

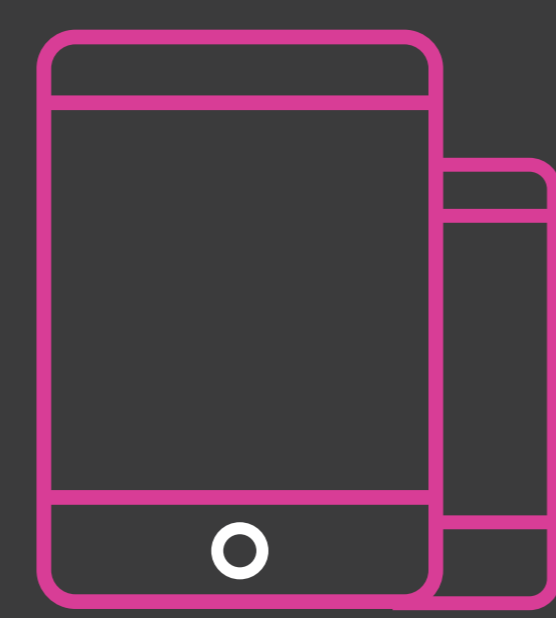
WIRELESS POWER TECHNOLOGIES

WHY DO WE NEED WIRELESS POWER?

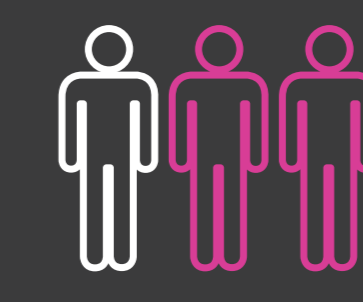
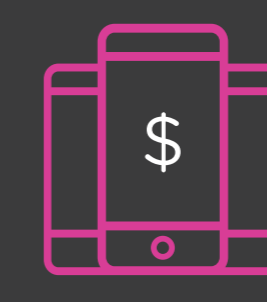
Smartphones

- Billions of smartphones are in use
- Battery anxiety is a major concern
- Wireless charging can continuously top off the battery

