

● Team 2



Baichuan Ji	717660bj	Business Need Description & Stakeholder Analysis
Dan Gong	727292rg	Success Criteria & Solutions
Felix Masselter	735890fm	Success Criteria & Solutions
Thy Cao	673415dc	Cost and Benefit Analysis & Assumptions and Limitations
Long Lê	735090al	Risk Analysis & Conclusion and Course of Action

1. Business Need Description

From the macro view, the Netherlands is currently facing a critical housing crisis, particularly affecting the younger generation and students. The combination of the high rental prices and limited availability has caused widespread financial stress and instability, exacerbating anxiety and depression (Arundel et al., 2022). According to a report from the Dutch Ministry of the Interior and Kingdom Relations (2022), the housing shortage in the Netherlands has reached approximately 315,000 units. The single tenants under 35 years old, which includes students, have 28.8 percent the highest median housing ratio (the total housing costs as a percentage of disposable income), while the EU average ratio is 20 percent (Centraal Bureau voor de Statistiek, 2024). Besides, the Netherlands is experiencing a significant demographic shift due to the ageing population. According to Statistics Netherlands (CBS, 2023), there are around 1.4 million people above 60 years old living alone. Additionally, loneliness is a growing concern among elderly people in the Netherlands. As reported by the National Institute for Public Health and the Environment (2022), almost half of Dutch citizens aged over 75 feel lonely in their lives. These two parallel challenges of housing shortage and loneliness among elderly people suggest a potential and innovative solution to address these issues.

From the micro view, elderly people face a range of daily challenges, including household tasks, taking medications, grocery shopping and cooking. Simultaneously, students are looking for affordable housing options due to limited income.

Several existing platforms have tried to address the housing crisis or the issue of elderly social isolation. StudentenWoningWeb is a student housing platform in the Netherlands that focuses on traditional rental forms (StudentenWoningWeb, 2024). Meanwhile, Woonz.nl offers options for elderly people to find co-housing opportunities but the platform mainly focuses on connecting with peers and misses the chance to combine younger and older generations (Woonz, 2024). These two examples are valuable but cannot address the intersection between elderly social isolation and the housing crisis among students.

In the future, as users expand and platforms develop, this project could be scaled over more cities and regions or even out of Europe. Other services will possibly be added in, including healthcare, community support and job opportunities, to address social problems mentioned before through the platform. Our project aims to bring positive force on two sides of SDG (United Nations Sustainable Development Goal). The first one is SDG 11, Sustainable Cities and Communities. Although the highly urbanisation has brought much convenience to people's lives, the housing crisis has caused significant trouble. Focusing on addressing this issue can have much positive influence on the sustainable development of the whole community and city. Besides, our project also focuses on SDG 11, Good Health and Well-being. We ought to attach great importance to the physical and mental health problems among the two target groups and believe that the interaction between students and the elderly will have a positive influence on overall well-being.

2. Stakeholder Analysis

The influence and interest of stakeholders are considered when solving business model problems and assessing project success. Stakeholders are listed in the following table and classified by Internal Stakeholders and External Stakeholders. *Table 1* also indicates if they are Primary (directly involved, denoted by P) or Secondary stakeholders (indirectly involved, denoted by S), and instructs their basic description, power and interest.

Internal Stakeholders	Type (P/S)	Description	Power	Interest
-----------------------	------------	-------------	-------	----------

