



## **SOEN 6841 - Software Project Management (Winter-2024)**

### **Project Initiation and Market Analysis**

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# Problem Identification :

## **Problem/Opportunity Statement:**

Elderly individuals face significant challenges in managing healthcare-related tasks due to cognitive decline, mobility issues, and the complexity of healthcare systems. These challenges include forgetting important healthcare receipts, missing medication doses due to unreliable reminder systems, difficulty accessing emergency services promptly, tracking medical history, finding suitable healthcare providers, and managing sleep through wearable device analytics. Addressing these issues through a comprehensive software solution presents a significant opportunity to enhance elderly care management and improve quality of life.

## **Significance of Addressing These Challenges**

Efficiently addressing these challenges is crucial for improving the health outcomes and well-being of the elderly. With the global population aging rapidly, a streamlined approach to elderly care management can reduce the financial strain on families and healthcare systems, ensuring that the growing needs of this demographic are met effectively.

## **Stakeholder Analysis: Key Concerns and Needs**

**Elderly Individuals:** Need for user-friendly digital platforms, reliable medication and appointment reminders, and easy access to healthcare providers.

**Healthcare Providers:** Seek solutions for streamlined patient management, easy access to centralized patient records, and tools for data-driven decision-making.

**Pharmacies and Medical Suppliers:** Look for efficient e-commerce integration, real-time inventory management, and secure transaction processes.

**Insurance Companies:** Aim for digital claims processing and tools that help users understand and manage their insurance benefits effectively.

**Local Health Departments:** Need platforms for distributing public health information and managing vaccination schedules.

## **Addressing Interests and Concerns Through the Software Solution**

**For Elderly and Caregivers:** Implement intuitive interfaces, secure communication tools, and automated reminders.

**For Healthcare Providers:** Provide centralized patient records, efficient scheduling systems, and analytics tools.

**For Pharmacies and Suppliers:** Offer e-commerce integration and inventory management tools.

**For Insurance Companies:** Facilitate digital claims processing and benefits exploration tools.

**For Public Health Initiatives:** Utilize the platform for information distribution and vaccination tracking.

# Relevance to Software Solution: Key Features

## **Addressing Elderly Receipt Forgetfulness:**

**Impact:** Implementing reminder solutions designed for elderly individuals which in turn would reduce frustration and improve access to healthcare information.

**Technology:** Using reminder functionality embedded within the app.

## **Need for emergency response services:**

**Impact:** Provides access to nearby emergency services very accessible.

**Technology:** Utilizes GPS-enabled mobile applications or wearable devices connected to emergency response systems (ERS) for quick and accurate location tracking.

## **Track Medical History:**

**Impact:** Facilitates easy access to personal medical records and histories for patients to share information with healthcare providers.

**Technology:** Utilizes secure cloud-based electronic health record (EHR) systems or mobile applications with features for storing, organizing, and sharing medical records.

## **Availability of Doctors on-demand:**

**Impact:** Enhances accessibility to healthcare for elderly individuals by providing convenient ways for remote consultations through chats, calls, or video calls with healthcare professionals.

**Technology:** Integrating platforms with mobile applications equipped with secure messaging, audio, and video call features for communication.

## **Wearable Device Analytics for Optimal Well-being:**

**Impact:** Improves elderly sleep management by using wearable device analytics to understand and optimize sleep patterns, leading to enhanced overall health and well-being.