Sources: Gartner, Statista, Wi-Charge



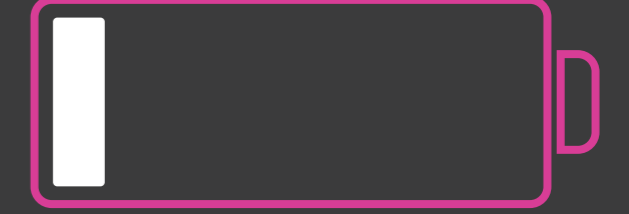
1.5B SMARTPHONES SOLD IN 2017



2/3 OF THE WORLD ARE USING MOBILE DEVICES

68%

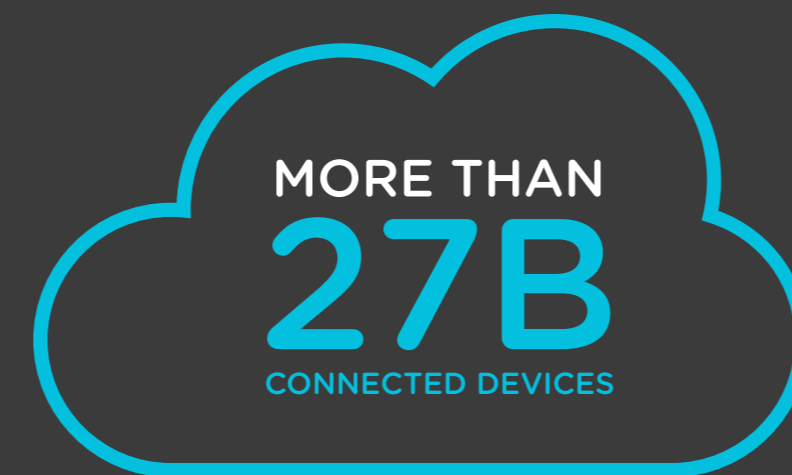
OF USERS ARE CONCERNED THAT THEIR PHONE BATTERY WILL RUN OUT



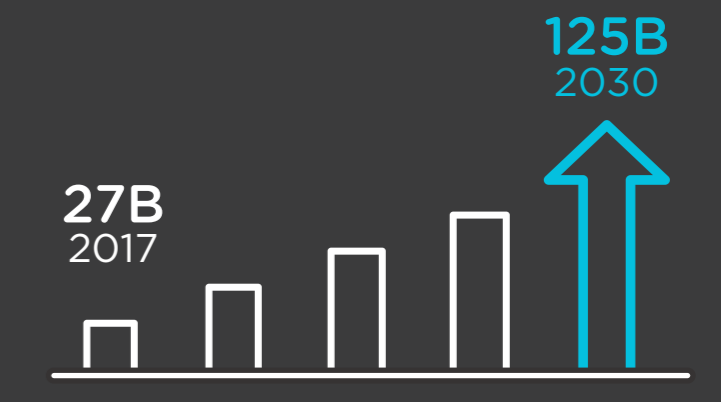
IoT and Smart Devices

- Batteries provide limited power and need to be replaced periodically
- Wires are expensive to install and difficult to maintain
- Wireless charging provides convenience as well as opportunity to add new capabilities

Sources: IHS Markit



12% ANNUAL GROWTH IN IOT DEVICES



CONSUMER 5.2B DEVICES

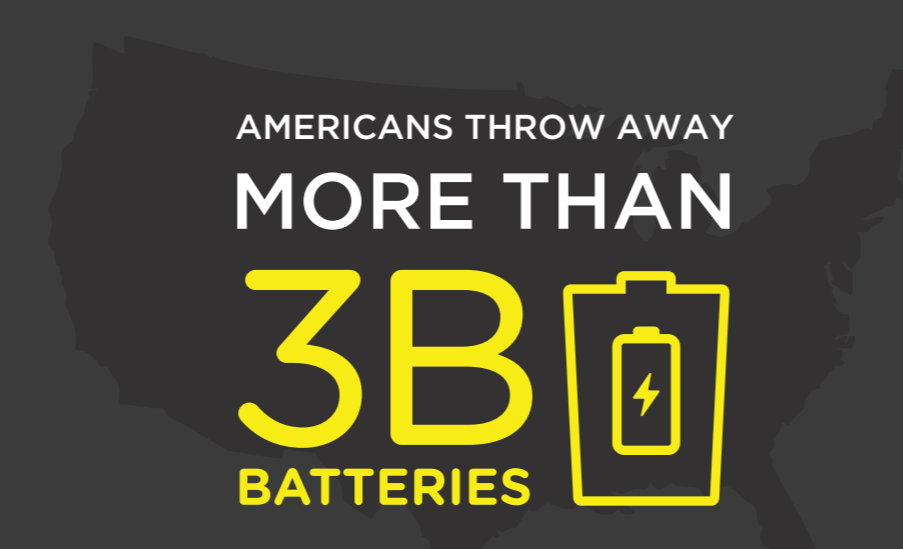
INDUSTRY 4.3B DEVICES

COMMUNICATION 14.6B DEVICES

Alternative to Toxic Batteries

- Batteries provide portability but limited power
- Discarded batteries create toxic waste in landfills
- Wireless power can reduce battery usage and waste

