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# EMPOWERING PLACES OF WORSHIP THROUGH INFORMATION TECHNOLOGY

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**Abstrak:** PNUP-Care merupakan gagasan program kepada masyarakat (PKM) yang diinisiasi melayani kebutuhan implementasi teknologi informasi (TI) bagi masyarakat pada era digitalasisi saat ini. GMA-community merupakan mitra PNUP-Care sebagai pilot-project pengembangan IT Rumah Ibadah pertama di wilayah kota Makassar. Rumah ibadah sebagai pusat ritual keagamaan, namun manakala dilengkapi sarana dan prasarana TI secara maksimal maka institusi ini akan menjadi lembaga referensi pendidikan karakter sekaligus pusat pengembangan kegiatan sosial kemasyarakatan baik pada aspek intelektual dan spiritual secara seimbang. Terdapat tiga aktivitas pilot-project PNUP-Care sebagai bagian dari permasalahan mitra yakni sarana dan prasarana, mutu pelayanan, dan sumber daya pengelola IT. Dengan metode observasi, teknologi transfer, penyuluhan/pelatihan, dan praktek/dem diperoleh hasil kegiatan diantranya (1) pengembangan website masjid berbasis mobile-web (2) instalasi GMA-Net berbasis fiber-optik, bebas akses dan unlimited bandwidth dan instalasi CCTV (TV monitor) multi-user yang dapat diakses oleh orangtua santri dan pengurus jamaah, (3) pelatihan berbasis learning-by-project dan coaching dengan pengenalan aplikasi web/mobile Pro dalam design grafis untuk membuat konten dakwah Islam yang menarik. Sistem digitalisasi rumah ibadah, khususnya masjid, dapat meningkatkan akses informasi global ke seluruh elemen jamaah (orangtua, remaja dan anak-anak) dalam menambah wawasan keislaman sekaligus media dakwah Islam di kekinian. Hal ini sekaligus juga sebagai langkah strategis dalam memakmurkan masjid, mendukung Gerakan Ayo Ke Masjid dan Masjid Ramah Anak (RMA).

**Kata Kunci:** PNUP-Care, Teknologi Informasi, Masjid, Rumah Ibadah, Masjid Ramah Anak

**Abstract:** PNUP-Care is a community service initiative (PKM) designed to address the implementation needs of information technology (IT) for communities in today's digital era. GMA-community serves as the partner for PNUP-Care and acts as the pilot project for the first IT-based House of Worship development in the city of Makassar. Houses of worship are traditionally centers for religious rituals; however, when equipped with optimal IT facilities and infrastructure, they can also serve as institutions for character education and as hubs for intellectual and spiritual community development. The PNUP-Care pilot project focuses on addressing three core issues faced by the partner institution: infrastructure, service quality, and IT management human resources. Using methods such as observation, technology transfer, counseling/training, and practical demonstrations, the project achieved several outcomes, including (1) the development of a mosque website based on mobile-web technology, (2) the installation of GMA-Net, a fiber-optic-based network providing free access and unlimited bandwidth, along with the installation of multi-user CCTV (TV monitors) accessible by both the parents of students and the mosque management, and (3) project-based learning and coaching sessions introducing professional-grade web/mobile design applications for creating engaging Islamic preaching content. The digitalization of houses of worship—particularly mosques—can significantly improve access to global information for all congregational segments (parents, youth, and children), enrich Islamic understanding, and provide a modern platform for Islamic outreach. This initiative also represents a strategic step in revitalizing mosque functions, supporting the "Let's Go to the Mosque" movement and promoting Child-Friendly Mosques (RMA).

**Keywords:** PNUP-Care, Information Technology, Mosque, House of Worship, Child-Friendly Mosque

## Introduction

Information Technology (IT) integration into educational institutions has brought about substantial changes in instructional methods and learning experiences, while also playing a crucial role in shaping students' character. Educational institutions serve as the primary centers for introducing and applying knowledge and communication technology (ICT) systems. In the current age of global integration, the fourth Industrial Revolution, often referred to as Industry 4.0, along with Society 5.0, has led to the importance of information and communication technology (ICT) and the rise of multiple digital media channels as vital systems for facilitating rapid and precise access to data and its processing (Martynov et al., 2019). Educational institutions come in various forms, ranging from formal to non-formal settings, including schools, madrasahs, universities, training centers, families, and even places of worship such as mosques and churches. Regardless of their form, all educational institutions are inevitably linked to IT systems especially in today's digital era.

ICT and digital media must be utilized effectively and responsibly (Aisyah et al., 2020). Formal educational institutions such as schools are broadly recognized as foundational environments for the development of both knowledge and character (Chotimah et al., 2025). Therefore, ensuring the presence and proper utilization of IT infrastructure in schools is essential to facilitate access to information. However, this raises a question regarding non-formal institutions such as places of worship including mosques, churches, and others that are they equally equipped and supported? Beyond serving as places for religious rituals, houses of worship today are evolving into centers for character education and community social development (Shiddiq et al., 2024). Just as formal schools require adequate IT infrastructure, so do these religious institutions. When properly equipped with IT facilities, houses of worship can foster human development with a balanced focus on both intellectual and spiritual growth (Mudlofir, 2016).

