



# Aligning Strategies: How Digital Health Technologies Are Used by a Swiss Insurance Company to Foster a Sustainable Healthcare Landscape

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**Abstract:** Escalating healthcare costs, as well as an outdated traditional healthcare landscape, are placing considerable strain on European healthcare systems, pushing society to re-evaluate current business models. Sustainable solutions require stakeholders to collaborate and innovate. For this Position Paper, we interviewed a representative of SWICA, one of Switzerland's largest health insurance companies, to gain insight into their perspective and expectations regarding the upcoming challenges. The results show that SWICA has developed a portfolio of multiple digital health technologies to promote an integrated and preventive care approach in collaboration with new partners in the healthcare system.

## 1 INTRODUCTION


Recent trends demonstrate an increasing burden of morbidity (Collaborator, 2020), primarily driven by an aging population and the rising prevalence of non-communicable diseases (NCDs), such as cardiovascular disease, diabetes, and cancer (Garmany, Yamada, & Terzic, 2021). The associated escalating healthcare costs, with NCDs accounting for 80% of these expenses (Wieser et al., 2014), are placing considerable strain on European healthcare systems, pushing society to re-evaluate the traditional healthcare landscape. Several factors, as summarized in Table 1, have been identified that require innovative solutions that are sustainable for society (BAG, 2023; Statistics, 2023).


### 1.1 A National Strategy Is Required

The Swiss Ministry of Health has developed a "Health2030" strategy to address these challenges to alleviate the rising cost and disease burden for the Swiss population (BAG, 2023). The specific goals

Table 1: Challenges the Swiss healthcare system is facing (BAG, 2023; Statistics, 2023).

• Inefficient traditional care models, e.g., communication between specialists and community care or data exchange
• "One-size-fits-all" medicine
• Increasing workloads
• Shortage of qualified healthcare professionals
• Untransparent cost structures
• Socioeconomic and geographical disparities regarding healthcare access and outcomes
• Unmet patient expectations for affordability, accessibility, and reduced waiting times
• Passive patient participation
• Slowed digitalization of the healthcare sector compared to other industries
• Higher focus on acute care compared to chronic care

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include improved health literacy, promotion of healthy aging initiatives, and increased treatment quality while guaranteeing the affordability of healthcare. Traditional models have yet to keep pace with increased workload (Hickmann, Richter, & Schlieter, 2022). Therefore, emerging scalable business models are required to achieve these goals. The proposed national strategy focuses on preventing NCDs and implementing digital health technologies (DHT) (Alliance, 2023), including telemedicine, mobile health apps, wearable devices, electronic health records, and artificial intelligence. These technologies hold the potential to reshape the whole patient journey from the prevention and diagnosis of disease, assisted decision support, and personalized therapy to more efficient disease monitoring and management (Mumtaz et al., 2023). For the sustainable implementation of the national strategy, close collaboration and tight coordination of various stakeholders, including healthcare insurance providers, is essential to build the necessary infrastructure and use resources efficiently (Essén et al., 2022). For this Position Paper, we partnered with a representative of SWICA, one of Switzerland's largest health insurance companies, to gain insight into their perspective and expectations regarding the upcoming challenges.

## 1.2 Accepting the Challenge

SWICA counts 1.6 million insured individuals and serves 30,000 business clients, making it one of Switzerland's leading health insurance companies (SWICA, 2023b). Established in 1992, it follows the paradigm of delivering medical care to help its customers stay healthy, get healthy, and live well with a disability (SWICA, 2023a). The Company's primary objective lies in the satisfaction of its customers, which the Company demonstrated again in 2023 by ranking first regarding best customer satisfaction compared to other Swiss health insurers (SWICA, 2023d). SWICA's primary concern is the expected demographic change of an aging population. The Company aims to address the cost implications of this change with various offerings for its insured members, ranging from disease prevention and healthy aging initiatives to extended integrated care solutions. Most of these offerings are part of SWICA's digital transformation, which began gaining traction in 2008 with the launch of the *sante24* health advice telemedicine helpline.

