

# Detailed Step-by-Step KPI Creation Guide

A comprehensive framework for building meaningful IT Key Performance Indicators — from strategic foundation to continuous improvement — grounded in real-world case studies and academic research.

IT BALANCED SCORECARD

5 PHASES · 12 STEPS

# The 5-Phase KPI Creation Framework

01

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## Phase 1: Strategic Foundation Analysis

Vision, mission, SWOT, and business strategy alignment

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## Phase 2: IT BSC Framework Development

Perspective definition and strategy map creation

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## Phase 3: KPI Creation Process

Identification, SMART criteria, and target setting

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## Phase 4: Implementation Framework

Weighting, measurement setup, and grading system

05

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## Phase 5: Continuous Improvement

Regular review, coaching, and annual adjustment

PHASE 1

# Strategic Foundation Analysis

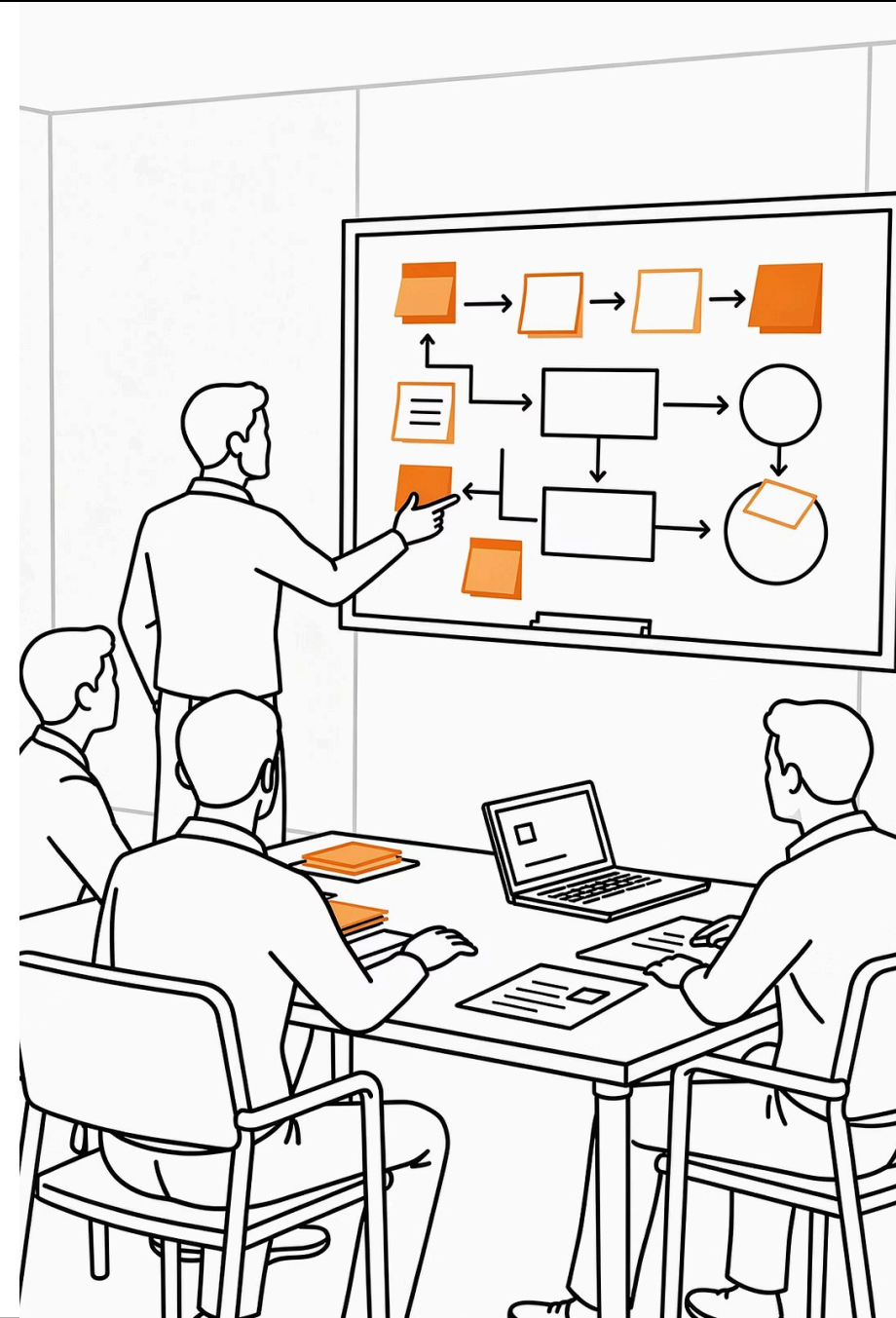
The foundation of any effective KPI system begins with a thorough understanding of organizational vision, mission, and strategic context. This phase ensures all metrics are anchored to real business objectives.