**Technology:** Uses wearable devices such as the Apple Watch or similar technologies to monitor and analyze sleep data.

## **Comprehensive Search Feature**

**Impact:** Makes finding healthcare services easier for the elderly and caregivers.

**Technology:** Uses GPS and search algorithms for personalized healthcare provider recommendations.

## **Appointment Scheduling System**

**Impact:** Reduces wait times and improves healthcare coordination.

**Technology:** Integrates with provider systems for real-time booking and reminders.

## **Financial Management Tool**

**Impact:** Simplifies managing healthcare expenses and insurance claims.

**Technology:** Employs financial tech for expense tracking and insights on spending.

## **Online Marketplace for Pharmacies and Medical Equipment**

**Impact:** Ensures easy access to medications and supplies, eliminating the need to travel.

**Technology:** Uses e-commerce solutions for browsing, ordering, and automated refills.

### **Service Connection for Task-Oriented Nursing Care**

**Impact:** Guarantees adherence to personalized care plans, enhancing elderly health outcomes.

**Technology:** Utilizes AI for matching caregiver skills with patient needs and dynamic scheduling.

### **Integration with Local Blood Banks and Organ Donation Registries**

**Impact:** Accelerates the matching process for urgent blood or organ needs.

**Technology:** Applies blockchain or secure databases for up-to-date, accessible donor matching.

### **Notification System for Vaccinations and Public Health Alerts**

**Impact:** Ensures the elderly and caregivers are informed about vaccinations and health advisories.

**Technology:** Features push notifications and alerts tailored to user health profiles and location.

## **Market Analysis**

**Title:** Market Analysis Report

**Objective:** We have three objectives for our elderly management system application.

**A.** Our objective is to enhance the quality of life for elderly individuals by providing innovative and personalized care solutions tailored to their unique needs, promoting independence and well-being.

**B.** We aim to revolutionize elderly care by offering comprehensive and accessible services that prioritize dignity, compassion, and holistic support, ensuring a fulfilling and comfortable aging experience.

**C.** Our mission is to empower seniors to live life to the fullest through the delivery of innovative technology, compassionate caregiving, and community engagement, fostering healthy aging and social connectivity.

### **Content:**

**1. Hospitals/Doctors/Clinics/Nurses:** Healthcare providers such as hospitals, doctors, clinics, and nurses are essential stakeholders in providing elderly care. Any elderly management system should cater to their preferences by offering user-friendly interfaces, seamless integration with existing workflows, and customization options to meet specific patient needs.

**2. Elderly Individuals:** Elderly individuals aged 65 and above represent the primary recipients of elderly care services. Any elderly management system should be designed with simplicity, accessibility, and customization in mind, offering features that promote health monitoring, social connectivity, and support for daily living activities.

**3. Insurance Companies:** Insurance companies provide various insurance products tailored to the needs of the elderly population, including health insurance, long-term care coverage, and retirement planning. elderly management system should demonstrate its ability to integrate with insurance workflows, offer customizable options, and provide clear communication about the benefits and features relevant to insurance coverage.

**4. Government:** The elderly management system should align with government priorities, promote inclusivity, offer culturally sensitive approaches, and adhere to ethical and privacy standards to gain government support and endorsement.

**5. Pharmaceutical Companies:** Any elderly management system should provide evidence-based information about medication management, promote health consciousness, and offer solutions that enhance medication adherence and safety.

## **Target Audience:**

### **1. Target Audience identification:** Hospitals/doctors/clinics/nurses

#### **Demographic Characteristics:**

##### **Professional Role:**

- a. **Doctors (geriatricians, internists, family practitioners) who specialize in or have many elderly patients.**
- b. **Nurses** (registered nurses, nurse practitioners, geriatric nursing specialists) are involved in day-to-day elderly care.
- c. **Clinic Administrators** who make decisions on procurement and implementation of management systems.
- d. **Hospitals and Clinics with a significant focus on geriatric care for many elderly patients.**

##### **Facility Type:**

- a. Size of the hospital or clinic (small community hospitals vs. large medical centers) and the types of services offered (specialized geriatric care, comprehensive care units).

##### **Cost-Effectiveness and Resource Management:**

- a. Decision-makers focused on cost-effective solutions that improve patient outcomes without significantly increasing operational costs.
- b. Example: Clinic administrators who select an elderly management system that reduces the need for repeated hospital visits or readmissions.

## **Targeting Strategy:**

**Education and Awareness:** Conduct seminars, webinars, and workshops to educate healthcare providers about the benefits and functionalities of the elderly management system.

**Case Studies and Evidence:** Share success stories and clinical evidence highlighting the impact of the system on patient outcomes and operational efficiency.

**Partnerships and Collaborations:** Collaborate with professional associations, geriatric care networks, and medical institutions to gain endorsements and credibility.

