in 2020:**  
Richmond Hill and Vaughan



Hospital Beds  
MRHH: **515**  
MVH: **+350**



**118,500**  
Emergency and  
Urgent Care Visits



**243,441** Outpatient  
**19,376** Admissions  
**9,359** Surgeries



**200,938+**  
Diagnostic  
Exams



**2,305**  
Births

# Our Service Model



Specialty

Clinics  
Chronic Kidney Disease  
Complex Continuing  
Rehabilitation

Mental Health  
Integrated Stroke  
Pediatrics  
Obstetrics



Physical Capacity:

**515** beds



and

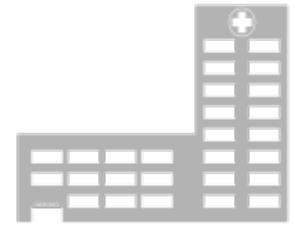


Acute Hospital Care

Emergency  
Critical Care  
Surgical  
Medical

Clinical Support

Laboratory  
Medical Imaging  
Pharmacy



Physical Capacity:

**350** beds

Initial

**550** beds

Future

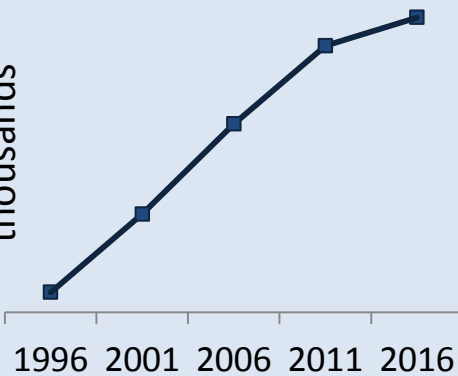
# King City skyrockets while larger Vaughan and Richmond Hill maintain above average growth



**306,233 residents**  
**8<sup>th</sup> largest**  
municipality in Ontario



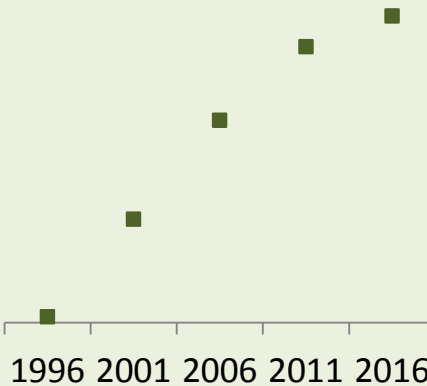
Population in thousands



Vaughan has added **18,000 people** since 2011



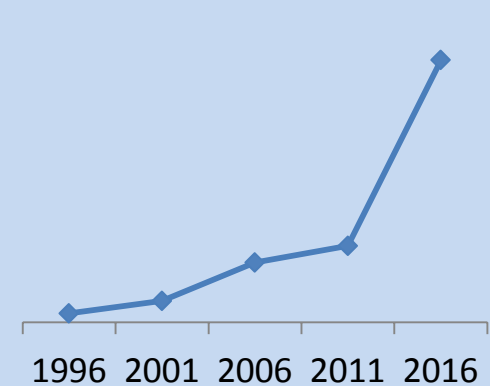
**195,022 residents**  
**11<sup>th</sup> largest**  
municipality in Ontario



Richmond Hill is still **growing faster** than the Ontario average



**24,512 residents**  
**8<sup>th</sup> fastest growing**  
municipality in Ontario



King grew by **23%** since 2011

# Emergency Department Pressures



On any given day,  
**250 to 320 patients**  
are seen in the  
Emergency Department



Each day,  
**45 to 70 ambulances**  
arrive at Mackenzie Health's  
Emergency Department



Over the past four years  
we've experienced  
**38% growth**  
in ambulance traffic