Development Team	P	Overall development of the project. Responsible for designing, testing, and maintaining the application to ensure the functionality and user experience of the platform.	High: Essential for the success of the application.	High: Directly involved in the project and has a vested interest in its outcome.
Investors	P	Provide initial funds for the project, ensuring the launch and promotion of the platform. Expect high returns on their investments.	High: Control the financial resources and have a direct influence on the project	High: Focus on the financial returns and expect high profits
Management Team	P	Responsible for the overall operation, strategy, and decision making of the platform. Ensure sustainable development.	High: Guide the direction of the platform and significantly control policies and plans.	High: Deeply bounded to the profitability
Marketing Team	P	Responsible for presenting market research, creating market plans and the awareness of the platform and appliance among target users.	Medium: Not involved in decision making directly. Has a significant influence on the brand.	Medium: The success of the project influences their income.
Finance Team	P	Responsible for managing budget projections and cash flows by analysing InterGenHome's financial statements.	Medium: Responsible for safeguarding the financial feasibility.	Medium: The success of the project influences their income.
External Stakeholders	Type (P/S)	Description	Power	Interest
Elderly Users	P	As house owners, they are core users of the platform, expecting to receive economic income and daily help from students.	Medium: Their involvement and adaptation influence the success of the platform and the long-term operation.	High: Deeply rely on suitable tenants to alleviate their social isolation and gain support
Students	P	Seek affordable housing and are willing to provide daily support in exchange for lower rents.	Medium: Their involvement and adaptation influence the success of the platform.	High: Expect housing opportunities and suitable house owners.
Government Agencies	S	Offer possible financial subsidies and policy support for the project.	Medium: Influence through policy and funding.	Medium: Expect the project to address social issues effectively.
Housing Agencies	S	Companies that manage rental properties. They possess extensive market knowledge and an existing tenant-landlord network.	Medium: Can influence the local housing market.	Medium: potential competitor or collaborator as our platform operates within the same industry.

Universities	S	Provide potential users through students. Provide cooperation and research support and help the platform to improve the service.	Medium: Influence platform's operational strategy and innovation	Medium: Focus on whether the platform can address student's housing issues and provide economic support.
--------------	---	---	---	---

Table 1. Stakeholder Analysis

3. Success Criteria

Success Criteria	KPI	3-year Target	Rationale
Well-being of Elderly People			
Perceived safety	Percentage of elderly users reporting feeling safe in their home-sharing arrangement	$\geq 98\%$	It is one of the leading factors that make the sharing-economy platform less vulnerable to failure (Yuan et al, 2021).
Mental health	Percentage of elderly users reporting improved mental health	$\geq 70\%$	The presence of a younger person may encourage more physical activity and better self-care among elderly users.
Well-being of Students			
Financial stress reduction	Percentage of students reporting decreased financial stress due to lower rent	$\geq 60\%$	Lower rent should translate to reduced financial stress for a majority of students, positively impacting their overall well-being.
Housing quality	Percentage of students satisfied with the quality of their living space	$\geq 85\%$	Affordable rent should not come at the cost of poor living conditions.
Financial			
Financial feasibility	ROI (Return on Investment) after 3 years	$\geq 15\%$	In our average scenario after 3 years, total costs are around €3,453,105 and total revenue is around €4,482,000. ROI would be 29.8%
Legal			
Regulatory challenges	Compliance with all relevant regulations of the Netherlands such as GDPR.	Meet all regulation	Our software must comply with all relevant regulations to ensure data is shared lawfully and appropriately protected against breaches. Maybe more related regulations need to be considered if we want to set more premium services like drafting a contract etc.
Scalability			
Adoption of students	The registered numbers of students	$\geq 17,000$	There are around 350,000 registered university students in the Netherlands, and we estimate 17,000 of them would use this app (Statista., 2024).
Adoption of elderly users	The registered numbers of elderly users	≥ 5000	In the Netherlands, 1.4 million people are older than 60 years old and living alone. We estimate 5000 of them would use our app (Centraal Bureau voor de Statistiek, 2024).
Success of matching	The number of signed contracts	≥ 1500	We believe at least a quarter of landlords could rent out their houses successfully from our platform.

Table 2. Success Criteria

4. Solutions

In this section, we list potential solutions to address the issues of elderly loneliness and the student housing crisis, including the null option. *Table 3* shows the comparison among solutions according to our success criteria, illustrating why we chose our preferred solution.

4.1. Null Option

As stated in section 1.1., students are struggling against an escalating housing crisis, while elderly loneliness has remained a persistent issue. On the one hand, students resort to multiple housing agency subscriptions or rely on social media platforms like Facebook, where a lot of students fall victim to scams. On the other hand, some elderly individuals suffering from loneliness might be open to providing housing to students but lack a trusted platform which matches both parties. The Dutch government has taken some steps, offering house allowance to students, and providing “care at home” service to assess elderly people (Mot et al., 2010; Schilder et al., 2018). However, the condition of acquiring allowances for student is hard to meet, and the houses they get would not be comfortable to live in even if they meet all the requirements. Same as allowance, the assessment for elderly people to get special treatment is restricted, which is understandable because public resources are limited. The other voluntary event or charity association may also provide some help to these two groups, but it is necessary to come up with more options to solve the current dilemma.

