

A Work Project presented as part of the requirements for the Award of a Master's degree in
Insert your Program from the Nova School of Business and Economics.

LIBERALIZATION OF THE HEALTHCARE JOB MARKET IN GERMANY – A
BUSINESS MODEL TO ACQUIRE FOREIGN HEALTHCARE PERSONNEL

*Causes and effects of the nursing shortage in Germany - The analysis of the use of foreign nurses
to tackle the problem*

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Abstract | Liberalization of the healthcare job market in Germany – a business model to acquire foreign healthcare personnel

The healthcare system in Germany is facing major challenges due to nursing shortage. Germany cannot guarantee the acute and prospective professional care of people in need with the available local human capital. One solution is to recruit foreign nurses. Despite the political effort, on the operational side, clinics are overwhelmed by the recruitment process of foreign nurses. Therefore, Careportal24 aims to liberalize the healthcare job market by connecting Turkish nurses with German clinics. This paper provides detailed information about Careportal24's business model, supported by extensive primary and secondary research efforts. The primary purpose of this thesis is to outline an impact-driven business opportunity for Careportal24.

Keywords (Healthcare personnel, foreign nurses, recruiting, Turkey)

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1. Business Plan

In the following group section, we present our proposal for Careportal24, a solution-oriented nursing recruitment platform. Careportal24 was developed based on extensive literature and empirical research, with the goal of creating an innovative and efficient platform that connects foreign nurses with German employers. This is an important issue in the healthcare industry, and we believe that our platform has the potential to make a significant impact on healthcare outcomes in Germany.

Our business model is carefully crafted and well-grounded in research, and in the following chapter, we will provide a detailed business plan that outlines the core elements and values of Careportal24. We will also discuss our marketing and sales strategy, legal setup, and financial plans, as well as the potential challenges and opportunities that we may face as we work to launch and grow our platform. Figure 1 shows an overview of Careportal24's business model.

8. Key Partner	7. Key Activities	2. Value Propositions	4. Customer Relationships	1. Customer Segments
<ul style="list-style-type: none"> Healthcare institutions in Germany German federal authorities and ministries Nursing universities and schools Vocational schools such as language schools like Preply and Goethe Institute Insurance companies 	<ul style="list-style-type: none"> Personnel placement Matching supply and demand Verifying & approving profiles of nurses Gathering required paperwork for via and for the recognition procedure Supporting cultural integration IT operation and maintenance 	<ul style="list-style-type: none"> To connect foreign nurses with German institutions Finding jobs and apply easily To make the job search and hiring process more accessible and efficient for individuals and enterprises Our goal is to improve the lives of thousands of international nurses and have a positive impact on the German healthcare system. 	<p>Nurses</p> <ul style="list-style-type: none"> Sign-up is free of charge Browse & apply for jobs Community forum and Buddy Program Machine Learning Techniques to facilitate search <p>Clinics</p> <ul style="list-style-type: none"> Post jobs Best-fit candidate matches 	<ul style="list-style-type: none"> Multi-sided Medical Facilities Nurses (job seekers) Online language platforms (e.g., Preply)
			<p>3. Channels</p> <ul style="list-style-type: none"> Website & mobile application Online and offline marketing activities Social Media Engagement Career Fairs Billboards 	
			<p>5. Revenue Streams</p> <ul style="list-style-type: none"> Revenue from the placement of nurses paid by the medical institutes 	
<p>9. Cost Structure</p> <ul style="list-style-type: none"> Cost of Technical Resources Marketing expenses Cost of Operation 		<ul style="list-style-type: none"> Cost of Human Resources Website development and IT Salaries 		

Figure 1: Business Model Canvas of Careportal24.

Source: Illustrated by project group

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1.1. Value Proposition

Careportal24 is a recruiting platform designed to help foreign nurses find jobs in Germany and support German medical institutions find highly qualified nurse personnel. Nurses can use Careportal24 to discover job opportunities, network with other nurses, and gain the skills necessary to launch their careers in Germany. At the same time, Careportal24 offers medical institutions the opportunity to post job openings and find pre-screened nurses who have been trained in cultural, linguistic, and social aspects. This solution includes four key components: personnel placement, administrative assistance, training, and post-placement support.

1.2. Product – Concept and Key Elements

The core of our solution is personnel placement. Medical institutions can register on the platform and post job descriptions for their open positions, including the required qualifications. At the same time, candidates can submit their profiles, including resumes, areas of interest, and preferences related to the city. Employers and applicants can then be matched in two ways: the nurse can find the job posting and apply directly, or Careportal24 can search its database for candidates who meet the hospital's criteria. The data of the candidate is transmitted anonymously to the institutions for assessment, where they can decide whether the qualifications and interests meet their requirements.

If a match is found, the medical facility and the nurse can have an initial online conversation, with one of the founders present if needed to bridge any language gaps. Once the personal fit has been evaluated, the placement process can begin.

The next key element of our business model is the process of gathering the required paperwork for the visa and verifying qualifications, which can take up to 6 months. Caregivers who want to work in Germany must obtain a long-term work permit and have their professional training recognized. As a recruiting partner, we work with the German Agency for Health and

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Care Professions (DeFa) to ensure that all applications are reviewed according to the official requirements. During the examination, the foreign caregivers' professional experience is taken into consideration, and the training content of the foreign country is compared with that of the German reference profession. If their training meets the legal standards, the specialist receives a certificate of equivalence, which is a prerequisite for professional recognition in Germany. If the training and career path do not meet the criteria in Germany, our nursing staff must complete an adaptation qualification. We arrange appointments with the State Office for Occupational Safety, Consumer Protection, and Health, where foreign nursing staff take a 'knowledge test' to be officially recognized.

While the documents are being processed, we prepare the nurses linguistically and culturally for working in Germany. For this time, we provide a roadmap for both the hospital and nurses to get an overview of the process. For medical facilities, the roadmap includes upcoming milestones and an estimated timeline for the nurse's arrival in Germany. The nurse's learning plan, including learning objectives and milestones, can be viewed in their profile on our website.

To ensure linguistic education, we partner with the online language platform Preply. The nurses are directed to their platform where they can select a language teacher of their choice. Medical facilities bear the cost of this process, and there are no hidden costs for nurses. We also provide training materials developed specifically for nurses, such as customized vocabulary lists and exercises. Nurses receive materials and texts that inform them about important aspects of German culture and help them develop a comprehensive understanding of life and career as a nurse in Germany. Lastly, we work with the nurses on the contracts received by hospitals to ensure that expectations are clearly communicated.

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The last element for the successful integration of care workers into Germany is the post-employment service. Our platform has been integrated with a forum and a chat function that help ensure successful integration for prospective and immigrant caregivers. The forum allows caregivers to get in touch with their future colleagues before they arrive. By creating a buddy program, caregivers who have already settled in Germany can offer their knowledge, answer queries, and provide guidance and assistance to other caregivers who are hoping to move to Germany. We created the ‘Nursing Diary’ as a subpage on our website to give nurses a place to record their assignments and experiences and to provide a forum for foreign nurses to ask questions. The following figure 2 provides an overview of the main components of our product.

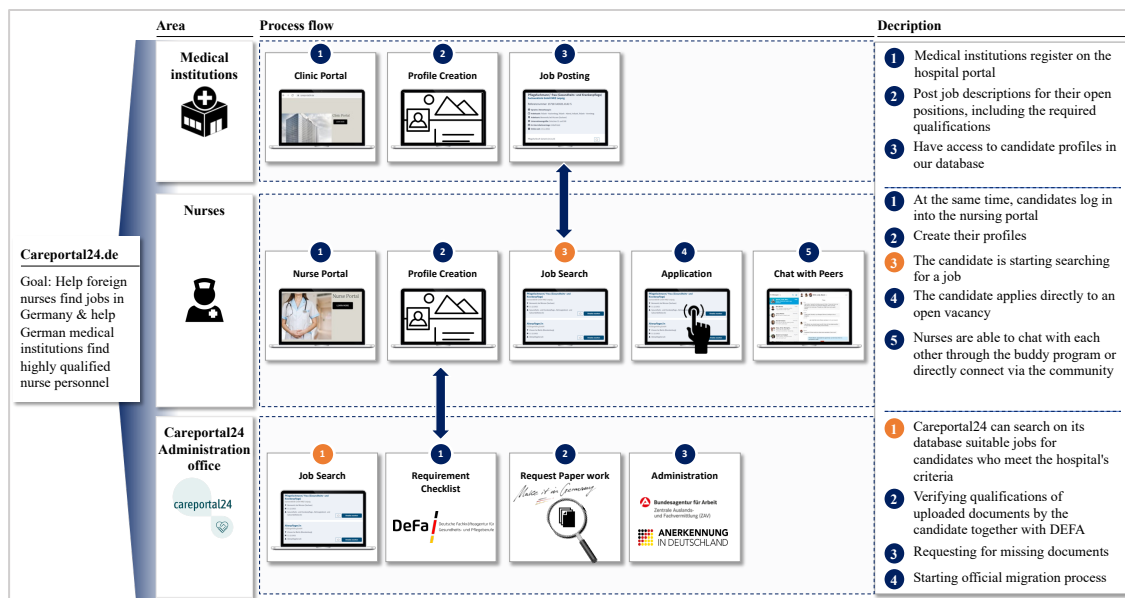


Figure 2: Careportal24 journey process flow

Source: Illustrated by project group

The subsequent chapters will delve into each component in greater detail and outline our short- and long-term strategy.

1.3. Market Sizing

To accurately assess the sales potential of our business concept and identify the main sources of income, we must first determine the market potential. This section will begin by

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evaluating the Total Addressable Market (TAM), followed by the Serviceable Available Market (SAM), and finally the Serviceable Obtainable Market (SOM).

First of all, it is estimated that the global nursing care market was worth 1.13 billion USD in 2021 and is projected to reach to 174,5 billion USD by 2029, with a CAGR of 5.5 percent, indicating a high market growth (cf. Data Bridge 2022). Against this background, deep diving into the German healthcare market, the supply gap in the nursing sector could increase to a total of almost 500,000 qualified caregivers by 2035 (cf. IW Köln 2018, 34). Based on a linear estimate, this means that the supply deficit grows by approximately 38,461 nurses each year. Furthermore, the supply shortfall will increase by 65 percent during the following eight years, reaching around 308,000 vacancies by 2030. This demonstrates the demand for qualified nurses is increasing significantly in Germany.

In order to determine Careportal24s' revenue potential, the first step is to identify a realistic commission fee for each placed foreign nurse. Both primary and secondary sources show that placement fees per foreign caregiver range from 15,000 to 21,000 euros (cf. Argüeso, Richter, and Schubert 2020; cf. Deutsche Welle 2021b). Thus, a potential average placement fee of 18,000 euros per foreign nurse is used to calculate the market size.

The Serviceable Available Market (SAM) is the total size of the German market which can be acquired based on the business model and target group. According to the extrapolation, our SAM is estimated to be 5,5 billion euros by 2030. Furthermore, by 2030, the Serviceable Obtainable Market (SOM) in the German nursing market is estimated to be 275 million euros. We have assumed that our company will be able to capture 5 percent of this market in our valuation (Figure 3).

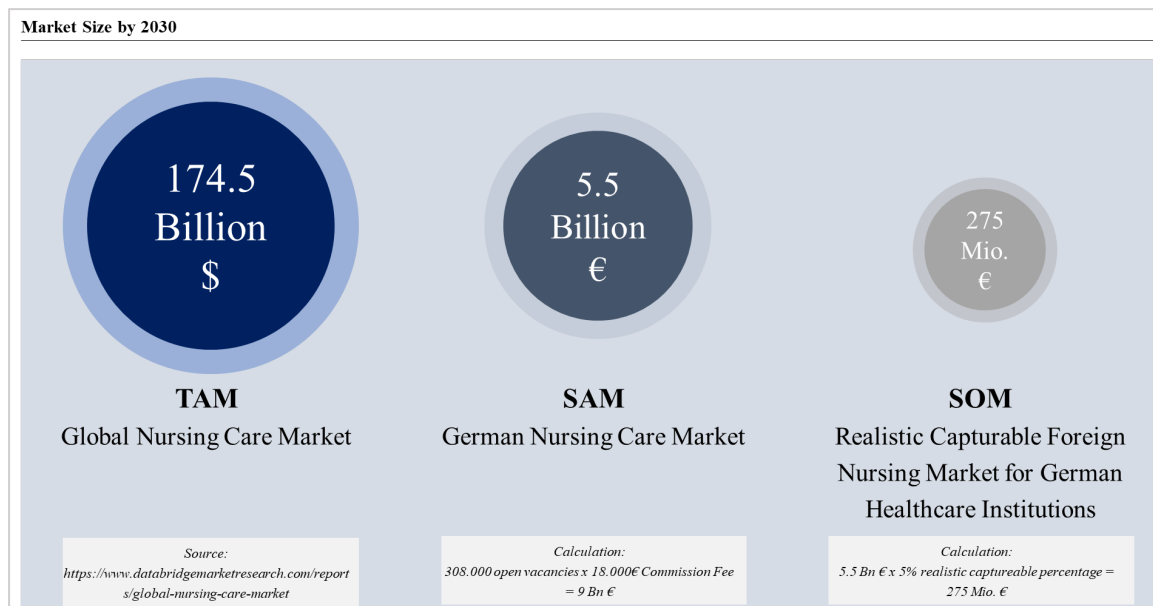


Figure 3: Market Share Analysis of Careportal24

Source: Illustrated by project group

1.4. Competitive Landscape and Unique Selling Proposition (USP)

In the following section, we will analyze the competitive landscape and explore how Careportal24 can use its unique selling point to gain an advantage over its competitors. Our secondary research identified seven competitors that specialize in recruiting certified nurses from abroad. Our competitors in the German healthcare market include WBS Recruiting International, CURA VITA, Interpers, MediCare, Gerandu, CarewithCare and DeKra. A competitive analysis of these companies consists of two overarching service categories along the value chain: recruitment and integration (Figure 4). We divided our analysis of the first pillar, concerning the recruitment of foreign nurses, into four categories: nations of origin of the nurses, selection or matching procedure, and availability of an online job portal.

