



HUMANITARIOS SIN
FRONTERAS

AI= Empowering
women around
the world

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Abstract

This project promotes the circular economy and artificial intelligence for the economic empowerment of women in vulnerable situations. Through initiatives such as the production of ecological soaps, it seeks to improve the lives of participants and promote sustainable practices in their communities. The project began with a comprehensive diagnosis that identified local opportunities and then provided training and support for the women to manage their own businesses. Following its initial success, it is expanding to the earthquake-affected Atlas region of Morocco to replicate its positive impact and offer hope to more women. The multi-sectoral approach and strategic partnerships ensure long-term sustainability, with the goal of eradicating inequalities and fostering fairer and more equitable development.

Impact statement

This project has generated significant impact in three dimensions: social, economic and administrative. Socially, it has empowered vulnerable women, giving them economic autonomy and building solidarity networks in their communities. Economically, it has facilitated the creation of sustainable microenterprises, promoting the circular economy and offering income alternatives in areas affected by crisis. Administratively, it has demonstrated the effectiveness of a multi-sectoral approach involving non-governmental organizations, governments and the private sector, optimizing resource allocation and ensuring project sustainability. In addition, it has been key in raising awareness among communities and institutions on the need to integrate innovative approaches in social intervention, contributing to the fulfillment of the Sustainable Development Goals (SDGs).

Humanitarios Sin Fronteras

Humanitarios Sin Fronteras is a non-profit organization, with more than 14 years of history, that works to provide people in vulnerable history, which works so that people in vulnerable situations can access opportunities to build their life projects. Our mission is to build a more just, supportive and inclusive society, in which diversity is accepted as a value and each person can develop his or her life project based on a consolidated social transformation. We believe in the capacity for change of each person and we support the most vulnerable through closeness and support.

Humanitarios Sin Fronteras was born from the need to change our environment. We believe that utopias become reality through effort and social struggle. The need to build a better world, fairer and closer to social justice, gives us the energy to break all the barriers of exclusion, from a holistic philosophy, we provide support and help to the most vulnerable support and help to the most vulnerable people in our society.

AI= Empowering women around the world

It is a hot May morning in the west of Almeria, and two women, Khadiya and Naima, both of Moroccan origin and with an enterprising spirit, began their day as so often before, walking through the streets. At the point of greatest daylight, with the heat and humidity of Almeria's summer made every step feel heavy. But that day, the usual tranquillity was disturbed by the thoughts that occupied their minds, full of ideas and worries about the obstacles they both faced in both their work and personal lives.

Khadiya was at a crucial crossroads in her life, with decisions that could change her future. Naima, her inseparable companion, was in a similar situation. Both are part of a pioneering project of the organisation Humanitarians Without Borders, a non-profit organisation with a strong presence in the local community, but also internationally with projects that are developed in search of a substantial improvement in the situation of the most vulnerable groups. This business project offered a unique opportunity for women like them, focusing on the production and management of personal care products from recycled oils.

For Khadiya and Naima, this project was not only a hope for improving their economic situation, but also a beacon of change for their community. United by their friendship and the challenges they shared, the two women knew the road would not be easy, but with every step they took under the Almeria sun, they felt they were getting a step closer to transforming their lives.

A project born out of necessity

The history of the project begins in the context of the settlements in the western part of Almeria. This area, marked by the massive presence of fruit and vegetable greenhouses as an economic engine, as well as communities of migrants from different parts of the

world, faces great challenges in terms of employment, housing, health, education and, in general, quality of life for the local population. Limited access to resources and opportunities had led many women to begin a relentless search for ways to improve their circumstances, to seek more and more personal autonomy.

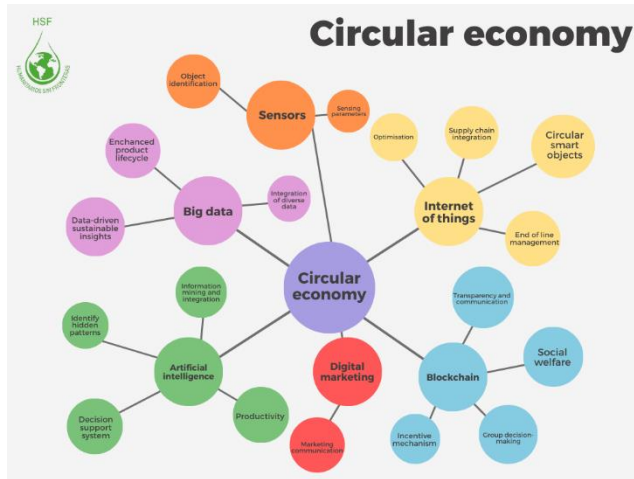
In 2023, Khadiya and Naima joined an economic and social empowerment programme driven by Humanitarians Without Borders, which focuses on combining artificial intelligence and circular economy to foster the integration of these communities and improve their quality of life. The idea was to use new technologies to create value from recycled resources, such as used cooking oil, and turn them into personal care products.

