

A Reference Architecture for Personalized and Self-adaptive e-Health Apps



Eoin Martino Grua



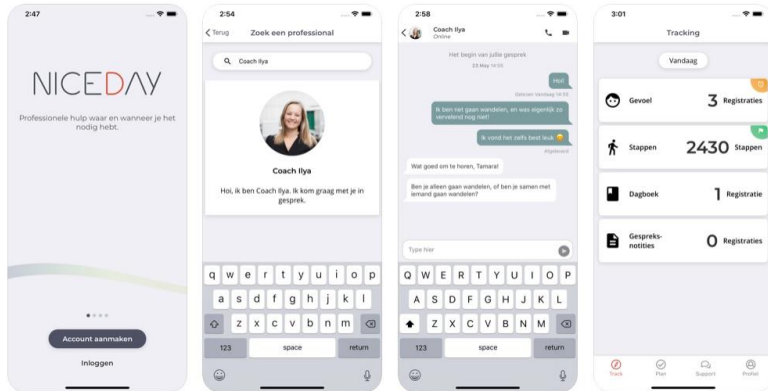
Martina De Sanctis



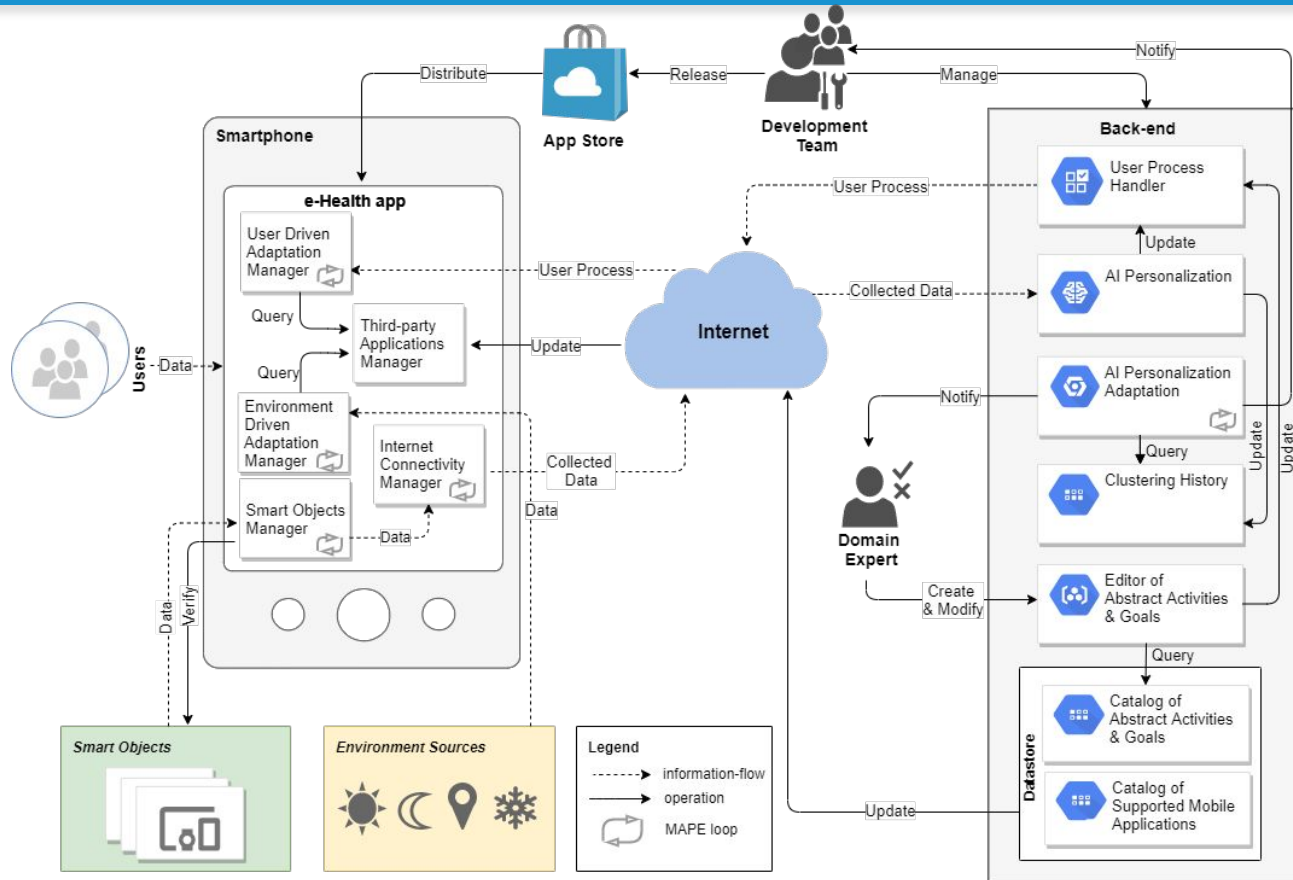
Patricia Lago

Why?

