Hands-on
SHAFE

01: STUDY TO CROSS KNOWLEDGE GAPS AND TO PREPARE ONLINE TRAINING PACKAGES

Research results for The Netherlands

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The aim of IO1 is to create a valid basis for the training packages to be developed in the frame of the Hands-on SHAFE Erasmus+ project. This national report summarizes the research results in The Netherlands.

ORGANISATION NAME OF LEAD PARTNER

AFEdemy, Academy on Age-Friendly Environments in Europe B.V.

AUTHOR(S)

Willeke van Staalduinen, Kimberly Seibel and Javier Ganzarain

CONTRIBUTING PARTNER(S)

Carina Dantas, Cáritas Diocesana de Coimbra

Karin Stiehr, ISIS Sozialforschung • Sozialplanung • Politikberatung

Sonny Renaux, Airelle

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1 Aims of the report

Based on the approach of the World Health Organization, age-friendly environments include three dimensions – physical environments, social environments, and municipal services – with eight interconnected domains: 1) Outdoor environments, 2) Transport and mobility, 3) Housing, 4) Social participation, 5) Social inclusion and non-discrimination, 6) Civic engagement and employment, 7) Communication and information, 8) Community and health services.

The overall aim of the Hands-on SHAFE project is to promote smart healthy age-friendly environments by fostering the implementation and application of ICT solutions, adequate physical environments as well as health and well-being. For each of these areas - abbreviated by SMART, BUILT and HEALTHY- training packages for facilitators are to be developed. The target groups of the trainings are volunteers, entrepreneurs, family members, formal and informal caregivers and other stakeholders in personal services. Special awareness is given to low-skilled or low-qualified persons who want to engage in an entrepreneurial initiative.

Against this background, the Hands-on SHAFE project addresses:

- Facilitators who support the implementation of SHAFE products and services as direct target group,

- Persons of all ages whose social participation and inclusion can be improved by means of SHAFE products and services as indirect target group.

The aim of IO1 is to create a valid basis for the training packages to be developed. Information gaps on needs and demands on the side of end-users still hinder the implementation and usage of existing technologies and appropriate environments. Findings are needed to learn how adults can be best approached, trained and advised on aspects of smart healthy age-friendly environments.

This national report summarizes the research results in The Netherlands. Besides an overview on the national context it describes existing SHAFE products and services as well as their target groups, gaps between their availability and usage, existing implementation support offers and their funding, and examples of good practice for the application and implementation of user-centred services and products in the realms of SMART, BUILT and HEALTHY. With special regards to facilitators who want to start their own company, the BUSINESS chapter informs about SHAFE areas which are appropriate for this intention, main regulation, support offers and stakeholders for starting a business, available training concepts and examples of good training practice. Based on this information, conclusions will be drawn on appropriate strategies regarding the training and support of the target groups.

Together with the reports of the other Hands-on SHAFE partner countries, this national report will be used to elaborate a European synthesis report. Further, a European factsheet will be provided to interested stakeholders, containing information in a reader-friendly and low-threshold style and serving for further dissemination activities.

2 Methodology and proceedings

In compliance with the project proposal, the following methods served to achieve the above-mentioned aims:

1. Desk research in each partner country concerning offers in SHAFE products and services, practices in the application and implementation of these offers, and examples of good practice;

2. Interviews in each partner country with experts from the individual modules (SMART, HEALTHY, BUILT and BUSINESS) or interconnected areas as well as with representatives of the target groups for the training.

The lead organizations for the training IOs defined keyword for the desk research, and interview questions for experts and stakeholders were jointly decided upon. Given the complexity of the topics, an exemplary case was to be discussed at the beginning of the interviews. It was agreed that the interviews could be adapted according to the specific background and expertise of the interviewee.

Interviews with experts included the following questions:

1. Which SHAFE products, services and initiatives are known besides those that were mentioned in the initial example?

2. Which SHAFE products and services are available in the region?

3. Do you think there is a considerable gap between the availability of SHAFE products and services and their usage by those in particular need of them?

4. If yes:
    - What are the underlying reasons for this gap?
    - What should be done to remove such barriers?

5. Which role can personal counselling and accompaniment play in facilitating the usage of SHAFE products and services?

6. Can you tell us about specific initiatives in the pilot region to facilitate the usage of SHAFE products and services?

7. Are there areas for SHAFE products and services which can be recommended to start one's own enterprise?

8. Can you tell us about funding opportunities in the pilot region if someone wants to facilitate the usage of SHAFE products and services by those who are in need of them?

9. Which agencies or other organisations offer support to persons who want to start a business?

10. Which themes should be in the focus of SHAFE facilitators?

11. What are the specific counselling needs of the SHAFE end users?

12. What are the specific training needs of SHAFE facilitators?

13. Which problems may arise during the training of facilitators?

14. Do you know any training concepts and experiences that should be taken into account in the design of the Hands-on SHAFE training?

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15. What else can you recommend for the Hands-on SHAFE training?

Focus groups discussions with potential future facilitators were structured along the following questions:

1. Which SHAFE products and services are known besides those that were mentioned in the initial example?

2. Which SHAFE products and services are available in the region?

3. Who is in need of SHAFE products and services, and what are characteristics of these target groups?

4. Given these special needs: How should the implementation of SHAFE products and services be facilitated?

5. What can be done to make the role of a facilitator of SHAFE products and services attractive?

6. Which preconditions must be met to encourage facilitators to enrol in a training?

7. Which special requirements as regards contents, methods, duration and timing and certification must be met in the training?

8. What should be done to sustain the training outcomes?

List of consulted experts:

SMART

- Ad van Berlo, Manager R&D Stichting Smart Homes Eindhoven, January 24, 2020

- Christiane Wüstkamp, Project manager iZi housing, municipality of The Hague, January 21, 2020

HEALTHY

- Ellen Boszhard, GGD Haaglanden, Public Authority Haaglanden, January 7, 2020

- Tessel Houdijk, Policy officer Innovation Department, Ministry of Health, Jan. 29, 2020

- Jos Verweij, School Healthcare Studies Rotterdam UAS, January 17, 2020

- Florian Visser, Avisco Advies, January 17, 2020

BUILT

- Suleyman Özbek, Bureaumanager Kokon Architects, January 9, 2020

- Frans Sengers, Utrecht University, Homes4Life Project, January 9, 2020

BUSINESS

- René van Hees, Tutor Business Development, January 24, 2020

- Gerrit van Staalduinen, Director Koning & Drenth Logistics, January 23, 2020

TARGET GROUP FACILITATORS

- Peter Aarssen, Team Manager, Saffiergroep, The Hague, February 25, 2020

- End-users: Older adults from The Hague, including neighbourhood Transvaal, trainees of the AFE-Activists Erasmus+ project, November 2019

3 Offers and implementation of SHAFE products, services and initiatives

3.1 National, regional and local contexts

3.1.1 Profile of the pilot location

The Dutch partner and coordinator of the Hands-on SHAFE Erasmus+ project, AFEdemy, is based in Gouda. Gouda and The Hague are the pilot locations for the Hands-on SHAFE project. Both municipalities are based in the province South-Holland in the western part of the Netherlands. Gouda and The Hague are well connected by train stations and motorways. The distance between both cities is about 30 km.

Gouda is a small medieval town with about 72,000 inhabitants. The alderman/city executive of Gouda, Thierry van Vugt, opened the kick-off meeting held in Gouda on 5 and 6 November 2019. The municipal workers of Gouda are notified of the existence of the project and recognize Hands-on SHAFE as in line with local policy.

The municipality of The Hague is inhabited by about 540,000 persons. The Hague is the political and administrative centre of the Netherlands. The municipality of The Hague is associated partner of the Hands-on SHAFE project.

In the follow-up of this chapter, more statistic details will be revealed about both cities.

3.1.2 Population by age-group and sex

Statistically speaking, The Netherlands is one NUTS 1 region. The Netherlands consist of 12 provinces and about 350 municipalities. In 2019, the Netherlands count 17.2 million inhabitants, living in an area of 41,500 km2 (density 411 inhabitants/km2). 50.3% are female, 18.8% are aged above 65, of which 4.3% is over 80 (CBS 2019).

The current population of The Netherlands is presented in table 1 below. 25% of the Dutch population has a migrant background. More than half of them come from non-Western countries, such as Turkey, Latin America, Asia (excluding Indonesia and Japan) and Africa. Most migrants from non-Western countries live in the Western part of the Netherlands, where Gouda and The Hague are located as well.

TABLE 1: POPULATION IN THE NETHERLANDS

Population	Netherlands	Zuid-Holland	Gouda	The Hague
Number of inhabitants	17,200,000	3,680,652	72,000	539,000
Aged 65-79	2,400,000		10,378	59,110
Aged 80+	779,000		3,428	18,963
Migration background	4,200,000		20,000	294,000
Non-Western background	2,300,000		15,000	195,000

3.1.3 Workforce

8.6 million people in the Netherlands form the current labour population. Current unemployment rate is 3.6%. Remarkable is the large number of people in the Netherlands that

are employees with flexible contracts and people who are having their own business without personnel. These numbers increased steeply during the last decades. From 2003, the number of self-employed people grew from 630,000 to 1,1 million in 2018 and the number of employees with flexible contracts increased from 1.1 million in 2003 to almost 2 million in 2018.

TABLE 2: BUSINESS AND EMPLOYMENT

Business and employment	Netherlands	Gouda	The Hague
Self-employed 1-person company	1,100,000	4,065	44,856
Company 2-4 persons		945	8,308
Company 5-9 persons		414	2,726
Company 10+ persons		540	1,699
Companies – SMEs	1,820,000		
Working population	8,651,000	35,225	288,525
Employees with flex contracts	1,971,000		
Unemployed	319,000	3,920	30,430

SMEs top 5 are: specialistic business consultancy, building companies, trade, healthcare and welfare organisations and education.

