

What Does a Business Intelligence Analyst Do: Role Overview and Scope



- Turns raw operational data into dashboards, reports, and decisions



- Sits between IT and the business — writes SQL, explains why numbers move



- O*NET 15-2051.01, Bright Outlook: queries data, finds trends, recommends



- Titles vary: Analytics Analyst, Reporting Analyst, BI Specialist, BI Consultant



- Works across finance, healthcare, retail, tech, gaming, pharma, e-commerce



The Core Purpose: Turning Data Into Defensible Decisions



- A BI analyst turns operational data into decisions others can defend.



- BI is descriptive: it answers "what happened?" using agreed, shared metrics.



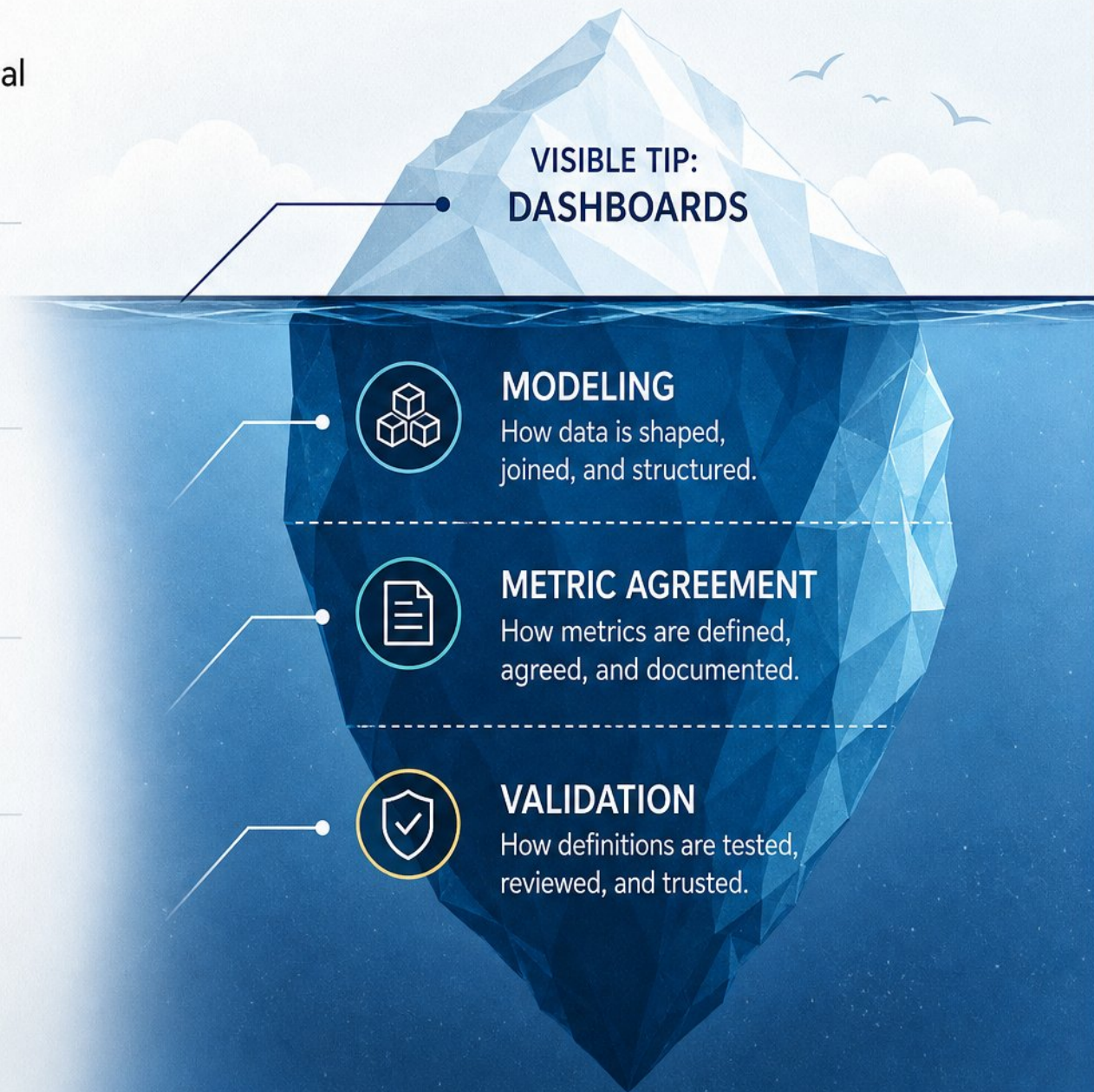
- Metrics are agreed before the dashboard ships; the question is known in advance.