4.2. Alternative Solution: Companion Robots

This would be a solution that capitalises on the advancements in technology by having an AI-powered companion robot for the elderly with the goal to combat loneliness. The company Intuition Robotics, for instance, has created a voice-operated robot that is able to remind the elderly to take their medicine, make jokes or play music (Landi, 2024). The company already partnered up with the New York State Office for the Aging (NYSOFA) by providing the device to more than 800 adults. By looking at NYSOFA’s data, one can conclude that 95% of clients who received the device reported a reduction in loneliness and ameliorated well-being (Landi, 2024). In addition, the users interacted with the device on average 33 times on a daily basis even after using it for 180 days.

While this solution addresses elderly loneliness to a degree, it does not solve the housing crisis for students. Furthermore, it is important to acknowledge that this technology does not replace human interaction (Miller, 2022). Finally, one should also consider the price of companion robots. The one from Intuition Robotics, for example, has a one-time Enrollment Fee of \$249.99 and then a \$59.99 monthly subscription fee to use it, which reduces the accessibility for many elderly individuals.

4.3. Alternative Solution: Government-subsidized Intergenerational Housing

For this solution, either the national or local government invests in housing projects that are designed to accommodate both elderly and students. These housing complexes would have shared common areas and potentially organised activities to foster interactions between the two demographics. This housing subsidy would complement the already existing housing subsidy (huurtoeslag) for young and low-income groups (Ministerie van Algemene Zaken, 2023). This solution would tackle both the housing crisis for students and the loneliness problem for the elderly. Nevertheless, the scalability of this project is limited by tight budget constraints, ultimately reaching fewer people. Moreover, the solution does not engage the idle resources of the elderly (empty rooms) which still creates inefficiencies in the housing market.

4.4. Alternative Solution: Bridge Two Sides by Traditional Agency

There are many agencies in the housing rental market, however, no agency is dedicated to matching elderly landlords and students. It is possible to establish a traditional agency company just for these two groups of people, which can effectively meet the two sides' needs. Nonetheless, this solution is financially unfeasible, because it is unable to build a competitive business model compared to other agencies. In addition, this solution is unable to expand the pattern over the country due to the distribution of demand and information block (Jud et al., 2002).

4.5. Preferred Solution: An Online Platform to Match Two Sides

To address the dual challenge of housing scarcity for students and the need for care among elderly people in the Netherlands, our preferred solution is to build an online platform that matches students with elderly landlords. This solution leverages shared living arrangements, where elderly homeowners offer affordable rent to students in exchange for light caregiving tasks or companionship. Elderly people who own homes and are willing to participate can match with students seeking affordable accommodations, and they are able to chat on the platform under supervision. The platform offers a safe and justified place for two sides, and could even help to draft relevant documents and provide more information about local rental law. Thus, we perceive that this platform will have a meaningful impact by addressing social isolation among the elderly, while simultaneously providing affordable housing to students, thus effectively meeting both needs.

The platform's potential to scale lies in its simplicity and efficiency. Implementing this solution through a digital platform makes it scalable across the whole country. Meanwhile, we can seek partnerships with local governments or other institutions such as universities and house agencies to launch the product more smoothly on the local market.

Success Criteria	Null solution	Solution 2	Solution 3	Solution 4	Preferred Solution 5
Well-being of elderly people	-	+	+	+	+
Well-being of students	-	0	+	+	+
Financial	+	-	-	-	+
Legal	+	+	+	+	+
Scalability	0	-	-	-	+

Table 3. Solution Evaluation | Note. “-” = negative impact, “0” = no or neutral impact, “+” = positive impact.

5. Cost and Benefit Analysis

There will be a distinction between one-time benefits, annual benefits, one-time costs and annual costs. Then, each category is divided into three scenarios: Low – assuming the lowest possible costs/benefits, High – assuming the highest costs/benefits and Average for the mean value between the low and high scenarios. Assumptions are specified in Table 7.

