

Real-World Departmental Use Cases in Power BI

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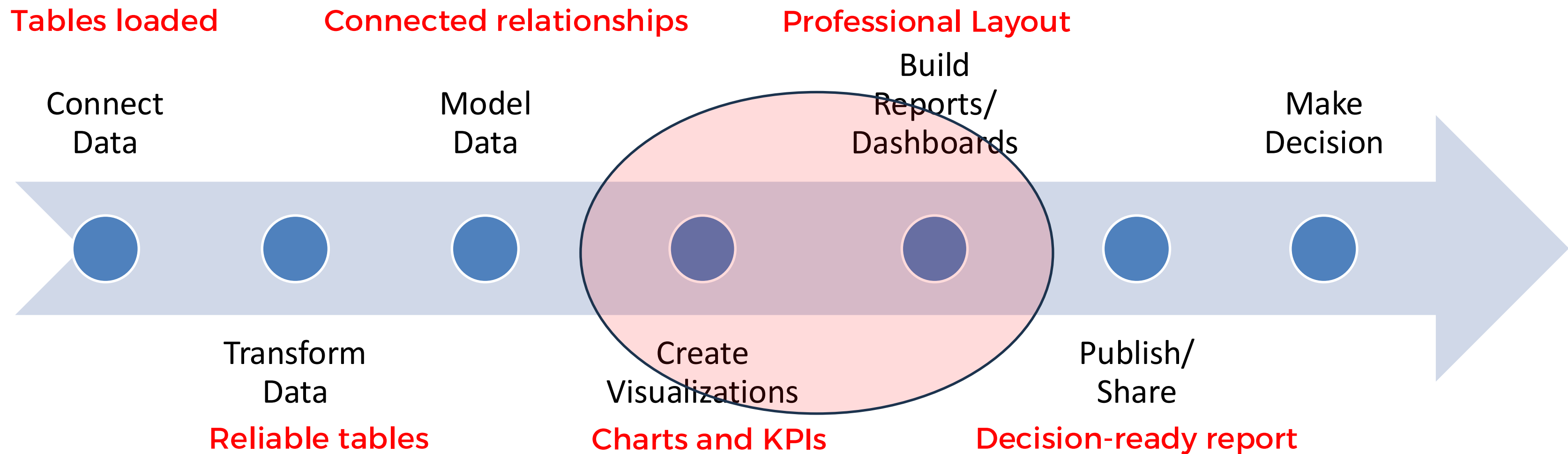
Course: From Data to Decisions using Power BI

Lecture 08



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Power BI Workflow (The Analytics Journey)



Each stage adds value — skip one and the chain breaks

Different Teams, Different Needs

Department	Core Business Question	Representative Metric Focus
Executive Management	Are we meeting high-level macroeconomic strategic goals?	Operating Margin %, Total Global Growth
Sales Department	Which regional pipelines generate the largest volume sales?	Average Order Value (AOV), SKU Velocity
Finance Division	Are we aligned with localized baseline budgets?	Budget Variance %, Accounts Receivable Aging
Operations & Logistics	Where are the friction-points in supplier processes?	On-Time In-Full (OTIF) Delivery %

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Designing a Business Dashboard

The End-to-End Business Intelligence & Analytics Workflow

1. Core Questions

Formulate the business objectives and critical decisions that need answers.

3. Pipeline Modeling

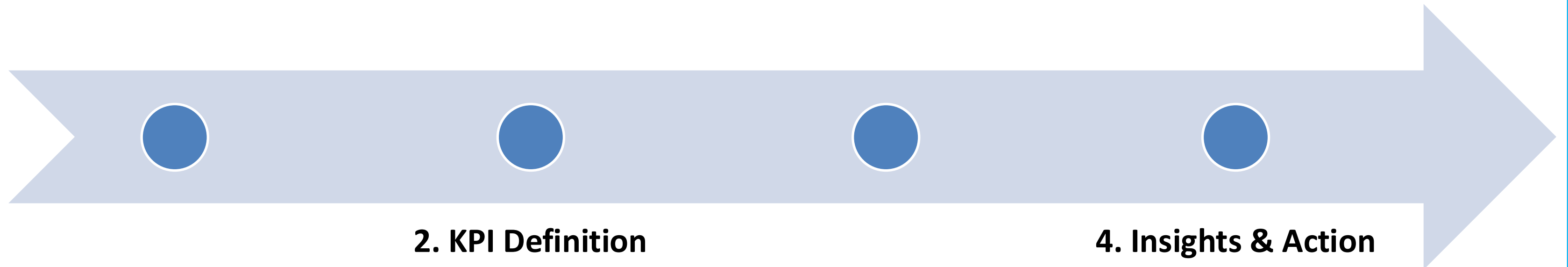
Collect, clean, model (DAX / Star-schema), and visualize the curated raw data.