- The audience is broader than the builder.

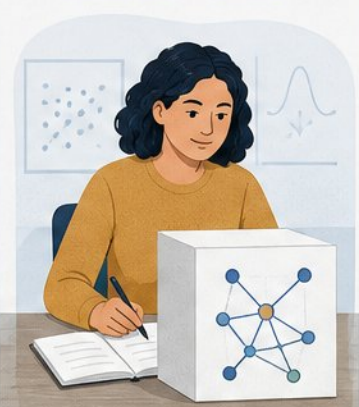


- Not built for: new questions, ad hoc CSVs, or predictive models.



BI Analyst vs. Adjacent Data Roles



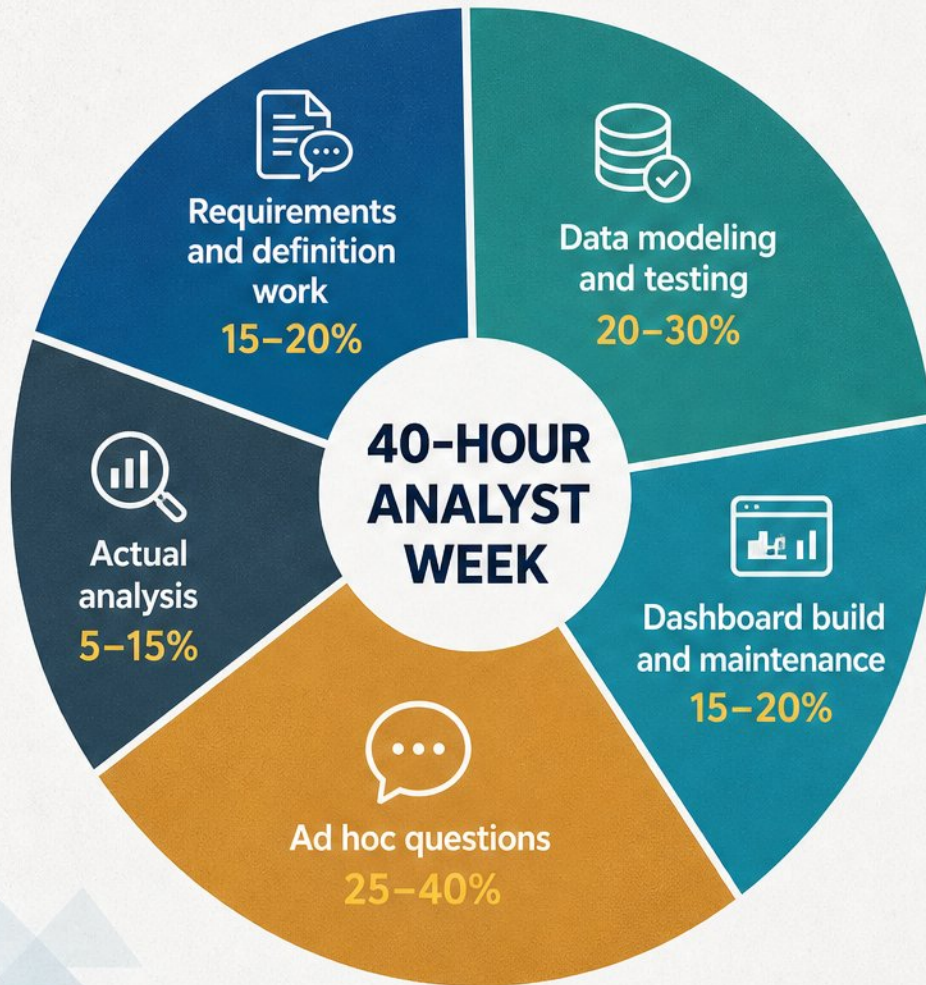
BI Analyst	Data Analyst	Data Scientist	Data Engineer	Business Analyst
				
Deliverable: Recurring dashboards & KPI definitions	Deliverable: Exploratory analysis & insights	Deliverable: Predictive model (deployed)	Deliverable: Pipelines, schemas, & tests	Deliverable: Requirements document & process maps

- **BI analyst:** owns recurring dashboards, KPI definitions, governed reporting
- **Data analyst:** wider scope — exploratory work, statistics, experimentation
- **Data scientist:** builds predictive models; output is a deployed model
- **Data engineer:** builds pipelines, schemas, and tests
- **Business analyst:** requirements, process maps, and specifications



