

Monitoring MSME Data That Has Been Certified On The Jakpreneur Platform Using Tableau Public

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ABSTRACT

This research aims to enhance the monitoring of certified Micro, Small, and Medium Enterprises (MSMEs) on the Jakpreneur platform through the implementation of effective data visualization techniques. The study involves the collection and integration of MSME certification data from Jakpreneur, and utilizes Tableau Public, a data visualization tool, for in-depth analysis and visualization. The objective is to gain comprehensive insights into the progress, geographical distribution, and distinctive features of registered MSMEs. This monitoring system is designed to empower stakeholders to make informed decisions related to the development and support of MSMEs. By showcasing the application of data visualization technology in the context of local micro-business certification, this research contributes not only to the efficiency of MSME monitoring but also serves as a model for using such technology in similar scenarios

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INTRODUCTION

The importance of data and information in the context of business or business No can be ignored, but rather become a key element For pushing progress and success, Data and information owned by a person entity business own has a significant positive impact on various aspects, including marketing, taking policy, and identification of new business opportunities.

Recorded growth in the number of MSME actors from year to year became a clear indication that sector This is the more interested and noticed by entrepreneurs. With adequate data and information, MSME players can make more smart decisions, design effective marketing strategies, and even identify new opportunities that can increase their competitive power on the market.

Punctuation is important for every MSME actor to utilize data and information as a main tool in optimizing the potential of their business. Business continuity in the contemporary business world places greater emphasis on the importance of halal products. Halal certification isn't only considered as a religious need but also as an indicator of main quality and safety products that are recognized by some big consumers.

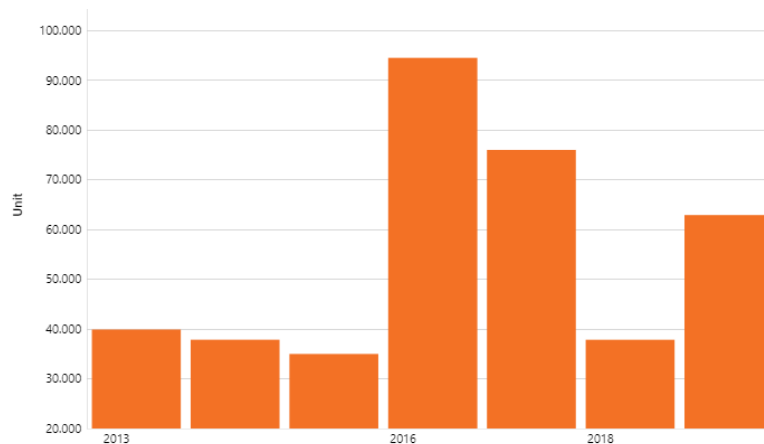


FIGURE 1. Growth of MSMEs in DKI Jakarta 2013-2019

Industry Micro Small (IMK) growing in Jakarta grew in 2019. The number reached 62,929 units, while in 2018 the figure only reached 37,900 units. As many details as possible 50,030 units (79.5%) were industry micro and 12,899 units constitute industry small. The number of IMK increase more of 66% compared year previously it was only 37,850 thousand units.

Inability in monitor MSME data to be problem main related by monitoring MSME data in Duren Sawit District involve constraint in distribution and visualization of data on the Jakpreneur platform . MSME data tends to spread across various platforms, making it difficult For accessed and analyzed in a way holistic . Therefore that is necessary steps innovation and improvements on the Jakpreneur platform For create centralized and utilized monitoring system effective data visualization .

For overcome challenges that arise from insufficient distribution of data organized and minimal visualization on MSMEs, we plan implementation solution innovative use Tableau application . Approach This will involve development centralized and capable monitoring system accessed with easy, possible perpetrator business For understand, analyze, and visualize their data in a way holistic .

METHOD

Application methodology in dashboard creation, data visualization, as well as analysis of distribution and growth of MSMEs in Duren Sawit District using Tableau application. This process involves the use of existing data, followed by data cleaning (cleaning), and so on, processed through Tableau application.