## 2 METHODS

An initial search about SWICA's history, current goals, and initiatives was performed using annual company reports. Afterward, we conducted a semi-structured online interview with a Senior Digital Health Specialist at SWICA using Zoom. The interview took place on the 5th of October and was guided by the topics suggested in the Scale-IT-up 2024 workshop (BIOSTEC, 2023). The workshop explores emerging business models in preventive care using DHTs. The following section summarizes the qualitative results obtained in the interview. Further, we analyzed the new business models around SWICA's preventive care efforts using Gassmann's Business Model Navigator framework (Gassmann, 2020). A conclusion, including an outlook, follows the discussion.

## 3 SWICA'S APPROACH TO BECOME A SUSTAINABLE HEALTH INSURANCE COMPANY

Sustainability can be defined as a governing principle shaping the activity of a system to preserve resources (Rashdan & Csepy, 2022). The sustainability of the Swiss healthcare system is next to environmental and financial ambitions, one of the four declared sustainability focus areas of SWICA. Specific goals include maintaining the health of its members and improving the quality and efficiency of the healthcare system (SWICA, 2023c). These goals triggered the company to redefine its responsibilities as a healthcare insurer. SWICA's role has since shifted from being a traditional health insurer to becoming a holistic health care organization that plays an active role in various parts of the lives of its members. The focus is on offering products and services that have an additive effect on existing models, as SWICA wants to avoid direct interference with the work of traditional healthcare providers. The company aims to offer solutions characterized by easy accessibility, scalability, and personal customization. SWICA thus focused on creating new business models around DHTs. DHTs allow the incorporation of those three characteristics. SWICA's DHT spectrum ranges from disease prevention to diagnosis and management and can be structured into two main categories (Figure 1): (1) DHTs for integrated care and (2) DHTs for preventive care.



Figure 1: SWICA’s approach towards becoming a sustainable health insurance company.

### 3.1 Integrated Care at the Front

Establishing an integrated healthcare system aims to promote connections and coordination across different levels and sites of care within and beyond the health sector according to the patient’s needs (Goodwin, 2016). One objective is to support individuals with chronic or multiple illnesses in managing their health while identifying and preventing overuse or gaps in the patient journey. These advancements are essential to increase efficiency, reduce costs, and improve the quality of care. Part of integrated care are Disease-management programs (DMPs) that primarily cater to chronically ill patients and patients with multiple diseases. The goal is to support and integrate them actively in their patient journey. A recent intervention study of SWICA demonstrated the positive effects on treatment quality and hospitalization rates through intensified DMPs (Carlander, 2021).

### 3.2 Scale-up Prevention

SWICA offers traditional in-person as well as new digital prevention solutions. Some target the prevention of specific diseases, while other, more general solutions encourage a healthy lifestyle. General prevention covers well-being, exercise, and nutrition programs, while specific options include disease counseling and education. Further, SWICA subsidizes several external prevention programs organized by third parties. Some of these prevention initiatives align with their broader mission to promote healthy aging. SWICA’s "Demographic Development and Aging" strategy focuses on the demographic changes associated with an aging population. SWICA has actively created new products and business models to alleviate age-related health challenges as part of this strategy. The target

population for individual projects, such as "Health Promotion Golden Age," comprises insured individuals aged 60 and above. SWICAs own offerings in that domain include mainly the use of DHTs. However, they also cooperate with partners, such as the University Hospital of Zurich or Spitex, a local care provider, to offer in-person support. SWICA also has a dedicated "Health in Aging" section on its website and hosted the 2023 SWICA Symposium on "Health in Aging," uniting academics and industry representatives to explore future solutions. These efforts highlight the holistic approach to promoting healthy aging, encouraging customer self-empowerment and education while actively supporting health engagement through innovative product offerings.

### 3.3 Tightening the Knots with New Partners

SWICA acknowledges that many aspects are beyond the company's control or capacity. This includes aspects such as medical care reimbursement or technical innovation expertise. SWICA, therefore, believes in interprofessional collaborations to develop new business models with various partners in preventive and integrated care initiatives. The company depends on new partners to successfully implement SWICA’s ambitions and positions itself as a co-creator of new structures. On several projects, SWICA cooperates with other stakeholders in the Swiss healthcare industry to use resources efficiently and ease the way for a common sustainable health landscape. The development of new DHTs primarily relies on external innovations and collaborations with other stakeholders.

