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Promoting Health and Wellness within the Community – with IT

Introduction

Healthcare cost and eldercare have always been the few main issues discussed in the annual Budget Debate\(^1\). Singapore’s government expenditure for healthcare is increasing year on year, and the government has pledged to double this spending account to S$8 billion a year in 5 years\(^2\). Despite that, most Singaporeans do not have sufficient health insurance coverage if disaster strikes.

Despite having healthcare subsidies to make healthcare more affordable and accessible, the demand for healthcare exceeds the supply throughout the past years. Instead of just increasing resources to meet the needs, promoting health and wellness to the community can reduce the demand for in-house care in hospitals. **What Singapore needs to do is to keep people healthy for as long as possible.**

In Singapore, citizens of all ages find it difficult to remain healthy while coping with the demands from work, school, family or life in a city. People of all ages suffer from an array of diseases such as diabetes, cancer, heart disease and high cholesterol. Below are some examples that are reflective of Singapore’s population:

**Senior Citizens**

![Graph showing percentage of elderly population in Singapore]

Singapore has one of the fastest aging populations in the world, where one in five Singaporeans will be aged 65 or older by year 2030\(^3\). An aging population means that there are more senior citizens aged 60 and above who are susceptible to major diseases such as High Blood Pressure, Diabetes, High Cholesterol and Heart Disease. Singapore’s aging population is putting pressure on the government to provide more healthcare resources, increasing government expenditure to embrace what we call the “Silver Tsunami”.

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Young Adults

More adults under 30 are susceptible to the chronic diseases and it is mainly due to an unhealthy lifestyle. However, few Singaporeans are aware of the consequence of such a lifestyle. Being unaware will make them less able to manage their health. Hence, there is a need to raise this awareness and address the need to make a change in their current lifestyles. Some examples of unhealthy living include:

- Lack of sleep (8 hours a day)
- Alcohol Intoxication
- Lack of regular exercise (30 minutes a day, 5 times a week)
- Bad eating habits (Lack of fruits & vegetables in their diet)

Studies have shown that a healthy lifestyle can reduce the risk of such diseases and hence, reduce the need for in-house healthcare services provided by these hospitals. Some examples of healthy lifestyle are

- Eating a balanced diet
- Staying active through regular exercise
- Regularly monitor personal health – using healthcare devices or having an annual medical checkup to monitor one’s state of health

Advancement in Information Technologies

Healthcare organizations are making used of information technologies such as social networking sites, blogs, video sharing sites, interactive games, web and mobile applications to promote health and wellness. External companies are also leveraging on technologies to create fun-filled health application. Some of the examples are:

Singapore HPB iDAT (interactive Diet and Activity Tracker)

iDAT is a healthcare tool that track physical activities, food intake and calculate calories balance to help people manage their health. iDAT made used of smartphone’s built-in GPS to track distance-based activities, monitoring the progress and it’s linked to the web and Facebook application to share the activities with others.

(Visit [http://www.endomondo.com/idat](http://www.endomondo.com/idat) for more details)
Health Buddy App

Created and made available by SingHealth, Health Buddy App is a downloaded mobile application that brings many healthy living tips and advice, and other comprehensive healthcare information to the users.

(Visit http://tinyurl.com/healthbuddyapp for more details)

WiiFit Plus

An enhanced version of the original Wii game, Wii Fit, Nintendo combined both fun and fitness into a game, and provided different types of training exercises for both single and multiplayer game. WiiFit also has health monitoring function that allow players to perform short and simple body tests to gauge the performance of one’s body. Wii Fit made used of Wii’s accelerometers and infrared control controllers to detect body motion and hence, creates an interactive game for all ages.


Challenge Statement

A local hospital wants to increase health awareness and encourage a healthy lifestyle to a specific group of Singaporeans. Design a solution.