Silver Economy: is not to be found as such. Central Bureau of Statistics uses different definitions and grouped them into sectors and therefore it is not possible to extrapolate Silver Economy business from them.

3.1.4 Health

Health figures indicate that more than half of the Dutch population suffers from at least one chronic disease. Multimorbidity is also to be found in almost 1/3 of the population. Especially older people have chronic diseases and sensory issues.

TABLE 3: HEALTH IN THE NETHERLANDS, 2019

Health	Netherlands
Person with 1 chronic disease	9,900,000
Multimorbidity	5,400,000
Visual problems	919,400
Hearing problems	761,600
Mobility problems	20% of women above 65 40% of women above 75 men above 75: 26%
Dementia	280,000

The Dutch healthcare system is a mixture of private and public initiatives, strongly regulated by the government and governmental agencies. € 100 billion per year (13.3% of national product) was spent on Dutch healthcare costs in 2018, € 5,805 per person (CBS 2019). Most healthcare costs spending goes to health insurance related costs and long-term care.

Table 4 presents the figures of health of older adults in The Hague. The figures are part of the 4 yearly monitor on health, performed by the public health authority Haaglanden (GGD Haaglanden). The monitor is based on a survey among citizens of The Hague.

TABLE 4: HEALTH FIGURES THE HAGUE, 65+ (2016)

HEALTH	THE HAGUE (in %)
Informal caregivers	13
Informal caregivers too much burden	19 of the informal caregivers
Own health valued	56 (very) healthy
One or more chronic diseases	55, in particular people from Surinam and people with lower SES
Number of falls	33
Feeling happy or very happy	88
Feeling socially isolated	7
Autonomy	83
Loneliness	52 (among 19-64 year: same percentage)
Frailty	25
Abuse (at home: bullying, financial, freedom)	6.5
(Severe) overweight	56
Sufficient physical activity	69
Alcohol abuse (over 14 (men) or 7 (women) glasses of alcohol per week)	30
Tobacco	16
Happy with their home	94
Happy with living environment	91
Receiving informal care	11 (40% 10 hours per week)
Municipal community support	60-74: 14% 75+: 46%
Long term care act: care at home	3

Public health authority Midden-Holland also performed a survey among the citizens of Gouda, to monitor their health. In the table below, the figures are presented for older citizens of Gouda.

TABLE 5: HEALTH FIGURES GOUDA, 65+ (2016)

HEALTH	GOUDA (in %)
Own health valued as (very) healthy	60 (very) healthy
Own health valued as (very) bad	9
Vital	66 (moderate-very high)
Autonomy	80
Not frail	74
Healthy weight	43
1 or more chronic diseases	57
Diabetes	17
Hearing disability	11
Visual disability	9
Mobility disability	23
Not able to perform daily activities	25
Not able to use own or public transport	13
Falls in last 3 months	17
Falls and (para)medical treatment	3.5
Moderate or high risk on depression/anxiety	50
High risk depression/anxiety	7
Social loneliness	50

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HEALTH	GOUDA (in %)
Emotional loneliness	34
Severe loneliness	12
Informal caregiver	15
Informal caregiving – burden	2.1
Receiving informal care	11
Receiving care (including informal care)	19
In need for more care	15
Sufficient physical activity	73
Overweight	56
Obese	17
Smoking	12
Heavy drinking	13
Voluntary work	25
Happy at home	8.3 out of 10
Happy with living environment	8 out of 10

			Levensverwachting		Gezonde levensverwachting			
					Levensverw. in als goed ervaren gezondh.		Levensverw. zonder lich. beperkingen	
Geslacht			2011/2014	2015/2018	2011/2014	2015/2018	2011/2014	2015/2018
Leeftijd (op 31 december)			jaren					
Onderwijsniveau								
Mannen	0 jaar	Laag onderwijsniveau	77,0	76,3	57,8	56,9	66,6	66,0
		Middelbaar onderwijsniveau	79,8	80,3	65,4	65,2	72,3	73,9
		Hoog onderwijsniveau	83,0	84,2	71,8	72,0	76,9	79,3
	65 jaar	Laag onderwijsniveau	17,1	17,3	9,5	10,0	12,3	12,0
		Middelbaar onderwijsniveau	18,8	19,3	11,7	12,6	14,3	15,4
		Hoog onderwijsniveau	21,3	22,4	15,0	15,7	16,8	18,5
Vrouwen	0 jaar	Laag onderwijsniveau	81,3	80,9	57,4	56,3	64,7	64,1
		Middelbaar onderwijsniveau	84,5	84,5	65,9	64,5	72,3	71,9
		Hoog onderwijsniveau	85,5	87,1	70,7	71,9	76,0	78,5
	65 jaar	Laag onderwijsniveau	20,7	20,4	10,2	11,3	11,9	11,8
		Middelbaar onderwijsniveau	22,8	22,9	14,4	14,6	15,4	14,4
		Hoog onderwijsniveau	23,3	24,7	15,3	17,1	16,7	18,0

FIGURE 1: LIFE EXPECTANCY AND HEALTHY LIFE YEARS PER EDUCATIONAL LEVEL

In chapter 3.1.6 the numbers of education level will be presented, but in regard with life expectancy and healthy life years expectancy, above figure shows that male and female with a low educational level (29% of the Dutch population) have a life expectancy that is 4-7 years lower than people with high educational levels. The difference in healthy life years is even worse: a difference of 16 years on average (4th column).

3.1.5 Housing

The Netherlands count about 7.7 million houses. Since a couple of decades, house owners are in the majority in the Netherlands. This is due to active national policies and support by the government on mortgages. The rent on mortgage for one house can half be reimbursed for 30 years by using the tax income system.

Since the financial crisis of 2008, it became more difficult for people to get a mortgage and especially young people have difficulties to buy their first house. At the moment there is huge shortage of affordable houses, new or existing. Adaptable housing for people with disabilities or older adults are even harder to get and therefore the older people's council of The Hague has declared housing as their key priority for 2020 and 2021.

Causes for the shortage of affordable and adaptable housing are multiple. For example, the unequal spread of the population across the country: people prefer to live in the western part where enough work is available, but also lead to the unavailability of building locations; the crisis of 2008-2012; and current environmental issues such as high level of nitrogen emissions and the presence of PFAS in the soil that demand climate neutral building activities.

Houses in the Netherlands are constructed by private companies, such as real estate or developing companies who make profit on building and selling houses on the Dutch housing market. At the other hand there are 350 social housing organisations (legal identity: mostly societies) active in the Netherlands. They own 2.4 million houses and rent these to 4.0 million tenants. They work in close cooperation with local governments on the realisation of social housing and services.

TABLE 6: HOUSING IN THE NETHERLANDS

Housing	Netherlands	Gouda	The Hague
Number of houses	7,741,000	32,209	259,264
• Social housing for rent	2,295,414	10,235	80,215
• Private housing for rent	1,004,225	4,543	58,601
• Houses in ownership	4,487,894	17,431	112,724
Adaptable housing		23,410	154,799

3.1.6 Education and ICT literacy

Most children start primary school (called 'basisschool' in Dutch) the day after their 4th birthday; whenever that is throughout the year. From their 5th birthday, all children are obliged to go to school (called 'leerplicht' in Dutch) till they are 16. Secondary education consists of 3 levels: (V)MBO: vocational education, HAVO: senior general secondary education and VWO: pre-university education. After secondary education Dutch people can choose for further vocational education, and universities of applied sciences or full universities.

The table presents known levels of education of Dutch people. Low literacy and analphabetism are still frequent in the Netherlands. One out of 5 Dutch has no or very limited digital skills. Especially older people and low educated people lack behind in ICT skills. High educated people have almost 3 times more basic ICT skills than low educated people.

TABLE 7: EDUCATION AND LITERACY IN THE NETHERLANDS

Education and (ICT) literacy	Netherlands	Gouda	The Hague
Low level education	4,442,000 (26%)	29%	33%
Medium level education	5,301,000 (31%)	39%	36%
High level education	4,288,000 (25%)	32%	31%
Analphabetism	250,000 (1.4%)		
Low literate	2,500,000 (14%)		
ICT illiterate – none or very small skills	22%		

3.1.7 Governance and funding of SHAFE measures

The municipality of Gouda provides funding[1] to Gouda citizens and organisations to work on the topics of 'safety', 'liveability' and 'social structure' in Gouda. Conditions are that the funding must benefit Gouda citizens, that without funding it cannot take place and that they are in line with Gouda policy.

Also, The Hague provides several funding[2] opportunities that are in line with SHAFE measures, such as for environment and sustainability, neighbourhood activities, housing, culture, care and community support and sports.

At national level, the Dutch government provides several kinds of funding and information:

- The Ministry of Health provides a website showcasing many care and eHealth solutions: Zorg van nu[3] (Care at the present) and Zorg voor Innoveren[4] (Care for innovation):.

- The Ministry of Health fosters acceleration programmes to exchange information between care professional, patient, professional networks and between the care domains long term care and acute care (VIPP – Versnellingsprogramma Informatie-uitwisseling Patiënt en Professional InZicht). More information on the Zorg van Nu website.

- The Ministry of Health and Netherlands Enterprise Agency offer the e-Health at home funding programme 'Stimuleringsregeling e-health Thuis[5] (SET). SET fosters scaling up and implementation of the use of existing e-health applications for older adults and people with a chronic disease or disability at home. The funding is available for care professionals who facilitate care and support at home and wants to cooperate with a purchaser.

- Ministry of Health: Innovation Impulse[6] Care providers people with disabilities. This funding is meant for healthcare providers to implement existing technologies.

