"Vinnie": A Solar-powered Talking Clothing Donation Bank

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The site of overflowing charity clothing bins has been a daily concern to me. As well as being an eye sore. These once-loved donated items are being left to be damaged by the elements. Through my research, which included attending the 2018 National Association of Charitable Recycling Organisations (NACRO) conference, I was shocked to find it costs Australian charities $13 million to dispose of 60% of the 1M tons of donations which are poor quality. This is a concern not just economically, but environmentally, considering 85% of textiles go to landfill. After investigating all aspects of supply chain, I identified a disconnect between user experience and responsible donation, learning the bins had not been innovated since 1937. My experimentation with design and technology aimed to improve quality of donations, logistics impacting illegal dumping and reduce costs to charities through public education and engagement. Vinnie, a solar-powered talking clothing donation bank, addresses the issue of user behaviour by changing the shape of the collection point along with sorting at the source with the Rags and Riches banks. It humanises the donation experience through facial graphics and an audio-chute educational message. Technology empowers user engagement with QR codes linking to mobile-first websites with information on quality and recycling. Infrared photodetectors identify capacity transmitting measurement by wireless communication to the charity's operational platform for collection efficiency and to prevent illegal dumping. Even the names, "Vinnie" and "clothing bank", change perception about how we view and invest in the work of charities.

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