# Mackenzie Vaughan Hospital Project

# Video Presentation



**Architectural rendering reflects current design concepts. Exterior colors and finishes may change with final design.**



# Project Stages

## Infrastructure Ontario – Phases

### Pre-Transaction

- IO due diligence
- Procurement model

### Transaction

- Transaction documents
- RFQ & RFP

### Implementation

- Design, construction, commissioning



### Stage 1

Proposal & Business case

### Stage 2

Functional Program

### Stage 3

Output Specs & Blocks

### Stage 4

Procurement

### Stage 5

Design & documents  
Construction & commissioning

30 – year  
Operating  
Period

## MOHLTC – Capital Planning Stages

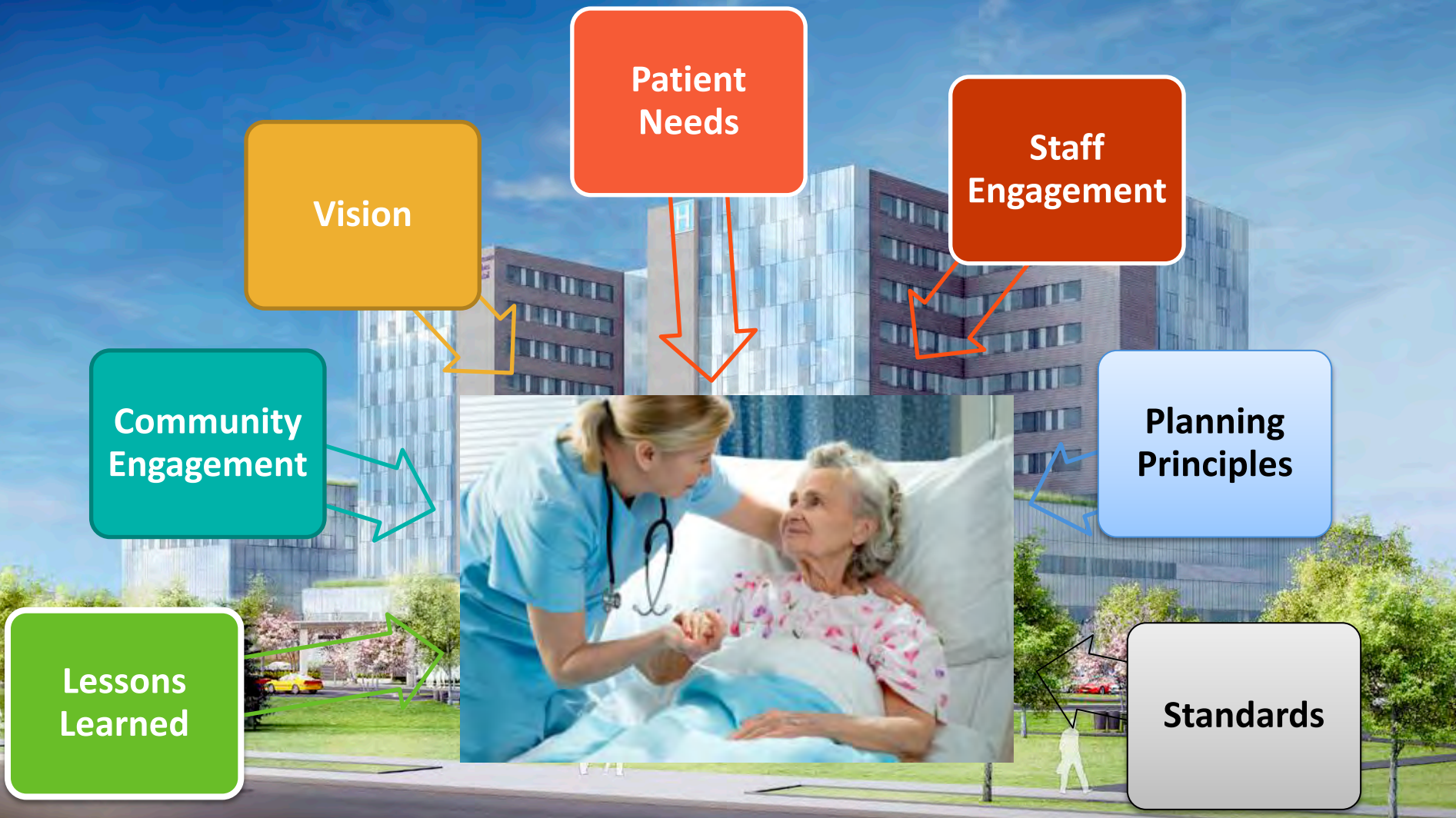
2010 —————> 2020

# Mackenzie Vaughan Hospital Groundbreaking

October 25, 2016



# Planning the New Hospital



Architectural rendering reflects current design concepts. Exterior colors and finishes may change with final design.