PNUP-Care is a community engagement initiative program by the State Polytechnic of Ujung Pandang (Politeknik Negeri Ujung Pandang - PNUP). As part of its Community Service Program (PKM), this initiative aims to help address various societal challenges, particularly in education and technology, through sustainable and appropriate solutions. PNUP-Care is an innovative concept focused on providing IT development support for the community, starting with the implementation of IT systems in houses of worship, particularly mosques.

The pilot project for PNUP-Care is being implemented in partnership with the GMA community, a non-productive residential group located in the Griya Mulia Asri (GMA) housing complex. This neighborhood is densely populated with predominantly middle-income, modern residents. It is situated in RT 7 RW 8, Pai Subdistrict, Biringkanaya District, Makassar City, approximately 20 kilometers from downtown Makassar. Demographic data shows that the area comprises 98 households, with 97% of the residents identifying as Muslim. Within the complex is a public facility of the Raudhatul Jannah Mosque, which is strategically located near a main road and frequently visited by both local and passing worshippers. The mosque sees a high number of congregants for daily prayers and is active with various religious programs such as

dawn lectures, remembrance gatherings (dzikir), Qur'an recitation improvement (tahsin), study circles (majelis taklim), and Qur'anic education for children (TPA). Therefore, the PNUP-Care program targets all elements of the GMA community surrounding the Raudhatul Jannah Mosque. This includes mosque administrators, congregants, parents, children, and youth who aim to develop an inclusive and IT-enabled educational ecosystem within this community.

The GMA community partner faces multifaceted challenges related to IT systems, affecting different sectors and community members, including those within places of worship such as mosques. These challenges include inadequate infrastructure, limited IT services, and the availability of competent IT personnel. Each of these areas requires appropriate solutions and sustained support, particularly in the context of mosque-based digital transformation. For instance, many mosques lack basic IT infrastructure, such as internet access, multimedia equipment, or integrated management systems. Regarding IT services, there is often no dedicated system for digital announcements, event scheduling, donation tracking, or educational program delivery. Additionally, the shortage of trained personnel to operate or maintain these systems limits the ability of mosque administrators to adopt and sustain digital initiatives. Addressing these gaps requires not only hardware and software provisioning but also capacity-building programs for mosque staff and volunteers, ensuring the sustainability of IT integration in religious and community services.

In addition to focusing on the construction of physical IT infrastructure buildings, the management of Raudhatul Jannah in the GMA community initiated the idea of developing a website or digital information portal for the mosque. The goal is to facilitate financial administration and implement paperless document management, enabling better communication of mosque related information to residents, congregants, and potential fund donaturs/sponsors particularly regarding the ongoing renovation plans for both the indoor and outdoor areas of the mosque. Usually, information systems at the partner site have been limited to manual record books, bulletin boards, or WhatsApp groups, which have restricted reach. Consequently, much important information regarding mosque activities and development needs has not been effectively communicated to the surrounding community.

A mosque website is thus needed as a central platform to inform potential donors and encourage material support either in cash or building supplies based on the mosque's comprehensive renovation master plan (Bello, 2023). The website is also expected to provide open and transparent access to financial data, enabling mosque administrators to manage donor lists, track potential contributors, and maintain financial reports (Chaniago et al., 2024). In addition, the site will host schedules for religious activities, Qur'anic education (TPA) updates, Islamic holiday celebrations, articles, and media galleries (photos and videos), among others.

Another situational analysis indicates that internet and website access via smartphones is more popular among users compared to PCs or desktops. According to StatCounter (2025), as of March 2025, 62.22% of website visitors accessed content via mobile devices, compared to 36.06% via desktops and 1.72% via tablets. Therefore, having a mobile-optimized website is

essential to increase traffic and usability (Tatikonda et al., 2024). This aspect touches all elements of the GMA community surrounding the Raudhatul Jannah Mosque.

The second issue concerns IT service provision, which is particularly important for children attending the mosque's TKA/TPA programs as well as their parents. This concern arose during the COVID-19 pandemic, when many children struggled to continue learning online due to limited access to mobile data (Pradana & Syarifuddin, 2021). Addressing this gap also aligns with the national mission of the Indonesian Mosque Council (DMI) in promoting the concept of Child-Friendly Mosques (Masjid Ramah Anak, MRA) and the "Let's Go to the Mosque" (Ayo ke Masjid) movement (Nashrullah, 2019).