An analysis of the target nationalities reveals that most of the hiring agencies adopt a multi-country approach, recruiting nurses from several countries. Additionally, apart from CURA and Dekra, the other five market participants only hire from countries outside the EU, as evidenced by the target countries of the hiring agencies. Gerandu and MediCare are two of the competitors that focus on hiring people from specific nations; for example, Gerandu only hires people from

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the Philippines, while MediCare only hires people from Tunisia (cf. Asis 2006). By examining the recruitment strategy, it is evident that all market participants collaborate with a partner network in their respective countries. This partner network consists of nursing and language schools. It must be highlighted that, except DeKra, none of the other competitors have their own physical offices in their respective countries (cf. DEKRA 2022). Looking at the talent pool pre-selection process, it can be concluded that all competitors have a strong customer focus. Requirement specifications are defined with customers from Germany through interviews. However, no other company besides Cura Vita offers an online job portal, which would provide transparency and speed up the matching process. An analysis of the target nationalities reveals that most of the hiring agencies adopt a multi-country approach, recruiting nurses from several countries. Additionally, apart from CURA and Dekra, the other five market participants only hire from countries outside the EU, as evidenced by the target countries of the hiring agencies. Gerandu and MediCare are two of the competitors that focus on hiring people from specific nations; for example, Gerandu only hires people from the Philippines, while MediCare only hires people from Tunisia (cf. Asis 2006). By examining the recruitment strategy, it is evident that all market participants collaborate with a partner network in their respective countries. This partner network consists of nursing and language schools. It must be highlighted that, except DeKra, none of the other competitors have their own physical offices in their respective countries (cf. DEKRA 2022). Looking at the talent pool pre-selection process, it can be concluded that all competitors have a strong customer focus. Requirement specifications are defined with customers from Germany through interviews. However, no other company besides Cura Vita offers an online job portal, which would provide transparency and speed up the matching process (cf. Curavita 2022). Creating profiles for both clients and nurses enables a niche to be formed in the market, as it allows for the transparent display of open vacancies, thus speeding up the process significantly.

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The second pillar of analysis, the integration service process, involves comparing criteria such as language support, technical process, cultural integration support, registration support, and management training.

When assessing the first criterion for comparison, support in learning German, it is evident that all competitors place a strong emphasis on this. Not only do they strive to obtain a German language certificate, but they also aim to acquire technical healthcare vocabulary. To achieve this, the competitors employ different strategies, such as having their own schools or collaborating with language schools. For instance, DeKra offers nurses a 15–18-month in-service training course in their home country, which leads to a telc diploma (cf. DEKRA 2022). The competitor analysis results suggest that most market participants have neglected the importance of aiding foreign workers to integrate into German culture and work culture. Only MediCare and CarewithCare offer their foreign nurses preparatory seminars on the topic of how to work for a German employer and team (cf. CWC 2021). However, in order for the integration to occur smoothly, the German side must also be prepared on how to cultivate and convey a welcoming culture. WBS Recruiting International and MediCare provide checklists and hold workshops for employees and managers on how to successfully establish a friendly culture (cf. MediCare 2022). Except for MediCare and CarewithCare, none of the other competitors in the market provide comprehensive support in planning and administering the registration process, nor do they organize entry to Germany or offer assistance on bureaucratic procedures (cf. CWC 2021).

Careportal24 is essentially differentiated from its competitors by a strong focus on differentiation through quality management, rather than scalability. The focus is on a manual matching process, an easily accessible job portal, a buddy principle that facilitates the onboarding process, and founders' cultural proximity to Turkey.

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Careportal24's job portal not only facilitates a comprehensive evaluation of the stakeholders involved but also utilizes the buddy principle to ensure that foreign care workers who have already been successfully placed can provide their insights and advice to other healthcare professionals who are looking to come to Germany. By having founders from both Turkey and Germany, a trusting environment is created which helps with the integration of foreign nursing staff. Furthermore, the founders' knowledge of both languages and cultures gives them an advantage in understanding the different backgrounds of the staff. By understanding the culture-specific character traits and behaviors of foreign care workers, it is possible to create a strategic partner network in Turkey. The following chart illustrates our differentiating characteristics.

COMPETITIVE LANDSCAPE						
Companies	Sourcing/Acquisition Service			Integration Services		
	Nurses outside EU	Pre-selection of foreign nurses	Online job portal for foreign nurses	German language education	Application/Registration Support	Buddy Program
Careportal24	✓	✓	✓	✓	✓	✓
WBS Recruiting	✓	✓	X	✓	X	X
CURA VITA	✓	✓	X	✓	X	X
Interpers	✓	✓	X	✓	X	X
MediCare	✓	✓	X	✓	✓	X
Gerandu	✓	✓	X	✓	X	X
CarewithCare	✓	✓	X	✓	✓	X
DeKra	✓	✓	X	✓	X	X

Figure 4: Competitive landscape of the foreign healthcare recruiting market

Source: Illustrated by project group

1.5. Partnerships

In the Key Partnerships module, we describe the network of partners and suppliers that are essential for the success of our business model. Our platform serves in the first three years as a bridge between Turkish nurses and German medical facilities, so our focus is to develop a

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practical supply and demand side business model. Thereby, partnerships help us cut expenses and acquire resources that would not be available to us otherwise.

To increase the number of caregivers on our website, we need to raise awareness and attention of caregivers in Turkey. To gain credibility in a market, we need to work with organizations that can create a familiar atmosphere for nurses and build trust. We believe that nursing universities are important partners in this endeavor, as they can attract more talent to healthcare professions through the employment opportunities they provide after graduation. The partnerships with the universities allow us to showcase our offerings at career fairs and create an anchor point in Turkey. Communication is done exclusively in Turkish by the two of the Turkish founders. The goal for the first year is to partner with 10 universities in Turkey. After the ‘test run’ with the first partner university, further partnerships are to be established with the help of network effects. Yet our empirical research has revealed that our strategic focus should be on forming partnerships with private universities. Given that they support international careers for their students and are not tied to policies that prohibit emigration.

Local and international language service providers are another crucial partner for our platform. An integration with a language school would result in high operating expenses due to the high initial costs of incorporating a video function into our platform as well as the permanent employment of German teachers. Therefore, another important partner is the language platform Preply, through which we can outsource an online language school. Here, there are volume discounts for companies, the costs of which are covered by the hospitals. This partnership offers the possibility of online language courses being completed flexibly before arrival. Preply business also offers the possibility for nurses to choose their own teachers, allowing the learning material to be tailored to individuals’ needs (cf. Preply 2022). One of the founders was in fact a teacher on the platform for a long time, therefore, they have experience in teaching German to Turkish doctors, who especially need improvements in medical vocabulary. In addition, we

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need to establish a partnership with the Goethe Institute to enable the testing of the B2 certificate for nurses. The long-term goal of the platform is to attract freelance, certified teachers to offer language lessons on our platform.

DeFa is another crucial partner for assisting the immigration administrative procedure. The German Federal Ministry of Health funds DeFa, an organization that assists the application processes, provides Careportal24 with a practical outsourcing choice that will make application processes more efficient. Medical institutions, such as hospitals or care facilities, are on demand. In this case, forming alliances and building long-lasting, trustworthy relationships are the main objectives. The nursing home 'DRK-Nordrhein', which has also decided to take part in the pilot project, is the first relationship we were able to forge.

Careportal24 needs to partner with German parties and ministries to develop credibility for our platform. Therefore, obtaining the Ral quality label for fair care and joining the Federal Ministry of Economic Affairs are our objectives of the first year.

To manage a partnership effectively, challenges must also be mentioned. Our research shows that universities in Turkey often do not support people leaving the country to work abroad. We also learnt that there are lots of people and parties who have an interest in this topic, including the government, politicians and even people within the healthcare sector. All of these people play a role in making it easier for foreign nurses to find work in Germany. Therefore, informal relationships with teaching professors and docents might be our indirect gateway to students. As the nursing crisis is a highly political issue, the government, politicians and lobbyists are involved stakeholders in our case (e.g. Federal Minister of Finance and the Federal Labor Office). Furthermore, indirect stakeholders should not be underestimated as they may have effects on our core stakeholders, such as relatives of foreign nurses, the healthcare sector in Germany, as well as patients and their relatives. As our effort is to acquire foreign nurses,

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the society in Germany is an indirect factor tremendously influencing the integration efforts of foreign nurses. The following figure 5 illustrates our partner network.

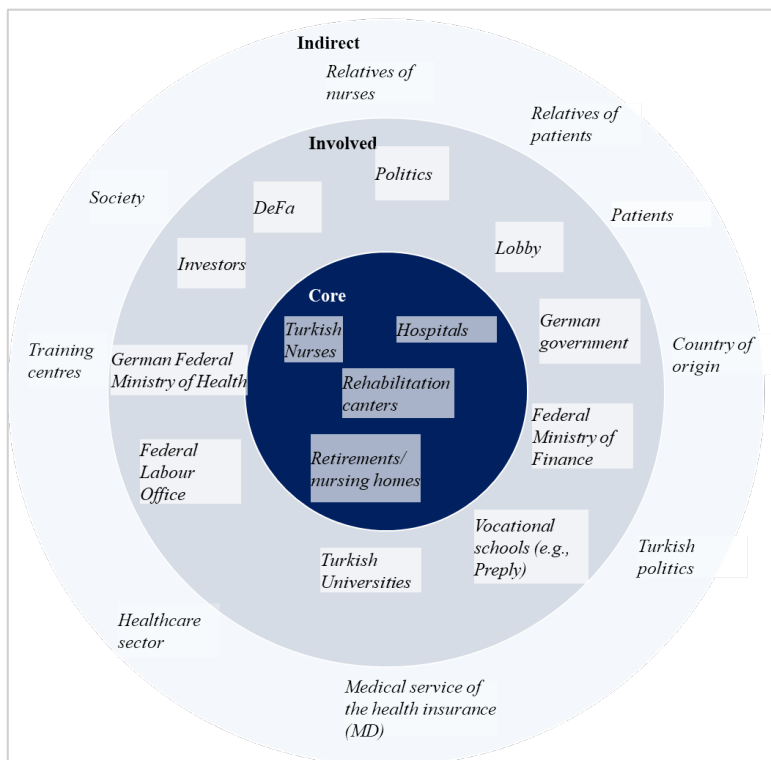


Figure 5: Stakeholder Analysis of Careportal24

Source: Illustrated by project group

1.6.Go-To-Market Strategy

The Careportal24 go-to-market strategy is described in the section that follows. Our strategy for the market launch begins by identifying our target groups and target countries. We then present our positioning, followed by outlining our marketing and sales strategy. Careportal24s' go-to-market strategy, which is based on our stakeholder analysis, is composed of two pillars that focus on both medical institutions and nurses equally.

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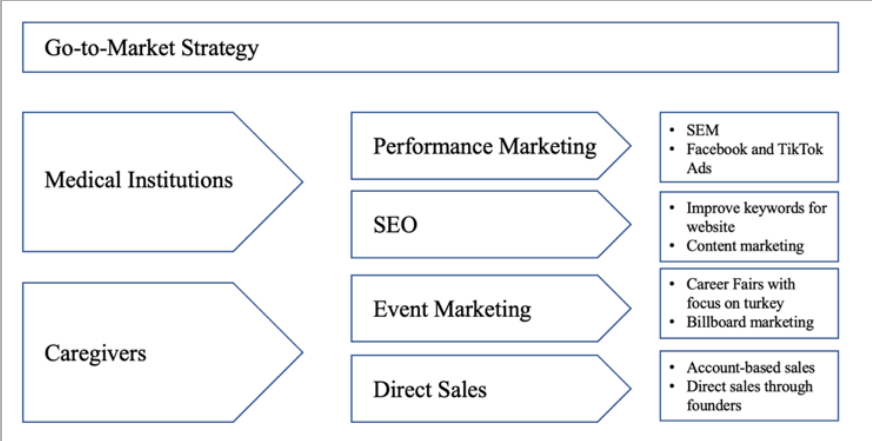


Figure 6: Go-To-Market Strategy

Source: Illustrated by project group

The first pillar of our marketing strategy focuses on the employer side, specifically medical facilities in Germany that are experiencing a nursing shortage. These include hospitals, nursing homes, doctors' offices, rehabilitation centers, and other care facilities. Our marketing strategy targets individuals who work in the administration of these institutions, as they are among the decision-makers for recruiting.

The nurses are the second target group. Our primary focus country for the first three years is Turkey due to the close cultural proximity of the founders and the excellent academic training. We have created two personas for the sake of simplicity. The desire to migrate is a requirement for our target persona. Persona one is Merve. She is in her mid-20s and lives in Turkey. Merve is studying nursing at Istanbul Gelisim University and is about to graduate. In her free time, she spends her time on social media or with friends. Her desire is to work abroad to gain new experiences and achieve a better standard of living. Persona two is Filiz from Turkey. She is in her early 30s and has 3 children. In Turkey, she can barely make ends meet on her salary and therefore, longs for a higher income and better living conditions. She has little time to look for new jobs. When she has time, she uses Google to search for new job opportunities.

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At our placement agency, we prioritize quality assurance. Our comprehensive services ensure the successful recruitment and integration of foreign care workers. What sets us apart from other agencies is our strong integration support, buddy principle, and the cultural background of our founders.

The marketing strategy we use to reach our target audience consists of two parts: Online and offline marketing. Our online marketing efforts consist of performance marketing on the one hand, and search engine optimization on the other. For our performance marketing, we are initially focusing on search engine marketing in the form of Google ads to get our platform high on Google results. We will also conduct social media marketing through Facebook and TikTok ads, targeting the channels Facebook, Instagram, and TikTok. The main target of this is the caregivers in Turkey, which is why we will primarily create content here with Turkish influencers, as well as the founders themselves. In addition, we will generate organic growth with the help of search engine optimization (SEO). This includes a content strategy using blog articles on our website and backlinks. For our offline marketing, we will focus especially on fairs like Career fairs at private universities in Turkey. Here we will focus on nurses and talk to students who are about to finish their education. In the first year, we will focus on Turkish nursing universities such as Istanbul Okan University, Istinye University, and Istanbul Gelisim University due to their cultural proximity to the founders. In addition, to create awareness, we will run billboard advertising in Istanbul and two central locations next to the university.

