



White Paper

Version 1

29th April 2018

Global Blockchain Platform for Elderly Wellness and Care



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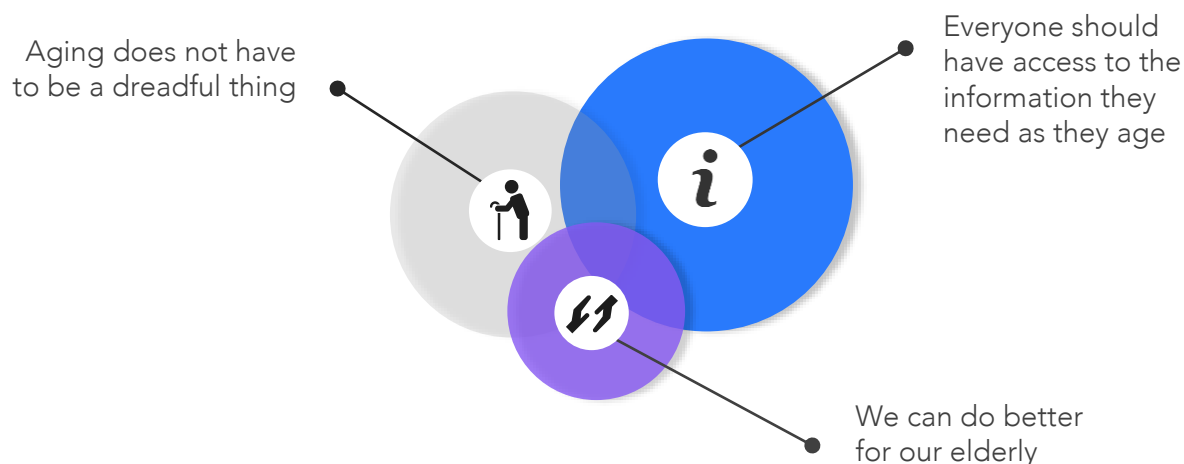
Abstract

The world's older population continues to grow at an unprecedented rate. As people grow older, they are more apt to suffer from chronic diseases, with a range of long-term health and social care problems, for which they need care and support. However, the elderly very often encounters daily difficulties and frustrations in navigating the health and social care system. Problems include their many separate assessments, having to repeat their story to many people, delays in care due to the poor transmission of information, and bewilderment at the sheer complexity of the system. Care fragmentation remains one of the most critical problems in elderly care industry globally, that underlies the more obvious elderly care crisis.

These problems present the perfect use case that can be tackled by blockchain technology: Wellderly is building the world's first blockchain-based platform for elderly wellness and care. The platform seamlessly coordinate health and well-being services to meet the needs of individual elderly citizens, effectively and efficiently. Wellderly adopts a personalised and integrated approach to service delivery for the elderly, with following capabilities and benefits:

- 01 Allow longitudinal data of the elderly to be securely stored on the blockchain which they can grant access to the service providers they had engaged.
- 02 Link all product and service providers for eldercare with the elderly, their families and care givers together to form a seamless ecosystem where relevant information are readily accessible by them
- 03 Motivate the elderly to actively participate in eldercare education and voluntarism through gamification and incentives to earn the Wellderly Token which they can use to pay for eldercare products and services
- 04 Improve efficiency and save cost for the service providers and the elderly by leveraging on smart contract and payment with Wellderly Token for eldercare products and services

Wellderly was founded on the beliefs that:

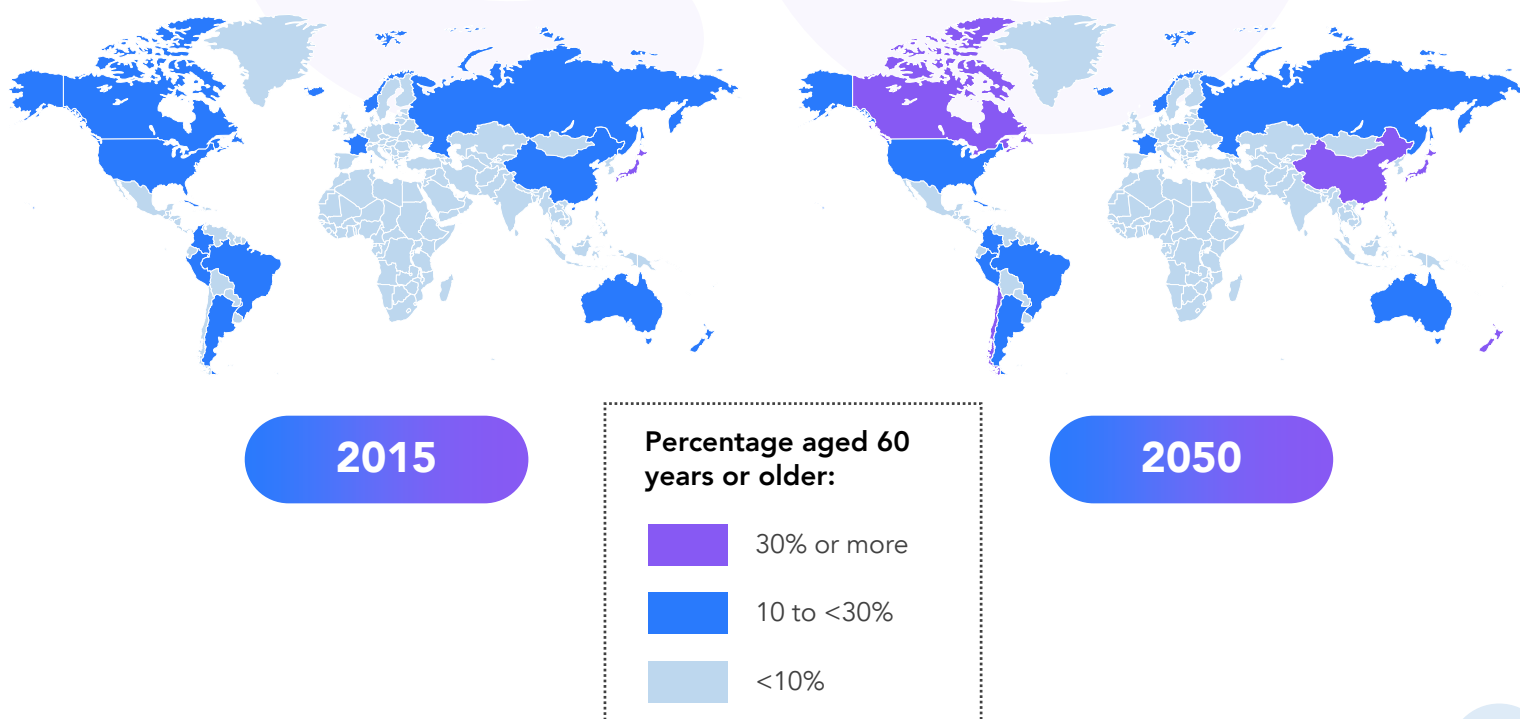


Other past healthcare ICOs like Medicalchain and Patientory focus mainly on medical care facet, using blockchain technology for electronic health record. We had realized that many of the factors that influence wellbeing and quality of life actually lie outside the control of medical care. These factors constitute the "Silver Economy", that includes all the economic activities relevant to the needs of older adults (i.e. health and nutrition, leisure and wellbeing, finance and transport, housing, education and employment). Wellderly taps on the powerful disruption of blockchain technology to enable service providers from different industries to be seamlessly coordinated, to co-create the health support system that all the elderly need in a cost-effective way.

The Silver Economy is the third largest economy in the world, according to Merrill Lynch, with an estimated value of \$7 trillion per year, growing to \$15 trillion by 2020. Hence, not only can this project bring significant benefits to our elderly, it also has enormous potential rewards for all stakeholders. We invite you to be part of this project to create the world's 1st blockchain ecosystem for the eldercare space. Together, we can create a solution which shall transform the Silver Industry. Together, we shall improve the wellbeing of our elderly and help them age more gracefully.

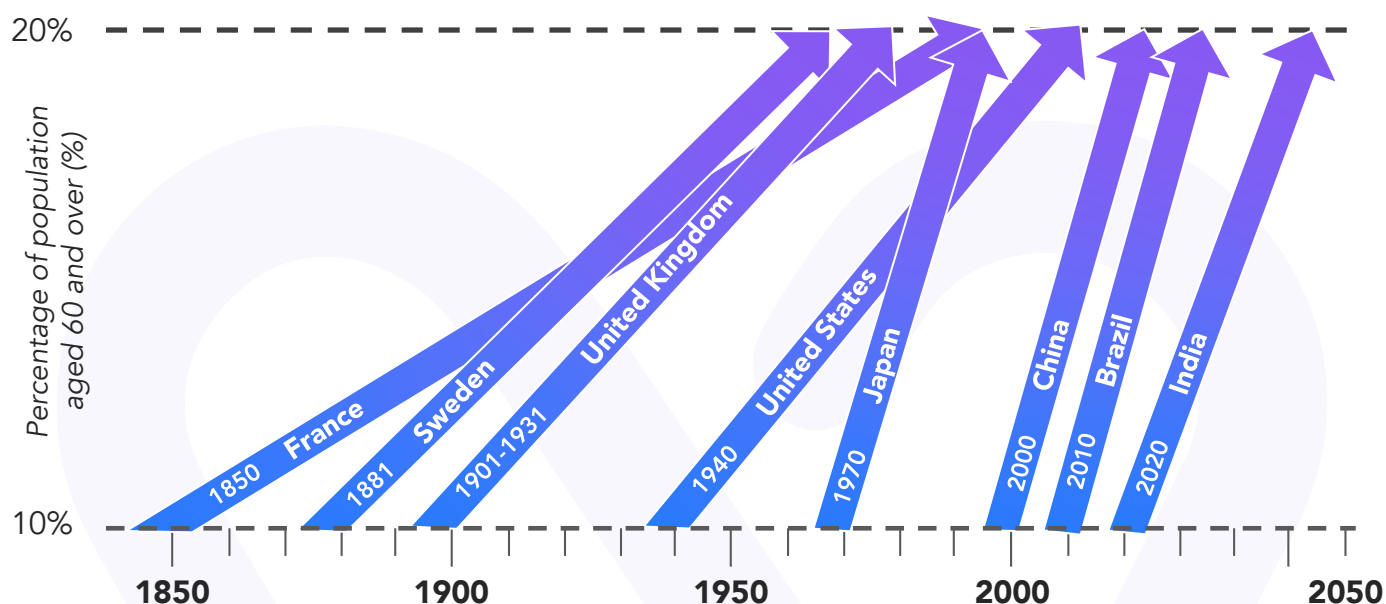
The Global Aging Population Megatrend

The world's populations are getting older at a rapid pace. The number of people aged 60 years or older will rise from 900 million to 2 billion, between 2015 and 2050 (moving from 12% to 22% of the total global population)¹. In almost every country, the proportion of people age 60 or older is growing far faster than any other age group, a result of both longer life expectancy and declining fertility rates². The two maps below show how populations are changing in different countries around the world.



