

Measure Definitions

AI-Driven IT Helpdesk & Incident Resolution Analytics

Course: IT300 – Business Intelligence

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Core Volume & Performance Measures

Total Tickets

Total Tickets = COUNT(FactTickets[date_key])

Description

Counts the total number of IT support tickets. This measure represents overall workload volume and serves as the base metric for several derived KPIs.

Average Resolution Time (Hours)

Avg Resolution Time (Hours) =

AVERAGE(FactTickets[resolution_time_hours])

Description

Calculates the average time required to resolve support tickets. Used to evaluate operational efficiency and service performance.

SLA & Compliance Measures

SLA Breach Rate (%)

SLA Breach Rate (%) =

DIVIDE(

SUM(FactTickets[sla_breached]),

[Total Tickets]

)

Description

Measures the percentage of tickets that exceeded their SLA thresholds. This KPI reflects service quality and compliance performance.

AI Performance Measures

AI Resolution Rate (%)

AI Resolution Rate (%) =

DIVIDE(

SUM(FactTickets[ai_resolved]),

[Total Tickets]

)

Description

Represents the proportion of tickets resolved automatically by AI. Used to assess the level of automation and AI adoption.

Human Resolution Rate (%)

Human Resolution Rate (%) =

1 - [AI Resolution Rate (%)]

Description

Indicates the percentage of tickets resolved by human agents. Complements the AI Resolution Rate to show workload distribution.

Average AI Confidence Score

Avg AI Confidence Score =

AVERAGE(FactTickets[ai_confidence_score])

Description

Calculates the average confidence level of AI-resolved tickets, serving as an indicator of AI decision quality and reliability.

Time Intelligence Measures

Month-over-Month Ticket Growth (%)

MoM Ticket Growth (%) =

VAR PrevMonthTickets =

```
CALCULATE(  
    [Total Tickets],  
    DATEADD(DimDate[date], -1, MONTH)  
)  
  
RETURN  
  
DIVIDE(  
    [Total Tickets] - PrevMonthTickets,  
    PrevMonthTickets  
)
```

Description

Measures the month-to-month percentage change in ticket volume. Used for trend analysis and workload forecasting.

Year-over-Year Ticket Growth (%)

YoY Ticket Growth (%) =

VAR PrevYearTickets =

```
CALCULATE(  
    [Total Tickets],  
    DATEADD(DimDate[date], -1, YEAR)
```

)

RETURN

DIVIDE(

[Total Tickets] - PrevYearTickets,

PrevYearTickets

)

Description

Measures the annual percentage change in ticket volume, supporting long-term performance evaluation and strategic planning.

Notes

- **All measures are created as DAX measures, not calculated columns.**
- **Measures dynamically respond to slicers and filters.**
- **Time intelligence measures rely on an active relationship with the DimDate table.**