- e-Health (mobile) apps on the market are too **rigid**
- **Personalisation** is more prevalent and a good method to maintain attention and user relevance
- **Solution:** a reference architecture for e-Health apps that combines **personalisation** and **self-adaptation**



Reference Architecture



User Process

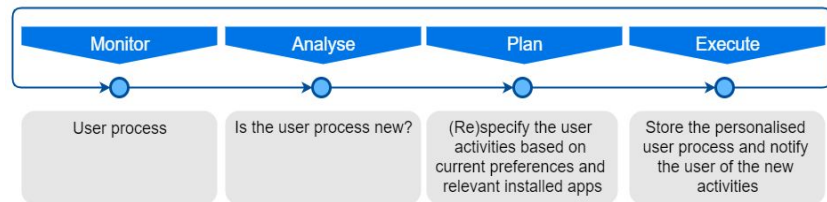
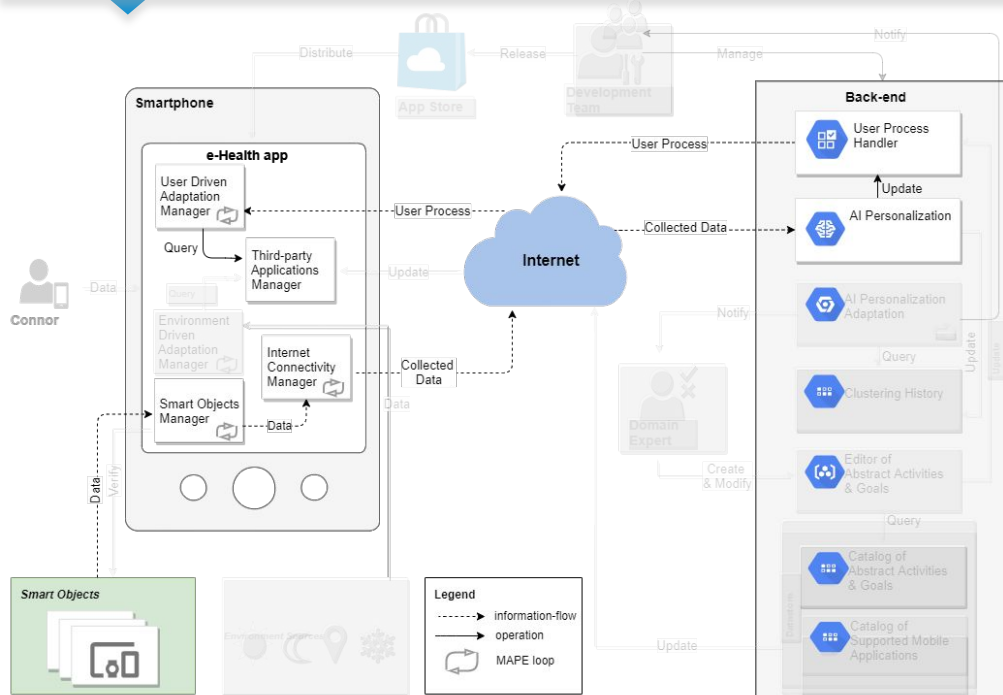
- A **User process** is made by one or more **Abstract activities**
- An **Abstract activity** is a vector of one or more **Activity categories**

<i>Cardio</i>	<i>None</i>	<i>None</i>	<i>None</i>	<i>Cardio</i>	<i>None</i>	<i>None</i>
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- A **Concrete activity** is a dynamically suggested activity of a certain **Activity category**

<i>Running</i>	<i>None</i>	<i>None</i>	<i>None</i>	<i>Running</i>	<i>None</i>	<i>None</i>
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User Driven Adaptation Manager

