

Improving Public Service Efficiency through the Development of the SPINTAR Information System at the Central Statistics Agency of Sukabumi City

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Abstract

This research was conducted as part of an internship program organized by Nusa Putra University and held at the Central Statistics Agency in Sukabumi City. The main problems identified were the suboptimal public service process, which still relied on manual procedures and the lack of system integration. This situation resulted in low service efficiency and delays in delivering information to the public. Therefore, this project aimed to improve the quality and effectiveness of services through the development of a web-based information system. The method used combined a user-needs-based approach with the Rapid Application Development (RAD) model. Data collection was conducted through direct observation and interviews to identify specific system requirements. The system was then designed, developed, and tested in stages to ensure its functionality met user needs. The result of this project was the SPINTAR information system, which provides a more structured, faster, and more accessible service mechanism. This system also improved data management and strengthened interaction between users and agencies. In conclusion, the implementation of the SPINTAR system successfully increased the efficiency of public services while supporting the digital transformation process at Central Statistics Agency in Sukabumi City. In addition, this activity provides practical experience for students in applying academic knowledge directly in a real work environment.

Keyword: Information Systems, Public Service, SPINTAR, Digital Transformation, Internship

Introduction

The Central Statistics Agency is a government institution with a strategic function in producing and providing accurate, reliable, and sustainable statistical data as a basis for supporting national development planning and policymaking in various sectors (Bayu Adinegoro dkk. 2025; Zenal Arifin & Iwan Kurniawan Subagja 2025). Central Statistics Agency's existence is crucial in ensuring the availability of quality data to support evidence-based decision-making. In addition to its role as a data provider, Central Statistics Agency is also responsible for providing statistical information services to the public who require such data for various purposes, such as academic activities, research, and other general needs (Juliyanti & Ditasari 2025; Yuza dkk. 2025).

Along with the rapid development of information technology, demands for improved quality of public services have also undergone significant changes. The public now expects services that are not only accurate, but also fast, effective, and efficient. Therefore, the implementation of an information technology-based service system is an unavoidable necessity in efforts to improve the quality of public services (Fena Fentika, Rossi Maunofa Widayat, M Ariy Dermawan, 2026; Uang & Susniwati, 2025). Digital transformation encourages government agencies to adopt integrated information systems to improve organizational performance and provide greater satisfaction to the public as service users (Cardova dkk. 2026; Hanafi, Triadi & Yusuf 2025).

However, in its implementation at the Central Statistics Agency Sukabumi City, the information service process still faces a number of significant obstacles. Some of the problems identified include suboptimal system integration, the continued dominance of manual service processes, and potential delays in information delivery. This situation results in less than optimal service efficiency and increases the likelihood of errors in data management (Dinnur Garista Wirawan 2025; Sihombing & Kusmanto 2025).

Based on these problems, a solution is needed in the form of developing an information system capable of integrating all service processes in a more systematic and structured manner. A well-designed information system is

expected to accelerate service processes, improve work efficiency, and minimize errors in data management (Hanafi dkk. 2025; Yuza dkk. 2025). In this regard, the Internship Program is a relevant tool to provide real opportunities for employment and develop the skills acquired during college. Through the Internship program organized by Nusa Putra University, students not only gain practical experience but also play an active role in designing technological solutions that can support improved service quality at the Sukabumi City Central Statistics Office (Aldi Setiawan & Somantri 2026; Nuridah dkk. 2025).

With this background in mind, this activity aims to develop an information system capable of increasing the efficiency of public services, accelerating the information delivery process, and providing easier access for the public to obtain statistical data more quickly, accurately, and in a structured manner. The implementation of this information system is expected to be a strategic step in supporting digital transformation within the Central Statistics Agency environment and improving the quality of services that are more responsive to community needs (Bayu Adinegoro dkk. 2025; Yulinda Uang & Susniwati 2025; Zenal Arifin & Iwan Kurniawan Subagja 2025).

Method

The internship implementation method in this research employed a needs-based approach, emphasizing the identification and adaptation of solutions based on the actual conditions and problems faced by the partner agency, in this case the Sukabumi City Statistics Agency. This approach was chosen because it yields more relevant, applicable, and targeted solutions aligned with the organization's needs. By addressing actual user needs, the use of information technology can be optimized to support effective and sustainable improvements in the quality of public services (Hasibuan, 2025).

