

**Luminesense Mockup Guide**

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1. **Wearable Device** - This device is designed to be worn on the wrist like a watch. It contains the Intel Curie chip. The chip is designed specifically for wearables and it contains a 6-axis IMU (accelerometer and gyroscope), a low powered Bluetooth module. The device will also include a photodiode and battery to power the chip.
2. **Luminaires** - The luminaires will be IP enabled and will be able to send unique optical codes to the wearable using pulse width modulation. The codes will include their unique identifier. As the user interacts with the room (actively and passively), the Central Base will communicate with each luminaire over a local network via Photons.
3. **Central Base** - The central base is comprised of a Raspberry Pi, Particle Photon and a router. The photon receives, processes and aggregates information sent from the wearable. The pi is used as a local server to the users who do not want to use the cloud based server. The central base controls the luminaires by sending instructions over wifi via Photon.
4. **Cloud Server** - For the database, the cloud service (Amazon Web Services **®**) will be used to store user preferences, energy consumption data and system functionality results.
5. **Web Application** - Sleek interface designed to access, restore user preferences, and view the user’s energy savings over time.
6. **Router** - A router is used to provide a local network as well as connect the Luminesense system to the Internet through an Internet service provider.