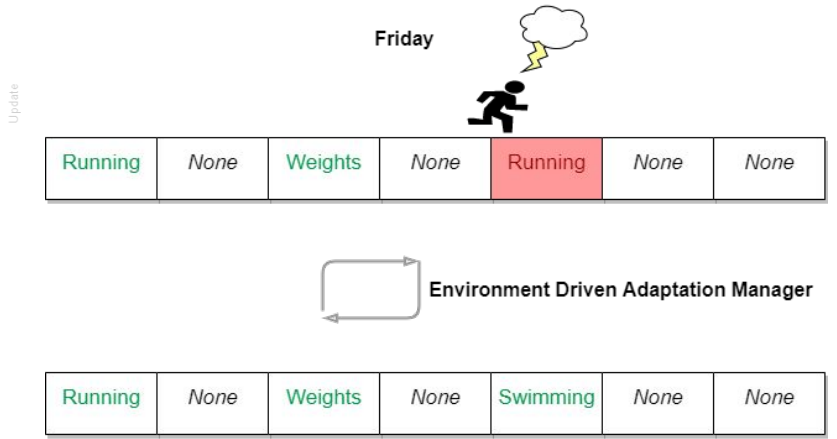
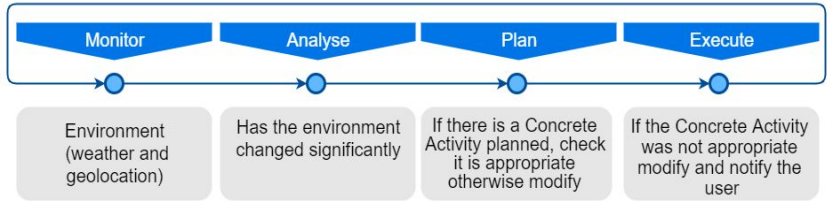
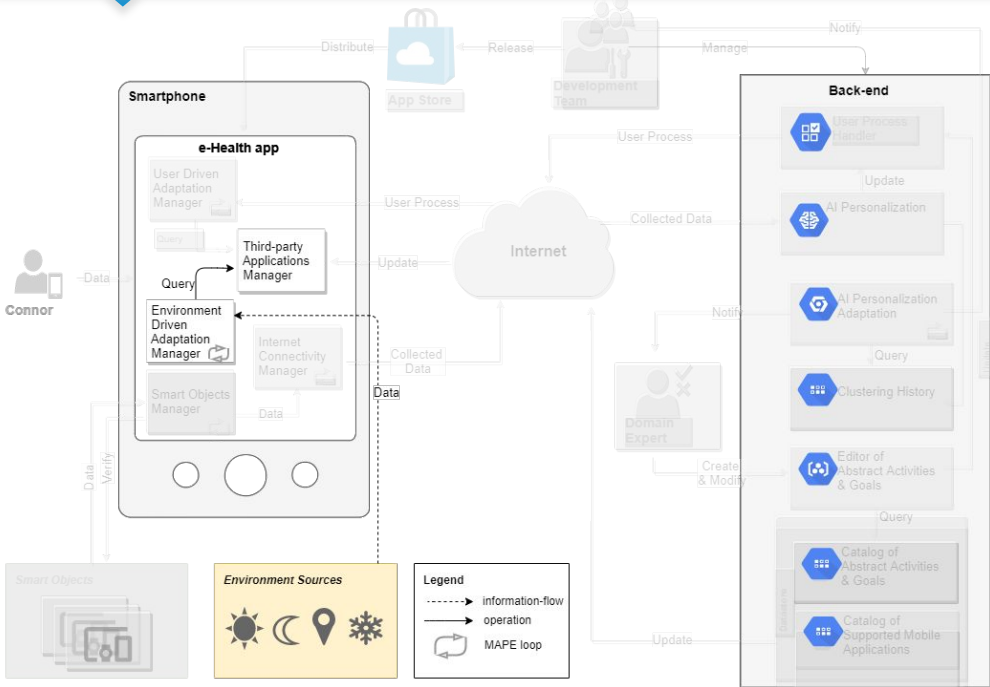