MRA aims to ensure children are welcomed in mosques and develop a love for being in the mosque environment (Bakar, 2019). However, a common and growing stigma portrays children as a source of disruption in mosques due to their noise and behavior, which are seen as disturbing the peace during worship (Ikhwan, 2013). In many cases, children have been asked to leave or even barred from entering mosques (Dahlan, 2024). In reality for some case, even physically assaulting children who are in the process of learning and developing religious habits within the mosque environment (Hasballah, 2022). Solutions are therefore needed to ensure children can come to the mosque without being rejected or discouraged.

Providing free internet access in mosques has proven to attract children and youth (Nursida, 2021). According to Purwaningrum (2021), this access encourages children to visit more frequently, invite their friends, and use the space for virtual learning, school-related browsing, online games, and other engaging activities. The proposed strategy involves allowing children to enjoy these activities outside of prayer times, with all games and browsing paused during prayer, prompting collective participation in congregational worship. This approach is expected to foster deeper religious understanding, build positive character, and instill good habits across the partner community (Cahyanto, 2023).

The third issue concerns the availability and capacity of IT management personnel, which is a central focus of the PNUP-Care pilot community service project. Providing website and WiFi infrastructure alone will not ensure long-term sustainability unless supported by skilled and dedicated administrative staff (Simarmata, 2020). The GMA community includes a relatively large group of young people, with approximately 30 registered members. These youth belong to Generation Z (Gen-Z), those born roughly between 1996 and 2010, who have grown up surrounded by the internet, smartphones, mobile communication, and wireless connectivity (Poluakan et al., 2019). As such, Gen-Z individuals have been immersed in digital environments for most of their lives and tend to be highly dependent on technology (Khrishananto & Adriansyah, 2021).

Therefore, creative strategies are needed to maintain their connection to the mosque while encouraging them to contribute their technological skills to religious and community development (Ahmad et al, 2024). Most of them already own smartphones or gadgets. A dedicated program focusing on digital creativity such as content creation training could guide them in using their devices positively (Tang et al, 2022). In addition, through mentoring and

training that includes podcast production as social media content, optimization of social media use, and its management, participants are expected to experience an improvement in their understanding and technical skills in managing social media more effectively (Poerana et al, 2022). Youth should be encouraged to engage in platforms like YouTube for Islamic learning (Yahya, 2020), not merely as consumers but as creators of meaningful content. The GMA community youth can become active contributors by producing relevant, engaging, and faith-based content to be shared through the digital platforms they already use.

Based on direct observations through site surveys and interviews with the administrators of Raudhatul Jannah Mosque and representatives from several elements of the GMA community, the following list outlines the identified problems faced by the PKM partner:

1. How can the Raudhatul Jannah Mosque website be developed and improved to provide a comprehensive information system with a more attractive and user-friendly mobile web interface?
2. How can internet network infrastructure and WiFi access be provided and utilized effectively to serve the mosque congregation and the surrounding community?
3. How can digital media resources be optimally managed to ensure consistent, informative, and sustainable content?

Table 1 presents a justification of these issues along with the classification of problem areas to align with the prioritized targets of the PNUP-Care program.

**Table 1.** Priority Issues of the Partner Group

| No | Aspects | Justification of the Issues |
|---|---|---|
| 1. | IT Infrastructure and Facilities | The mosque website is not yet optimal. The website, initiated by one of the congregants, is still temporary and has not been well-managed or established as a permanent platform. Website development is needed to attract the attention of donors and local residents for fundraising purposes related to the mosque's construction, renovation, and the operation of other religious social activities. |
| | | Telecommunication network infrastructure, particularly Internet access, is also absent. During the COVID-19 pandemic, all work and learning activities were conducted remotely (work/school from home). As a public facility, the mosque needs to provide a stable IT network to serve the internet needs of the surrounding community and support the website infrastructure being developed. |
| 2. | IT Services | The WiFi service needs to be optimized to support the MRA program and the "AYO KE MASJID" movement. |
| | | The utilization of science and technology (IPTEK) should be enhanced to build trust among the parents of TKA/TPA students, encouraging them to send their children to learn the Quran and feel comfortable at the mosque. Likewise, adult congregants should embrace the children, ensuring that both the mosque and its community are welcoming to children and teenagers. |
| 3. | IT Management Resources | Support for managing resources in the use of the website and social media as public information platforms for mosque activities and development planning can be optimized. |
| | | Guidance for the youth and young people of the GMA community should be provided to encourage the use of digital platforms and social media as spaces for Islamic preaching (dakwah). |

Based on direct observations through site surveys and interviews with the administrators of Raudhatul Jannah Mosque and representatives from the GMA community, this community service program aims to:

1. Develop and enhance the Raudhatul Jannah Mosque website into a comprehensive information system with a more attractive, mobile-friendly, and user-oriented interface that can better serve the needs of worshippers and the general public.
2. Provide and optimize internet network infrastructure and WiFi access, enabling effective use by mosque congregants and the surrounding community to support religious, educational, and social activities through digital platforms.
3. Improve the management of digital media resources to ensure the delivery of consistent, informative, and sustainable content, including digital da'wah, event promotion, and community service information.