## Step 1

Vision & Mission Analysis with SWOT

## Step 2

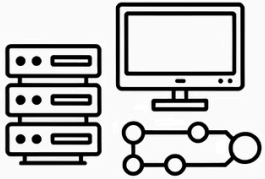
Business Strategy Alignment



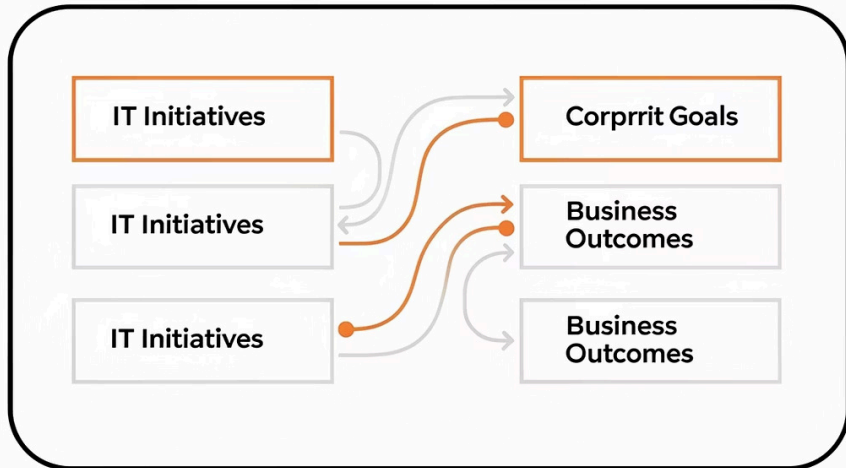
# Step 1: Vision & Mission Analysis with SWOT

**Document Current State** — e.g., AMIK BSI Tasikmalaya: *"Provide ICT services to students and employees"* (Bambang Kelana Simpony et al., 2016). Then identify a strategic objective — e.g., Tire Manufacturing: *"Achieve 20 Trillion revenue by 2020 with 43% from PCR Plant production"* (M. Rokhim et al., 2017).





# Step 2: Business Strategy Alignment



## Map IT Contribution

Industrial Engineering Dept.  
vision: *"Provide initiatives and support for improving factory results by promoting effective use of continuous improvement tools to enhance productivity, cost reduction, and employee well-being."* (M. Rokhim et al., 2017)

## Critical Success Factors

- Safety improvements
- Quality enhancements
- Productivity increases

(M. Rokhim et al., 2017)

# IT BSC Framework Development

The IT Balanced Scorecard (IT BSC) organizes performance measurement across four perspectives, ensuring IT strategy is evaluated holistically — from financial contribution to future capability building (Handoko et al., 2019).