With this approach, it is possible to use data more effectively to provide a deep outlook related to the condition of MSMEs and their development in the region.

Following is an explanation of the application technology used:

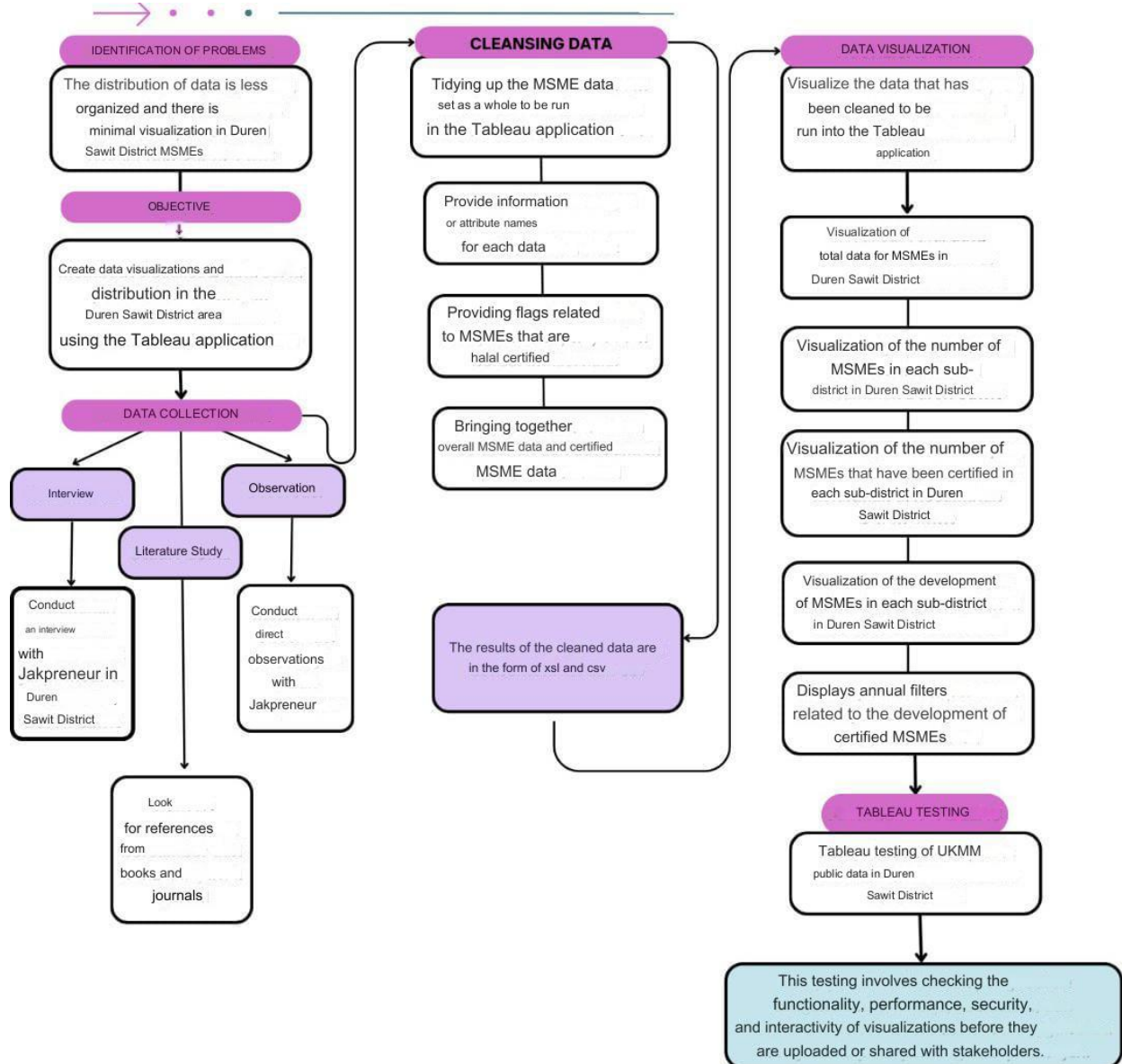


FIGURE 2 . Application of Methodology

Initial Stages

In phase beginning , step First is collect study related literature with topic research to be done . The main goal is For identify problems that will become focus study .

