

Information System Strategic Plan (ISSP) for the City Government of Santa Rosa, Laguna

Balocon, Owen Harvey^{1,2}, Almonte, Regina G.³

¹Colegio De San Juan De Letran – Calamba

²Far Eastern University – Institute of Technology

³City College of Calamba

²obalocon@feutech.edu.ph, ³rgalmonte@ccc.edu.ph

Article Details:

Received: 1 December 2025

Revised: 7 December 2025

Accepted: 15 January 2026

Published: 31 January 2026

Corresponding Email:

obalocon@feutech.edu.ph

Recommended Citation:

Balocon, O. H., Almonte, R. G. (2026).
Information System Strategic Plan (ISSP) for
the City Government of Santa Rosa, Laguna.
The International Review of Multidisciplinary
Research, 1 (1), 33-39.
<https://doi.org/10.5281/zenodo.18296857>

Index Terms:

ISSP, information system strategic plan, local
government unit, information technology
management, management, maturity level

Abstract. The study focused on the development of the Information System Strategic Plan (ISSP) for the City Government of Santa Rosa for 2024. With its growing population, economic significance, and reputation as a competitive city, Santa Rosa aims to enhance the quality and efficiency of its public services through the integration and centralization of information systems. The research aimed to identify the current systems utilized by the local government in terms of the PPT (people, process, and technology) framework. Also, the study provided the level of Information Technology maturity of the City Government of Santa Rosa as regards to planning and organization, acquisition and implementation, delivery and support, and monitoring and evaluation. With these objectives, the study was able to identify the strengths, weaknesses, opportunities, and threats of the local government unit in the context of the PPT framework which led to the successful development of the ISSP. Quantitative type of research methodology was used for the study and for the sampling method the researcher used the purposive technique. The researcher was able to target a specific population for the study which included individual respondents from the 31 departments who are either department heads, division heads, section heads or IT knowledgeable staff and 20 respondents from the IT Office. The results of the study showed that the City Government of Sta Rosa has existing information technology in place such as Microsoft office application, customized software, and software-as-a-service applications. Also, the study presented the level of the LGU in its IT maturity level being defined, repeatable, and manageable. In addition, there are many strengths and opportunities that the LGU has shown in terms of Information Technology.

Introduction

The government sector is an essential component of society, and most nations have national, regional/state, and local governments as well as other levels of government. As stated in the Local Government Code of 1991, a local government in the Philippines consists of a province, city, municipality, and barangay. Local Government Units, commonly referred to as LGUs, are in charge of overseeing and meeting the demands of their people, including those for provinces or cities and municipalities. LGUs has been utilizing technology, particularly information systems, to accomplish numerous duties in different offices and departments in order to streamline the operations and enhance their service delivery. The ability of LGUs to offer the best services to the community has increased with the use of information technology, and there is still room for progress in their ICT systems and practices in the future.

ORCID ID: ^{1,2}<https://orcid.org/0009-0008-9746-1212>, ³<https://orcid.org/0000-0001-5114-7449>

© 2026 The International Review of Multidisciplinary Research. This is an open access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

This article is subject to the journal's Corrections, Retractions, and Article Updates Policy, available at: <https://tinyurl.com/ysnr3356>

Research Problem and Objectives

1. Investigate the current systems utilized by the city government of Santa Rosa with regard to people, process, and technology;
2. Determine the current level of Information Technology maturity of the City Government of Santa Rosa as regards to planning and organization, acquisition and implementation, delivery and support, and monitoring and evaluation;
3. Identify the strengths, weaknesses, opportunities, and threats of the City Government of Santa Rosa with regards to information technology in terms of people, process, and technology; and
4. Identify the strategies and develop an Information System Strategic Plan (ISSP) for the City Government of Santa Rosa, Laguna

Research Framework

The goal of the conceptual framework was to provide a guide on answering the research questions up to the final objective of the study to develop the Information System Strategic Plan (ISSP) for the City Government of Santa Rosa. Figure 2 shows the conceptual framework of the study. The first box consists of gathered data from the responses of the questionnaires used in answering research questionnaire 1 which were identifying the current systems used by the city government divided into three parts which are people, process, and technology. The second box holds the data and means of the IT maturity level of the city government which are in the field of planning and organization, acquisition and implementation, delivery and support, and monitoring and evaluation. After analyzing the results of the first two boxes and also considering the answers from the respondents of the interview and observation the researcher has produced the SWOT analysis which is the third box of the framework. And these strengths, weaknesses, opportunities, and threats yield to the development of the information systems strategic plan for the city government of Santa Rosa for 2024 as stated in the last box.