Finally, we will focus our sales strategy primarily on offline direct sales to reach medical facilities in Germany. We will initially focus on a few key accounts that we will identify through research. Due to the distrust of the institutions towards unreliable intermediary agencies, we will choose a particularly personal approach in our sales strategy, in that the sales will initially be carried out by the founders themselves in the hospitals.

1.7. Financials

It is worth mentioning that the business plan heavily depends on the scaling strategy of Careportal24 and the corresponding assumptions. A business plan for five years was prepared. The time horizon of five years was chosen based on the belief that this represents a realistic period of market changes; periods beyond this are challenging to forecast.

In the first three years, the operations are concentrated on recruiting medical healthcare nurses from Turkey. Regional expansion to Bosnia-Herzegovina (BIH) is planned for the fourth year. This way, we take a mixed-scaling approach, focusing on vertical scaling for the first three years by improving services and efficiency. In the fourth year, we switch to a horizontal scaling approach by expanding to the next countries and replicating the business model, making necessary adaptations to fit local conditions.

Due to initial calculations indicating that horizontal scaling lowers profit in the long run, we have chosen to pursue an alternative approach. Our goal is to increase the number of healthcare personnel within the country over the course of the year. By focusing on one country first, the partner network and the recruitment of foreign nurses can be carried out more efficiently. Our scaling strategy therefore focuses on the bundling of management capacities and does not have to consider cultural, language or management differences in the first three years.

Our market volume analysis has been used to inform our business plan calculations. As we are aware that we cannot fully cover the market, we analyzed: a) potential nurses willing to migrate; b) nurses willing to migrate to Germany; c) out of this percentage, how much we can cover through services by Careportal24. We estimate that every year, around 10 percent more healthcare personnel may migrate to Germany if the situation remains or worsens in Turkey. According to our estimations in the first year, 5 percent of the potential migrants from Turkey

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(2,551) will be recruited through Careportal24, resulting in 128 nurses (Figure 7). From there on the conversion rate will grow by 10 percent, 20 percent, 30 percent, and 40 percent for Turkey. In year four additional nurses from Bosnia and Herzegovina will be recruited. With an average commission fee of 18,000 euros, this results in a total revenue of 2.3 Mio. euros in the first year. The revenue will grow to 32.8 Mio. euros by year five.

	2023 = Y1	2024 = Y2	2025 = Y3	2026 = Y4	2027 = Y5
Focus Country:					
Turkey	128	281	617	1,019	1,494
Bosnien und Herzigowina				174	255
Total	128	281	617	1,193	1,749
Revenue					
Careportal24 commission fee	2,296,080 €	5,051,376 €	11,335,288 €	22,332,237 €	32,753,948 €
Total Revenue	2,296,080 €	5,051,376 €	11,335,288 €	22,332,237 €	32,753,948 €

Figure 7: Careportal24 revenue potential over 5 years

Source: Illustrated by project group

As seen in figure 7, the expenses will reach 2.7 Mio euros in the first year. As the business scales, expenses will reach 28.2 million euros in year five. The largest expense is personnel costs, which will decrease in proportion to the total expenses over time as more and more processes are automated through the Careportal24 platform. In year one we expect to start with 17 total full-time equivalents (FTE) which will increase to 130 FTE by 2027. All salaries have been researched accordingly, accurately representing the current labor market conditions. In Germany, companies typically pay an additional 20 percent on top of the salary for costs such as social security, payroll contributions, or non-cash benefits (Für Gründer 2022).

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Expenses					
Personnel Expenses incl. insurance costs	- 1,290,000 € -	2,136,000 € -	3,030,000 € -	5,272,080 € -	6,631,440 €
	48%	39%	30%	27%	24%
Overhead Expenses	- 42,932 € -	103,898 € -	201,763 € -	284,627 € -	341,158 €
	2%	2%	2%	1%	1%
Office rent	- 10,000 € -	48,000 € -	96,000 € -	108,000 € -	108,000 €
Office rent abroad	- 400 € -	400 € -	800 € -	1,000 € -	1,000 €
Technical Equipment	- 28,560 € -	50,400 € -	97,440 € -	164,640 € -	218,400 €
Software licenses	- 1,472 € -	2,598 € -	5,023 € -	8,487 € -	11,258 €
Communication, Internet & Security Network	- 2,000 € -	2,000 € -	2,000 € -	2,000 € -	2,000 €
Other material expenses	- 500 € -	500 € -	500 € -	500 € -	500 €
Legal and consulting fees (incorporation + notary costs, legal check on: a) contracts for Careportal24 employees, b) GDPR obligations, c) T&C d) privacy policy drafts for website, potential cases against Careportal24.de)	- 20,000 € -	10,000 € -	15,000 € -	15,000 € -	15,000 €
	1%	0%	0%	0%	0%
Marketing online (PPC capmains, SEO, SEA, etc.)	- 275,530 € -	880,152 € -	1,795,510 € -	3,891,169 € -	6,277,753 €
	10%	16%	18%	20%	22%
Marketing offline (job fair, print media, city light poster, etc.)	- 68,882 € -	181,850 € -	448,877 € -	972,792 € -	1,569,438 €
	3%	3%	4%	5%	6%
Travel expenses	- 20,000 € -	16,000 € -	15,000 € -	12,000 € -	12,000 €
	1%	0%	0%	0%	0%
B2 Language Training & Certificate	- 972,007 € -	2,138,416 € -	4,704,515 € -	9,086,871 € -	13,327,411 €
	36%	39%	46%	47%	47%
Domain & Hosting	- 1,440 € -	1,440 € -	1,440 € -	1,440 € -	1,440 €
	0%	0%	0%	0%	0%
Total Expenses	- 2,690,791 € -	- 5,467,755 € -	- 10,212,105 € -	- 19,535,979 € -	- 28,175,640 €

Figure 8: Careportal24 expenditure at a glance

Source: Illustrated by project group

The next major cost center is German language training and the Goethe Institute Certificate, accounting for 36 percent of total expenses. It is estimated that, on average, each nurse will need 500 hours of German language training, which will cost 15 euros per hour, with an additional 120 euros for the Goethe Institute Certificate. The total cost will result in 7,500 euros per nurse. The third biggest cost position is marketing (online and offline), which will increase from 13 percent to 28 percent in year five of the total expenses.

	2023 = Y1	2024 = Y2	2025 = Y3	2026 = Y4	2027 = Y5
Starting Cash Position	- €	450,289 €	25,909 €	979,765 €	3,348,085 €
Profit/Loss	- 399,711 € -	424,379 €	953,856 €	2,368,320 €	3,883,062 €
Investment need	850,000 €				
Free Cash Flow	450,289 €	25,909 €	979,765 €	3,348,085 €	7,231,147 €

Figure 9: Careportal24 Free Cash Flow

Source: Illustrated by project group

	2023 = Y1	2024 = Y2	2025 = Y3	2026 = Y4	2027 = Y5
EBITDA	- 394,711 € -	416,379 €	1,123,183 €	2,796,258 €	4,578,309 €
Depreciation and amortization (e.g. Careportal.de software, software licenses, office equipment)	- 5,000 € -	8,000 € -	1,000 € -	10,000 € -	10,000 €
EBIT (operating Result)	- 399,711 € -	424,379 €	1,122,183 €	2,786,258 €	4,568,309 €
EBIT Margin	-17%	-8%	10%	12%	14%

Figure 10: Operating result of Careportal24 - 5-year planning

Source: Illustrated by project group

Figure 9 and figure 10 indicate that the business will incur operating losses in the first two years, with an EBIT of -399,711 euros and -424,379 euros respectively. From year three

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onwards, the business will generate a profit of 1.1 million euros with a 10 percent margin. The profit margin will increase in the following years to 12 percent and 14 percent. In year five, the EBIT is estimated to reach 4.6 million euros.

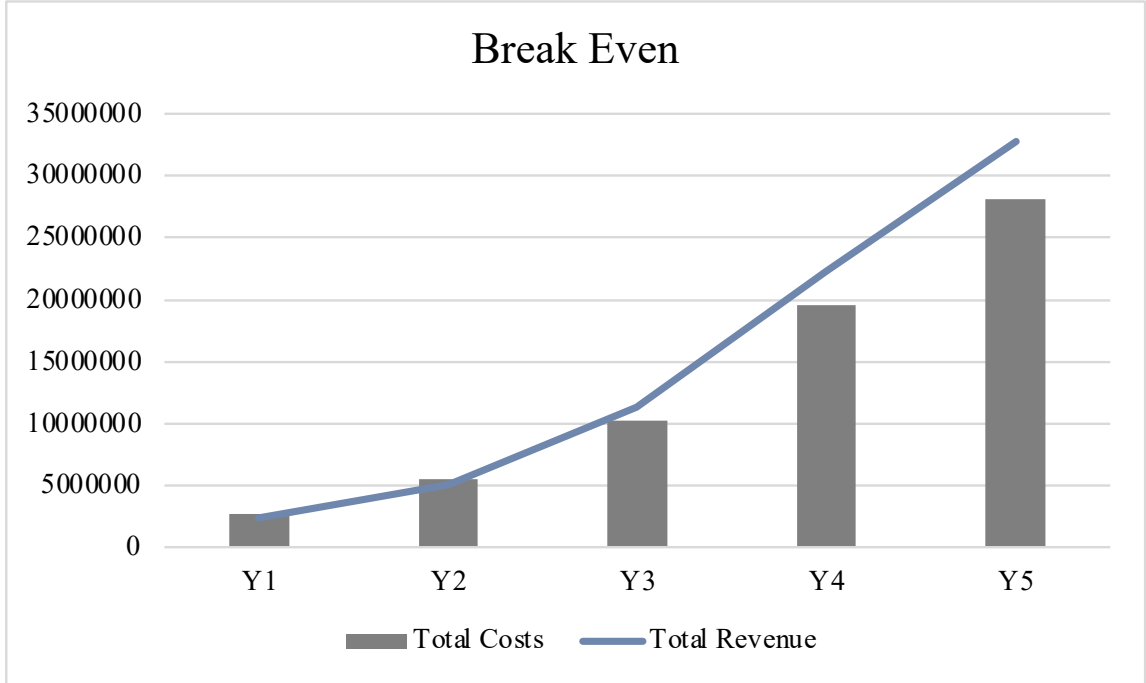


Figure 11: Break Even Forecast

Source: Illustrated by project group

1.8. Funding

As figure 9 indicate, an initial investment of 850,000 euros is needed to start and run the business. As the nursing crisis is a national challenge for the German government, we aim to apply for government financing programs. These financing programs are dedicated to young founders who have no interest in obtaining shares and rights within the company itself. The German government has established a future fund that is backed by the Reconstruction Loan Corporation (de. Kreditanstalt für Wiederaufbau (KfW)). Within the investment period up until 2030, the KfW will make 10 billion euros available for public funding. Together with private investors, this amount should increase to 30 billion euro (Die Bundesregierung 2022e). According to Heise, challenges surrounding the skilled workforce shortage in Germany will

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receive greater funding (Steiner 2022). This opportunity could be our kickstart to build our MVP.

If funding by the KfW institutions is limited for coverage of our business operation's running costs, we need alternative monetary resources. Business Angels (BA) is our first option, followed by Venture Capital (VC) firms. It is better to get a 'warm' referral by founders or through other business connections rather than sending pitch decks to BA and VC. Yet the strategy of 'cold targeting' might be still possible, although it is time consuming and there are lower chances of getting funded. Due to the professional experiences within the founder team in the Berlin startup world, we have the opportunity to get in touch directly with several founders and VC, such as Cherry Ventures. (Shizune 2022).

1.9. Legal Framework

In the following chapter, the legal form for the establishment of Careportal24 is outlined. Careportal24 is not subject to any specific or legal restrictions, as the platform is intended to support the following two aspects. On the one hand, it empowers foreign nursing professionals who are looking for a job in medical institutions in Germany. And on the other hand, it supports hospitals and care institutions in recruiting qualified foreign professionals.

Thus, A legal form is required for our venture. To select the best form, criteria such as the number of founders, the limit of liability, capital to start, taxes, and suitability for investors must be taken into account. Considering all factors, it is best to use a legal form where founders are not personally liable and investors can easily invest in. For a private limited company (Ltd., or 'GmbH' in German), a minimum share capital of 25,000 euros is required, which is outside our monetary budget (cf. R. Klein 2022a). Therefore, without compromising on liability and other advantages of a GmbH, the federal government offers a special legal form, called the 'Unternehmergeellschaft (UG)/ Mini-GmbH', with a minimum share capital of 1 euro.

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Founders are obliged to retain 25 percent of the annual profits until the share capital adds to 25,000 euros (cf. R. Klein 2022b). As this is ideal for entrepreneurs with limited capital, we have chosen the UG as the official legal form for the foundation of Careportal24 (cf. R. Klein 2022b).

1.10. Ethical Framework

The subsequent paragraphs explain how confidential data is managed and how cooperation with foreign human capital is shaped in order to act in within an ethical framework.

As a recruiting platform, Careportal24 collects personal data from foreign nursing staff, medical facilities as well as from its employees. This data is protected against mishandling by the Basic Data Protection Regulation (EU 2016/676), in particular by the Federal Data Protection Act (BDSG) (cf. GDPR.eu 2022). For this reason, the Data Protection Notice applies for every user on our website. We will use HTTP Cookies to tailor a more personalized website visit, which users can choose to deactivate at any time.

To better understand our customers and improve our service, we will use analytic data provided by website hosts, including SquareSpace.com and Google Analytics. In addition, to optimize our marketing, advertising and search engines, marketing tools like Google AdWords, Facebook/Meta will be used. As those companies are registered in the US, the collected information will be sent to servers in the US. However, shared information will be encrypted and anonymized to adhere to the EU-U.S. and Swiss-U.S. Privacy Shield Framework (cf. International Trade Administration 2022).

Furthermore, ethical recruitment standards are essential to our business model, as we want to contribute to overcoming the nursing shortage in Germany without discriminating or exploiting foreign nurses. Careportal24 adheres to the Dhaka Principles for Migration with Dignity (Figure 25) (cf. Institute for Human Rights and Business 2022a). Therefore, employers,

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instead of workers will be asked to pay for recruiting efforts. To gain credibility, Careportal24 aims to become a respected partner of the Leadership Group for Responsible Recruiting by 2023 (cf. Institute for Human Rights and Business 2022b).

