



TEAM 2 - COMPOS

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Every 65 seconds, an American develops Alzheimer's disease, a disease that affects over 5.7 million Americans. With the number expected to rise above 16 million by 2050, the continued care of our loved one's as they grow older is getting more and more difficult. Alzheimer's and other dementias cause the nation \$259 billion annually and this figure could balloon up to \$1.1 trillion in 3 decades. Even on the human scale, the impact is huge considering that 35% of caregivers for people with dementia report a decline in health due to their responsibilities. This is staggering compared to 19% for caregivers of people without dementia. (Alzheimer's Association)

A very widespread, and costly problem with caregiving for Alzheimer's patients has been keeping track of their location, more specifically ensuring against patient elopement from care facilities and homes. Family members often don't have the ability of being ever present with their loved ones, and even at larger facilities there is never enough manpower to keep track of every patient. Our team plans Compos to be our solution to this problem. Our product is an adaptive indoor locationing system composed of a network of beacons, wearable devices for the patients, a server, and a webpage. Utilizing the information about received signal strength by our wearables for signals sent by stationary beacons, we can ascertain room-scale location of a patient within a facility. If a patient ever leaves the building, a notification informs the caregiver instantly. With a key problem addressed for caregivers, Compos also aims to fulfil the needs of the patients themselves. To be of use for and help everyone, the wearable device will provide patients with the time.

Apart from simple location services, Compos also alerts caregivers about abnormal behavior and movement patterns. This helps keep better track of patients without impeding their daily activities and so making everyone's lives easier and better.