## Corporate Contribution

How IT contributes to financial and business value



## Customer Orientation

IT service quality from the user viewpoint



## Operational Excellence

Internal IT process efficiency



## Future Orientation

IT capability development for future needs

# Step 3: Corporate Contribution Perspective

**Definition:** How IT contributes to financial and business value (Handoko et al., 2019).

## Increase Revenue

Through IT-enabled services and digital channels

## Reduce Operational Costs

Via automation and process optimization

## Improve ROI on IT Investments

Maximize returns from technology spending

# Step 3: Customer Orientation Perspective

**Definition:** IT service quality from the user viewpoint (Handoko et al., 2019).

## Enhance User Satisfaction

With IT services across all touchpoints

## Improve System Availability

Ensure reliability and consistent uptime

## Reduce Response Time

For support requests and incident handling



# Step 3: Operational Excellence Perspective

**Definition:** Internal IT process efficiency (Handoko et al., 2019).

## Optimize IT Infrastructure

Maximize performance of  
servers, networks, and  
systems

## Streamline Service Delivery

Reduce friction in IT  
service processes

## Minimize System Downtime

Proactive monitoring and  
rapid incident response

# Step 3: Future Orientation Perspective

**Definition:** IT capability development for future needs (Handoko et al., 2019).

## Develop Staff Competencies

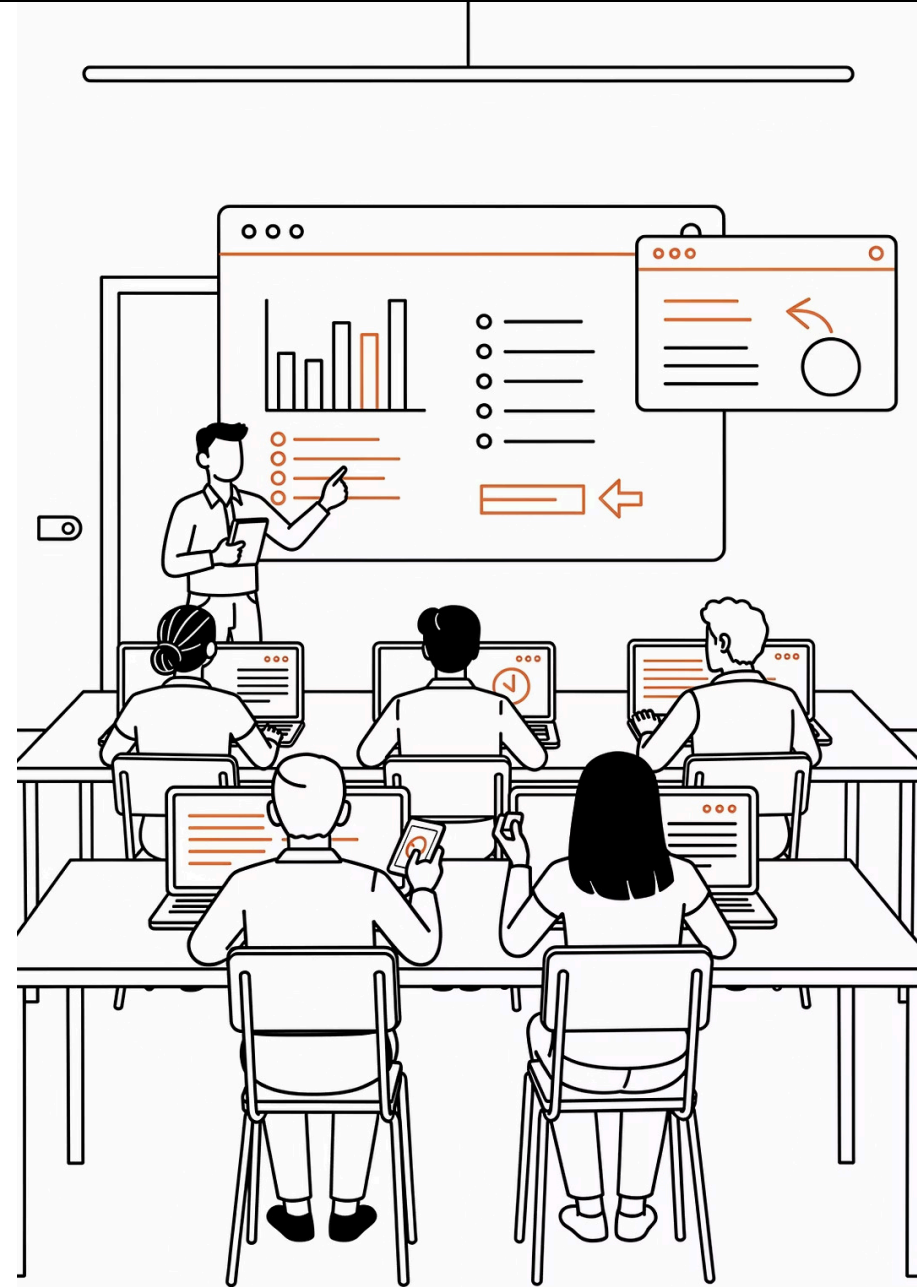
Build technical skills through structured training programs

