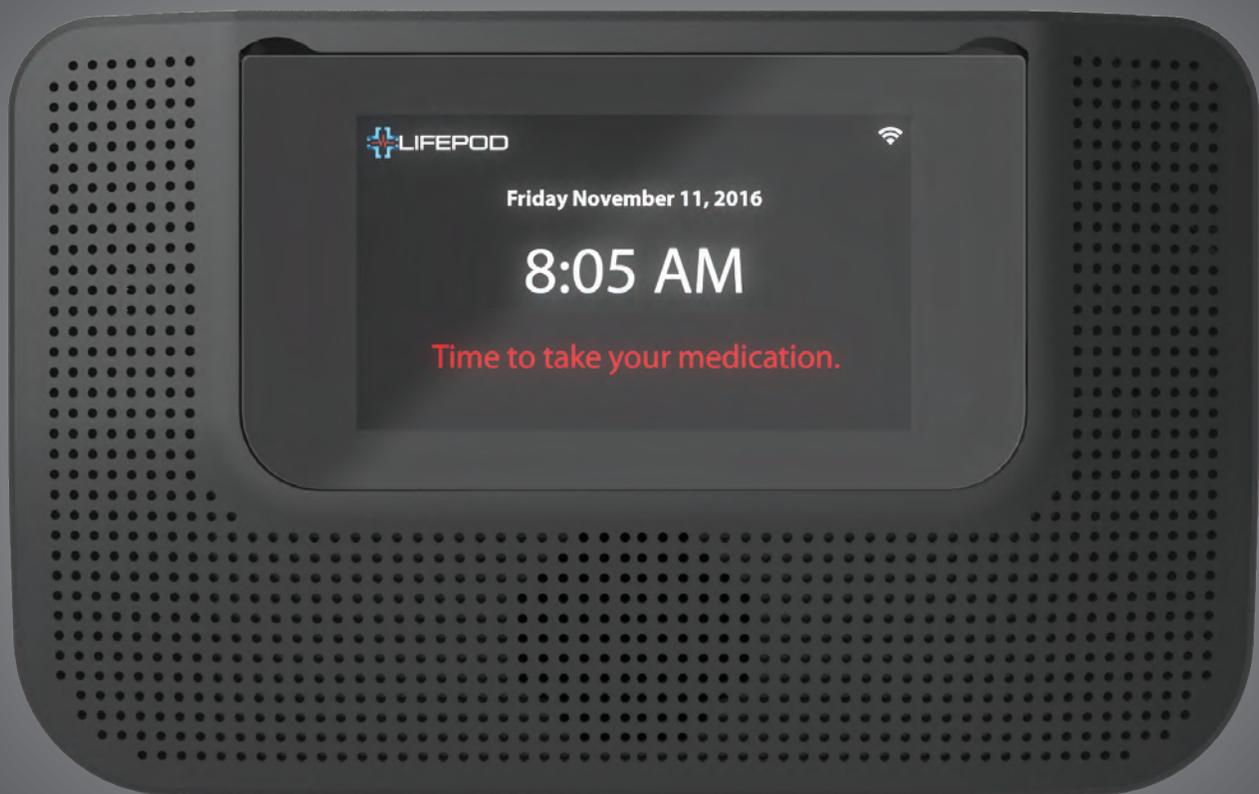


CASE STUDY

For Lifepod the most natural, intuitive user interface was the human voice.





Voice-activated products, such as Amazon's Echo, are taking the world by storm, and voice control is predicted to be the #1 trend in Internet of Things (IoT) products in 2017. According to the Voice Report, the number of voice-first devices shipped will grow from 1.7 million in 2015 to 24.5 million in 2017.

Dennis Fountaine, CEO of Transcendent Technologies and a lifelong entrepreneur, recognized early the disruptive product opportunities that are made possible with voice controlled devices. He embarked on the development of several products, including a home healthcare device called LifePod, the world's first voice-controlled virtual caregiver, companion and digital assistant.

amazon echo



“Alexa!, Turn off bedroom lights and play my bedtime playlist”

A connected virtual caregiver that can save lives and enable seniors to stay in their homes longer.

Dennis wanted to solve the many problems that those at home with medical needs have, including: medication and appointment reminders, hands-free emergency 911, help with daily routines, home automation, and companionship. He evaluated off-the-shelf products like the Amazon Echo, powered by the Alexa Voice Service (AVS) platform and found they had two major flaws for his intended application: they required specific “Wake Words” to initiate an interaction, and they required that elderly users memorize dozens, or hundreds, of voice commands to execute all the desired functions (called Alexa Skills).

Dennis saw the need for a new product that would add a layer of intelligence and automation to the available voice services. He envisioned a system that could:

- Execute commands automatically at a pre-programmed time or from a single voice command: turn on the lights, open the blinds, say the time of day, date, weather, start playing music.
- Run several customizable daily routines that include complex sequences of commands: in the morning, play music, open the blinds, turn on the lights.
- Periodically check-in at specified times to ensure the user is doing ok.
- Provide reminders at specific times that meet the user’s personal needs, like taking their pills, brushing their teeth, or special events like a doctor’s appointment.
- Give a sense of companionship by triggering a randomized set of actions that Alexa already supports such as reading an audiobook, saying the word of the day, asking trivia questions, or telling them a fun fact.
- Send alerts and status reports to caregivers or family members.



A fully-functional prototype in record time.

Dennis knew he had a limited window of opportunity. Embracing a lean process, he wanted a functional prototype he could use to prove out his design concept and validate the technology behind it as quickly as possible. The search for the right product design partner led him to Design 1st. The result was a fully-functional prototype within six weeks.

“Advanced, voice-controlled, Internet-connected products incorporate many technical elements and their development requires a very broad range of expertise,” explains Dennis. “Coordinating all of those moving parts can quickly become a nightmare, but Design 1st brings it all together by having a tight in-house team of industrial designers; mechanical, electrical, and electronics engineers; prototyping specialists, production experts, and more. They also work closely with Macadamian for application and cloud software development. It’s a very nimble, effective approach, and that makes my life much easier.”

Dennis’ company is based in Silicon Valley, so he often gets asked why he partnered with Canadian-based Design 1st rather than using one of the many experienced product design firms in California. “I have worked with several California-based companies in the past and, frankly, Design 1st has more expertise and experience than most, after all, they’ve been successfully developing hardware-based products for 25 years. They also give me much more responsive, one-on-one service, and their cost structure is lower, so I get better value for my money.”

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On the very fast turnaround time for the project, Dennis adds: “I have worked with many designers and engineers over the years who over-promised and under-delivered. Design 1st is the first who did what they said they would do and actually delivered ahead of schedule. They are extremely reliable and efficient. It has been a wonderful experience working with them.”

Dennis has many ideas and products in mind, so he was looking for a long term relationship with a truly collaborative and responsive partner. “Experience has taught me that in order for a project to be successful, I must gel with the personalities involved and the team has to be very cohesive. Design 1st won me over the first time I met them. Unlike other firms I have tried to deal with, Design 1st got it right away and required no hand-holding.”

Moving quickly to market.

The success of the LifePod functional prototype provided strong validation of the design and technology. It also generated considerable market interest, and Dennis is moving the design forward into pre-production - with Design 1st at his side.

Website: <https://www.lifepodnet.com/>

About Design 1st

Design 1st is one of the largest, most experienced product design firms in Canada, with over 500 projects, 18 years, and 130 patents under its belt. Their industrial design, engineering, electronics, software, and manufacturing setup experts work as a cohesive team to transform ideas into winning products.



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- Dennis Fontaine, CEO of Transcendent Technologies