

SOFTWARE DEVELOPMENT FOR PLANNING AND COORDINATING CHARITABLE INITIATIVES

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Abstract

The paper analyzes current approaches to planning and coordinating charitable initiatives, examines existing digital platforms and identifies their main advantages and disadvantages. A software concept has been developed to help improve the efficiency of managing volunteer projects, fundraising, and resource allocation. The proposed solutions are aimed at optimizing coordination processes and increasing the transparency of charitable activities.

Keywords: *charity, software, automation, volunteer programs, initiative coordination, digital technologies, transparency, web technologies.*

Анотація

У роботі проведено аналіз сучасних підходів до планування та координації благодійних ініціатив, досліджено існуючі цифрові платформи та визначено їхні основні переваги й недоліки. Розроблено концепцію програмного забезпечення, що сприятиме підвищенню ефективності управління волонтерськими проектами, збором коштів і розподілом ресурсів. Запропоновані рішення спрямовані на оптимізацію процесів координації та посилення прозорості благодійної діяльності.

Ключові слова: *благодійність, програмне забезпечення, автоматизація, волонтерські програми, координація ініціатив, цифрові технології, прозорість, вебтехнології.*

Introduction

Modern technologies play a key role in planning and coordinating charitable initiatives. Effective management of volunteer programs, fundraising, and resource distribution requires advanced digital solutions that automate processes, facilitate interaction between participants, and enhance transparency. In this context, the development of software for charitable organizations allows for optimizing their operations, improving communication, and engaging a larger number of people in philanthropy.

The relevance of developing software for charitable activities has increased significantly since the beginning of the full-scale war in Ukraine. A large number of humanitarian initiatives, the need to quickly collect and distribute resources, coordinate volunteers, and ensure transparency of financial flows have become critical tasks. In such circumstances, an effective digital platform can significantly increase the speed of response to requests, ensure proper control over aid, and simplify communication between donors, volunteers, and recipients of aid.

The aim of the work is to develop a digital platform that will ensure effective planning, management and coordination of charitable initiatives. The system automates key processes, such as event organization and results analysis, promoting transparency and resource allocation, monitoring of charity performance activities.

The developed software will be targeted at a wide range of users, including charitable organizations, corporate initiatives and individuals seeking to contribute to charity. It will enable centralized event planning, donation accounting, and monitoring of completed tasks using advanced web technologies and data analysis methods.

The object of the study is the processes of coordination, management and monitoring of charitable initiatives using information systems.

The subject of the study is methods and tools for developing software for effective planning, organization and automation of charitable activities.

The main task is to create a functional platform that will provide users with the ability to organize charity events, coordinate volunteers, keep track of resources, analyze the effectiveness of events and ensure transparent communication between participants. The system implements mechanisms for joint planning, fundraising and distribution, as well as reporting tools that will help improve the management of charitable initiatives and attract new participants. The use of such a platform in times of crisis, particularly during the war, will allow for faster resource mobilization, more efficient assistance, and increased interaction between all participants in the charitable process.

Analysis of the subject area and comparison of analogues

The analysis of the subject area is a key stage in the development of any software, as it allows you to identify the main needs, challenges, and opportunities in the chosen area. In the case of charitable initiatives, it is important to investigate existing approaches to organizing fundraising, coordinating volunteers, conducting charitable events, and reporting. In particular, attention should be focused on technological solutions that help automate these processes, as well as the level of integration of such solutions into the digital charity ecosystem.

Philanthropy is an important component of social development, which reflects the level of social cohesion, mutual support and humanity. In today's world, the development of digital technologies has contributed to the transformation of charitable activities: organizations, volunteers, and donors can now interact through online platforms that ensure fast and efficient management of charitable initiatives.

Since the beginning of the full-scale invasion of Ukraine in 2022, there has been a significant increase in the number of charitable organizations. At the beginning of December 2023, 20,671 charitable organizations were registered in Ukraine, which is 74% more than before the war. This indicates the activation of civil society and the growing need to coordinate charitable activities. In total, there are 208,385 non-profit organizations in Ukraine, of which the largest share is occupied by public associations – 57,497 (27.5%). Charitable organizations account for 9.9% of the total number of non-profit institutions [1].

The largest number of nonprofit organizations is registered in Kyiv – 11.8% of the total number in the country. During the period of full-scale war, more than 4,000 such institutions were added in the capital. Lviv region ranks second with 7.8%, and Dnipropetrovsk region is third with 7.3%.

Thus, the full-scale invasion is one of the key factors behind the growth of charitable activity (as support for the military, IDPs and victims is critical), but it is not the only reason for this surge in social responsibility. The main factors that contributed to the growth of charitable initiatives include:

1. Helping sick people – every year, thousands of Ukrainians need expensive surgeries, organ transplants, and treatment for cancer and rare diseases. Charitable foundations help raise funds, provide medical support and rehabilitation.
2. Animal protection – the problem of stray animals remains urgent, and the war has put even more animals on the streets. Charitable organizations create shelters, organize sterilization and treatment programs, and help find homes for animals.
3. Supporting orphans and socially vulnerable groups – providing humanitarian aid, supporting educational initiatives, organizing psychological assistance and rehabilitation for children who have lost their parents.
4. Environmental initiatives – fighting deforestation, water pollution, and implementing waste collection and recycling projects.
5. Raising funds for the development of science and education – supporting talented young people, funding educational programs and scholarships.