## Methods

The implementation of problem-solving will use the following methods: Observation, Technology Transfer, Counseling/Coaching/Training, and Practice/Mini Projects/Demos. The data in this community service project were collected using a qualitative approach through direct observation and informal dialogue. The team interacted with around 20 individuals, including mosque administrators, youth volunteers, and regular worshippers at Raudhatul Jannah Mosque.

Instead of using formal questionnaires, the information was gathered through casual conversations and field observations during and after the implementation process. This method allowed the team to understand the real experiences, responses, and changes felt by the community, especially related to the use of digital technology, website access, and social media engagement. The results of these observations and dialogues were then summarized to describe the impact of IT development on the community's knowledge, skills, and participation.

Table 2 shows the problem-solving methods and their respective targets, outlining how each method, ensuring that the solutions are not only functional but also sustainable through active participation and capacity building of the mosque community. This table also reflects the Activity Plan and Methods, detailing the sequence of activities carried out in each stage. Each activity is associated with a specific method to ensure the effectiveness of implementation and the achievement of measurable outcomes.

**Table 2.** Activity Plan and Methods

| Solution to Issues in the Activity Plan | Method | Implementation Stage Plan |
|---|---|---|
| Development of a mobile-web with various and attractive menu features | Design and development of a mobile-web-based website. A Financial Reporting System and Information & Gallery System will be added to the main web menu. | Stage 1 |

| Solution to Issues in the Activity Plan | Method | Implementation Stage Plan |
|---|---|---|
| Procurement and construction of the Internet Network | Installation of GMA-Net based on Fiber-optic, with free access and unlimited bandwidth. | Stage 2 |
| Procurement and installation of Closed-Circuit Television (CCTV) | Installation of multi-user CCTV (TV monitor) accessible by the parents of the students and the mosque administrators. | |
| Training for content creators and social media admin management for the GMA community information system | Training based on learning-by-project (mini-project) and pair-coaching support. The partner will be facilitated with the introduction of Pro web/mobile applications to ease the creation of basic and advanced content. | Stage 3 |

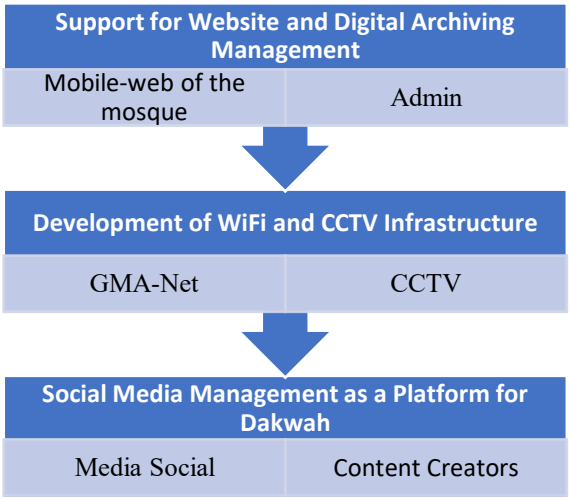


**Figure 1**. Project Plan PNUP-Care

The PNUP-Care method is implemented systematically to ensure the comprehensive and complete implementation of IT systems in houses of worship. Figure 1 shows the conceptual structure of the IT system implementation for houses of worship carried out with the GMA community partner. This activity has been conducted over multiple stages or years. The development process of the IT system for houses of worship must be considered from all aspects, in line with the resources and situation of the partner. In the first stage, the focus is on developing the mobile-web with various and attractive menu features; in the second stage, the focus is on the procurement and construction of the Internet network and CCTV; and in the third stage, the focus is on training content creators and managing social media admins to support the GMA community information system.