Not only are the world's populations getting older, population aging is happening much more quickly than in the past! For example, while France had almost 150 years to adapt to a change from 10% to 20% in the proportion of the population that was older than 60 years, places such as Brazil, China and India will have slightly more than 20 years to make the same adaptation³.

Time for percentage of population older than age 60 to double



With an increase in the worldwide geriatric population brought about by changing global demographics, there has been a sharp rise in demand for products and services for the elderly. An increased life expectancy of the population has further augmented this demand in the global market, leading to the growth of several sectors catering to the needs of the elderly at a global level. Merrill Lynch estimates the Silver Economy at \$7 trillion per year, which makes it the 3rd largest economy in the world. By 2020 the private spending power of the elderly generation will reach \$15 trillion globally⁴.

¹ <http://www.who.int/mediacentre/factsheets/fs404/en/>

² http://www.un.org/en/development/desa/population/publications/pdf/ageing/WPA2015_Report.pdf

³ <http://www.who.int/mediacentre/factsheets/fs404/en/>

⁴ <http://ec.europa.eu/research/innovation-union/pdf/active-healthy-ageing/merrill.pdf#view=fit&pagemode=none>

Problem 1: Care Fragmentation

One of the most critical problems in the Silver Industry globally is care fragmentation. The absence of good care-coordination between the health system and social services often caused the elderly to “fall through the cracks” because neither side understands the full extent of the challenges faced by the elderly. Care fragmentation also frustrates elderly and their caregivers, who find it difficult to navigate among the various providers and often feel that there is no one person who can help them get all essential services. The failure to provide the elderly with carefully coordinated care can allow small problems to escalate into medical emergencies. This can result in unnecessary hospitalizations, increased mortality, and higher health system costs.

Currently, the various providers often only store the elderly’s data in their own proprietary systems; thus, the elderly’s data is all in silos, resulting in information fragmentation. One of our Co-Founders, Ms Dorothy Loh, left corporate work life to take care of her father, had faced with this issue when she was taking care of her frail father in 2016 and 2017. She encounters daily difficulties and frustrations in navigating the health and social care system. She had to keep 4 different record books with yellow stickers for critical ‘points’ to keep track of his daily activities, vital signs, medicines schedules and appointment schedules with the different doctors and home care providers. She strongly believes that if Wellderly platform was available to keep all her dad’s data then, she will be able to have a peace of mind as she can hand the record key to her sibling when she travels and also during medical emergency situation.

The challenges to navigate today’s care landscape are further exacerbated for the elderly and their caregivers due to a huge multitude of information available. It would take a lot of time and effort to wade through the information that is useful to oneself. Each person also has blind spots. The person will only be able to search for things that he knows about (known knowns) or about things that he knows that he does not know about (known unknowns). But if the person does not know that he does not know something (unknown unknowns), then he will not be able to search for it. A common issue that our Chief Medical Officer, Dr. Jit Seng Tan, often heard from the elderly patients and their families is that they do not even know the existence of financial assistance schemes to help them! The elderly could have qualified for it many years ago and their financial burden lessened if they had known about the scheme earlier.

Wellderly is creating a decentralised platform where the data of the elderly will be hosted on the blockchain, with the elderly in control of who to have access to their information. Various organisations in partnership with Wellderly will be able to integrate their respective social electronic record / electronic medical records / electronic health record systems with our Wellderly platform to access the data nested in our blockchain infrastructure when they are authorized by the elderly to do so. Similarly, our Wellderly blockchain will also contain the links to individual service provider’s record of the elderly. Access to these records will be subjected to each service provider’s policy on data sharing.

Solution 1 : Blockchain solution to facilitate information exchange



Figure 1. Silver Industry Transformation Plan

As a blockchain-based platform, Wellderly manages and distributes senior's administration data in a secure and trusted way. This facilitates the exchange of information between different care domains. As a result, this will improve care coordination between professional care providers in health, rehabilitation and social care domains and actively include seniors and their caregivers in the integrated care settings. Consequently, this offers many benefits including reduced hospital readmission rates and longer lives of independence outside of expensive, long-term care facilities.

Blockchain also maintains a single complete, up-to-date view of the longitudinal record of senior's data. This forms the foundation that could enable greater benefits from Artificial Intelligence (AI) /Machine Learning (ML), which depends on large volumes of high quality data. For example, we can use AI/ML to predict when the seniors are going to be unwell; or the system will be able to answer common questions or complaints, that otherwise might require general practitioner or hospital attention, thus reducing demand on the healthcare system. Blockchain makes this data discoverable, locatable, and retrievable, e.g. to aggregate as needed to run various AI/ML diagnostics.

Problem 2: Traditional approach of focusing on care and cure for the elderly

The current way of caring for the elderly is economically unsustainable because it is based on a costly, hospital-centred health system. Culture is one key factor. Health is usually defined in terms of 'disease', and older people have more diseases than younger people do. Hence, seen from a clinical perspective, the elderly suffer more illness – and the solution is more healthcare⁵. But older people themselves often view things differently. In one survey of 650 elderly citizens in the Netherlands, two-thirds of the respondents – irrespective of age – said their general state of health was good or very good⁶. In other words, they enjoyed life, did not see themselves as sick and did not want to be medicalised. Research by British gerontologist Ian Philp reinforces these findings. When you actually ask older people what they need, he notes, their top three priorities are pain management, companionship, and financial advice – in that order⁷. So the current way of caring for the elderly is focusing on the wrong thing: what is the matter with the seniors, not what matters to them.

Solution 2: Expand the focus from care and cure to vitality and wellbeing

Wellderly's approach is far more holistic, with the emphasis on vitality and also including on care. Besides, we focus on self-rated quality of life and wellbeing, instead of focussing on illness. Indeed, many of the factors that influence wellbeing and quality of life – nutritious food, the right housing stock, a reliable communications infrastructure and the like – lie outside the control of healthcare providers. Maintaining a healthy population is not, therefore, just a job for the doctor, nurse or social worker; it's a collective challenge and opportunity for many organisations in many different industries.

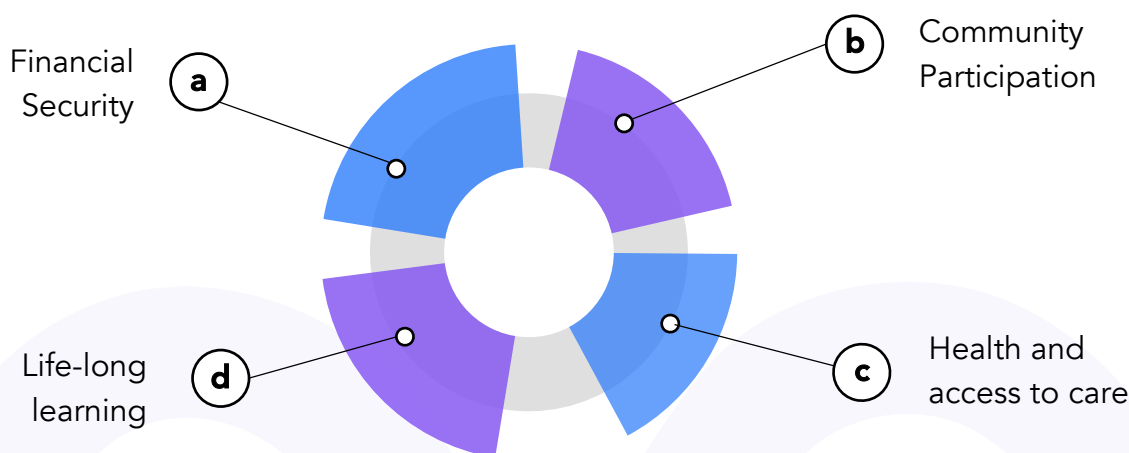
As such, Wellderly network brings together a wide range of service providers from different industries to form an ecosystem that caters to the needs of the elderly. As elaborated in **Solution 1**, Wellderly's blockchain platform, with the capacity of facilitating the exchange of information between different care service providers, will enable a collaborative approach to co-create the support system that all seniors need, in a cost-effective way. Preserving the health and wellbeing of the elderly will become a shared endeavor among the service providers that are part of Wellderly network. This can range from the right housing to technology that can make a major contribution to helping older people maintain their health and independence, be it through living aids, diet and exercise apps, gaming and e-books for mental stimulation or social networking for companionship. Besides, it also includes aspects like easy access to transportation to stay connected to their community, friends and family; and many other services.

⁵ <https://www.pwc.com/gx/en/healthcare/pdf/pwc-elderly-care-report.pdf>

⁶ Medical Delta, "Shades of Grey: Ambitions of 55+" (May 2013).

⁷ <https://www.pwc.com/gx/en/healthcare/pdf/pwc-elderly-care-report.pdf>

With this emphasis on wellness and prevention, Wellderly does not only focus on the elderly who are weak and frail, but we start the relationship with the elderly when they are well. The platform is nested on data analytics and artificial intelligence, and anchored in all 4 aspects of life of World Health Organization's Ageing-in-Place framework:



Wellderly eldercare functional classification framework

Within Wellderly platform, the elderly is stratified according to their functional status, apart from their chronological age, to give the best indication of their real needs. For functional status, Dr. Jit Seng Tan has specifically developed the eldercare classification framework for Wellderly Network, based on his experience and expertise in the elderly medical homecare sector for the past 10 years.

The key differentiator will be to stratify elderly according to physical and functional status which is a critical step in recommending relevant eldercare products and services to them. The individual's account would serve as synopsis of their medical history, highlights and on-going updates. This allows the individual to have portability of their medical information.