Cardio	None	None	None	Cardio	None	None
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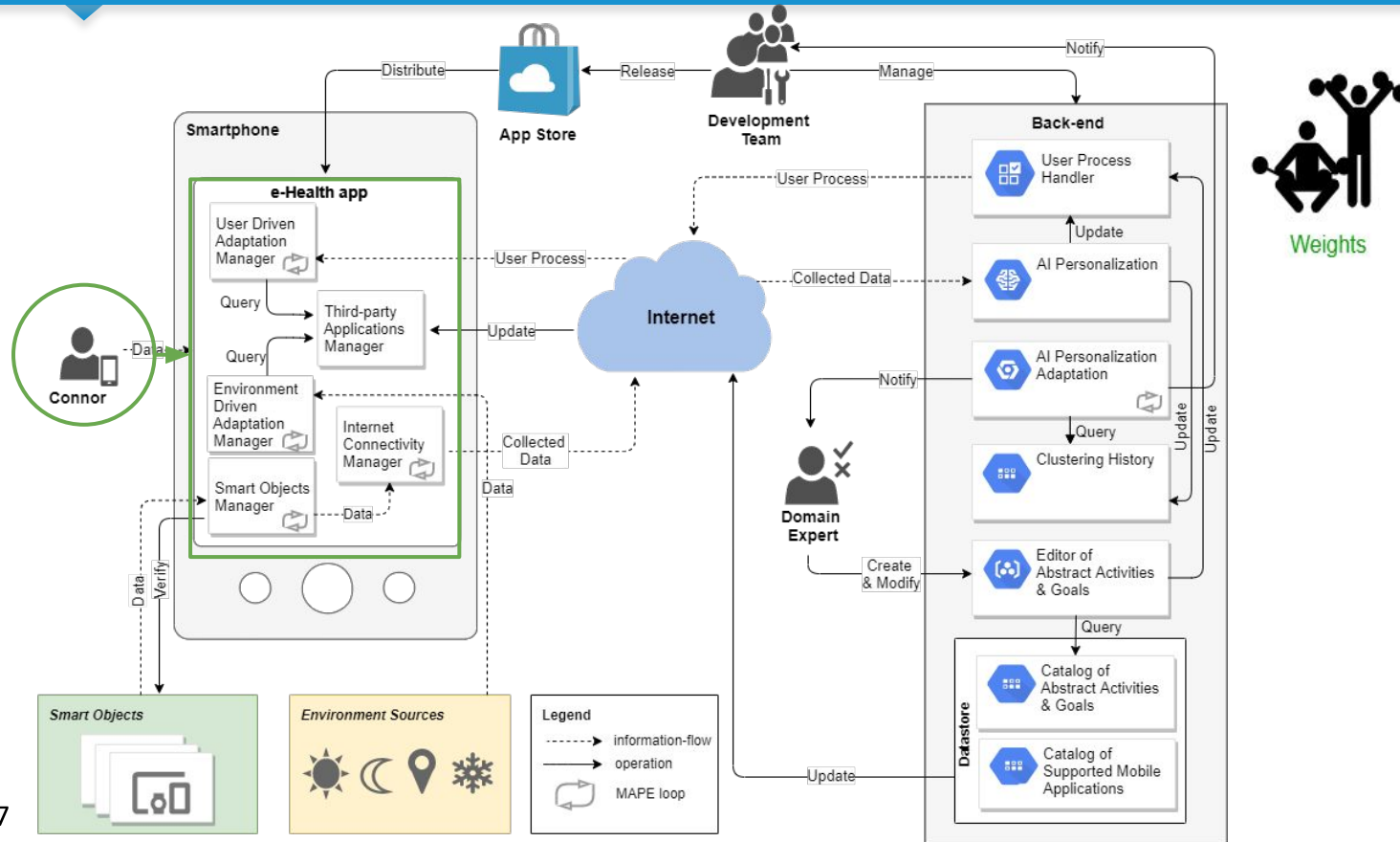


