# BSML Regional II Measuring Instrument Testing Monitoring Dashboard (Real-Time)

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# Background & Project Purpose

## Background

- The dashboard was developed to support data-driven monitoring of measuring instrument verification at BSML Regional II.

- It provides clear visibility into operational performance, while addressing challenges such as scattered raw data and limited monthly trend insights.
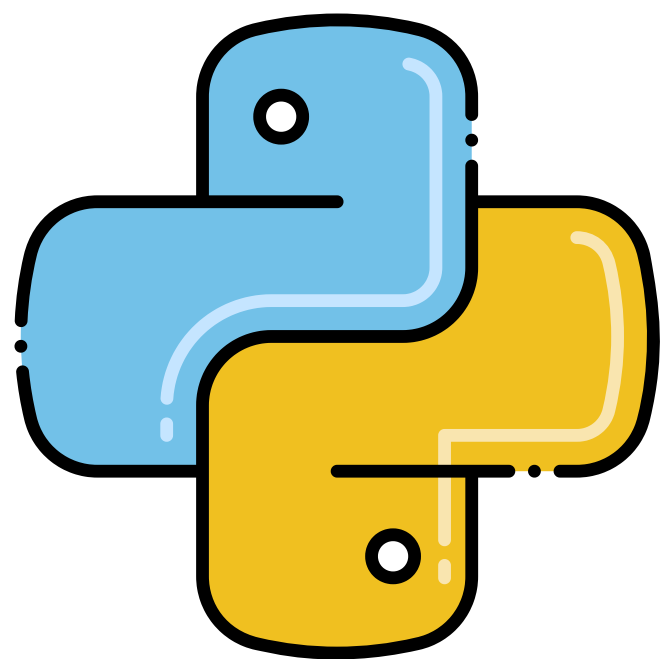
## Project Purpose

- To transform unstructured operational data into clean, standardized information and present it through an analytical dashboard that improves performance tracking and decision-making.