That's why, with the growing number of charitable initiatives and volunteer projects, there is a need for flexible and efficient software solutions that provide automated event management, volunteer coordination, donation accounting, and reporting. The use of modern web technologies, mobile applications, and data analysis algorithms opens up new opportunities to improve the efficiency of charitable projects. Integration of such tools into a single platform allows for centralized management of processes and interaction between all participants in initiatives.

An important aspect of charity software is the accessibility and intuitiveness of the interface, which allows you to attract a wide audience of users - both experienced volunteers and beginners. In addition to basic project management functions, the system should support integration with social networks, electronic payment services, and have analytical tools to evaluate the effectiveness of campaigns. This will help increase the level of trust in charitable activities, improve their transparency, and attract new participants.

In addition, modern technologies allow using elements of artificial intelligence and machine learning to analyze the effectiveness of charity campaigns, forecast resource needs, and automate interaction with donors. In the future, charity software solutions are expected to evolve in the direction of improving the personalization of user experience, expanding fundraising functionality, and integrating with international platforms.

At the moment, traditional approaches to organizing charitable projects often include the use of social networks, messengers, or third-party services, which is not always effective. Due to the lack of a single integrated solution, there are problems with tracking applications, coordinating resources, and interacting with participants.

To assess the relevance of developing software for coordinating charitable initiatives, it is important to pay attention to existing online platforms, namely: DobroDiy, HelpKarma, and Zgraya.

DobroDiy is an online platform for supporting charitable initiatives that allows organizers to create campaigns, engage volunteers, and receive financial assistance from donors. The service aims to increase the transparency of fundraising and simplify interaction between participants in charity events [2].

HelpKarma is an international fundraising service for social and charitable projects that allows you to create campaigns, distribute them to potential donors, and receive support. It includes a mechanism for rating organizers to increase trust in charitable initiatives [3].

Zgraya is a charity project that brings together donors, philanthropists, and organizations that need help. The platform allows funding various initiatives, supporting projects in healthcare, education, social protection, and community development [4].

The proposed software for coordinating charitable initiatives is a modern web resource that unites all participants in the charitable process in a single digital space. The platform enables convenient communication between users, promotes transparent donation collection, and allows you to participate in charitable initiatives by selecting them by category, direction, or level of involvement.

To clearly demonstrate the differences between the platforms under consideration, we summarized their advantages and disadvantages in a comparison table (see Table 1).

Table 1 – Comparative analysis of analogues

Functional capabilities	DobroDiy	Zgraya	HelpKarma	Proposed software
Filtering of events by categories	0	0	1	1
Personal account	0	0	1	1
Adding events to «Favorites»	0	0	0	1
User activity monitoring	0	0	0	1
Volunteer rating	0	0	1	1
Online donations	1	1	1	1
Cumulative coefficient	1	1	4	6

Analyzing Table 1, we note that the in-house development has a higher total coefficient according to the criteria considered compared to the HelpKarma analog by 33% ($100\% - 4/6 \cdot 100\% = 33\%$), compared to the web resources DobroDiy and Zgraya by 83% ($100\% - 1/6 \cdot 100\% = 83\%$).

The high total coefficient of in-house development compared to existing platforms confirms its competitive advantages and the relevance of creating specialized software for coordinating charitable initiatives.

First, the advanced functionality, including filtering events by category, a personal account, the ability to add events to Favorites, and monitoring user activity, ensures more effective interaction between participants in charitable initiatives. This allows users to find relevant events faster, manage their activities more conveniently, and receive personalized recommendations.

Second, the introduction of a rating system for organizers increases the level of trust in charity campaigns. Evaluating organizers based on their activity and transparency will help attract more donors and volunteers.

Thirdly, a comprehensive solution that integrates all the main functions eliminates the problem of scattering charitable initiatives across different platforms and communication channels. A single system for creating events, coordinating volunteers, and collecting donations allows for optimized resource management and improved communication between participants.

In addition, the proposed solution has the potential for scaling and further adaptation to the changing needs of charitable organizations. For example, the ability to integrate with financial services, analytical tools, and automated management systems will expand the range of services and ensure the sustainable operation of the platform.

Thus, the results of the analysis confirm the feasibility of developing our own software for coordinating charitable initiatives, which will be able to solve existing problems in this area and provide a convenient, transparent and effective mechanism for interaction between all stakeholders.

Conclusions

Modern digital technologies are a key factor in the effective management of charitable activities, as they allow automating the processes of fundraising, volunteer coordination, and resource allocation. This has become especially relevant in the context of a full-scale war in Ukraine, when charitable activities have reached

an unprecedented scale, and the need for rapid resource mobilization and transparency of financial flows has become critical.

The proposed digital platform should provide comprehensive management of charitable activities, including event organization, volunteer coordination, financial reporting, and campaign performance analysis. The integration of web technologies, mobile applications, and data analysis algorithms will significantly increase the transparency and efficiency of charitable projects.

Thanks to its intuitive interface, support for integration with social networks and payment services, the system will be available to a wide range of users, from volunteers to large charitable foundations. The use of artificial intelligence and automated algorithms will help improve initiative planning, optimize resource allocation, and assess the impact of charitable activities on society.

Thus, the implementation of the proposed software will significantly increase the efficiency of charitable activities, facilitate coordination between participants and promote social responsibility in the face of modern challenges.

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