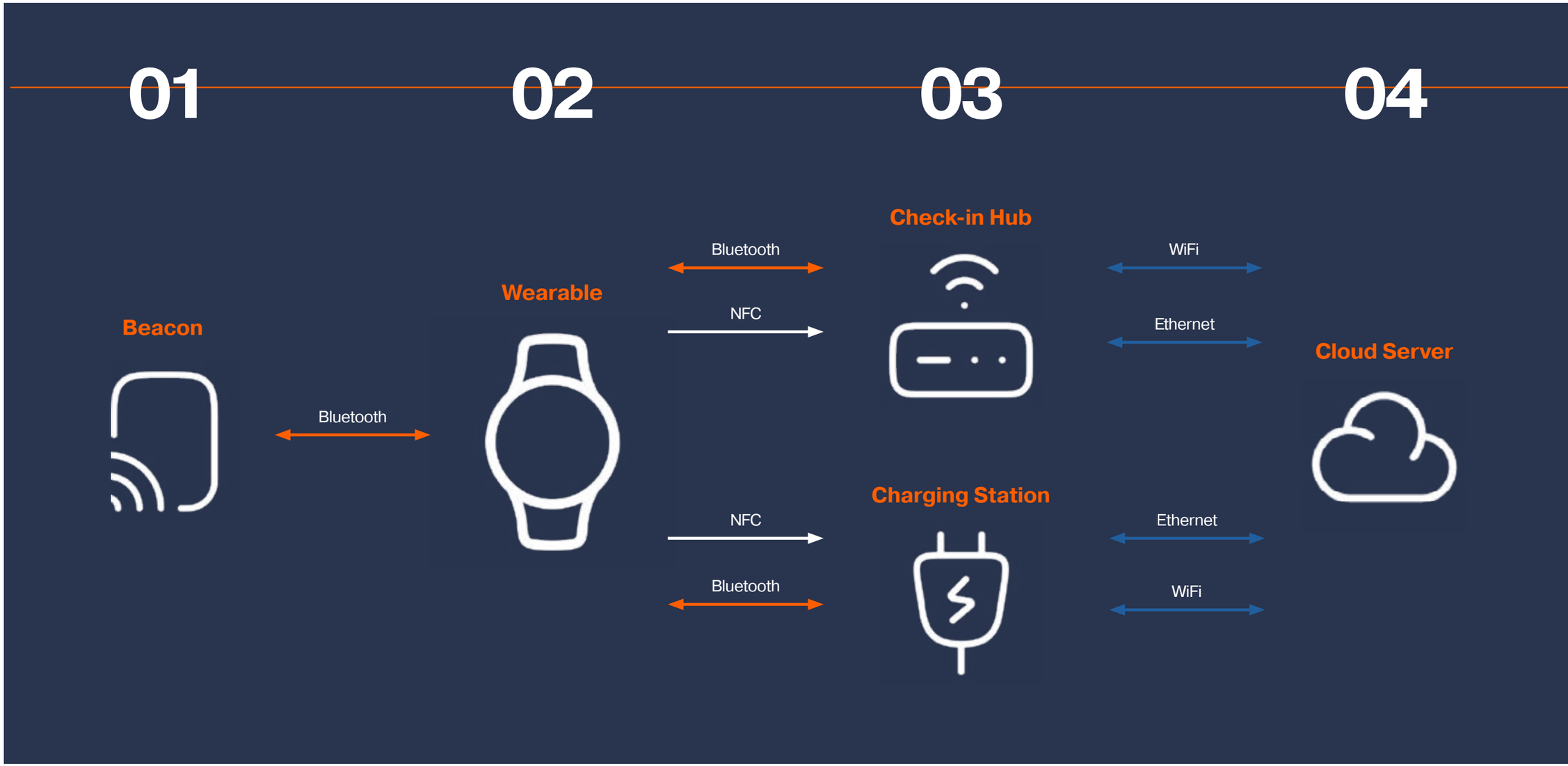
spacebands

TECHNICAL OVERVIEW

www.spacebands.com

SYSTEM ARCHITECTURE



WEARABLE DEVICE

DEVICE OVERVIEW

The spacebands wearable device is a wrist-worn device with built-in sensors that records exposure levels to hand arm vibration and loud noise and syncs them to the cloud when placed on charge.

The wearable will alert staff through haptic technology when they exceed an EAV or ELV. When this happens, the device will store this event data to send onto the spacebands cloud server when the wearable is placed on the spacebands charging dock.

FORM FACTOR

The wearable is a comfortable wrist-worn device like a watch. It is waterproof and robust and can work outdoors and indoors. The strap is adjustable and can be worn on the outside of coats.

The wearable alerts the user with real-time hazard prevention and then stores data until it can be shared with our servers.

POWER CONSUMPTION

Minimum: 1 full day battery life
Charge time: Less than 4 hours
Turn on is a 3-second hold on the touch button, and turn off is a 6-second hold on the touch button.

PRIVACY

Employee and business privacy is at the forefront of all development. All data will be anonymous as standard, unless the employer decides to assign specific devices to specific users.

Effectively, an employer can decide if they want to track safety on an individual basis. If not, their company can still benefit from the company-wide dataset.

CONNECTIVITY

The wearable device does not have internet capabilities. It connects to spacebands' servers via the Charging Station.

DISPLAY

The wearable display has been designed so that it doesn't distract the user, but the display shows the following:

- Which hazard is occurring
- Battery level
- Date and time
- There is a button on the wearable as a number of features require interaction from the user, for example, the PPE prompts ask the user if they are wearing PPE, and the lone worker system confirms that the user is activating lone working.

The wearable will display battery percentage when on the charge station and will also indicate when it is transferring data to the cloud whilst on charge.

CHARGING STATION

DEVICE OVERVIEW

The charging station is a multi-port charger to charge up to 15 wearables at one time. The charging station is also be a means of data transfer.

All data that is held on wearables is sent to the spacebands analytics dashboard when it is plugged into the charging station.

The charging station is able to identify duplicate pieces of data to ensure only the most recent data is uploaded to the cloud from the last time of data transfer.

CONNECTIVITY

The charging station will have both WiFi and Bluetooth connectivity. Data transfer happens via Bluetooth when a wearable is placed on the charging station.

The data is sent to the spacebands analytics platform via a dongle within the charging station that provides internet connectivity.

DISPLAY

The charging station displays when wearables are charging and indicates when they are fully charged.

BEACON

DEVICE OVERVIEW

The Beacon is a device that is placed on a wall of a building or on the surface of a machine or vehicle.

Beacons are used to give proximity alerts to staff when they are close to moving machinery, in restricted areas or areas where they need to put on PPE. The Beacon only emits a signal and doesn't receive any signals.

FORM FACTOR

Beacons are waterproof and robust. They work outdoors and indoors.

The attachment mechanism is adjustable so that it can be moved between areas, but it is sturdy and secure when it has been placed somewhere.

The Beacon works effortlessly in the background once turned on.

POWER CONSUMPTION

Beacons have a very long battery life without the need to charge often. The Beacon will signal when it is running low on battery to prompt users to charge it.

CONNECTIVITY

The Beacon constantly sends out a Bluetooth signal which is detected by the wearable device, alerting the user when they're in Bluetooth reach of the Beacon.

When the Beacon signals to the wearables, the wearable stores this data until it can be shared to the analytics dashboard.

spacebands

GET IN TOUCH

SUPPORT@SPACEBANDS.COM

BOOK A DEMO

SPACEBANDS.COM