

ENSAFE – Business Plan Netherlands Appendix

Lead Partner: ICE Creates
Authors: Simon Platt, Chris Lunn
Contributors: Joyce de Laat, Paul Martin, Lorenzo Lasagne
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1 Introduction

This document provides detail for elements of the business model for ENSAFE in the Netherlands, it acts as an appendix to the main business plan document. Specifically, this document contains the Market Analysis for the Netherlands. First the background of the Dutch healthcare system is given.

1.1 Background

In the Dutch healthcare system, a transition is ongoing towards more self-reliance and self-care of patients. The Dutch government supports and tries to accelerate this transition and believes that eHealth could play a major role in this. eHealth is defined as the use of new information and communication technologies, internet technology in particular, to support or improve health and healthcare. In July 2014 the Ministry of Health, Welfare and Sport (VWS) has formulated three goals in the field of eHealth which they want to accomplish with caregivers and caretakers in the next 5 years:

- 80% of chronically ill people (and 40% of the general population) has direct access to medical data and health records and can use these in mobile apps or internet applications;
- 75% of the chronically ill and vulnerable elderly is able to perform measurements independently, mostly in combination with remote telemonitoring of a care professional;
- Everyone who receives home care is able to communicate 24/7 remotely with a care professional using a display (and domotics).

In this way the role of eHealth has to grow. Over 90% of doctors list examples of eHealth that they find promising. Doctors listed a broad range of eHealth applications as pilots and good examples. Use of eHealth among nurses is on the rise. Among nurses, use of the internet for looking up information, for example, or showing patients information, increased. The use of apps for care and health increased in this group as well. The use of telecare (communication via a video connection) and medicine dispensers among nurses increased in care in particular - this almost doubled, to around one fifth of the nurses (Source: 2015 eHealth monitor by Nictiz and Nivel).

2 Market Analysis

The following sections outlines the results for the Market Analysis of the Netherlands. Market drivers, the market structure and competitor products & services are discussed.

2.1 Market Drivers

Desk research and insight gathered from potential partners across the Netherlands provides us with a strong foundation to build the ENSAFE as a service offer. Several drivers and factors play a role in this.

2.1.1 Political & Legal Drivers

In Dutch healthcare, we can distinguish several key partners in order to gain a better understanding of who's who and who does what, we distinguish between private individuals, healthcare providers and healthcare purchasers. The Netherlands has a population of 16.8 million. As “policyholders” – i.e. having a contract with a health insurer – these private individuals are one of the three key players in the Dutch healthcare. Healthcare providers play another key role in healthcare. Healthcare providers are defined as all organisations, institutions and individual healthcare providers who offer healthcare, assistance and support. In other words, the term “healthcare provider” refers to more than merely an institution that provides healthcare services. Healthcare purchasers are (depending on the type of care) healthcare insurers, healthcare administration offices and local authorities which are responsible for purchasing care as well as implementing the core healthcare acts and act as a mediator between care providers and care takers. Figure 1 shows the triangle which the private individuals, healthcare providers and health insurers formulate in the Dutch healthcare system (Source: This is how Dutch healthcare works. Maaïke de Vries & Jenny Kossen, 2016).

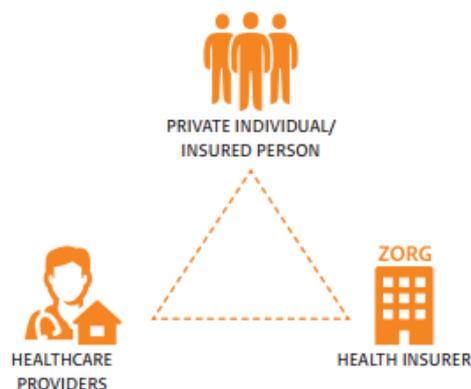


Figure 1: Healthcare in the Netherlands by Ministry of Public Health, Welfare and Sport (January 2016)

This past year a number of organisations in the healthcare sector have expressly made contact to jointly deal with obstacles to eHealth. Examples are the eHealth Implementation Agenda that was published in 2014 (mentioned in the introduction). The ‘eHealth and improvement of healthcare’ letter years (Minister and State Secretary of VWS, 2014) can give a significant boost to this national control. In the letter, the Minister and the State Secretary set concrete targets in the area of e-Health for the next five. In the table below these priorities are outlined, together with the implications for ENSAFE.