In this way, initiatives that promote sustainable development and social integration were encouraged with the help of AI, market opportunities were identified and products with potential commercial value were designed.

AI to empower women.

From Khadiya's perspective, Artificial Intelligence (AI) represented a beacon of hope in the midst of her reality. Initially, her knowledge of technology was limited, and the complexities of the digital world intimidated her. However, as she immersed herself in the Humanitarians Without Borders-driven project, she began to see the possibilities that AI offered not only for her professional development, but also for strengthening her community. Naima, her partner and close friend, shared this same vision, although, like Khadiya, she had started with uncertainty towards the technology.

Khadiya understood that AI was not just a technical tool, but an ally in their quest to improve their living conditions. The training workshops allowed them both to demystify concepts that had previously seemed unattainable. Learning how to analyse data and use algorithms to optimise the production of ecological soaps gave them practical skills that they could apply directly to their enterprise. For Naima, these skills also represented a way of asserting herself as a woman in a society that had often closed doors to her.



The ability of AI to reduce bias in recruitment processes resonated deeply with both of them. Khadiya had felt for years that job opportunities for women were limited and often influenced by prejudice. Naima shared this concern, and together, they realised that AI could be a powerful tool to level the playing field. Knowing that

technologies existed that could facilitate their employability and that of their peers filled them with confidence and determination. They began to see how this technology could open doors that had previously seemed closed, not only to them, but to many vulnerable women.

In addition, Khadiya and Naima witnessed the impact of AI on their education and work. AI-based educational platforms enabled them to access resources and training programmes that would have been inaccessible to them before. This advancement not only expanded their knowledge, but also prepared them to face the job market in a more prepared and empowered manner. For Khadiya, AI gave her the tools she needed to become the protagonist of her own story, and for Naima, it meant the possibility of helping other women find their way.

However, Khadiya was also aware of the challenges of implementing AI, and Naima shared these concerns. Both recognised that not all women in their community had equal access to education and technology, and that a struggle was needed to ensure that inclusion was the cornerstone of any progress. For them, true empowerment lay not only in taking advantage of the opportunities that AI could offer, but in ensuring that other women could also benefit from them.

Looking to the future, Khadiya and Naima dreamed of a world where the combination of AI and the circular economy would transform the social and economic landscape of their community. They wanted their venture not only to thrive, but also to establish a sustainable model that could be replicated in other areas, giving many more women the possibility of economic empowerment. For both, AI represented not only a technological

breakthrough, but a paradigm shift in the fight for gender equality and sustainable development. And with every step they took, they felt they were getting a step closer to that goal.

Methodology and sample

Methodology

The applied methodology guiding this comprehensive project is structured through three main phases: Diagnosis and Planning, Development and Implementation, and Evaluation and Scalability. Each phase effectively addresses the socio-economic and environmental difficulties faced by migrant workers in Almeria, combining the use of Artificial Intelligence (AI) with the principles of the circular economy.

Phase 1: Diagnosis and Planning

Data Collection

During this first phase, an initial diagnosis is carried out using qualitative and quantitative methods. Interviews, surveys and focus groups are conducted with the inhabitants of the El Ejido settlements to understand their needs, available resources, and the social and economic dynamics that affect them. Active community participation is key in this phase, ensuring that their voices and experiences are heard.

Identification of Opportunities

At this point of the study, a comprehensive diagnosis has been carried out involving multiple participatory methodologies and analytical tools. Through in-depth interviews, direct observations, surveys, community meetings, discussions and working groups, we have explored the existing opportunities in the region to implement circular economy projects. These activities have been instrumental in gaining a comprehensive and nuanced view of the environment, allowing us to identify key areas where sustainable initiatives can flourish.