This process is also useful For find various source information related later will compared to with research previously . During stage beginning This is exploration can done For find relevant problems and formulate possible solution strategies applied . This step own significance important Because can help ensure success ongoing research done .

Stages Data collection

At the data collection stage, the method used is secondary data, which is obtained through datasets. A dataset is an object that includes data and relationships between data stored in memory or files. The structure of a dataset is similar to data stored in a database .

Apart from datasets, utilize other secondary data sources, such as scientific journals, scientific articles and books through literature studies. This is done to find previous research that can be used as a reference in creating information and visualization on a visualization dashboard.

This data was collected by processing information obtained through the Integrated Entrepreneurship Development Program (Jak Preneur) in the Duren Sawit District area, East Jakarta. With a dataset of District Micro, Small and Medium Enterprises (MSMEs) in each Subdistrict.

Data Cleaning Stages (Data Cleaning)

After collect dataset, step furthermore is carry out Data Cleaning, namely the process of identification , repair and deletion error or inaccuracy in MSME data. The purpose of Data Cleaning is increase data quality and reliability so that it can used For analysis and retrieval accurate decision . _ The stages involve tidy up the entire dataset for usage in Tableau applications , providing information or Name attributes on each data, and ensure data consistency _ comprehensive .

Stages Implementation and Visualization of Dashboards in Tableau

After complete the data cleansing process , step the last one is implement valid data from the Jakpreneur Platform to in Business Intelligence (BI) platforms, in particular using Tableau. Stage implementation involve import data into Tableau and execute data for create a new worksheet . The data has been processed Then visualized via the Tableau Public dashboard.

Dashboard as interface visual users, use For serve information with easy way _understandable. In context monitoring and retrieval decision related to MSMEs in Duren Sawit District, the dashboard utilizes information and visualization geographic. As tool in the realm of Business Intelligence, dashboards are considered as combination functional information and visual representation as gauges and indicators in taking decision .

RESULTS AND DISCUSSION

Tableau Implementation and Testing

Tableau implementation is a usage process device Tableau software for make interactive data visualization and informative dashboards. Following stages data visualization with using tableau.

Stage Connect data with Tableau

At stage this is the result data analysis of data that has been deep cleaned Excel and CSV forms will be connected with tableau application so you can done data visualization .

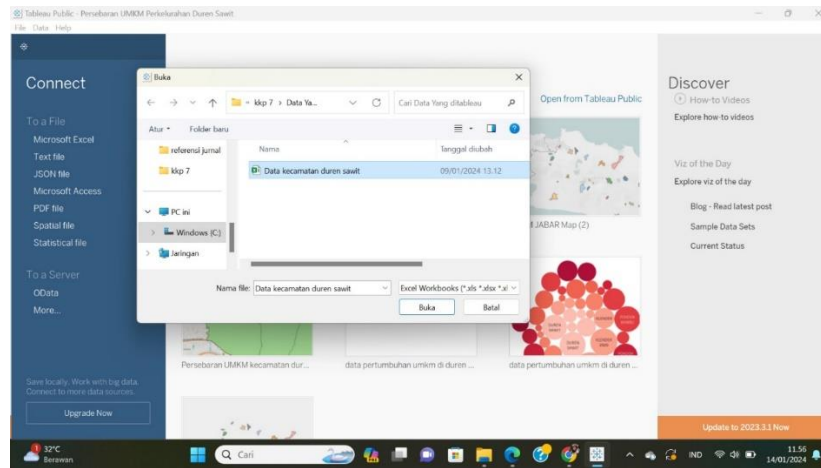


FIGURE 3 . Stage Connect data with Tableau

Appearance when the data is ready succeed connected with tableau application

When the data is successful connected with Tableau application , below appearance interface for start the manufacturing process visualization and dashboard.