The 6 functional categories that an elderly can be grouped under, are:

01

Very Fit

- Not taking any long-term medications. Apart from screening purposes, not on any long-term routine follow up by any health services.

02

Managing well

- On long-term medications (e.g. high blood pressure, high cholesterol)
- Not on specialist care
- Never hospitalised for major event (e.g. heart attack)

03

Vulnerable

- Activities of Daily Living (ADLs) independent
- Post major event (e.g. heart attack or a minor stroke)
- On long-term medications with care from Specialists in hospitals

04

Mildly Frail

- ADLs independent (can manage at home) and those who are semi-dependent (need help when going out)
- Instrumental ADL semi-dependent, will need others to manage finances, housekeeping, grocery shopping etc.

05

Frail

- Assisted daily living (ADL) dependent after a severe medical event such as a major stroke or gradual decline from dementia or organ failures such as kidney failure.

06

Palliative

- Bedbound and maybe dying

Activities of Daily Living (ADLs) denotes the ability to:

- 01** Transfer oneself, i.e. from a sit to stand position.
- 02** Ambulate oneself, i.e. to walk from point A to point B.
- 03** Wash and Bath oneself, i.e. to be able to clean oneself like brushing teeth and taking a bath.
- 04** Toilet oneself, i.e. able to use the bathroom to urinate or defecate and clean up thereafter
- 05** Dress oneself, i.e. able to put on the full set of clothing, underwear, upper and lower garment.
- 06** Feed oneself, i.e. able to use tools to bring food to the mouth and eat.

Instrumental Activities of Daily Living (iADLs) denotes the ability to:

- 01** Cleaning and maintaining the house
- 02** Managing money
- 03** Moving within the community out of the house
- 04** Preparing meals
- 05** Shopping for groceries and necessities
- 06** Taking prescribed medications
- 07** Using the telephone or other form of communication
- 08** Doing laundry

In summary, each elderly is categorised into one of the 6 groups easily by themselves, their care coordinators or their family. With such stratification, government policies, products and services can be customised and presented to the elderly. Longitudinal data from each elderly can be logged and future usage of such long-term data can be presented to researchers if needed. The only difference is now the elderly have the control to allow the access of such data and be reimbursed for their data.

The following chart summarises the above functional categories with the aging in place framework.

Figure 2: Wellderly's Functional Classification Framework with examples

Category	Financial Security	Community Participation	Health & Access to Care	Lifelong Learning
1 Very Fit	<ul style="list-style-type: none"> Job recruitment Insurance policies LPA or Financial planning 	<ul style="list-style-type: none"> Volunteer Hobbies Community centre programs Active Ageing Hub 	<ul style="list-style-type: none"> Health screening Exercise is prescription Nutritional info 	<ul style="list-style-type: none"> Courses
2 Managing Well	<ul style="list-style-type: none"> Job recruitment Insurance policies LPA or Financial planning 	<ul style="list-style-type: none"> Volunteer Hobbies Community centre programs Active Ageing Hub 	<ul style="list-style-type: none"> Health screening Exercise is prescription Nutritional info Online portal for booking polyclinic review 	<ul style="list-style-type: none"> Courses
3 Vulnerable	<ul style="list-style-type: none"> Insurance policies LPA or Financial planning Means testing 	<ul style="list-style-type: none"> Hobbies Community centre programs Active Ageing Hub 	<ul style="list-style-type: none"> Simple assessment Self-monitoring Online portal for appointments Remote monitoring 	<ul style="list-style-type: none"> Courses on info on chronic disease
4 Mildly Frail	<ul style="list-style-type: none"> Insurance policies LPA or Financial planning MEANS testing, PG DAS assessments etc Care giver Subsidies like FDWG 	<ul style="list-style-type: none"> Day care centres 	<ul style="list-style-type: none"> Self-monitoring Online portal for appointments Remote monitoring Virtual retirement home program 	<ul style="list-style-type: none"> Caregiver training program
5 Frail	<ul style="list-style-type: none"> Insurance policies LPA or Financial planning MEANS testing, PG DAS assessments etc Care giver Subsidies like FDWG Eldershiel/ IDAPE claim Subsidies 	<ul style="list-style-type: none"> Day care centres participation Day rehab centre Transportation 	<ul style="list-style-type: none"> Self-monitoring Online portal for appointments Remote monitoring Portals to get caregivers 	<ul style="list-style-type: none"> Caregiver training program
6 Palliative	<ul style="list-style-type: none"> Planning a WILL and LPA MEANS testing, PG DAS assessments etc Care giver Subsidies like FDGW Eldershiel/IDAPE assessment etc SMEF Subsidies 	<ul style="list-style-type: none"> Cluster support program Ageing in place program Pastoral Care Services 	<ul style="list-style-type: none"> Self-monitoring Online portal for appointments Remote monitoring Stay in Care Giver provision Portal for home care services or nursing home services Portal for palliative services like HCA/ASSISSI/METTA and AIC HOME programs 	<ul style="list-style-type: none"> Caregiver training program Advance Care planning discussions and information End of life care management taught to relatives and carers

Wellderly Token

Wellderly's collaborative care approach puts the seniors at the heart of the system. This integrated care model, according to research by McKinsey⁸, can achieve the best results when seniors themselves take control of their own health – when they actively manage their own care and avoid unhealthy behaviours. As such, incentive schemes are critical in Wellderly network. They help motivate the seniors to stay healthy and actively participate in wellness activities and prevention programs.

We know how frequent flyer miles can successfully encourage customer behaviour patterns, i.e., loyalty to a particular airline alliance. We can apply a similar approach to the eldercare space with a complementary currency, the Wellderly Token - that would encourage the elderly to take on healthy habits and practices, as well as to volunteer their time to help other elderly in need. For example, one hour of stretching and breathing exercises would enable elderly to earn Wellderly Tokens; or specific preventive treatments could similarly be encouraged with Wellderly Tokens.

The elderly in turn can use their earned Wellderly Tokens to purchase products and services from wellness service providers on Wellderly Network. This has the potential to bring about psychological rewards to seniors, such as feelings of self-worth, fulfillment and confidence. On the other hand, Wellderly Tokens help create new commerce and enable service providers on Wellderly Network to reach out to elderly customers.

In designing the utility of Wellderly Tokens, we carry out a thorough research with reference to other complementary currencies that have been used in the elderly care space. This draws our attention to a very well-known case of Fureai Kippu - a complementary currency system for providing elderly care in Japan.

Inspiration from Japan's Fureai Kippu Time-banking in elderly care

The system of Fureai Kippu, or "caring relationship tickets," allows individuals to earn credits by caring for a local elderly. They can redeem those credits toward care for a non-local elderly person, such as a parent who lives far away or themselves if they get sick. The tickets can also be saved and redeemed in the future.

Fureai Kippu attained an international reputation for its pioneering and large-scale success as an example of how to deal with the challenge of an aging society. In 2010, Britain Care Services Minister Paul Burstow hailed on BBC, the Japan's Fureai Kippu as an "effective way" to "enable communities to take social care responsibilities on for themselves." Bernard Lietaer, a Belgian expert on Japan's complementary currencies, praised in his book: *The Future of Money* as "A remarkably successful application of a specialized "Healthcare Currency" operating at the national level in Japan which...has proved more cost-effective and compassionate than the system which prevails in the West". Phillip Colligan of the quango National Endowment for Science, Technology and the Arts (NESTA) in London similarly provided positive descriptions:

⁸ <https://www.mckinsey.com/industries/healthcare-systems-and-services/our-insights/what-does-it-take-to-make-integrated-care-work>

“

The Fureai Kippu schemes in Japan enable people to earn credits for caring for elderly people in their community. These credits can then be used to “buy” similar person to person services by their relatives in another part of the country, or even save them for their own retirement. Developed over the past 15 years, the use of this nationwide, creating an alternative gift economy of shared time, skills and resources.

”

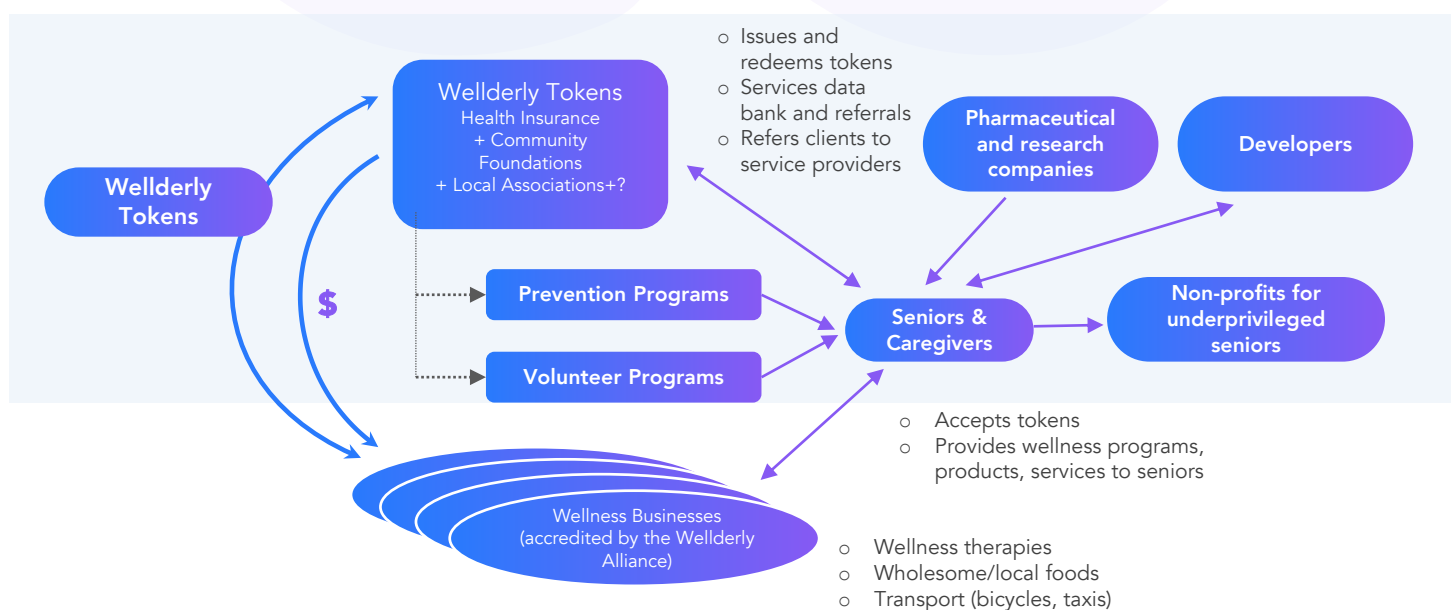
Such views are also shared by politicians and policymakers, including Care Services Minister Paul Burstow, noted above, Civil Society Minister Nick Hurd and David Halpern, a member of Institute for Government.

