Smart Cities Project Proposal: Smart Health

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Executive Summary

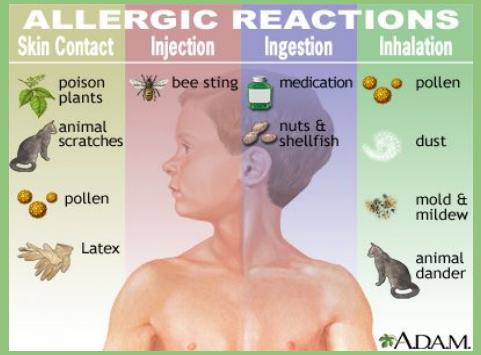
A smart sustainable city is an innovative city that uses technology to improve quality of life and competitiveness, while ensuring that it meets the needs of present and future generations with respect to economic, social, environmental, and cultural aspects.

The USA government intends to build a model sustainable smart city which is eco-friendly and will house 50K people. The smart city must maintain sustainable resources and provide a healthy and high quality life for its residents.

We will be responsible for developing the Smart Health System for this city that is consistent with the principles of smart and eco city and provides healthy lifestyles for the residents.

What operational need or market opportunity is your system intended to address?

Our system can help prevent medical misdiagnosis and mitigate any risk of re-vaccination or a patient being re-diagnosed treatment that did not work



Our system can keep track of all of a user's allergies in one easy-to-access location, which can help users who have multiple allergies keep track of them.

In case of emergency or in case a user needs to switch doctors or hospitals, our system can easily and quickly transfer all pertinent health information to medical staff and first-responders.

Stakeholders

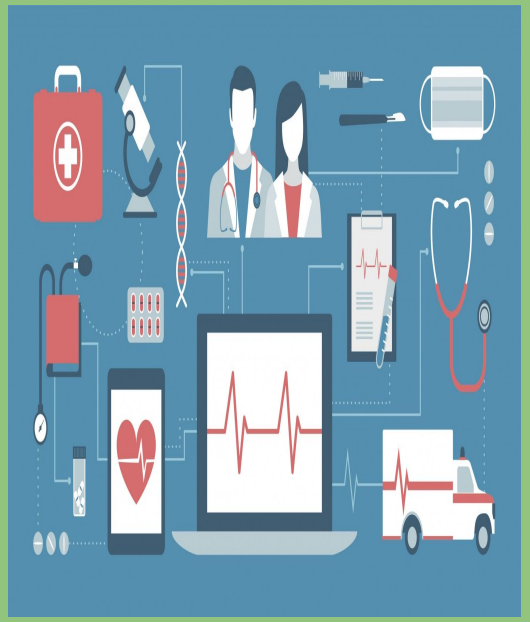
- **Patients**: Appointments should be requested within minutes with any medical facility. They also require the facility to list their services
  - The time to create an appointment request shall not exceed 10 minutes
  - All medical service information shall always be available

- **Health professionals**: Information is readily available and accurate so that any smart city resident can be taken care of whole-heartedly
  - All patient medical information shall be retrieved in under 15 seconds

- **Medical facilities**: Patient and resident information can be aggregated so that health trends can be determined (epidemics).
  - Upon requesting information from the trend detection system, trends shall be calculated in under 1 minute

- **Smart city residents**: Dietary and lifestyle recommendations are made occasionally to remind them to be healthy
  - The system shall provide recommendations when it detects optimal weather or when the user is in a grocery store

What are the three to five most important features of your system that distinguish it from your competitors?



Reducing Error Rates:

Given the vast amount of up-to date and accurate data, doctors can provide evidence-based medicine and analyze patient readmission rates

Predictive -> **Preventive model**

Time efficiency:

Smart Info exchange between doctor and patients reduces a lot of time wasted in waiting for doctors

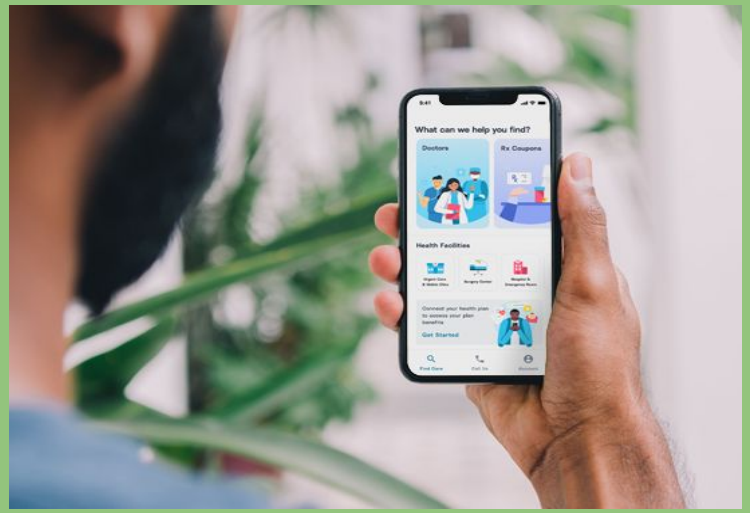
Improved Communication:

Interconnectedness between departments, facilities provide better collaboration between providers.

Patient reminders can be sent proactively for data anomaly

What is your proposed system concept? What alternative concepts did you consider and why did you choose the one you proposed?

Our proposed system concept is a Smartphone app capable of collecting and monitoring the user's health data, providing suggestions such as if the user should avoid red meat in their diet.



Our app is also able to connect with any doctors or hospitals that the patient goes to, so that the staff there can accurately and easily access their important health data.

How will your proposed concept operate within the larger context to achieve its intended purpose?

Our smart health system will synergize with existing medical facilities within the city to help make the medical services provided by the city more accurate and efficient. It would also allow for faster response times to those in need of medical attention.

Our technology and system features will also enable and encourage users to follow healthier lifestyles through its live diet suggestions, thus keeping in line with the goals of the city. The overall result will be an increase in sustainable health practices.

What are the key specifications that will drive the system's design and development?

Personalized healthcare that uses advanced data analytics to make healthy suggestions to the user.

Uninterrupted, quick, and precise sharing of important medical data with qualified medical professionals.

Robust and secure private data transmission and storage for only authorized parties as specified by the user.