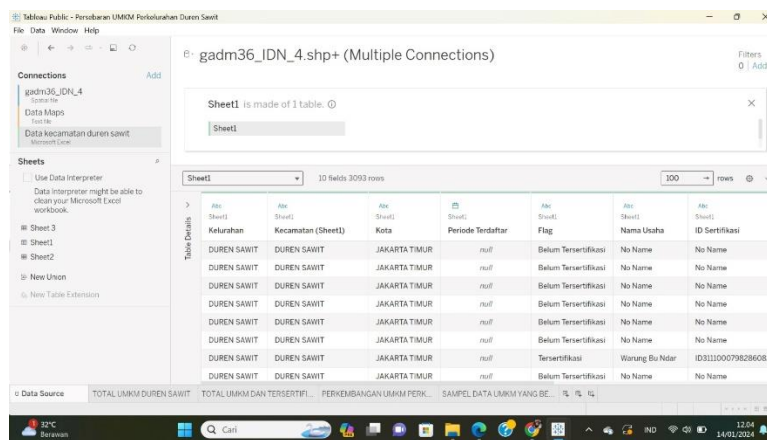


FIGURE 4 . Appearance when the data is ready succeed connected with tableau application

Stage arrange appearance desired visualization

Stages This arrange appearance desired visualization in Tableau involves a number of step For adapt elements visualize and create it in accordance with needs and goals .

- View of the total number of MSMEs in Duren Sawit District

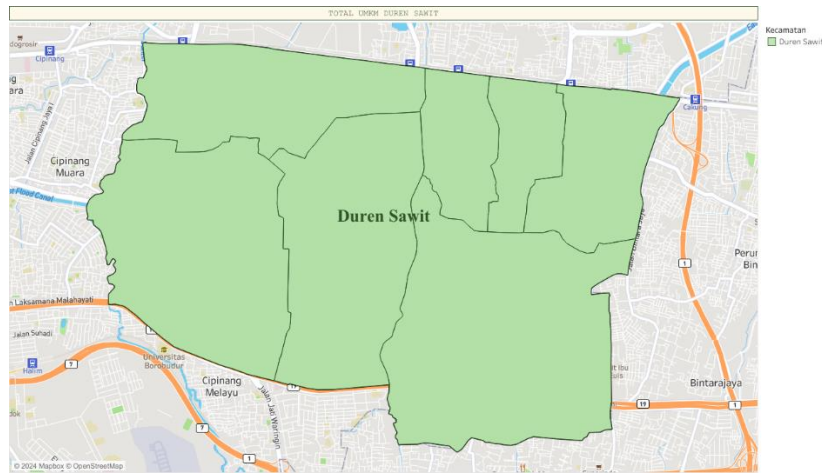


FIGURE 5 . View of the total number of MSMEs in Duren Sawit District

- Appearance Visualization of total Village MSME data and existing MSME data halal certified in Duren Sawit District 2018 – 2023