Similar initiatives grounded in Fureai Kippu time-banking concept have been implemented in Britain, including Care4Care (Isle of Wight) and CareBank (Windsor and Maidenhead Council in Berkshire). Switzerland also introduces the time banking scheme in which retired care volunteers “deposit” hours worked looking after elderly people. In return, they can use any time saved up for their own care provision later in life. Similar time banks for elderly care also exist in the United States, New Zealand, South Korea and France, amongst others. However, most operate at a local level and hence, the credits are non-transferable between different issuing organisations due to a lack of central clearing house.

Wellderly Token System

Expanding upon the concept of “caring currency” Fureai Kippu, we introduce Wellderly Token, an internal currency that incentivizes the seniors to stay healthy and actively volunteer to help other seniors in needs. The framework of the Wellderly Token System aims to promote holistic and optimal health of the elderly through healthy lifestyle and active voluntarism. This will help in preventing chronic diseases such as high blood pressure and diabetes and help the elderly lead more meaningful lives.

Figure 3. Wellderly Token System



The role played by the airline alliances in issuing and administering frequent flyer miles would be performed by Wellderly Alliance - an association of organizations which have a financial or other interest in promoting healthy behaviours among elderly. Such an alliance could include health insurance companies, community foundations, local associations and health maintenance Organizations (HMOs).

The process starts with Wellderly Alliance issuing Wellderly Tokens for two types of activities where:



Healthy and active elderly are able to earn Wellderly Tokens by providing help of a non-medical nature to other elderly who need chronic support, similar to the Fureai Kippu system in Japan (as described in detail above). Another similar scheme is the Care Bank in Vermont (e.g., help in shopping, reading to visually disabled elderly, help with house living conditions). Such home care programs typically cost five times less than hospital care systems.

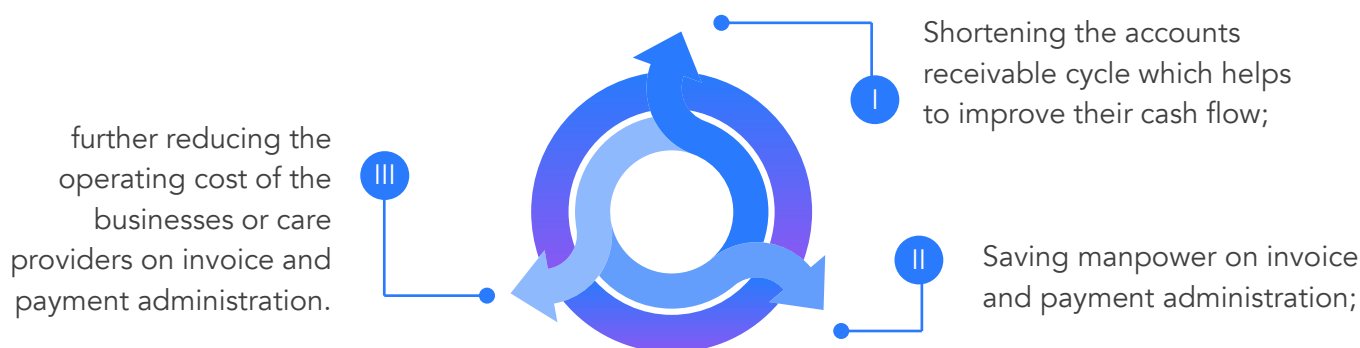


Elderly are also incentivized with Wellderly Tokens by taking an active part in specifically qualified preventive health programs (like primary, secondary and tertiary prevention; health educational programs). The Return on Investment (ROI) for these activities has been estimated at a striking 300% to 1000% depending on the program.

These tokens could be redeemed for other services or goods that further promote health, ranging, for instance, from payment for preventive therapies to buying appropriate foods. Another use of the tokens could be in partial payment for the insurance premiums, given that elderly participating in this system should have a lower probability of getting or remaining sick. This logic is what justifies the Elderplan Insurance Company in Brooklyn, New York accepting 25% of its health insurance premium for elderly participants in a local Time Bank.

Figure 3 above shows schematically the flow of Wellderly Tokens through economic circuits for prevention programs and volunteer home care support systems.

Businesses or care providers would decide if they want to accept Wellderly Tokens in full or partial payment for their services. Likewise, the elderly would decide if they want to use Wellderly Tokens for full or partial payment for the services they consumed. Given that credit card company charges about 3% for each transaction, payment using the Wellderly Token can be a great way to help businesses and care providers save some operating cost. Moreover, payment using the Wellderly Token can be settled much faster compared to traditional fiat currency system. This will provide three benefits to the businesses or care providers:



Some of the savings, in turn, can be passed to the elderly to encourage them to pay by the Wellderly Token. Thus, both the businesses/care providers and the elderly would benefit from the use of the Wellderly Token.

Through gamification, the Wellderly Tokens can be used as incentives to help the elderly to become or remain healthy than they otherwise would be, reducing current and future medical costs. The system would create a wider market for goods and services that promote wellness among the elderly. Even the pharmaceutical industry could benefit by producing more preventive medical products and services. In the cases where governments provide universal healthcare for elderly, a Wellderly Token system also helps to reduce the pressures on government to go into deficit for healthcare spending.

Another possible use of the Wellderly Token and how the needy and underprivileged elderly can benefit from it is charity work. Today, many people want to give back to society by helping the poor and needy but are hesitant to do so because they are skeptical of the welfare organizations. Some welfare organizations have high operating cost, resulting in a huge chunk of the donation not reaching its intended recipients. Very often, the donors also have little say in how the donation would be spent. As a cryptocurrency created using the blockchain, Wellderly Token can solve these problems very easily based on its inherent full traceability property. Wellderly can partner with welfare organizations to improve their efficiency on the collection and/or disbursement of donation via Wellderly Token. This will provide full transparency on the donation administration and assure donors that lion's share of the donation will end up in the hands of the intended recipients. We can even extend this to track how the recipients use the donation they received. Wellderly platform can also be used by our welfare organization partners to provide targeted charity where donors can choose to donate a specific amount of Wellderly Token directly to individual needy elderly screened by the welfare organization instead of donating to the welfare organization.

In conclusion, the Wellderly Tokens is not an experimental, unknown approach; it is, in fact, a very successful, tried and tested approach but with a new digital catalyst which offers many new possibilities to transform the Silver Industry and improve the wellbeing of the elderly, rather than merely the treatment of diseases.

Partners

We work with a wide range of partners from many different verticals in the eldercare industry:

- Home care
- Nursing home
- Elder law attorneys
- Telemedicine
- House Call Doctors
- Retirement Planning
- Geriatric Care Management
- Assisted Care
- Hospice
- Insurance
- Caregiver Training
- Transport
- Internet of Things
- Rehabilitation
- Housing
- Memory Care
- Financial
- Wearable devices
- Volunteering

We will continuously add on accredited partners to our Wellderly Network to meet the diverse needs of individual elderly citizens.

Some of our current partners are:

ARTT Network:

- <http://www.artt-network.org/home.html>
- ARTT-network is an inclusive not-for-profit network for people with disabilities

Care Advisors Recruitment Enterprise Pte Ltd:

- <http://carepl.com.sg/>
- CARE Pte Ltd is an agency for trained caregivers for elderly

Centre for Senior:

- <http://www.centreforseniors.org.sg/wps/portal/centreforseniors/home>
- The Centre for Seniors (CFS) is a non-profit, Voluntary Welfare Organisation (VWO) that is committed to promoting the total well-being of older persons in Singapore, specifically their vocational, financial and psycho-social health

Chatbots for Health:

- <https://www.chatbotsforhealth.com/>
- Chatbots for Health is a platform to create chatbots related to health without coding

ClayOPS:

- <http://www.clayops.com/>
- ClayOPS is a data analytics company with solutions for clinics use.

HoviCare:

- <http://www.hovicare.com/>
- HoviCare is a Senior Activity Centre in Singapore. It's parent company is from Finland and they run nursing homes in Finland.

Lotus Eldercare Pte Ltd:

- <http://lotuseldercare.com.sg/>
- Lotus Eldercare is a medical homecare company. Our doctor follows up with bed or home bound patients in their home.

Lotus Eldercare Academy:

- <http://academy.lotuseldercare.com.sg/index.php/en/>
- Lotus Eldercare Academy collaborated with Noble Lamp Technical Services Co Ltd to run the Specialized Caregiver Training Course in Cambodia

Predictive 365:

- <https://www.predictive365.com/>
- Predictive 365 is a company with Tele-monitoring platform and equipment

Proage:

- <http://www.proage.sg/>
- Proage provides customised health and wellness solutions across sectors with diverse needs.

Health Food Matters:

- [http:// healthfoodmatters.com.sg](http://healthfoodmatters.com.sg)
- Health Food Matters supplies elder-friendly food that looks good and tastes good. Most importantly, they provide the seniors with the nutrition that they need in order to stay strong, healthy, and happy.

Speedoc:

- <https://www.speedoc.com>
- Speedoc is an app that brings a house call doctor directly to where you are.