# Unprecedented Community Support for Future Health Care Development



- \$117M million for future hospital development from
- Land contribution for the future Mackenzie Vaughan Hospital from
- Strong donor support from



# Plenary Health

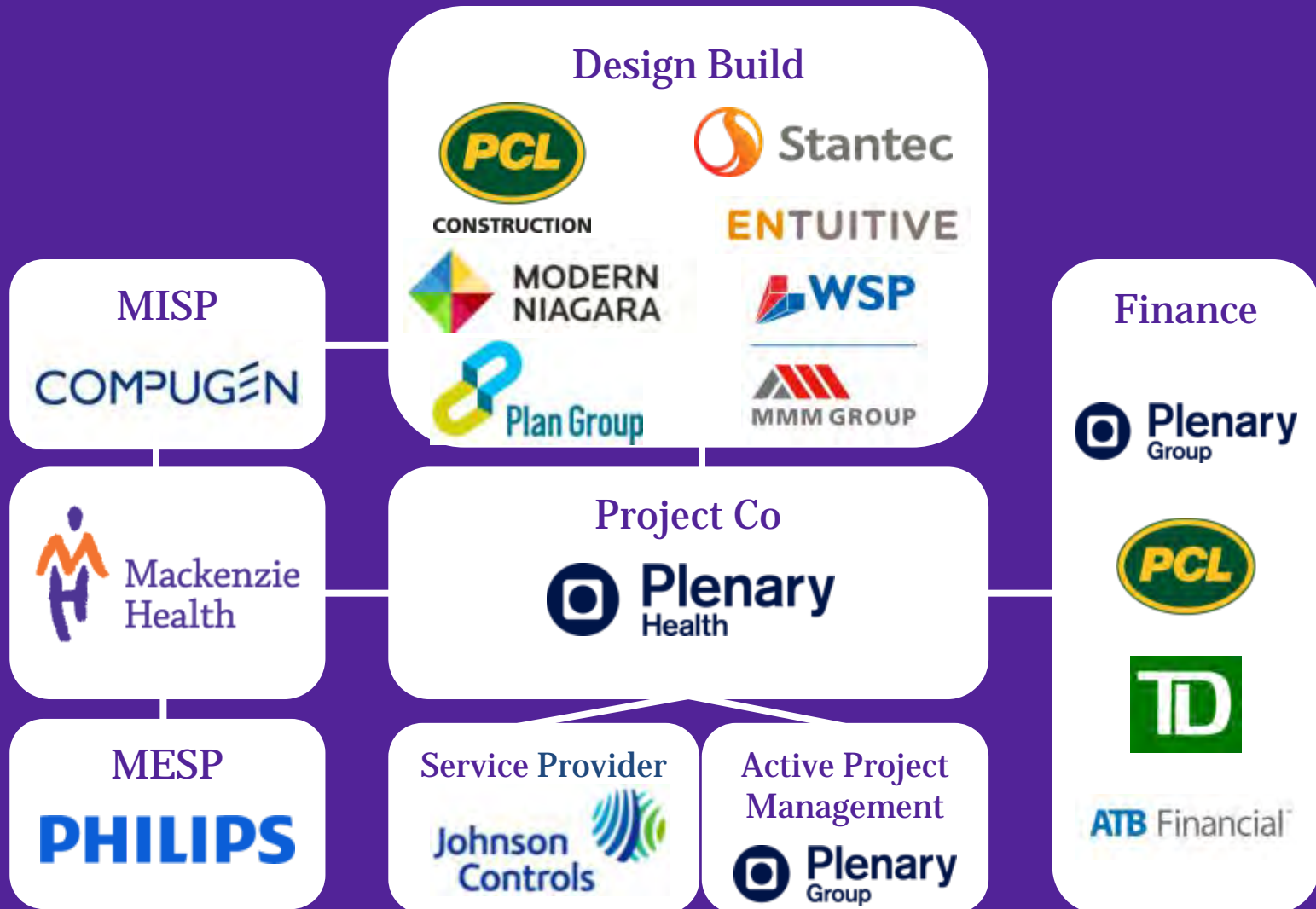
---

**Hafeez Habib**

**Vice President, Project Delivery  
Plenary Group**



# Plenary Health and Partners



# Projects In Operation



**North Bay Regional Health Centre**  
North Bay, Ontario



**Bridgepoint Hospital**  
Toronto, Ontario



**NHS Health-Care Complex**  
St. Catharines, Ontario



**St. Joseph's Healthcare Hamilton**  
Hamilton, Ontario



**Peel Memorial**  
Brampton, Ontario



**Humber River Hospital**  
Toronto, Ontario

# Principles and Site Utilization

---

**Stuart Elgie**

**Senior Principal, Business Centre Sector Leader  
Stantec Architecture**