5.1. Cost Analysis

IntergenHome will be developed internally to maintain quality control and address security concerns while optimising costs. Throughout the development phase and the maintenance phase, the in-house team will take full responsibility for ongoing support and updates. The cost analysis is presented in Table 4 and the figures in this table are rounded to the nearest whole number.

Costs	Description	One-time Costs (€)			Annual Costs (€)		
		Low	Average	High	Low	Average	High
FA. C 01	Software development	-	-	-	36,000	63,000	90,000
FA. C 02	Software updates & maintenance	-	-	-	7,200	12,600	18,000
FA. C 03	Regulation compliance	-	-	-	2,640	6,600	10,560
FA. C 04	Data storage	-	-	-	141	141	141
FA. C 05	Project planning	12,333	18,499	27,000	-	-	-
FA. C 06	App launching	25	25	25	99	99	99
FA. C 07	Salaries of core teams	-	-	-	229,000	269,000	309,000
FA. C 08	Cybersecurity services	-	-	-	424	556	688
FA. C 09	B2C marketing	-	-	-	150,840	607,200	1,269,300
Subtotal		12,358	18,524	27,025	426,344	959,196	1,697,789
FA. C 10	Overhead expenses (20%)	-	-	-	85,269	191,839	339,558
Total		12,358	18,524	27,025	511,613	1,151,035	2,037,346

Table 4. Cost Analysis

5.2. Benefit Analysis

In the first year of launching our application, we plan to offer the service free of charge to students who are seeking housing. This will be made possible through the innovation credit scheme subsidy, provided by the Dutch government (ROV.nl, 2024). By applying for this subsidy, we aim to attract a large user base and demonstrate the value of our platform. After the initial year, we will begin collecting a subscription fee from home-seekers. Additionally, landlords are required to pay a commission fee when the housing contract is signed. This approach ensures a fair and affordable process for students while sustaining the app's operations. The benefit analysis is presented in Table 5, excluding non-financial benefits, and the figures in this table are rounded to the nearest whole number.

Benefits	Description	One-time Benefits (€)			Annual Benefits (€)		
		Low	Average	High	Low	Average	High
FA. B 01	Subscription fee	-	-	-	45,000	90,000	135,000
FA. B 02	Commission fee	-	-	-	702,000	1,404,000	2,377,200
FA. B 03	Subsidy from the Dutch government	15,000	15,000	15,000	-	-	-
Total		15,000	15,000	15,000	1,242,000	1,494,000	2,512,200

Table 5. Benefit Analysis

6. Risk Analysis

This section will evaluate the potential risks of our preferred solution if implemented. The risks are evaluated by their probability of happening (denoted as P) and their impact on the project (denoted as

I), both following a qualitative scale of Low (denoted as L), Medium (denoted as M), and High (denoted as H).

Risk	P	I	Description	Mitigation Strategy
Development Phase				
Unclear requirement documents	M	H	Incomplete, ambiguous requirements leading to rework and delays	Comply with standard requirement documentation practice to ensure well-written requirements
Communication gaps	M	M	Miscommunication between developers, clients, and stakeholders leads to products not meeting requirements	Ensure communication lines between stakeholders, hold frequent alignment and catch-up meetings
Technical challenges	H	H	Difficulties with new or complex technologies, integration with existing systems, or a lack of technical expertise can cause delays	Ensure trained staffing and have experts on technical matters
Implementation Phase				
Bad profile users exploiting the matching mechanism	H	H	As both social groups are highly vulnerable, bad people could exploit the platform to conduct misbehaviours	Strict profile requirements for registration, detailed and extensive screening process, active and continuous monitoring mechanisms
Legal and regulations compliance	L	H	Misalignment with regulations and legal requirements such as GDPR could halt the entire app	Make sure to apply strict compliance with rules and laws
Risks of multiple matching	M	L	As the application allows for one-to-many matching, several students could share the same residence with the landlord, potentially leading to a conflict of interest in terms of responsibility	Clearly stipulate in contracts the rights and responsibilities of involved parties; have effective reporting protocols
Risk of commission evasion	M	H	The landlords and tenants could directly communicate and agree to an offline price to bypass the platform's commission fee, greatly impacting profitability	Impose strategies to prevent this, such as data and communication monitoring, pricing and payment enforcement, penalties, etc.
Market Risks				
Low adoption rate	M	H	Elderly people may be averse to adopting technological solutions, limiting the supply of residence	Ensure user-friendliness; set up dedicated teams to assist elderly people to set up
Competition	M	M	Competition from incumbent housing providers and potential newcomers could drive down the price	Target main user groups (elderly people, students) to differentiate product offerings
Financial Risks				