## Implement Emerging Technologies

Adopt new tools aligned with business strategy

## Build Innovation Capabilities

Foster a culture of continuous technological improvement



# Step 4: Strategy Map Creation

Strategy maps reveal cause-effect relationships between perspectives. Future investments cascade upward to drive corporate results (Lumbanraja et al., 2022; Bambang Kelana Simpony et al., 2016).



Each layer reinforces the next — capability building drives operational gains, which improve customer experience, ultimately delivering measurable business value.

## PHASE 3

# Detailed KPI Creation Process

Phase 3 translates strategic objectives into concrete, measurable indicators. Each KPI is defined with a precise formula, a realistic target, and a clear link to one of the four IT BSC perspectives.

### Step 5

KPI Identification &  
Definition

### Step 6

SMART Criteria Application

### Step 7

Target Setting with  
Stakeholder Agreement

# Step 5: KPIs for Corporate Contribution

KPI	Definition / Formula	Target
IT ROI Percentage	$(\text{IT Benefits} - \text{IT Costs}) / \text{IT Costs} \times 100$	15% annual ROI
Process Automation Rate	$\text{Automated processes} / \text{Total processes} \times 100$	80% by year-end

Sources: Handoko et al., 2019; M. Rokhim et al., 2017

# Step 5: KPIs for Customer Orientation

KPI	Definition / Formula	Target
User Satisfaction Score	Average rating from user satisfaction surveys (1–5 scale)	4.2 / 5.0
System Uptime Percentage	$(\text{Total time} - \text{Downtime}) / \text{Total time} \times 100$	99.5% uptime

Sources: M. Masrom et al., 2022; Handoko et al., 2019

# Step 5: KPIs for Operational Excellence

KPI	Definition / Formula	Target
Incident Resolution Time	Average time to resolve IT incidents (hours)	<4 hours average
Change Success Rate	$\text{Successful changes} / \text{Total changes} \times 100$	95% success rate

Sources: M. Rokhim et al., 2017; Handoko et al., 2019

# Step 5: KPIs for Future Orientation

KPI	Definition / Formula	Target
Staff Training Completion Rate	Completed training hours / Planned training hours × 100	100% completion
Technology Upgrade Projects	Number of completed technology upgrade projects	6 projects/year

Sources: M. Masrom et al., 2022; Handoko et al., 2019

# Step 6: SMART Criteria Application

Every KPI must pass the SMART test. Example: "IT Project Delivery Performance" (M. Rokhim et al., 2017)

## Specific

% of IT projects delivered on time and within budget

## Measurable

$(\text{On-time projects} / \text{Total projects}) \times 100$

## Achievable

Based on historical data showing 75% current performance

## Reasonable

Target set at 85% — a 10% improvement over baseline

## Time-bound

Measured monthly, evaluated quarterly



# Step 7: Target Setting with Stakeholder Agreement

## 1 Historical Analysis

Review past 3 years of data; identify trends. E.g., current user satisfaction at 3.8/5.0 (M. Rokhim et al., 2017)