In the context of system development, this research adopted the Rapid Application Development (RAD) method, a model within the Software Development Life Cycle (SDLC) framework. The RAD method is known as a

software development approach oriented toward speed and flexibility through an iterative process that actively involves users in every stage of development. This user involvement allows the developed system to better align with real-world needs and minimize design errors (Dharmawan 2025; Muhammad Ausathul Fikri & Siti Rokhmah 2025).

The RAD method was chosen based on its advantage in accelerating the system development process without compromising the quality of the expected results. This method allows developers to iteratively refine systems through user feedback, resulting in applications that are more adaptive and responsive to changing needs. Furthermore, RAD is also considered effective in small- to medium-scale information system development projects, particularly in organizational environments requiring fast and efficient solutions (Susmiyanto & Muflih 2025; Ulfatus Sholikhah dkk. 2024).

By combining a partner-based, needs-driven approach with the RAD method, this internship focused not only on the technical aspects of system development but also on the solution's suitability to end-user needs. This is expected to make a significant contribution to improving the effectiveness of information services at the Sukabumi City Statistics Agency through an integrated, user-friendly system that addresses the challenges of public service delivery in the digital era. The stages of the RAD method in this study are shown in Figure 1.

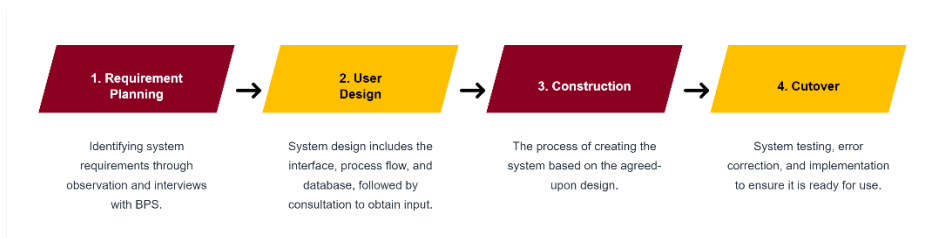


Figure 1. Stages of the Rapid Application Development (RAD) Method

The stages involved include:

1. Requirement Planning
Identifying system requirements through observation and interviews with Central Statistics Agency.
2. User Design
System design includes the interface, process flow, and database, followed by consultation to obtain input.
3. Construction
The process of creating the system based on the agreed-upon design.
4. Cutover
System testing, error correction, and implementation to ensure it is ready for use.

Results and Discussion

During their internship at the Central Statistics Agency in Sukabumi City, students actively participated in the development of an information system aimed at improving the quality of public services. This activity focused not only on technical aspects but also involved intensive coordination with field supervisors. This interaction was conducted to ensure that the designed system truly met the agency's operational needs. Documentation of these discussions and coordination activities can be seen in Figure 2.



Figure 2. Discussion Activities with Field Supervisors at Central Statistics Agency Sukabumi City

This process provided a more comprehensive understanding of the workflow and service requirements within Central Statistics Agency. Subsequently, system development activities were carried out through several structured main stages: system requirements analysis, interface design, system implementation, and internal testing. These stages were designed sequentially to ensure a systematic development process and optimal system results.

During the design phase, the development of the SPINTAR information system focused on user-friendliness, ensuring easy access for a wide range of users. The system interface design was simple yet functional to enhance the effectiveness of user interaction with the system. The main page of the SPINTAR system is shown in Figure 3.

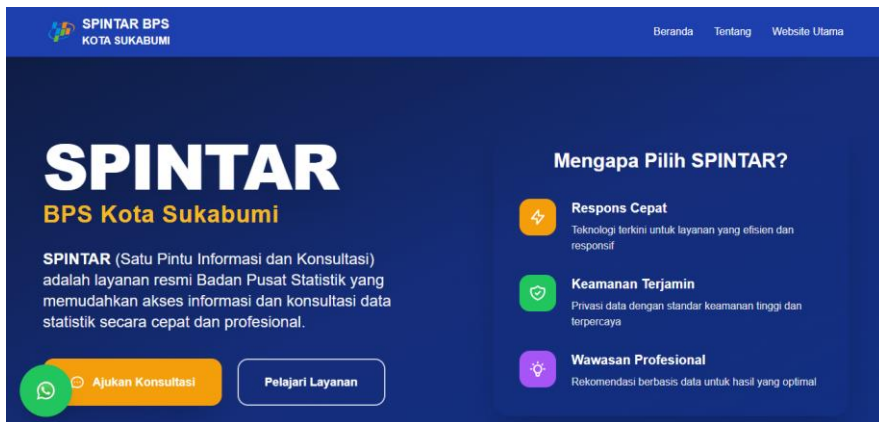


Figure 3. SPINTAR System Home Page View

Based on this display, it appears that the navigation menu is structured and intuitive, allowing users to quickly find the services they need. This demonstrates that the system has been designed with usability and efficient information access in mind.