Quick test: dashboard = analyst; requirements doc = BA; model = data science

The Honest Weekly Shape of the Job



- **Requirements and definition work: 15–20%** — meetings, written definitions, arguing over "active"



- **Data modeling and testing: 20–30%** — SQL, transformation models, tests, backfills, documentation



- **Dashboard build and maintenance: 15–20%** — everyone notices loudly when it stops



- **Ad hoc questions: 25–40%** — Slack, DMs, reconciliations, sanity checks; noticed within a day

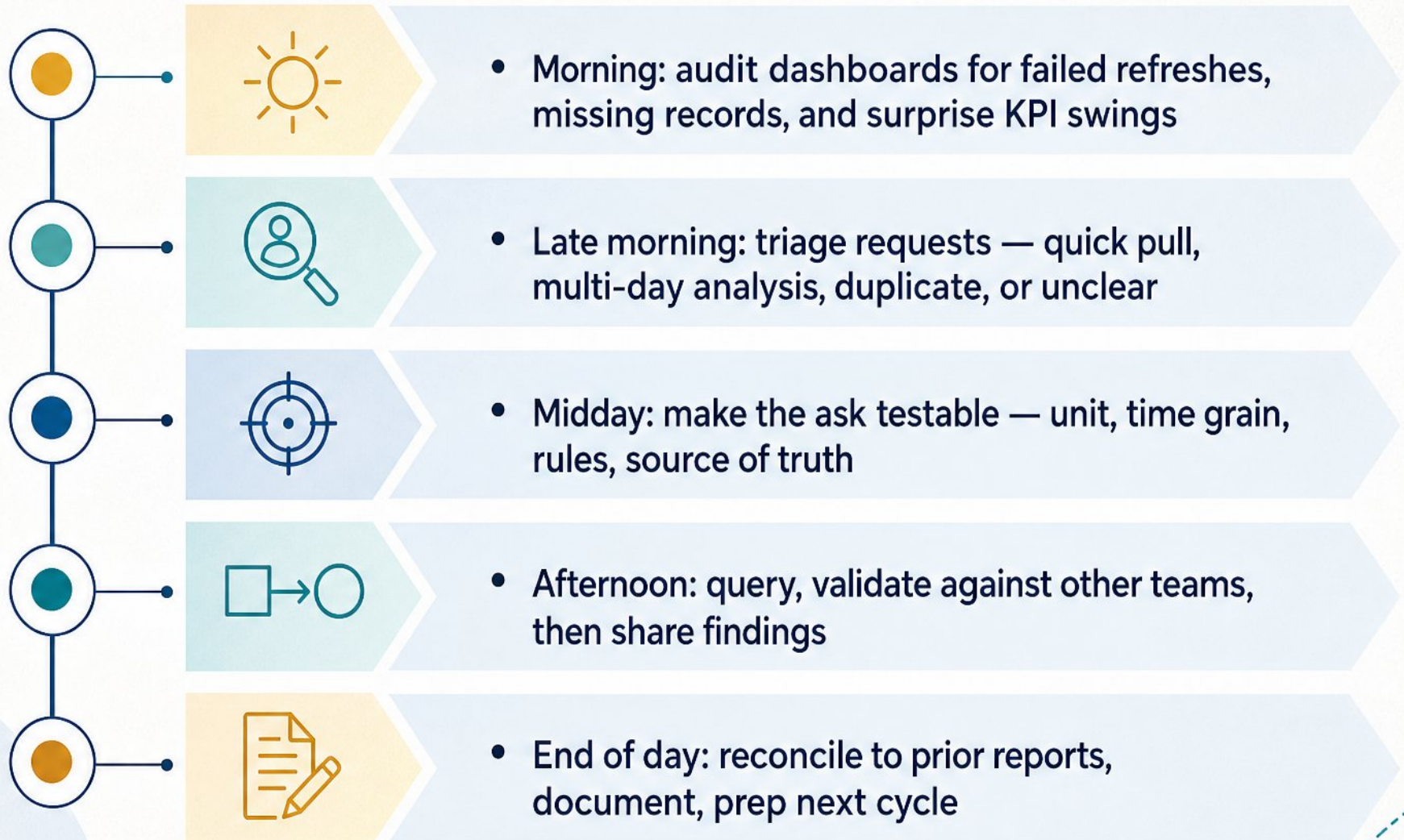


- **Actual analysis: 5–15%** — cohorts, drivers, forecasts, written recommendations