## 2 Benchmarking

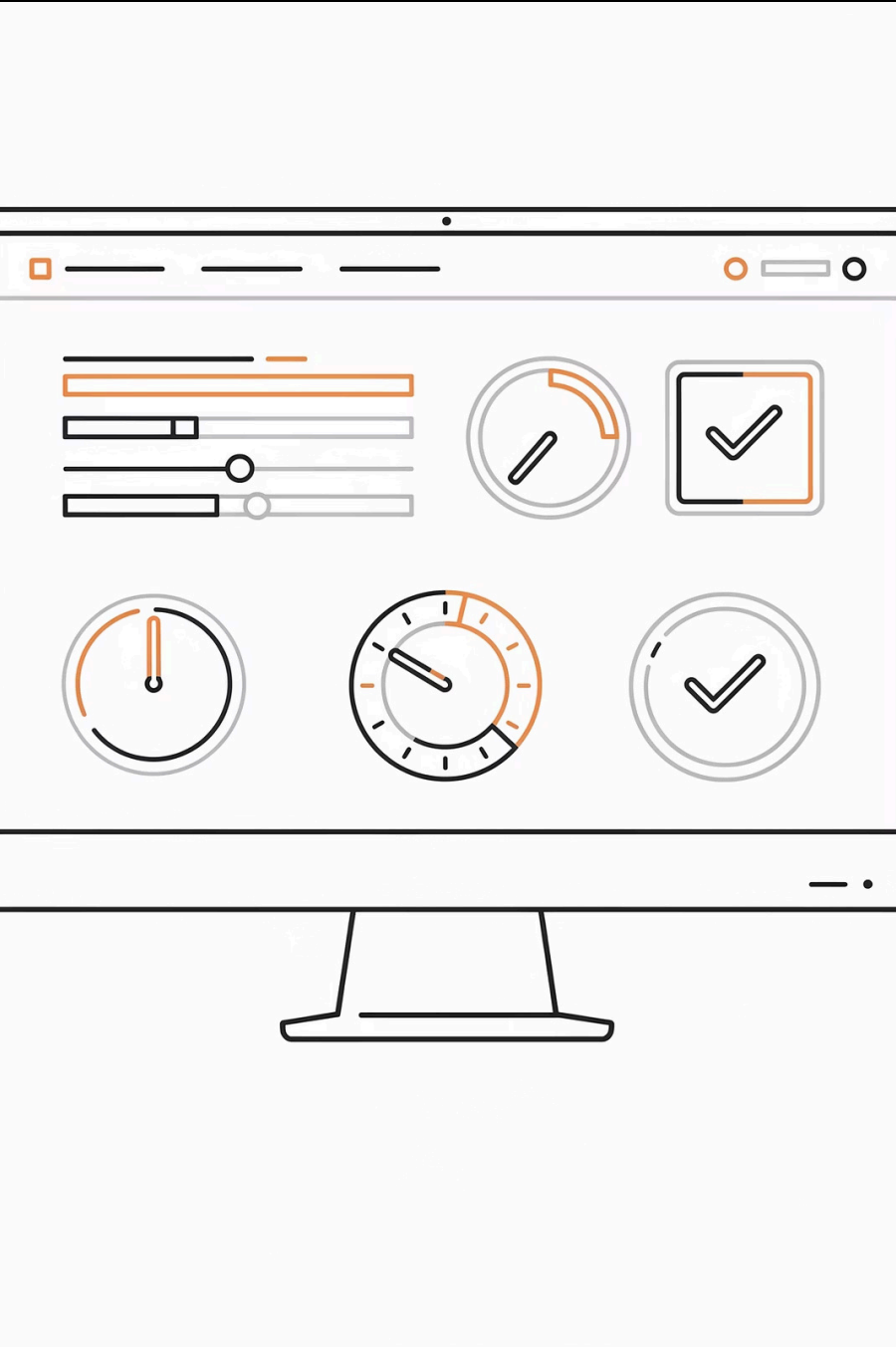
Research industry standards. E.g., industry average system uptime is 99.2% (Handoko et al., 2019)

## 3 Stakeholder Consultation

Align management expectations, user requirements, and resource constraints (M. Rokhim et al., 2017)

## 4 Target Agreement Documentation

Formal meetings, written agreements with signatures, communicated to all team members (M. Rokhim et al., 2017)



#### PHASE 4

# Implementation Framework

With KPIs defined and targets agreed upon, Phase 4 establishes the operational infrastructure: how KPIs are weighted, how data is collected, and how performance is scored and graded.