One important component of the SPINTAR system is the consultation form feature, which the public uses to submit requests for statistical information services. This feature is designed to facilitate a more organized

communication process between users and the Statistics Indonesia (Central Statistics Agency). The consultation form can be seen in Figure 4.

The image shows a web-based consultation form for SPINTAR BPS Kota Sukabumi. The form is titled "Formulir Konsultasi Publik" and includes the following sections:

- Informasi Konsultasi:** A header section with the instruction "Lengkapi formulir di bawah ini dengan informasi yang akurat".
- Informasi Pribadi:** A section for personal information with the sub-header "Data diri untuk keperluan komunikasi". It contains four input fields: "Nama Lengkap" (with a placeholder "Masukkan nama lengkap Anda"), "Email" (with a placeholder "contoh@email.com"), "Nomor WhatsApp" (with a placeholder "08xxxxxxxx"), and "Tanggal Konsultasi" (with a date picker set to "15/04/2026").
- Detail Konsultasi:** A section for consultation details with the sub-header "Jelaskan kebutuhan konsultasi Anda". It contains a "Deskripsi Konsultasi" text area with the instruction "Jelaskan secara detail topik atau pertanyaan yang ingin Anda konsultasikan...".
- Waktu Konsultasi:** A section for the consultation time, with a dropdown menu set to "05:00" and a "Pilih Waktu" button. Below it, the format "Format 24 jam: 09:00, 14:30, 21:00, dll." is shown.
- Lampiran:** A section for attachments, with a "Choose File" button and the text "No file chosen". Below it, the limit "Format 24 jam: 09:00, 14:30, 21:00, dll." is shown.
- Buttons:** A blue "Kirim Konsultasi" button and a "Reset Form" button.
- Informasi Penting:** A section with important information, including: "Tim kami akan merespons dalam waktu 1x24 jam", "Pastikan nomor WhatsApp Anda untuk komunikasi lebih lanjut", and "File lampiran maksimal 5MB (format: PDF, DOC, JPG, PNG)".

The footer of the page includes the logo of "BADAN PUSAT STATISTIK" and the following information:

- Tentang Kami:** Beranda, Profil BPS, PPD, Kebijakan Diseminasi.
- Tautan Lainnya:** ASEAN Stats, Forum Masyarakat Statistik, Reformasi Birokrasi, Layanan Pengadaan Secara Elektronik, Publikasi Statistik STIS, Pusdiklat BPS, JDIH BPS.
- Contact Us:** Badan Pusat Statistik Kota Sukabumi, Jl. Soelabhana No. 14 Sukabumi, 43113 Jawa Barat - Indonesia, Email: tps3272@bps.go.id, Phone: +62 266 221 503, Fax: +62 266 229 082.

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Figure 4. Consultation Form Display on the SPINTAR System

This feature allows users to systematically input request data, helping to expedite the verification and service processing process. Furthermore, the organized form structure also helps reduce the potential for data input errors.

To support system management, SPINTAR is equipped with an admin dashboard that serves as a control center for monitoring and managing all incoming service requests. The admin dashboard display is shown in Figure 5.

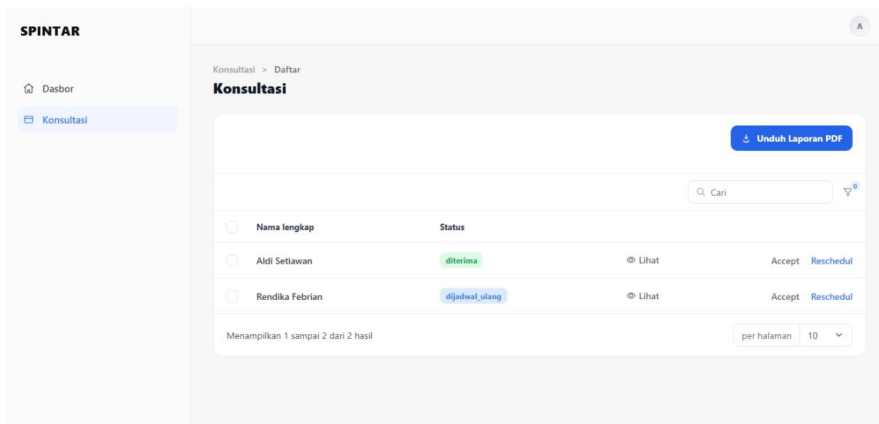


Figure 5. System Dashboard Admin Page View

This dashboard presents real-time information on service request data, making it easier for admins to process data more quickly, accurately, and in a structured manner. This feature makes the service management process more efficient than previous manual methods.