2. KPI Definition

Pinpoint and define targeted, measurable, and actionable key performance indicators.

4. Insights & Action

Extract strategic metrics, interpret trend changes, and execute decisions.



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What we will cover

1. Executive Dashboard
2. Sales Department
3. Marketing Department
4. Finance Department
5. Human Resources
6. Operations Department
7. Customer Service
8. Developing Business Acumen

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1. Executive Management



Executive Business Questions

An effective executive dashboard must synthesize enterprise answers directly for core strategic questions:

- **Strategic Alignment:** Are local operations aligned to meet board-mandated profit goals?
- **Variance Spotting:** Which global regions are generating the highest profit efficiency?
- **Risk Abatement:** Where are localized challenges accumulating across international markets?

Dashboard Rule

Avoid operational micro-details. Focus heavily on summary insights, predictive variances, and automated smart text summaries.

Executive Dashboard: Core KPIs



1. Core executive dashboard Purpose

- Provide senior executive management (CEO, CFO, Board of Directors) with a unified, high-level, and birds-eye perspective of corporate wellness.
- Ensures macroeconomic trends and cross-company targets are tracked in real-time.



2. Critical Strategic KPIs

- Gross Revenue & Profit Margin (\$): Absolute bottom-line health indicator.
- YoY Sales Growth: Measures expansion and market capture velocity.
- Operating Margin (%): Tracks localized business unit cost efficiency.
- Customer Satisfaction (CSAT/NPS): Strategic brand value.

Recommended Executive Visuals



KPI Trend Cards

Provide instant, color-coded snapshots of actual metrics compared against preset targets.



Forecasting Trends

Utilize historical data with line forecasting models to visualize upcoming quarter trajectories.



Waterfall Charts

Deconstruct the progressive margin drivers between previous totals and current margins.

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2. Sales Department



Sales Department Key Questions

The Sales dashboard provides critical answers for managers to evaluate daily pipeline effectiveness:

- Product Mix: Which distinct product lines drive our biggest profit volume?
- Territory Analysis: Which regional territories require strategic support?
- Client Risk: Are we over-reliant on a small cluster of high-value accounts?

Pipeline Action Note

Correlating seasonal cycles and product movement velocity allows operations to match inventory levels directly with projected sales spikes.

Sales Dashboard Purpose & KPIs



1. Core Sales Objective

- Track regional pipeline movements, optimize salesperson close times, monitor product volume curves, and maximize cash inflows.
- Focus: Translating raw pipelines into reliable strategic forecasts.



2. Key Sales Metrics

- Total Sales Volume (\$): Total revenue generated.
- Average Order Value (AOV): Unit spend per basket.
- Top-N Clients: Accounts highlighting key partner dependency.
- SKU Performance Velocity: Inventory movement rates.

Recommended Sales Visuals & Analytics



Clustered Bar Charts

Compare performance directly across individual sales reps, categories, or regions.



Top-N Client Lists

Filter customer matrices dynamically to isolate your highest-grossing corporate accounts.



Pareto Analysis

Utilize the 80/20 rule to focus efforts on the 20% of inventory items driving 80% of sales.

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3. Marketing Department



Marketing Business Questions

A qualified marketing dashboard answers key questions to keep acquisition budgets efficient:

- Spend Optimization: Which operational channels generate the highest relative lead value?
- Cost Efficiency: Which platform options are becoming too expensive to sustain?
- Friction Detection: Where are conversion bottlenecks causing customers to drop out of our sales funnel?

Funnels Tip

By mapping customer paths in Power BI, you can quickly identify web pages where prospective buyers abandon their carts.

Marketing Dashboard Purpose & KPIs



1. Marketing Objective

- Analyze the performance of digital and offline promotional campaigns, manage channel budgets, and maximize lead conversion efficiency.
- Focus: Reducing acquisition friction while scaling high-ROI channels.