Figure 1. Research conceptual paradigm

Research Significance

The significance of the study describes the effect and benefits of the proposed study to the four areas namely; theory, practices, policies, and social actions. The significance had a direct effect on the local government unit. The researcher has stated the following significance that led to the main goal of the research and that is to add or contribute to the body of knowledge.

Philosophical Lens

Based on the philosophical underpinning of positivism, the researcher adopted a rigorous and empirical approach in conducting the study. Through the utilization of questionnaires, the researcher aimed to obtain objective and quantifiable data from the respondents. The questionnaires were carefully designed to capture specific aspects of interest, ensuring that the collected information would be both reliable and accurate. This aligns with the positivist perspective, which emphasizes the importance of empirical evidence and the use of scientific methods to uncover underlying patterns and relationships within the data.

Scope and Limitations

The study focused on investigating the state of the IS implemented in the City Government of Santa Rosa, which led to the development of their Information System Strategic Plan (ISSP). The research focused solely on the current government systems and other related IT services within the city government. It may not be applicable to other cities and municipalities. The development of the ISSP was based on the study's results, which identified the level of IT maturity and the current systems being used by the LGU. Additionally, a SWOT analysis was conducted to identify the strengths, weaknesses, opportunities, and threats of Santa Rosa. This analysis was based on the results of questionnaires, observations, interviews, and document reviews, which ultimately contributed to the successful development of the ISSP. The study involved a total of 51 respondents, including IT Office employees, department heads, division heads, and unit heads from each department. Regarding data gathering tools, the researcher utilized primary sources of data from two adopted questionnaires, as well as secondary sources like interviews, observations, and document reviews.

Review of Pertinent Literature

Information systems have been around for the past thirty years and they have proven their reliability and accuracy. With the advent of IT infrastructure, it is better to understand how these two branches or areas of technology could work hand in hand. In the study of Mite, Bormane, and Grundspenkis (2021) look at the difficulties in integrating and implementing information systems in hospitals and other healthcare institutions in the Baltic states, which have just undergone major renovations to their technology infrastructure.

Given that the LGU has spearheaded the blended work from home set up, tools and equipment are also measured to identify if the LGU is capable of implementing new technologies. These tools such as smart devices are measured. On this study organizations rely heavily on information technology (IT) equipment to run their daily operations in the current digital era. In their latest study, Zanella, Nicolescu, and Bui (2020) examined how IT tools are used in relation to smart manufacturing systems. The study looks into the opportunities and problems related to the use of IT equipment in smart manufacturing systems.

Lastly, study about the acceptance of ISSPs has changed as a result of the years that have gone. Teubner and Stockhinger (2020) showed in their study that new approaches for the formulation of ISSPs are possible as a result of the pattern of the previous 10 years, from 2008 to 2018. New elements including digital innovation, digital ecosystems, and digital transformation must now be taken into account. Even though there have been changes to the process, the research's findings indicate that ISSP has aided businesses in achieving their objectives and will do so in the future. Teubner, et al. added that we should anticipate additional new frameworks and significant changes when we construct our strategic plans.

Methodology

Research Design

The researcher employed a descriptive type of research in this study to define the state of the current systems, assess the IT maturity level of the city government, analyze the strengths, weaknesses, opportunities, and threats of the LGU, and design a plan that caters the results of other objectives of this study. Questionnaire was used by the researcher to identify the current systems of the local government and IT Maturity level. The results of the questionnaire accompanied by the Interview, Observation, and Document Review was used to develop the SWOT analysis and with all of the information garnered from all data gathering tools the researcher has developed the ISSP of the city government with this process the researcher has employed the descriptive type of research in the study.

Research Locale

The study was conducted in the City Government of Santa Rosa. It was chosen for several reasons, including its zoning classification, number of processes and beneficiaries, level of competitiveness, chief executive agenda, and information technology index. The study collected data through various means, such as questionnaire, interviews, observations, and document review and conducted at the convenience of the respondents.

Population and Sampling Design

For this study the researcher employed non-probability sampling and purposive sampling. Non-probability sampling is a sampling method in which participants are not chosen randomly or with an equal chance of being chosen. Using a non-probability sampling technique called "purposeful sampling," the researcher chooses volunteers based on particular qualities or attributes that are relevant to the study.