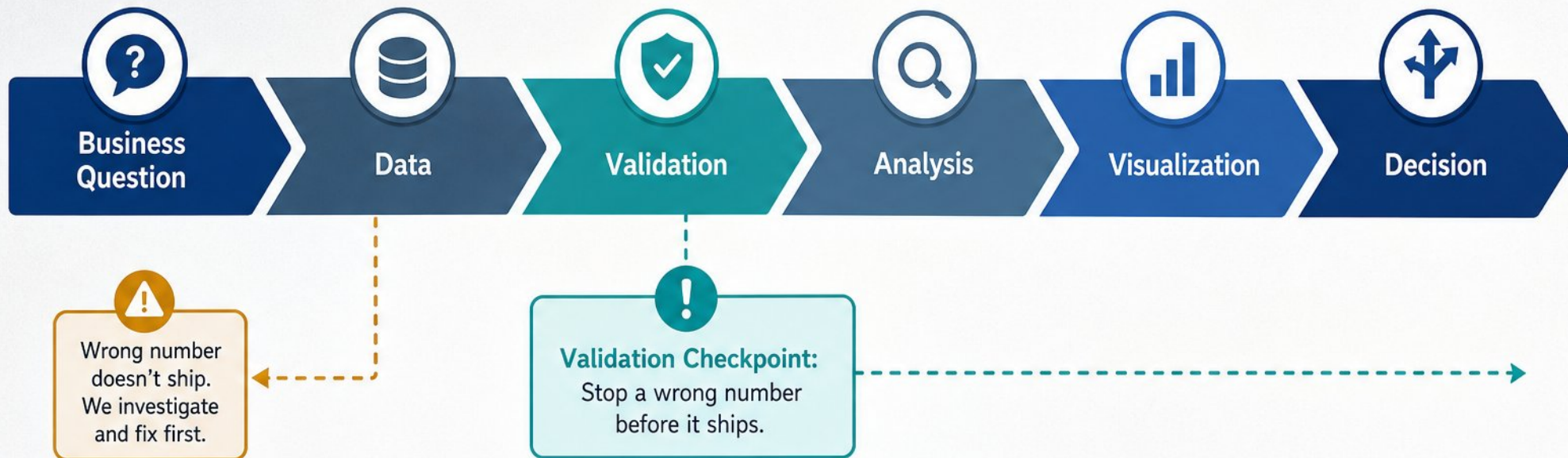


Half the week is communication and translation;
the SQL is the iceberg tip

A Day in the Life: The BI Analyst Workflow



From Business Question to Decision: The Analytical Path



- Working path: business question → data → validation → analysis → visualization → decision



- Validation is critical: \$8.4M in SQL vs. \$8.9M approved — check refunds, taxes, dates first



- Ask: what decision changes, what unit, what time grain, who else has a number?



- Output is a written definition — inclusions, exclusions, edge cases, authoritative system