Sources: US Environmental Protection Agency



=

180K TONS OF BATTERIES

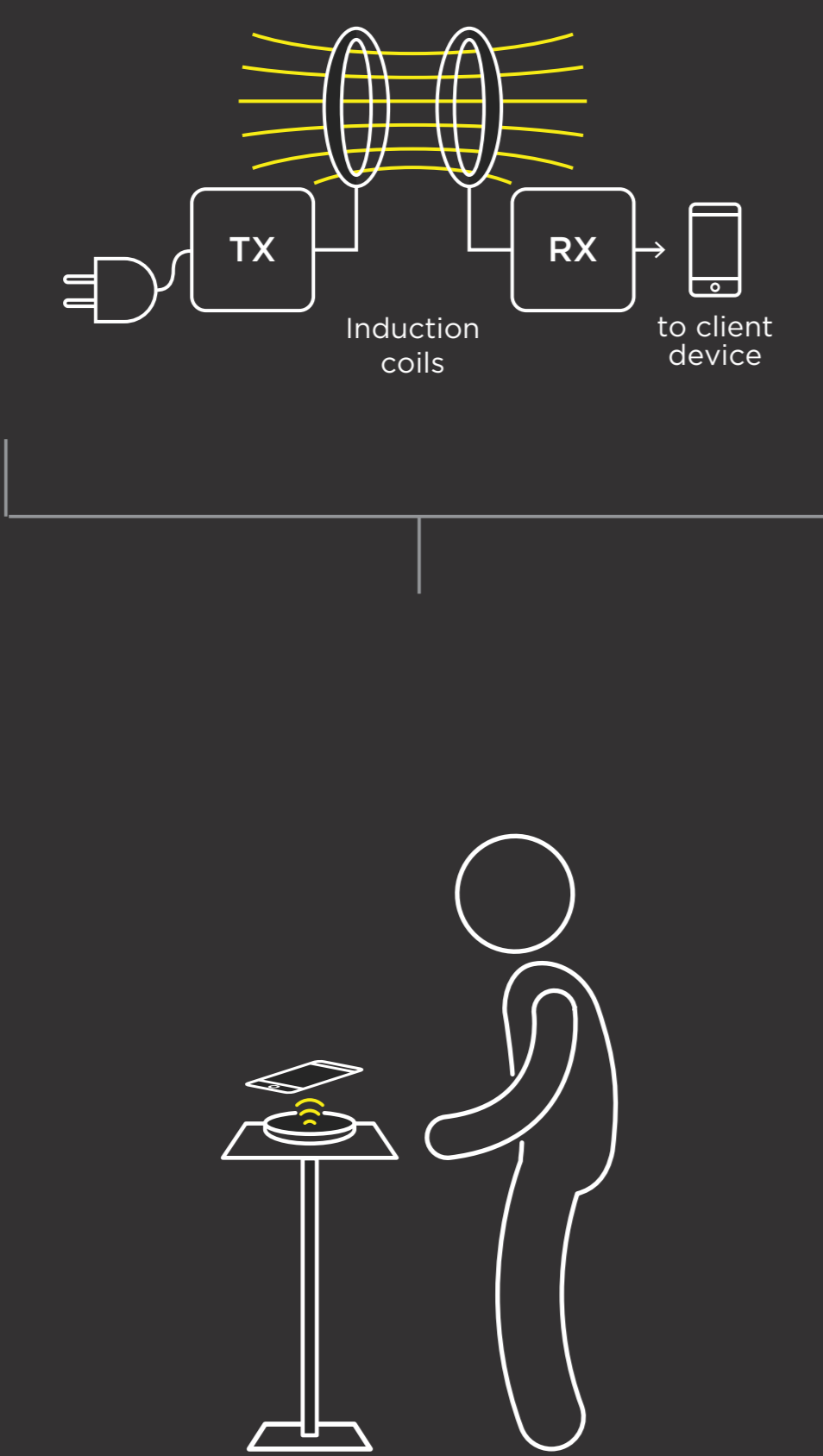
}

86K SINGLE-USE ALKALINE TONS OF BATTERIES

HOW DOES IT WORK?