The diagnostic process has not only revealed the community's most pressing needs, but also its strengths and the resources that can be harnessed to drive positive change. One of the most promising projects identified is the production of ecological soaps, which has shown great potential to become a sustainable and profitable venture. This type of

initiative not only generates income, but also contributes to the preservation of the environment, aligning with the principles of the circular economy.

Furthermore, it has been identified how artificial intelligence can play a crucial role in optimising these processes. The data collection carried out during the diagnosis will allow to define more precisely how AI can be applied to improve efficiency in the production and marketing of green products. For example, AI can help forecast demand for these products, optimise the use of available resources, and improve waste management. All this while ensuring that the proposed solutions are adapted to local realities and respect the unique characteristics of the region.

From this diagnosis, we have detected that there is a growing interest in the community to adopt more sustainable practices and use technology to improve their living conditions. However, we have also found that more support in terms of training and resources is needed to turn these opportunities into concrete and sustainable long-term projects.

Phase 2: Development and Implementation

Training and Capacity Building

During the first part of the second phase, workshops and training programmes are organised focusing on the production of ecological soaps, recycling techniques and basic use of digital tools. These activities promote the empowerment of the participants and will provide them with valuable skills to increase their employability and entrepreneurship.

AI implementation

We develop and apply AI models to optimise production, manage inventories and predict product demand. This includes the use of machine learning algorithms that improve soap formulations and minimise waste, thereby increasing the sustainability of the business.

Phase 3: Evaluation and Scalability

Monitoring and Evaluation

During this last phase, performance indicators are established to measure the social and environmental impact of the project. We conduct ongoing monitoring and periodic

evaluations to adjust and improve initiatives based on the results achieved and the changing needs of the community.

Adjustments and Continuous Improvement

Based on the monitoring and evaluations, adjustments will be implemented to improve the efficiency and effectiveness of the project. This final phase will also seek to identify opportunities to replicate and expand the model in other communities and sectors, promoting greater sustainability and scalability of the project's impact.

Sample

The sample will be composed of 47 women from the settlements located in the province of Almería. They were selected by means of a purposive sampling to ensure the inclusion of different beneficiary profiles within the group of vulnerable women.

Inclusion criteria will include:

- Inhabitants of settlements with limited access to basic services.

Migrants in vulnerable situations, without documentation, or with employment in the agricultural sector.

Individuals interested in participating in training and entrepreneurship programmes.

The sample selection was carried out in the initial phases of data collection and was oriented to reflect the diversity of the migrant community, allowing for a more inclusive and representative approach in the elaboration of proposals for improvement and development.

The methodological strategy and sample design ensure that the project not only addresses the immediate realities of migrants, but also drives structural changes towards greater social and economic inclusion in the region.

The local economy

The project not only has a direct impact on the empowerment of women in vulnerable contexts, but also plays a crucial role in the growth of the local economy. The creation of new businesses, especially those based on sustainability and circular economy principles, is revitalising the economic fabric of the region. Each new business contributes to the

diversification of the local economy, generating employment, increasing household incomes and promoting innovation in sectors such as green soap production, waste management and resource reuse.

The emergence of these businesses not only improves the economic conditions of the people directly involved in the project, but also strengthens local business networks. Local suppliers, markets and businesses benefit from this dynamic, creating a multiplier effect that drives economic growth throughout the community. By encouraging local production and consumption of sustainable products, it stimulates a more resilient economy, less dependent on external resources and better prepared to face global challenges.

One of the most positive aspects of this project is its openness to the entire population. Although special emphasis has been given to the empowerment of women in vulnerable situations, the project is designed so that anyone interested in being part of these initiatives can join and benefit from them. The inclusion of the whole community is essential to ensure that the economic impact is broad and sustained, and that the benefits of the circular economy reach all sectors of society.

Furthermore, the creation of sustainable businesses not only responds to an economic need, but is also aligned with community values. The project promotes responsible practices that respect the environment and reinforce residents' commitment to care for the environment. In doing so, it establishes a model of economic development that is not only viable in the short term, but also sustainable and beneficial for future generations.

Training and challenges

As the project progressed, Khadiya and Naima participated in a series of trainings designed to strengthen their skills in the use of artificial intelligence and business management. These sessions enabled them to develop a business model that was not only economically viable, but also promoted sustainability and the circular economy. Together, they began to see how the combination of technology and business acumen could transform not only their lives, but also that of their community.