Running	None	None	None	Running	None	None
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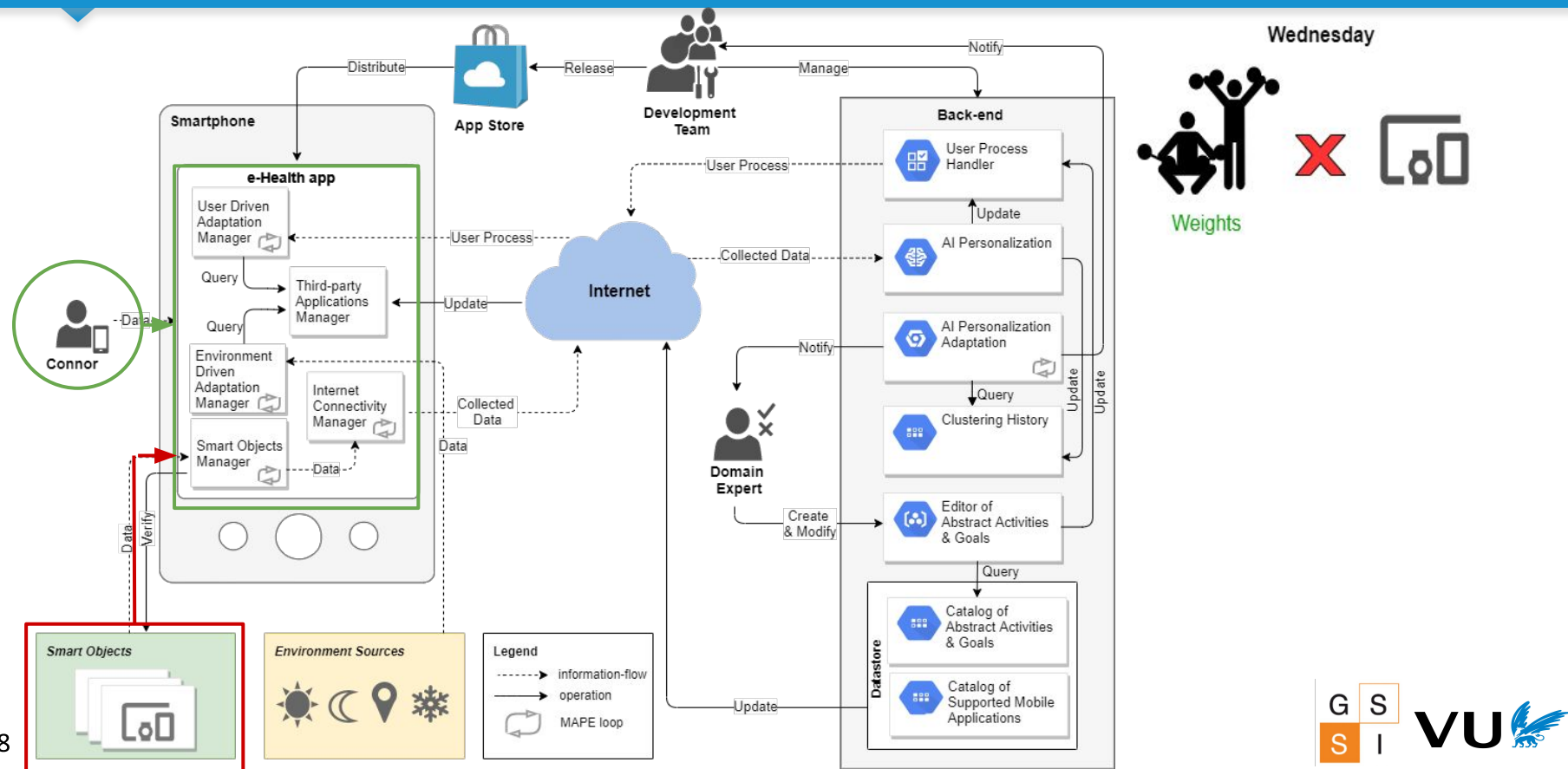
Environment Driven Adaptation Manager