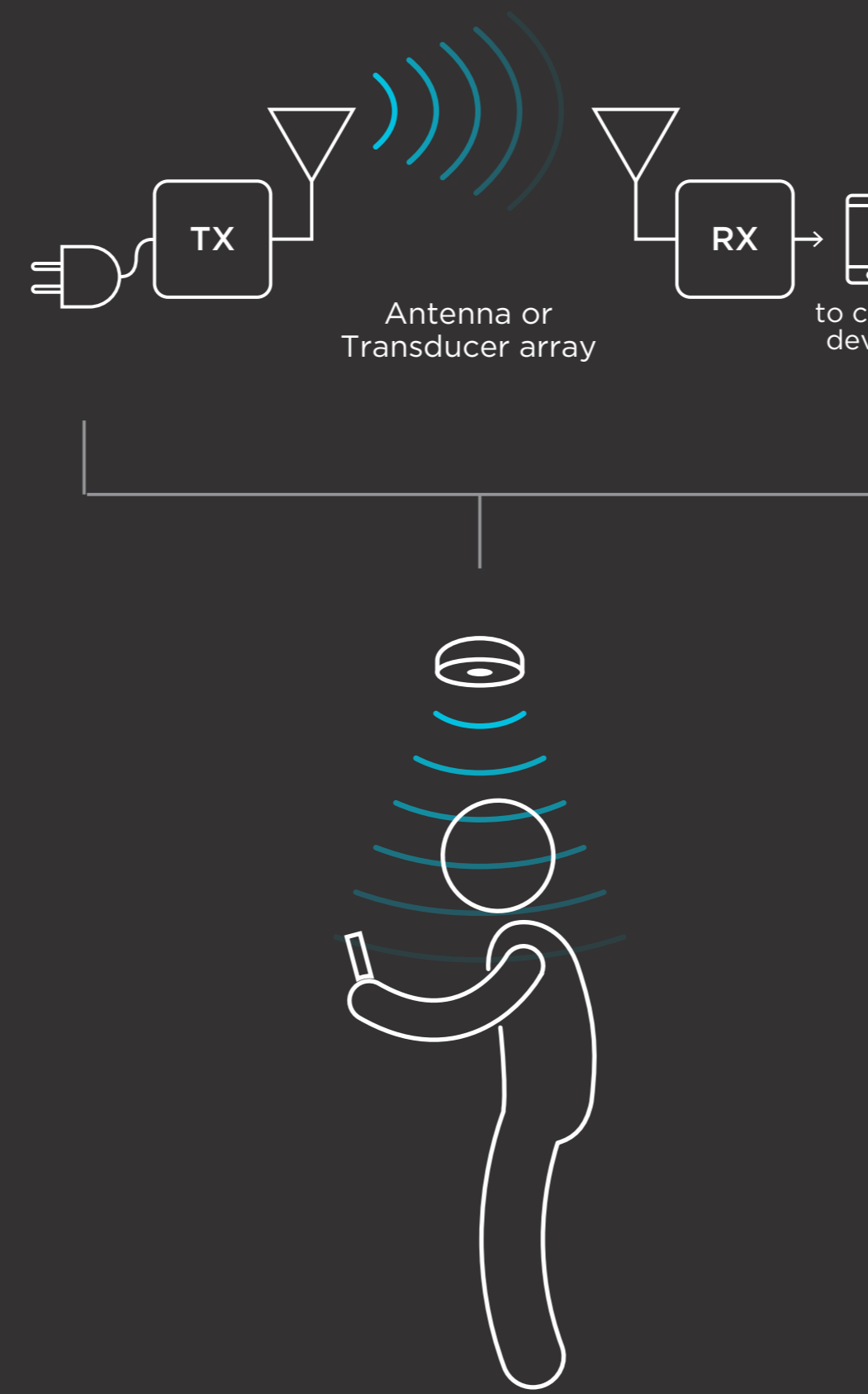
APPROACHES TO WIRELESS POWER TRANSFER

INDUCTIVE SOLUTIONS



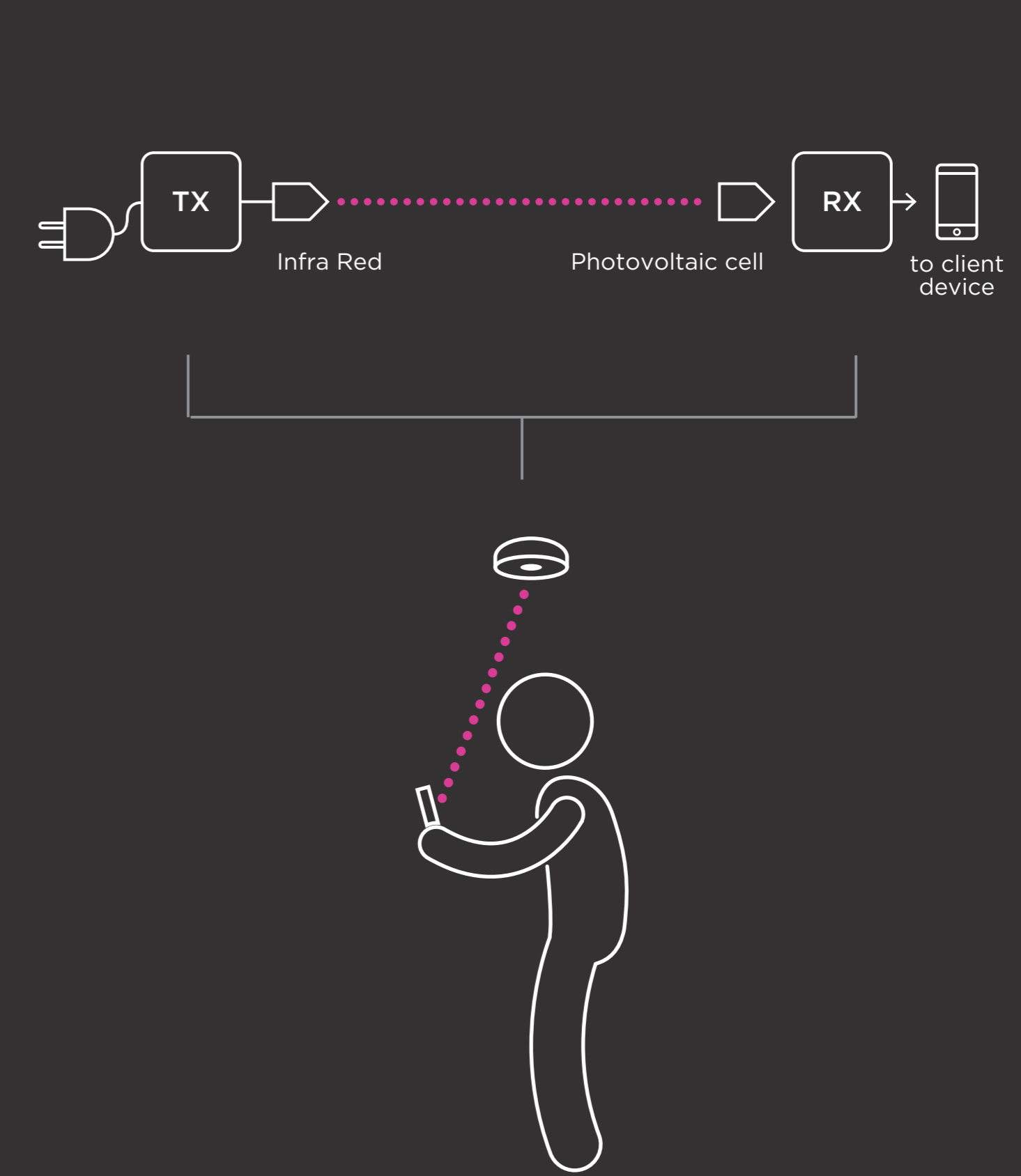
- ✓ Highest power
- ✓ Highest efficiency
- ✗ Very short distance

RF AND ACOUSTIC SOLUTIONS



- ✗ Low power
- ✗ Low efficiency
- ✗ Medium distance

INFRARED SOLUTIONS



- ✓ High power
- ✓ High efficiency
- ✓ Long distance

COMPARING POWER DELIVERY AND USER EXPERIENCE

Users would like to be able to charge any device anywhere. We can analyze the power requirements of various devices - computer peripherals, smart home devices, smartphones and beyond. Next, we look at the charging distance: on a pad, desk, in a room or outdoors. Only infrared wireless charging can meet the key requirements, including charging a phone anywhere in a room.