In the process, however, they faced a number of difficulties. Lack of adequate infrastructure and general economic challenges affected project implementation. Naima, in particular, faced moments of doubt, feeling at times that the obstacles were too much

to overcome. However, their determination and the support they received from the programme were key to moving forward. Individual mentoring sessions and trainings helped to resolve technical and strategic issues, allowing the project to move forward, albeit more slowly than expected.

Khadiya, who had always been persevering, found the mentoring sessions an essential guide in tackling the technological challenges. Naima, on the other hand, relied on the mentoring to strengthen her business decision-making skills, which proved crucial in navigating the economic difficulties. Together, they learned to deal with pressure and to see every obstacle as an opportunity to improve.

Despite the complications, the project remained on track, and with each challenge overcome, Khadiya and Naima felt more prepared and more committed to the vision of creating a more sustainable and just future for themselves and their community.

Procedure

For Khadiya, the project process began at the beginning of the year, with a clear focus on the needs of women residing in the settlements of Almeria, both in the east and west. From the beginning, she was actively involved in the implementation of the project, which started to show promising results and consolidated itself as a valuable initiative for all those involved, with the ambition to scale up to other territories.

In order to gain an insight into the reality of their community, the project team made numerous on-site visits, which allowed them to gain an in-depth understanding of the living conditions in the settlements. During these visits, direct interviews were conducted with other women and their families, allowing them to hear first-hand about the experiences and challenges they faced. These conversations were crucial in gathering detailed data and ensuring that the findings authentically reflected the experiences of those whom the project sought to benefit.

The team did not simply observe passively; they also actively engaged with residents, which facilitated a more nuanced understanding of their environment. This immersion made it possible to approach issues from an insider's perspective, enriching the research and strengthening the validity of the conclusions drawn.

The study focused on empowering women entrepreneurs through the use of artificial intelligence (AI) to promote gender equality in the labour market during this fourth industrial revolution. Khadiya and Naima were part of an initially selected group of 15 women entrepreneurs, a sample that expanded to 47 women involved in various projects and activities, including forums, focus groups, talks and interviews. Together, they shared not only the learning, but also the determination to apply that knowledge in their own ventures.

Under the slogan ‘Your idea. Your project. Our future’, Khadiya conducted 30 training sessions with experts in the field, accumulating more than 150 hours of training, focused on helping participants to shape their ideas and projects. In addition, she enjoyed more than 60 hours of one-on-one mentoring, which provided her with personalised support in developing a solid business model.

As the study progressed, Khadiya proposed her own project. Together with the other participants, they identified the most viable and sustainable project through the use of AI: the creation of an eco-friendly soap. This venture was not only positively received in the market, but also became a successful business model, illustrating the potential of AI to boost women's economic empowerment and promote gender equality in a growing sector. Naima, like Khadiya, decided to take a gamble on this idea, knowing that together they could make it thrive.

Aware of the challenges along the way, such as fierce market competition and adverse economic conditions, Khadiya and her peers, including Naima, used artificial intelligence to adjust and optimise their production and marketing strategies. Through identifying market trends, predicting demand and improving operational efficiency, they managed to develop a business model that, although still under construction, showed a positive impact on their empowerment and the promotion of the circular economy.

Looking to the future, Khadiya, Naima and the rest of the team were committed to expanding their business and replicating their model in other areas. They were determined to demonstrate that combining advanced technology with sustainable practices could have a transformative effect on the lives of women and their communities, opening a path towards greater equality of opportunity.

Challenges and hope

Throughout the process, additional challenges emerged. Market competition was fierce and economic conditions remained difficult. However, the use of artificial intelligence made it possible to adjust and optimise production and marketing strategies. AI helped to identify market trends, predict demand and improve operational efficiency.

The project, although still under construction, demonstrated the potential of artificial intelligence to transform lives and communities. While the business was not fully operational, the journey so far showed a positive impact on empowering women and promoting the circular economy.

Looking to the future

The project focused not only on the creation of sustainable products, but also on the empowerment of women in vulnerable contexts. By demonstrating that it was possible to combine advanced technology with sustainable practices to make a positive impact, it became a role model. With initial success as a foundation, Khadiya and Naima, along with the other women in the project, planned to expand their businesses and replicate the model in other areas. The combination of artificial intelligence and the circular economy had proven to be a powerful tool for improving people's lives and promoting equal opportunities.

From their home in a small village, other women like Khadiya found a window to knowledge. No longer did they need to travel miles to reach a school; education now came to them through the screen. Language, which had always been an obstacle, vanished as the AI offered automatic translations and programmes that adapted lessons to their level of understanding. Each time they navigated these online courses, they felt the world getting smaller and their dreams bigger.