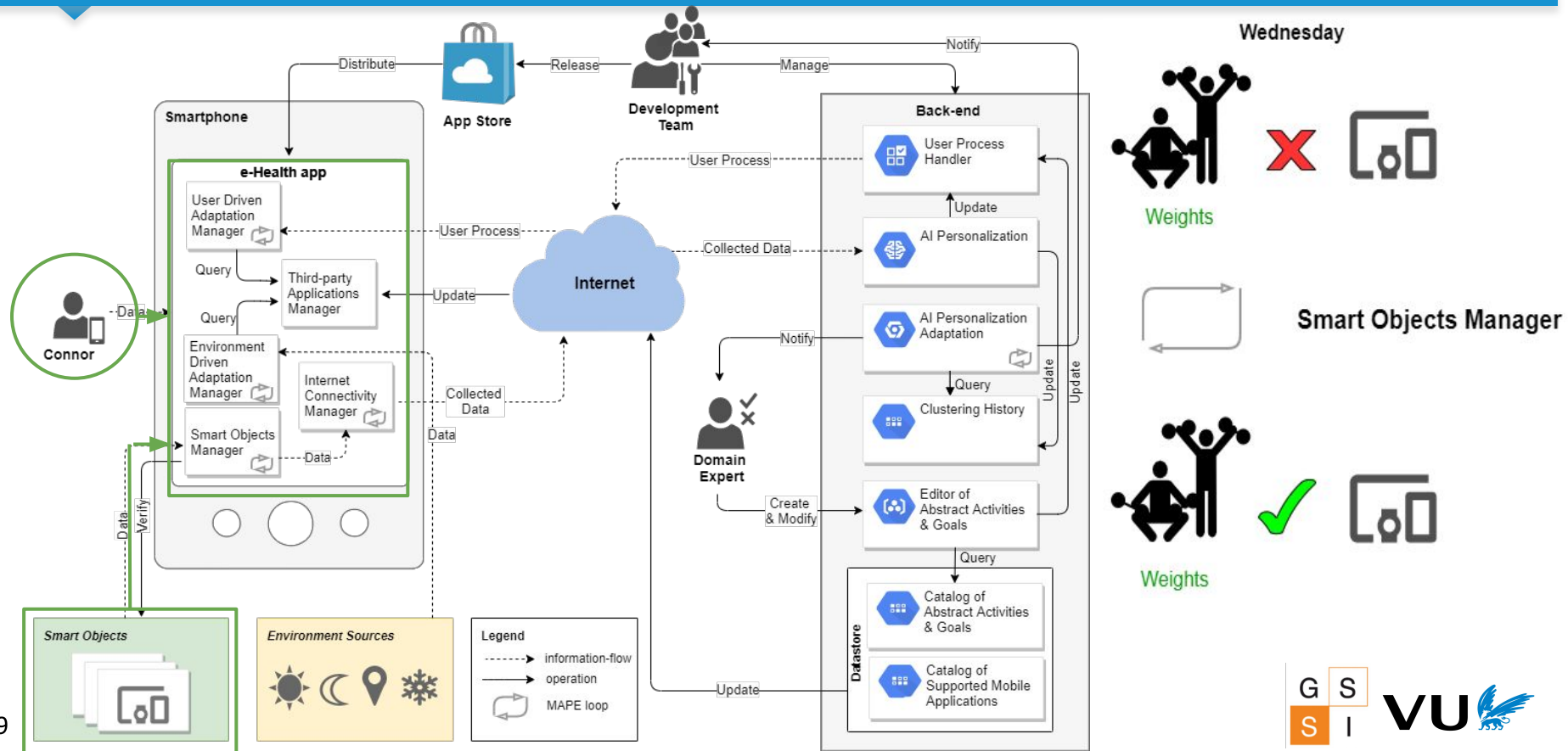
Example case



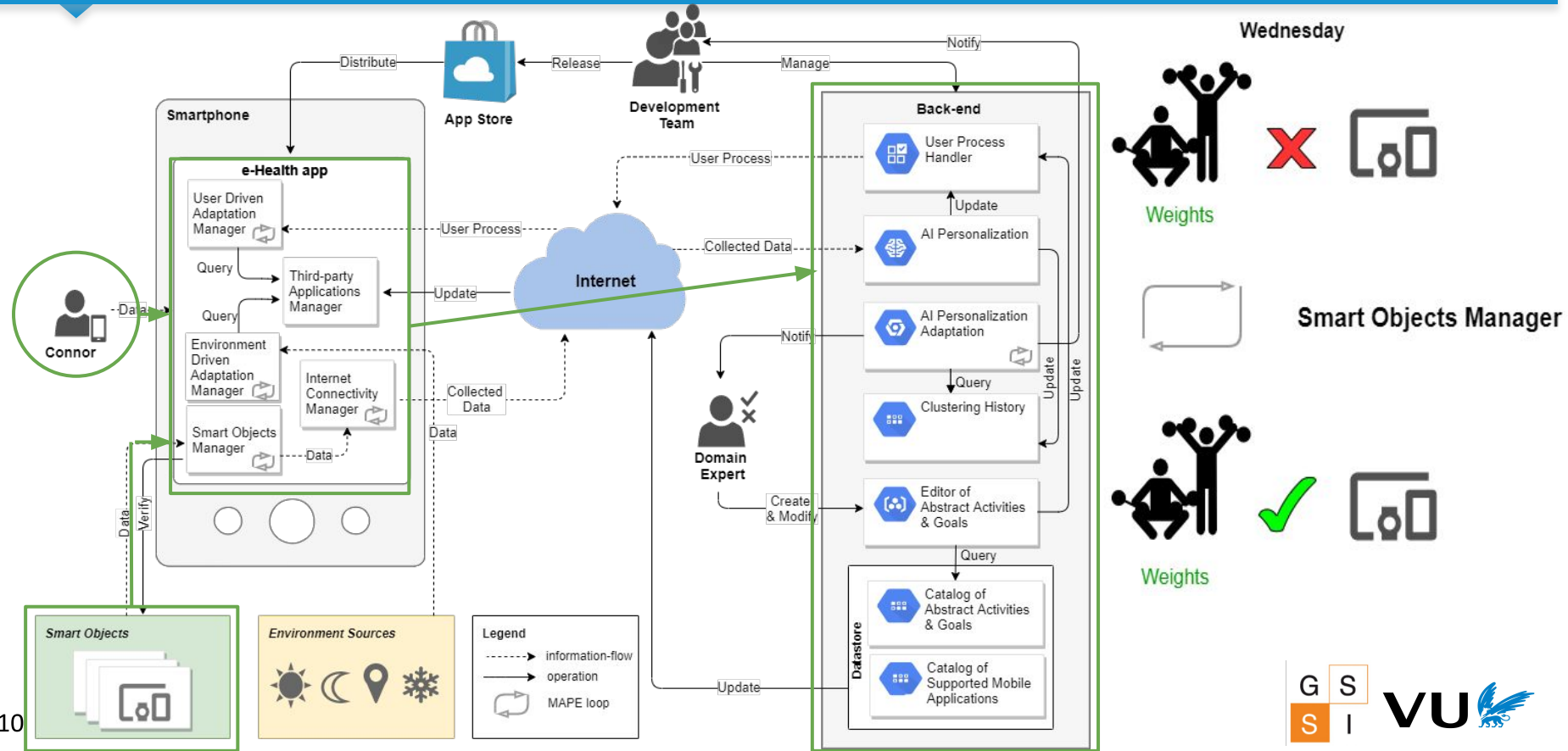
Example case



Example case



Example case



Future Work

- Defining a goal model
- Publishing the design methodology used and the viewpoint definition
- Having a scenario-based evaluation of the RA