2. Key Marketing KPIs

- Campaign ROI: Campaign revenue relative to spend.
- Conversion Rate (%): Percentage of leads converted to buyers.
- CAC (Acquisition Cost): Cost to acquire a customer.
- Lead Inbound Volume: Total prospective traffic captured.

Recommended Marketing Visuals



Conversion Funnels

Track marketing prospects at every stage from initial click to paid client.



Acquisition Scatters

Map campaigns across dual axes (Spend vs. Revenue) to instantly identify ROI outliers.



Performance Heatmaps

Visualize digital channel interactions across customer profiles and target days.

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4. Finance Department



Finance Business Questions

Finance dashboards keep managers informed on corporate budget compliance and performance:

- Budget Deviation: Are business unit expenses aligned with original forecasts?
- Opex Anomalies: Which cost lines are growing fastest, and where are we exceeding limits?
- Capital Allocations: Is liquid cash flow strong enough to support planned expansion projects?

Analysis Concept

Variance Analysis helps finance teams isolate specific cost centers driving overall budget deviations.

Finance Dashboard Purpose & KPIs



1. Finance Objective

- Support corporate fiscal health, monitor expense compliance, manage active budgets, and track key profitability metrics over time.
- Goal: Eliminate budget surprises through real-time expense monitoring.



2. Key Financial KPIs

- Gross & Net Profit (%): Key financial health ratios.
- OpEx (Operating Expense): Run-rate spending levels.
- Budget Variance (\$): Gaps between plan and actual spend.
- Free Cash Flow (FCF): Available operational liquidity.

Recommended Finance Visuals



Waterfall Charts

Track cumulative changes as revenues and expenses reconcile to net margins.



Matrix Financials

Build dynamic Income Statements and Balance Sheets that support localized hierarchy drill-downs.



Time Intelligence

Use DAX calculations to quickly compare YTD performance against prior quarters.

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5. Human Resources



HR Business Questions

HR dashboards help managers monitor workforce performance, employee engagement, and talent development.

- Employee Turnover: Are certain departments or locations experiencing higher employee turnover than expected?
- Employee Engagement: Which teams have the highest or lowest engagement scores, and what factors influence them?
- Learning & Development: Are training programs improving employee performance and supporting organizational goals?

Analysis Concept

Workforce Analytics helps HR teams identify trends in employee retention, engagement, and performance, enabling data-driven decisions to improve productivity, reduce turnover, and strengthen talent management.

HR Dashboard Purpose & KPIs



1. HR Dashboard Objective

- Support workforce health, track voluntary attrition, manage training development programs, and measure employee satisfaction.
- Goal: Reduce employee turnover to lower recruitment and onboarding costs.



2. Key HR KPIs

- Total Active Headcount: Staff broken down by division.
- Turnover Rate (%): Monthly attrition.
- Absenteeism Rate: Staff attendance health.
- eNPS (Engagement): Overall team satisfaction.

Recommended HR Visuals



Stacked Column Charts

Visualize active headcount split across departments and job level tiers.



Attrition Trend Lines

Monitor annualized voluntary and involuntary turnover metrics.



Absenteeism Matrices

Use color-coded heat matrices to find days or seasons with high absenteeism rates.

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6. Operations Dashboard



Operations Business Questions

Operations dashboards help managers monitor operational efficiency, production performance, and supply chain reliability.

- Operational Efficiency: Are production lines meeting output targets while maintaining efficiency and minimizing downtime?
- Quality & Defects: Which products, production lines, or suppliers are contributing most to defects and quality issues?
- Supply Chain Performance: Are inventory levels, delivery times, and supplier performance supporting business demand?

Analysis Concept

Operational Analytics helps operations teams identify process bottlenecks, monitor production performance, optimize inventory levels, and improve supply chain efficiency through data-driven decision-making.

Operations Dashboard Objectives & KPIs



1. Operations Dashboard Objective

- Support operational excellence by monitoring production performance, inventory levels, delivery reliability, and product quality across the supply chain.
- **Goal:** Improve operational efficiency, reduce production costs, minimize defects, and ensure on-time customer deliveries.



2. Key Operations KPIs

- **Production Output:** Units produced compared to production targets.
- **Defect Rate (%):** defective products during production.
- **Inventory Turnover:** Efficiency of inventory utilization and replenishment.
- **On-Time Delivery (%):** Percentage of orders delivered on schedule.
- **Supplier Performance:** Supplier delivery reliability and quality compliance.