According to the letter the government wants to make every effort, together with parties in the healthcare sector, to realise these objectives and formulate an ‘eHealth step-by-step plan’/‘roadmap’. The government will contribute to these efforts with measures for removing specific obstacles and with a programme to promote the exchange of information. This programme, when applied to the ENSAFE product portfolio, provides a strong business case. Digital innovation can support both the ‘system’ and patients to benefit from our offer and improve health outcomes for patients.

Table: Priorities of the ‘eHealth and improvement of healthcare’ letter and implications for ENSAFE

Political and Priorities and Policies	Implications for ENSAFE
<p>Goal: 40% of Dutch citizens and 80% of the chronically ill have direct access to certain medical information and can use this information in mobile apps or internet applications.</p>	
<p>Ease and service for healthcare users</p>	<p>The ENSAFE GoLivePhone, when integrated with self-care and self-management platforms, provides an additional opportunity for patients to make lifestyle improvements that will help them to live better and reduce their dependence upon clinical expertise and improve comorbidities that can make existing conditions escalate more quickly.</p>
<p>Awareness of the possibilities to the right of having access to medical information</p>	<p>ENSAFE makes access to medical information possible by generating (medical) information. Sensors and digital data sources help to support patients at home. Earlier detection facilitates earlier intervention and integrated support (digital and face to face). Links with formal care will be established.</p>
<p>Electronic communication between healthcare providers and end users.</p>	<p>The ENSAFE GoLivePhone, when integrated with self-care and self-management platforms provides an additional opportunity for patients to make lifestyle improvements that will help them to live better and reduce their dependence upon clinical expertise and improve comorbidities that can make existing conditions escalate more quickly. Links with formal care will be established.</p>
<p>Empowerment of patients, engagement of communities, increased patient choice and development of more personalised services</p>	<p>The ENSAFE service offer provides the opportunity for individual patients and their families to take ownership of their health using technology. With the various gradations of ENSAFE (3 or 4) the service can be personalised.</p>
<p>Goal: 75% of the chronically ill and the vulnerable elderly who can and want to do so can take independent measurements, in most cases in combination with telemonitoring.</p>	
<p>Making better use of technology, further developing leadership and supporting scientific research and innovation.</p>	<p>The ENSAFE service offer provides health and care services, and the opportunity to reduce reliance upon more expensive resources, thereby supporting improved efficiencies and return on investment to the government and the tax payer.</p>

Political and Priorities and Policies	Implications for ENSAFE
Empowerment of patients, engagement of communities, increased patient choice and development of more personalised services.	The ENSAFE service offer provides the opportunity for individual patients and their families to take ownership of their health using technology. With the various gradations of ENSAFE (3 or 4) the service can be personalised.
Goal: Anyone who receives care and support at home can use home automation and consult a healthcare provider via a computer screen, 24 hours a day if desired.	
Support healthcare providers to harness digital technology.	The ENSAFE service offer provides additional assistance and data to help inform clinical decisions around individual cases. Links with formal care will be established.

2.1.2 Legal Factors

There is no specific legislation for eHealth as it is a variant of existing care. There is legislation that imposes conditions on the digital nature of eHealth. However, these laws are not specific to healthcare, but apply to all digital handling of confidential information. So since eHealth is considered to be a variant of existing care it must comply with existing laws.

The philosophy underpinning the Dutch healthcare system is based on several more or less universal principles: access to care for all, solidarity through medical insurance (which is compulsory for all and available to all) and high-quality healthcare services. Inevitably, the Dutch system has also been shaped by a number of historical trends and developments and social conditions. Foundation of the healthcare system The Dutch healthcare system is governed by four basic healthcare-related acts:

- the Health Insurance Act (Zorgverzekeringswet),
- the Long-Term Care Act (Wet langdurige zorg),
- the Social Support Act (Wet maatschappelijke ondersteuning) and
- the Youth Act (Jeugdwet).

In addition, there are several general laws in place (including the Competition Act/Mededingingswet) and a number of specific healthcare acts (e.g. the Care Institutions (Quality) Act). From the general laws three have implications for ENSAFE as well, like:

- Fundamental Law that includes the right that everyone should give permission for interventions at their body and that the government should organize measures to promote public health;
- Civil Law which is relevant for who has authority over under-aged and incapacitated patients;
- Privacy Law includes the protection of privacy of citizens and patients and data collection and providing.

The four healthcare-related acts form the foundation of the Dutch healthcare system. The Health Insurance Act (which provides for hospital care) and the Long-Term Care Act (which focuses on other types of care) account for the bulk of the healthcare budget available in the Netherlands. The Long-Term Care Act is a national act governing healthcare throughout the Netherlands. In implementing the Health Insurance Act, private health insurance companies play a key role in a system based on “regulated competition” and a number of specific public requirements. The Social Support Act and the Youth Act provide for other forms of care and support. The roughly 400 municipalities in the Netherlands are primarily responsible for enforcing these two acts.