1.11. Minimum Viable Product (MVP)

To test the business potential and acquire the first customers, we need to create Careportal24s' Minimum Viable Product (MVP), which is explained below.

The [Careportal24.de](https://careportal24.de) website was designed on SquareSpace.com, a software-as-a-service (SAAS) kit system for user-friendly website creations. The website includes six main pages for guiding the user through our services: (1) Home page, (2) About us, (3) Clinic Portal, (4) Nurse Portal, (5) Job Portal and (6) Contact Us. Users can choose to view the website in English or Turkish. In chapter five is explained in depth why Turkey has turned out to be a good business opportunity. The main purpose of this website is to measure traction, whether clinics and nurses are interested in contacting us or registering for our services. This step is important for continuing the project and proof of concept. The website is created with enough information that users intuitively gain an understanding of the future platform, aimed partnerships, and our entire service portfolio. A description of each website page is detailed below.

The home page is also our landing page, where users are welcomed (cf. Appendix Figure 26). The content on the page is created to immediately present our approach to target core stakeholders. Against this background, our offer is as transparent job portal. Careportal24 services contain certified language courses, administration office, community and individual buddy programs. Following services are offered: We have separated the content directed to clinics and nurses, so they are guided to their own user-specific portals. Careportal24 aims to partner with the German government, specifically, the Federal Ministry of Finance as they incentive us to acquire candidates, within the Triple Win migration program, outside of Europe.

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The Federal Employment Agency is important to us as they provide contacts to vocational schools and have a database of published vacancies for healthcare workers. Cultivating a strong relationship with government support, we hope to achieve credibility and gain users' trust, encouraging them to register. In the last section of the home page, we have included two main citations by our interviewed experts: Mrs. Hasenkopf, member of the German Red Cross Nordreihn, and Mr. Mieves, member of the Bundestag and health committee, to further urge the importance of making changes to this market.

The 'About us' section is presents users with information on who we are and what we do. Since pricing is a critical matter in acquiring workers from third countries, we wanted to highlight, that candidates are not being charged during or after the recruitment process (cf. Appendix 26). The section emphasizes that we only charge employers if they are interested in a candidate. We ensure that each page includes a call-to-action (CTA) button for either registering or contacting us regarding any matter.

We have created the clinic portal as a first step to introduce our service to German healthcare employers. At Careportal24, employers can benefit from four main areas: administrative tasks, a comprehensive approach encompassing the entire recruitment to the integration process, training, and a commitment to ethical recruiting practices. As majority of German clinics have experience with foreign nurses, it is crucial to be transparent with which country candidates are being recruited from. The page also includes a frequently asked questions by employers' section at the bottom.

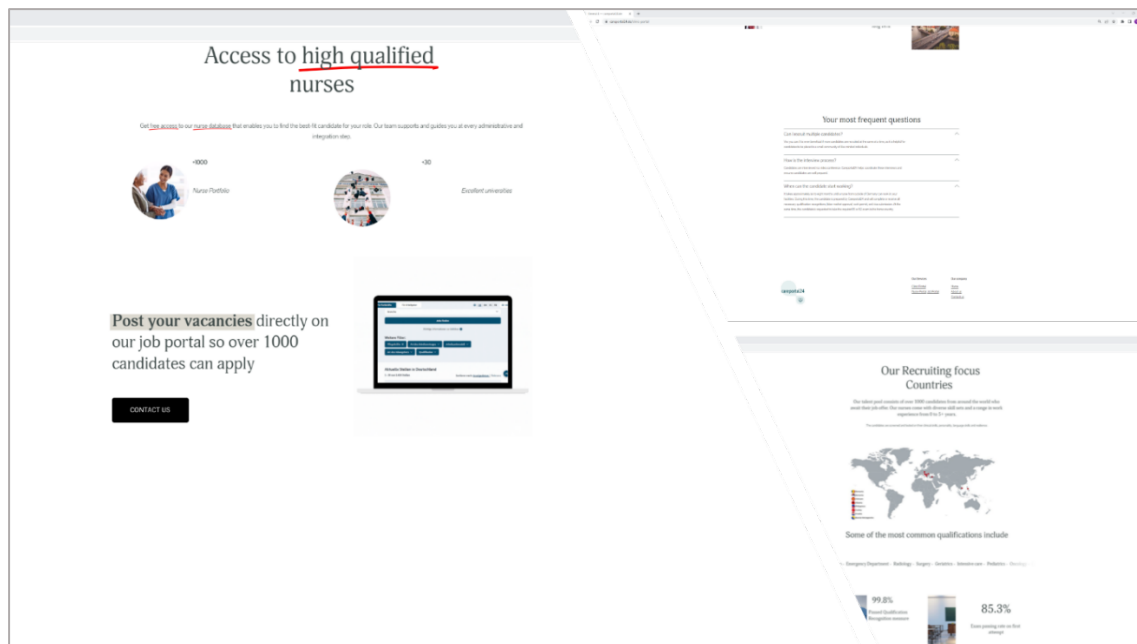


Figure 12: Careportal24 - Clinic Portal

Source: Illustrated by project group

The nurse portal is similar set up as the clinic portal, however, the main difference is our promise to foreign healthcare workers that the whole process is free of charge and rooted in ethical recruiting standards. This is important as it emphasizes that workers are never alone throughout this process. We further highlight the end-to-end approach is guaranteed by Careportal24 and that we support all integration and qualification trainings. Our recruiting approach follows 5 steps which are outlined at the bottom of the page: (1) screening and collecting documents from candidates; (2) coordinating the interviews between employers and candidate; (3) our administrative team takes care of initiating the qualification recognition process on a governmental level; (4) the administration office takes care of visa applications and, in specific cases, support in relocation; (5) concluding, we welcome candidates to Germany and upon arrival candidate need to prove their qualifications and language proficiency to determine if further arrival procedures should be taken.

Derived from the qualitative research, an interaction forum between nurses needs to be initiated. With our ‘community’ approach, nurses from Turkey can reach out via a chat option

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to nurses that successfully migrated to Germany. Prof. Dr. Ayla Kececi mentioned that many students reach out to get in touch with graduates who are working already in Germany in order to understand the process and get tips (cf. Appendix 7.2.11.). Therefore, a network forum is an essential part of Careportal24 strategy to gain fast acceptance among students.

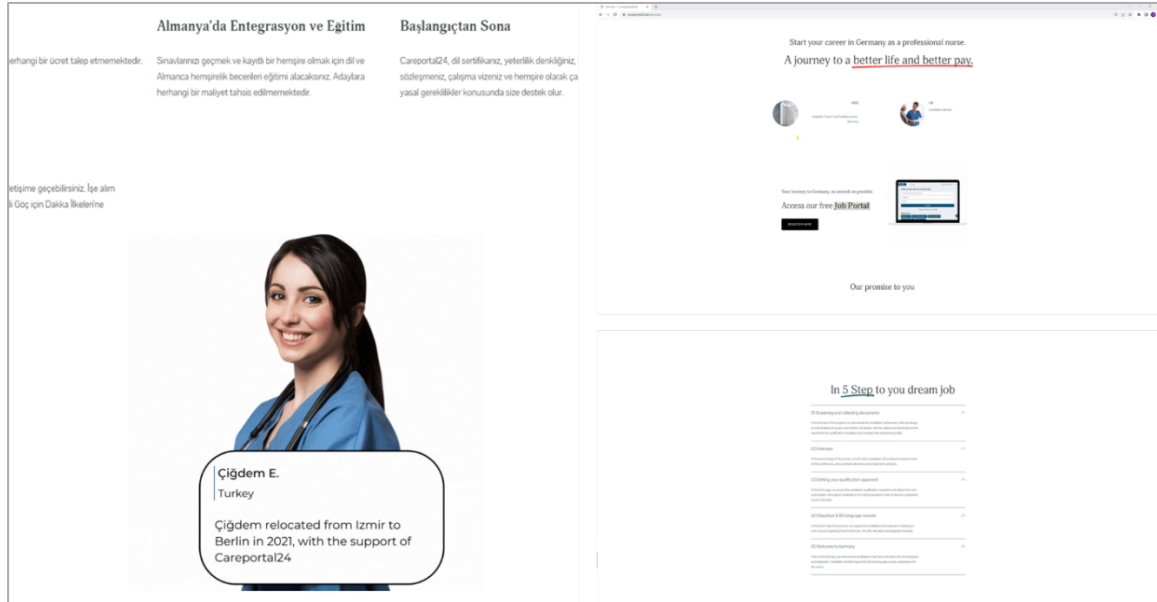


Figure 13: Careportal24 - Nurse Portal

Source: Illustrated by project group

The job portal will be launched when we can onboard the first clinic in Careportal24. After we have received a successful traction metric, the website will be moved to WordPress.com, a system similar to SquareSpace.com but with more sophisticated options to create a professional interactive portal where users can create personalized accounts. The job portal and the recruiting workflow process between the employer and employee side needs to be set up. A cloud-based database will be used to connect, store, share and edit important documents such as certification. Apart from operational elements, Careportal24 also needs to publish the website its terms and conditions, privacy policy/imprint, and code of conduct.

1.12. Project's Short-Term, Long-Term Goals, and Measurables

In the following section, we will outline Careportal24's short-term and long-term strategy including measurable objectives. The short-term strategy has a three-year span and consists of

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five measurable targets. In contrast, the long-term strategy focuses on scaling and exit options and extends over eight years.

Our first short-term goal is to form a strategic alliance with Preply, an e-learning language platform, within the first month of our business launch in order to facilitate our integration service. In order to provide our service, it is essential that our second short-term goal is to have fixed contact persons with the state authorities of Germany. This will help to expedite the process of validating certificates and work experiences of foreign nurses. Additionally, our third short-term goal is to establish cooperation with the German Agency for Healthcare and Nursing Professions (DeFa) within the first three months.

Furthermore, in the first six months, our fourth goal is to establish partnerships with 20 private Turkish nursing universities, such as Istanbul Medipol University and Halic University (cf. Global Academia 2022b). Following this, our fifth's short-term goal is to attract 128 nurses to register their profiles on Careportal24s' and join our talent pool within nine months. To reach this goal, we will place our service on nursing schools' websites and participate in ten nursing career fairs with our own booths.

Careportal24's long-term strategy consists of nine goals, with a focus on further growth and exit scenarios. To capitalize on growth opportunities on the supply side, one of the long-term goals is to reach 617 Turkish nurses by 2025. Additionally, the plan is to enter the Bosnia and Herzegovina market in year four and have 174 registered nurses by 2026. To achieve this, Careportal24 is aiming to establish partnerships with ten Bosnian nursing universities, such as Bangor University and the University of Split. We will attend six nurse career fairs each year and are aiming to expand our client base to approximately 2,500 healthcare institutions (cf. StudyQA 2022). Additionally, from an operational standpoint, we intend to incorporate AI-based software to automate the review of certification and application documents

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Elaborating on potential exit scenarios, it has become apparent that market activities in the last nine years have included around 130 company takeovers in the medical and nursing care sector by private equity companies, and that this number continues to rise steadily. This trend affects all care sectors, such as nursing facilities, ambulatory care services, hospitals, rehabilitation clinics, medical and dental practices/medical care centers, and homecare companies (cf. Sauermann 2017). This development, combined with the drastic increase in the number of people needing care, presents new opportunities for the vertical integration of offerings for the acquisition of care workers. As such, Careportal24's exit strategy could be the acquisition by a private equity company, which would save future costs on the acquisition of hospitals.

The concept of 'theory of change' distinguishes through the accountability ceiling, measurable objectives from social impact (Figure 14). After outlining our measurable short- and long-term goals along with proposed interventions, we now highlight the social impact of our project.

Impacts are divided into direct and indirect outcomes to identify the long-term impact of Careportal24. Regarding the first pillar of direct outcomes, caregivers will experience less fear of integration through our platform, avoiding cultural shock. Additionally, the relationship with German caregivers will improve. By introducing the buddy program, caregivers will experience less loneliness, reducing psychological damage to foreign nurses. On the German hospital side, more nursing staff will guarantee improved work-life balance for existing nurses. Moreover, further positive social effects can be indirectly achieved with this service, including, less nursing shortage in Germany. In addition, the attractiveness for skilled workers from abroad will increase, which in turn relieves the German healthcare system. The long-term goal for Careportal24 is to create an empowering and inclusive environment for caregivers in

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Germany. This is achieved through a platform that facilitates integration on both sides of supply and demand.

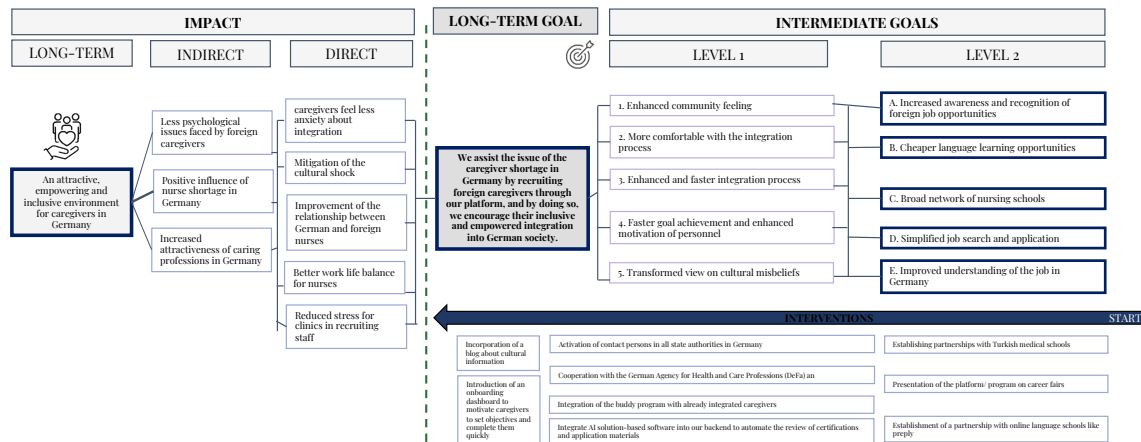


Figure 14: Theory of Change model applied to Careportal24's long-term and short-term impact goals

Source: Illustrated by project group

1.13. Challenges and Measures

The potential integration of foreign nurses presents a huge opportunity for German employers. However, there are also challenges on both sides connected with this cooperation. The scope of this chapter addresses the risks associated with the operating business model as well as the preventive measures designed to mitigate them.