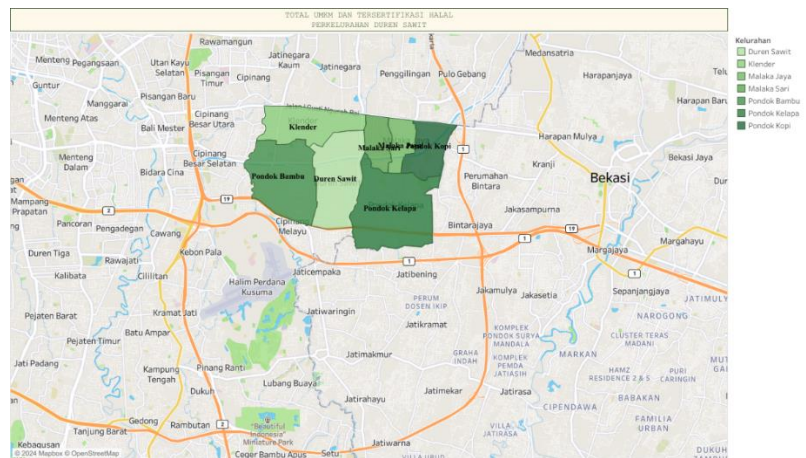


FIGURE 6 . Appearance Visualization of total Village MSME data and existing MSME data halal certified in Duren Sawit District 2018 – 2023 .

- Appearance Visualization development of village MSMEs in Duren Sawit District 2018 – 2023

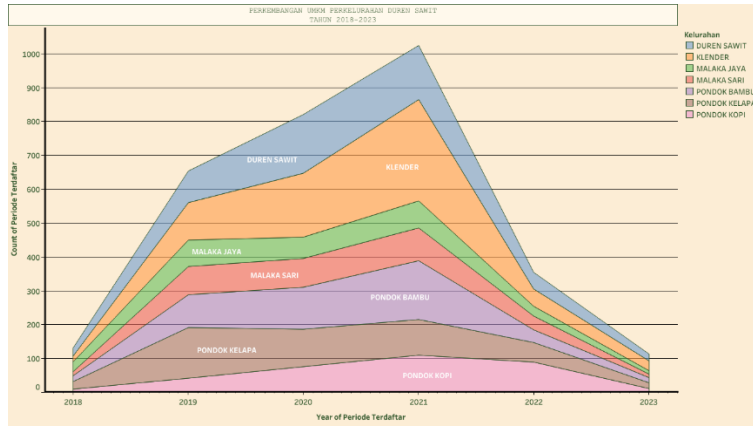


FIGURE 8 . Appearance Visualization development of village MSMEs in Duren Sawit District 2018 – 2023 .

- Display of development data on halal certified MSMEs in Duren Sawit District 2022 – 2023 .

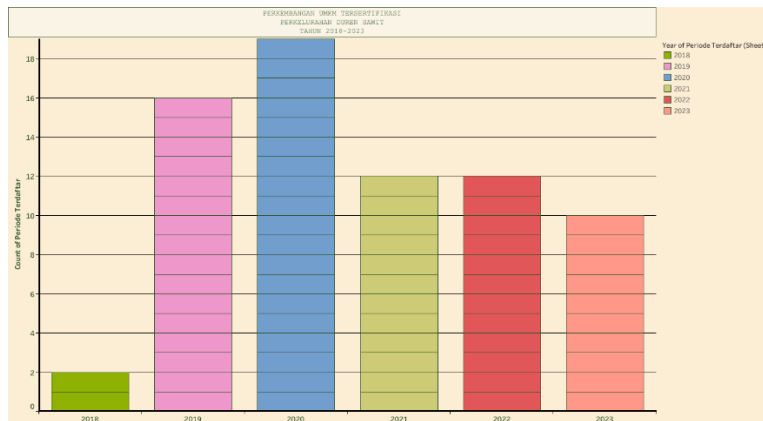


FIGURE 7 . Display of development data on halal certified MSMEs in Duren Sawit District 2022 – 2023 .

Final Test Results

In results testing and discussing monitoring of existing MSME data certified on the Jakpreneur platform using Tableau Public, can concluded that implementation Data visualization with Tableau Public provides comprehensive and interactive overview _ related with the existing status and development of MSMEs halal certified on the platform .

Following appearance tableau testing of UKMM public data in Duren Sawit District

- View of the total number of MSMEs in Duren Sawit District 2018 – 2023 .