But it wasn't just education that was changing. Together with other women, Khadiya and Naima had started a project called 'Green Algorithm Beauty'. An initiative that, under the guidance of AI, eliminated bias and gave way to decisions based on data, not emotions. Both were surprised to see how their business ideas began to take shape and how they could compete on equal terms in a market that previously seemed unattainable.

Technology also opened doors in the professional sphere. Not only did Khadiya gain new skills, but the AI became her personal mentor, pointing out areas where she could

improve. That constant feedback gave her the strength to keep going, to improve herself and continue to grow.

And then Khadiya began to notice something else: she was not only changing her life, but also that of her entire community. AI was helping to identify inequalities that had previously gone unnoticed. It was not just about empowering women, but about building a fairer environment for everyone, from the most vulnerable to those with intellectual disabilities, who were now finding a place in the digital workplace.

This movement was not only transforming women like Khadiya and Naima into leaders of change, but also influencing their environment. With every step they took, they contributed to the development of a circular economy, harnessing natural resources and maximising human talent. It was a virtuous cycle that improved not only their lives, but also those of their families and the whole village.

The project did not stop there. They were learning how to manage waste, how to turn what was once considered waste into valuable resources. With the help of artificial intelligence, Khadiya, Naima and the other women in the project were changing the way employment was viewed. Traditional work was giving way to more valuable employment, more aligned with the times, where the digital and green economy offered new opportunities.

Now, Khadiya and Naima are looking to the future with determination. The project is not only transforming their lives, but contributing to a more inclusive and sustainable economy. They are creating something new, something big, where vulnerable people would no longer be invisible. They are the driving force for change, and with each passing day, the world becomes a little fairer, a little more equal.

The history of our women

In this section, we present the life stories of two exceptional women who embody the spirit and impact of the project. Although the project has been shaped by a large number of women whose stories are deeply inspiring, we have selected these two outstanding protagonists because of their remarkable resilience and strength.

Their personal journeys not only reflect the challenges and achievements of the project, but also serve as an example and motivation for all the women involved, showing how determination and commitment can transform lives and communities.

Khadiya

Khadiya had been a young girl full of dreams, yet life seemed to have other plans for her. At 16, she found herself married to a man she did not know. Despite the suddenness of the change, she found some happiness in the early years. She lived in the countryside with her husband, Nourdine, and her family, and eventually her children came along. They became the center of her life, filling her days.

The first few months of her marriage were uneventful. Her father-in-law, a kind man who welcomed her with open arms, enrolled her in a sewing and fashion design academy. Fatima threw herself into that world with passion, developing her skills not only in sewing, but also in the kitchen, where her creativity continued to grow. She felt that, despite the limitations of her environment, she had the opportunity to build something for herself. But that illusion was cut short. She was unable to continue her formal studies; her teacher told her that she was older than her classmates and, little by little, the doors of learning closed to her. Even so, she continued with sewing and cooking, trying to hold on to those small victories.

Everything went dark when his father-in-law passed away. With his death, family dynamics changed. Nourdine's older brother claimed the inheritance, plunging the family into conflict. Nourdine, being the youngest, was caught in this situation, and the happiness they once felt began to crumble. Khadiya saw him suffering, and she herself felt helpless to see her mother-in-law, a woman who had loved her so much, in this situation. They decided they had to leave.

The Mediterranean crossing was only the beginning of a greater struggle. Upon arrival, the promises of a better life did not immediately materialize. The feeling of being lost, with no clear direction, was overwhelming. There were times when Khadiya and Nourdine thought about returning to Morocco, but the desire to give their children a different future drove them on.

Over time, Khadiya began to rebuild what she knew. She started small sewing and cooking projects, trying to find her place in a new country. Meanwhile, Nourdine

struggled trying to regularize her legal status. It was a slow and grueling process, but they seemed to be making progress.

Then came the pandemic. Covid-19 brought chaos. Both Khadiya and Nouridine lost their jobs, and economic uncertainty set in at home. The pressure of not being able to support her children, coupled with the constant fear of contagion, was too much for Khadiya. Depression slowly enveloped her, dulling the glow she had once had. Every attempt to legalize her situation was met with a closed door, and the feeling of being trapped grew by the day.

