

Innovation Partnership  
Procurement by Co-Design

North York General Hospital (NYGH):  
Preventing Falls  
**Challenge Brief**



**Contact name**

Arun Dixit

**Response deadline**

**October 20, 2017**

**Phone number**

416-756-6000 ex. 4060

**Challenge Brief reference #**

NYGH-CH01

**E-mail**

arun.dixit@nygh.on.ca

**Maximum procurement budget**

**\$ 25,000**

Note: this does not obligate provider to procure any solution

**Project Team**

- **Lead:** Dawne Barbieri – Director, Professional Practice
- **Co-Lead:** Jennifer Quaglietta – Director, Patient Experience and Quality
- **Team Member:** Arun Dixit – Quality Improvement Specialist
- **Team Member:** Stephanie Robinson – Quality Improvement Specialist
- **Team Member (ad-hoc):** Talha Hussain – Quality Improvement Specialist
- **Clinical Advisor:** Falls Committee Members
- **Technical Advisor:** Sumon Acharjee – Chief Information Officer
- **Procurement Advisor:** Brad Harkin – Manger of Procurement
- **Other Advisors:** Patient Advisors

All vendor responses must be made via completion of an “Innovator Brief” template and forwarded to the above contact via email by the response deadline, with a cc to designchallenge@marsdd.com.

## The Challenge

Maximum of 1200 characters

In Canada, 1 in 3 seniors experience falls which can lead to loss of independence, reduced quality of life, and even death. In a hospital setting falls that do occur are often unwitnessed, and are mainly experienced by patients who are unaware of their own cognitive or physical limitations. With 60% of the patients admitted at NYGH being 65+, the hospital is in search of an innovative tool to prevent falls in this vulnerable patient population.

A comprehensive, evidence-based falls prevention program has been in place at NYGH for more than five years. Many quality improvement approaches have been implemented to further enhance the falls prevention program including policy revisions and process redesign, yet the number of falls and associated costs continue to increase. Technological advances, such as bed alarms, have been used as prevention strategies but can lead to alarm fatigue and delayed response times. In addition to alarms, other market solutions (i.e. Hip airbags) have been used however this solution leaves other body parts (i.e. Head, limbs, ribs) exposed to injury.

The hospital would like an interdisciplinary team to develop a testable and procurable working prototype that could accurately predict falls before they happen and alert staff and patients of the need for proactive intervention. In addition, the vendor should use existing and approved technologies available at NYGH to propose a sustainable solution.

## Desired Outcomes

Maximum of 3 outcomes based specifications (OBS)

OBS #1: North York General Hospital is interested in reducing the number of falls on their units on average by 50% within 6 months of implementing the solution.

OBS #2: North York General Hospital is interested in improving employee engagement and patient satisfaction levels on a unit with high risk of fall patients by minimum 1% within 3 months of implementing the solution.

## Evaluation Criteria

Criteria to be used for vendor selection (NOT to evaluate solutions).

### *Company*

Has the company demonstrated the competency to act as partner? Do they have an innovative vision? Do they have a strong leadership team with experience in the healthcare sector? Do they have strong references from other healthcare organizations?

### *Human-Centred*

Has the company demonstrated ability to develop robust human-centred solutions for a similar problem?

### *Proposed approach*

Is the proposed approach to the challenge innovative? Do you agree that it can solve the challenge proposed? Will it have a significant impact on the end user (staff, patients, etc.)? Is the presented approach easily scalable and cost effective?

### *Ability to execute*

Has the company demonstrated the ability to deliver a solution to other complex challenges? What have been the outcomes of solutions they have implemented for similar problems?

### *Ability to produce validation data*

Has the company demonstrated their ability and expertise to produce validation data? Have they shared an example of data they have produced for any of their products or prototypes? Is the quality of that data sufficient enough to make a procurement decision?

### *Experience of project team*

Does the team have experience working on innovative solutions in the healthcare sector? Does the team have experience with machine learning? Does the team have experience in manufacturing similar solutions for scalability? Did the company propose the right type of project team to take on this engagement? Did the company propose the right number of staff to take on this engagement?

### *Co-development*

Does the company have any interest in working with NYGH beyond the end of the project to further develop this or other related technologies as identified in the design phase?

Note: NYGH will weigh all criteria equally.

## Key Dates

The following is a summary of key dates in the RFP process. Program sponsor (MaRS) and provider may change any of the dates below, in its sole discretion and without liability, cost, or penalty.

Key Dates	Milestones	Duration
Sept 28, 2017	Program launch, providers invited to download and complete a Challenge Brief	2 weeks
Oct 16 - 20	All challenges posted online, vendors begin to respond with Innovator Briefs	1 week
Oct 23 - 27	Vendors have all submitted Innovator Briefs. Providers shortlist vendor selection.	1 week
Nov 6	Dialog day. Each provider will hear their selected vendor pitches. Final vendor selection completed.	1 day
Nov 7 - 10	Teams prepare and submit co-design grant application.	1 week
Nov 13 - 17	External judging panel reviews grant applications. Meets on 17th to make final decision. Co-Design grant winners announced.	1 week
Nov 20	Co-Design Workshop #1: Discovery. Teams sign collaboration agreements.	1/2 to 1 day
Nov 20 - Dec 15	Teams work on discovery phase.	4 weeks
Jan 15, 2018	Co-Design Workshop #2: Ideation & Concept testing	1/2 to 1 day
Jan 15 - Mar 3	Teams work on ideation and concept testing phase.	8 weeks
Mar 5 - 8	Design review sessions. 1 - 2 hour sessions with each team to review learnings from discovery and concept testing results.	1 week
Mar 9	Co-Design Workshop #3: MVP prototyping and evaluation framework.	1/2 - 1 day
Mar 9 - Jun 15	Teams work on MVP development and evaluation phase.	14 weeks
Jun 18 - Jul 5	Teams make procurement decision and formalize agreements.	3 weeks