Budget overruns	M	H	Difficulties in estimating costs of development, excessive unforeseen costs	Conduct thorough cost & benefit analysis, ensure stable funding by partnering with long-term investors
Unstable funding	M	H	Government subsidies or funding from investors could drop due to unexpected factors	Partner with reliable investors and ensure long-term funding commitment in contracts

Table 6. Risk Analysis

7. Assumptions and Limitations

General Assumptions	
GA. 01: Students are willing to use the app.	GA. 02: Home seekers are willing to pay a subscription fee.
GA. 03: Elderlies are willing to use the app.	GA. 04: Landlords are willing to rent out their idle spaces.
GA. 05: Users use the app regularly to find housing opportunities.	GA. 06: The development timeline has a functional app ready to launch.
GA. 07: Landlords are willing to pay a commission fee.	GA. 08: Marketing efforts result in an increasing number of users.
GA. 09: The algorithms are fair and effectively match home seekers to the right landlords.	GA. 10: Data storage is safe and secured.
GA. 11: The number of increasing signed contracts via InterGenHome contributes to SDG 11 and SDG 3.	GA. 12: The application for the Dutch government's subsidy is successful, covering costs and allowing free access for users in the first year.
GA. 13: The app complies with GDPR.	GA. 14: Customer support services are required to help elderly users navigate the app.
Financial Assumptions	
<p>FA. B 01: The subscription fee for users who define themselves as “home seeker” is €15 per month. The number of registered students in universities around the Netherlands in 2022 is 341,900 (Statista, 2024). We target to achieve 6,000 student users every year</p> <p>Estimated benefit: Low: $3,000 \times €15 = €45,000$ per year Average: $6,000 \times €15 = €90,000$ per year High: $9,000 \times €15 = €135,000$ per year</p>	<p>FA. B 02: The commission fee for users who define themselves as “landlord” is 25% of the booking, collected from the first month's rent. The number of successful bookings in Kamernet is 2,600 monthly (Kamernet, 2024). As we are a startup, the number of successful bookings might be lower, approximately 300 to 700 per month. The lowest rent per month is extracted from Numbeo (2024). We use a standard deviation of 20% to calculate rents for the average and high scenarios.</p> <p>Estimated benefit: Low: $300 \times €780 \times 25\% \times 12 \text{ months} = €702,000$ per year Average: $500 \times €936 \times 25\% \times 12 \text{ months} = €1,404,000$ per year High: $700 \times €1132 \times 25\% \times 12 \text{ months} = €2,377,200$ per year</p>
FA. B 03: Subsidy from the Dutch government is €15,000 (one-time payment) (RVO.nl, 2024)	FA. 01: The project uses the following dollar-euro exchange rates as of 17 September.: \$1 = €0.8977 (European Central Bank, 2024)