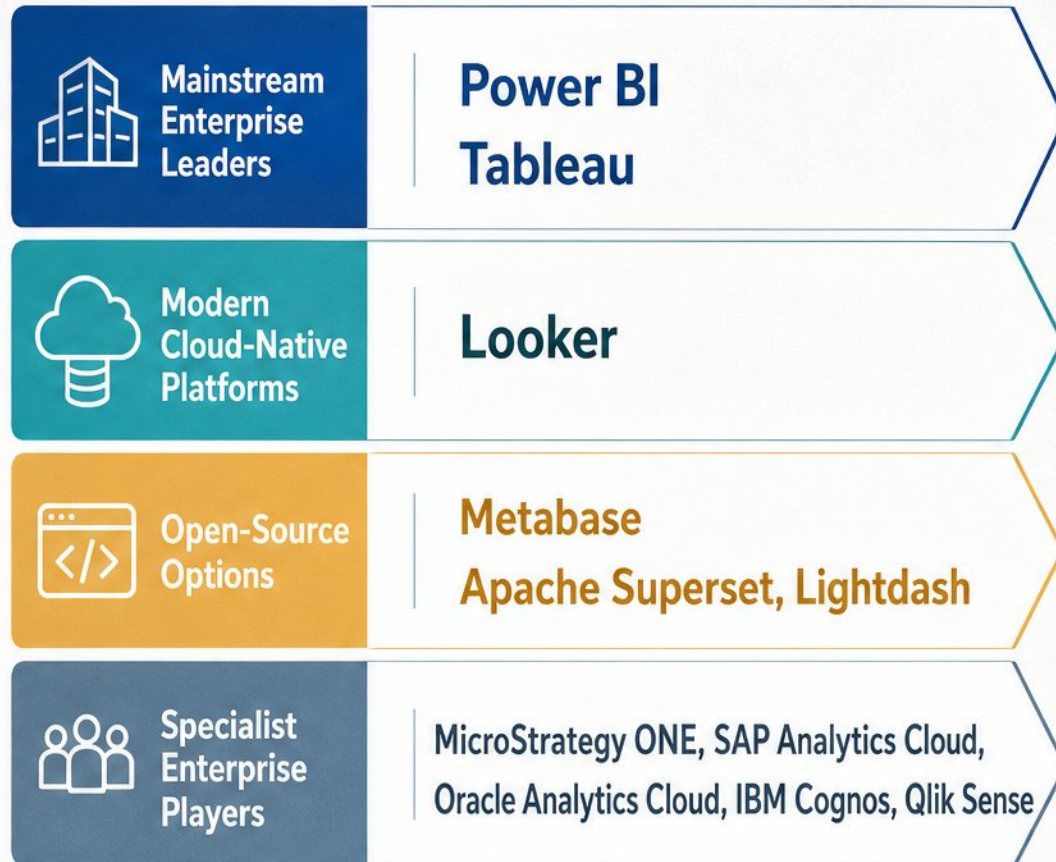


- Real example: churn traced to 31% drop in high-value prescriber visits, 22% West campaign gap

Essential Tools and Technologies

	SQL is non-negotiable: joins, CTEs, window functions, cohorts	 REQUIRED
	Learn one BI platform deeply, not four superficially	 REQUIRED
	Cloud warehouses: Snowflake, BigQuery, or Redshift	 REQUIRED
	dbt models and tests; Airflow, Dagster, or Prefect for scheduling	 EXPECTED
	Excel and Sheets still vital for validation and quick checks	 EXPECTED
	Python or R: a multiplier, not an entry requirement	 MULTIPLIER

Choosing and Using BI Platforms: 2026 Landscape



- **Power BI:** most-deployed enterprise platform, bundled with Microsoft 365 E5, tightly integrated with Fabric and Copilot
- **Tableau:** leads visualization depth, Tableau Pulse AI anomaly detection; ~\$15–\$75/user/month
- **Looker:** built for modern warehouses, LookML semantic layer enables governed self-service
- **Metabase:** top open-source choice for fast time-to-first-dashboard; Apache Superset and Lightdash also strong
- **Specialists:** MicroStrategy ONE, SAP Analytics Cloud, Oracle Analytics Cloud, IBM Cognos, Qlik Sense



2026 winning pattern: hybrid — incumbent tool for standardized reporting, AI layer for ad hoc questions



