Memory Care Retirement Home
&
Smart Living Lab

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It is estimated that 747,000 Canadians currently living with Dementia and at least 47.5 Million world wide

In Canada 76,000 new cases of dementia diagnosed every year with the expectation to reach a total of 1 Million Canadians by 2030 (66% increase)

The current cost for Dementia is $10.4 Billion per year and expect to reach $16.6 Billion by 2030 (1% of GDP)

Currently, there is NO effective treatment for Dementia or Alzheimer's. However, some European countries are attempting innovative practises, proven to be successful to slow down the disease.
Holland’s Dementia Village
A True Family Living Space
Magic Life Furniture

Custom Memory Care Solutions
Ressam Gardens
State of the Art Memory Care Facility

- Innovative Building Concept
- Smart Living R&D Laboratory
- Modern Urban Design
- Advanced Healthcare Training & Practices
Ressam Gardens: A Smart Living Laboratory

- A Living Lab is an environment that fosters technologic innovation for joint value co-creation among citizens, research organizations, companies, cities and regions.

- Ressam Gardens Living Lab will benefit all sectors of our society including: Patients, Research Community, Industry, and Government.

- The expected outcomes for Ressam Gardens are: provide economic opportunities, enhance research platform, new product(s) development, technology commercialization, and encourage industry partnerships.
Ressam Gardens – Partnerships
Lotfi Belkhir, Ph.D.

Associate Professor & Chair of Eco-Entrepreneurship
W Booth School of Engineering Practice & Technology
McMaster University
Ressam Gardens Collaboration with SEPT & MIRA

Work in Progress
- Breathing Patterns Remote Monitoring
- Fall Prevention and Detection

Future Projects
- Smart Living Space for Seniors
- Bio Monitoring Apparatus
- AI-enhanced projects
- Indoor and Outdoor Tracking Systems
- Data Aggregation & Cyber Security
- Electric Mobility (Wheelchair, Bike, Golf Cart)
Breathing Patterns Monitoring Using Infrared Imaging

Target Market:
- Smart Living Space for Seniors
- Chronic Obstructive Pulmonary Disease (USD $40+ B in the North America)
- Sleep Apnea affects about 44 Million people in North America

Solution:
- Use of Infrared Imaging to deliver inconspicuous, safe and early assessment and diagnostics of breathing disorders

Benefits:
- Early and preventative treatment
- Improvement in quality of life and aging
- Reduction in cost of treatment
Fall Prevention & Detection Using Infrared Depth Cameras

Target Market:
- Falls are the second leading cause of accidental or unintentional injury deaths worldwide
- 37.3 million falls that are severe enough to require medical attention occur each year
- Adults older than 65 years of age suffer the greatest number of fatal falls

Solution:
- Use of Infrared depth camera to assess and analyze gait patterns and provide early warnings of potential falls as well as detection of those falls when/if they occur

Benefits:
- Leading indicator warning of potential falls and preventative measures to prevent them
- Immediate alert of the emergency and caregivers in case of falls
- A record and playback ability of the fall to enable optimal treatment

Brian de Nobriga
President
Claybar Contracting Inc.

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Dundas, ON L9H 2L3
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Established in 1965

Claybar’s corporate carries top expertise in general contracting and petroleum construction sectors

Today, Claybar is a multi-disciplinary firm offering a wide range of professional and various technical services to meet continually changing and demanding client requirements

Moving forward, it is our plan to invest into the development of Retirement Homes, an industry estimated to reach a One Trillion Dollars by 2050
Ressam Gardens
The Future Of Memory Care Facility

Site Location and Building Design
- Proximity to newly developed town houses, city parks & shopping centres
- A unique building layout

Long Term Strategy
- Creating a harmonized urban community
- A modern concept of retirement home
- A model which can to be adopted throughout Canada and North America
# Ontario’s Dementia Strategy

## Dementia Strategy Key Investments

<table>
<thead>
<tr>
<th>Initiative</th>
<th>Outcome</th>
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<tbody>
<tr>
<td>1. Expand province-wide access to dementia specific programs.</td>
<td>Improved access to respite supports, including in-home and overnight, to reduce care partner burnout.</td>
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<tr>
<td>2. Enhance flexible respite services for care partners of people with dementia.</td>
<td>More dementia-specific training hours and supports for front-line and primary care practitioners.</td>
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<td>3. Care Partner Education and Training</td>
<td>In-person and online educational resources for care partners so people have the right skills to provide care for loved ones.</td>
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<td>4. Dementia Workforce Training and Education</td>
<td>Enhancing supports in home and community to help care partners manage complex behavioral health needs.</td>
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<td>5. Behavioural Supports at Home and in Community</td>
<td>Providing front line health care providers more tools and supports to better manage dementia.</td>
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<td>6. Behavioural Supports in Long-Term Care Homes</td>
<td>Expanding Behavioural Supports Ontario program in long-term care (LTC) homes.</td>
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<td>7. Evaluation of Memory Clinic Models</td>
<td>Exploring expansion of innovative models to improve patient diagnosis and appropriate management.</td>
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<td>9. Continued investments in physician education in geriatric care</td>
<td>Enhance capacity for specialists to support the entire health workforce to respond to the needs of our aging population.</td>
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<td>10. Dementia Campaign</td>
<td>Targeted campaigns to key populations to educate the public and reduce stigma around dementia.</td>
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$101 million over 3 years for Ontario’s new Dementia Strategy
Ontario’s Dementia Workforce

**Evaluation of Memory Clinic Models**

- An investment to evaluate short- and long-term health system impacts of Primary Care Collaborative Memory Clinics in Ontario.

**Dementia Workforce Training and Education**

- An investment to enable service providers to increase their capacity to provide dementia training to front-line staff. Funds will be used to enhance the competencies of healthcare staff who work directly with people living with dementia and their families.

**Deliverables**

- Data collection and analysis of health system impacts of Primary Care Collaborative Memory Clinics in Ontario.

- Training for up to 20,000 front-line care staff.

**Outcomes**

- The health care workforce has increased capacity to provide care that meets the unique needs of people living with dementia in the communities where they live.
Ressam Gardens will house a medical clinic as well as a treatment centre on the main floor.

This space will be dedicated to McMaster University for research and training purposes.

The training program will include grad students, PDF, researchers, medical students, residents, nurse practitioners and physician assistants.
rTMS is a Promising Dementia Treatment Technique

Recent studies showed that rTMS can help Dementia patients to slow the progression of the disease

rTMS can also be used as an innovative tool to evaluate the effectiveness of new medications for Alzheimer's treatment

rTMS offers patients, doctors, and family members a hope for a cure, and proven to slowing down the progression of the disease
It takes a village to care for an elder

Thank You