The integration process can be a challenge for immigrants, leading to micro stressors in their everyday lives. These demands and obligations can cause psychological and physical stresses, resulting in negative emotions like despair, anger, or hopelessness (cf. Loffing 2005, 35). In many countries, including Turkey, a bachelor's degree is required to enter the nursing profession, whereas in Germany this is not the case. This difference in academic degrees can lead to dissatisfaction among Turkish nurses. The dissatisfaction of the recruited nurses due to the impression that working in Germany undermines their competence could cause them quitting shortly after taking up the job in Germany. This would result in a negative customer experience for us, since we do not deliver on our quality promise. Therefore, the buddy system has been integrated into the platform as a mitigation to the above stated risks. Its goal is to pair

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foreign nurses with other nurses who are already part of the platform so that any issues can be addressed quickly, and the feeling of isolation is reduced. In addition to the designated caregivers in the buddy program, a forum allows participants to communicate with each other. Thus, our platform is designed to give a vivid representation of the nursing profession in Germany so that nurses coming to Germany can get a better idea of what life is like before they arrive.

Furthermore, the contractual framework conditions for foreign caregivers can be a hurdle to successful integration. The focus is on the contractually stipulated obligations, such as the commitment to work in a particular city and the associated minimum working hours. These may not be apparent to foreign nurses due to language barriers and may prove to be reasons for dissatisfaction and consequent resignations. To prevent this, we ensure that the contents of the employment contracts and the associated obligations are understood by our foreign professionals. In light of this, we review the content of the agreements with them. In this way, we minimize the risk of our placed nurses seeking to quit the profession and avoid our clients from receiving an inferior placement service.

In addition, when assessing nurses' integration development over time, it is important to consider any differences in progress. For instance, some nurses may take longer to acquire language skills than others. This can lead to frustration in the first instance and, in the worst case, to the abandonment of the integration program. Therefore, nurses need to be continuously supported and given the opportunity to reach their integration milestones, such as language goals. To keep them motivated, they can view their own onboarding dashboard on the platform and monitor their progress and accomplishments. In addition, personal interaction with contacts is given through the buddy program.

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Finally, in addition to the integration risk, there is also the risk of Brain drain. This is the outflow of information and loss of human capital from a specific country that can impede progress and growth. In our case, this means that the countries of origin of the nurses will suffer considerable economic losses due to emigration if there is a shortage of care workers in these countries. Therefore, it is essential to take this into account when implementing our business idea (cf. GIZ 2013, 19). Thus, to avoid any potential shortages of caregivers in their home country, we are aiming to diversify our recruitment efforts to other countries as soon as possible. We have already scheduled our first expansion for fourth year. In this way we can ensure that there are enough nurses available in the countries of origin and thus avoid creating new labor shortages. Furthermore, we do not want to ‘headhunt’ nurses, but rather provide a point of contact for nurses who are already interested in immigrating to Germany. For this reason, the long-term goal of our platform is to grow by word-of-mouth rather than through aggressive recruitment marketing.





Challenges	Measures
Integration process 	Buddy system: <ul style="list-style-type: none"> ▪ Matching of existing and new foreign nurses on the platform ▪ Enabling communication and an exchange of challenges, questions, feelings, etc. ▪ Creating a community feeling by connecting and preventing isolation ▪ Facilitating a real representation of the nursing profession and conditions in Germany by their peers on the ground.
Contractual Obligations 	Bureaucratical support: <ul style="list-style-type: none"> ▪ Ensuring that contracts and the associated obligations are understood ▪ Reviewing agreements together with candidates ▪ Minimize the risk misplaced foreign nurses and securing higher integration success rates.
Individual development 	Individual support: <ul style="list-style-type: none"> ▪ Tracking candidates' integration milestones (e.g. language goals) ▪ Displaying milestone progress on a dashboard ▪ Connecting single candidates to peers within the Buddy program
Brain Drain 	Ethical Recruiting: <ul style="list-style-type: none"> ▪ Diversification of recruitment efforts to avoid potential nursing shortages of country of origins. ▪ Enabling nurses to intrinsically apply for open vacancies – no "headhunting" of nurses is applied ▪ Recruiting activities are based mainly on word-of-mouth rather through aggressive recruitment effort

Figure 15: Challenges and Measurements at a glance

Source: Illustrated by project group

2. Introduction

"With 450,000 open positions, the skilled labor shortage is the biggest issue German companies are facing right now." (Ohoven 2018)

This is how Professor Dr. h.c. Mario Ohoven, the president of the Small and Medium Enterprise Association, describes the growing problem of the shortage of skilled workers and qualifications in the German economy. The 'shortage of skilled workers' is no longer just a buzzword, but an important issue for companies across all sectors. In fact, the shortage of skilled workers and the consequent vacancies results in a loss of economic activity that costs the German economy an estimated 86 billion euros annually (cf. Carter 2022).

With a projected shortage of 308,000 nurses by 2030, especially the German healthcare sector represents a major area of concern when it comes to labor shortages (cf. Martin 2020). The industry has been experiencing a lack of certified nurses and an increased demand for care over the past years, which was only exacerbated by the COVID-19 pandemic (cf. Br24 Redaktion 2022). According to the Institute of the German Economy, Germany currently is experiencing a shortage of 200,000 caregivers within the fields of geriatric care, general healthcare, and nursing (cf. Pieper 2022).

In recent years, one main approach used to meet the growing demand for nursing services has been to recruit foreign professionals. The companies are investing considerable amounts of money in recruiting doctors and nurses from abroad in the hope of continuing to provide high-quality services to patients and retaining newly acquired nurses for as long as possible. However, the market faces a number of challenges, such as language barriers, cultural differences, and high turnover rates, which have not yet been adequately addressed (cf. Sanimed 2022). Although there are existing agencies that recruit certified nurses from abroad, these existing business models are primarily characterized by high costs for the nurses and

insufficient support for the hospitals after placement (cf. Argüeso, Richter, and Schubert 2020). Therefore, these models are primarily concerned about monetary gains instead of helping support the nurses' cultural and social integration. To address the nationwide 'nursing shortage', new business models must enter the market.

Based on the problem described above, this thesis examines the potential for creating an innovative business model that transforms the nursing shortage in Germany into a business opportunity that meets the needs of both foreign nurses and German healthcare employers. The proposed business model could provide a supportive solution to the nursing shortage in Germany while creating a safe and positive work environment for the foreign nurses employed.

Furthermore, this research elucidates how technology can be used to bridge the gap between employers and foreign nurses to encourage the development of more innovative business models within the healthcare sector in the near future.

3. Problem

The following section analyzes the nursing shortage issue and its causes. In addition, the solution approach for attracting foreign specialists will be highlighted and its current limitations are identified. These problem areas will help to identify business opportunities. Subsequently, the quantitative research conducted in this thesis is presented to support the identified business opportunity.

3.1. The causes and effects of the nursing crisis in Germany

To explore opportunities for developing an innovative business model to attract more nursing workforce, it is first necessary to characterize the problem of the nursing shortage and its origins. Therefore, the following sections discuss the causes of the nursing shortage in Germany and its impact within the healthcare sector.

The first important aspect that needs to be explored in greater detail is the demographic change and its impact on the labor market. In this thesis, demographic change will be specifically characterized as the change in a population's age structure in response to changing living conditions. The result is a decreasing number of younger individuals whilst an increase in the number of elderly people (cf. Stula and Linz August/ 2010, 2). The German labor market is particularly affected by this change. Currently, one in two people in Germany is older than 45 whereas, one in five is older than 66, thus showing the progression of the age gap (cf. Statistisches Bundesamt 2020).

Demographic change is also evident within the healthcare market. The number of people in need of care in Germany has risen by an average of 5 percent over the past five years, whereas, the supply of available care workers has decreased by an average of 2 percent (cf. Bundesagentur für Arbeit 2022a, 11). As a result, the gap between demand, the number of

elderly individuals, and the number of available caregivers is progressively widening (cf. Statistisches Bundesamt 2020).

This situation is reinforced by the declining interest of Generation Y and Generation Z in Germany to work within healthcare professions. They find the profession of caregiving particularly unattractive due to the long working hours and low pay (cf. Dettling 2018). As a result of this wide-spread belief, fewer nurses will be available, as 40 percent of the current staff is expected to retire within the next 10 to 15 years (cf. Kig 2019). Therefore, there will not be enough young workers to replace the older generation in the labor market in the near future.

When analyzing the issue of the decreasing attractiveness of nursing professions, an income that is much lower compared to the German salary standards is a main contributor. Although the German Federal Ministry of Health requires a gross minimum wage of 2,600 euros across all German states, this value is still 11 percent below the average German payroll (cf. Statistisches Bundesamt 2022; cf. Bundesagentur für Arbeit 2022a, 11).

The changes in the healthcare system described above have caused several negative outcomes, one of which is the shortage of nurses. The gap between patients and nurses leads to an increased workload demands, which has detrimental effects on the working conditions of nurses. According to a 2018 study by the Hans Böckler Foundation, nurses on average had to care for 13 patients. Comparing this to the recommended ratio of one nurse per four patients, it is evident that nurses are being overworked (cf. Simon and Mehmecke 2017). In Scandinavia, for example, one nurse cares for less than half the number of patients, approximately 6 patients (cf. Augustin 2022).

Furthermore, overworking impacts the quality of care nurses are able to provide. A study conducted by the Center for Health Outcomes and Policy Research at the University of Pennsylvania found that increasing the workload of healthcare personnel has a direct effect on

patient mortality, readmission rates, and longer lengths of stay (cf. McHugh et al. 2021). Consequently, nurses feel an increasing sense of guilt as they are unable to spend enough time with patients in need due to high workloads and staff shortages. This can cause frustration and if internalized across long periods of time, it can cause mental illnesses such as anxiety and depression. Mental illnesses caused by burnout occur twice as often in healthcare-related professions than in any other profession (cf. Reimann 2022). For example, a Spiegel report shows that nurses in Germany report situations where nurses could even provide food for patients while they were dying but they because of how little time they could dedicate to each patient. This results in tremendous feelings of remorse and self-blame which has tremendous tolls on nurses' mental health (cf. Dworak 2020).

Moreover, the shortage of nurses causes an annual cost of 66,528 euros per absent employee to stakeholders, which is almost double the average salary of a nurse. These costs include the cost of recruitment and the cost of lost patients (cf. Görden 2020).

In summary, the shortage of nursing staff has a significant impact on the German healthcare market and is rapidly driving up costs for the industry. Age demographic changes and the shifting values of younger generations are the main causes. Although the minimum wage has been raised and financial incentives have been introduced in response to this staff shortage, these measures are still insufficient and are slow to take effect, whereas this is a pressing issue. There is no simple solution for increasing the attractiveness of the nursing profession, therefore, there is an urgent need for new solutions, presenting a novel entrepreneurial opportunity. One way to close the current gap in the German healthcare system is to supplement the insufficient domestic workforce with foreign healthcare personnel. Since 2019, there has been an increase of approximately 30 percent in foreign healthcare workers. This shows that opportunities to work and migrate to Germany are growing in attractiveness

(cf. Deutsche Welle 2021a). This possibility of increasing the migration of nursing workforces will be explored in the next subsections.

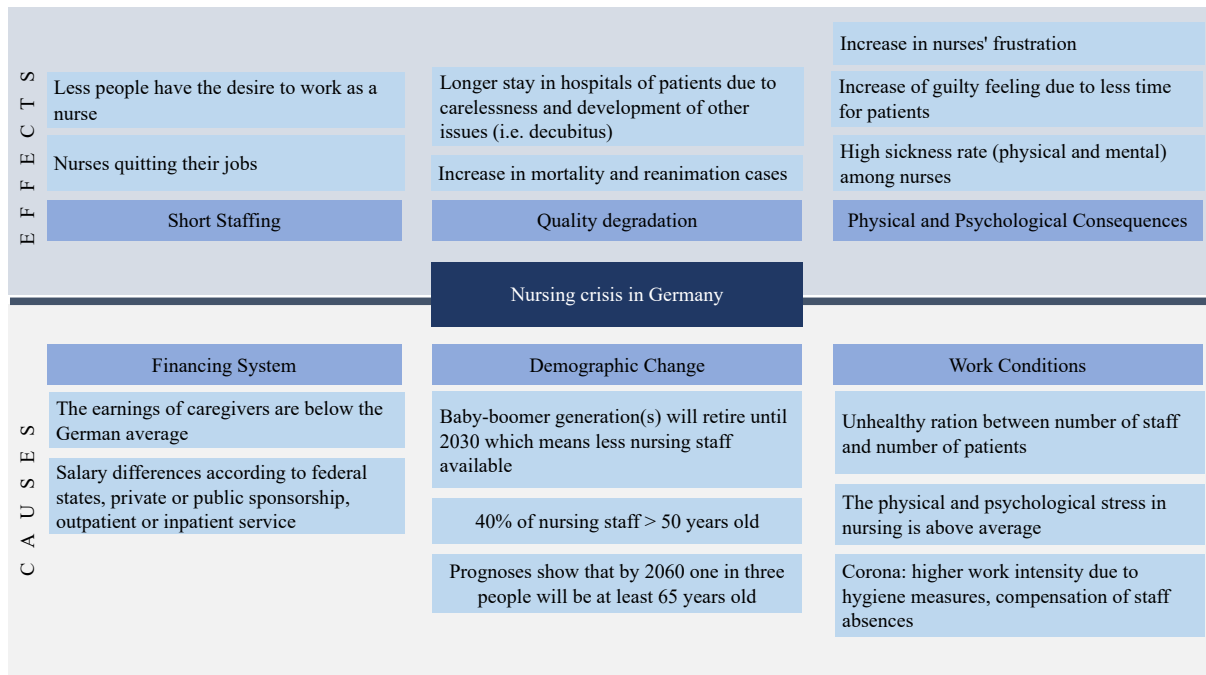


Figure 16: Cause and Effects of the nursing shortage

Source: Illustrated by project group

3.2. Potential analysis of the recruitment of foreign nurses

To fill the gap within the German healthcare system, the solution of recruiting foreign healthcare workers will be evaluated. To understand the potential business opportunities within this field, motivation for foreign nurses to immigrate to Germany to fill open positions will be considered.

