

Hello Upwork candidate

I have a small software company in Canada, we are working on idea that involves hardware development and Firmware integration for a manufacturing sector. Let me share the idea that I am working on.

In Japan and maybe Vietnam there are a lot of vending machines, this idea was taken from that. I am looking at building a smart padlock - and maybe door lock with a keypad. See images below.. Right now I am negotiating with Chinese manufacturers, the following:

Option 1: API/SDK's that connect to the hardware and software of the device. Our clients will use our interface that allows them to manage the lock. The client can automate different pass codes based on events. For example, user purchases an item is given a 5 digit code, user opens pad lock and closes the gate after usage. Once the lock is opened the same 5 digit code is removed from memory. 2nd example, client sends 5 digit code to a user and the 5 digit code expires after 4 hours. Pass code is set to an employee, employee leaves job the pass code is purged. As you can see there are many examples of how the pad lock can be employed.

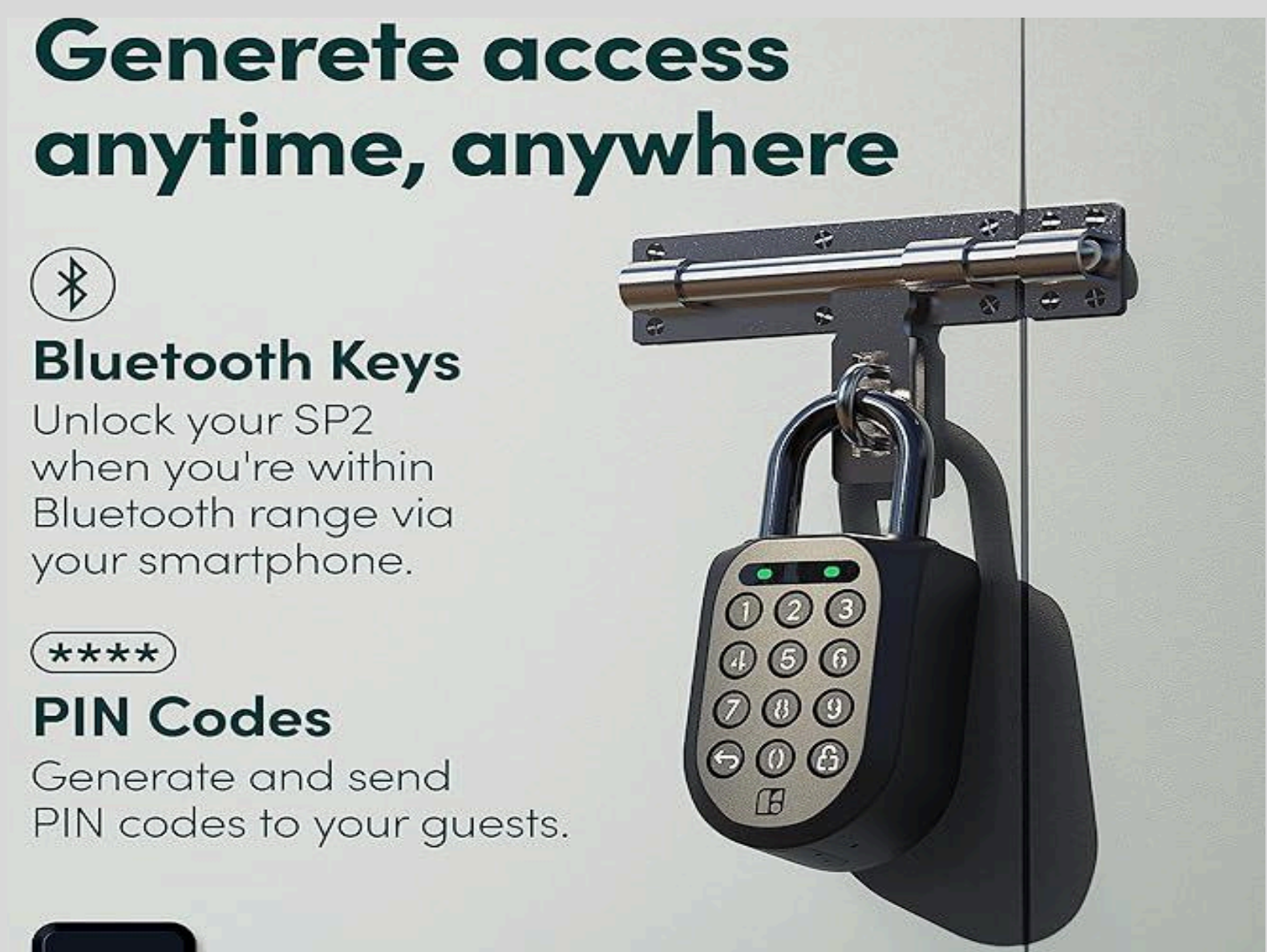
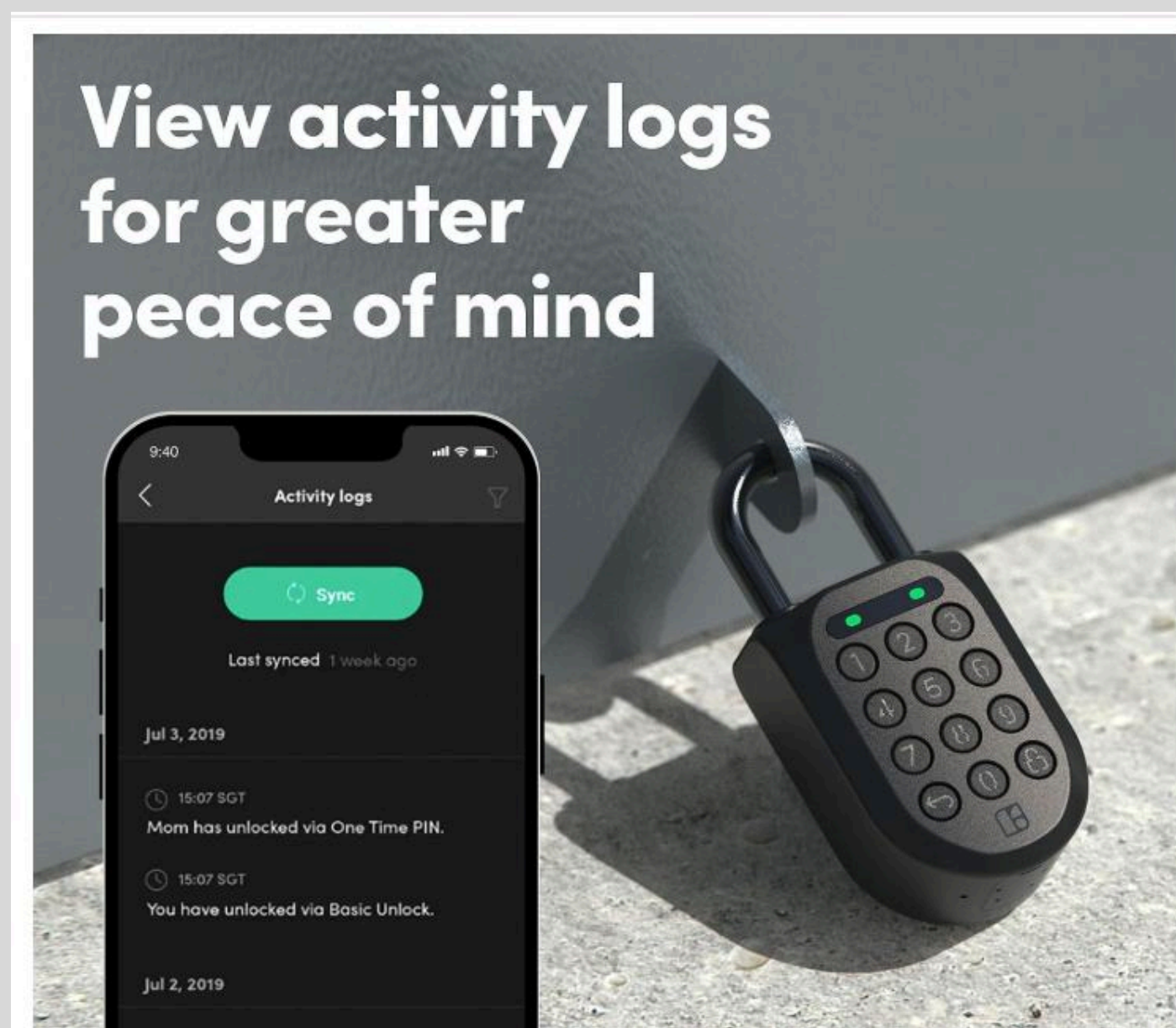
Option 2: We use the components of the padlock with our own firmware. I guess we flash our firmware onto the MCU.

Option 3: We build our PCB and firmware. Not sure if we source the ongoing construction to the Chinese manufacturer.

Connectivity of the padlock: BLE, GSM 4&5 G, LoRa, maybe GPS

Size of the padlock: 7.00 cm tall x 5.00 cm wide x 4 cm thick

Needs a battery and possible recharging port



Let us assume I negotiate Option #2 or 3. Are you able to build out the lock. Do you have the necessary equipment for testing. Battery life is going to be critical. The lock needs to work in harsh environments, rain, snow, cold weather - 40, hot weather + 40, we might need to charge the lock with some type of external source.. .

This is one idea of many that I am exploring. Have you ever thought of moving to Canada?