- Ministry of Health: 15% of the budget for nursing homes is for innovations and working hours saving measures.

- Netherlands Enterprise Agency (Rijksdienst voor Ondernemend Nederland[7]): Investment funds Seed capital for e-health start-ups. Especially for upscaling.

Some Dutch City Councils also provide 360⁰ services, like YES!Delft[8], a tech incubator, to turn innovative ideas based on disruptive technology into successful social entrepreneurship. These initiatives connect an ecosystem of experts, mentors, corporate partners and investors. In these incubators, providers can get in contact with initiatives to see the different possibilities and companies, they use the regional centres to get in contact with users.

More concretely in the SHAFE domain, also Dutch universities, Erasmus University Rotterdam, Erasmus MC and TU Delft, are cooperating to develop a joint eco-system[9] to address the major social challenges in the SMART, HEALTH, BUILT and even BUSINESS fields. It will provide a

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1   gouda.nl/Inwoners/Subsidieloket
2   denhaag.nl/nl/subsidies.htm
3   zorgvannu.nl
4   zorgvoorinnoveren.nl
5   rvo.nl/subsidies-regelingen/stimuleringsregeling-ehealth-thuis-set
6   volwaardig-leven.nl/projecten/innovatie-impuls
7   rvo.nl
8   yesdelft.com
9   https://www.eur.nl/en/news/erasmus-university-tu-delft-and-erasmus-mc-intensify-collaboration

working space in which scientists in the fields of medicine and the health sciences, technical sciences and social sciences can collaborate with businesses and institutions in start-ups, scale-ups and wet labs. It will have co-creation sites all over the region. "This far-reaching collaboration gives a better opportunity for realising revolutionary solutions and for systematically advancing the social embedding and acceptance of new technologies and medical developments," says Hans Smits, interim President of the Erasmus University's Executive Board.

3.2 SMART: ICT for BUILT and HEALTHY

3.2.1 SMART measures and their target groups

In many ways the Netherlands are active to achieve smart environments all over the country. The public authorities support initiatives for innovation by extra funding, implementation measures and information and provides an attractive business climate for IT companies to come to the Netherlands.

ICT for Healthy: The ministry of Health provides several funding programmes for healthcare organisations to implement and upscale e-Health solutions (see 3.1.7).

ICT for Built: The combination of technology and built environment is still not very common, as also pointed out by Marston and Van Hoof (2019). In consultation with our experts, they point at exemplary measures such as energy efficiency ICT measures in the built environment (smart meters for example) or the empathic housing initiative and smart neighbourhood in Aalst/Malvalaan from TU Eindhoven with interactive floor tiles to measure walking patterns, wall displays for reminders, alarm gates for people with dementia and display colours and guide movements (Omroep Brabant, 2020).

3.2.2 Challenges in implementation and gaps between availability and usage

Background

Generally speaking, members of the older population in the Netherlands currently use technology less than the rest of the population (van Ingen, de Haan and Duimel, 2007). Whereas over 94% of Dutch have internet at home and 92% use it, only 60% of 75-plussers could use internet at home and just 50% used it (Centraal Bureau voor de Statistiek, 2016).

One of the reasons pointed during the interviews is that general public do not know the advantages of smart devices, as this is only known at higher level, but not at ground level. What services are being offered?

Another reason mentioned is the fear of usage due to the fact that they are not used to this kind of technology and devices and they don't know them, i.e. older people are afraid to get a robot vacuum cleaner in their room. Providing information on what is out there, the possibilities of usage of technology and benefits that it can bring to the older people could take away the fear of usage of technology.

According to CBS, the rate is rising fastest in this age category, conforming to the hypothesis that technological literacy in the older population should rise as younger generations join their ranks. In the past several years, 75-plussers have used tablets more, with the rate rising from 10% to 30%. Meanwhile, among those 65 to 75 years old, 80% use the internet at home. The preferred device of this age group is a laptop, but they are much more likely than 75-plussers to use a smartphone (54% vs. 29%). These differences could narrow in the future.

We are moving towards willingness to adopt technology to stay independent, but still we cannot see available technology in the stores. Due to financial cuts (some services or products are not being paid anymore by the national health systems or the insurances) and the lack of co-financing opportunities, there is a barrier to make affordable those products and services that are available in the market. At the moment there is a financial discuss going on these topics.

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Health

The Dutch government has prioritized e-health and technology in the care sector in recent years, for example, through the Longer at Home ('Langer Thuis') program (Ministerie van Volksgezondheid, Welzijn en Sport, 2019). Among its goals, it is promoting awareness of e-health solutions, such as fall sensors, communication platforms, or remote monitoring for care providers. This is very needed, as i.e. an interviewee mentioned that people consider that fall sensors are not for them, even if it would be, and therefore not so well adopted as i.e. emergency buttons. Through eHealth week, care and educational institutions, municipalities, health insurers, suppliers, and patient associations demonstrate the potential of integrating care and technology. Another goal of the Dutch government is ensuring that more Dutch, especially those with chronic illness, have access to their health records and data.

"Go digital," was the advice of the Commission on Future Independent-Living Older Adults ('Toekomst zorg thuiswonende ouderen') in a recent report (Commissie Toekomst zorg thuiswonende ouderen, 2020). One of the major recommendations is that the use of technology should be accepted as normal by professional caregivers and older adults alike to facilitate independence, reduce the amount of labour needed, and maintain cost efficiency. A trend that has been identified as incremental factor of ICT usage by older people, is the fact that they ask more as they get info from practitioner or home care and nursing home care professionals, sometimes also from family members, and get curious about what they can get from it. At the same time, the Commission acknowledges that technology will not be a silver bullet and local, and regional governments will have to work together to meet growing care needs.

There are several examples of eHealth and non-digital solutions in the area of health. For example, an app called **BeterDichtbij** allows people speak with medical professionals without the need to leave their home. Some of the advantages are that people can ask questions to ease their worries, get test results, and potentially avoid unnecessary trips to the doctor's office.

Other possible smart solutions to support independent living are:

- Smart mirror: to remind on to take medication, to drink or other things to help to remember.
- Smart tv and smart phone: could be used as well as help to remember and to get activated.
- Automatically turn of the cooker (induction), also when a pan is empty.
- Automatic lights and sensors are easily to get and to install.
- Automatic diary: a light indicates the day of the week and the date.
- Smart spoon/fork to help to eating if case of tremble
- Diapers with sensors, indicating that the person needs to be cleaned (for nursing homes)
- Social contact with relatives, friends, doctors, etc.
- Sensors detecting movement and falls
- Social robotics
- Indoor and outdoor solution: Tracking and tracing devices, i.e. tablet connected to smart sensors in the wall to help to go (orientation) in a building or outside from A to B.

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* Outdoor solution: PERSAFE is an app and clip on a smartphone to alarm family by voice control.

Privacy and Security Issues

A growing area of concern in the technology sector is privacy and safety. The sale of personal and user data of individuals on the internet or smart device can become a lucrative source of income for tech companies (Duong, 2019). Information and devices can also be vulnerable to hacking or cyber-attacks. The Dutch government provides some information and advice to users for reducing the risks of using smart devices and works to take off the market devices that can be easily hacked. On the website "Autoriteit Personsgegevens"[10] people can learn about topics related to privacy and data protection and also file complaints. **SeniorWeb** (described in more detail below) also provides information about online and digital security targeted for seniors. Some progress may still need to be made as The Netherlands had the most breaches of General Data Protection Regulation (GDPR) of all EU-28 countries according to a 2020 report (McCarthy, 2020). GDPR, which became law in 2018, is supposed to enable individuals more control over their use of data. The Netherlands had 40,647 breaches between May 2018 and January 2019; it also had the highest number (147.20) per 100,000 residents.

Some general ways that SMART technologies are being used include improving sustainability and environmental approaches, and safety and security. For example, using wireless sensors[11] to control lighting or indoor climate control can help to improve energy efficiency. Advances in safety and security through cameras and other solutions always come with the added concern about cybersecurity and hacking (read further below).

3.2.3 Available implementation support offers by stakeholders

At organisation level, organisations are not well aware of new services they could offer to this target population. Here there are already some very supportive initiatives like Dementia Dynamics in Design, which is a collaboration of the Tranzo center at Tillburg University, Technische Universiteit Eindhoven, GGzE (Eindhoven), and the Slimmer Leven cooperative. It is also part of the Create Health-programme of ZonMW. It seeks to use technology to address the social challenges of people living with early dementia ('Dementia Dynamics in Design', 2019). One of the initiatives of this project is the **Living Lab**, which works with different stakeholders to support the development of new tools based on the needs of people living with dementia. Through this platform, companies can test out their tools with 200 people living with dementia.

Older adults largely gain their skills through self-study, and most have an interest in improving, which they would like to do through courses catered to people in their age group (van Ingen, de Haan and Duimel, 2007). A website called **SeniorWeb**[12] offers courses and computer assistance through the phone, internet, or home visits from a volunteer. Tips on safety and security online are offered through courses, written in plain language or via the aforementioned technical support (online or in-person). In addition, SeniorWeb provides tips on tablets and smart TVs and promotes helpful apps. For example, visitors to the site can learn about Eetmeter[13], a digital food diary that helps you track your diet and make changes in order to eat heathier.

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[10] autoriteitpersoonsgegevens.nl
[11] sh-ib.nl
[12] seniorweb.nl
[13] mijn.voedingscentrum.nl/nl/

An initiative by the Ministry of Economic Affairs, Team **Smart Industry**, helps companies to explore business opportunities through smart technology and digitization (Smart Industry, 2020). They offer assessment tools for factories, advice on cyber security and other topics, workshops, and other events. In Fieldlabs throughout the country, companies can also discover, test, or showcase smart solutions.