Skills Beyond Tools: Communication and Business Acumen



- **Communication:** explain complex insights clearly to non-technical audiences



- **Assessed in interviews** via presentation and data storytelling exercises



- **Business acumen:** how the business makes money, what leadership asks



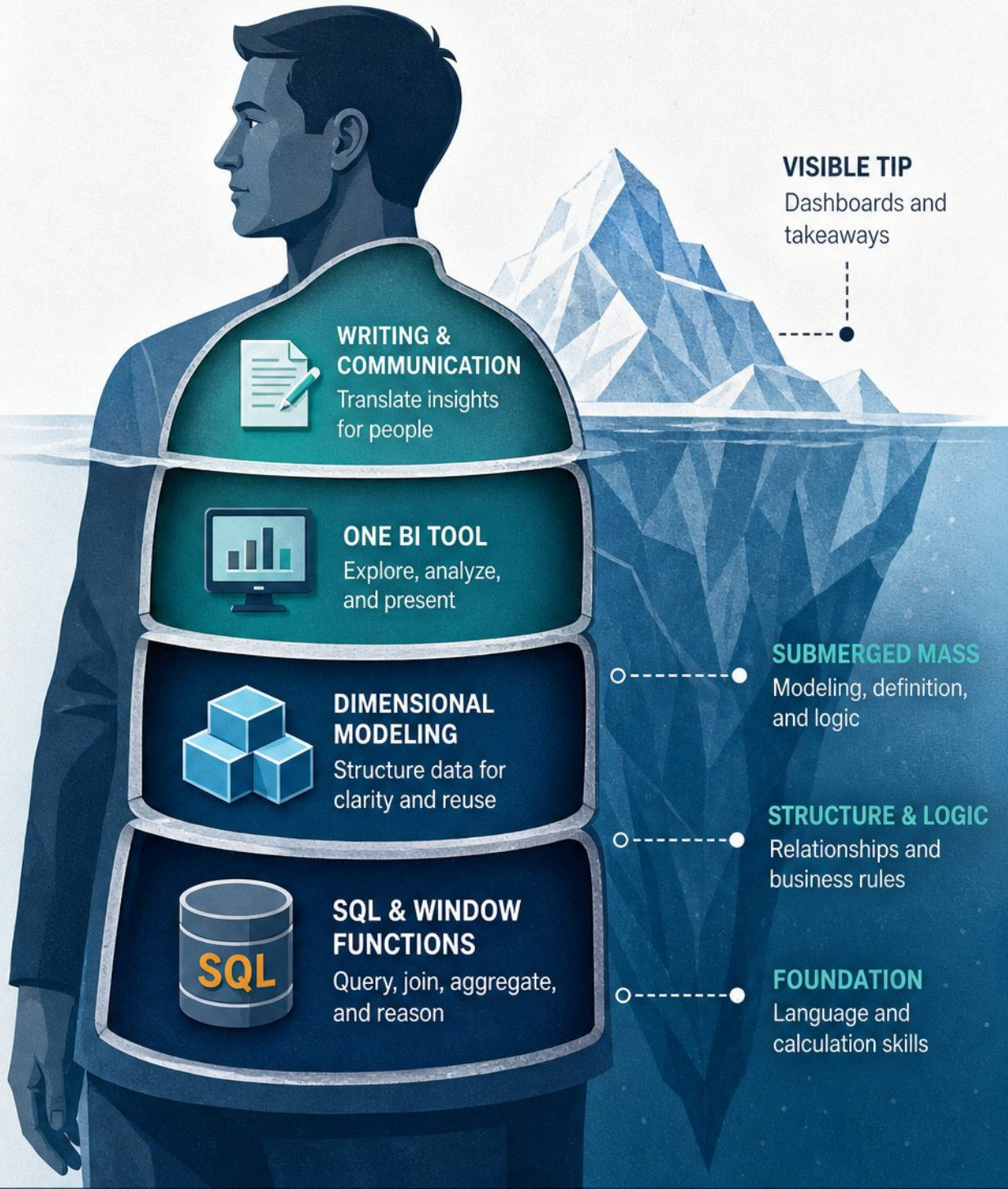
- **Analytical thinking:** break vague questions into answerable pieces first



- **Attention to detail:** catch bad numbers before the board deck



- **Practitioner ordering:** SQL, dimensional modeling, one BI tool, then writing



How BI Work Creates Business Value: Case Evidence



1

- **Cloud security firm:** 606% Year 1 ROI, 90% faster dashboards, 120 engineering hours recovered



2

- **Retailer cost-to-serve model:** 13,000 unproductive SKUs found, \$50M working capital freed



3

- **German advertiser unified campaign data:** €3.5M annual savings, 25% faster reporting, 500+ users



4

- **E-commerce platform:** weekly reporting cut from ~16 to ~6 analyst-hours, reconciliation meeting ended



5

- **Pharma manufacturer:** monthly KPI reporting time cut 95%, 70% of spreadsheet analysis governed



Metric Definition Card



Unit

What the metric measures



Time grain

The time period to which the metric applies



Inclusions

What is included in the metric



Exclusions

What is excluded from the metric



Authoritative source

Where the metric comes from

Common Misconceptions and Role Boundaries



Reality:

Includes modeling, governance, ad hoc investigation



Reality:

They are distinct specializations, not a hierarchy



- **Myth:** BI analysts only build dashboards; reality includes modeling, governance, ad hoc investigation



- **Myth:** BI equals data science; BI is descriptive, data science is predictive



- **Myth:** BI is just reporting; modern BI includes self-service, storytelling, decision support



- **Myth:** Analyst is a junior data scientist; they are distinct specializations, not a hierarchy

