Part 2 - Modeling the Future State

INSIGHTS

SCHEDULE

It becomes difficult especially for older patients to follow a strict schedule to monitor and manage their condition.

How might we create an integrated system where monitoring and delivery of insulin is automated?

TREATMENT

Current treatment of diabetes, especially in third world countries does not take into account specific insulin needs based on varying blood sugar levels. Doctors prescribe a set treatment which might lead to more cases of hypo or hyperglycemia.

How might we ensure predictive control and real-time estimation of a person's state and deliver only the required amount of insulin/ other hormones at all times?

MANAGEMENT

Diabetes medicines are expensive. Patients and their caregivers have to continuously keep ordering medicines and other devices required to manage the condition.

How might we ensure smart delivery of required items to manage the condition based on automated consumption tracking?

MENTAL HEALTH

People with chronic health conditions are more prone to suffering from mental health problems. They need a strong support system.

How might we create a positive support system for diabetes patients by providing community support and someone to talk to about their doubts and condition at all times?

DIET

Diet plays a huge role in maintaining the condition. The food that we consume affects blood sugar levels. However, in building predictive models, data from food consumption often gets left out.

How might we create a controlled environment of food consumption personalised to the patient's needs with minimum inputs from the patient?

(I would like to focus on one of these directions more in depth).

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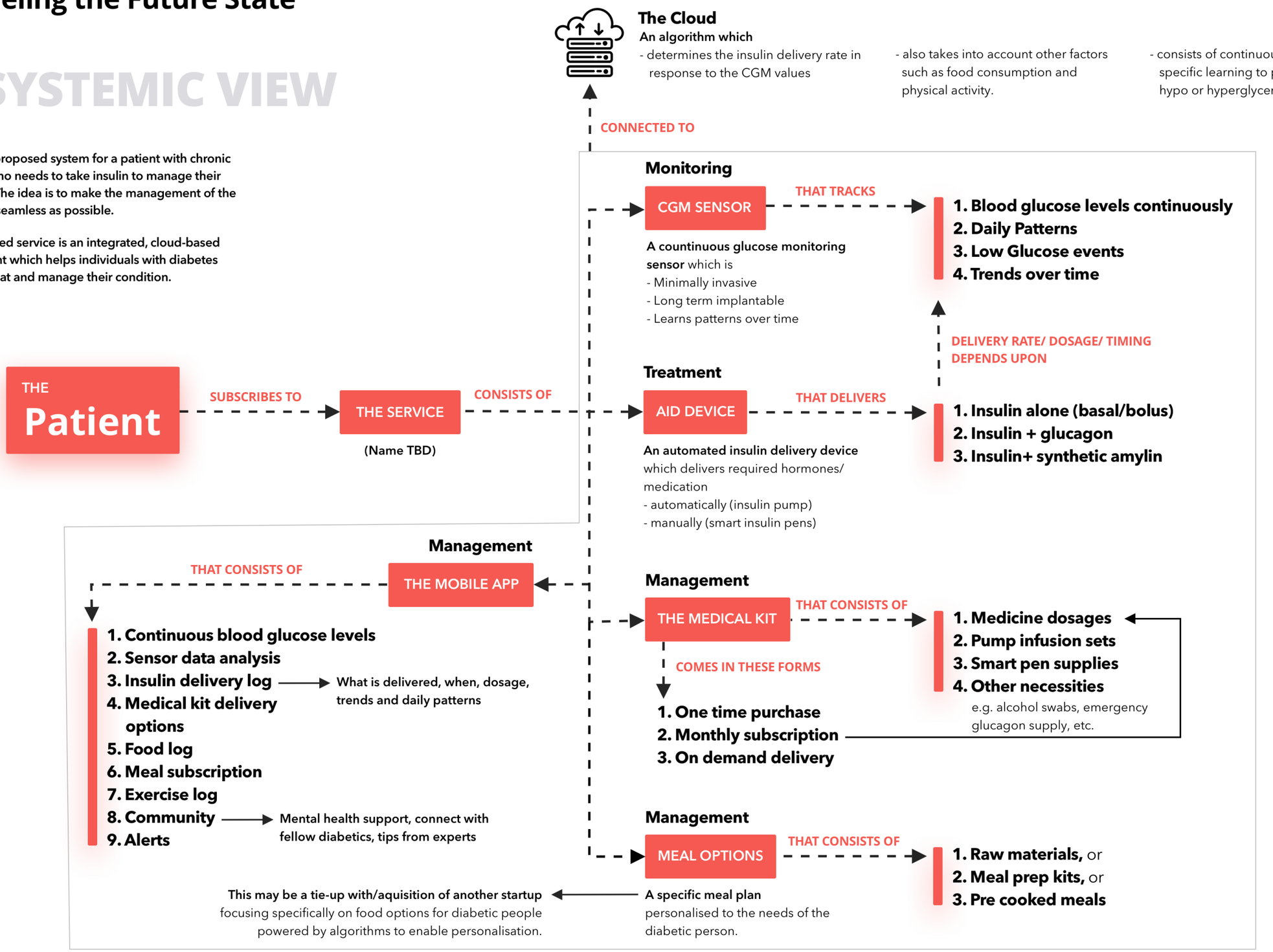
A SYSTEMIC VIEW

This is the proposed system for a patient with chronic diabetes who needs to take insulin to manage their condition. The idea is to make the management of the disease as seamless as possible.