The first motivator is the wage gap between Germany and nurses' home countries. Although the average annual salary of a nurse in Germany is lower than the average occupational salary in Germany, it is still much higher than the salary of nurses in foreign countries. For example, the average annual salary of a nurse in Bulgaria is 15,013.44 euros, and only 8,838.06 euros in Turkey (cf. ERI Economic Research Institute 2022). Although it can be argued that these foreign countries have lower living costs, their standard of living is much lower than in Germany due to the low income. Therefore, it is beneficial for nurses to immigrate to Germany

for better income and ensure more security for their family members back home (cf. Dorvlo 2021).

Caregivers often immigrate to Germany with the goal of providing their children with a better future and more career opportunities. This is because German universities, such as the TU München, are ranked among the top 50 academic institutions across the EU (cf. Dworak 2020).

The availability of social insurance benefits such as a pension, health, and unemployment insurance are also huge motivators for foreign caregivers to work in Germany. Germany's healthcare system is ranked third according to the Global Index of Healthcare Innovation with a total score of 59.79. This provides foreign nurses with greater financial security compared to what they would have in their home countries (cf. Girvan 2021).

To holistically evaluate foreign nurses' potential, it is necessary to examine how their abilities can be recognized within the German healthcare system. Non-EU citizens must obtain a visa or residency permit in order to work in Germany. This is the first and most important step in this process, as it recognizes their qualifications and validates important immigration documents. In order to get a visa, certain criteria must be fulfilled, including valid education credentials and obtaining authorization from the German government to practice healthcare (cf. Bundesregierung 2022b). Additionally, foreign nurses must achieve certain education degrees within their own country that match Germany's criteria in order to be recognized. These degrees must be equivalent to Germany's theoretical and practical training requirements which states nurses must undergo a total of 4,600 hours of training (cf. Pfadenhauer 2022).

One of the German visa requirements states that foreign nurses must have a legitimate job offer prior to their application, this poses further immigration challenges. In attempt to simplify this process, the government has reduced the administrative burden for admitting foreign nurses

and fastened the recognition procedures. In 2012, the ‘Recognition Act’ was introduced, establishing standardized nationwide procedures and criteria for judging the qualifications of foreign professionals (cf. *Anerkennung in Deutschland 2021a*). This was later complemented by the Skilled Workers Immigration Act, which came into force in 2020, with the goal of facilitating easier entry and obtaining residency rights in Germany. This expedites the procedures for visa checks, recognition of qualifications, and acquiring work permits (cf. *Anerkennung in Deutschland 2021b*).

Language proficiency is also a key factor to consider, particularly a comprehensive understanding of healthcare technical terminologies. Applicants must meet the European Language Framework Level B2 or the minimum B1. Furthermore, a German doctor must certify that the foreign healthcare professional is physically and mentally fit to work in the industry. Additionally, a certificate from either the country of origin or the German police supporting that the nurse is of good conduct must also be presented (cf. *Bundesregierung 2022a*).

Finally, support for cultural integration must be provided to avoid foreign nurses from being immediately discouraged and disappointed with their life in Germany. It is important to recognize that those who migrate without any support are more likely to experience homesickness, loneliness, and the onset of mental illnesses such as depression. According to research by the IMAP Institute investigating foreign nurses’ cultural integration experiences, more than 70 percent of respondents reported that job-related stress was exacerbated by the lack of a warm cultural and social environment. 60 percent of respondents stated that difficulties associated with adjusting to a new culture, lifestyle, and lack of social support outside the hospital environment was a critical challenge. Reasons for this may include lacking sufficient language skills for socializing with others and inherent difference between their cultural backgrounds (cf. *IMAP 2020*).

Smith et al.'s 2021 study revealed that integration programs that focus on improving cultural awareness and clinical communication can benefit nurses' health and well-being, leading to better recruitment and retention rates. Structured integration programs helping nurses throughout their migration process have been reported in the literature based in the United Kingdom and Australia, but not from Germany. The potential for such programs to improve nurses' overall wellbeing could lead to increased integration success rates and overall more positive experiences for nurses transitioning into a foreign healthcare system (cf. Smith et al. 2022).

From our research, it is apparent that the process of applying for a job as a foreign health professional in Germany is difficult and time-consuming, requiring a long list of qualifications that varies for each individual's case. This makes it difficult for foreign healthcare professionals to apply for jobs in Germany without doing extensive research or seeking help from outside sources. Despite the government introducing initiatives that expedite the process, a medical institution that is already working at maximum capacity is unable to take on the highly intensive administrative tasks nor assist foreign nurses' integration. Therefore, there is a need for an intermediary between nurses and hospitals to address this lack of support by providing assistance on bureaucratic procedures and cultural integration. The next step is to conduct an empirical study to quantify the potential of this identified business opportunity.

4. Empirical Opportunity Evaluation

In the following part, we will evaluate the identified business opportunity that focuses on acquiring foreign personnel. To do this, we reached out to potential stakeholders such as hospitals and nurses.

To gain insight into stakeholders, we used a quantitative survey to gather information. The questionnaire was designed using a hypothesis-drive approach, we formed hypotheses that were informed by our previous research findings that served as the basis for the survey questions we designed. The following presents our hypotheses. The nursing shortage is perceived as high by German medical institutions.

1. The nursing shortage will be considered a critical issue by German medical institutions.
2. Facilities affected by the nursing shortage will believe the measures taken by the government are insufficient.
3. Medical facilities are considering hiring foreign nursing personnel in response to this shortage.
4. Medical facilities need support in order to provide successful integration.
5. Facilities would consider using an intermediary platform to acquire foreign personnel.

4.1. Data collection

The survey was created via the Qualtrics website that helps to design online questionnaires. We piloted the survey before sending it out to participants through Qualtrics' automated email distribution method. Respondents were informed of the study's purpose on the front page of the questionnaire. Participants were kept anonymous throughout the process so they can freely express their personal opinions on sensitive matters. If participants decide that

they do not wish to disclose the information while completing the questionnaire, they can exit the survey and their results will not be included in our analysis. No ethical considerations were violated in our study.

4.2. Sampling

Our research was limited by both time and financial resources therefore, we aimed to gather a sample size of at least 200 subjects. The population we will be sampling from are employees in hospitals, nursing, and retirement homes in Germany, as they are most relevant to our thesis. Using the email addresses provided by the Federal Statistical Office's Directory of Hospitals and Preventive Care or Rehabilitation Facilities, 7,711 individual emails, that included a link for accessing the questionnaire, were sent out.

4.3. Data analysis and opportunity evaluation

In this chapter, the results from the quantitative survey will be analyzed and discussed to validate the findings from our previous research that used secondary sources. Furthermore, these results will evaluate the potential business opportunity that we have identified by informing appropriate improvements to our solution design and help consider previously unforeseen limitations. Overall, we hope this will help further the general understanding surrounding the effects of the nursing crisis on German healthcare institutions. Using the features available on Qualtrics, we were able to analyze the data and generate informative statistical models with the help of Stats iQ and Text iQ tools. By visualizing trends within the data, we can determine whether our hypotheses are supported.

The survey had a total of 255 respondents that fully completed all aspects of the questionnaire. Since the collected data was nominal only frequencies could be analyzed. Of the 255 respondents, 85 percent (N=219) worked in nursing homes or homes caring for the elderly, 13 percent (N=29) worked in hospitals, and 0.4 percent (N=1) worked in a doctor's office. The

remaining respondents were assigned to the category 'other' (N= 6). The questions were translated from German into English to aid comprehension.

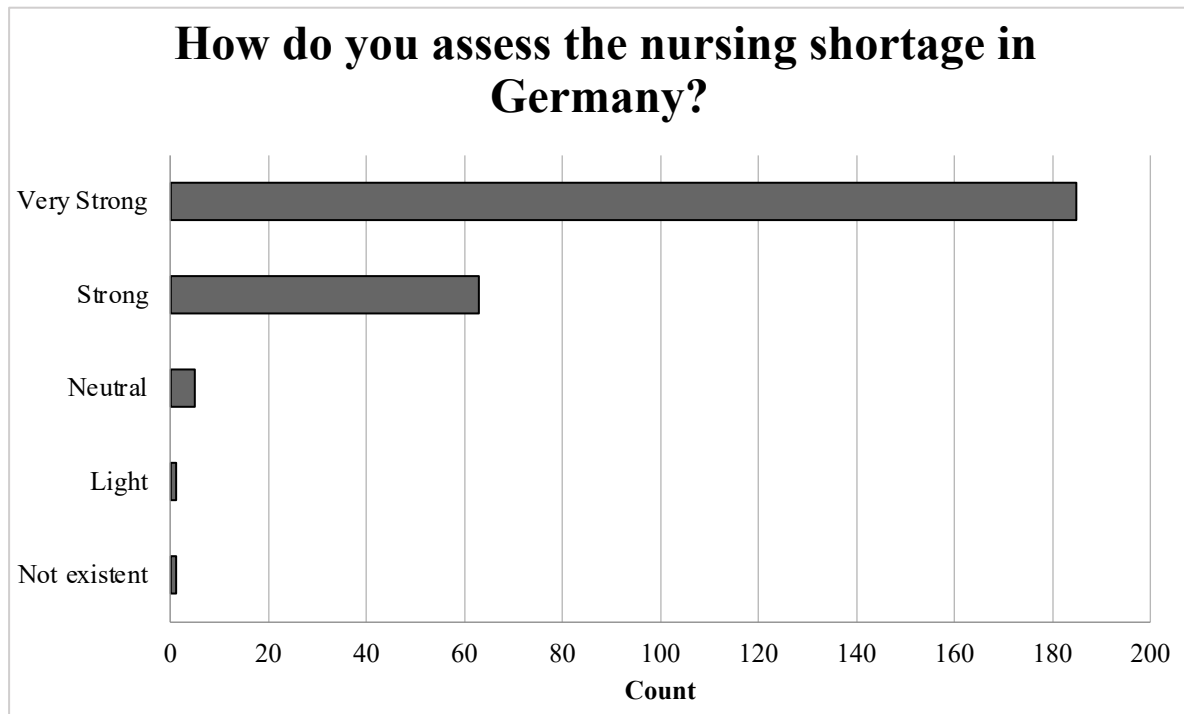


Figure 17: Question 1 – How do you assess the nursing shortage in Germany?

Source: Illustrated by project group

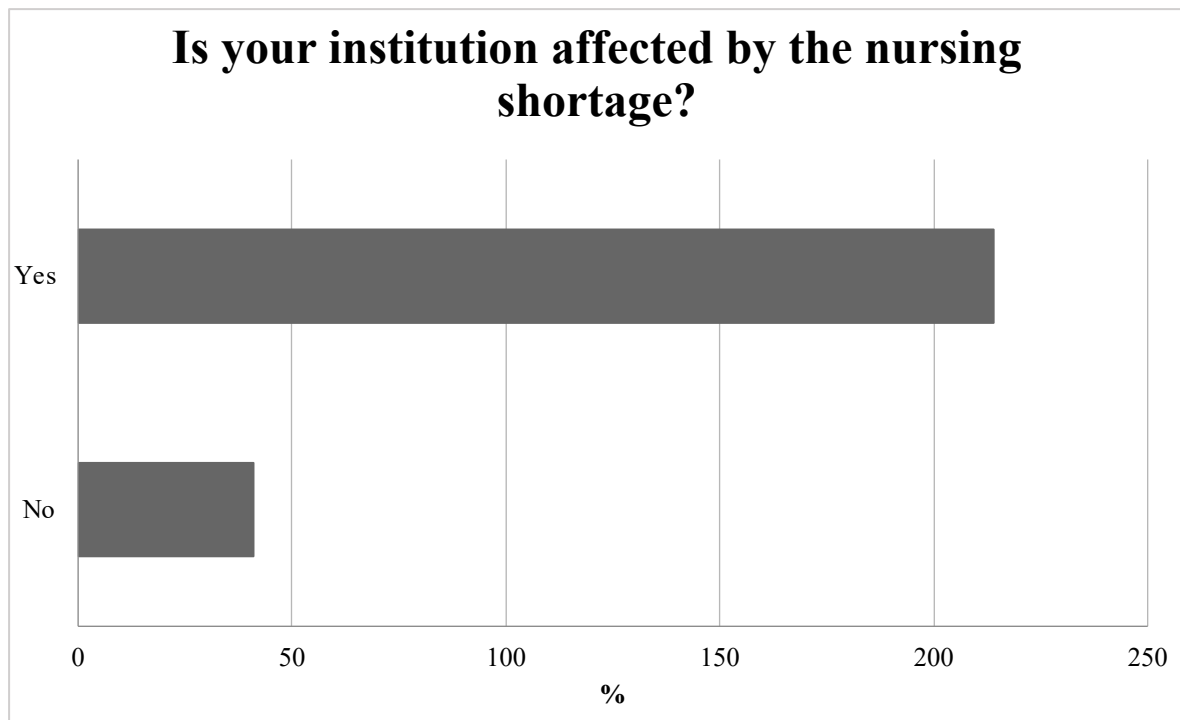


Figure 18: Question 2 – Is your institution affected by the nursing shortage?

Source: Illustrated by project group

Questions 1 and 2, response frequencies shown above, were included to assess how respondents perceive the current state of the nursing shortage in Germany and within their own facilities. Possible responses ranged from very strong to nonexistent. The results show that 72 percent (N=185) of the participants classified the nursing shortage as very strong and 26 percent (N=63) considered it as strong. In total, 98 percent of respondents believed the nursing shortage is high or very high. Moreover, 84 percent of respondents believed that the nursing shortage has also impacted their own institution. Thus, these combined results support our first hypothesis which states that the nursing shortage is indeed a prevalent issue.

After the initial hypothesis has been supported, we wanted to further investigate how companies are exactly recruiting personnel. Therefore, question number three was included to determine the extent that facilities are already using intermediary agencies to acquire personnel (Figure 19).