Besides the current legal framework as described above, the legal context for products such as ENSAFE are relatively unclear given that the market is still relatively small. So as the Health and Care Sector is subject to a wide range of legal and ethical guidance from a client and data perspective, it is expected that the business model in the Netherlands will need to overcome the following factors:

- Concern that technology solutions may be installed without fully involving or obtaining the consent of the individual involved. This can be particularly relevant when the equipment is used to support individuals with mental health difficulties.
- Concerns about particular types of technology, such as those used for monitoring individuals movements, and how they may affect the privacy of the individual.
- Even though the Netherlands has a privacy law in place, there are still concerns about the use of computer technologies that rely on sharing and storing information and the need to ensure such information remain confidential and is not misused or negligently passed into the wrong hands, since this is a new field. This concern has been heightened by recent news stories concerning the loss of personal data.

2.1.3 Economic Factors

In the Netherlands the total care expenditure is 94 billion euros, including both healthcare as wellbeing services (Source: Centraal Bureau voor de Statistiek, 2013). The expenditure for eHealth are included in this as well. Funding of eHealth is growing and may be an economic factor the demand for the ENSAFE service. Other economic factors may have specific reference to digital technology/assistive technology in healthcare.

An eHealth funding checklist is designed for anyone who wants to have more insight into the way in which funding of eHealth is arranged within the Health Insurance Act and the Long-term Care Act. Innovators with an eHealth solution can check which type of healthcare providers they should focus on for the sales of the solution and healthcare providers could check whether or not eHealth solutions can be funded by for example health insurers. Healthcare purchasers agree that the use of eHealth can be a means to achieve their goals of quality improvements. During the purchasing of care they may therefore create development plans which are dedicated to eHealth. In addition, agreements are made with care providers about providing telecare under the Health Insurance Act.

Health insurers fund eHealth solutions when the arrangement and the effectiveness of care does not change substantially with respect to the original care, because insurers fund the effectiveness and not

the form it will be delivered in. Additionally points when eHealth can be funded are the presence of a positive business case, support with end users (patients and caregivers) and a substitution effect. Sometimes eHealth is only funded when specific requirements are met. For example, requirements about the ratio between face-to-face contact and eHealth; eHealth may not take more than a specific percentage of the total treatment. These requirements differ per care profession.

Healthcare insurers can finance eHealth from the regular purchasing procedures like telemonitoring, providing funding for (pilot) research and (financial) participation in start-ups for a limited amount of time. However, not all type of eHealth solutions fit under the policy of the health insurers or one of the different Healthcare Acts mentioned before, so different funding routes need to be explored as well, like a direct consumer model.

2.1.4 Social Factors

The following social factors may influence demand for the ENSAFE services from a citizen perspective. This includes incentives as well as barriers to adoption. The social factors that may influence the adoption of ENSAFE in the Netherlands are related to socialism using personal technology to support better health. Access to the market will therefore need to resolve two key issues:

The Digital Capability of Patients

In the Netherlands there is a big group of (elderly) citizens who don't have basic digital skills and these people are those who are most likely to be suffering from poor health. They are also those most likely to be further disadvantaged by age, education, income, disability, or unemployment. There is also a general lack of awareness of products and services like ENSAFE amongst the general public.

However, in the Netherlands 92 per cent of the population had access to the internet in 2015. Even 50 per cent of people above 75 years had access to the internet. Compared to other EU countries the internet skills in the Netherlands and Nordic EU countries are high. In 2013 13 percent of the 16 to 75 years had high internet skills, 44 percent average skills and 36 percent of low skills. On an average EU level this is respectively 12 percent, 35 percent and 30 percent. The Netherlands belongs together with Denmark, Sweden and Finland to the countries where less than 10 percent of the population has no internet skills. In Romania, Italy and Portugal this share is above 30 percent. One possible explanation is that people in these countries at home are less likely to have access to the internet (Source: Centraal Bureau voor de Statistiek, 2014; Centraal Bureau voor de Statistiek, 2016).

The Ability of Professionals to Adapt their Methods of Support to Include a More Digital Approach

There is a level of fear that technology may be used to cut back care service and reduce human contact with service users. This may prove challenging for professionals, because they fear that their work will be reduced or will change in a negative way. Furthermore, they are used to deliver care in a certain way right now.