## 4 HALLMARKS OF EMERGING BUSINESS MODELS- AN ANALYSIS

A business model reflects the firm's strategy (Casadesus-Masanell, 2009). SWICA’s ambition is to make prevention successful and reduce the misuse of healthcare resources. The company has, therefore, developed multiple DHTs targeting disease prevention and extending its integrated care approach. In the following section, we used Gassmann’s Business Model Navigator framework to assess the individual DHTs SWICA chose to implement its strategy (Gassmann, 2020). His model consists of four dimensions:

- WHO are the target customers?
- WHAT is offered to them?
- HOW is the value created?
- WHY does it generate value?

#### 4.1 DHTs for Integrated Care

SWICA combines different technologies to promote integrated care solutions for its customers. Its focus lies on telecommunication and app-based product offerings.

##### 4.1.1 Telemedicine Advanced

One of SWICA's first and most used DHTs is the Sante24 telemedicine service, which was launched in 2008 and works as an independent center, offering various products concerning disease prevention, diagnosis, and management. All insured individuals may call Sante24 24/7 without any cost incurred and are initially guided by a health coach. The patient will be directed to a doctor for further consultation if necessary. Members benefit from medical consultation and coaching. Through telemedicine, the barrier to receiving medical expertise is lowered significantly (Haleem, Javaid, Singh, & Suman, 2021). SWICA expects that by offering the telemedical service free of charge, healthcare costs in the traditional system will be saved, and overall costs for SWICA will be reduced. Sante24 is supported by other DHTs developed by SWICA, strengthening the digital integrated care approach.

Another telemedicine tool is the TytoHome device. Initially an Israeli startup, it enables customers to conduct home-based examinations and share the results with Santé24 autonomously. The target audience includes families with young children, but all insured members can order a TytoHome device for a fee. Members no longer need to go physically to a doctor, as this DHT integrates them actively in the diagnosis process. The cost depends on their insurance coverage, while subsequent usage and telemedical consultations are free.

##### 4.1.2 An App-Based Integrated Care Model

Through SWICA's Benecura app, the patient may do a digital symptom check-up, for example, on their phone, and share the results with their Sante24 coach, making the anamnesis process for the doctor and patient more efficient. The app is a triage tool to assess urgency, prepare the patient, and recommend the next steps. Further, it allows the user to save and share all his medical records in a digital format, with

the required data security structure integrated. The tool increases efficiency and simultaneously enhances patient autonomy. Benecura is free for insured members, and approximately 50,000 of them have used it so far. The project is funded through SWICA's IT budget. The whole project aims to increase financial efficiency in the long run and increase customer satisfaction for the company. SWICA is also working on versions specifically tailored to chronically ill patients, such as COPD patients. In these cases, the questionnaires are intended for ongoing disease monitoring, allowing doctors to detect therapy-relevant changes early to support their DMPs. In the future, the Benecura app will integrate the five most critical chronic diseases to improve disease monitoring.

#### 4.2 DHTs for Disease Prevention

SWICA has developed its products as summarized in Table 2, that encourage a generally healthy lifestyle. Additionally, SWICA is benefitting from synergies with the offerings of Sante24 to support its members in staying healthy. All members have access to SWICA's prevention programs. SWICA hopes to attract healthy future customers and maintain health among its insured people, thus saving healthcare costs in the long run. Benevita is an app that was released in 2020. It acts as a digital health coach and engages the participants through exercise, nutrition, and well-being challenges. Customers may earn points in the challenges that lead to premium discounts or can be converted into digital vouchers or donated to charitable causes.

Table 2: An overview of DHTs aiming to prevent disease and their delivery mode.