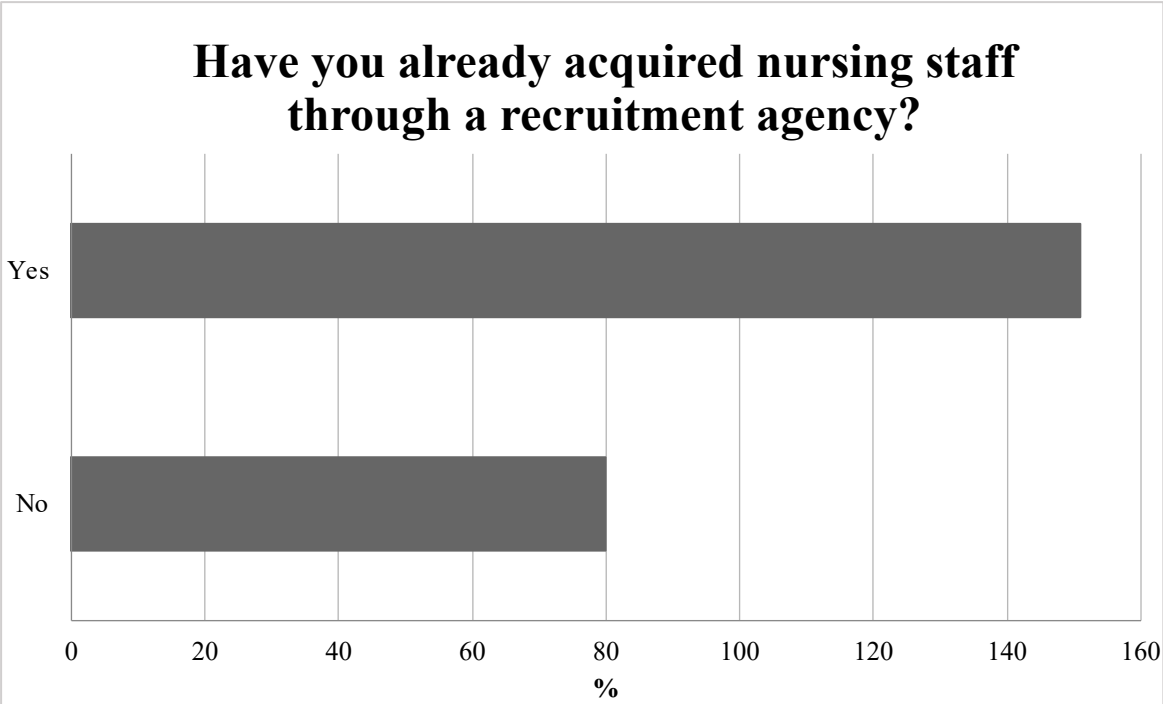


Figure 19: Question 3 – Have you already acquired nursing staff through a recruitment agency?

Source: Illustrated by project group

The survey results revealed that 65 percent of respondents are actively hiring staffs through an intermediary agency. Over half of the respondents (55 percent) have previously acquired nurses from abroad. This supports our hypothesis that hospitals often lack the resource to independently source nurses, instead they rely on secondary sources.

Previous findings have established that hospitals require agencies, but it remains unclear how successful using these agencies are. Therefore Question 5 was included to determine how satisfied the respondents were with the service provided by existing intermediaries.

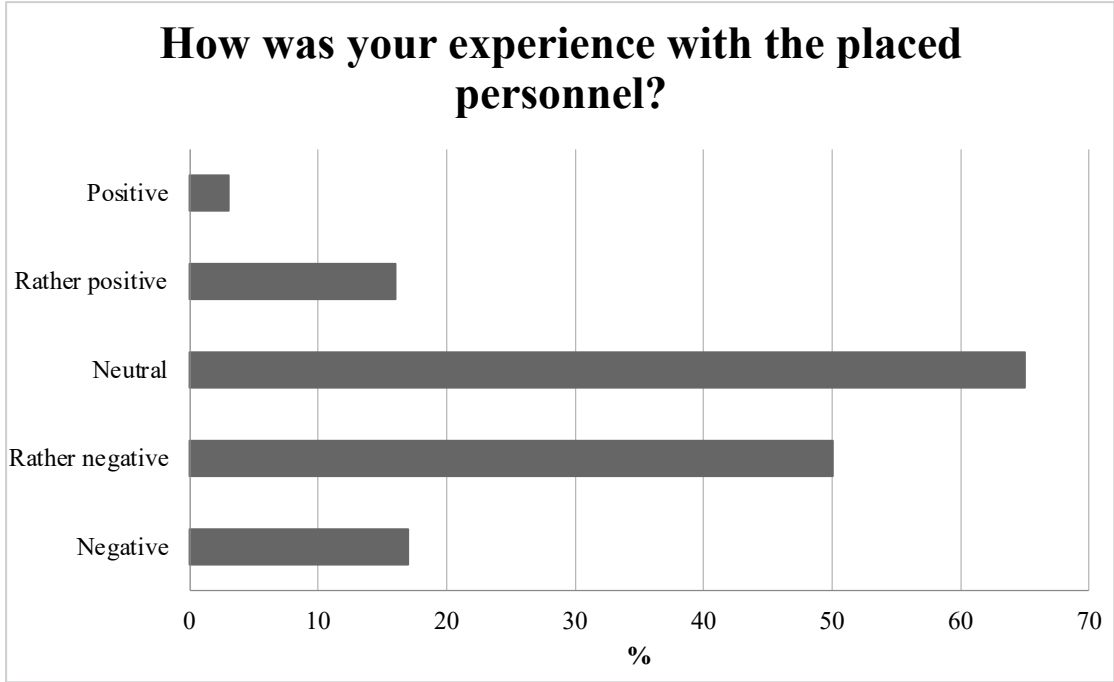


Figure 20: Question 5 – How satisfied were you with the acquired personnel?

Source: Illustrated by project group

The responses for this survey show that the majority of respondents (75 percent) had either a neutral or negative experience and only 13 percent of respondents reported having a pleasant experience. Thus, this suggests a skew towards negativity, implying that the current service providers are not meeting the hospitals’ standards for recruiting foreign nurses. Therefore, this shows potential for new solutions to improve dissatisfaction.

Question 6, "Please give reasons for your answer from question 5", was included to allow respondents to elaborate on the specific factors causing dissatisfaction, with hopes that the responses can better inform an improved business model. The respondents said that they sensed a lack of motivation and genuineness on the agency’s side, moreover, their services were often unreliable. This unreliability was often connected to temporary workers provided by agencies that were seen as a negative factor due to their high costs and short-term presence at the facility. Finally, insufficient language skills were mentioned as a reason for dissatisfaction with the agencies. The respondents also noted that they received very little support from

licensing authorities responsible for incoming foreigners and their work permits and that the agencies offered no assistance in processing the necessary paperwork. In addition, interviewees highlighted that many agencies do not pay attention to the cultural integration of the nurses they place, although this is a key factor for a successful business model as it ensures that nurses can settle into the country and want to remain for an extended period.

Moreover, difficulties that foreign nurses may experience throughout the immigration process highlight the importance of agencies providing adequate assistance, especially considering that these nurses are unfamiliar with German bureaucratic procedures. Question 7 was included to identify which countries would be the most suitable for acquiring foreign nurses from. Turkey and Albania were particularly noted as the facilities had the best experience with nurses from these countries.

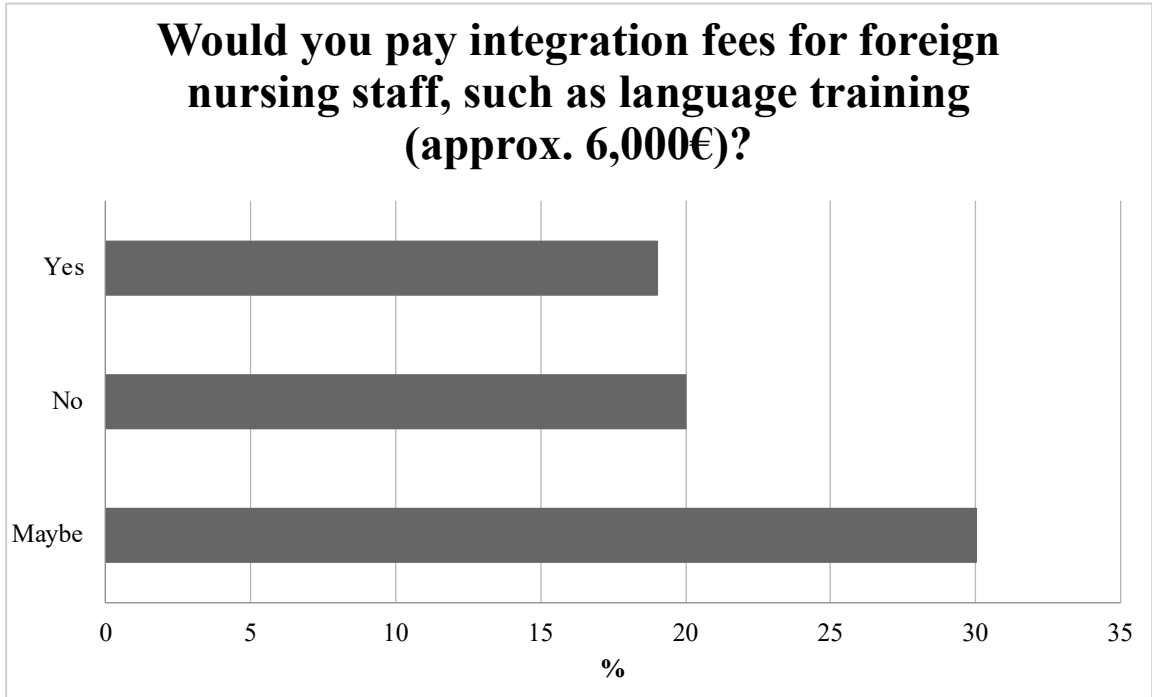


Figure 21: Question 8 – Are you willing to cover the costs of integrating foreign nursing staff, including language training (estimated at 6,000 euros)?

Source: Illustrated by project group

Finally, it is critical for our questionnaire to also assess hospitals' monetary budget for extra support in helping foreign nurses integrate into Germany. For this reason, we surveyed

the willingness to pay using the example of providing language training for a foreign nurse. 28 percent of respondents said they would invest up to 6,000 euros for integration services (Figure 21). Hospitals' budget is essential for designing the revenue of our business model.

In summary, the quantitative survey responses from 255 potential clients have revealed that the majority need healthcare workers and are willing to hire foreign workers. This suggests that our solution model has great potential and is in high demand. We have confirmed that the current solutions do not satisfy the customers' needs, therefore, we aim to work towards addressing these identified issues. Lastly, the survey indicated that Turkish nurses were most highly favored. This will be further examined in the following part of the thesis.

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5. Figures

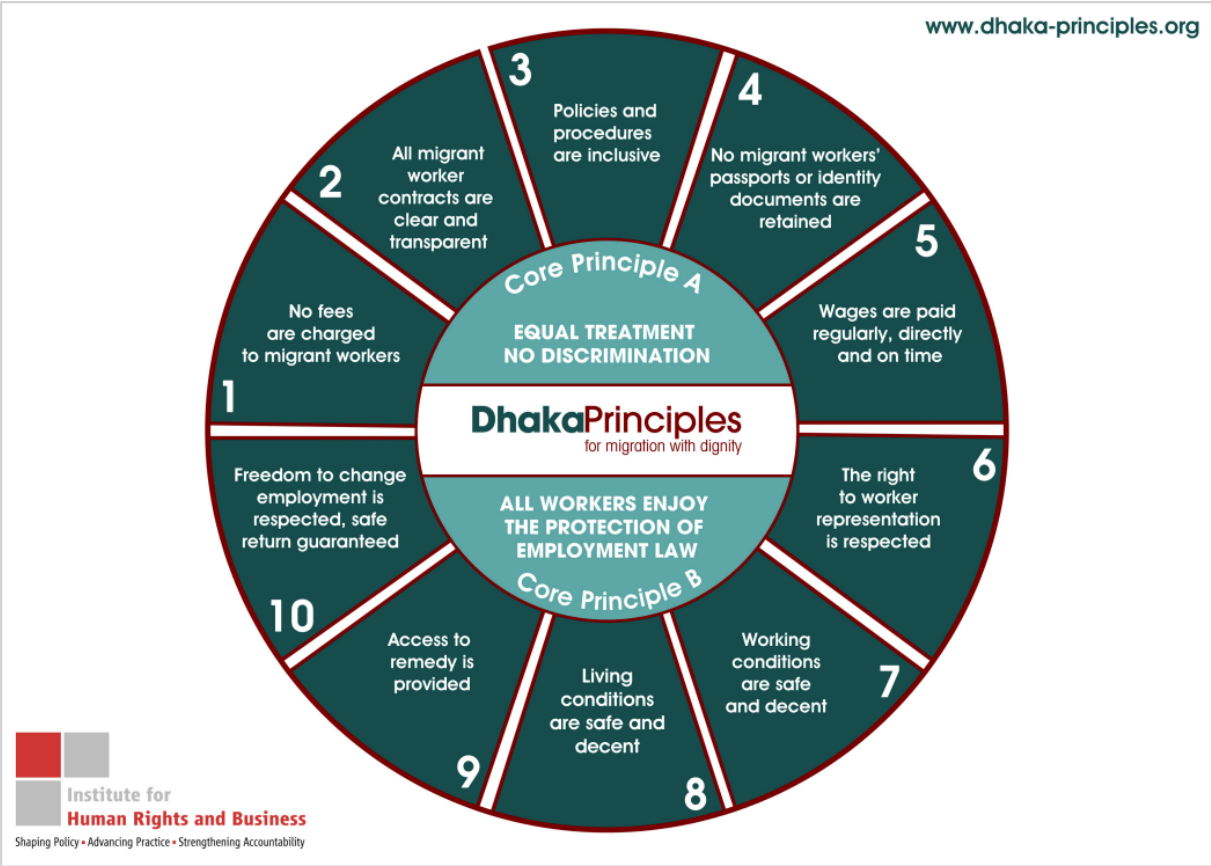


Figure 22: The Dhaka Principles for Migration with Dignity (the “Dhaka Principles”)

Source: Institute for Human Rights and Business. “Dhaka Principles for Migration with Dignity.”