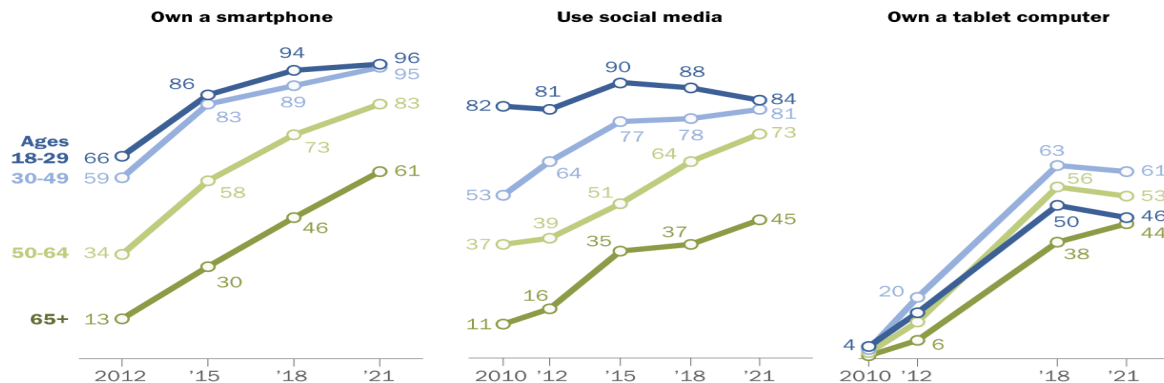
**Customization and Integration:** Demonstrate the system's flexibility to integrate with existing hospital or clinic workflows and its ability to customize features according to specific needs.

**Trial and Support:** Offer trial periods with full support to allow healthcare providers to experience the system's benefits firsthand, addressing any concerns or customization needs during the trial.

## 2. Target Audience Identification: Elderly individuals

### Smartphone ownership and social media use among older adults continue to grow

% of U.S. adults who say they ...



Note: Respondents who did not give an answer are not shown.  
Source: Survey of U.S. adults conducted Jan. 25-Feb. 8, 2021.

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Fig 1 : Smartphone ownership among older age groups. [6]

### Demographic Characteristics:

**Income and Economic Status:** Many are on fixed incomes, such as retirement pensions or savings. Economic stability can affect access to services and products.

**Family Structure:** Presence of children, grandchildren, or being childless can impact support systems and housing decisions.

### Psychographic Characteristics:

**Health and Wellness Orientation:** Interest in maintaining physical and mental health through activities like exercise, diet, preventive healthcare, and alternative medicine.

**Technological Adoption:** Varies greatly; some are tech-savvy and embrace digital tools for communication, entertainment, and healthcare, while others may be hesitant or resistant to technology.

**Consumer Behavior:** Preferences for products and services that enhance comfort, safety, independence, and quality of life. This may include mobility aids, home modifications, leisure activities, and health-related products.