Despite these potential barriers, technology is being increasingly used either within the sector, or by the public who are starting to use trusted technology within a health context for example, Google Health.

The following evidence supports this direction of travel:

- ECP is an platform which has as goal to strengthen the use of ICT in the Netherlands and conducts activities around different topics in order to create the necessary basic conditions and prerequisites for the development of an information society, like tackling digital literacy.
- Zorgbelang (organisation which serves the interests of patients) has published an “eHealth Ruler”, an independent research to digital service providers. What hospital, mental health institution, doctor and the care and nursing homes are the most progressive in offering eHealth basic services? At whom can you make an appointment or request a repetitive prescription online? At whom can you see lab results and/or access your file digitally? This helps to create awareness among professionals as well as the citizens.
- In the Netherlands we have seen an increase in healthcare users who keep track of their own information on doctor’s visits or treatments. More people also keep track of their physical activity. The role of the healthcare user as a source and recipient of medical information is likely to become more important. But possibilities in electronic information sharing between healthcare users and healthcare providers are still limited. Enabling the patient to share their medical information electronically could potentially also be a way to better facilitate information exchange between healthcare providers, in the cases where this is currently difficult to realise. An additional benefit could be that as the electronic sharing of information between healthcare users and providers becomes more self-evident, both parties’ eHealth priorities could converge a bit more.
- In terms of eHealth in care, the 2015 intermediate reports of the eHealth monitor (Krijgsman et al., 2015) showed that few people with care and support at home have access to applications such as telecare and medicine dispensers. Various tools can play a role in tackling obstacles:
 - public information campaigns;
 - clear and accessible guidelines and assistance. This can include legislation, funding, but also content-related guidelines, such as preconditions for unlocking patient information;
 - promoting promising pilots;
 - tools for ensuring commitment and reaching binding agreements.

2.1.5 Technological Factors

Despite some of the barriers to market access and creating new social norms related to the adoption of technology in health and care, there is overarching evidence that the benefits of assistive

technology outweigh any potential reservations.

New developments in assistive technology are likely to make an important contribution to the care of people in institutions and at home. Video monitoring, remote health monitoring, electronic sensors and equipment such as fall detectors, door monitors, bed alerts, pressure mats and smoke and heat alarms can improve older people's safety, security and ability to cope at home.

In the region of Eindhoven several healthcare providers work together in a specific geographical area to deliver types of care which otherwise are difficult to provide in a cost-effective way, like night care in the extramural setting. The best practice is designed to combine both resources and efforts of healthcare organisations to be able to organize and deliver care in a more efficient and cost-effective manner whilst not compromising the quality of care provided. This collaboration also allowed for the use of technology and remote types of monitoring to create further gains in quality and efficiency and resulted in a high quality remote monitoring centre. This shared facility serves as an interoperable hub where eHealth products and services can be connected and integrated with several healthcare providers at once instead of organising this subsequently.

Another development which highly supports the implementation of eHealth services is the revised direction of the RZCC (Regional Care Communication Centre). Together with its stakeholders (care providers in the region of Southeast of Brabant) the RZCC organised several work sessions to stress the importance of care communication and working together in this matter. The sessions led to a reassessment of the mission and principles of the organisation.

The aim of the RZCC is to increase the quality of patient care by initiating, facilitating and encouraging electronic information exchange between care providers and between providers and patients in the Southeast Brabant region.

Together the stakeholders agreed on the following principles:

1. We do not compete on patient data; the patient's interest is always leading! Where possible we will enforce this.
2. The partners catalyse care communication in the Southeast Brabant region via the RZCC.
3. We create substantive and administrative commitment for a specific project calendar.
4. We strive for full participation within the projects.
5. Projects linking sectors have absolute priority over sector-specific projects.
6. Everyone can participate; here we use the WAT (Working Apart Together) concept.
7. Disclosing patient data, we do together as a region (e.g. personal health record).
8. Commitment in projects automatically means participation in the costs, collaboration and resource availability.
9. We must meet quality standards and only work with standards.
10. In the assessment of the projects, the added value for the patient is of utmost importance.

The ENSAFE project is an example of a project which helps to explore the needs of the patient and the relevance of data sharing within different phases within the continuum of care.

2.1.6 Conclusions

Having considered the evidence base, it is clear that ENSAFE as a service provides a clear opportunity to take advantage of national policy and other economic conditions in the Netherlands. As well ENSAFE plays an important role in furthering the cultural and technological innovation that can not only generate more efficient and effective services, but also improve the experience and health of patients.