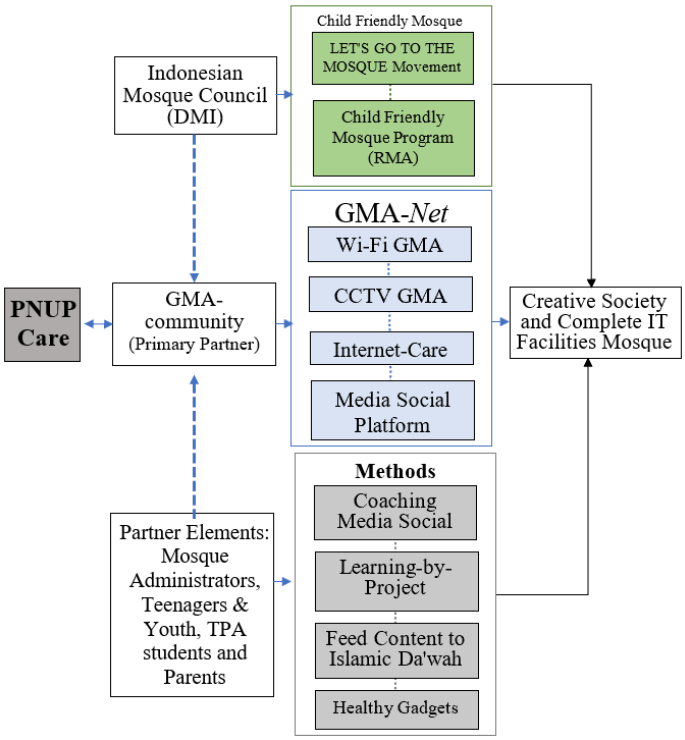


**Figure 2**. The role of the PNUP-Care Team and Partners in implementing the IT system for places of worship

In the first stage, the focus is on developing the mobile web with various and attractive menu features, aiming to improve user experience, accessibility, and engagement, especially for diverse community members. The adoption of responsive design and user-centered interface has been widely recognized as a key factor in enhancing web usability and satisfaction (Farizqi & Haryono, 2024). According to a study by Insfran & Fernandez (2008), mobile-friendly web applications with intuitive navigation and well-organized content significantly improve user interaction and retention, particularly in community-based services such as religious institutions.

In the second stage, the focus is on the procurement and construction of the Internet network and CCTV systems, which are essential to support both digital infrastructure and community security needs within the mosque environment. The availability of a reliable internet connection is fundamental for enabling digital services such as online religious content, administrative communication, and public announcements. Studies have shown that internet connectivity in places of worship enhances inclusivity and engagement by allowing broader access to religious education and services (Elsafir, 2024). As highlighted by Mohammed et.al (2004), integrating both systems, network and surveillance, creates a digital ecosystem that supports transparency, accessibility, and accountability in mosque operations.

In the third stage, the focus is on training content creators and managing social media admins to support the GMA community information system. This stage is crucial to ensure the sustainability and effectiveness of the digital platforms developed in earlier phases. This training is intended not only to improve technical skills in content production, such as graphic design, video editing, and caption writin, but also to promote digital storytelling that reflects community

values, events, and religious activities. Providing training for web and media administrators ensures that communication strategies adhere to ethical standards, deliver accurate information, and effectively engage the target audience (Vasiliu, 2020).

As illustrated in Figure 2, it shows the interconnection and roles of the partner, as well as the technology transfer mechanism and the targeted output. This conceptual structure of the IT system implementation for houses of worship can also be applied to other places of worship.

## Results and Discussion

PNUP-Care implements an IT empowerment program within the scope of mosque houses of worship, involving a team consisting of PNUP lecturers, students, and other collaborative partners. This activity has been carried out over three stages (multi-year), with annual targets differing according to the issues outlined in Table 1. All plans and methods of the activities in Table 2 have been completed 100%. The results of the implementation include:

- **Stage 1:** This project focuses on designing and developing a mobile web version optimized for readability and user experience. The initial phase of the PNUP-Care pilot project is documented in the publication by Sirmayanti et al. (2019), which highlights the activities carried out during this stage. The PNUP-Care program engaged three lecturers and two students from PNUP. The lecturers, representing different study programs, were chosen according to the specific competencies required to respond to the primary issue identified by the partner.
- **Stage 2:** This stage encompassed two core activities: (1) the implementation of GMA-Net, a fiber-optic-based internet infrastructure offering free and unlimited bandwidth access to users; and (2) the installation of a multi-user CCTV system equipped with remote access features, enabling both parents of students and mosque administrators to monitor activities in real time. The PNUP-Care team initiative involved the collaboration of four lecturers from various study programs and four students from PNUP, fostering an interdisciplinary approach to community engagement. This stage also established partnerships with industry stakeholders, namely PT Telkom Tbk (IndiHome) and PT MobileIT, both of which contributed by providing equipment and internet network services essential to the program's implementation (Sirmayanti et al., 2021). Moreover, the PNUP-Care initiative engaged partners from the Residents' Group and the Administrators of Darul Ulum Mosque, Al Hidayah Daya Complex, Makassar, to develop CCTV facilities that enable real-time monitoring throughout the mosque area via an intelligent system accessible through mobile devices. The integration of WiFi-enabled CCTV not only enhances security but also supports educational activities in the surrounding area, including at Madrasah MAN 3 Makassar, thereby contributing to the strengthening of smart-school initiatives (Sirmayanti et al., 2023).
- **Stage 3:** The training was carried out using a learning-by-project approach (mini-project) combined with pair-coaching support. Participants were introduced to professional web and mobile applications designed to support the creation of both basic and advanced digital

content. Several activities under the PNUP-Care initiative, as part of the pilot project, have been documented and published in collaboration with various partners, in line with the project's objective to expand multi-stakeholder engagement. One of the initiatives involved youth from Salenrang Village, Maros Regency, who were encouraged to repurpose their smartphone usage to promote local tourism through creative content shared on social media in the post-pandemic period (Sirmayanti et al., 2020). PNUP-Care also engaged a multidisciplinary team of four lecturers from different study programs and six students from the PNUP Media-TRJT team. Additionally, a collaborative effort was carried out with the Youth Scientific Group (Kelompok Ilmiah Remaja/KIR) of MAN 3 Makassar City (Sirmayanti et al., 2022).