Our partners are currently operating in many countries over the world:



France



Finland



Singapore



Indonesia



Thailand



Vietnam



Myanmar



Malaysia



USA

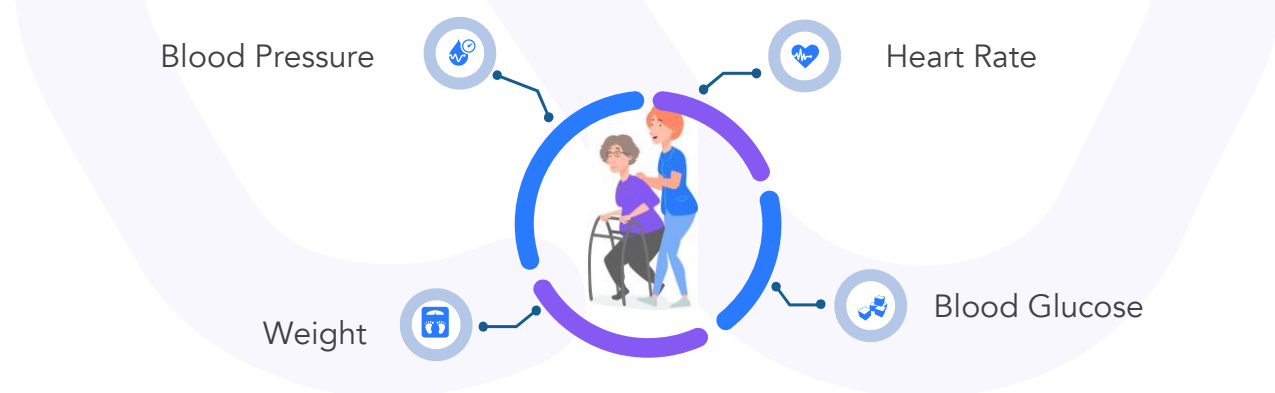
Besides actively working with other partners to build up the ecosystem for elderly care, Welllderly also has the capability to provide services to fill up certain gap within the Silver Industry when necessary. In the section below, we illustrate how tele-consultations and tele-monitoring service can be implemented on Welllderly platform based on actual trials that have been conducted.

Tele-consultations and Tele-Monitoring on Wellderly platform

It is critical for the elderly, especially those who have suffered chronic illnesses, to keep monitoring their health. But many of the elderly may not be able to go to the hospitals frequently; and even for those who can, the time and money spent on such visit can be significant. Therefore, there is a huge demand for tele-consultation and tele-monitoring services. According to a June 2015 study from McKinsey & Company, the economic effect from cloud-connected health technology could range between \$170 billion to \$1.1 trillion a year in the next 10 years.

Dr. Jit Seng Tan has extensive experience in tele-consultation and tele-monitoring systems. He was the Medical Consultant for project Eir, which is the precursor of the Open Internet of Medical Things (IoMET) project. For further details on Eir (https://wiki.mozilla.org/Eir#Team_members) and OpenIoMET (<https://github.com/OpenIoMeT/Iomet-wiki/wiki>), please refer to their respective websites.

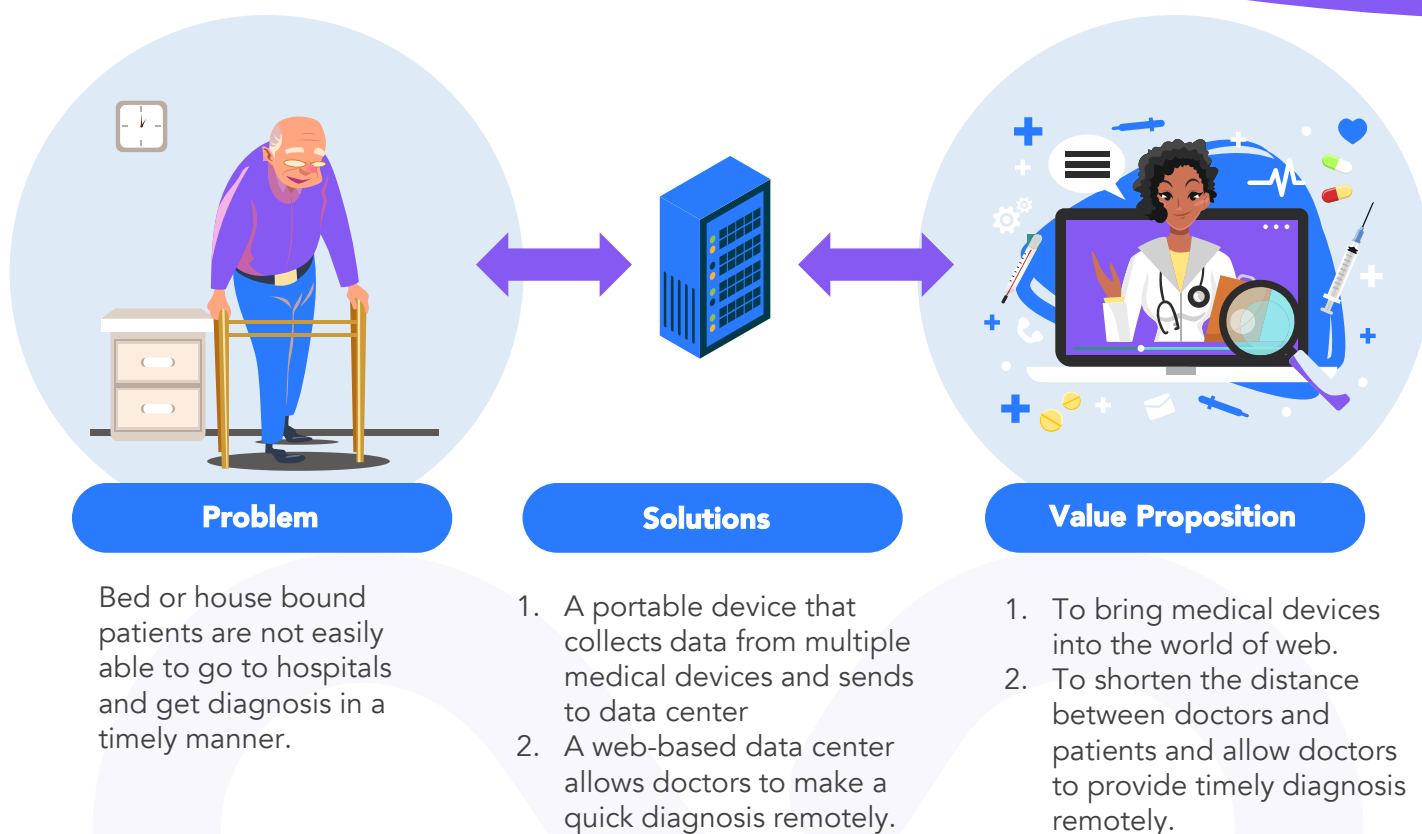
Dr. Jit Seng Tan has conducted a tele-monitoring / tele-consultation trial that involved 18 users, divided into four different profiles and lasted for 3 months. Using blue-tooth enabled devices, the vital signs that were monitored in this pilot were:



For details of this trial, please refer to Appendix A for Dr. Jit Seng Tan's report.

Dr. Jit Seng Tan had also presented tele-monitoring at the conferences below:

- Patient Experience Asia Summit 2018
- Innovation in HealthCare Seminar 1 at Nanyang Polytechnic
- ASEAN Community Based Healthcare Forum 2017
- Asia Healthcare Week: 4th Annual Healthcare Facilities Asia
- Healthcare Asia Forum 2017 - Singapore Leg



For elderly who does not want to or cannot leave their home, Wellderly will provide them with tele-consultation service with any of the following service providers through the Wellderly platform:

- Travel agents for holiday planning for elderly
- Financial planners for retirement planning
- Lawyers for LPA, wills or other issues
- Social workers for telephone bill issues working with MSF
- Virtual therapist services
- Plumbers
- Doctors

Such tele-consultations can easily be used by elderly themselves or their carers. We have rolled out such trial service in the past and Wellderly will be able to utilise our past partners and experience to roll out tele-consultations easily in large scale format.

We believe that current tele-consultation and tele-monitoring market is underserved. Current remote medical services systems are either segregated or separately owed by doctors / hospitals adding to the care and information fragmentation problem we have highlighted earlier under the Problem segment. Hence, Wellderly's vision is to collaborate with top-notch robotics and Artificial Intelligence (AI) providers to provide our elderly with a comprehensive and seamless tele-consultation and tele-monitoring services via our Wellderly platform where all the data collected from each web-enabled device are accessible to patients and they decide whom the data should be sent to.

Technology & product

We will develop the following 3 primary classes of applications as depicted in the diagram below:

Wellderly Alliance Platform

This is the front end which the elderly interacts with to get information on product and services they need. It encompasses other modules and microservices like tele-consultation, tele-monitoring, and smart referral etc which will be rolled out in phases.

Wellderly Blockchain

The Wellderly Blockchain will store key data of the elderly and will provide links to our partners' social electronic record / electronic medical records / electronic health record systems. It will also encapsulate a smart contract layer which facilitates the execution of transactions and its eventual payment between the elderly and the partner whose service the elderly has consumed. Payment may be made in the Wellderly Token, or fiat currency, or both.

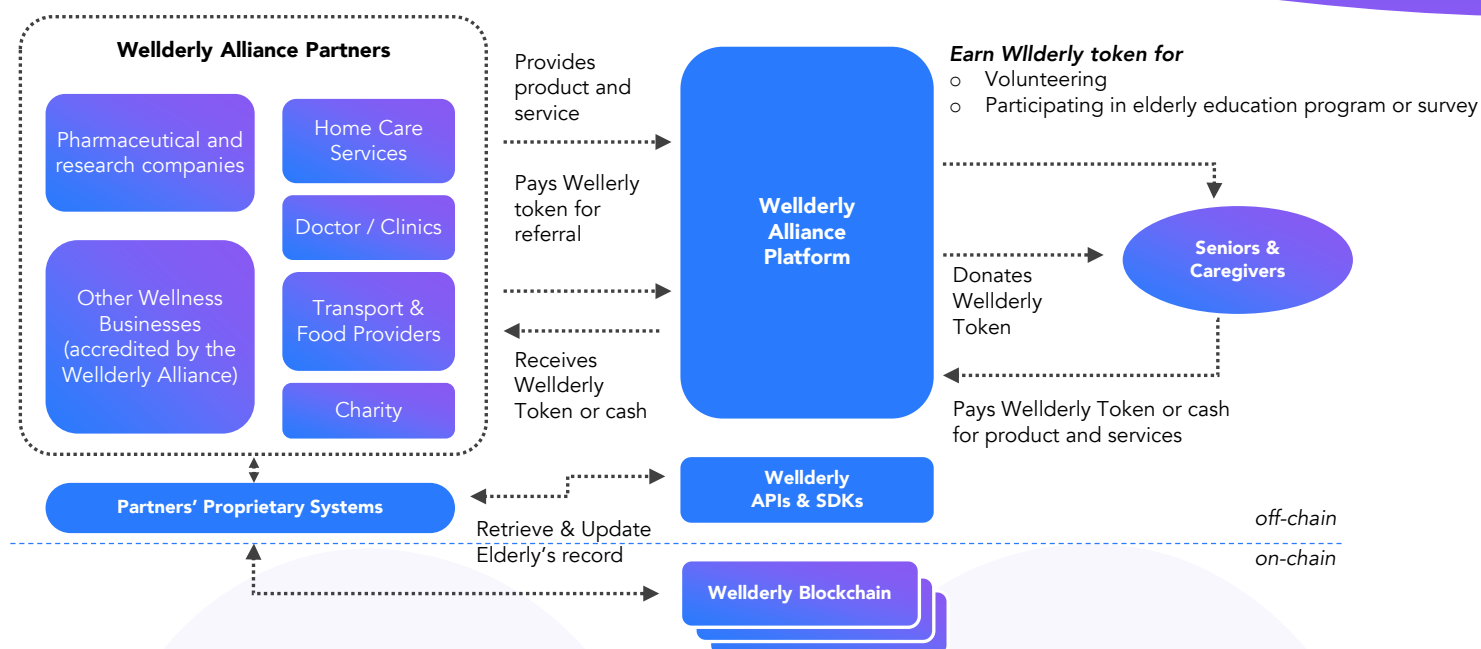
Wellderly Application Programming Interface (API) & Software Development Kit (SDK)

