Major Software Components for Augmented Reality Systems

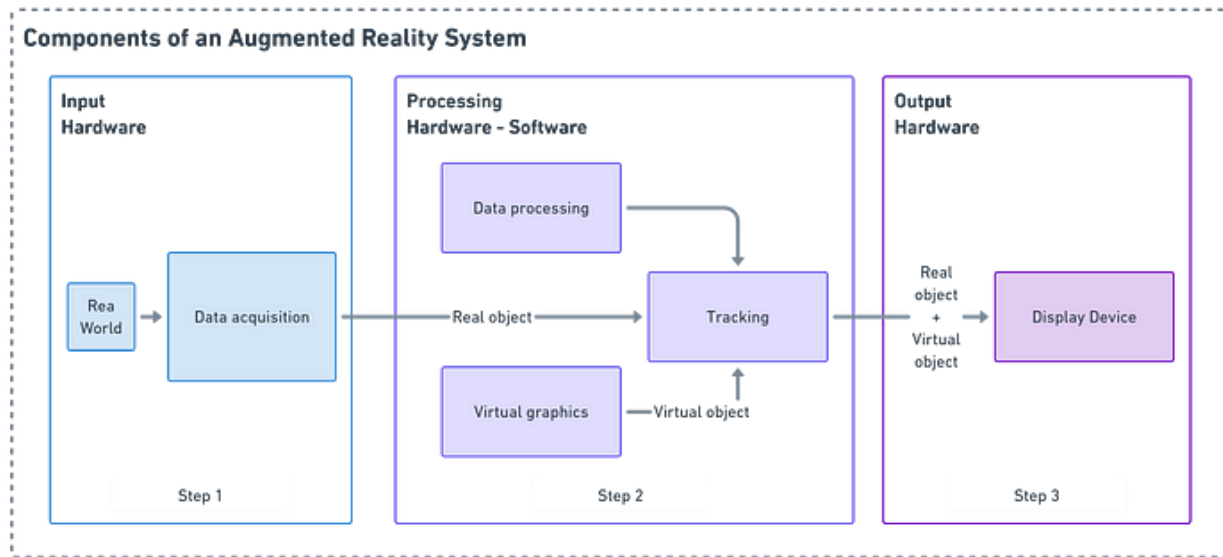**Components of an Augmented Reality System**

Hardware

The main characteristic of the hardware components is to **acquire** and **display** the data and information, and **process** it.

- **Input — Sensors:** Different types of sensors that respond to physical or chemical stimuli from the real environment and provide the necessary data for the development of the system.

- **Output — Display:** The devices for displaying the information can be divided into **wearable** and **non-wearable**. But it can also be classified into **optical**, **video,** and projection devices.

Software

The main characteristic of software components is to interpret the acquired data to transform and augmented it.

- **High-level:** Currently, several tools help in the development of applications, known as SDK (Software Development Kit), such as Vuforia, ARKit, ARCore, Wikitude, ARtoolKit, EasyAR, LayAR.

- **Low-level** consists of different areas, which may vary according to the application or the developer's needs, such as programming libraries, Computer vision, CG, Image processing, HCI.

AR Application

SOFTWARE COMPONENTS

Tracking	Android SDK	Rendering
Vuforia SDK		**Unity 3D**

Hardware
(Touch Screen Handheld Device)