The proposed service is an integrated, cloud-based environment which helps individuals with diabetes monitor, treat and manage their condition.



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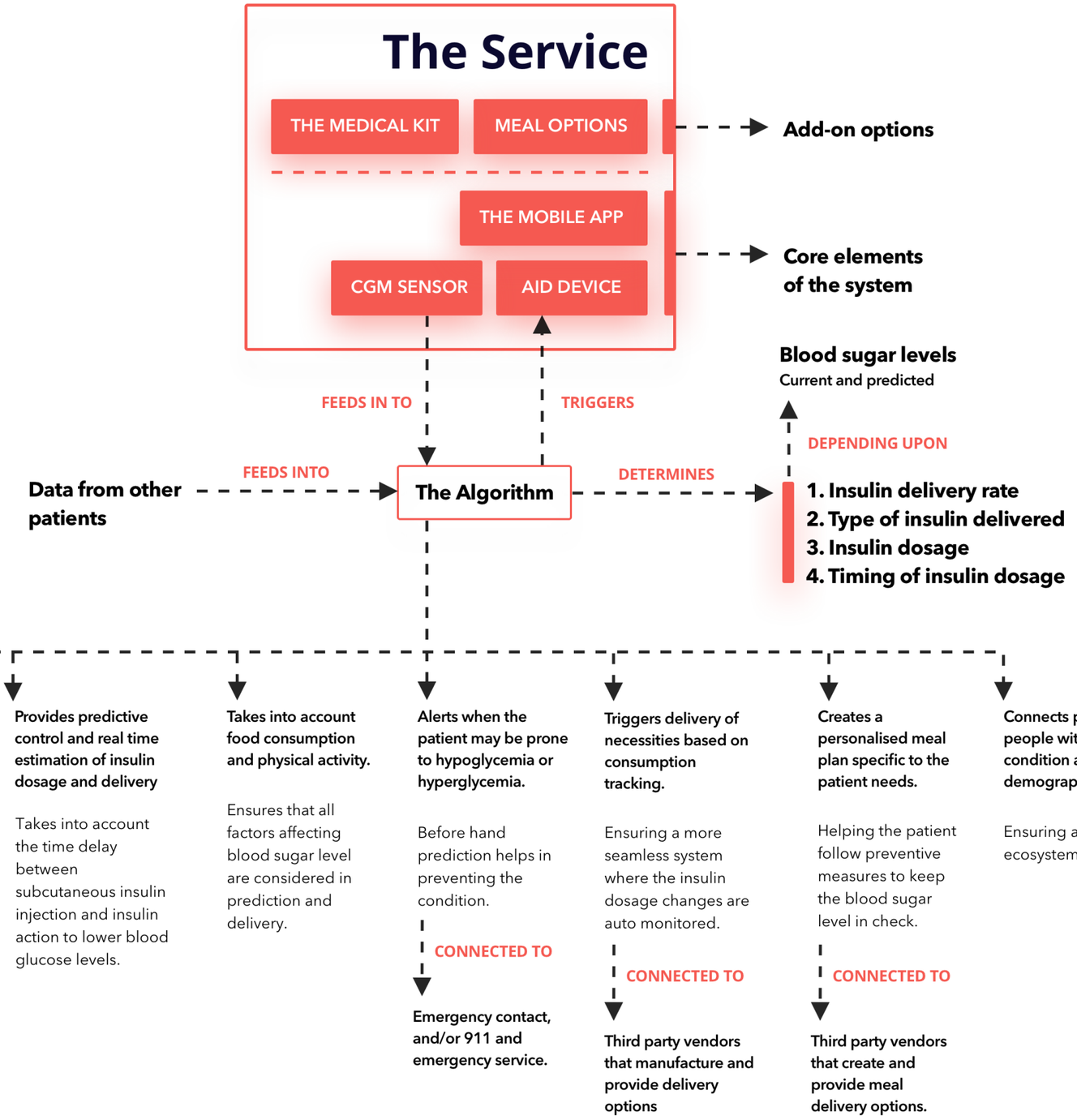
THE SERVICE AND THE UNDERLYING ALGORITHM

The service consists of core elements that the user can subscribe to as well as add-on options to manage their condition better.

The underlying algorithm ensures seamless management of the condition by ensuring an almost fully automated ecosystem.



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