

“I was sure that Fujitsu’s RMS would further enhance the value of our solutions. I also thought that if we were armed with Fujitsu’s technological know-how, we would be able to globally expand our business.”

Daryl Arnold
Founder and Chairman
ConnectedLife



ConnectedLife partners with Fujitsu to integrate Fujitsu UBIQUITOUSWARE Resident Monitoring Solution into a cloud-connected eldercare platform.

At a glance

Country: Singapore
Industry: Healthcare
Founded: 2013
Website: connectedlife.io

Challenge

A growing number of elderly people live alone and need support. ConnectedLife and Fujitsu wanted to provide privacy-oriented wellness and health monitoring services to improve the quality of care delivered to older adults.

Solution

Fujitsu’s powerful and comprehensive Resident Monitoring Solution (RMS) has been incorporated into ConnectedLife’s sleep wellness and bedroom safety module to enhance its intelligent independent living service.

Benefit

- Detecting unusual events through sound, and alerting family and caregivers in real-time
- Monitoring older adults while ensuring privacy, utilizing Fujitsu’s proprietary sound analysis technology, which does not record conversations
- Easy to use, enabling family and caregivers to remotely view status in real-time, online or from a mobile device

Customer

Headquartered in Singapore, ConnectedLife is a wellness and healthcare company that has developed unique technology and applications for the Internet of Things to address the needs of a fast-growing, global, aging population. It has developed advanced solutions for this aging population in relation to independent living, the management of chronic illnesses, and supplementary care to cope with orthopaedic symptoms and Parkinson's disease.

Products and Services

■ FUJITSU IoT Solution UBIQUITOUSWARE Resident Monitoring Solution

Caring for an aging society

One-third of people aged 65 and over in Singapore live alone. With a rising number of older adults in society, there is therefore an increasing demand for new services that support independent living while also delivering quality care. At the same time, chronic illness incidents are growing, further straining the health and home care industry which is already facing issues such as rising costs and manpower shortages.

As such, automation and improvements in productivity in the service sector by leveraging ICT technology have become a priority for Singapore. In collaboration with a telecommunications company, ConnectedLife addresses this challenge with a solution that provides active monitoring, emergency escalation and in/out-of-home care for older adults by adopting Internet of Things (IoT), and thereby providing peace of mind to busy caregivers.

"We have started to provide monitoring services for older adults living alone, giving peace of mind to their family members who live separately from them," explains Daryl Arnold, Founder and Chairman, ConnectedLife. "An aging population is a social problem common to many developed countries. I am sure that many potential customers are waiting for such services all over the world."

However, there were two initial challenges faced by ConnectedLife - detailed monitoring and privacy protection. ConnectedLife started out providing monitoring services, such as sensing individual motions and door movements. However, this proved inadequate to detect sudden changes in an older adult's health.

Another key consideration is protecting the privacy of older adults. ConnectedLife has in place a robust and secure system that is thoroughly tested and approved by the Info-communications Media Development Authority of Singapore (IMDA) to ensure that the older adult's personal data does not fall into the hands of third parties.

Smart sensors with proprietary algorithms

ConnectedLife has incorporated Fujitsu's cutting-edge Sound Sensing Technology into its solution, giving an added dimension beyond just motion sensing, to enable access to important health data. FUJITSU IoT Solution UBIQUITOUSWARE Resident Monitoring Solution (RMS) and software is an excellent fit with ConnectedLife's whole vision and solution, all while addressing the issue of personal privacy and providing important insights into an older adult's health.

Fujitsu's powerful and comprehensive RMS is incorporated into ConnectedLife's sleep wellness and bedroom safety module to enhance its intelligent independent living service. RMS consists of sensitive and reliable sound sensors, as well as Fujitsu's proprietary sensor algorithms for behavioral analysis.

RMS sensors work passively in the background to detect activities as the older adults go about their daily sleep routines. The collected data, in the form of motion and sounds, is sent to the sensor algorithm installed on ConnectedLife's Microsoft Azure cloud platform for analysis. Over time, the sensor algorithms will learn what an older adult's behavior is normally like, and can therefore detect anomalies in that behavior.

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Peace of mind for carers

RMS picks up sounds during an older adult's daily living, including snoring, wheezing, and coughing, as well as unusual sounds, by utilizing Fujitsu's proprietary acoustic analysis technology. For example, the algorithm recognizes continuous coughing by older adults as something unusual and will send an alert to the mobile phones of their family and caregivers. All the data collected is then stored in the cloud as events. Moreover, it can detect sounds such as snoring to analyze sleep quality, while also measuring indoor humidity and temperature, in order to gain a comprehensive understanding of the older adult's health and their home environment.

The older adult's privacy is protected because the details of conversations are not recorded. Therefore, older adults do not have to worry about the possibility of their conversations being recorded. RMS is easy to use and enables family and caregivers to remotely view the older adult's status in real-time, online or from a mobile device.

"ConnectedLife intends to contribute to the development of new technologies and popularize high-value added monitoring services by studying Fujitsu's advanced technologies and constantly feeding back real-world observations to Fujitsu on the performance of sensors and the algorithms for further integrations with other technologies," concludes Arnold.

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