**Humanize | Embrace Individuality | Independence**



**Nature | Respite | Wellness**



**Technology | Connectivity | Innovative**



MAJOR MACKENZIE DRIVE WEST

JANE STREET

STREET C

STREET A

STREET E

STREET F

STREET B

STREET D

STREET Y

BLOCK 9  
LANDSCAPE BUFFER  
1000

BLOCK 3  
1000

BLOCK 1  
MELROSE 1000  
1000

BLOCK 43  
4500 RIGGS RESIDENTIAL  
1000

BLOCK 8  
1000

EXISTING  
COMMERCIAL

BLOCK 7  
1000

BLOCK 17  
1000

BLOCK 16  
1000

PART 14  
1000

PART 1  
1000

PART 2  
1000

PART 3  
1000

PART 4  
1000

PART 5  
1000

PART 6  
1000

PART 7  
1000

PART 8  
1000

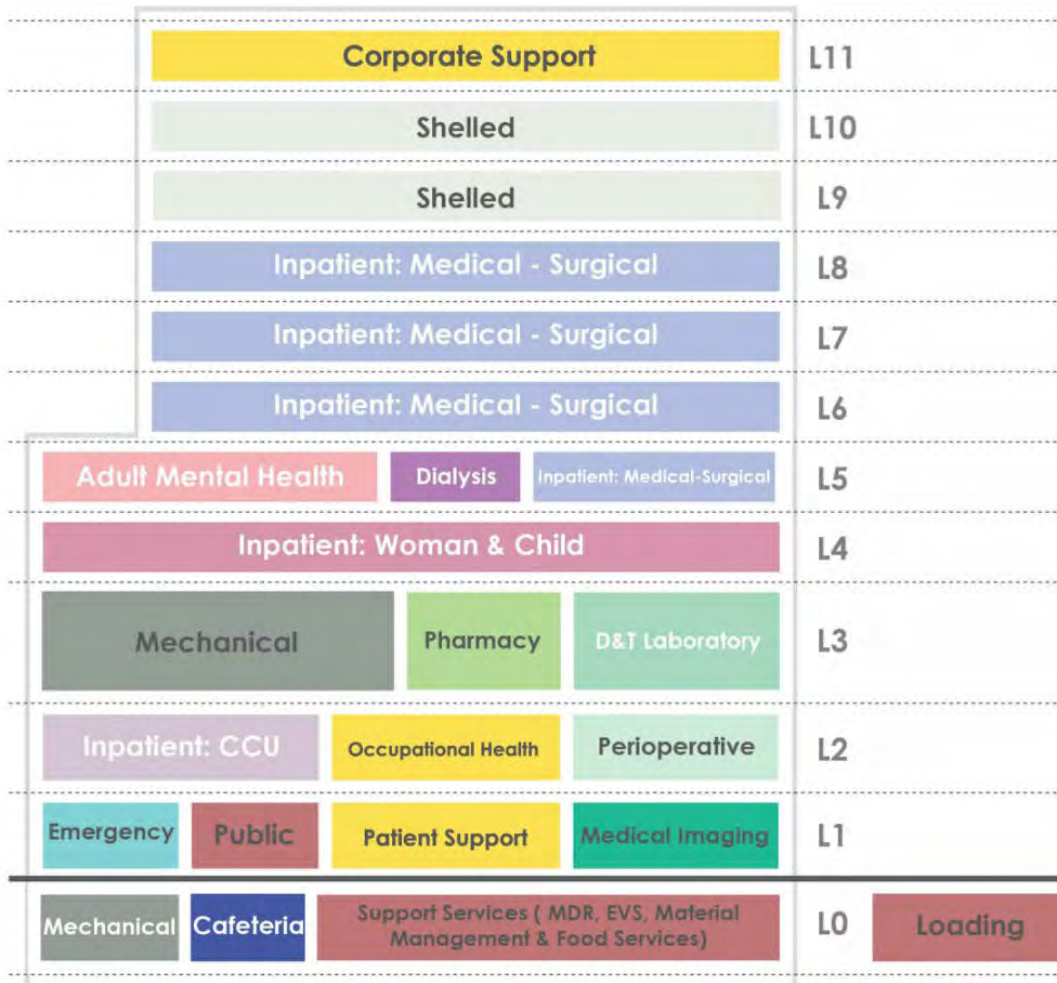
PART 9  
1000

EXISTING



Aerial View – South Side, Looking North

# Location of Services



Proposed Scheme



Markham  
Stouffville  
Hospital

H

Main Entrance

Markham  
Stouffville  
Hospital

- ← Main Entrance Drop Off
- ↑ Exit to Jane St.