It was in the midst of this hopelessness that a new light emerged. Humanitarians Without Borders (HSF) came into her life at a time when she needed it most. With their support, Khadiya began to get involved in circular economy projects, an opportunity that allowed her to rediscover her skills and feel useful again. HSF's accompaniment not only provided her with tools for her personal development, but also offered her the hope of finally regularizing her situation and that of her family. For the first time in a long time, she felt she had a real support network, a community that would not let her down.

Through her involvement in the project, she found a new purpose and a structure that allowed her to rebuild her self-esteem and emotional well-being. The opportunity to be involved in a meaningful and sustainable venture provided her with not only a source of income, but also a renewed sense of identity and belonging.

Each day, little by little, she began to experience improvements in her mood and outlook on life. The supportive environment, training and empowerment that the project provided played a key role in her recovery process. This personal transformation has had a profound impact, not only on her life, but also on the lives of those around her.

Khadiya is now in a process of personal growth. With HSF's guidance, she is not only building a better life for her children, but also helping to transform her community. The circular economy, along with the digital tools HSF has taught her to use, have given her renewed purpose. Although her road has been long and full of obstacles, for the first time she feels that there is hope on the horizon, a hope that, thanks to Humanitarians Without Borders, is closer than she ever imagined.

Her story illustrates how the project not only addresses economic needs, but also provides a space for personal and emotional growth. By overcoming her difficulties and taking advantage of the opportunities presented to her, she has demonstrated how positive change is possible and how personal growth can be a powerful outcome of engaging in inclusive and transformative initiatives.

Naima

Naima grew up in an environment where poverty and constant struggle were the only reality she knew. Her childhood was spent in a humble family, bordering on extreme poverty. What she remembered most from those years was the image of her father, getting up in the darkness of the early morning, only to return exhausted when the day was almost over, always trying to bring some bread to the table. That daily effort remained engraved in her memory, along with the pain of seeing how, despite everything, they barely managed to survive.

As time went by, and as her parents aged, Naima found herself taking on the role of protector of her younger siblings. With no clear job options and facing the temptations of dark paths, such as prostitution, she clung to what little she could control. Life did not offer her many outlets, but she did not allow herself to fall into despair.

In search of an opportunity, she went to live with her sister in Tangier. There, her story took another turn. She met an older man who was a friend of her sister's husband. This man was kind to her, offered her protection and a way out of her situation. She thought she saw in him the possibility of a different life, so she accepted his marriage proposal and went to live with him in Seville, leaving behind the hostile environment of her sister's home, where she had suffered mistreatment at the hands of her sister's husband.

The first days in Seville were full of hope. Naima allowed herself to dream of a new life, with a stability she had never had before. But soon those illusions crumbled. Her new home became a prison, full of abuse and violence. However, there was a day when everything changed, and Naima decided to end that nightmare. But breaking those chains led to the darkest episode of her life. Her husband, enraged by her decision, tried to kill her. He shot her three times, leaving her in a coma for four long months. Those were difficult months, until she finally woke up. The first thing she saw when she opened her eyes was her mother, who, despite suffering from a degenerative disease, had managed to

be by her side. That instant, after having been so close to death, was one of the happiest moments of his life.

After a long recovery process, Naima was taken into a shelter in Seville. There, surrounded by other women who had also survived difficult circumstances, she began to rebuild her life, at a point where she had no ties in the country, but where she found new connections, especially with a woman who became her pillar. Together, they worked in the agricultural campaigns in Huelva, and little by little, Naima found the strength to move forward.

Some time later, she decided to move to Roquetas de Mar. There, she met the father of her son, a humble and loving man who restored her faith in love. With him, she lived a period of peace and happiness, something she had never experienced before. However, fate struck her again when her husband died suddenly of a respiratory arrest. Once again, Naima found herself alone, but this time with a newborn in her arms.

It was at that moment, at her lowest point, that Humanitarians Without Borders (HSF) crossed her path. HSF offered her more than just help; it gave her the opportunity to rebuild her life once again. Naima found in them unconditional support and a welcoming space where she could not only feel protected, but also begin to dream of a better future for her and her son.

Thanks to HSF, Naima is learning to transform her pain into strength, to use the tools of the circular economy to create a new beginning. Although the road has been long and full of shadows, she now sees a light at the end of the tunnel, a light that promises a brighter future, full of opportunities.

Thanks to the experience and testimony of the women, we can see that the collaboration with HSF has been profoundly transformative for them. Through the circular economy projects and the constant support they have received, they have found not only a safety net, but also opportunities for personal and professional growth. This work has allowed them to rebuild their lives with dignity and hope, while being part of a larger project that drives change and inclusion.