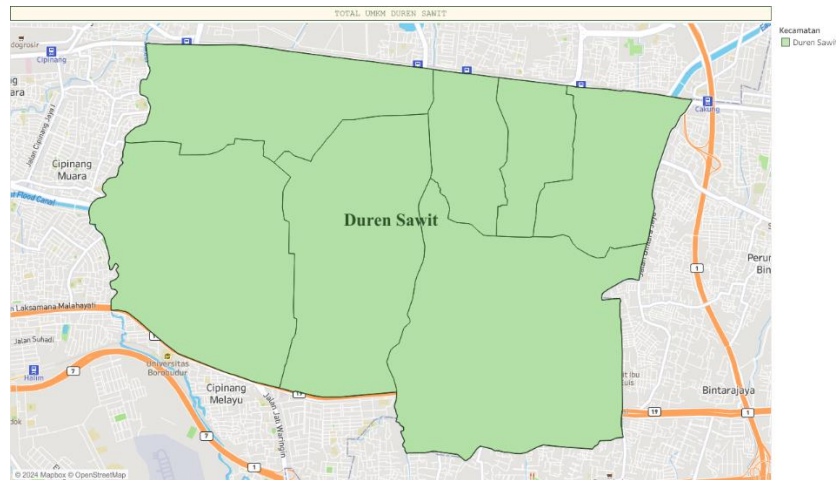


FIGURE 9 . View of the total number of MSMEs in Duren Sawit District 2018 – 2023

- Appearance Visualization of total Village MSME data and total existing MSME data certified in Duren Sawit District 2018 – 2023 .

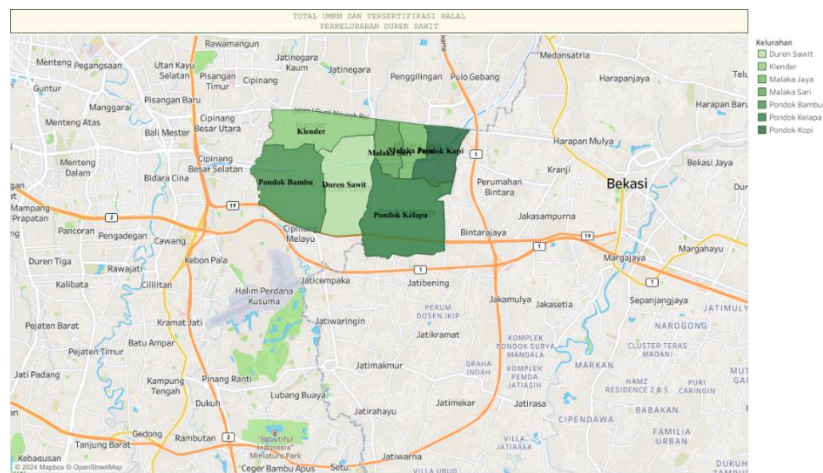


FIGURE 10 . Appearance Total MSME data visualization Subdistricts and totals already _ certified _ in Duren Sawit District 2018 – 2023 .

- Appearance Visualization development of village MSMEs in Duren Sawit District 2018 – 2023 .

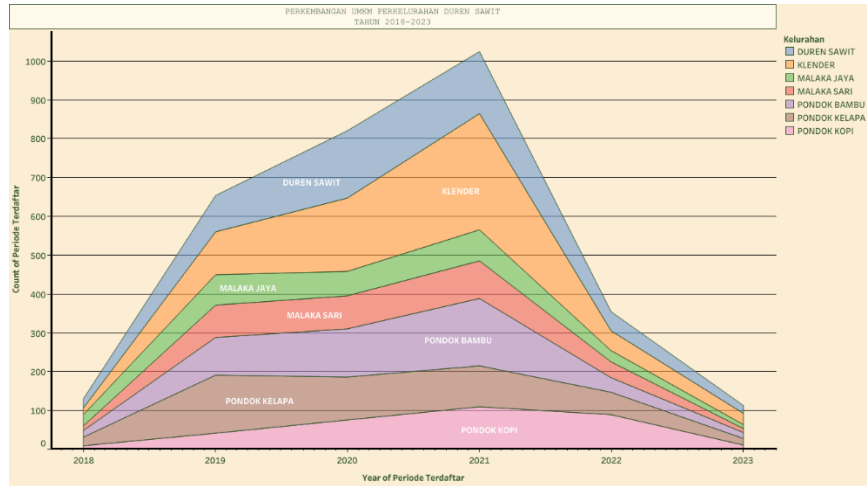


FIGURE 11 . Appearance _ Visualization development of village MSMEs in Duren Sawit District 2018 – 2023 .