The first PNUP-Care pilot project was the development of the Raudhatul Jannah mosque website. The website, located at raudhatuljannah-gma.com, allows the public to access all mosque activities, including financial reports and other informational galleries. It has also been modified to include a better and more complete mobile web version (see Figure 3).

**Figure 3.** The design and development of a mobile web version that is both user-friendly and easy to read

Figure 4 provides an illustration of the before and after of the website creation. Initially, the financial system and reporting were done through bulletin boards on the mosque walls. However, after the webpage was created, complete information for donors could be accessed through the web. This website has provided benefits by spreading open information to donors about the Mosque's Financial Report. Monthly reports and bank statements are now available as open access through the official Raudhatul Jannah mosque website, raudhatuljannah-gma.com. This has also made Raudhatul Jannah mosque the first mosque in Makassar to feature financial transparency on its website. In 2022, the mosque received the DMI Award 2022 for mosque governance or Mosque Management in the Jami Mosque category. The news article can be accessed through the following link: https://suarathibbunnabawi.id/index.php/2022/05/18/masjid-raudhatul-jannah-wakili-kota-makassar-dalam-dmi-award-2022/.

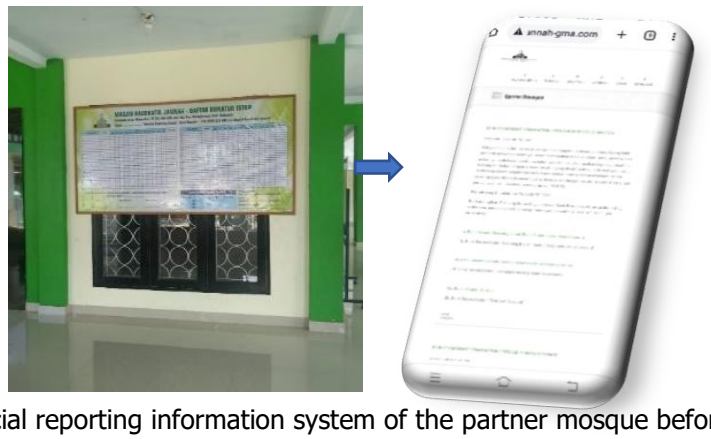

**Figure 4.** The financial reporting information system of the partner mosque before and after the website creation

The second pilot project of PNUP-Care was the installation of an Internet network and the construction of CCTV facilities within the mosque and its surrounding area. This WiFi access is provided free of charge to all mosque visitors. The CCTV access is available for 30 users (real-time) for mosque administrators, TPA supervisors, and parents of registered children, allowing them to monitor their children's learning activities even from a distance. The layout of the WiFi modem and CCTV installation points can be seen in the illustration in Figure 5.

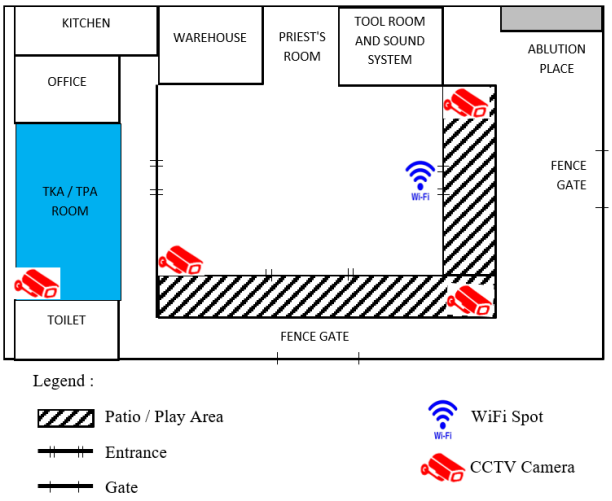


**Figure 5**. Layout of WiFi Modem and CCTV Installation Points

In collaboration with PT. Telkom Tbk (Indihome) in the Makassar City area, specifically for the religious facility internet network promotion program, the installation of the Fiber Internet cable (Indihome) was carried out according to the network points as shown in Figure 5. Following this, the indoor cable was connected to the mosque's server room, and the wireless modem was placed at a strategic point within the mosque, as shown in Figure 6.