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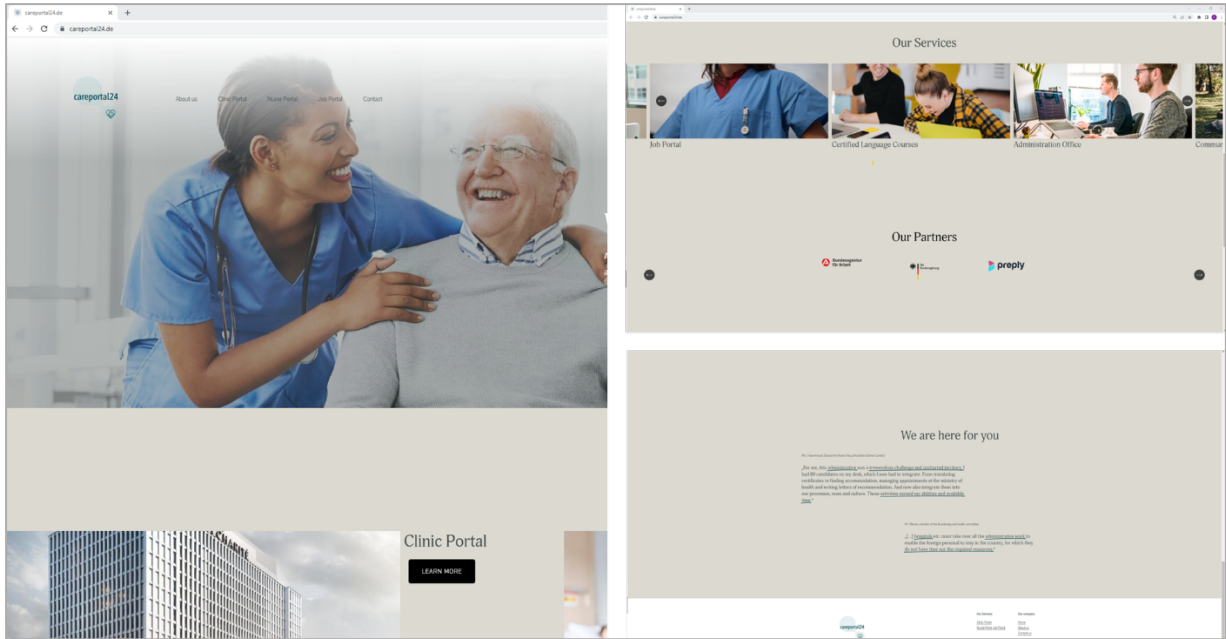


Figure 23: Careportal24 - landing page

Source: Illustrated by project group

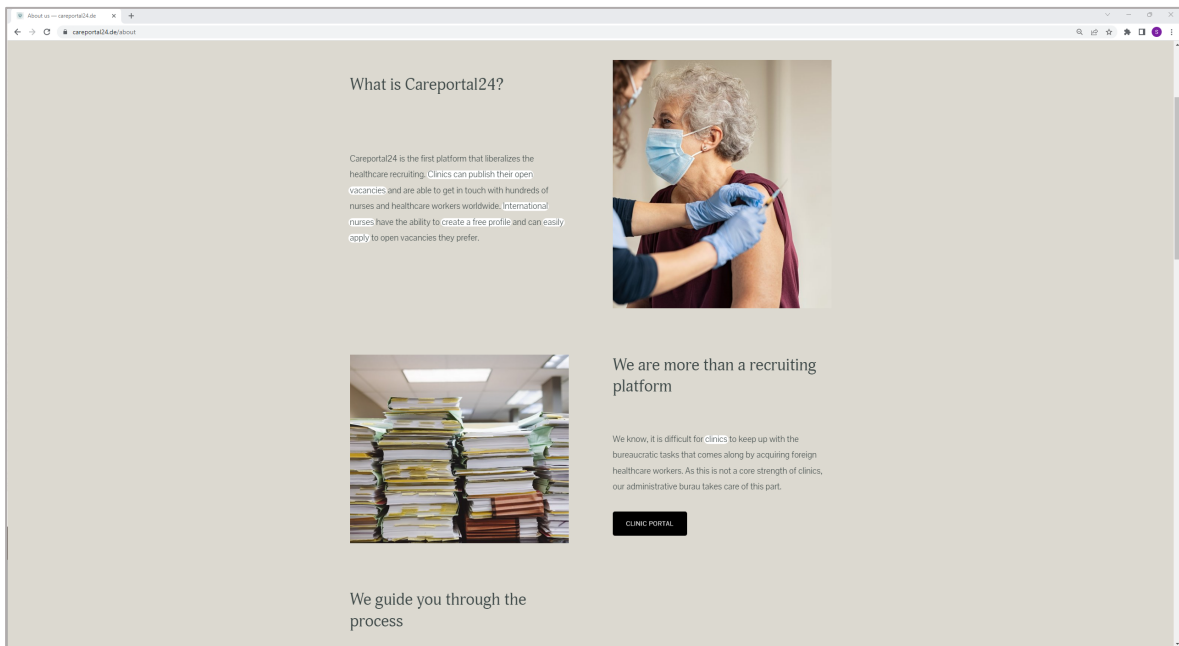


Figure 24: Careportal24 - About us

Source: Illustrated by project group

**Regulation on the Employment of Foreigners
(Employment Regulation - BeschV)
Annex (to § 38)**

- 1 Afghanistan (Islamic Republic of Afghanistan),
- 2 Angola (Republic of),
- 3 Equatorial Guinea (Republic),
- 4 Ethiopia (Federal Democratic Republic),
- 5 Bangladesh (People's Republic),
- 6 Benin (Republic),
- 7 Burkina Faso,
- 8 Burundi (Republic),
- 9 Côte d'Ivoire (Republic),
- 10 Djibouti (Republic),
- 11 Eritrea (State),
- 12 Gabon (Gabonese Republic),
- 13 Gambia (Republic of),
- 14 Ghana (Republic),
- 15 Guinea (Republic),
- 16 Guinea-Bissau (Republic),
- 17 Haiti (Republic of),
- 18 Yemen (Republic of),
- 19 Cameroon (Republic of),
- 20 Kiribati (Republic),
- 21 Congo (Democratic Republic of),
- 22 Congo (Republic of),
- 23 Lesotho (Kingdom of Lesotho),
- 24 Liberia (Republic of),
- 25 Madagascar (Republic of),
- 26 Malawi (Republic of),
- 27 Mali (Republic),
- 28 Mauritania (Islamic Republic of Mauritania),
- 29 Micronesia (Federated States of Micronesia),
- 30 Mozambique (Republic),
- 31 Nepal,
- 32 Niger (Republic of),
- 33 Nigeria (Federal Republic of),
- 34 Pakistan (Islamic Republic of Pakistan),
- 35 Papua New Guinea (Independent State of Papua New Guinea),
- 36 Solomon Islands,
- 37 Senegal (Republic of),
- 38 Sierra Leone (Republic),
- 39 Somalia (Federal Republic of),
- 40 Sudan (Republic),
- 41 South Sudan (Republic),
- 42 Tanzania (United Republic of Tanzania),
- 43 Togo (Republic),
- 44 Chad (Republic),
- 45 Uganda (Republic of),
- 46 Vanuatu (Republic),
- 47 Central African Republic.

Figure 25: Regulation on the Employment of Foreigners

Source: Bundesministerium der Justiz. 2021. "Verordnung Über Die Beschäftigung Von Ausländerinnen Und Ausländern (Beschäftigungsverordnung - BeschV)." Accessed December 12, 2022. https://www.gesetze-im-internet.de/beschv_2013/anlage_1.html

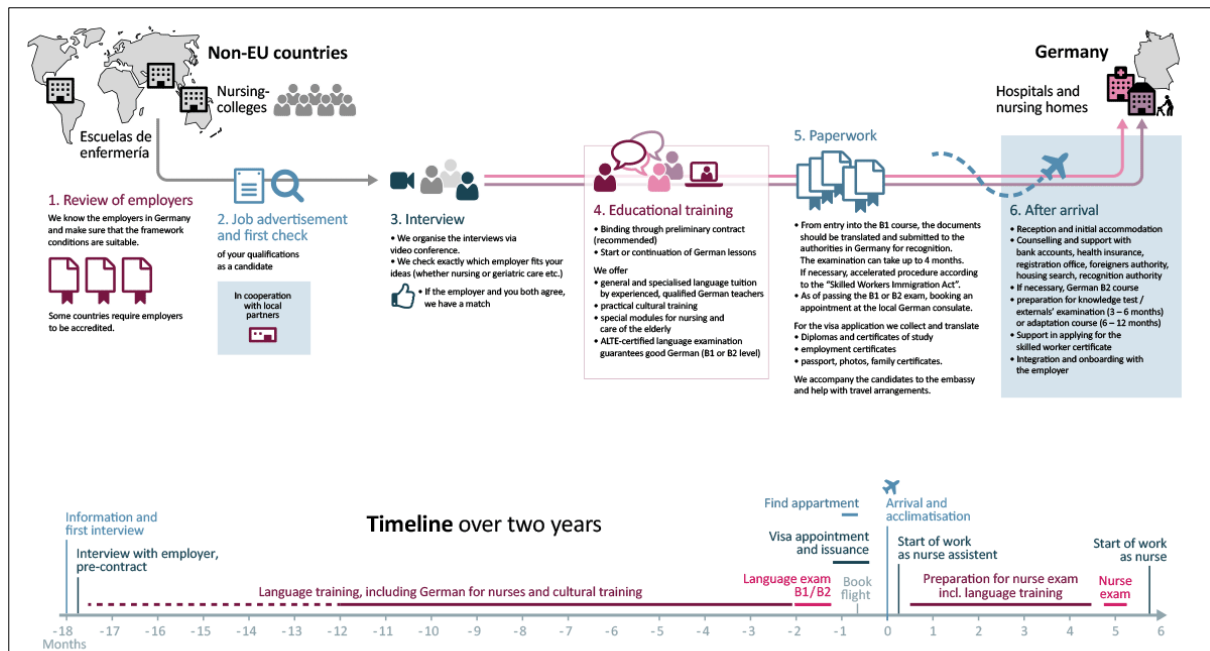


Figure 26: Flowchart of the mediation process

Source: Start Placement Service. 2021. "Placement of Health Professionals in Germany." Accessed December 14, 2022. <https://start-placement.com/en/>.

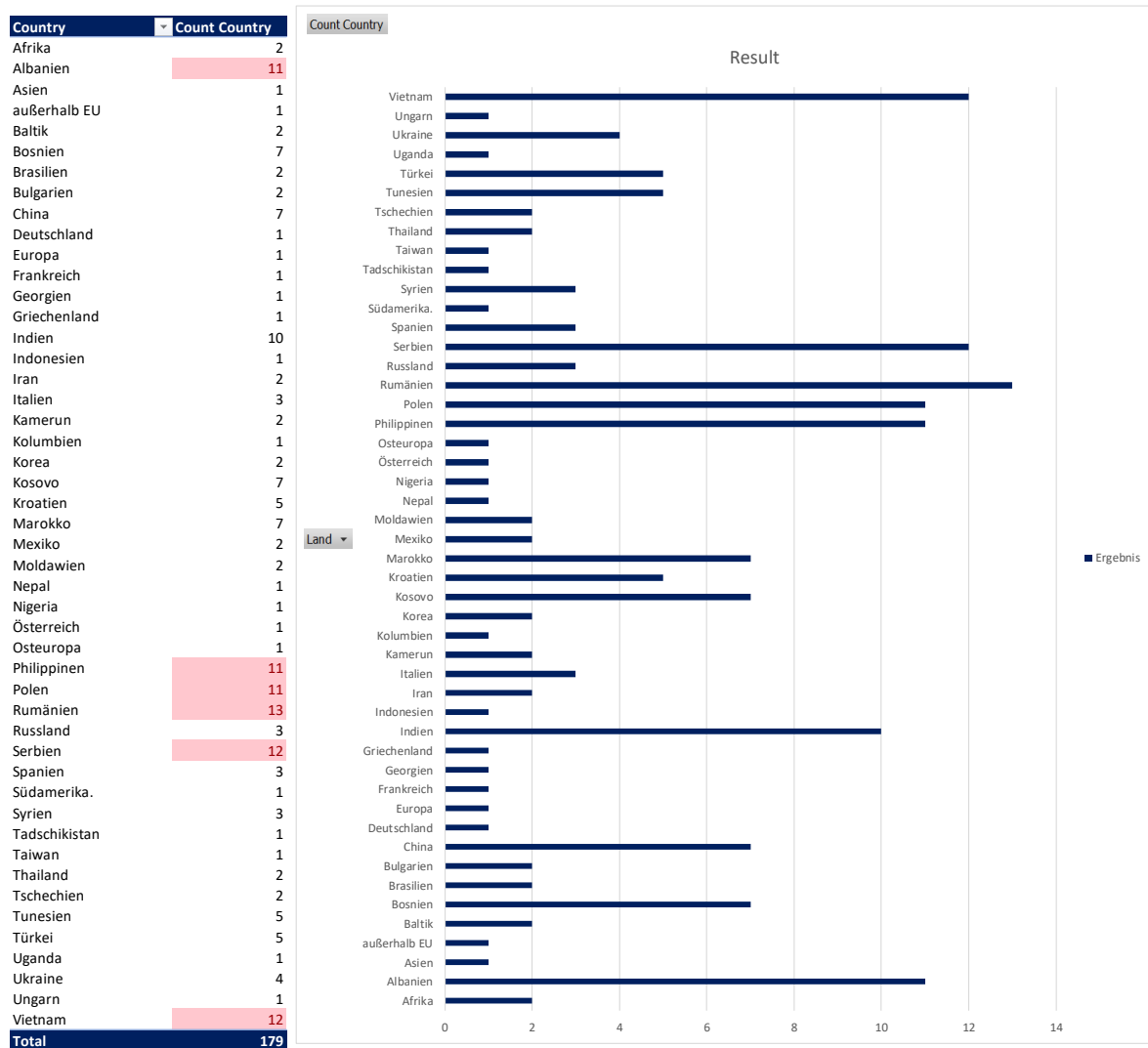


Figure 27: Country Analysis derived from Quantitative Data

Source: Illustrated by project group