- Display of development data on halal certified MSMEs in Duren Sawit District 2022 – 2023 .

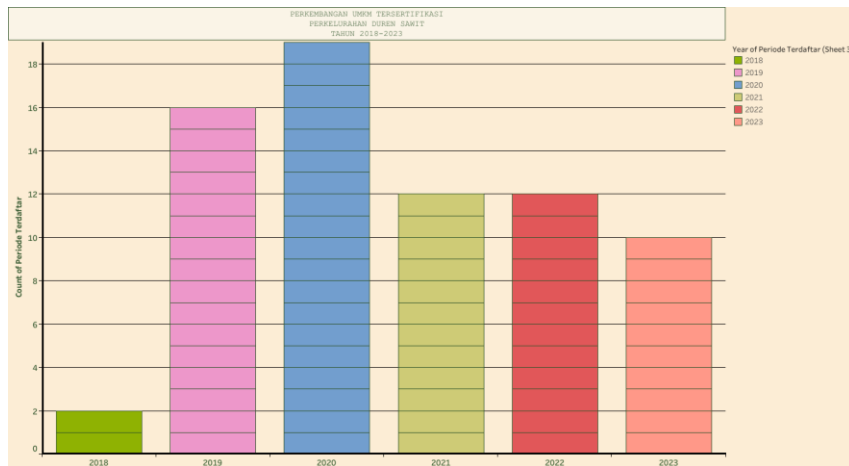


FIGURE 12 . Display of development data on halal certified MSMEs in Duren Sawit District 2022 – 2023 .

CONCLUSION

Conclusions of study This is implementation monitoring system using Tableau Public has produced positive results in track and understand existing MSME data certified on the Jakpreneur platform. Innovative steps taken, such as development of a centralized system and effective data visualization, have helped overcome distribution constraints of previously complicated data.

The monitoring results show that with adoption technology here, perpetrator business can with more easy understand development business they see trend sales, and identify factors key other. Maps, graphs, diagrams and interactive dashboards give a clear and holistic picture, making it easier perpetrator business in taking more decisions smart.