**Figure 6.** Indihome Cable Installation Process at the PKM Partner Location


**Figure 7**. Information board for free WiFi and Internet access in the partner mosque area

Figure 7 shows several information boards about free WiFi and Internet access are available at various points in the mosque area. This system is installed with an on-off mechanism, where the WiFi access is temporarily disabled during prayer times to encourage children to join the congregational prayer and not use their gadgets while the worship is taking place.

Next, the installation of the CCTV has been completed and is now functioning as a surveillance tool for the entire mosque area and its surroundings. This CCTV surveillance system can be operated and monitored through the smartphones of the mosque administrators, community leaders, TKA/TPA supervisors, and parents of the children/students using an app. The installation process of the CCTV was activated after confirming the availability of the Internet network. As shown in the layout in Figure 5, there are four camera installation points: 3 outdoor and 1 indoor at the Raudhatul Jannah Mosque. The PNUP-Care PKM team carried out the installation process, setup, and access testing, involving experienced technicians from PT MobileIT and participating students, as seen in Figure 8 and Figure 9.

**Figure 8**. Installation of CCTV cameras and activation process at the target points

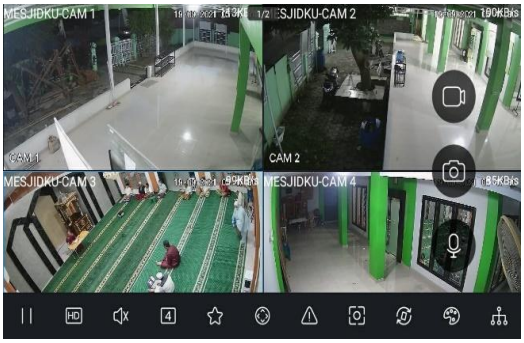


**Figure 9**. Results and appearance of the 4 CCTV camera points

The third PNUP-Care pilot project provides training and mentoring in implementing digital media as a platform for da'wah for the youth of the Raudhatul Jannah Mosque. With the availability of free WiFi and Internet access that has been established, a creative follow-up effort is required to make the GMA-community youth become the frontline movers of the "AYO KE MASJID" (Let's Go to the Mosque) movement in their surrounding environment. During the training, the work team was divided into several divisions. These divisions were formed according to the participants' character and interest in social media. Through knowledge sharing and peer-coaching with the youth of Raudhatul Jannah Mosque GMA community, several mini projects were created within each division to form Islamic da'wah content. The workshop materials included graphic design, photography techniques, public speaking, and a basic web and HTML introduction.

The project in the third stage is a complement or continuation of the two PNUP-Care programs from the previous stages with this partner (see Table 2). After the website, WiFi network, and CCTV have been established, the next step is to provide web admin staff to maintain the establishment or continuity of this IT infrastructure. The output of the third stage PNUP-Care program is five social media account products across five work divisions, namely YouTube (see Figure 10), Spotify (see Figure 11), Instagram (see Figure 12), Facebook (see Figure 13), and the website raudhatuljannah-gma.com (see Figure 3).

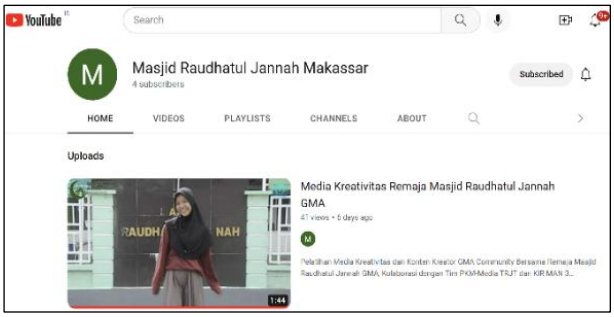


**Figure 10**. The main page of the YouTube media for Raudhatul Jannah Mosque, Makassar

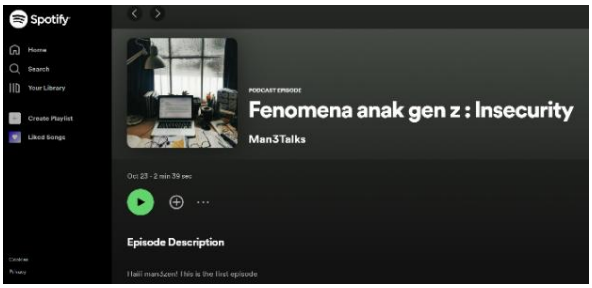


**Figure 11**. The main page of the Spotify media for Man3Talks


**Figure 12**. The main page of the Instagram media for *remasraudhatuljannah_gma*


**Figure 13**. The main page of the Facebook media for Remas Raudhatul Jannah GMA

**Figure 14**. The indoor view of the mosque before and after the final building renovation in 2024

Figure 14 shows the physical changes to the indoor area of the mosque after some donors contributed funds for the construction. In addition, after the implementation of the PNUP-Care programs, the benefits that the partners have received are as follows:

- ✓ Availability of GMA-Net facilities through free Internet access.
- ✓ The availability of CCTV facilities accessible to designated partner stakeholders, as well as other collaborating partners and community members
- ✓ The AYO KE MASJID and MRA programs have been established with increased trust from parents in sending their children to study at TKA Raudhatul Jannah.
- ✓ The mosque has become a safe place for play, and moral education is well maintained.
- ✓ The number of mosque congregants has increased.
- ✓ The mosque's development is progressing smoothly, the number of donors has increased, and several renovations have been carried out.
- ✓ The availability of social media accounts allows for a broader Islamic preaching platform.