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# Tools Used

Python

SQL

Google Sheet

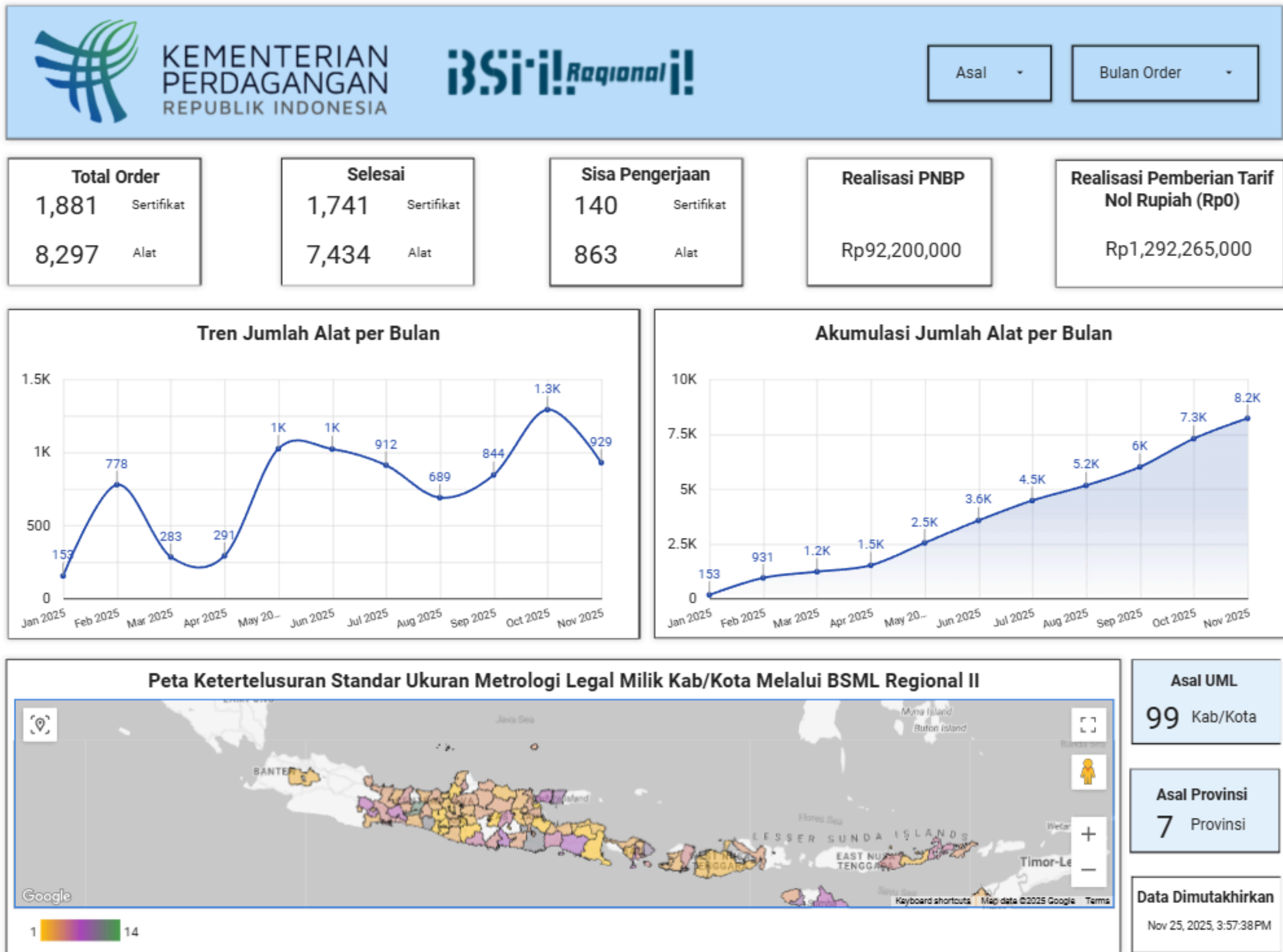Looker Studio

# Data Sources & Processing

## Data Sources

- Internal operational dataset containing order information, institution details, instrument specifications, verification status, and technician records.

- Includes dates, location attributes (province/region), and supporting document metadata.

## Processing

- Standardized date formats, institution names, and instrument attributes.
- Cleaned missing/inconsistent values and merged multi-source data into one structured dataset.
- Prepared the final dataset for Looker Studio visualization.

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**Dashboard Overview**

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Asal | Bulan Order

**Total Order**
1,881 Sertifikat
8,297 Alat

**Selesai**
1,741 Sertifikat
7,434 Alat

**Sisa Pengerjaan**
140 Sertifikat
863 Alat

**Realisasi PNBP**
Rp92,200,000

**Realisasi Pemberian Tarif Nol Rupiah (Rp0)**
Rp1,292,265,000

**Tren Jumlah Alat per Bulan**
153, 778, 283, 291, 1K, 1K, 912, 689, 844, 1.3K, 929
(Jan 2025 – Nov 2025)

**Akumulasi Jumlah Alat per Bulan**
153, 931, 1.2K, 1.5K, 2.5K, 3.6K, 4.5K, 5.2K, 6K, 7.3K, 8.2K
(Jan 2025 – Nov 2025)

**Peta Ketertelusuran Standar Ukuran Metrologi Legal Milik Kab/Kota Melalui BSML Regional II**

1 — 14

**Asal UML**
99 Kab/Kota

**Asal Provinsi**
7 Provinsi

**Data Dimutakhirkan**
Nov 25, 2025, 3:57:38 PM

# Key Dashboard Components

- **Order & Instrument Summary**: Total orders, total instruments, and completion status.

- **Monthly Trends**: Visualization of instrument volume per month.

- **Cumulative Performance**: Year-to-date accumulation of verified instruments.

- **PNBP Overview**: Total tariff, zero-tariff counts, and financial summary.

- **Geographical Distribution**: Map showing instrument distribution across regions.

- **Filters**: Institution, province, and order month for dynamic analysis.

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# Key Insights

**Increasing Workload:** Instrument verification volume shows a notable upward trend over the months.

**High Completion Rate:** Majority of orders have been processed and completed by technicians.

**PNBP Contribution:** Financial data indicates consistent revenue from verification activities.

**PNBP Contribution:** Most instruments originate from a few dominant provinces, indicating focused service areas.

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DATA ANALYSIS

# My Contributions

- **Data Preparation**: Cleaned, standardized, and consolidated multi-source operational data.

- **Data Structuring**: Organized key attributes (orders, instruments, institutions, regions, status) into an analyzable format.

- **Dashboard Development:** Designed and configured visual components, filters, and metrics in Looker Studio.

- **Analytical Interpretation:** Generated insights to support performance monitoring and data-driven decisions.

# Conclusion

- The **dashboard** provides clear, structured, and actionable insights for monitoring measuring instrument verification.

- Data is now more accessible, standardized, and ready to **support operational decision-making.**

- Visualization helps BSML track performance, financials, and regional distribution effectively.

# Thank You