This backend infrastructure layer allows our partners' proprietary systems to integrate with Wellderly Alliance Platform. It enables the seamless exchange of information with the authorization of the elderly.

Wellderly has put in place a comprehensive product development model commonly used by many successful software firms worldwide to ensure we deliver a high quality and useful product for our users.

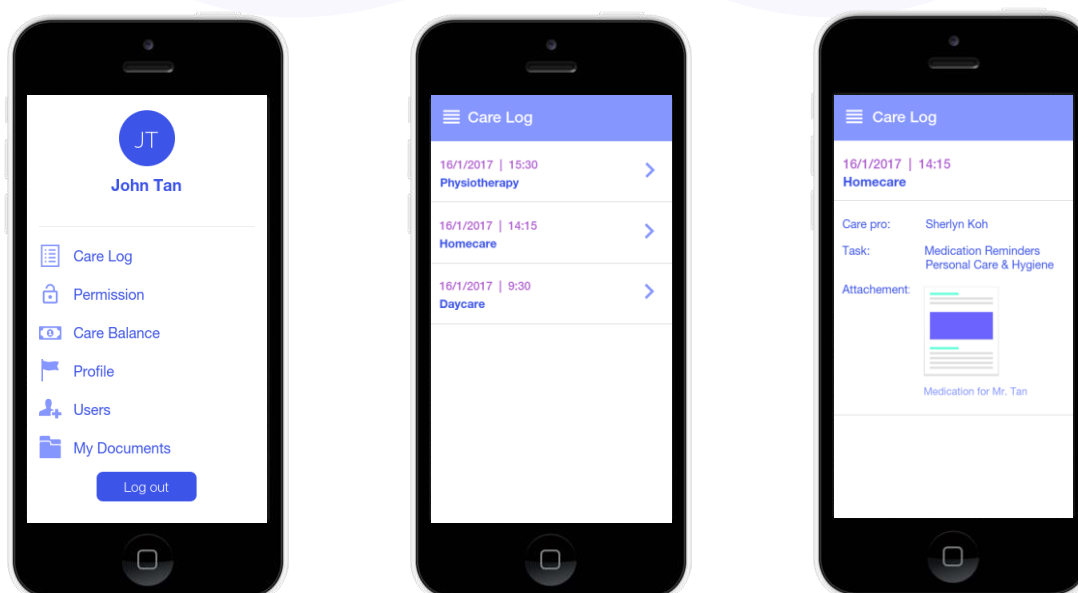
Release 1 is slated to be rolled out shortly after the completion of the Wellderly Token Crowdsale. It comprises the Wellderly Alliance Platform and the Wellderly Token.

Release 2 will include capabilities like smart contract, Wellderly API & SDK and shall be launched 6 months later. Thereafter, we plan to launch a new release every 6 months as we add more features and capabilities to the product.



Wellderly App for the seniors and their caregivers

The Wellderly app was designed with the objective of bringing support services as close to the seniors and/or their caregivers as possible. The seniors' data is securely stored and maintained as single version of the truth using blockchain technology. Through the Wellderly app, the seniors and caregivers decide who has access to which information. This is to ensure that the senior is put at the heart of the Wellderly system and they have the control in determining the care services they receive. The seniors' wellness and care log is kept up to date with detailed information on care services provided. This allows health and well-being services to be seamlessly coordinated to meet the needs of individual elderly citizens, many of whom may have complex co-morbidities, effectively and efficiently.



Team

Wellderly co-founders are deeply rooted in elderly care and healthcare space with over 20 years of combined experience



Dr. Tan Jit Seng / Co-founder & Chief Medical Officer

Dr. Tan Jit Seng is trained as a medical doctor and still is a fulltime eldercare clinician doing primary health care work and running long term home based services for public, charity, social enterprise and private systems for the past 16 years.

He has been involved in health technology development since 2010, supporting:

01

Government research organisations like A*STAR 's I2R on fall detection research using audio and vibration signatures; MOHH on looking at Nursing home EMR systems in NHELP project; SgEnable on Enabling Village Tech-Able initiatives

02

MNCs like National Computer Systems on Remote Vital Signs Monitoring projects, Innosparks on wheelchair ramps, ST Engineering on their Tech Factor Challenge events;

03

Start-ups on innovating and development of cloud platforms, devices, robotics and A.I. medical technology, with companies like Pastel Health, Nucleus Dynamics, SoundEye, and Pillpresso to name a few.

Dr Tan is currently the Vice President of Asia Pacific Assistive, Rehabilitative and Therapeutic Technologies Network. Dr Tan is also the Chief Technology Officer for Lotus Eldercare Technologies and will soon be launching its first product LEMS, a on cloud mobile Electronic Medical Record system with secured chat and tele prescriptions. He has founded www.LocumSg.com in 2010 as well, a successful job referral portal to linking directly healthcare institutions with a huge pool of locum doctors in Singapore. He is the runner up of MIT's Hacking Medicine Event on Robotics in 2017.

Dr Tan's latest health tech involvement includes the Medical Advisor for TUV SUD - Smart Elderly Care @ Home Centre. The centre acts as a "sandbox" for companies to pilot innovative smart healthcare devices for patients' home use; and customising Telepresence Robotics by Ohmibots for healthcare uses.



Tong Duong / Co-founder & CEO

Tong is Forbes 30 Under 30 Honouree in 2018, under Healthcare & Science Category. Tong co-founded Homage, a leading on-demand home care services for the elderly in Singapore. Homage has raised US\$1.2 million in seed funding from US-based 500Startups, early-stage VC firm Golden Gate Ventures, and seed investor SeedPlus in 2017.

Homage was mentioned in Singapore National Day Rally 2017 by Prime Minister Lee Hsien Loong: "Homage gave many seniors and their families peace of mind." (Singapore National Day Rally is an annual address that the Prime Minister of Singapore makes to the entire nation, on the first or second Sunday after National Day on 9 August). Homage was awarded "Social Enterprise Start-Up of the Year" at President's Challenge Social Enterprise Award 2017. Homage received OCBC Bank Emerging Enterprise 2017 Most Promising Startup Award.

Team

We also have over 50 years of combined experience in Multinational corporation



Eddie Leong / Co-founder & CTO

Eddie is an IT veteran with 20+ years of experience in application development and system integration. He was with GIC for the last 17 years during which he has created and successfully implemented many IT solutions to GIC offices globally. His last appointment with GIC was SVP, Head of IT Applications (Corporate Services).

Eddie has a Bachelor (Honours) Degree in Computer Science from the National University of Singapore and he is also a CFA (Chartered Financial Analyst) charter holder.



Dorothy Loh / Co-founder & Chief Strategy Officer

Dorothy leads Community Partnership and Resource Development at World Vision, South Asia and Pacific Regional Office. She has been the sales director at Oracle Consulting ASEAN. She has vast experience as business and sales Leader for ASEAN, in Enterprise Software and Cloud Solutions Business. She is also Advisor/Consultant/ Sales Coach to Startups and SMEs



Shing Yuen Teo / Co-founder & COO

Shing Yuen serves as Operations Manager & pharmacist at Lotus Eldercare Pte Ltd for close to 5 years. She is very familiar with eldercare sector and the financial schemes available. She also spent 11 years as Pharmacist, Area Manager & Operations Manager with Unity Healthcare where her scope of work includes:

- 01** Operations, dispensing, HR, marketing for retail pharmacy
- 02** Formulation and roll-out of SOPs, BCM practices
- 03** Design, User Acceptance Test and Roll out of new system



Khanh Tong / Co-founder & Blockchain Head

Khanh is the founder of Blockchain Hardcore Series – a community for blockchain enthusiasts, developers, blockchain entrepreneurs to easily connect and exchange ideas. He is also the co-founder of Checkit, one of 10 start-ups that were selected to incubate in second cohort of Telstra-backed accelerator muru-D from across Asia Pacific.

Advisors



Chay YeeMeng

- Independent Committee Member, SingHealth Fund
- Board Member, Chairman of Audit Committee and Chairman of Nomination Committee, Trek 2000 International Ltd
- Board Member, Finance Committee Member, National Kidney Foundation Singapore



Shirley Wong

- Managing Partner at TNF Ventures
- Board member of Infocomm Media Development Authority of Singapore (IMDA)
- Co-chairman of the Cyber Security Awareness Alliance
- Vice Chairman of South Asia Business Group
- Member of Temasek Polytechnic's IT School Advisory Council
- Entrepreneur-in-Residence at Singapore Management University.