3.2.4 Funding opportunities for implementation support

See 3.1.7 "Governance and funding of SHAFE measures".

3.2.5 Examples of good practice in implementation support

SHAFE SMART Good practice #1

ToverTafel, Active Cues

Objectives

Apathy is a major problem among people with later stage dementia. Originally targeting people in later stages of dementia, the ToverTafel[14] encourages them to move and interact with their environment. New versions are available for populations with other special needs, such as people with mental disability and children.

Key facts

The private company of ToverTafel, Active Cues, was founded in 2015 by 3 founders. It was originally developed by Hester Le Riche during her PhD research at TU Delft and VU Amsterdam. The company promotes happy contact with technology through photo exhibits and other initiatives. The company also makes use of co-design to develop new kinds of ToverTafel for other target groups.

ToverTafel started in The Netherlands in 2009, and since then it is available in the United Kingdom, Germany, France and Sweden.

ToverTafel is carried out by the purchasers of the game(s). They install the game and make use of the instructions on how to play it.

The product is supported by the purchasers and the players of the game. Since the product is still on the market, it must be a valuable product.

The development costs are for the company Active Cues. The return on investment comes from selling the product.

Implementation

The ToverTafel is a playful, interactive light table for older people, blind people, kids, and adults. There is a version for people with dementia, one for children in special education (Sprout), and one for adults with cognitive disorders (UP).

ToverTafel is a package deal of product and additional support to play the games. Healthcare organisations and other interested people can buy the product and support.

The device is hung from the ceiling over a table. It is portable, which means that it can be easily moved to another room and played at a different table. Equipped with a projector and

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[14] https://tovertafel.nl/

speakers, the device comes with nine games (with more also available) that can be played alone or under supervision.

The ToverTafel is a product one can buy online on the market. The company provides additional support and installation instructions.

Risk management is on the company Active Cues.

Results

The product development has been successful: the product further develops for other target groups and is still available on the market. The company Active Cues only offers the Tovertafel and has 40 employees.

SHAFE SMART Good Practice #2

Tessa[15] (TinyBots)

Tessa is a social robot, one of many that are currently in development or on the market.

Objectives

Tessa is a social robot for people at a certain phase of dementia. It functions as an agenda to help structure their days, suggest activities, and provide reminders.

Key facts

Tessa was developed by the private company TinyBots. Individuals and healthcare organisations can purchase Tessa. The purchase costs can be reduced by the Dutch healthcare insurance system and by tax reduction (for individuals).

Tessa is on the market since 3 years. Over 400 individuals and 75 healthcare institutions are making use of Tessa. In testimonials of customers, individuals mention that they feel less lonely while using Tessa and supports the informal carer to leave the house for a while.

The investment costs are for the developing private company TinyBots. Their return of investment is the selling of Tessa to the consumer and business market.

Implementation

Tessa is for people at stage 2 or 3 of dementia who are still living at home. The device is placed somewhere central in the person's home, such as the living room. Via an app, a family member or caregiver creates the agenda, for example, by adding an activity, a message, and the time when Tessa should give it. The robot can also play music, but it is not interactive and cannot respond when people speak.

The robot was tested during development through several pilots, and users pointed out some problems with setting up the robot and creating a profile that are now supposedly resolved (*Robot Tessa*, 2018). A help desk for users is also available. One potential problem is if the user unplugs the robot without the family member or caregiver knowing.

Results

Tessa is still on the market, so must be a successful product. Six people work at the company.

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[15] tinybots.nl/particulieren/home

ZorgScherm[16] (Senior Tablet) by Memory Lane

ZorgScherm is an example of one of many devices meant to connect older adults to caregivers and others through an easy-to-use interface.

Objectives

The ZorgScherm is an example of one of many devices designed to be accessible for older people with limited technological knowledge. Because it looks like a digital photo frame, it looks like it belongs in a living room. The device can help caregivers provide remote care and other services. Memory Lane intended for it to be easy to use and to enable older people to remain in their homes for longer while combatting loneliness.

Key facts

The ICT is developed for older adults and their children as informal carers. It is developed to enable children to be get in touch with their parents, also if physical contact is not feasible. All functionalities of the tablet can be remotely controlled and set.

At first the private company Memory Lane developed an app to connect children and parents. This app was sold 40,000 times and in use with 30 municipalities until the end of 2018. Because many people work with their own tablet, operational issues occurred to use the app. This is why Memory Lane started to develop their own tablet: ZorgScherm. LENOVO developed the touchscreen and the software has been elaborated by Roxelane Development. The online connection is provided by partner T-Mobile. At the moment Memory Lane grew to a company size of 35 employees.

The device is currently being used by Radar Wmo and Home Instead in Rotterdam. Memory Lane provided one tablet to all of the residents of Rotterdam Centrum and Overschie to try out for six months (*Wmo radar en Home Instead introduceren seniorentablet*, 2019). In Castricum, 30 users were given the screen for free by Home Instead Kennemerland *(KBO Noord Holland*, 2019).

Return on investment is foreseen by selling the tablet to individual customers and municipalities. The tablet can be purchased for an amount of € 29.95 per month (within a 2 year subscription; payment per year). The Memory Lane Companion App is included and the tablet contains a SIM-card.

Implementation

The user-friendly device is supposed to serve as both a senior tablet and means for care providers to check on their clients. It is supposed to be easy to set up and can work via Wi-Fi or SIM card. It has care functions, emergency functions, and relaxation functions. Some examples include a photo album, video calling function, and an agenda for appointments. Memory Lane can also create customized apps and provide analytics of users.

Results

The product development started in 2014. The company is still on the market.

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[16] mymemorylane.com

Project Zilver[17] (primarily North and South Holland)

Objectives

Project Zilver was established as a consortium to investigate how the new channel of voice can help older adults in their daily lives. Project Zilver's mission is to improve the lives of, and around, older adults through voice technology, in a non-stigmatising manner.

Project Zilver is written with a Z to pay hommage to its Dutch roots. In Dutch silver is spelled with a z: 'zilver'. Also, when the movement will spread to other countries with their own Project Zilver initiatives, this will help the brand stand out.

Key facts

Project Zilver is an initiative of Voice developer Maarten Lens-FitzGerald, innovation lab of the social insurance bank NOVUM, older people organisation ANBO, insurance company Achmea, Google and Social Insurance Bank.

Implementation

The research project provided a Google Home Assistant for 55+ people to try out for a few weeks. The trial included 3,450 participants, followed by a qualitative study among 14 older adults.

One downside of the assistant is that you cannot use it to call in the case of an emergency. It also sometimes does not recognize the speaker's (Dutch) language well, and users have noted unaccountable differences between the Dutch and English versions.

One of the pros of the assistant is that it is voice-activated, which means that is potentially easier to use and more accessible for some than button-activated devices. There is also a possibility that talking to a device that replies to you could reduce loneliness. Along those same lines, the device also enables older people to message or (video) call loved ones. The overall vision is for such devices to enable older people to remain in their homes longer.

Each partner has different reasons and potential benefits for participating in this trial. Google would like to increase its market and improve its voice recognition software. Achmea would like to work on an aid device for fall prevention. The SVB would like to see people use such devices to ask about their pensions (AOW) or get answers to some FAQs.

Results

According to a news article about the project (Bremmer, 2019), participants used their assistant it for setting a timer, finding out the weather forecast, helping them locate their phone, and making a shopping lists.

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[17] projectzilver.com/en/

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SHAFE SMART Good Practice #5

iZi Woning[18] (The Hague)

Objectives

An initiative of The Hague municipality, the project promotes technological solutions that allow older people to be self-reliant in their current home environment for longer. They welcomed developers to test their solutions with older residents. The iZi house is open to the public to visit and learn about solutions, many of which are already available on the market.

Key facts

The iZi Livinglab was founded by the municipality of The Hague in cooperation with Leyden University Medical Centre, University of Tilburg, The Hague University of Applied Sciences, Social Housing cooperation HaagWonen, Welfare organisation Xtra, Nell, Technical University Delft, World Startup Factory.

Implementation

The three-room experience house in The Hague has 90 solutions; some but not all are digital. There are devices like social or care robots, smart tablets, lifestyle sensors, and personal alarms. The bathroom is adapted with handles and slip-proof floors, as well as a toothpaste dispenser. The bedroom has special lighting to prevent falls during a trip to the bathroom at night.

The project includes the iZi Living Lab, which consists of a pre-existing group of older residents in social housing that can test and provide feedback on the products. More proficient users work with and train others in the group, and can tour visitors through the iZi house.

The program won a World Smart City award in 2018 (Inclusive and Shared Cities category). However, it is not unique, as many such smart showcase homes currently exist in The Netherlands (i.e. Comfort Woning in Overschie, Rotterdam).

Youtube: https://www.youtube.com/watch?v=AZH1U8uqtoM

Results

The iZi demo house is available for visits. Funding for upscaling and further exploitation is being searched for.

SHAFE SMART Good Practice #6

BeterDichtbij (Better near) App[19]

Objectives

The app was developed to make healthcare more easily accessible and simple.

Key facts

BeterDichtbij was initiated within and by the healthcare sector itself in 2015 or 2016. 28 regional hospitals, the members of the society of cooperating general hospitals, cooperated to jointly develop BeterDichtbij. Since 2018 is BeterDichtbij app part of an independent organisation.

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[18] wijenizi.nl
[19] beterdichtbij.nl

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Implementation

The app can be downloaded for free in the App Store and Google Play. The healthcare professional or doctor invites the user to BeterDichtbij. With the app people can send a photo, pdfs or files with a doctor. In this way, the results of a medical check-up can also be read at home. Also the information of Thuisarts.nl (doctor at home) is available by using the app. Secured access to the app is by using a pin code.