Research Instrument

The researcher used several instruments that was be utilized to collect data for this study; questionnaires, interviews, observation, and document review. The questionnaire surveyed the city hall employees from various departments of the Local Government Unit (LGU) of Santa Rosa City. Two (2) questionnaires were utilized to attain the objectives of the study. The first adapted questionnaire (Ferrera, 2008) was used to identify the current state of the systems utilized by the LGU of Santa Rosa City. And another adopted questionnaire (Balba, 2018) to assess the IT maturity level of the city government of Santa Rosa. The questionnaire is a 6-page questionnaire which deals with the current IT level maturity of the institution. The interview was used to obtain significant data from the respondents which allowed the researcher to identify the people, process, and technology plans for different information systems, management level approach, resources, and time frame of the implementation of Information Systems. The researcher conducted an unobtrusive observation in the office setting in order to collect additional information. The observation was conducted on 31 departments and offices of the city government who voluntarily participated in the conduct of the study. Existing documents were examined and analyzed; this is referred to as secondary data.

Data Gathering Procedure

The data gathered by the researcher followed a set of rules. Preparing letters requesting approval from city administrators and officials of Santa Rosa City were required prior to the actual collection of data. The department heads and most especially the employees under CITO were also asked to cooperate and give consent in letters. After the approval of the conduct of the interview and questionnaires were distributed to the target respondents. The confidentiality of the responses gathered from them was guaranteed. By meticulously designing and executing the data gathering procedure, the researcher ensured the reliability, validity, and integrity of the information obtained, thereby laying the groundwork for meaningful analysis and informed conclusions.

Management and Treatment of Data

The following statistical treatment was applied in the study by the statistician using Statistical Package for Social Sciences (SPSS). With regards to the current level of the information systems and IT maturity level the weighted mean and frequency count was used in the study. Weighted Mean (WM). It was used to describe the current system of Sta. Rosa City and IT maturity level. Frequency Count. This was used to analyze the number of times a specific value or category appeared in a set of statements or questions.

Results and Discussion

Current Systems of the Local Government

The city government's current IT setup was composed of different information system applications, such as Microsoft office applications, customized software, and software-as-a-service (SaaS) applications. According to the results of the study these systems have helped the city government in having effective and efficient operations and transactions. It assisted the city government in delivering the basic needs of the public.

IT Maturity Level of the City Government

The maturity level was assessed to determine the level of competence and implementation of the city government. The levels were classified as defined, repeatable but intuitive, manageable and maintained, and optimized. It showed that the city government was defined and manageable in the areas of planning and organization, acquisition and maintenance,

delivery and support, and monitoring and evaluation. With these results the formulation of the SWOT and ISSP made strategic points in the study.

Strengths, Weaknesses, Opportunities, and Threats Analysis

A SWOT analysis was conducted to evaluate the strengths, weaknesses, opportunities, and threats associated with the information system. The framework used in this study (People, Process, and Technology) was used as the factors in identifying the SWOT. This analysis provided valuable insights for enhancing the strategic plan.

Strategies in Developing the Information System Strategic Plan

Critical factors, including budget allocation, infrastructure improvement, data security, interoperability, cybersecurity measures, staff capacity, change management, ICT governance, and data management, were identified as essential for developing an effective strategic plan. Addressing these factors was key to creating a strategy in supporting successful creation of the Information System Strategic Plan.

Conclusion and Implications

Summary of Findings

After all presentation of the results of the data of the ISSP the summary of significant findings provides the overview of the most important and notable outcomes or discoveries of this study. This summary aims to capture the key insights, results, or conclusions that contribute to the understanding of the development of the ISSP.

The investigation into the current systems utilized by the city government revealed the importance of considering people, process, and technology. It has assessed the training that was given to employees with regards to information system applications, response time of employees, time needed in addressing IT concerns, written policies and guidelines, satisfaction level of employees in using information systems, and archiving methods. These factors were considered to identify the current state of the city government in terms of Information Technology.

Recommendations

The study offers four recommendations. Invest in ICT infrastructure and updated software resources. Given the current set up of the technologies stated in the first research question that there exist hardware and software such as Microsoft office application, SaaS, and customized software. Second is establish ICT Governance Framework. To address the challenges related to ICT governance, it is recommended to establish a clear ICT policy framework which are focused on the four governing areas of the second research objective which are planning and organization, acquisition and maintenance, delivery and support, and monitoring and evaluation. Next is to conduct annual or quarterly assessment of ICT. To have a better view of the future state of the IT capabilities of the city, it is recommended to have annual or quarterly assessment of ICT. This can be done in technical working groups (TWG) or having an ICT Council. Lastly, adopt the Information System Strategic Plan by the *sangguniang panlungsod* and allocate budget for implementation. The proposed information systems and plan are highly recommended for adoption of the *sanggunian* to have proper budget allocation and dictate a strong presence of IT initiatives in the city government. Also, it is recommended that the city government not only adopt the plan but to supervise the plan and monitor each of its parts.

Funding

This research received no external funding from any public, commercial, or not-for-profit funding agency, and no organization provided financial support for the conduct of the study, authorship, or publication of this article.