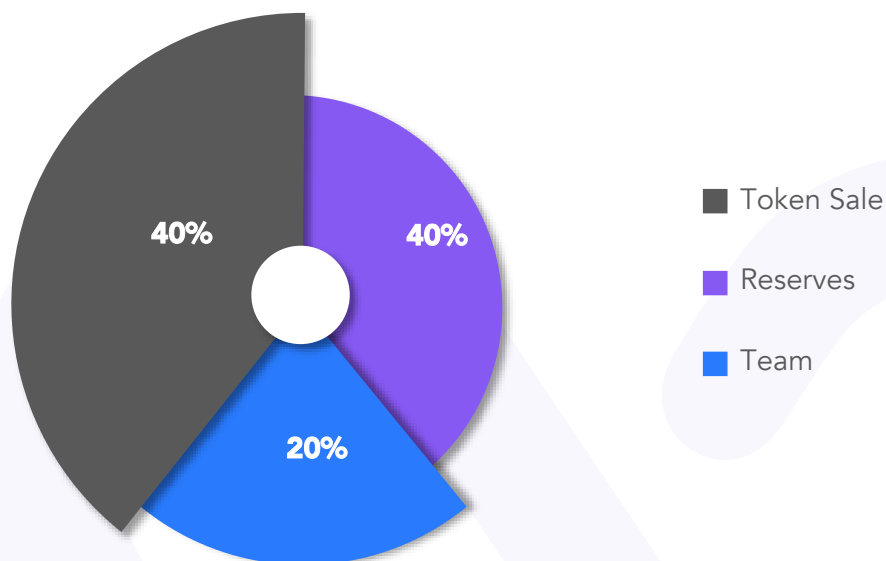
Dr Pang Boon Chuan

- Visiting Consultant, Neurosurgery, Mount Elizabeth Hospital & Ng Teng Fong General Hospital
- Qualifications: MBBS, MRCS (Edinburgh), M Med (General Surgery), FRACS (Neurosurgery)

Wellderly Network Token Sale

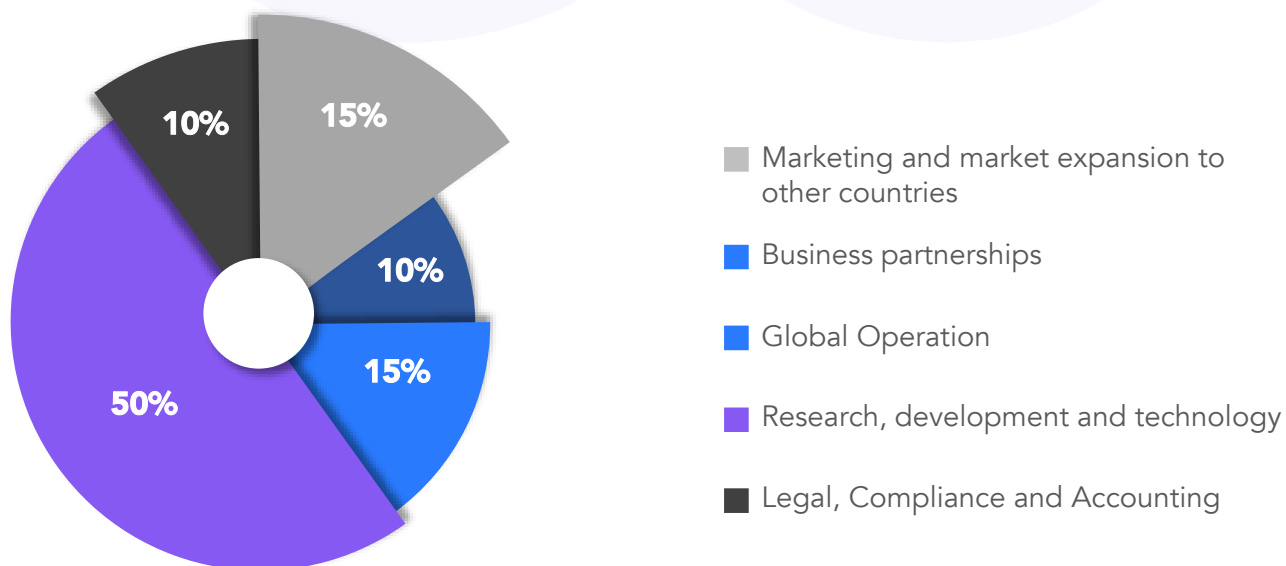
Our Token Sale will consist 40% of all Wellderly Network Tokens that will ever be generated. Further details will be announced via our website, telegram and blog.

Token Allocations



The Wellderly team will be on a 2-year linear vesting schedule.

Usage of funds



Anticipated Timeline (Roadmap)

Target Release Date	Description of Capabilities and Functionalities Overview
Q2 2018	Business <ul style="list-style-type: none"> Launch of website and Whitepaper Continue to onboard partners from different verticals onto Wellderly Network Technicals Build Wellderly blockchain-based prototype to pilot nationwide in Singapore Token Generation Event
Q3 2018 or one quarter later after the Crowdsale of Wellderly Token, whichever is later	Business <ul style="list-style-type: none"> Onboard 20 or more business / technology partners Technicals Beta release: Wellderly Platform Release 1 comprising the Wellderly Alliance front-end.
Q1 2019 or two quarters later after last release, whichever is later	Business <ul style="list-style-type: none"> Pilot launch Wellderly integrated care model Phase 1: Integration between community and social care Pilot launch B2C concierge service that helps seniors and their caregivers to schedule appointments, manage wellness and care records; serving as an overall personalized customer service team when it comes to managing all the facets of care for the elderly. Onboard 40 or more business / technology partners Develop the Wellderly@Work program, which works with corporate HR departments and other Health Maintenance Organizations to offer the concierge service to Wellderly members. Signing up more companies will not only be good for the bottom line, but it also means that we are making an impact on more people's lives. Technicals <ul style="list-style-type: none"> Beta release: Wellderly Platform Release 2 comprising <ul style="list-style-type: none"> Wellderly Application Programming Interface (API) & Software Development Kit (SDK); Wellderly Blockchain; and Wellderly Alliance Platform enhancement to support above business functions.
Q3 2019 or two quarters later after last release, whichever is later	Business <ul style="list-style-type: none"> Official launch Wellderly integrated care model Phase 1: Integration between community and social care. Official launch of B2C concierge service Onboard 60 or more business / technology partners Expand Wellderly Network into one or more Asia Pacific countries (e.g. Australia, Taiwan, Hongkong and Japan) Announcement of partnerships in the first country in the expansion plan Technicals Wellderly Platform Release 3 comprising country specific enhancements to support above business expansion.
Q1 2020 onwards	Business <ul style="list-style-type: none"> New product ideas and ongoing iteration Continue the expansion plan Implement Wellderly Network's second phase of integrated care model: Integration between primary care and secondary care Implement Wellderly Network's third phase of integrated care model: Integration between payors and providers Technicals Beta release: Wellderly Platform Release 4 to support above business expansion.

Appendix A:

Remote Monitoring study done by Dr Jit Seng Tan, Chief Medical Officer of Wellderly in 2016

This is a short sharing of my experience after rolling out remote monitoring services into homes under Lotus Eldercare, the home care service at which I am founder and Elderly Home Care Physician. This pilot started in late February 2016 and lasted a total of three months.

At the start, we questioned the need for such monitoring. Who would utilize such services and how would they benefit? After the initial brainstorming, we identified four demographics to roll out this remote monitoring pilot:

The first group was the chronically sick elderly patients who were dependent on others for their Activities of Daily Living (ADLs). This is also the largest group, and many of these patients already had their vital signs routinely monitored by their respective care givers.

The second group was active agers above 65 with zero to only a few chronic medical conditions. These people are generally well and ADL independent, able to still live life without any support. This is also the group that agencies such as the Health Promotion Board and Population Health services are targeting to prevent complications and hospitalizations. By managing their stable chronic medical conditions well, the goal is to maintain their independence for as long as possible.

The third group was younger patients below age of 65 who have already had some kind of chronic conditions and are still in the workforce. They may be on medications for chronic conditions but still lead a busy and hectic life.

Finally, the fourth group was those above 40 with no chronic medical conditions. Those who are undiagnosed or who refuse to accept prior diagnosis also fall into this group. Performing health screening among these people could potentially pick up previously undiagnosed conditions.

The vital signs that were monitored in this pilot were:

- Blood Pressure
- Heart Rate
- Blood Glucose
- Weight



Before discussing my experience of rolling out a remote monitoring service, perhaps I can elaborate how such a remote monitoring service might be of use to me as a clinician.

As a long-term home care physician, most of my patients are bed- or wheelchair- bound and mostly uncommunicative. Vital signs monitoring becomes the next level of communication between them and me. A fever or increased in heart rate might tell me the patient is sick, a sudden spike of blood glucose level may mean they have a bout of urinary tract infection. Monitoring in my group of patients is often paramount to detecting problems early, and with early intervention I can prevent the sickness from worsening.

Advantages of Remote Monitoring

There are many advantages that an effective remote monitoring service can be for patients. My patients in hospital transitional care services are a prime example. Frequently, their medications are adjusted, started or stopped while they are warded in the hospital due to a change in physiology during treatment. More intensive monitoring is needed when this group of patients goes home to ensure medications can be restarted or stopped when the clinical conditions change. For example, a patient coming in for septic shock with low blood pressure will have all his anti-hypertensive medications stopped. During treatment and recovery in the hospital, these medications may still be withheld due to the patient exhibiting normal blood pressure. After the patient returns home, he goes back to his routine life and blood pressure will begin to creep upwards as well. How can the clinician know to restart the medications in a timely manner? Remote monitoring in transitional care services will be very helping in such situations.

For patients followed up in normal GP clinics or polyclinics for primary care services, remote monitoring allows clinicians to establish a baseline of their vital signs. This is important as the patient's vital signs might be elevated due to "white-coat hypertension". Patients might have raised blood pressures consistently in clinic setting but back home, it might be normal or slightly raised. Many a times, when a family physician starts an anti-hypertensive medication, there is worry that the patient's blood pressure could drop too fast and too much, causing light-headedness and resulting in falls, especially in elderly patients. Remote monitoring can not only let us know the normal home blood pressure readings, but also allow us to see post medication effects, whether it is causing too much a drop. This holds very true for diabetic monitoring and treatment as well.