Results

The app is supported by the society of general hospitals. The team of BeterDichtbij consists of about 17 people.

SHAFE SMART Good Practice #7

Alliantie Digitaal Samenleven[20] (Alliance Digital Society)

Objectives

To foster the participation and inclusion of people in the (digital) society and to empower them.

Key facts

Alliance Digital Society is a public private cooperation of about 30 partners. It was initiated by the Ministry of Internal Affairs, Number Five Foundation and VodafoneZiggo in 2019.

To become partner of the Alliance there are three possible roles:

- Family: close to the alliance, like a family. Partners support coordination, facilitate and organise the programme of the Alliance. Support is given in hours and in money.

- Friend: participates actively in the working groups and contributes by expertise, people and means.

- Fan: works on the actions of the Alliance, sometimes participates in events and disseminate the Alliance in further occasions.

Implementation

Alliance Digital Society helps people to identify the most important things in society and support in digital solutions. The Alliance works with several themes in working groups:

- losing a partner by death or divorce, where remaining partners are supported to take care of their affairs by learning digital solutions, and

- the Society supports digital skills among older people

Results

The initiative just started.

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[20] digitaalsamenleven.nl

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SHAFE SMART Good Practice #8

Social media for Community or neighbourhood watch

Objectives

To prevent neighbourhoods from criminal activities.

Key facts

The practice can be found everywhere in The Netherlands. In urban, sub-urban and rural areas, small and large communities.

This practice is only run by volunteers. Neighbours in a street, neighbourhood or larger community agree to share their mobile numbers and to create a WhatsApp group. Sometimes also the local policy officer participates in the group.

No investment costs.

Implementation

The group function of Whatsapp is used in The Netherlands to create so-called Whatsapp Neighbourhood prevention groups. Neighbours can share information and alarm each other to inform if a suspicious person or other dangerous situations in the neighbourhood occur. Such as: a woman is ringing at doors and cheating older adults, or there have been burglaries while using the back door in street X. When entering the neighbourhood a special sign (see figure 2) is placed to warn criminals off. These signs can be found everywhere.

FIGURE 2: WHATSAPP NEIGHBOURHOOD PREVENTION IN GOUDA

Results

The initiatives are to be found everywhere in The Netherlands. Groups come and go, depending on the availability and activity of a few group leaders.

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3.3 HEALTHY

3.3.1 HEALTHY measures and their target groups

The Netherlands have a national health insurance system to cover costs for primary care (general practitioners, physical activists, pharmacy, district nursing, etc.), secondary care (hospital care) and tertiary care (specialised healthcare provisions). Every inhabitant of the Netherlands is mandatory insured. The health insurance system is executed by private insurance companies. They are strongly regulated by the national government to provide basic insurances for all people that cover elementary healthcare related costs. People can have additional insurances for provisions such as dental care, physical activity therapy and alternative therapies. Besides the payment of nominal premiums by each Dutch inhabitant, Dutch employers pay additional revenues for their employees within the Dutch tax system. Self-employed people and pensioners pay these healthcare insurance costs themselves. (Health Insurance Act, *Zorgverzekeringswet*)

Also, nationally insured are the costs for residential long term care, such as nursing home care, care for people with mental disabilities (Long Term Care Act, *Wet langdurige zorg*). The government defines what is insured and private insurance companies execute the act at regional level. Since 2015, access to nursing homes or other residential care facilities has been limited to patients that need 24 hours per day and 7 days per week supervision and care. People with less intensive care needs are bound to remain at home. At the moment, there are several initiatives to facilitate older people with less care needs who want to live together in clustered independent housing units, with joint meeting, care and alarming facilities.

Public health is allocated within the municipalities. Each municipality is part of the regional public health service (GGD, *Gemeentelijke Gezondheids Diensten*). These services provide information and propose measures regarding issues such as prevention, abuse and homeless people.

Since 2015 municipalities are fully responsible to provide community care and support at local level. This includes facilities such as home care, transport services, social participation and inclusion. Municipalities are also responsible for child and youth care, participation and work. The national government decentralized these tasks to the municipalities without the necessary upgrade of budgetary levels. The role of the family in the Netherlands is not as big as in other countries, but due to these budget transfers or cuts, it is becoming more necessary.

People in long term care and community care can receive the needed care by contracted local or regional health care providers or ask for a so-called personal care budget. In the last case, the control of the quality of care is handed over to the customer.

SHAFE mainly concentrates on public health and community care and support.

3.3.2 Challenges in implementation and gaps between availability and usage

The main challenge at local level is the increase of demand for local community care and support and insufficient budgeting. This leads to cuts in provisions at local level, such as the provision of welfare support, reduced availability of community centres among others.

Besides budget cuts, home care providers are also confronted with shortages of well-qualified personnel, so there is also an urgency to work on different ways, the need at short-term to train nurses and also organisational change-management, which at the moment is not getting any attention and is more difficult than the technology part itself, and requires implementation at all levels of the organisation.

The consulted experts point at several challenges that threatens quality of life and healthy lives, especially for people who are more fragile:

- The consumption of far outdated food

- Sufficient consumption of liquids

- Financial, emotional and physical abuse

- Prepare your personal will (for heritage, but also for expressing the treatments you refrain)

- Income issues, such as insufficient finances to afford additional medicines, therapies, wellbeing

- For (informal) caregivers and volunteers, understand what chronic disease or impairment mean in personal lives.

3.3.3 Available implementation support offers by stakeholders

The municipalities of Gouda and The Hague have several local programmes to offer community care and support. They contract local active partners to provide homecare and other services to local people in need. The municipalities yearly publish calls for tenders. Since recent the municipalities are thinking of more-years contracts with providers, to ensure longer term provision of care and community support.

3.3.4 Funding opportunities for implementation support

To have healthcare and public health facilities funded, one must officially be recognized as healthcare provider. This is regulated by the Healthcare Institutions Admission Act (Wet Toelating Zorginstellingen)[21]. For welfare facilities a variety of funding programmes, even to experiment services, is available, however recent budget cuts offer minimal opportunities at the moment.

3.3.5 Example/s of good practice in implementation support

SHAFE HEALTHY Good Practice #1

Haags Ontmoeten[22] (Meeting in The Hague)

Objectives

To offer older adults and their informal carers a place to walk in freely. To offer a place to meet each other, to share experiences and to relax.

Key facts

Haags Ontmoeten is an initiative of the municipality of The Hague from 2018. At the moment about 40 official Haags Ontmoeten places are active. The aim is to have places in every neighbourhood. Five programme coordinators are assigned to connect people, organisations and administrations within the neighbourhoods. It is expected that 13,000 people benefit from the programme.

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[21] wtzi.nl
[22] haagsontmoeten.nl

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The investments are done by the municipality of The Hague and are part of the programme Senior-friendly The Hague.

Implementation

People can meet to jointly drink coffee, to talk with people in the same circumstances, to consult professionals or to perform joint activities, such as cooking, pub quizzes, music or knitting.

Results

There is no evaluation available yet.

SHAFE HEALTHY Good Practice #2

Kijksluiter[23] (Short video about medicine)

Objectives

To offer patients and informal caregivers a short video in which they learn more in a personalised way about the medicine that is prescribed.

Key facts

Kijksluiter is established by the Foundation Kijksluiter. Since December 2018, the foundation officially cooperates with the ministry of Health and the Medicines Evaluation Board to guarantee the quality and completeness of the information on medicines. Healthcare insurance companies promote the use of Kijksluiter. Already 80% of the pharmacies of Kijksluiter. Kijksluiter is further offered by hospitals, general practitioners, electronic health data and others.

In 2020 a subscription to offer Kijksluiter costs per year:

- Pharmacy: € 585.-
- General Practitioner: € 195.-
- Hospital outpatient pharmacy: € 585.-
- Hospital inpatient: € 2,400.-
- Hospital connection to GIP screen: € 3,000.-

Kijksluiter is available for patients free of charge. The healthcare professional provides the link to Kijksluiter via email, SMS, patients portal or patients app.

Kijksluiter is addressed to people that can't or don't read small texts. Available in Dutch, English, Turkish and Moroccan. Upcoming also German, French and Spanish.

Implementation

One video on Kijksluiter takes 6 or 7 minutes to watch. The videos are interactive, so the viewer can decide which parts he/she wants to see or not and which parts to repeat. The used language has been adjusted according to the standards of Stichting Pharos[24] and within test rounds with people with low educational levels.

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[23] kijksluiter.nl/#!
[24] https://www.pharos.nl/

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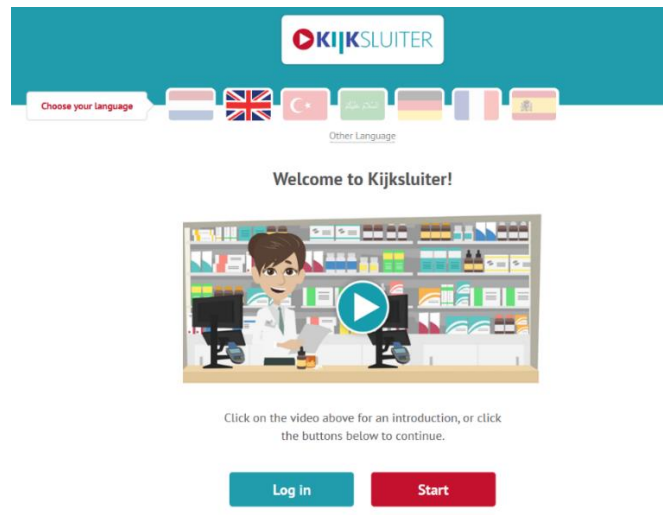Erasmus+ Programme
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FIGURE 3: KIJKSLUITER HOME PAGE

Results

Initiative just started. The cooperation within the healthcare sector is promising.