REFERENCES

- Faizal, Sri Wahyuni, and Fitriani K. (2022). Android-Based Housing Bill Payment System (Case Study of Lake Alam Pendidikan Housing, Gowa Regency). *Journal of Science And Technology*, 1(1), 1–5.
- Fajri Mulyana, Muhammad, & Boing Kotjoprayudi, Raswysshnoe. (2021). *Web-Based Application for Managing Rt/Rw Incoming Cash Using the Payment Gateway Method (Case Study of Matahari Cigado Regency, Baleendah Bandung)*. 7(6), 1–9.
- Laksono, M. Rafe Suryo, & Meilina, Popy. (2023). *ADMINISTRATIVE INFORMATION SYSTEM RT 09 KIMIA FARMA II COMPLEX, EAST JAKARTA*. 13(3), 212–217.
- Triyanto, D., Sholeh, M., & Hasan, F. N. (2023). Implementation of Business Intelligence Using Tableau to Visualize Flood Disaster Impact Data in Indonesia. *CLICK: Scientific Studies in*
- Lestari, Sarmidi, & Nurrahman H. (2017). Monitoring Data on Micro, Small and Medium Enterprises in Babakan Nangka Singaparna Regency Tasikmalaya. *Jumika*, 4(1).
- Kusumoputro, R. A. S. (2024). Fire Extinguisher System Hard Skill Improvement Training at the Inalum Building, Batubara Regency. *ABDIMAS: Journal of Community Service*, 7(1), 86-94.
- Panggratama, R., Irnawati, D., Selviana, S., & Fadila, E. N. (2024). Community Service in Strengthening the Branding of Gadung Chips MSME Actors in Dander Bojonegoro District. *ABDIMAS: Journal of Community Service*, 7(1), 164-170.
- Widayat, W., Sulardjaka, S., Al-Baarri, A. N., & Nurjannah, R. (2020). Halal certification support in UMK Hanum food (halal certification support in UMK Hanum food). *Indonesian Journal of Halal*, 3(1), 83–87.
- Dewi, V. I., Iskandarsyah, T., Sulungbudi, B. M., Danil, L., Pratikna, R. N., & Kustedja, E. V. B. (2021). Sustaining Competitive and Responsible Enterprises Training Program Encourages MSMEs to Rise in the Pandemic Era. *JMM (Independent Community Journal)*, 5(6), 2937-2954.
- Firdaus, D. H., & Setyobudi, T. (2022). The role of digital platforms in halal certification for MSMEs after the enactment of Law Number 11 of 2020 concerning job creation in the era of the Covid-19 pandemic. *Al-Huquq: Journal of Indonesian Islamic Economic Law*, 4(2), 123-144.
- Darmawan, A. J., Suryani, N. K., Heptariza, A., & Susilo, R. F. N. (2023). . PKM Digital-Based MSME Entrepreneurship Framework for Jelijih Punggang Village in Puputan Bali. *Sendimas Proceedings*, 8(1), 116–121.
- Kusumoputro, R. A. S. (2024). Fire Extinguisher System Hard Skill Improvement Training at the Inalum Building, Batubara Regency. *ABDIMAS: Journal of Community Service*, 7(1), 86-94.
- Dewi, A. P., & Hakiki, M. I. (2023). Digital Transformation in the Halal Industry in Indonesia (Study of the Implementation of Blockchain Technology in the Halal Certification Process). *Indo-Fintech Intellectuals: Journal of Economics and Business*, 3(2), 360–370.
- Munthe, Y. N., Marliyah, M., & Harahap, R. D. (2023). Analysis of Sustainable Innovation of Mumubutikue Medan MSMEs in an Islamic Economic Perspective. *SEIKO: Journal of Management & Business*, 6(2), 118–132.
- Fatima, M., & Akhtar, S. J. (2023). An overview of micro, small and medium enterprises (MSMES) in the state of Uttar Pradesh. *EPRA International Journal of Economic and Business Review (JEPR)*, 11(1), 1–

10.

- Triwahyono, B., Rahayu, T., & Kraugusteeliana, K. (2023). Analyzing the role of technological innovation in improving the operational efficiency of MSMEs. *Polgan Minfo Journal*, 12(1), 1417–1426.
- Wiwin, N., Sunarya, P. A., Azizah, N., & Saka, D. A. (2023). A Model for Determine Upgrades for MSMEs using Analytical Hyrarcy Process. *ADI Journal on Recent Innovation*, 5(1), 20–32.
- Zulianti, D., & Aslami, N. (2022). Implementation of Management System on Halal Certification for Medan City Msmes Actors: (Case study at the Medan City Cooperative and MSMEs Office). *CASHFLOW: Current Advanced Research On Sharia Finance And Economic Worldwide*, 1(3), 11–16.
- Suciu, G., Butca, C., & Suciu, V. (2016). Cloud platform for energy-aware resource management within SMEs. *International Conference on Applied and Theoretical Electricity (ICATE)*, 1–5.
- Mittal, V., & Raman, T. v. (2021). ERCEPTION AND IMPACT OF GOODS AND SERVICES TAX ON MICRO, SMALL AND MEDIUM ENTERPRISES-AN EMPIRICAL VIEWPOINT. *Journal of General Management Research*, 8(2).