For chronic care, remote monitoring can also aid a physician in determining when the patient needs to return for review to replenish the medications for their chronic illness. So instead of reviewing monthly, 2 monthly or even 3 monthly for medications, patients on remote monitoring services can be given 6 monthly or even longer appointment dates. In future, if there are blood-taking points in the community, patient might not even have to visit doctors to obtain new prescriptions for their chronic conditions! They can be empowered by the remote monitoring system as it provides the best clinical evidence whether to continue treatment. This empowerment plus technology use will probably be able to cut the number of visits to polyclinics or hospital's specialist outpatient clinics.

For those who have been diagnosed but resistant to start therapy, remote monitoring is a good way to start these group on seeing their vital signs daily and if need be, start therapy. Remote monitoring can provide them all the objective data they need to convince themselves.

On the population health side, monitoring equipment place in strategic areas can allow the population to take measurement anytime and still be recorded into systems such as Health Hub. This will allow the nation to be very "smart" and provides everyone a venue to have some basic health checks.

User Acceptance and Effectiveness

So, now on to my experience for my remote monitoring trials.

It was easy for my patients who were already doing daily routine monitoring. It was hard to ask a new user to change their lifestyle habits and do daily monitoring, unless they had a life changing health event recently. We have in total about 18 users in our pilot group, divided into the four different profiles as listed above. After three months of usage, only eight users continued the daily monitoring. There are various reasons why patients encountered technical difficulties or decided to stop. Here are some of those reasons:

1 Technical issue 1

The monitoring device used Bluetooth to a gateway connected to the modem/router. If the distance between the gateway and the device was too far, the data could not sync. This happened to one of my patient whose family routinely did monitoring at home, but I was unable to get the readings.

2 Technical Issue 2

For monitoring of 2 or more patients in the same household, one needs to tap and identify him or herself before doing self-monitoring. This additional step might not go well with some active elderly. While they did their daily monitoring, they did not tap their cards on the gateway and hence, I was unable to get the readings remotely as well.

3

After a few weeks, there is user fatigue, especially for those active and functionally capable ones. If the reading does not fluctuate much week after week, the tendency to stop monitoring will be high for those doing self-monitoring.

4

Change of caregiver, and with the new care giver not knowing how to use the devices, the monitoring devices were left untouched.

5

There were 2 elderly patients who, being healthy and well, did not even bother to start the monitoring after the equipment were set up!

Apart from the negatives, there were some positives for sure! One bed bound uncommunicative elderly was diagnosed to have a dislocated joint after their heart rate and pulse rate were suddenly raised. Another middle age hypertensive executive was convinced to take up treatment after a period of self-monitoring and now has well controlled blood pressure.

From what we have learnt in these 3 months, remote monitoring will be more successful for those who are already doing routine self-monitoring than those who do not. After care support is important as well, to constantly retrain the individuals doing the monitoring work so that they are more confident. The technology itself must also work, since in some situation, the distance of the devices and the gateway can pose as a limiting issue. My gut feeling is those who have a life changing health related episode – e.g. a new stroke, a heart attack etc. – will be more willing to change and embrace remote monitoring. Those who are still well and do not have any serious health issues will be very much more resistant in switching a small part of their lifestyle to do remote monitoring. I believe that continually educating the people and empowering them with such technologies will be key to future healthcare models.

Appendix B:

Wellderly User Case Scenario

<u>Biodata:</u> Mr Lee Ah Hock Chinese Male Born 2 nd Feb 1958 Military Personnel Retired 30 th March 2018			<u>Health:</u> Yearly Periodic Health screening PES A, combat fit No chronic medical conditions, NKDA	<u>Interest:</u> Volunteer work Fishing Marathon Hiking	<u>Financial:</u> Savings Medishield / Medisave Investments in stocks & shares	<u>Family:</u> Elderly mother ADL dependent. Wife, 2 daughters and 1 son, all married.
Date / Age	Situation	Wellderly Category	Data Wellderly	Data Linkage	Service Provider	Wellderly Token (WDER)
01-01-2018 / 59	Preparing for retirement from full time military work – found and joined Wellderly as an ordinary member	1	Basic Bios as above.	+ Interest sync into Remindme Care	Wellderly	+1 WDER for joining and completion of data.
30-03-2018 / 60	Retired: searched Wellderly Cat 1 – Community participation – Sports/marathon	1	Added marathon event – sync into Remindme Care	+ Timing	SAFRA Half Marathon	-0.2 WDER for marathon registration
01-04-2018 / 60	Signed up successfully into Marathon: Wellderly recommended to be referred for pre-event health check as an A.I. automated process based on age and biostatics– referred to Sports Clinic, Outcome – Fit for participation	1	Added event – referral made and appointment to Sports Clinic	+ Sports Clinic EMR for fitness for Instruction + NEHR	Sports Clinic	-0.5 WDER for health screening in Sports Clinic
20-07-2018 / 60	Came back from overseas package tour, decided to learn some eldercare skills esp for dementia since elderly mother has dementia: search Wellderly Cat 1 – Continue Education – Course for Dementia	1	Added Course Time/Dates/Duration – Family Caregiver Training Program Name entered to list of potential dementia elder sitters and caregivers	+ time date of course + time date of completion	Course provider	-0.1 WDER with CTG funding
08-08-2018 / 60	Wants to do volunteer job, related to his past occupation as a military expert: Wellderly – Community Participation – referred to RSVP	1	Added Volunteer Learning Center – Provider for consultancy services	+ completion of course	RSVP Singapore	-0.1 WDER for courses

10-10-2018 / 60	Found volunteer work via Wellderly – Community participation – Volunteer work	1	Start volunteer work	Hours charted, with effort paid in WDER	Wellderly	+++ WDER
20-03-2023 / 65	Routine pre-marathon check found to have hypertension: Wellderly – health – remote monitoring services – referred to Predictive 365 and Lotus Eldercare for long term follow up	2	Started treatment for hypertension Started remote monitoring for blood pressure and pulse rate via blue tooth enabled BP devices with AI predictive responses provided by Detalytics	+Sports Clinic EMR for fitness for Instruction + monitoring data from Predictive 365 + Lotus Eldercare EMR - Lotus Eldercare Memory Systems (LEMS) + NEHR	Sports Clinic Predictive 365 Lotus Eldercare Detalytics	(-) WDER +++ WDER partially from CPF life payout + WDER CDMP payout
20-02-2025 / 67	Hiking in Australia, develop some chest pains – Tele monitoring showed ischemia from ECG tracing, tele consultation done with Lotus Eldercare back in Singapore – urgent referral to nearest tertiary hospital	3	Referred to hospital in Australia Pictures of hike sync to Remindme Care	+ Australia Hospital + Lotus Eldercare + Predictive 365 + NEHR	Australia Hospital – Urgent angioplasty done Lotus Eldercare – transferred baseline info like ECG and labs report to Australia Predictive 365	(-) WDER +++ WDER from Travel insurance
30-02-2025 / 67	Returned to Singapore and referred for Cardiology follow up by Lotus Eldercare	3	Referral to Cardiologist	+ Lotus Eldercare (with Australian hospital report) + Cardiologist EMR +NEHR	Lotus Eldercare Cardiology clinic	(-) WDER
17-05-2028 / 70	Discharged to Lotus Eldercare fully, no further cardiology review needed – Wellderly – Health – recommended to do AMD/ACP/LPA	3	Appt/date/time AMD/LPA/ACP done by Lotus Eldercare	+ Lotus Eldercare + NEHR	Lotus Eldercare	(-) WDER
12-09-2028 / 80	New volunteer work – sharing importance of SAF in primary schools	3	Start of volunteer in schools	Hours charted, with effort paid in WDER	MOE Primary School	+++ WDER given by MOE
30-07-2050 / 92	Sudden fall at home, ambulance called – suffered a haemorrhagic stroke over the basal ganglion – stay 3 months for rehabilitation in community hospital, good functional recovery and able to walk with a limp going home. Unable to do IADL independently.	4	Start of IADL dependency Date of hospitalisation Diagnosis	+ Hospital EMR + NEHR	Acute Hospital	(-) WDER +++ WDER from Medishield life +++ WDER from past volunteering work +++ WDER from CPF Life

05-05-2057 / 99	Sudden weakness and fall, ambulance called – suffered from ischemic stroke – severe and now ADL dependent with dysphagia	5	Start of ADL dependency Date of hospitalisation Diagnosis	+ Hospital EMR + NEHR	Acute Hospital	(-) WDER +++ WDER from Medishield life +++ WDER from past volunteering work +++ WDER from CPF Life
02-07-2057 / 99	2 months stay in hospital, ADL dependent: Wellderly – Health - Engage stay in caregiver Referred back to Lotus Eldercare for long term home care	5	Care giver engagement, details, agency details	+ LEMS care plans + NEHR + Homage + CARE PL	Lotus Eldercare CARE PL Homage	(-) WDER +++ WDER from past volunteering work +++ WDER from CPF Life
03-07-2057 / 99	Lotus Eldercare initiated Eldersshield assessment and claim from NTUC Income	5	Eldersshield, FDWG claims done	+ LEMS + NEHR + NTUC Income	Lotus Eldercare	+ WDER from Eldersshield claims
10-11-2057 / 99	Sudden breathlessness – Remote monitoring shows hyperventilation and desaturation, urgent tele presence consultation with Lotus Eldercare – call ambulance and readmitted Mr Lee – aspiration pneumonia, treated by acute hospital and started nasogastric tube feeding	6	Readmission time and day Diagnosis	+ Hospital EMR + LEMS + NEHR	Acute hospital Lotus Eldercare	(-) WDER +++ WDER from Medishield life +++ WDER from past volunteering work +++ WDER from CPF Life + WDER from Eldersshield claims
02-12-2057 / 99	Discharge from acute hospital – Lotus Eldercare MCA done, Preferred Plan of Care decision made, for home based care only	6	Date of MCA , donee(s) details	+ LEMS + NEHR	Lotus Eldercare	(-) WDER +++ WDER from CPF Life + WDER from Eldersshield claims + WDER from SMEF funding
02-02-2058 / 100	Passed away peacefully in his sleep – Wellderly – Healthcare – Afterlife chatbot assistance: Housecall GP was called and available to sign the CCOD	6	Date of Death, Diagnosis on CCOD	+ NEHR	Housecall GP Afterlife Chatbot Service	(-) WDER