All of this has not only allowed them to acquire new skills and knowledge, but also provided them with the opportunity to build a network of support among themselves. The

combination of technical training, personalized mentoring and the possibility of applying artificial intelligence to their own projects gave them greater confidence in their abilities and a clearer vision of their future. This transformative process not only boosted their personal and professional development, but also strengthened their sense of belonging and empowerment within their communities.

Future directions

With the success and lessons learned from the project as a base, an expansion to new regions is envisaged, starting with the Atlas region in Morocco, specifically in Amizmiz, an area severely affected by the recent earthquake. The idea is to transfer the circular economy and women's empowerment model to this new reality, in the hope that the positive impact observed can be replicated in equally challenging contexts.

The Atlas region, which has faced devastating natural challenges, represents an opportunity to bring more than immediate relief; it seeks to offer a sustainable and lasting solution. By applying the project's approach in Amizmiz, it aims to provide the women of this community with tools and resources that will enable them not only to rebuild their lives, but also to develop skills and capacities to generate income and promote local economic growth.

The implementation of this model in Amizmiz not only seeks to support women in the recovery process, but also to open doors to new possibilities and hope. The combination of circular economy and advanced technology, together with the experience gained in the original project, offers a path to transform lives and communities in different contexts.

This expansion effort reflects a broader commitment to bring hope and opportunity to women in vulnerable situations around the world. By moving the project to new realities, it seeks to extend the positive impact that has benefited so many people to more communities, helping more women reach their potential and contribute to a more just and inclusive future.

Conclusions

The experience accumulated throughout the project has underlined the ability of women in situations of extreme vulnerability to demonstrate remarkable resilience and outstanding adaptability. The implementation of the circular economy and the use of

artificial intelligence in this project have proven to be key tools to empower their capacities and provide them with a stronger economic foundation.

The positive impact of the project is evident in the transformation of the participants' lives. The integration of the circular economy with artificial intelligence has enabled the women not only to improve their economic conditions, but also to contribute significantly to sustainability and social justice in their communities. This approach has provided an invaluable opportunity for women to start and manage businesses that not only generate income, but also promote sustainable practices. The adaptation of advanced technologies and circular economy strategies has proven to be an effective formula for coping with difficulties and opening new doors to economic development.

One of the main lessons learned from the project is the importance of adaptability and adjustment to local conditions. The next phase of the project focuses on transferring the experience and success achieved to the Atlas region of Morocco, an area severely affected by the recent earthquake. This step not only broadens the scope of the project, but also seeks to replicate the positive impact in a new geographical reality, offering support and opportunities to more women in similar contexts. Adapting strategies to different local contexts and realities is crucial to maximize impact and ensure that solutions are effective and relevant to the target communities.

In addition, the project experience has highlighted the importance of building solidarity networks and fostering sustainable development at the community level. Circular economy-based initiatives, when designed and implemented in collaboration with local communities, can generate a more inclusive and equitable environment. Creating businesses that take advantage of local resources and promote sustainable practices not only strengthens the local economy, but also contributes to the creation of a fairer and more balanced environment. This approach not only has a positive impact on the direct participants, but also creates a multiplier effect on their families and communities.

The success of the project also underscores the need for a comprehensive, multi-sectoral approach to address vulnerabilities and promote sustainable development. It is critical that stakeholders, including governments, non-governmental organizations and the private sector, work together to facilitate access to economic opportunities and support women's economic empowerment. Ongoing training, strengthening partnerships and

implementing flexible strategies are essential to achieve significant and lasting change in affected communities.

Finally, the project has established a promising model that can be adapted and replicated in other crisis-affected regions. The experience demonstrates that, with the right support, an adaptive approach and a methodology based on the circular economy, it is possible to generate substantial and positive changes in the lives of vulnerable women. This approach not only contributes to equity and social justice, but also offers a pathway to sustainable and resilient economic development, which can be a source of inspiration and change for communities around the world.

Discussion Questions.

- How can artificial intelligence continue to empower women in vulnerable contexts in the future?
- What barriers must be overcome to ensure that artificial intelligence is an inclusive and equitable tool for vulnerable women?
- What advances can artificial intelligence generate to empower women in the economic marketplace? In what ways can artificial intelligence improve access to education for women and girls in rural or marginalized areas?

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