2.2 Market Structure

The three largest key partners in the healthcare market are the private individuals, healthcare providers and health insurers, as mentioned before. Since 2006, the current Dutch healthcare system was introduced in the Netherlands. More competition was encouraged in the sector and health insurers & healthcare providers got more freedom in negotiating about the prices of a treatment for example. This freedom means that there are fewer rules; more has been left to the responsibility of the insurers and healthcare providers. Also, people can choose their own health insurance and healthcare provider, for which good and clear information is required. To regulate the entire process the right way, the Dutch Healthcare Authority (NZA) was established in 2006. The NZA acts as an independent regulator in the healthcare market. If certain consumer interests are at stake, the NZA will most likely intervene. The diagram below outlines the structure for health and care in the Netherlands.

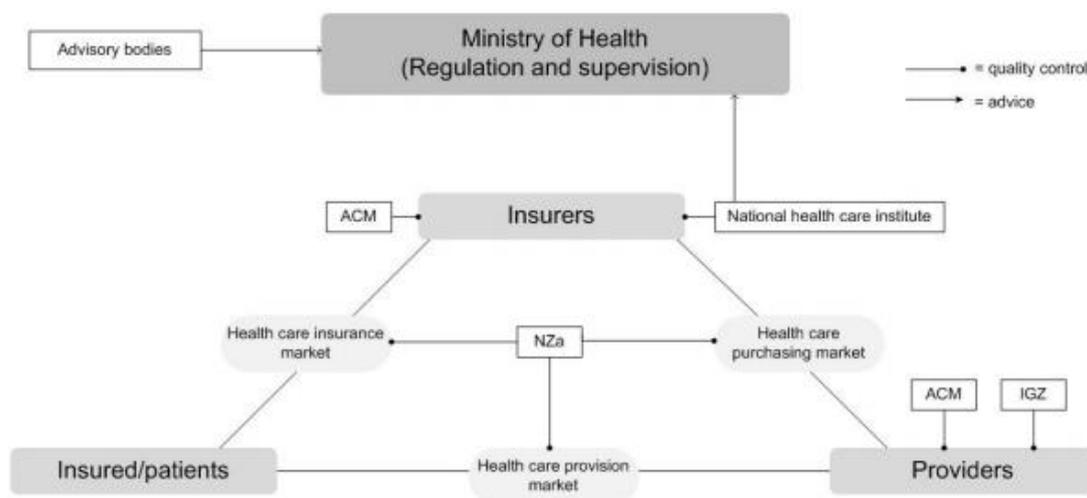


Figure 2 The Dutch Health System by Joost Wammes, Patrick Jeurissen and Gert Westert, Radboud University Medical Center (2014).

This structure offers us the opportunity to develop a proof of concept within a number of health and care settings to test and valid our business model. Furthermore, the complexity of the Dutch market at the current time provides us with the opportunity to consider multiple access routes for the ENSAFE as a service offer. The majority of support for the patient is delivered by healthcare providers

funded by health insurers and there is a strong level on national pride in health services and the concept of ‘free’ care amongst the population. This makes it likely that ENSAFE would achieve scale adoption when it can be introduced as part of a ‘Care Package’ for specific patient groups provided by organisations directly responsible for purchasing or delivering care. It is more unlikely that ENSAFE would achieve scale adoption within the Netherlands as a business to customer or direct sales model, because people are not used to pay for care directly. They are used to get care reimbursed by their health insurance. However, since the route via health purchasers is difficult to achieve and a trend of tracking health information under individuals, including health users, is growing, this route needs to be further explored.

2.3 Competitor Products & Services

Two competitors with comparable products/services are detected:

Sensara

Sensara focuses on the prevention, early detection and efficient management of treatable psychosocial and physical consequences of chronic diseases that are accompanied by progressive cognitive decline and an increased risk of straying and falling during the advanced stages of the disease.

The functionalities of the Sensara system can be summarised as:

- Monitoring of the activities of elderly persons with sensors.
- Generating alarms when unexpected/deviant (in) activities are predicted or detected (for example a fall).
- Generating warning when longer term deviations from the personal behaviour are detected.

Philips

Philips CareSensus is a unique home care monitoring solution consisting of connected, discrete, non-camera based sensors placed strategically in a senior’s home to provide full-time monitoring of their daily activity, paired with a tablet-based two-way video engagement tool. Connected remote care teams such as in-home care providers or managed care organisations can spot changes from normal patterns and provide intervention before a more serious event occurs. The result is blended care—a combination of traditional hands-on care and remote care.