

Brought to you by [Universidad El Bosque](#)

[Back](#)

Optimization of the Royalty Project Management Tool through Triggers and Interactive Support using Power Automate and Virtual Agents

[Proceedings of the LACCEI International Multi-conference for Engineering, Education and Technology](#) • [Conference Paper](#) • [Open Access](#) • 2024 • DOI: 10.18687/LEIRD2024.1.1.515 [🔗](#)

[Herrera, Edwin Andres Arevalo](#) [✉](#); [Puentes, Cristian Torres](#); [Sánchez-Gómez, Juan Sebastián](#) [✉](#)

Politécnico Grancolombiano, Colombia

[Show all information](#)

1

72th percentile

Citation [🔗](#)

1.04

FWCI [🔗](#)

[Full text](#) [▼](#) [Export](#) [▼](#) [🔖 Save to list](#)

Document	Impact	Cited by (1)	References (9)	Similar documents
----------	--------	--------------	----------------	-------------------

Abstract

For the proper sustainable development of Colombia, it is critical to ensure appropriate management of projects that will use these royalties. The GES group has a tool where all technical and legal inspections are managed, and developing and optimizing this tool is fundamental to comply with the objectives of Law 2056 of 2020 and Resolution 271 of 2021 and avoid the process of misuse of resources for sectors such as construction, education, and health. A total of 31,583 projects have been approved since 2012 with investments of COP\$ 111,318,490,310,087, from which have been invested COP\$ 95,848,713,073,511 from royalties. This evidence the reliance of the country to guide resources to the sector where they are most needed and the commitment of the government and entities to make an efficient investment. This project's innovative proposal is to integrate triggers with automated workflows with Power Automate and a human-like chatbot that will operate through Power Virtual Agents, technologies that have proven efficient in automating administrative processes and increasing operational efficiency in many other industries. The implementation will be made with the SCRUM methodological approach and change management, which would allow the GES group to make a change that can be improved and adapted. The expected results of the implementation will enable the automation of many processes in different parts, such as alerts and notifications much more accurately and quickly, and the chatbot will assist experts by providing real-time assistance, so it will also increase the quality of the user experience. All of this increased efficiency will grant the experts more time to do more critical tasks, which will improve productivity and quality. A capacity for innovation and improvement will also increase. In conclusion, the implementation of these technologies and methodologies is a pilot test that eases the way for like processes in the public and private sectors. Nevertheless, this implementation can only occur with the commitment of the entire group of GES to make these changes sustainable and help the country find Sustainable Development Goals 9 and 16, promoting inclusive societies, and resilience infrastructure. © 2024 Latin American and Caribbean Consortium of Engineering Institutions. All rights reserved.

Author keywords

PMBOOK; Project management; royalties' projects; SCRUM

© Copyright 2025 Elsevier B.V., All rights reserved.

About Scopus

[What is Scopus](#)

[Content coverage](#)

[Scopus blog](#)

[Scopus API](#)

[Privacy matters](#)

Language

[日本語版を表示する](#)

[查看简体中文版本](#)

[查看繁體中文版本](#)

[Просмотр версии на русском языке](#)

Customer Service

[Help](#)

[Tutorials](#)

[Contact us](#)

ELSEVIER

[Terms and conditions ↗](#) [Privacy policy ↗](#) [Cookies settings](#)

All content on this site: Copyright © 2026 [Elsevier B.V.](#) ↗, its licensors, and contributors. All rights are reserved, including those for text and data mining, AI training, and similar technologies. For all open access content, the relevant licensing terms apply.