- Implementing a prototype of the RA. Testing the real-world performance
- Test the prototype RA with real subjects

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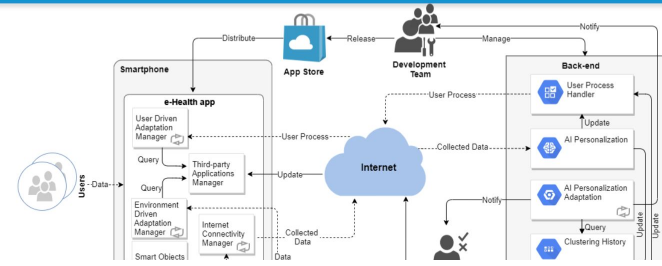
Thank you!

Why?

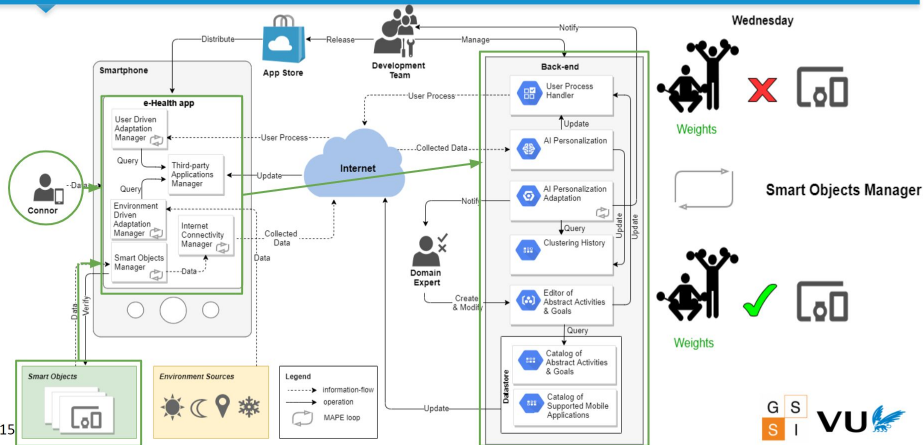
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