

Customer story

Yoto Player: The development possibilities of Raspberry Pi enabled an appealing, child-focused audio player to take shape

Yoto Player provides a great experience that children own and control, without introducing more screen time. Thanks to Raspberry Pi and the support and expertise of our approved reseller, it's a UK success story.

Raspberry Pi solution	Raspberry Pi Zero W
Size of business	SME
Industry	Consumer audio

Ben Drury and his Yoto co-founder Filip Denker both have backgrounds in digital music services. Just as they were looking to set up a new venture, both were becoming parents for the first time. This led them to consider how young children interact with technology, and they decided to focus on a product that allowed kids to access technology without using a screen or needing a parent to operate it for them.

Yoto benefited from
their strong relationship
with a Raspberry Pi
Approved Reseller

The challenge

"Audio is better than screen time for inspiring creativity and imagination," Drury says of the company's approach. With children at Montessori nurseries, the idea of a physical interaction-based learning environment came about. But digital entertainment for children seemed to be predominantly based around phones and tablets, with young children increasingly spending time on platforms such as YouTube and on dedicated apps for kids. Drury and Denker's key idea was to develop an audio entertainment product that children could use without the need for yet more screen time.



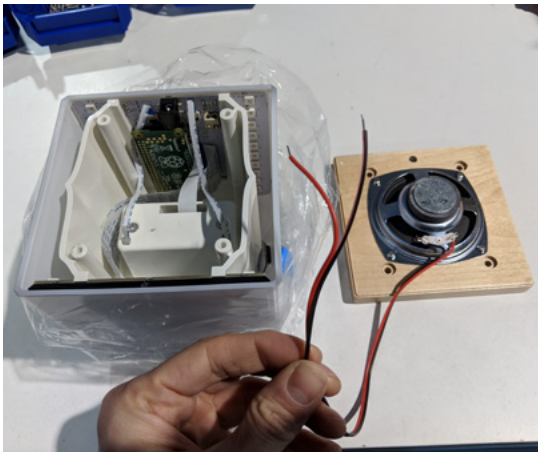
The solution

“Yoto Player is designed to be a physical way that kids can be in control of their own listening experience using physical NFC cards,” explains Drury. “Kids enjoy collecting and ordering cards – so it seemed an obvious use of them for storytelling and podcasts.”

At the beginning, Drury had used Raspberry Pi for monitors and servers but not for standalone connected devices. He began using the Pimoroni 8x8-pixel Unicorn HAT (later a 16x16-pixel one) and, based around this, hashed out a product form in a makerspace workshop. They also “wrote loads of code to run on Raspberry Pi and server-side and also the Yoto app for iOS and Android.”

R&D and PCB engineering and design for the first product, as well as assembly, were all done in the UK. The first product iteration was based around Raspberry Pi 2, switching over to Pi Zero and eventually Raspberry Pi Zero W when it launched – a “huge thing” for Yoto as it meant they could build a wireless version of their storytelling player. “We were concerned by the availability of the Pi Zero W boards as they were quite new at the time, but we took the risk and we were able to secure supply,” says Ben.

Raspberry Pi was “absolutely crucial” to the development of Yoto Player



Why Raspberry Pi?

Drury is a long-time enthusiast of British computing and engineering, with fond memories of his BBC Micro, Acorn, and Archimedes computers. He was intrigued from the outset about Raspberry Pi and was an early investor in Pimoroni, a longstanding Raspberry Pi Approved Reseller which later became Yoto’s development partner. This was an inspired move, adding hardware know-how to Denker and Drury’s expertise in software and user interfaces.

December 2017 saw Yoto’s first Kickstarter launch, with shipping of their initial run of 750 units in late 2018. A few issues with EMF leakage meant some design tweaks were needed and Yoto were able to benefit from their strong, well established relationship with Pimoroni, calling again on their technical expertise.

The results

The first Yoto Player met with success, launching with a starter pack of stories including ones by Roald Dahl as well as blank cards for kids to record their own stories onto the player’s 8GB SD card. Capturing the imagination of Roald Dahl’s grandson early on – he’s now a Yoto board member – cemented interest in the device’s concept, and a whole slew of children’s publishers followed. Julia Donaldson’s beloved Gruffalo story, as well as some of Enid Blyton’s extensive bibliography, are among the most famous.

There are also phonics cards and 100-word visual cue cards for learning vocabulary from five other languages. With multilingual children, Ben and Filip are strong advocates for early language learning. They see Yoto Player as the sort of device that can help children who don’t have such ready access to a wide vocabulary at home to begin acquiring a broader verbal language base.

Raspberry Pi was “absolutely crucial” to the development of Yoto Player, says Drury. “Without Raspberry Pi we wouldn’t have been able to build it in the first place.”

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