SHAFE HEALTHY Good Practice #3

Digivaardig in de zorg[25] (Digital skills in health care)

Objectives

The use of digital technology is increasing within the healthcare sector. Workers in healthcare have to increasingly deal with applications, such as electronic health record, domotics, telemedicine. A share of the healthcare professionals is not well equipped yet to use digital technology. Therefore the Coalition Digivaardig in de zorg (Digital skills in healthcare) took the initiative to improve the skills of healthcare workers.

Key facts

The initiative is active since 2018. The cooperating partners are a coalition of partners from healthcare organisations, VET institutions and Universities of Applied Sciences, Patients Federation, supported by the core group ECP!Platform for Information Society, healthcare institution 's Heeren Loo and the Ministry of Health. They created the website.

Implementation

Digivaardig in de zorg is a website for care professionals who want to improve their digital skills. The website focuses on elderly care institutions and people with disabilities. The initiative to the website was taken by long term care institutions. The editors of the website have different backgrounds, such as university and VET institutions.

Digicoaches (of the institutions or peer to peer) are used to foster the learning within the institutions. They support their colleagues to improve their digital skills.

The website further offers national sites on elderly care, home care and care for people with disabilities. Also they offer a self-test for managers. Additionally, the site provides leaflets, publications, agenda of face-to-face meetings and lectures.

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[25] digivaardigindezorg.nl

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3.4 BUILT: Housing, public spaces, buildings and mobility

3.4.1 BUILT measures and their target groups

In The Netherlands the building of houses, public spaces and other facilities is strongly regulated. Municipalities and provinces allocate building areas and which destination the building should have (housing, shopping, industry, health care, etc.). The allocation of places and destination has to be decided in close consultation with the local population. The Dutch government wants to simplify and merge the existing regulation for spatial development. From 2021, the so-called Environmental Act (*Omgevingswet*) probably will start.

The actual Dutch building regulation (*Bouwbesluit*[26]) of buildings is from 2012 and is updated every year.

Housing

According to the advice from the Dutch Commission on Future Independent-Living Older Adults ('*Toekomst zorg thuiswonende ouderen*'), too few houses for older people are currently being built, and, as a result, they are staying too long in houses that are no longer suitable for them *(Commissie Toekomst zorg thuiswonende ouderen*, 2020). They note the need for new forms of communal and semi-communal living, something between the traditional house and the nursing home. There are currently 2.3 million 60-plussers in The Netherlands, the majority of whom do not have the income to purchase homes from the luxury market (Dinther, 2020). Creating more housing options for older adults would facilitate their moving out of homes that are too large or having too many stairs and make them available for families.

Public Spaces

The Healthy Design Guide ('*GezondOntwerpWijzer*'[27] - GOW), a platform hosted by the Dutch government, provides information on healthy living environments, including recommendations and examples (*De GezondOntwerpWijzer, 2020*). According to the GOW, public spaces should be accessible, clean, and safe, relying on camera surveillance, if necessary. Streets should be free of obstacles, and neighbourhood facilities should be accessible to all with front doors that are visible for safety reasons. Urban spaces should strike a balance between compactness and open space (i.e. courtyards).

3.4.2 Challenges in implementation and gaps between availability and usage

The main challenge in The Netherlands at the moment is the big shortage of housing, in general, and specific housing for seniors, in particular. The building of housing has largely suffocated from the financial crisis from 2008-2012. Since then the plans for new housing restarted, but because of long duration of decision-making procedures, not many housing has been realised since. Nowadays the building is hampered by nitrogen and PFAS problems. There is too much nitrogen and PFAS released that is a threat for the health condition of the Dutch citizens. Therefore, extra measures have to be taken.

Further challenges and solutions came from the consulted experts.

To provide accessible bathrooms, without taking too much space, the door to the toilet room should have a door that opens out and away from the side with the toilet bowl ("Slot aan de

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[26] bouwbesluitonline.nl
[27] gezondeleefomgeving.nl

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kant van de pot"). Doors to the outside can also be made automatic or easy to open; barriers can be removed or replaced with sloped ones made of rubber.

In terms of health, some good practices included ensuring good ventilation, heating, and sufficient daylight inside. The interviewee mentioned a project in Den Helder where they were enlarging balconies to enable people to go outside. The step down was also filled in with 6cm of extra strong concrete to make everything at one level.

Kokon Architects have designed patio houses (patiowoningen), a sort of life cycle-proof housing (levensloopbestendige woningen). These designs contain enough room for the later conversion of the ground floor to include a bedroom and bathroom, thus, removing the need to go upstairs when a person is no longer able. The houses are wider and thus more expensive. Targeted at people 50 and older, some families have also bought them intending to stay in one house for a long time. Another option discussed was the kangaroo house.

Experts also advise to use the Irish Universal Design Guidelines[28], to learn more about aspect such as aromas, colours, contrasts.

Transport facilities are needed. This could be a kind of paratransit provision: a system of transport based in between big public transport and small taxis, for instance based on small flexible vans and mobility-as-a-service (MaaS) ideas Innovative examples can be found throughout Europe, particularly in Sweden and Finland.

In new built physical environments, the WIFI connection is very bad because of the big concrete walls. While designing one must think of more room for cables to install WIFI amplifiers. Also it would be wise to think carefully how to enmesh a building with digital infrastructure (for instance an idea would be add dedicated technical maintenance rooms on the same areas in the floor plan in order to create a shaft for maintenance and upgrading access)

3.4.3 Available implementation support offers by stakeholders

For Individuals

People wishing to modify their homes or apartment have different loans available to them: a surplus mortgage, 'Blijverslening'[29] and the 'Verzilverlening'[30] from the Stimuleringsfonds Volkshuisvesting (SVn). Introduced by SVn in 2016, the Blijverslening allows tenants and homeowners to renovate their houses into life-cycle proof homes (levensloopbestendige woningen). Municipalities manage and set their own conditions for these loans. It is currently available in 31 municipalities. Examples of modifications include raised toilet, chair lift, or seated shower.

Wet maatschappelijke ondersteuning[31] (Wmo) assesses needs or limitations of individuals and helps them resolve this problem, i.e. through long-term care at home or in a nursing home; mobility scooter, wheelchair, and lift, TaxiBus, etc. The assessment is done through a home visit by a consultant. The facilities available vary by municipality. If a nursing home is recommended, that facility takes over care for everything (van Andel, 2019).

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[28] universaldesign.ie/Built-Environment/Housing/
[29] svn.nl/blijverslening
[30] svn.nl/verzilverlening
[31] rijksoverheid.nl/onderwerpen/zorg-en-ondersteuning-thuis/wmo-2015

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3.4.4 Funding opportunities for implementation support

The Dutch government wants to stimulate the development of new types of housing and care for older adults. One new initiative that begun in 2019 includes a subsidy (70-90%) for the initial phase of a residential care program, a government-backed loan for the development phase, and a possibility to guarantee up to 10 million in loans for 50 projects each year (Ministerie van Algemene Zaken, 2019). The hope is that this will make it easier for social entrepreneurs to get funding for their projects. The schema intends to support innovative, small-scale and clustered residential care arrangements for people with a low- or middle income with life-course-proof or easily adaptable homes (rented or owned).

3.4.5 Examples of good practice in implementation support

SHAFE BUILT Good Practice #1

Blokkie Om, Rotterdam (Overschie)

Objectives

The purpose of the project was to create a dementia-friendly, walkable shopping route for people in a Rotterdam neighbourhood. Recognizing where they are can often be a problem for people with dementia. If they know their route, people living with dementia can stay active and moving, which might help them more independently (*Dementievriendelijke wandelroute in Rotterdam*, 2019).

Key facts

The Blokkie om was designed Gerjanne van Gink by the request of the Rotterdam municipality. They had two neighbourhoods in mind but ultimately chose to begin with the Overschie neighbourhood. The other potential neighbourhood, Kralingen-Crooswijk, is currently experiencing considerable construction, but it is still possible that a route will be installed there eventually.

Implementation

There are two routes marked yellow or green. The routes have extra benches, and special attention was paid to sidewalk entry and exit ramps for people that need them along the way. The project is monitoring the success of the route, but a local nursing home already has reported that it is working well. The organizers are discussing with the retailer's association ways to increase awareness and ultimately use of the route.

Results

It is a young initiative.

SHAFE BUILT Good Practice #2

The Hofje (Knarrenhof® Foundation[32])

Objectives

The Knarrenhof® Foundation promotes cooperative housing for people, including older adults, that want to live both socially and independently. The model form promoted is the courtyard

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[32] knarrenhof.nl

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house (Hofjes), where residents live independently around a common courtyard or garden. The residents can, therefore, do activities together and keep an eye on one another.

Key facts

Knarrenhof® is designed by the company Locksley Collective. The owner, Peter Prak, has 25 years of experience in designing living neighbourhoods in The Netherlands, such as Amersfoort Vathorst, Stadshagen Zwolle, Meerstad Groningen. The other founders of Knarrenhof® are INBO architects (Eerde Schippers – partner/director), Cooper Feldman, Nel Sangers, Liedeke Reitsma. Partners of the initiative are the province of Overijssel, municipalities and the national government. The national government named Knarrenhof® three times as good practice.

Until now, one Hofje has been realised in the city of Zwolle. The initiators plan to further develop the Knarrenhof® concept across the country and several local plans have been launched.

Implementation

What is unique about their approach is that the projects begin with the residents, who then help design the building before it is constructed. Knarrenhof finances the research and plan development stages, and guide groups through legal and other organizational challenges.

They argue that the market does not provide enough "life-cycle proof" (levensloopbestendige woningen) residences. The few that exist are often very expensive. Furthermore, half of municipalities currently have a shortage of senior housing.