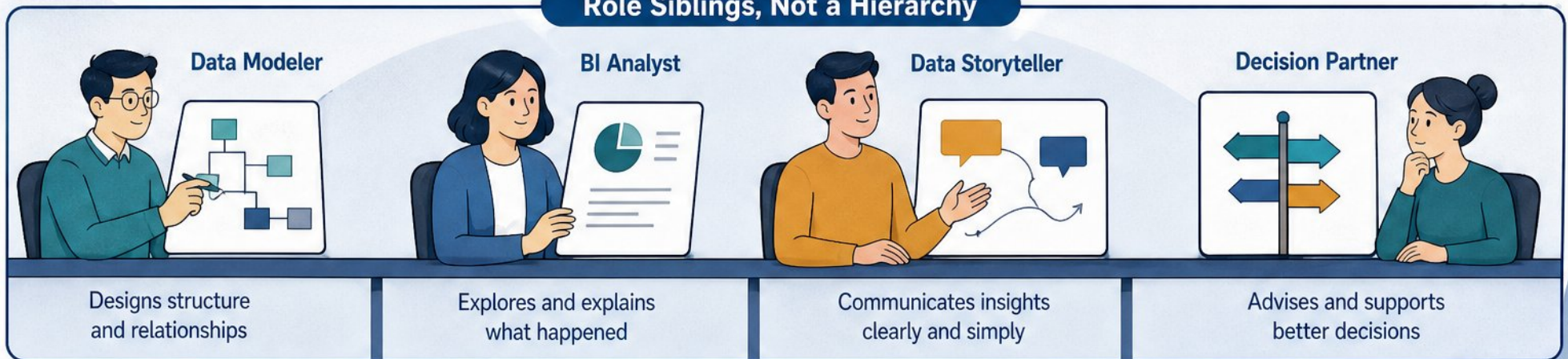


- Titles are loose: BLS and O*NET distinguish BI (15-2051.01); employers often don't

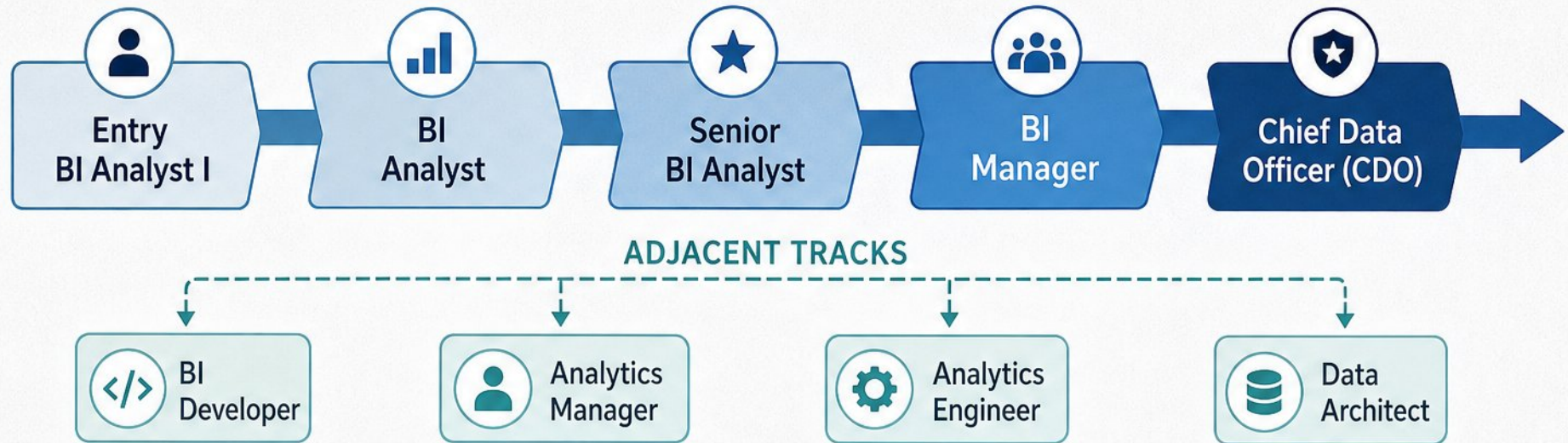


- **Depreciating:** query generation, standard charts, routine refresh; **appreciating:** metric ownership, catching bad numbers

Role Siblings, Not a Hierarchy



Career Paths, Job Market, and Compensation



- Typical ladder: BI Analyst I → BI Analyst → Senior → BI Manager → CDO



- Adjacent tracks: BI developer, analytics manager, analytics engineer, data architect



- BLS: 34% growth (2024–2034), ~23,400 openings per year, 245,900 employed



- Median pay \$120,230 (2025); career-site estimates range \$79K–\$116K



- Top-paying markets: New Hampshire, California, D.C., Maryland, Washington



- Demand driver: more decisions, not more data — reliable governed insight

Getting Started: Education, Portfolio, and Job Search



- No single path: business, IS, CS, statistics, economics all work



- Bachelor's typical but not required; skills and projects decide



- Key certs: PL-300, Google BI Certificate, Tableau Desktop Specialist



- Portfolio: 2–3 end-to-end projects beat a stack of badges



- Each project answers: question, tools, metrics, and insight



- Timelines: 6–18 months career changers, 3–6 months with SQL

PORTFOLIO PROJECT: ANSWERING THE RIGHT QUESTIONS



BUSINESS QUESTION

What is the key question we are trying to answer?