& Develop



Mackenzie  
Health









← Emergency  
Woman & Child  
↑ Information ⓘ

Link

Link

← Information ⓘ  
Registration  
Diagnostic Imaging

### LINK CAFE







West Entrance



Emergency  
Woman & Child



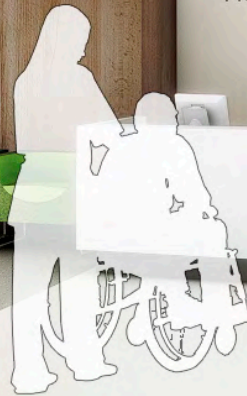




Level 6

← A | B | C  
Medical/Surgical

D | E | F →  
Medical/Surgical







Mackenzie  
Health









Woman & Child

West Entrance

EMERGENCY

EMERGENCY



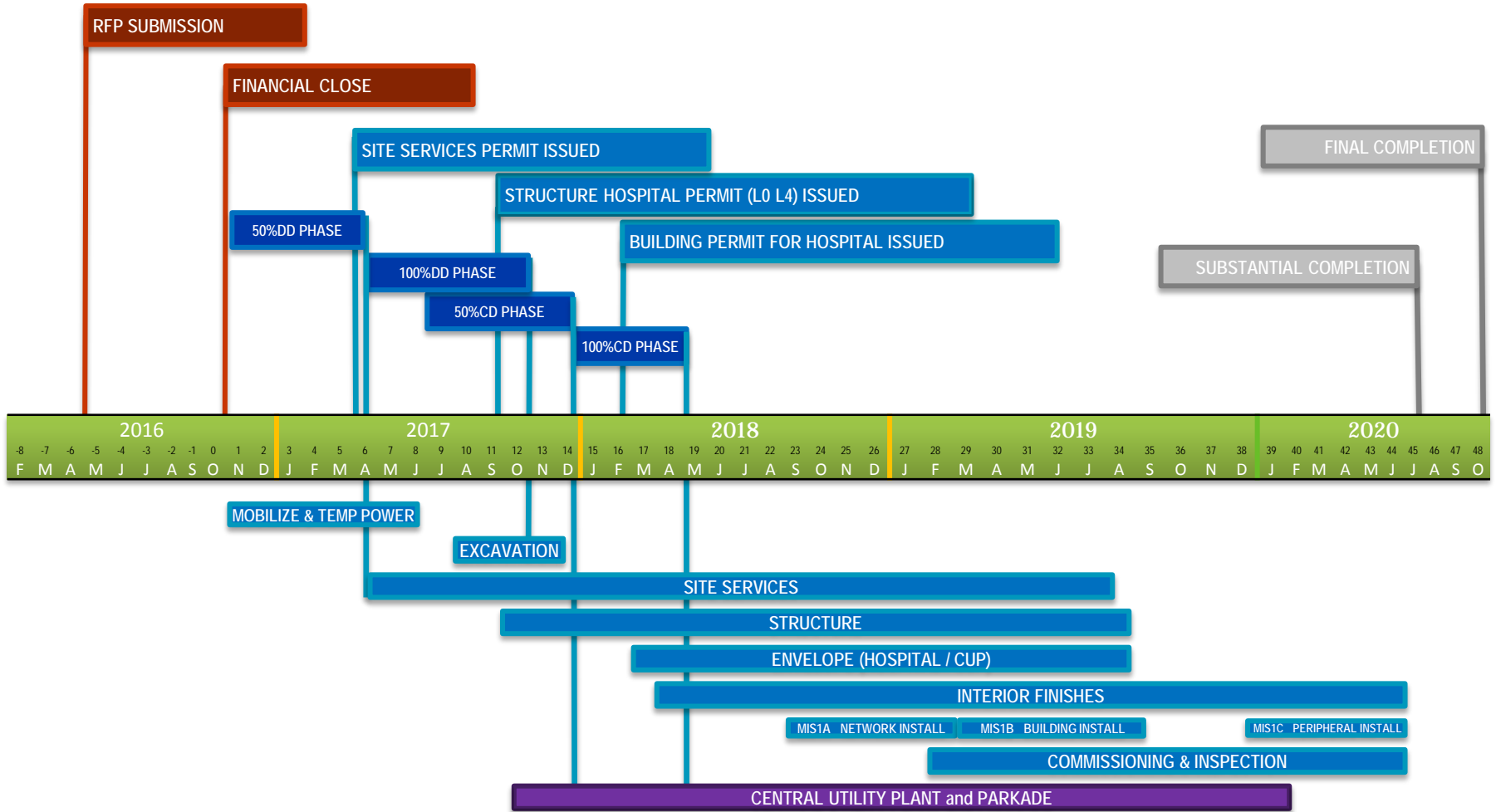






Aerial View – South Side, Looking North

# Design and Permit Sequence



# Next Steps



- **City of Vaughan**

- Presentation the Committee of the Whole: March 7, 2017
- Subsequent lifting of the “H” allowing permits to be applied for and issued
- Site Services Permit target release: March 24, 2017

- **York Region**

- Region to issue Environmental Assessment report for improvements to sections of Major Mackenzie Drive and Jane Street