The "hofje" promoted by Knarrenhof is number one of top ten interesting forms of care residence arrangement.

FIGURE 4: KNARRENHOF®

Results:

The concept is well known and appreciated. Further steps towards national coverage of the concept is in the making.

SHAFE BUILT Good Practice #3

GezondOntwerpWijzer – HealthyDesignGuide

Objectives

To provide information, insights and inspiration on healthy design.

Key facts

The National Institute for Public Health and Environment developed the website Healthy living environment. Within this programme, the GezondOntwerpWijzer was developed to provide recommendations, practices, organisations, tools and other information to every interested stakeholder.

Investment costs are public funded by the Dutch national government.

Implementation

The GezondOntwerpWijzer is divided in 7 themes. Most are very relevant in the SHAFE context. To avoid procedural regulations and issues here, we immediately switch to several practices that are mentioned on the website. Per theme a maximum of 4 is selected in line with the diversity and distribution over the country. Some website links also provide websites in the English language.

- Healthy mobility
    - o GWL terrain Amsterdam: living area that is restricted for cars. Many green spaces. Parking is in a garage. https://www.gwl-terrein.nl/
    - o Cycle city Houten: cycling road in the form of a star where cyclists have priority upon cars. https://www.houten.nl/burgers/verkeer-en-vervoer/fietsen1/fietsnet/
    - o Kindlint: is a child-friendly road in the neighbourhood that connects playgrounds, schools and other child places. The road can be recognized by jolly coloured stones in the pathways. https://www.verkeersnet.nl/verkeerseducatie/2193/project-kindlint-draagt-bij-aan-veiliger-omgeving/
    - o Stichting Woerden actief: to promote physical activity among the population of Woerden by providing an information programme in local media, improvements of cycle and foot paths. https://woerdenactief.nl/
- Safety
    - o Plans safety of the municipalities of Nijkerk and Alphen aan den Rijn.
- Public spaces
    - o Neighbourhood squares Breda and Tilburg: these squares have been well maintained and shops have been supported to create more attractive shops. Activities are organised on the squares. http://www.adprom.nl/downloads%20bestanden/pleinenboek.pdf
    - o WiMBY!, Hoogvliet Rotterdam. Welcome into My Backyard! Architecture of experimental buildings and small scale projects and cooperation on architecture, urban planning, education and art. https://www.crimsonweb.org/spip.php?article27
    - o Westergasfabriek, Amsterdam. A terrain with 19 historic buildings. The terrain has been decorated as public parc and the buildings are destined for culture,

restaurants and bars and cultural activities. http://www.project-westergasfabriek.nl/
- o Tuin van Noord, Leiden: park, sports facilities and allotments to offer more space to the population nearby.
- Green areas and water
  - o Green roofs, Nijmegen. The city of Nijmegen provides funding to install green roofs to influence the climate change, sustainability and climate neutral city. http://www.waterbewust.nl/groendakmetsubsidie.html
  - o Healing garden Martini Hospital Groningen: a healing environment in the hospital where people feel pretty. Lots of daylight, green square and garden. Patients feel better and heal more quickly and experience less stress. https://www.rtvnoord.nl/nieuws/111005/Martini-Ziekenhuis-krijgt-healing-garden
  - o Action gardens: people can grow their own vegetables, fruit and flowers in small scale gardens (25m2). It is a meeting place for people. https://doetuinenhaarlem.nl/ a
  - o Sustainable water system Potmarge, Leeuwarden. The historical stream runs through the city garden. The banks have cycle and foot paths. At another location there are places where the water will be purified. https://www.noorderbreedte.nl/2003/12/01/potmarge-de-tuin-van-leeuwarden/
- Environmental quality
  - o Maasterras, Dordrecht/Zwijndrecht: an area between the railway stations of Zwijndrecht and Dordrecht, near the centres of both municipalities. Making use of the height differences several industries are build there to avoid hinder for the living centres. http://www.wijkendordrecht.nl/oudkrispijn/nieuws-en-publicaties/nieuws-uit-oud-krispijn/archief/april-2005/maasterras-tussen-stations-zwijndrecht-en-dordrecht
  - o Supply plan Centre of Utrecht. The city of Utrecht plans to optimize the supply of shops in the centre of the city and to improve air quality. http://www.goedvervoer.eu/BROCHUtrecht.pdf
  - o City of sun, Heerhugowaard is the largest CO_2-emission neutral neighbourhood in the world. http://www.heerhugowaardstadvandezon.nl/
- Sports and plays
  - o Prismare, Enschede. This is a cluster of a school, youth centre, library, child care, sports facility, theatre, homes for care, music and atelier. Facilities can be used in daytime by some organisations, and others use the same facilities at night. http://www.prismare.nl/
  - o Seniors' playground. In Rotterdam older adults can sport in a playground with special attributes. These attributes train people's balance and are preventive for falls. https://www.tno.nl/media/1366/kvl-pz-ouderen_beweging_hillesluis_maart_2007.pdf
  - o Cruyff Courts: good and safe places to play sports for children and potential other interested persons. http://www.cruyff-foundation.org/cruyff-courts/
  - o Krajicek Playgrounds: places where young people can play or sport, especially in neighbourhoods with little space to play. http://www.krajicek.nl/Playgrounds
- Indoor air
  - o New hospital buildings Erasmus Medical Centre, Rotterdam: healing environment to recover and work. http://www.erasmusmc.nl/nieuwbouw/
  - o PRONET (English): overview of scientific examples in the field of indoor air. https://www.researchgate.net/publication/244924873_The_PRONET_project_Pollution_reduction_options_network_to_enhance_implementation_of_successful_transport_and_indoor_environment_practices_in_Europe

- o Allergy free housing, Barendrecht. 40 houses have been realised for families with children with allergic asthma. https://www.wono.nl/pdf/realisatie%20aa%20barendrecht.pdf
- o Clean school: Pieter Wijtenschool, Waalwijk, a healthy and sustainable school where children can learn well and teachers teach well. http://www.pieterwijten.nl/index.php/onze-school

Results

Public website, where we can add the results of SHAFE at the end of the project, I assume.

3.5 BUSINESS: Business opportunities and planning

3.5.1 Silver economy market and potential areas for starting a SHAFE business

With the increasing numbers of older adults in The Netherlands, the market opportunities for people who want to start providing services or selling products that are in line with SHAFE is also increasing. Important is to be well informed and experienced with the SMART or BUILT or HEALTH field and to know who the stakeholders are and know the networks.

For the Netherlands, one can consider the following products and services:

- ICT support: devices and installations
- ICT trainings: how to use
- Housing support, advise and adaptations
- Nursing and personal support at home
- Cleaning services
- Meals provision
- Meeting provision and services
- Transport services
- To design quantified self-technologies, for example, to measure blood pressure. Keep in mind aesthetics as it needs to be nice to have and nice to wear.
- Consultancy on sustainability measures
- Be aware of the business model and the return on investment
- Smart age-friendly furniture
- Home sharing provisions: When deployed in a meaningful way ICT offers many new opportunities. Think, for example, of the matching algorithms they use in Ireland to foster home sharing. Home sharing offers a solution to the shortage of housing in Ireland and also facilitates the retrofitting of houses, because banks are more open to provide loans in such cases.
- Sewing and repairing cloths
- Social work provision

3.5.2 Main regulations for starting a business

At first, a starting entrepreneur has to choose what legal entity the business should have.

For single persons, in the Netherlands it is best to choose for a self-employed business or limited company. When you start a business with more colleagues[33], there are several other opportunities, varying from limited company, cooperative or big company. The legal entity defines the liability. In case of a self-employed business the entrepreneur is liable for debts with its own private finances; in case of a company there is no personal liability.

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[33] ondernemersplein.kvk.nl/starten-met-een-zakenpartner/

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After the decision on the legal entity (eventually by including notary services), the business has to be registered at the Trade Register of the Dutch Chamber of Commerce: Handelsregister, Kamer van Koophandel[34]. The KvK notifies the Dutch Tax Authority about the registration. Dutch Tax provides a VAT-number and informs the entrepreneur about the mandatory VAT submissions. VAT has to be submitted every quarter of the year.

To achieve a tax reduction as self-employed entrepreneur, the entrepreneur needs to keep books of his/her working hours on the company and administration. In 2020 the limit is € 7030 per year; the amount will be lowered until € 5000 per year in 2028. In total the entrepreneur needs to spend 1225 hours on the business. Work types can be administration, acquisition, project work and/or advertisement. The books must remain available for 7 years, 10 years in case of real estate.

3.5.3 Support offers and stakeholders for starting a business

According to the interviewee experts in the business area, the first two things you need to do as entrepreneur are:

1. To hire a very well experienced book keeper or accountant to keep your books and administration in the correct way;

2. To check if you really are an entrepreneur: For this you can use an online tool such as:

   - https://www.kvk.nl/krachtmeting/

   - https://entrepreneurscan.com/nl/ondernemerstest/

   - https://www.123test.nl/ondernemerstest/

The tests also support the starting entrepreneur to learn where they should additionally learn to level up their confidence and to know where to start.

More information for entrepreneurs is available in the following places:

- The Ondernemersplein[35] website is addressed to entrepreneurs and is founded by the Dutch Chamber of Commerce (KvK) and several Ministries. It contains information about taxes, employees, offices, regulations, international affairs, etc. See for more information Section 3.5.5.

- To support people who start their own business, the Dutch Chamber of Commerce (KvK) provides a roadmap. The roadmap contains items such as: what are the opportunities and your own competences, what is the available market, financial planning, legal entity, administration rules, company regulations such as location, fire regulations, how to find customers. Additionally, the KvK organises regional meetings where entrepreneurs can meet.