<p>FA. C 01: The project requires 3 Software Developers for initial development (4 - 6 months). Their responsibilities also involve automation testing and UI/UX designing. In the Netherlands, the monthly salary for a developer can range from €3,000 to €5,000 (Glassdoor, 2024). Added expenses include software licences, development tools, and potential integrations with third-party software.</p> <p>Estimated cost: Low (4 months): €36,000 – €60,000 Average (5 months): €45,000 – €75,000 High (6 months): €54,000 – €90,000</p>	<p>FA. C 02: The software must be maintained and updated yearly. The costs can be 15 - 20% of total app development costs (Devtechnosys, 2024).</p>
<p>FA. C 03: The project requires a Legal Advisor specialising in data privacy (GDPR), intellectual property, contracts, and regulatory compliance specific to tech companies and app development.</p> <p>Rates of legal services range from €120 – €240 per hour (Business Legal Consultancy, 2024). As a startup, IntergenHome needs 2 hours per month for initial set-up and ongoing legal consultations (e.g., compliance checks, contract reviews)</p> <p>Estimated cost: Initial setup: 10 to 20 hours × €120-€240/hour = €1,200 - €4,800 per year Ongoing consultations: 12 to 24 hours × €120-€240/hour = €1,440 – €5,760 per year Low: €1,200 + €1,440 = €2,640 per year Average: €3,000 + €3,600 = €6,600 per year High: €4,800 + €5,760 = €10,560 per year</p>	<p>FA. C 04: The project uses AWS (S3) for encrypted data storage. Assuming IntergenHome has 40,000 users in the first year. Each user can upload up to 30 photos and their personal information (name, DoB, location, gender) will be stored.</p> <p>Estimated storage: Photo storage: 30 photos × 500 KB × 40,000 = 0.57 TB. Personal information storage: 5 KB × 40,000 = 0.0002 TB. Total storage: 0.57 TB + 0.0002 ≈ 0.5702 TB = 570.2 GB</p> <p>Estimated cost (Amazon Web Services, 2024): Average: 570.2 GB × \$0.023 × 12 = \$157.32 = €141.15 per year.</p>
<p>FA. C 05: The project requires a Business Analyst during the development phase (4 - 6 months) who will engage with stakeholders, identify project requisites, and outline the design specifics for the system. The salary for this position with 4-6 years of experience is anticipated to be between €37,000 and €54,000 per year (Glassdoor, 2024).</p> <p>Estimated cost: Low (4 months): €12,333 – €18,000. Average (5 months): €15,416 – €22,500. High (6 months): €18,499 – €27,000.</p>	<p>FA. C 06: Google Play charges a one-time fee of €25,-. Apple charges €99,- yearly (Dutch Coding Company, n.d.).</p>
<p>FA. C 07: The core team of IntergenHome involves a Product Manager, a Marketing Specialist, a Sales Representative, an Accountant, and a Customer Support Specialist.</p> <p>Estimated cost (Glassdoor, 2024): Product Manager: €68,000 – €90,000 per year Marketing Specialist: €40,000 – €50,000 per year Sales Representative: €37,000 – €62,000 per year Accountant: €41,000 – €60,000 per year Customer Support Specialist: €43,000 – €47,000 per year</p> <p>Total: €229,000 – €309,000 per year</p>	<p>FA. C 08: The project uses the cybersecurity service from CrowdStrike. The package Falcon Go costs \$59/device per year and it provides Superior next-gen antivirus, simple, centralised firewall management, and device control. The project requires 8-13 devices (including desktops, tablets, and smartphones) for initial setup.</p> <p>Estimated cost (CrowdStrike, 2024): \$59 = €52.96 8 - 13 devices × \$52.96 = €423.68 to €688.48 per year</p>

FA. C 09: Expenses for B2C marketing allocated at 12-20% of revenues are recommended for startups (BuildFire, 2024).	FA. C 10: Overhead expenses are calculated as 20% of total costs. (Devtechnosys, 2024)
Limitations	
L. 01: IntergenHome is only available in the Netherlands at the moment.	L. 0: Less tech-savvy people might not use the app.
L. 0: IntergenHome does not require a background check because we do not have the right to collect users' ID numbers.	L. 0: The algorithms cannot capture personal compatibility.

Table 7. Assumptions and Limitations

8. Conclusion and Course of Action

The shortage of housing remains one of the most aching problems in the Netherlands. The past few years have witnessed soaring housing prices. Thus, it has become much harder for younger people, especially students, who are yet to have a reliable source of income, to find appropriate residence. At the same time, the country has an ageing population (Statistics Netherlands, 2024), which indicates that more and more elderly people will face the problem of loneliness. Our proposed solution IntergenHome aims to tackle both of these issues by a sharing mechanism: matching spare resources (empty accommodation resided by elderly people) with students in need of housing. This would improve the well-being of elderly people alongside relieving the stressful housing search for students. After defining success criteria, evaluating alternative solutions, and carrying out thorough cost/benefit analysis and risk analysis, we believe that IntergenHome is the most effective and feasible solution. IntergenHome will directly contribute to SDG 11: Sustainable Cities and Communities, and SDG 3: Good Health and Well-being. An overview of the recommended course of action to successfully employ IntergenHome is displayed in Figure 1.