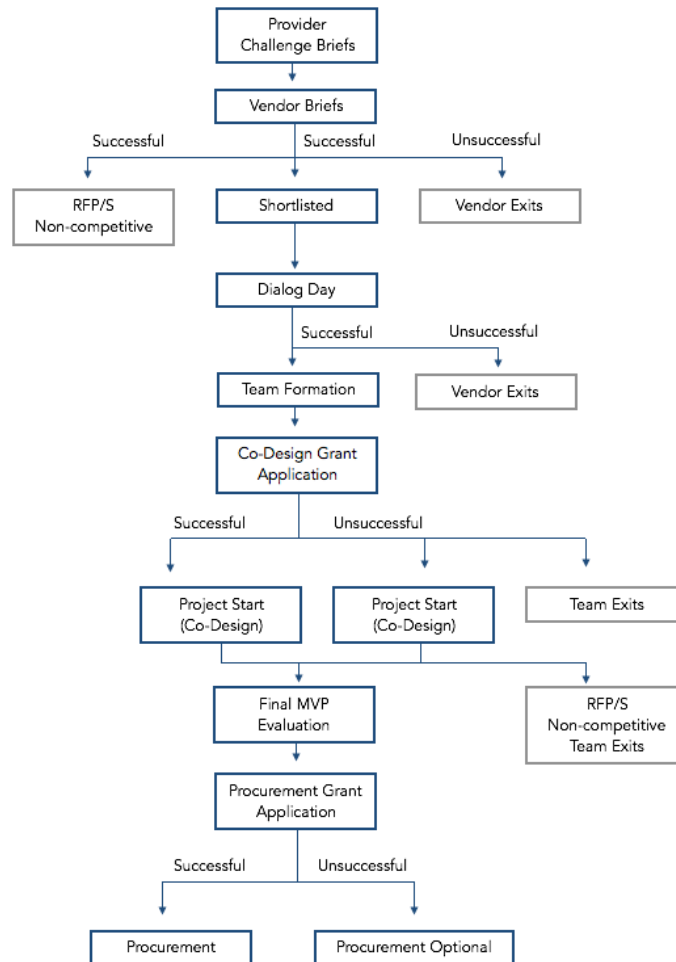
<b>Jul 9 - 13</b>	External judging panel conducts site visits.	<b>1 week</b>
<b>Jul 20</b>	Final solutions day. Judges award up to \$50k for procurement.	<b>1 day</b>

## Terms and Conditions

1. The “Innovation Partnership: Procurement by Co-Design” program may or may not lead to a procurement. There is no requirement for procurement at the end of the program, and procurement is at the discretion of the Provider. There are a number of potential outcomes from participation in this program (see figure below).
2. This Design Challenge document is issued to invite vendors who are able to develop solutions within the program timelines or have existing solutions that require refinement or validation, to respond and partner with the Provider to solve the proposed challenge.
3. The process will be in four phases:
  - a. Phase 1: Challenge Brief
    - i. Proponents prepare a submission in response to OBS
    - ii. Providers evaluate submissions based on evaluation criteria published in Challenge Brief, and generate a short list of qualified proponents
  - b. Phase 2: Dialogue Day
    - i. Short listed proponents are invited to present on submissions
    - ii. Providers evaluate presentation/discussion based on published criteria (to be made available to short listed proponents) and a proponent is selected. There are now two possible outcomes:
      1. Proponent may find an ideal solution and decide to pursue an RFP/S or non-competitive procurement strategy
      2. Proponent may form a team to pursue co-design
  - c. Phase 3: Co-Design
    - i. Selected proponent and provider form a team to co-design a solution and evaluate a minimum viable product, and decide whether to apply for the co-design grant. There are now three possible outcomes:
      1. Co-design moves forward with grant funding
      2. Co-design moves forward without grant funding
      3. Co-design does not move forward
  - d. Phase 4: Procurement
    - i. Providers evaluate success of the minimum viable product based on published desired outcomes
    - ii. Providers determine whether to move forward with a procurement, and whether to request the additional grant from IPPCD. There are now three possible outcomes:

## Innovation Partnership Procurement by Co-Design

1. Procurement moves forward with grant funding
2. Procurement moves forward without grant funding
3. Procurement does not move forward



4. Questions related to the Challenge being proposed must be directed to the Provider, and questions that modify the Challenge will be posted publicly for all potential proponents. Questions related to the Innovation Partnership: Procurement by Co-Design Program must be directed to MaRS ([designchallenge@marsdd.com](mailto:designchallenge@marsdd.com))
5. Submission requirements (mandatory requirements; proponents who do not meet the mandatory requirements will be disqualified)
  - a. Interested proponents must respond via submission of an Innovator Brief document, available online on <https://www.marsdd.com/systems-change/procurement-co-design>
  - b. The Innovator Brief document must be submitted directly to the Provider by the due date listed on the cover page of this document, with a cc to [designchallenge@marsdd.com](mailto:designchallenge@marsdd.com).
  - c. The submission must include proof of necessary licenses.
6. Bid disputes must be directed to the Provider, and will be managed according to the Provider's published bid dispute resolution process.

## Innovation Partnership Procurement by Co-Design