Month 1 to 6



# 4D Schedule



# 4D Schedule



# 4D Schedule



# 4D Schedule





# 4D Schedule



# 4D Schedule



# Technology and Innovation

---

**Altaf Stationwala**

**President and CEO**

**Mackenzie Health**



Mackenzie  
Health

# Procurement of an Integrated Solution

## EMR



## Managed ICAT



## Managed Equipment



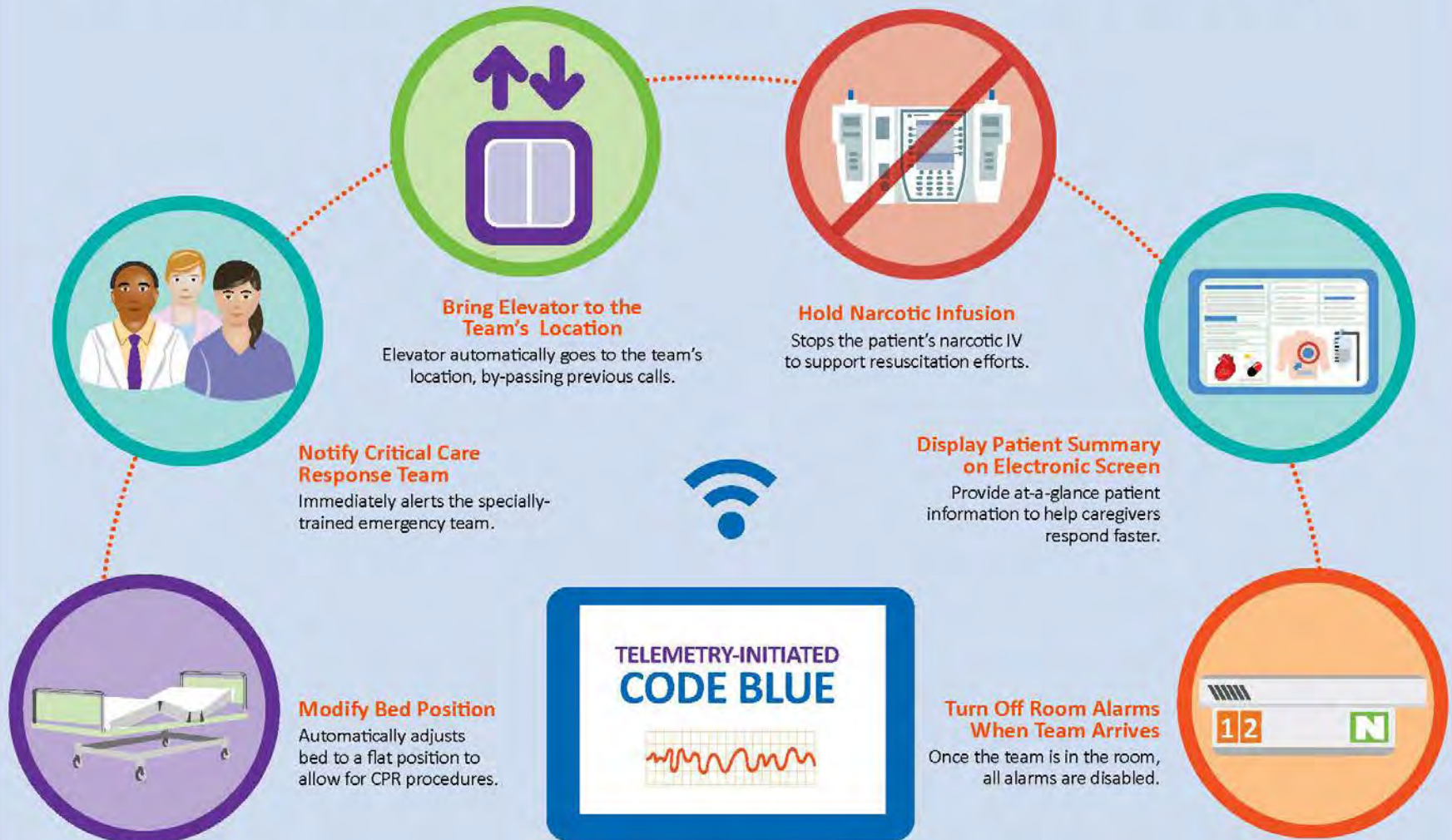
**Epic**

**COMPUGEN**  
Simplifying the business of technology ... together

**PHILIPS**

# Smart Workflow

Mackenzie Vaughan Hospital will be the first hospital in Canada to feature fully integrated 'smart' technology systems and medical devices that can speak directly to one another to maximize information exchange.



# Smart Hospital Vision – Innovation Unit

First-in-canada project featuring unique advanced technology integration transforming delivery of care

12

N

## Special Notification Lights

Outside each room, lights alert the staff from across the unit to patient safety concerns such as fall risk or when immediate assistance is needed.



## Smart Stations

Installed in every room, provide patient information to caregivers to respond faster to patients' needs, therefore improving patient outcomes and experience.

## Mobile Phones

Enable nurses and physicians to communicate securely with one another about medications, meetings or discharge plans to expedite patient care.



## Smart Beds

Features include safety alerts to help prevent adverse events such as falls and built-in scale for accurate and timely weighing of patients.

## Smart Badges

Identify location on the unit, alert of patient calls, enable staff communication and record response and direct patient care time provided.



## Hand Hygiene Support Solution

Utilizes a system that assists team members to practice hand hygiene at key points in time to avoid spreading germs to patients.

## Data Centre

Provides the IT infrastructure to quickly adopt new and emerging healthcare innovations and technologies, as they become available.



## Smart Infusion Pumps

Patient-controlled pumps deliver medications, fluids and nutrients at precisely controlled rates and help prevent medication errors.



# Publications



## Hospital News

www.hospitalnews.com

FEBRUARY 2017 EDITION | VOLUME 30 | ISSUE 2

INSIDE

INFECTION CONTROL SUPPLEMENT

See page C1

Infectious Prevention and Control Association of Canada

---

**FOCUS IN THIS ISSUE**  
FACILITIES MANAGEMENT AND DESIGN/GREENING HEALTHCARE/INFECTION CONTROL:

Innovative and efficient health care designs, the greening of healthcare and facilities management. An update on the impact of automation technology on health care delivery. Advancements in infection control in hospital settings.