### 3. Target Audience identification: Insurance companies

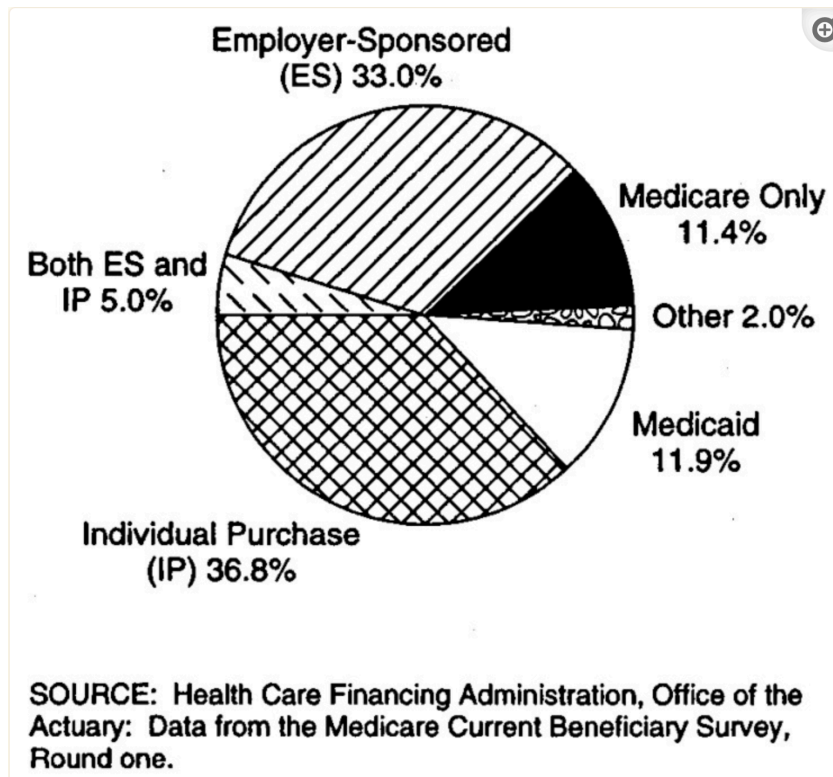


Fig 2: Medicare Survey [7]

#### Demographic Characteristics:

**Income:** Another important demographic factor is income. While the elderly population may have retired from full-time work, they may still have income from pensions, retirement savings, or investments. Understanding their income levels helps insurance companies tailor policies that are affordable and suitable for their financial situation.

**Health Status:** While not strictly demographic, understanding the health status of the elderly population is crucial for insurance companies offering health insurance or long-term care coverage. Factors such as pre-existing conditions, mobility issues, and chronic illnesses can influence the types of insurance policies needed.

**Psychographic Characteristics:**

**Lifestyle:** Psychographic characteristics such as lifestyle choices can impact insurance needs. Some elderly individuals may lead active lifestyles, traveling frequently or engaging in hobbies and activities, while others may lead more sedentary lives.

**Attitudes Towards Health:** Psychographic factors also include attitudes towards health and healthcare. Some elderly individuals may prioritize preventive care and wellness programs, while others may be more focused on managing existing health conditions.

**Financial Attitudes:** Attitudes towards finances and risk tolerance vary among the elderly population. Some may be conservative investors seeking low-risk insurance products for stability..

**5. Target Audience identification: Government****Demographic Characteristics:**

**Income:** While not all elderly individuals may be low-income, there should be a focus on those with limited financial resources, including retirees on fixed incomes.

**Ethnicity:** Consideration should be given to diverse ethnic groups within the elderly population to ensure inclusivity and equitable distribution of resources.

**Living Arrangements:** Targeting both elderly individuals living independently and those residing in assisted living facilities or nursing homes is important to address varied needs.

**Psychographic Characteristics:**

**Health Status:** Segmenting the elderly population based on health status, including chronic illnesses, disabilities, and mental health issues, allows for tailored services and support.

**Technology Adoption:** Assessing the level of comfort and familiarity with technology among elderly individuals helps determine the feasibility and effectiveness of digital solutions for managing elderly care services.

**Financial Concerns:** Understanding the financial priorities and challenges faced by elderly individuals, such as healthcare costs, housing expenses, and retirement savings, informs decisions regarding financial assistance and support programs.

**6. Target Audience identification - pharmaceutical companies****Demographic Characteristics:**

**Income Level:** Typically, elderly individuals may have retired and have fixed incomes or pensions, thus affordability could be a factor.

**Geographic Location:** Concentration may be higher in areas with a larger elderly population, such as retirement communities or urban centers with aging populations.



**Psychographic Characteristics:**

**Health Consciousness:** Elderly individuals may be more health-conscious due to their increased vulnerability to health issues. They may seek medicines that offer improved effectiveness and fewer side effects.

**Lifestyle:** Psychographic factors such as active vs. sedentary lifestyles can influence medication preferences and adherence.

**Attitudes Towards Health Care:** Some may prefer traditional medicines, while others may be open to modern pharmaceutical advancements.

**Tech-Savviness:** Willingness and ability to use technology for managing health conditions and medications.

**Targeting Strategy:**

**Educational Initiatives:** Provide clear, accessible information about the benefits and safety of improved medication salts through materials like brochures, seminars, and online resources.