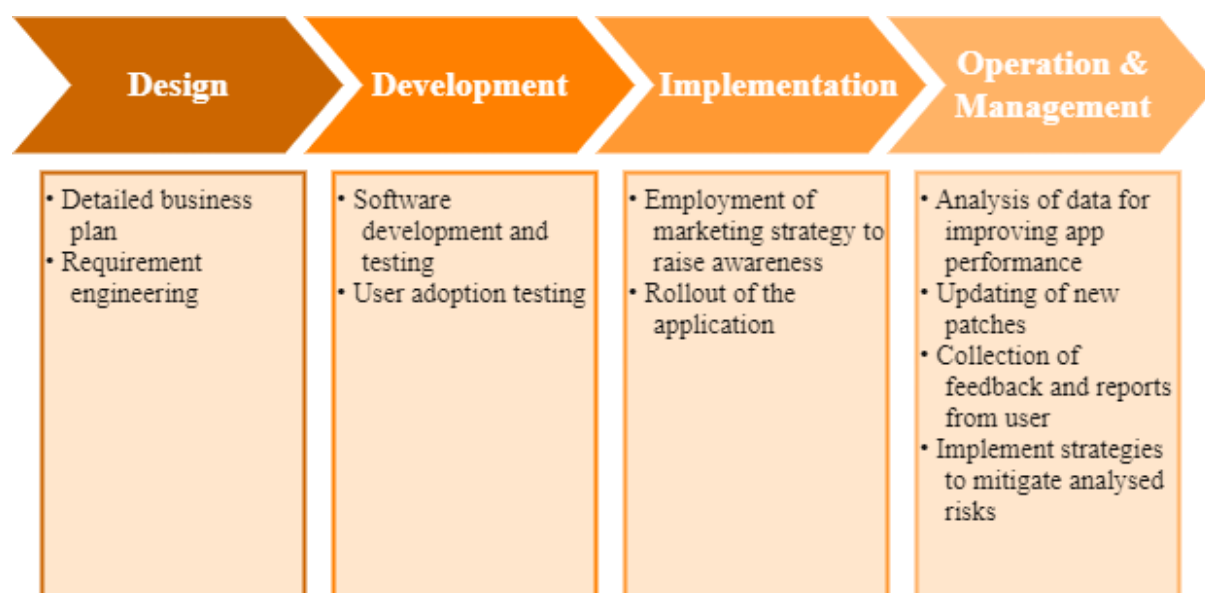


Figure 1. Course of Action

References

- Amazon Web Services. (2024). Amazon S3 simple storage service pricing. Amazon Web Services, Inc. <https://aws.amazon.com/s3/pricing/>
- Arundel, R., Li, A., Baker, E., & Bentley, R. (2022). Housing unaffordability and mental health: dynamics across age and tenure. *International Journal of Housing Policy*, 1–31. <https://doi.org/10.1080/19491247.2022.2106541>
- BuildFire. (2022, May 18). Mobile app marketing costs: How to plan your app marketing budget. BuildFire. <https://buildfire.com/app-marketing-budget/#:~:text=Many%20experts%20recommend%20s pending%2012,in%20the%20pre%2Drevenue%20stages>
- Business Legal Consultancy. (2024). Rates. <https://www.businesslegalconsultancy.com/en/rates/>
- Centraal Bureau voor de Statistiek. (2024, September 4). *1 op de 5 mensen woont alleen* [1 in 5 people lives alone]. <https://www.cbs.nl/nl-nl/nieuws/2024/36/1-op-de-5-mensen-woont-alleen>
- Centraal Bureau voor de Statistiek. (2024, September 6). 1 op de 5 mensen woont alleen. <https://www.cbs.nl/nl-nl/nieuws/2024/36/1-op-de-5-mensen-woont-alleen>
- Centraal Bureau voor de Statistiek. (2024, September 13). Aandeel woonlasten in inkomen hoogst voor jonge alleenwonende huurders. <https://www.cbs.nl/nl-nl/nieuws/2024/37/aandeel-woonlasten-in-inkomen-hoogst-voor-jong e-alleenwonende-huurders>
- CrowdStrike. (2024, September 17). Endpoint, cloud & identity protection products. <https://www.crowdstrike.com/products/>
- Devtechnosys. (2024). Mobile app development cost in the Netherlands. <https://devtechnosys.com/insights/app-development-cost/netherlands>
- Dutch Coding Company. (n.d.). Onderhoudskosten app ontwikkeling. Retrieved September 17, 2024, from <https://dutchcodingcompany.com/app-ontwikkelen-kosten-onderhoud>
- European Central Bank. (2024, September 17). Euro exchange rates charts. https://www.ecb.europa.eu/stats/policy_and_exchange_rates/euro_reference_exchange_rates /html/eurofxref-graph-usd.en.html
- Jud, G., Winkler, D., & Sirmans, S. (2002). The impact of information technology on real estate licensee income. *Journal of Real Estate Practice and Education*, 5(1), 1–16. <https://doi.org/10.1080/10835547.2002.12091580>

- Kamernet. (2024). About us. <https://kamernet.nl/en/about-us>
- Landi, H. (2024, January 12). CES 2024: Older seniors are happily living with AI—in the form of chatty robot ElliQ. Fierce Healthcare.