**INSIDE**

From the CEO's desk... 14

Executive Matters... 15

Early Mobilization... 18

Trends in Transformation... 20

Doctors Without Borders... 21

Nursing Pulse... 24

Columns... 27

**INSIDE**

From the CEO's desk... 14

Executive Matters... 15

Early Mobilization... 18

Trends in Transformation... 20

Doctors Without Borders... 21

Nursing Pulse... 24

Columns... 27

# Canada's first smart hospital

Mackenzie Vaughan Hospital is becoming a reality

Story on page 6

FEATURE REPORT: DEVELOPMENTS IN MEDICAL IMAGING — SEE PAGE 18

## CANADIAN Healthcare Technology

CANADA'S MAGAZINE FOR MANAGERS AND USERS OF INFORMATION SYSTEMS IN HEALTHCARE | VOL. 22, NO. 1 | FEBRUARY 2017

---

INSIDE:

FOCUS REPORT: EDUCATION

PAGE 14

**Cloud-based QA**  
Real Time Medical is now providing small and large hospitals with a subscription-based peer review service. It is available for specialties such as radiology, endocrinology, pathology and ophthalmology. Page 6

**Appropriate ordering**  
St. Michael's Hospital, in Toronto, is creating a team of people with 40 physicians to analyze the CT or MRI usage of doctors. The age... Page 6

**Information governance?**  
With the explosion of computerized and paper-based data in healthcare organizations, it is more important than ever to develop information governance standards. A group in Canada has been founded to do just that. Page 13

**Innovation showcase**  
Q: Canada often used to be the envy of the rest of the world in terms of the pace to trial and test new technologies in the health care arena. The reality is November... Page 12

**"Beyond Imaging - Ensuring Radiology Impact in Clinical Care and Research"**

**Will radiologists be needed in era of AI computers?**

Computers can already recognize faces better than humans, and systems using Deep Learning and Artificial Intelligence are developing the ability to spot diseases in diagnostic images and provide possible treatments. How long will it be before such systems are as good as radiologists? The question intrigued CIO experts at the most radiological society of North America conference in Chicago. [See news on page 24](#)

**Mackenzie Health devises new workflows for 'smart' hospital**

**BY HELEN REIDENBERG**

Technology is dramatically improving the delivery of healthcare, and it's integrating a host of solutions around the core Epic system to reduce bottlenecks and clear inefficiencies. These solutions will first be deployed at the existing Mackenzie Health site in... [See news on page 2](#)

**The hospital is using the Internet of Things to build intelligence into clinical workflows.**

In 2010, the hospital that started it all and its teams are holding in nearby Vaughan, a \$1.6 billion investment that will open its doors in 2020.

"The member one complaint we've heard from clinicians is the amount of time it takes to use passwords to log in and out of different systems," said... [See news on page 2](#)

HEALTHCARE DEVELOPMENT



## INTELLIGENT INFRASTRUCTURE

Mackenzie Vaughan Hospital to feature fully integrated 'smart' technology

By Catalina Gurin

Mackenzie Health marked the largest milestone to date for the Mackenzie Vaughan Hospital project with the beginning of construction in October 2016. Mackenzie Vaughan Hospital will be the first new hospital to be built in Ontario's York Region in the last 30 years. As part of Mackenzie Health's own hospital model, Mackenzie Vaughan Hospital and Mackenzie Richmond Hill Hospital will provide its growing communities with increased access to cutting-edge healthcare, closer to home.

Upon completion in 2020, Mackenzie Vaughan Hospital will provide a state-of-the-art emergency department, modern surgical services, advanced diagnostic imaging, ambulatory clinics and intensive care beds. Other specialized services will include medicine, nursing (oncology), pediatrics, mental health and the York Region District Surgical Centre. The hospital will have approximately 380 beds on opening day, with capacity to expand to 650. The majority of patient rooms will be private — a best practice in infection prevention and control.

# Questions?