**Continuous Feedback:** Collect feedback from elderly patients and caregivers to refine products and services, ensuring they meet the unique requirements of this demographic.

## Competitor Analysis:

**Introduction of the companies.**

**PointClickCare:** PointClickCare is a cloud-based software platform designed for the senior care industry. It offers solutions for electronic health records (EHR), care coordination, billing, and other administrative tasks specific to senior care facilities.

**Birdie:** Birdie is a digital care management platform that helps caregivers coordinate and deliver care to elderly clients at home. It offers features such as scheduling, task management, and communication tools to streamline caregiving processes.

**Well Sky:** Well Sky provides software solutions for post-acute care providers, including home health agencies, hospices, and skilled nursing facilities. Its offerings include tools for clinical documentation, billing, and compliance management.

**Ianacare:** Ianacare is a platform that connects family caregivers with resources and support networks. It offers tools for coordinating care tasks, accessing educational materials, and connecting with other caregivers for advice and encouragement.

**Vesta Healthcare:** Vesta Healthcare offers in-home care services and remote monitoring solutions for elderly individuals with complex health needs. Its programs aim to improve health outcomes and reduce hospital readmissions through proactive care management.

## **Analysis of strengths and weaknesses of these companies**

- **PointClickCare:**

**Strengths:** PointClickCare is a leader in providing cloud-based software solutions specifically tailored for the senior care industry. The company benefits from its established presence in the market and its ability to adapt to changing regulatory requirements. [1]

**Weaknesses:** PointClickCare may face challenges related to competition from other software providers and the need to continuously update its platform to meet evolving industry standards and customer demands.

- **Birdie:**

**Strengths:** Birdie's focus on digital care management for elderly clients at home addresses a growing need for innovative solutions in the home care sector. Its platform streamlines caregiver tasks, improves communication, and enhances the overall caregiving experience. Birdie may benefit from the increasing trend towards aging in place and the preference for home-based care.

**Weaknesses:** Birdie may face challenges related to scalability and market penetration, particularly in highly competitive markets where other similar platforms exist. [2]

- **Well Sky:**

**Strengths:** Well Sky provides comprehensive software solutions for post-acute care providers, addressing the needs of various healthcare settings beyond just senior care. The company benefits from its established presence in the healthcare industry and its reputation for quality solutions.

**Weaknesses:** Well Sky may face challenges related to customization requirements for different care settings and the need to stay updated with rapidly evolving healthcare regulations and technology standards. [3]

- **Ianacare:**

**Strengths:** Ianacare's platform fills a critical gap by connecting family caregivers with resources and support networks. The company may benefit from the increasing recognition of the importance of supporting family caregivers in the overall care ecosystem.

**Weaknesses:** Ianacare may face challenges related to user acquisition and engagement, as well as the need to continuously update its resources and support offerings to meet the evolving needs of family caregivers. [4]

- **Vesta Healthcare:**

**Strengths:** Vesta Healthcare offers specialized in-home care services and remote monitoring solutions for elderly individuals with complex health needs. Its proactive care management approach aims to improve health outcomes and reduce hospital readmissions, addressing a critical need in the aging population.

**Weaknesses:** Vesta Healthcare may face challenges related to scalability and the need to demonstrate the effectiveness of its care management programs in improving patient outcomes and reducing healthcare costs. [5]

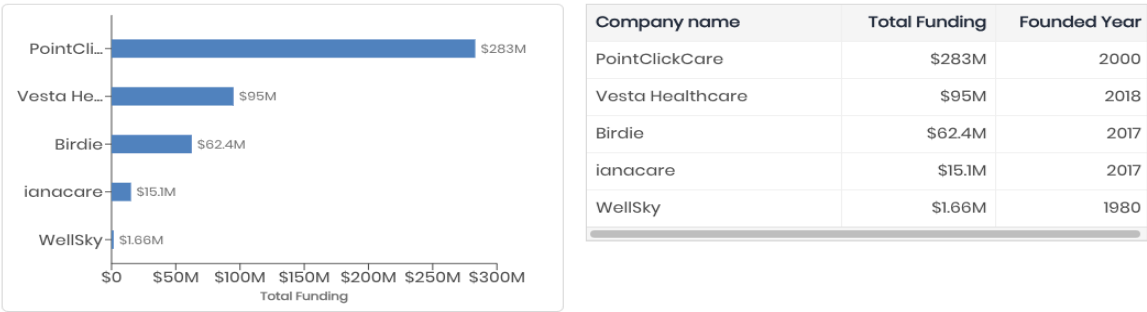


Fig 3: Funding information of these companies [8]