Recommended Operations Visuals



KPI Cards

Monitor key operational metrics such as Production Output, Defect Rate, Inventory Turnover, On-Time Delivery, and Overall Equipment Effectiveness (OEE).



Production & Delivery Trend Lines

Track production volume, inventory levels, and on-time delivery performance over time to identify trends, seasonal patterns, and operational improvements.



Pareto & Decomposition Analysis

To identify the products, production lines, suppliers, or defect types contributing most to operational issues and quality losses.

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7. Customer Service



Customer Service Business Questions

Customer service dashboards help managers monitor service quality, customer satisfaction, and support team performance.

- Customer Satisfaction: Are customers satisfied with the service they receive, and which factors have the greatest impact on satisfaction?
- Service Efficiency: Are customer issues being resolved quickly, and are service teams meeting response and resolution targets?
- Recurring Issues: Which products, services, or issue types generate the highest complaint volumes and require corrective action?

Analysis Concept

Customer Service Analytics helps organizations identify service bottlenecks, improve response efficiency, uncover the drivers of customer satisfaction, and enhance the overall customer experience through data-driven decisions.

Customer Service Dashboard Objectives & KPIs



1. CS Dashboard Objective

- Support service excellence by monitoring customer satisfaction, response efficiency, complaint resolution, and overall service quality.
- Goal: Improve customer experience by reducing resolution times, increasing first-contact resolution, and maintaining high customer satisfaction levels.



2. Key CS KPIs

- Customer Satisfaction (CSAT): Overall customer satisfaction score after service interactions.
- Average Resolution Time: Average time taken to resolve customer issues.
- First Contact Resolution (%): Percentage of issues resolved during the first customer interaction.
- Complaint Volume: Total number of customer complaints received.
- Net Promoter Score (NPS): Measures customer loyalty and willingness to recommend the company.

Recommended Customer Service Visuals



KPI Cards

Display CSAT, NPS, Resolution Time, First Contact Resolution, and Open Tickets.



Line Charts

Track complaints, resolution times, and customer satisfaction trends over time.



Key Influencers / Decomposition Tree

Identify the factors driving customer satisfaction, complaint volumes, and service performance.

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8. Business Acumen



Business Acumen: The Foundation of Great Analytics

"The most valuable business analysts are not those who know the most about Power BI—they are those who understand the business well enough to ask the right questions, uncover meaningful insights, and turn data into better decisions."

Understanding the Business Behind the Data

Business acumen is the ability to understand how an organization creates value and use data to support better business decisions. Strong business analysts combine technical expertise with industry knowledge and strategic thinking.

Business Acumen: The Foundation of Great Analytics

"Power BI doesn't make better decisions—people do. Business analysts create value by combining technical skills with business knowledge to solve real organizational challenges."

Technology helps you analyze data.

Business acumen helps you understand what the data means.

Critical thinking helps you identify opportunities and solve problems.

Communication helps you turn insights into action.

Developing Business Acumen

Business analysts create the greatest value when they combine technical skills with business knowledge to transform data into actionable insights and informed decisions.

Learn the Business: Understand your organization's products, services, customers, competitors, and business model.

Know the KPIs: Learn the key performance indicators and success metrics used by different departments.

Ask Business Questions: Focus on why results occurred, not just what happened.

Collaborate with Stakeholders: Engage with managers and subject matter experts to understand business processes and challenges.

Think Like a Decision-Maker: Analyze data with the goal of identifying opportunities, solving problems, and recommending actions.

Stay Curious: Follow industry trends, market developments, and emerging technologies to broaden your business perspective.

Exercise: Advanced Analysis

1. Choose Your Department

Select one business department (Sales, Marketing, Finance, HR, Operations, or Support) and identify ****5-7 critical KPIs**** to build for.

Include at least three distinct visual types.

2. Build your Dashboard

Incorporate an advanced AI-powered visual tool, such as Forecasting, Key Influencers, or a Decomposition Tree.



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Exercise

<https://www.kaggle.com/datasets>

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08**Key Points**

Different departments require different KPIs, dashboards, and analytical techniques.

Effective dashboards are designed around business questions, not just data.

Power BI supports strategic and operational decision-making across the entire organization.

Combining meaningful KPIs, appropriate visuals, and analytical insights creates greater business value.

The goal of business intelligence is to turn data into informed decisions and measurable business outcomes.

Lecture 09:

- Publishing, Sharing, and Collaboration



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Next Lecture



Thank You