

SaaS BI Design

Senior Data Analyst Assignment for Time Doctor
By Itai Raboy

Objective and Scope

- Context: B2B Project Management SaaS
- Goal: Trusted visibility: usage, engagement, productivity
- Out of scope: Employee monitoring, time tracking

Raw

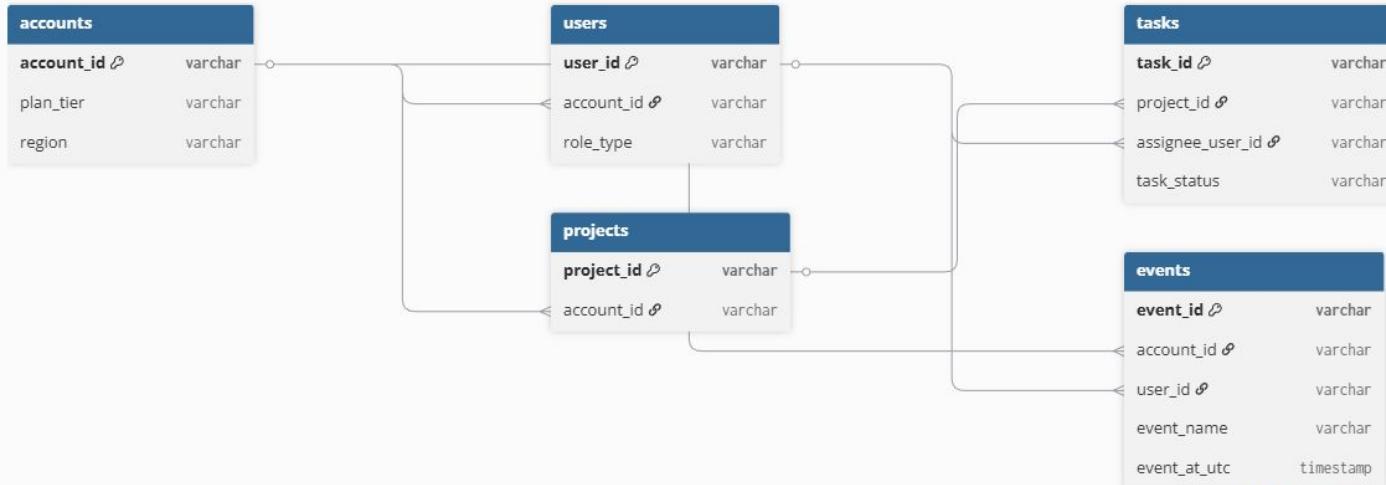
Transform

Marts

Dashboard

Data model

- Core principle: Realistic with controlled imperfections
- Supports metrics at weekly grain



Transformations and KPIs

- Layered SQL: Staging → Intermediate → Marts

KPI	Why it matters	Limitation
WAU	Adoption	Calendar-week logic
W+4 Retention	Stickiness	Strict; Recent cohorts = N/A
Throughput	Value realization	Backlog effects
Cycle Time	Friction	Task mix bias
On-time completion	Reliability	Depends on customer definition
Late event rate	Data trust	-

Dashboard design

- Page 1: Executive Overview
- Page 2: Engagement & Retention
- Page 3: Productivity & Trust



QA & Production

- ◎ Guardrails: nulls, anomaly checks, schema drift, lag
- ◎ Next steps: tests/contracts, orchestration, alerting
- ◎ In the future: forecasting, advanced ML

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