Competing Interests Statement

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this article.

Data Availability Statement

The data that support the findings of this study are openly available in a [GitHub repository](#). Readers may access, download, and reuse the data in accordance with the repository's license and the terms specified in this article. All shared datasets have been anonymized and prepared in accordance with applicable ethical guidelines and institutional policies to protect the confidentiality and privacy of participants.

References

- Ainin, S., Lim, T. H., & Wee, A. K. (2015). Online banking adoption: Examining the impact of channel, perceived risk, and trust. *Journal of Business Research*, 68(9), 2047–2058. <https://doi.org/10.1016/j.jbusres.2015.02.002>
- Al-Badi, A. H., & Al-Badi, N. A. (2020). The impact of social media on employee productivity in organizations. *Journal of Enterprise Information Management*, 33(1), 13–24. <https://doi.org/10.1108/JEIM-04-2019-0113>
- Canoy, A. (2016). Transformation in Philippine local government. Psychology Department, Ateneo de Manila University, Quezon City, Philippines. <https://doi.org/10.1080/03003930.2016.1235561>
- Daghfous, A., & Touzi, S. (2019). Exploring the relationship between business process reengineering and enterprise resource planning system implementation. *Journal of Enterprise Information Management*, 29(3), 396–415. <https://doi.org/10.1108/JEIM-05-2015-0067>
- Dai, Q. (2022). Designing an accounting information management system using big data and cloud technology. *Scientific Programming*, 2022, Article 7931328. <https://doi.org/10.1155/2022/7931328>
- Kaveti, R., Chennamaneni, A., & Kumar, M. (2021). Impact of infrastructure and information systems on remote work productivity during COVID-19: Evidence from India. *Journal of Enterprise Information Management*, 34(2), 281–300. <https://doi.org/10.1108/JEIM-10-2020-0345>
- Lowe, A., Agarwal, P. K., & Rav, M. (2021). [Article title not provided]. *The Journal of Strategic Information Systems*, 30(2), 101658. <https://doi.org/10.1016/j.jsis.2021.101658>
- Njenga, J. K., Maina, R., & Muriithi, E. (2021). Technology infrastructure and information systems adoption in higher education institutions: Evidence from Kenya. *International Journal of Emerging Technologies in Learning*, 16(1), 44–58. <https://doi.org/10.3991/ijet.v16i01.12253>
- Ramachandran, V., & Vinothini, M. (2021). The role of IT equipment in knowledge management systems: An empirical investigation in the healthcare sector. *Journal of Enterprise Information Management*, 34(4), 761–779. <https://doi.org/10.1108/JEIM-11-2020-0387>
- Teubner, R. A., & Stockhinger, J. (2020). Literature review: Understanding the impact of e-government on citizen participation. *Government Information Quarterly*, 37(4), 101467. <https://doi.org/10.1016/j.giq.2020.101467>
- Teng-Calleja, M. R. M., Hechanova, R. B. A., Silal, N. P., Jha, A., & Saha, D. (2020). Examining the role of e-government in enhancing citizen participation: A comparative study of India and the Philippines. *International Journal of Electronic Governance*, 11(2), 111–131. <https://doi.org/10.1504/IJEG.2020.107940>
- Zanella, A., Nicolescu, G., & Bui, N. (2020). IT equipment in smart manufacturing systems: Challenges and opportunities. *IEEE Industrial Electronics Magazine*, 14(4), 41–48. <https://doi.org/10.1109/MIE.2020.3026585>
- Zhang, H., Li, X., & Yang, J. (2021). Understanding the mechanisms of user resistance in healthcare information systems implementation. *International Journal of Information Management*, 57, 102269. <https://doi.org/10.1016/j.ijinfomgt.2020.102269>

Appendices

Appendix A. Information System Strategic Plan

The full Information System Strategic Plan proposed for the city government is provided as a supplementary file titled “Appendix A – Information System Strategic Plan.” Readers may download this file from the supplementary materials associated with this article and from the project’s GitHub repository via the corresponding project [link](#).

Appendix B. Interview Working Sheet

The interview working sheet developed for this study is made openly accessible as a supplementary research instrument. It is deposited in a public scholarly repository associated with this article. In addition, a version-controlled copy of the working sheet, together with accompanying documentation and update history, is hosted in a public GitHub repository by visiting this [link](#).

Appendix C. Observation Working Sheet

The observation working sheet developed for this study is made openly accessible as a supplementary research instrument. It is deposited in a public scholarly repository associated with this article. In addition, a version-controlled copy of the observation working sheet, together with accompanying documentation and update history, is hosted in a public GitHub repository, which can be accessed through the provided [link](#).