Your task:

- Choose ONE target audience (an age group, gender or a local community etc.) and analyze the health issue(s) that this group of people face.
- Develop an innovative solution to address the health issues(s) using Information Technology.
- Convince a group of entrepreneurial healthcare and IT professionals (judges) to adopt and fund your idea.

In 1 month, you will be presenting your value proposition to the judges. You are required to:

1. Describe and justify your target audience and particular awareness or lifestyle.
2. Explain your solution, including what particular technology you are employing.
3. Explain your solution and how it benefits your target audience. The solution should address the following:
• What did you find from your research and/or survey?
• How does your solution address the awareness or life style problem?
• How will you deploy your solution (schedule, phases)?
• What is your budget and funding strategy? How will you sustain your solution?
• How will you monitor your results? How will you evaluate the goals of your solution?

Task List

In teams of 3, you are to design, develop, and then, showcase an idea that:

• Meets the judging criteria
• Does not involve collaboration or services provided by external organizations such as 3rd party consultancies and marketing agencies

To do so, you are advised to perform the following:

• Research and understand the tasks in the Challenge Statement
• Conduct some market research to gauge receptivity, feasibility, costs, etc.
• Prepare and rehearse for the presentation

Your team is not expected to develop or come up with a working prototype. Pencil sketches on PowerPoint, pictures on mounting boards, or any other method and tool will be allowed if the team feels it is sufficient to convey the solution across.

It is also advisable to include some mentions of the technologies employed and stakeholders involved during the presentation.

Sources of Information

• You are encouraged to research on information regarding suggested technologies mentioned, in particularly the use of such technologies in the healthcare industry.

Case Clarification

Questions are to be directed to the competition manager between 31 March 2012 to 06 April 2012, inclusive of both dates. The questions will be consolidated and all answers will be published on 09 April 2012 on the competition website - http://innovateit.smu.edu.sg/ for the benefits of all teams. Please note that only questions deemed appropriate to the competition manager will be answered.

Please email InnovateIT@smu.edu.sg with the subject header ‘Business Case Clarification’.
Judging Criteria

Your team’s solution will be judged based on the following criteria:

Innovation (20%)

- Is the idea original, unique or creative?
- Does the idea create business value for the organization?
- Does it utilize current technology creatively?

Business and IT Alignment (20%)

- Are the justifications for the particular technology sound?
- How well is the solution aligned with the theme, and the problem/opportunity

Feasibility (20%)

- How costly or complex is the solution?
- Is the solution technically feasible?

Presentation (20%)

- Did the presenters convey their solutions clearly and professionally?
- Can teamwork be seen evidently?
- Is the presentation lively and engaging?

Bonus Points (20%)

- Bonus points will be awarded to the team’s solution based on the judging panel’s discretion on additional effort

Rules & Regulations

Intellectual Property

- All teams must ensure that their entries submitted are original and unpublished works created by the participant(s). All entries must not contain content that infringe any copyright laws or any intellectual property rights belonging to any third parties.
- All intellectual property rights relating to any entry submitted shall be deemed to be owned by the contestant.
- Participants must ensure that all software used to develop their solutions are legally obtained and licensed, or open sourced. Failure to comply will result in disqualification from the competition. Besides the standard projectors and whiteboards available in the presentation room, please note that the organizers will provide no other hardware equipment or software.
• When teams submit their solutions, they would be granting SMU the rights and license to use, distribute, publish or share the content present in their solutions. Primarily, organizers are looking to use the solutions in part to highlight each team's entry and success in the competition.

**Terms & Conditions**

• SMU reserves the right to disqualify any participants found to be in violation of any of the rules and regulations or on any other reasonable grounds.
• SMU reserves the right to make changes to any of the rules and regulations without prior notice.
• The judges' decisions are final.

**Withdrawal**

Teams are allowed to withdraw from the competition up to 3 days after the business scenario is given out. Please email InnovateIT@smu.edu.sg with your reason for withdrawal.

**Contact Information**

For any enquiries, please direct them to InnovateIT@smu.edu.sg