TOOLS

What data and tools did we use to explore it?



METRICS TRACKED

Which metrics did we follow and why?



WHAT THE ANALYSIS REVEALED

What did we learn and what would we do next?

KEY CERTIFICATIONS TO CONSIDER



PL-300



Google BI Certificate



Tableau Desktop Specialist

REALISTIC TRANSITION TIMELINES



6–18 months
career changers



3–6 months
with SQL



METRIC DEFINITION CHECKLIST



UNIT

What exactly is being measured?



TIME GRAIN

Over what time period is it measured?



INCLUSIONS

What is included in the metric?



EXCLUSIONS

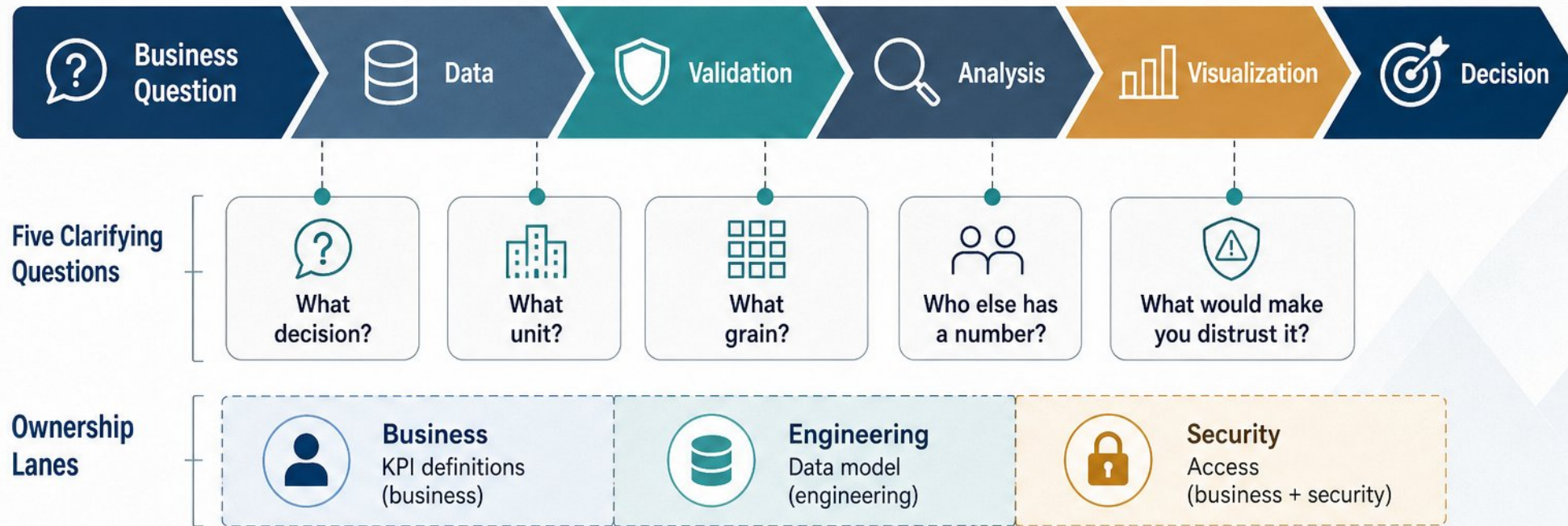
What is excluded from the metric?



AUTHORITATIVE SOURCE

Where does the definition come from?

Working Effectively With BI Teams: A Guide for Stakeholders



- A good request answers five questions: what decision, what unit, what grain, who else has a number, what would make you distrust it



- Involve BI early, before a vague question hardens into a chart nobody uses



- Name owners: KPI definitions (business), data model (engineering), access (business + security)



- Expect constraints: availability, quality, refresh cadence, and silent schema drift



- Judge output on accuracy, relevance, actionability — every dashboard needs owner and decision



- Track meta-KPIs: adoption, decision-to-data latency, incidents, satisfaction, time-to-insight



- Data literacy is shared: train users to self-serve and save analysts for higher-value work

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