In addition to the admin dashboard, the system also provides a super admin dashboard with higher-level access. This feature allows comprehensive system management, including user settings and system configuration. The super admin dashboard is shown in Figure 6.

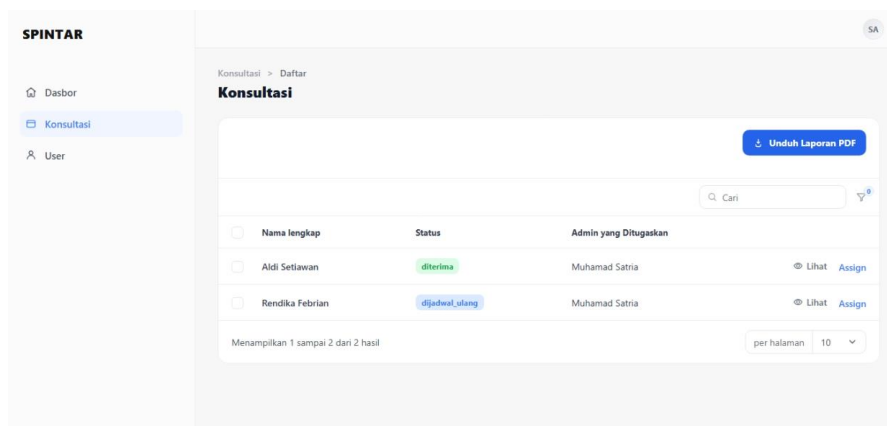


Figure 6. System Dashboard Super Admin Page View

The division of access rights between admins and super admins demonstrates that the system has been designed with security and operational control in mind. This is crucial for maintaining data integrity and ensuring that each user has access appropriate to their role.

The primary outcome of this internship was the development of the SPINTAR information system, which can be used as a more structured and efficient statistical information service. This system facilitates the delivery of information to the public and increases the effectiveness of managing service requests.

In addition to benefiting the agency, this internship also had a positive impact on the students. They gained practical experience in information system development, improved technical skills in technology, and honed their teamwork skills in a professional environment. From the agency's perspective, the developed system improved operational efficiency and the quality of public service.

However, several challenges were encountered during the system development process, such as the need to adapt the system to dynamic user demands and adapt to the new work environment. These challenges were overcome through effective communication and good coordination between the students and the team at the Sukabumi City Statistics Agency.

Overall, this activity shows that developing user-needs-based information systems can be an effective solution in improving the quality of public services, particularly in providing fast, accurate, and easily accessible statistical information.

Conclusion

The internship program at the Central Statistics Agency in Sukabumi City has significantly contributed to the development of information systems aimed at improving the quality of public services. Through this activity, students were directly involved in the design and implementation of a system designed to address the need for more effective and efficient statistical information services. The resulting information system, SPINTAR, serves as a digital solution that optimizes service processes that were previously manual and lacked integration.

The SPINTAR system demonstrates improvements in operational efficiency, particularly in managing service requests and delivering information to the public. With a more structured and digitally based system, service processes are faster, more accurate, and more accessible to users. This aligns with the demands of digital transformation in the public service sector, where transparency, speed, and ease of access are key indicators in assessing the quality of an agency's services.

Furthermore, this internship also provides significant added value for students as the implementers of the program. Students not only gain practical experience in applying the theory they have learned in class but also gain a deeper understanding of the work dynamics within government agencies. Involvement in the information systems development process also improves technical skills, problem-solving skills, and communication and collaboration skills within the work team.

Furthermore, this activity reflects the importance of synergy between academia and the workplace in producing real solutions that directly impact society. The implementation of the SPINTAR system not only provides short-term benefits in the form of increased efficiency, but also opens up

opportunities for the development of more complex and integrated systems in the future.

Therefore, it is recommended that the information system developed not stop at the initial implementation stage but continue to be refined in accordance with evolving user needs and technological advances. Further development can include feature enhancements, integration with other systems, and strengthening data security aspects. Furthermore, optimal system utilization by agencies is also crucial for maximizing its benefits in supporting higher-quality public services.

Thus, this internship not only produces a product in the form of an information system but also makes a tangible contribution to encouraging technology-based public service innovation within the Sukabumi City Statistics Agency.

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