<https://www.fiercehealthcare.com/ai-and-machine-learning/ces-2024-older-seniors-are-happily-living-ai-form-chatty-robot-elliq>
- Ministerie van Algemene Zaken. (2023, September 20). Applying for housing benefit. Housing | Government.nl.
<https://www.government.nl/topics/housing/rented-housing/applying-for-housing-benefit>
- Miller, J. (2022, September 19). Social robots: The friend of the future or mechanical mistake? IEEE Technology and Society.
<https://technologyandsociety.org/social-robots-the-friend-of-the-future-or-mechanical-mistake/>
- Mot, E., Aouragh, A., de Groot, M., & Mannaerts, H. (2010). The Dutch system of long-term care. CPB Netherlands Bureau for Economic Policy Analysis.
<https://www.cpb.nl/sites/default/files/publicaties/download/dutch-system-long-term-care.pdf>
- RIVM (National Institute for Public Health and the Environment). (2022). *Loneliness Among the Elderly: Health Impact*. Retrieved from <https://www.rivm.nl>
- RVO.nl. (2024). Innovation credit.
<https://english.rvo.nl/subsidies-financing/innovation-credit#application>
- Schilder, F., Scherpenisse, R., PBL Netherlands, & Tiwos. (2018). Affordable housing in the Netherlands.
https://www.pbl.nl/sites/default/files/downloads/PBL2018_Policy-and-practice-affordable-housing-in-the-Netherlands_3336_0.pdf
- Statista. (2024, July 5). Netherlands: Number of university students 2022.
<https://www.statista.com/statistics/782018/number-of-university-students-in-the-netherlands/#:~:text=Number%20of%20university%20students%20in%20the%20Netherlands%202016%2D2022&text=In%202022%2C%20341%2C900%20students%20were,social%20sciences%2C%20at%20around%2063%2C400>
- Statistics Netherlands. (2024). Elderly people.
<https://www.cbs.nl/en-gb/visualisations/dashboard-population/age/elderly-people#:~:text=How%20many%20elderly%20are%20there,older%20was%20still%2012.8%20percent>
- StudentenWoningWeb. (2024). Home. Retrieved September 20, 2024, from
<https://www.studentenwoningweb.nl/>
- Woonz. (2024). Wonen, service en zorg voor senioren. <https://www.woonz.nl/>

Yuan, T., Honglei, Z., Xiao, X., Ge, W., & Xianting, C. (2021). Measuring perceived risk in sharing economy: A classical test theory and item response theory approach. *International Journal of Hospitality Management*, 96, 102980. <https://doi.org/10.1016/j.ijhm.2021.102980>