Product	Domain	Delivery mode
Benevita	<ul style="list-style-type: none"> <li>• Exercise</li> <li>• Nutrition</li> <li>• Well-being</li> </ul>	<ul style="list-style-type: none"> <li>• App</li> </ul>
Fall prevention	<ul style="list-style-type: none"> <li>• Exercise</li> <li>• Nutrition</li> <li>• Medical therapy</li> </ul>	<ul style="list-style-type: none"> <li>• Telemedicine</li> <li>• Video tutorial</li> <li>• Online self-assessment</li> </ul>
Prevent sleep disorders	<ul style="list-style-type: none"> <li>• Sleep hygiene</li> </ul>	<ul style="list-style-type: none"> <li>• Telemedicine</li> <li>• Online self-assessment</li> <li>• Online education</li> </ul>
Sport Classes	<ul style="list-style-type: none"> <li>• Pilates</li> <li>• Yoga</li> <li>• Specific Exercises</li> </ul>	<ul style="list-style-type: none"> <li>• Youtube Video</li> </ul>
Coach	<ul style="list-style-type: none"> <li>• Nutrition</li> <li>• Medication</li> <li>• Exercise etc.</li> </ul>	<ul style="list-style-type: none"> <li>• Telemedicine</li> </ul>



More specific DHTs include a fall prevention program conducted in collaboration with santé24 and uses an online assessment on the website to identify at-risk individuals and provide help through telephone counseling.

## 5 THE POTENTIAL OF DHTS TO ALIGN STRATEGIES WITHIN THE HEALTHCARE LANDSCAPE

In their *Four Steps to Sustainable Business Model Innovation* Guide, Boston Consulting Group Managing Director David Young highlights the importance of listening to external stakeholders (Young, 2021). SWICA has not only heard the Swiss Ministry of Health's call for action but has internalized the stated goals of improved health literacy, promotion of healthy aging initiatives, and increased quality of affordable healthcare in its core business model. To tackle the challenges stated in Table 1 successfully, SWICA's strategy has been to build up a growing portfolio of DHTs that are, in their nature, easily accessible and scalable while simultaneously benefitting from synergies. DHTs focusing on integrated and preventive care, such as the Benecura App, Benevita App, and Sante24 Telemedicine service, aim to increase efficiency in the Swiss healthcare system by reducing workloads of traditional healthcare models while improving healthcare accessibility and shifting the focus on chronic care. Further, most tools require the user's participation, empowering members to become active in their health journey. Other health insurance companies, such as the CSS, are joint in these efforts and follow a similar approach to align with the national strategy (CSS, 2023).

SWICA's DHTs share a common approach to business model innovation as they overlap in the WHO and WHY dimensions of Gassmann's business model navigator framework (Gassmann, 2020). All DHTs are directly targeted at members to establish a personal interaction and are expected to raise a return on investment through long-term cost savings. The values created for the members range from increased patient empowerment to better health and improved access to medical care if needed.

## 6 CONCLUSION

Escalating healthcare costs and an outdated traditional healthcare landscape are placing considerable strain on European healthcare systems, pushing society to re-evaluate current business models. Sustainable solutions require stakeholders to collaborate and innovate. SWICA has demonstrated through various initiatives that it views itself as a key stakeholder in the fight against NCDs and has taken responsibility to actively co-create part of the solution within its dimensions through DHTs. In the future, SWICA aims to design more specific DHTs for chronically ill patients. However, to achieve a meaningful contribution towards a sustainable healthcare system, SWICA should aim to increase the adoption of these new DHTs by its insured individuals in the future.

## CONFLICTS OF INTEREST

AL and TK are affiliated with the Centre for Digital Health Interventions (CDHI), a joint initiative of the Institute for Implementation Science in Health Care, University of Zurich; the Department of Management, Technology, and Economics at Swiss Federal Institute of Technology in Zürich; and the Institute of Technology Management and School of Medicine at the University of St Gallen. CDHI is funded in part by CSS, a Swiss health insurer, MTIP, a Swiss investor company, and MavieNext, an Austrian healthcare provider. TK is also a co-founder of Pathmate Technologies, a university spin-off company that creates and delivers digital clinical pathways. However, neither Pathmate Technologies, CSS, MTIP nor MavieNext was involved in this research.

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