Following the implementation of the IT system, including the development of a mobile-friendly website, the installation of internet and CCTV infrastructure, and training in digital content creation, here several significant impacts were observed within the Raudhatul Jannah Mosque community.

**Human Capacity Development**

Based on a post-implementation assessment involving 20 respondents (consisting of mosque administrators, youth volunteers, and regular congregants), 83% of participants reported an increased ability to access mosque information digitally. In particular, the youth group demonstrated greater involvement in managing digital communication channels, including website content and social media. Furthermore, 76% of respondents acknowledged improved digital literacy, especially in using digital tools for event announcements.

In addition, the frequency of information posts on digital platforms particularly the mosque website and WhatsApp group has increased, especially in the lead-up to weekly Friday prayers. Updates such as prayer schedules, sermon themes, and community announcements

are now shared more consistently and timely, allowing worshippers to stay better informed and connected with mosque activities.

**Perception and Engagement of Worshippers**

Before the program was implemented, communication in the mosque was mostly done through bulletin boards and verbal announcements. After the introduction of the IT system, such as the website and social media, most information is now shared through digital platforms. From the observations and informal discussions with 20 respondents, around 71% of them said they prefer receiving mosque-related information digitally.

Community participation has also improved, especially in online religious activities like virtual sermons and donation campaigns, which are more active on weekends and during religious holidays. In particular, during major events and donation drives, information can now be delivered faster and more accurately through digital channels. Worshippers receive real-time updates about event schedules and donation needs, and they can also track the progress of donations and financial reports online. This transparency has helped build greater trust and encourages more people to take part and contribute to mosque activities.

**Quality of Mosque Welfare Services**

The improvement in digital access has significantly enhanced the efficiency and transparency of mosque welfare services. For instance, the implementation of digital donation tracking via the website has allowed for more accurate financial reporting and has strengthened trust among donors. Moreover, the provision of free Wi-Fi access has created positive spillover effects for the surrounding community. The internet network currently covers the entire mosque area and extends up to 20 meters beyond its boundaries, allowing not only worshippers but also students and visitors in the vicinity to benefit.

In addition, the mosque has installed CCTV infrastructure that supports up to 50 simultaneous users, enabling parents of young students (santri) to monitor their children while attending classes or religious learning activities at the mosque. This service is also free of charge, contributing to a safer and more transparent learning environment for children.

**External Perception and Broader Community Impact**

Implementing this integrated IT and community empowerment program has not only improved internal operations of the mosque but also significantly enhanced its image and role in the eyes of the wider community. With improved digital infrastructure, transparent communication, and increased community engagement, Raudhatul Jannah Mosque is now seen as a progressive and active institution beyond its immediate residential complex.

This transformation has led to greater recognition from external stakeholders, including neighboring communities, religious organizations, and local authorities. The mosque has been trusted to host regional-level religious events, such as *dakwah* training workshops, *safari dakwah* activities, and community education programs. These events attract participants from outside the housing complex, showing that the mosque is becoming a regional hub for spiritual and community learning.

Consistent and well-managed digital communication, especially through the mosque's website, has also contributed to a broader reach of its activities and services, drawing attention and appreciation from people who had not previously engaged with the mosque. As a result, the number of worshippers has grown steadily, not only among residents of the housing complex but also from surrounding neighborhoods, demonstrating the mosque's increased relevance, inclusivity, and positive public perception.

## Conclusion

The PNUP-Care initiative through the Community Service Program (PKM) in delivering information technology (IT) development services for the community has been successfully implemented in collaboration with the residents and congregation of Raudhatul Jannah Mosque under the GMA-community. PNUP-Care focuses on three main orientations: developing IT infrastructure for places of worship, improving public service quality related to IT issues, and empowering human resources in utilizing IT and social media technologies. This PNUP pilot project was carried out over three stages (multi-year) with full involvement from all elements of the GMA community, making it a potential model project for IT system development in other places of worship. Digitalizing places of worship, particularly mosques, can enhance global access to information for all congregation members—parents, youth, and children—by enriching their Islamic knowledge and providing a platform for Islamic preaching in today's digital media era. The digitalization efforts also serve as a strategic step to revitalize mosques, support the "Let's Go to the Mosque" movement, promote Child-Friendly Mosques (RMA), and even Congregant-Friendly Mosques (MRJ).

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