- The Dutch government supports Dutch entrepreneurs by providing an agency only for entrepreneurs: Netherlands Enterprise Agency - Rijksdienst voor Ondernemend Nederland (RVO[36]). This agency supports entrepreneurs to invest, develop and expand organisations in the Netherlands and abroad.

- At regional level, the Chamber of Commerce provides so-called regional starter desks. Also, universities may provide or support these starter desks. The province of Zuid-

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[34] kvk.nl
[35] ondernemersplein.nl or business.gov
[36] rvo.nl

Holland provides the Innovation Quarter[37]. This is an agency to strengthen the regional economic structure by stimulating the innovation potential of the greater delta region of Rotterdam and The Hague.

- Entrepreneurs can meet at HigherLevel[38], the Dutch Business Forum, to exchange information, questions and answers. There entrepreneurs can also ask for comments on financial plan, website, international businesses, and consumer topics.

- Banks, consultancy agencies and accountants also offer support to entrepreneurs.

- See also TechIncubators in 3.1.7

3.5.4 Available training concepts

At the Chamber of Commerce – Kamer van Koophandel (KvK)[39] many trainings for entrepreneurs are available, like, for example, coaching for start-ups, services as business case, security and cybersecurity, courageous entrepreneurship, annual accounts.

3.5.5 Example/s of good training practice

SHAFE BUSINESS Good Practice

Ondernemersplein – Business.gov

Objectives

Website to inform entrepreneurs on how to start and maintain a business

Key facts

The Ondernemersplein (Entrepreneurs square) is an initiative from the Dutch Ministry of Internal Affairs. Partners are the Chamber of Commerce, Netherlands Enterprise Agency, Tax authority, Central Bureau of Statistics. On the site, people can find information and advise from the (semi) government. Everything that is needed to start and maintain a business. Law and regulation, tax rules, funding, events and sector information.

Implementation

The website provides the following learning content:

- Roadmap to start a company in 10 steps: business plan, financing, hourly rate, trade register, etc.

- Employees: how to find and appoint, temporary contracts, sickness of the employee, say farewell to an employee, etc.

- Financing: banking loans, savings, investors, lease contracts, funding opportunities

- Freelance and self employed: when is someone an entrepreneur, liberal professions, self-employed versus employed, model agreements

- Taxes: VAT, car lease, income tax, business tax, etc.

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37 innovationquarter.nl/en/
38 higherlevel.nl
39 kvk.nl

- Operations: administration and book keeping, financial affairs, liability, contracts and legal affairs, privacy regulation, fraud and safety, insurances, etc.

- Innovation and product development: innovation concept, innovation to market, financing innovations, patents and IPR

- Business buildings: locations, rent or purchase, permits, safety, energy saving and sustainability

- International entrepreneurship: start a company abroad, import and export, outsourcing, VAT, international money transfers, customs, taxes, etc.

- Environmental responsibility: energy saving, corporate social responsibility, CO_2 reduction, economic footprint.

- Closure or selling the company: goodwill, buyers, letter of intent, secrecy, tax issues, employees.

Results

The website provides many answers to questions of entrepreneurs and is open to feedback and further improvements.

4 Recommendations for training packages

4.1 Needs of the end-users and role of facilitators

People who want to (continue to) live independently and participate in society are looking for safety at home and on the streets, secure measures to receive healthcare or being able to alarm someone when at home. Also, they look for opportunities to participate in society.

The role of facilitators can be to facilitate above mentioned priorities of older adults as a volunteer, (in)formal caregiver or as entrepreneur and to provide them SHAFE solutions.

To be able to perform this role successfully, before starting their own initiative, facilitators – the learners of the Hands-on SHAFE project – would need to learn the themes listed in section 4.3.

4.2 Strategies to attract and address potential SHAFE facilitators

Many facilitators didn't ask to become a facilitator, but circumstances make them a facilitator. For example, if parents or partner is developing health issues, the child or partner needs to take measures to secure safe independent living. To reach this group in The Netherlands the facilitators can make use of informal caregivers organisations, such as MantelzorgNL[40], older people's organisations, such as AGE Platform Europe[41], and older people's councils in Gouda and The Hague.

Volunteer facilitators on SHAFE can be found in the neighbourhoods of Gouda and The Hague. Every neighbourhood in Gouda or The Hague has volunteers that are active in so-called neighbourhood teams. These teams receive funding from the local governments to be active at community level. Also they come into action if the government has new building plans or other activities in the neighbourhood (reconstruction, trees cuts and new plants, fibre provisions).

Facilitators who want to make their own business in Gouda and The Hague can approach the municipal workers who facilitate labour participation in the respective communities. Also, they may approach the Chamber of Commerce mentioned on the website for entrepreneurs Ondernemersplein[35].

4.3 Appropriate training contents and methods

Most important thing to start with, is to provide the trainings in Dutch. That is the first question everyone asks: "It will be in Dutch, isn't it?".

- Understanding what the (real) needs, preferences and fears of people with chronic diseases or disabilities are. Where, i.e. diet, medicines, vision, hearing or energy, do people have to take care of? Understanding the support they can get from family (this varies from country to country)) and professional carers in their environment.

- Understanding SHAFE.

- SMART: What is available on the SMART market that can be easily installed and used at home or underway and benefits the end-user? Does it work? Is it useful/meaningful and for whom (Product-market fit)? What level of literacy, confidence and support is

[40] mantelzorg.nl
[41] age-platform.eu

needed? When is it needed? How to guarantee safe and easy access for the end-user? What can the facilitator do and what needs to be left over to experts? Considering the role of the practitioner or home care and nursing home care professionals as prescriber in order to disseminate the available technology and its benefits to the older people.

- HEALTHY: to learn more about the ageing process, prevention, participation, diseases and treatment. What can the facilitator do him/her self, what is for professional caregivers?

- BUILT: to create safe living environments, it is helpful to learn what is available on the market and which easy solutions can be taken to adapt the living environment?

- BUSINESS: Understanding the business model, players (user, prescriber, payer, client-support group, …), the real problem (prevention, cure, care…) and their needs and expectations. How to get in contact with end-users, client-support groups, organisations and providers? How to (re)act? How to develop the demand? How to sell, in general, and, concretely, to organisations? Design-thinking, creative-thinking and co-creation (rather to be used at creativity and ideation phases than at market development phase) to look at the issue from the perspective of the end-user and be sensitive for other kind of possibilities.

Also, some transversal topics need to be addressed, like, i.e. privacy, safety, interoperability, accessibility, affordability, information exchange between professionals and organisations.

For SMART and BUILT use a modular approach by providing information per location:

- Living room

- Bathroom

- Bedroom

- Toilet

- Entrance

- Elevator

- Outdoor spaces

- Public buildings, such as meeting rooms, health facilities

And for all make use of illustrations, sketches to explain, as clear and visual as possible, the situations and make use of questions and answers. In order to build-up sensitivity it is most important that facilitators use also their own personal examples.

4.4 Strategies to sustain the training outcomes

- To provide a certificate after completing a certain number of modules;

- To provide tests within the training, so people can check if they understand;

- To ask and showcase practices learners provide to the trainings;

5 Quotes of experts and stakeholders

👋👋 We would want to have more safety, more housing for seniors, more benches in the public area and appropriate transport for people with disabilities. 👋👋

Older adults in The Hague, as end-users of SHAFE

👋👋 I sometimes got questions why we don't possess a specified technology? The reason? That is because older adults haven't asked for it (yet). 👋👋

Christiane Wüstkamp, iZi House The Hague

👋👋 As entrepreneur: at first hire an excellent book keeper for your administration. 👋👋

Gerrit van Staalduinen, Director Koning & Drenth Logistics

👋👋 Check if you really are an entrepreneur. 👋👋

René van Hees, Tutor Business Development

👋👋 Always visit a future client in the home situation to check how to support and avoid incidents such as falling. 👋👋

Peter Aarssen, (Team Manager Saffiergroep

👋👋 Patio houses are wider and thus more expensive but offer sufficient room for conversion and are life cycle—proof. 👋👋

Suleyman Özbek, Kokon Architects

👋👋 Doors have to open out and away from the side with the toilet bowl: Slot aan de kant van de pot. 👋👋

Suleyman Özbek, Kokon Architects

👋👋 Older people are the ones who have to use these technologies, know how to use it and find it meaningful. Concentrate in really needed devices. We use regional centres to get in contact with users. Older people ask more as they get info from practitioner or home care and nursing home care professionals and get curious about what they can get. 👋👋

Jos Verweij, School Healthcare Studies Rotterdam UAS

👋👋 There is a lot of smart technology available, but demand is not well-developed. Advantages of smart technologies are only known at higher level and we are moving towards willingness to adopt technology. 👋👋

Florian Visser, Avisco Advies

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- Christiane Wüstkamp, Project manager iZi housing, municipality of The Hague, January 21, 2020

HEALTHY

- Ellen Boszhard, GGD Haaglanden, Public Authority Haaglanden, January 7, 2020

- Tessel Houdijk, Policy officer Innovation Department, Ministry of Health, January 29, 2020

- Jos Verweij, School Healthcare Studies Rotterdam UAS, January 17, 2020

- Florian Visser, Avisco Advies, January 17, 2020

BUILT

- Suleyman Özbek, Bureaumanager Kokon Architects, January 9, 2020

- Frans Sengers, Utrecht University, Homes4Life Project, January 9, 2020

BUSINESS

- René van Hees, Tutor Business Development, January 24, 2020

- Gerrit van Staalduinen, Director Koning & Drenth Logistics, January 23, 2020

TARGET GROUP FACILITATORS

- Peter Aarssen, Team Manager, Saffiergroep, The Hague, February 25, 2020

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