## Business Values

### 1. Business Values for Target Audience Identification: Hospitals/Doctors/Clinics/Nurses

#### Enhanced Patient Care:

- Personalized Treatment Plans: Prioritizing tailored treatment plans that involve patients and families in decision-making processes ensures a patient-centered approach to care, enhancing satisfaction and outcomes.
- Seamless Coordination: Facilitating seamless collaboration among healthcare professionals fosters holistic care approaches, leading to more comprehensive and efficient patient management.

#### Cost-Effectiveness and Resource Management:

- Reduction in Hospital Visits: By focusing on preventive care and proactive health monitoring, hospitals can reduce the frequency of hospital visits and readmissions, leading to significant cost savings and improved resource allocation.

#### Evidence-Based Decision Making:

- Utilization of Clinical Evidence: Hospitals and healthcare providers can leverage clinical evidence and analytics to make informed decisions, implement evidence-based practices, and improve patient outcomes.

### 2. Business Values for Target Audience Identification: Insurance Companies

### **Strategies for Engagement:**

- Customized Policy Offerings: Developing insurance products that cater to the specific needs and preferences of the elderly population based on demographic and psychographic characteristics.
- Educational Initiatives: Providing educational resources and tools to help elderly individuals understand their insurance options and navigate the insurance landscape effectively.

### **3.Business Values for Target Audience Identification: Government**

#### **Engagement Strategies:**

- Tailored Services: Develop programs based on health status and lifestyle preferences.
- Financial Assistance: Provide support programs to address financial concerns and ensure equitable access to services.
- Educational Initiatives: Offer clear, accessible information about available resources and support services.

### **4. Business Values for Target Audience Identification: Pharmaceutical Companies**

#### **Engagement Strategies:**

- Tailored Communication: Use appropriate language and channels (e.g., healthcare professionals, online forums) for effective messaging.
- Educational Initiatives: Provide clear information about the benefits and safety of medications through various mediums.
- Feedback Mechanism: Gather input from elderly patients and caregivers for continuous improvement of products and services.

### **5. Business Values for Target Audience Identification: Research and Development (R&D) - Health Devices**

#### **Business Values:**

- Innovation for Independence: Developing cutting-edge health devices that empower elderly individuals to maintain independence and well-being.
- User-Centered Design: Prioritizing user feedback and preferences throughout the R&D process to create devices that meet specific needs.
- Customer Engagement: Building trust and loyalty through educational initiatives, personalized support, and continuous improvement based on user feedback.

## References -

1. PointClickCare. Retrieved February 9, 2024, from <https://www.pointclickcare.com/>
2. Birdie. Retrieved February 9, 2024, from <https://www.birdie.care/>
3. Well Sky. Retrieved February 9, 2024, from <https://www.wellsky.com/>
4. Ianacare. Retrieved February 9, 2024, from <https://ianacare.com/>
5. Vesta Healthcare. Retrieved February 9, 2024, from <https://www.vestahealthcare.com/>
6. Source: <https://www.pewresearch.org/short-reads/2022/01/13/share-of-those-65-and-older-who-are-tech-users-has-grown-in-the-past-decade/>
7. Image source: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4193362/>
8. Image Source - Tracxn. (n.d.). Elderly Care Competitors. Retrieved from [https://tracxn.com/d/companies/elderly/\\_XsQXztT\\_x9Cf1bCsO3eMmuecW4daAB5OSxwHYsUHZTI/competitors](https://tracxn.com/d/companies/elderly/_XsQXztT_x9Cf1bCsO3eMmuecW4daAB5OSxwHYsUHZTI/competitors)