## Step 8

KPI Weighting & Scoring  
System

## Step 9

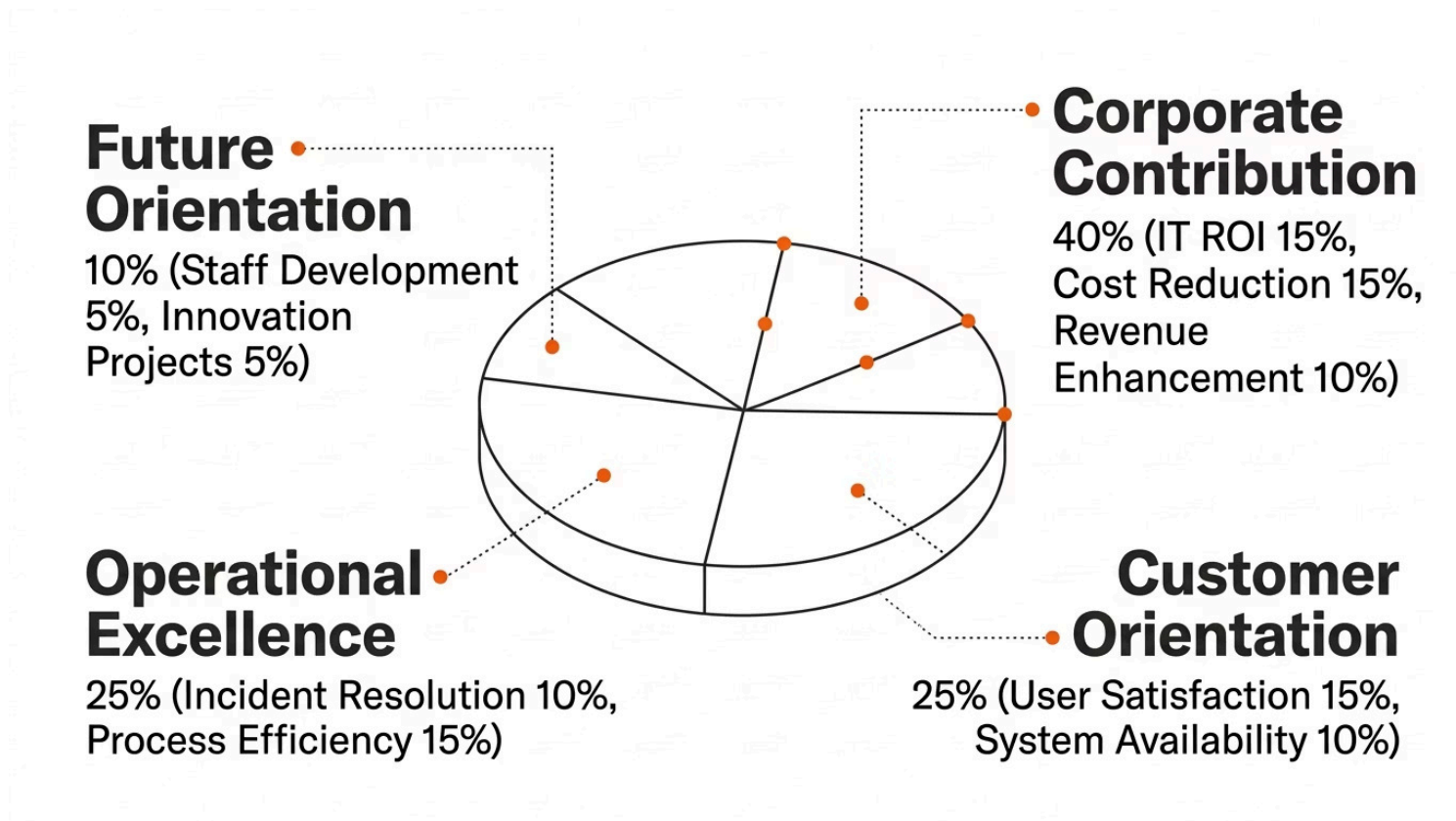
Measurement Framework  
Setup

## Step 10

Evaluation & Grading System

# Step 8: KPI Weighting Structure

Example weighting from the Manufacturing Case (M. Rokhim et al., 2017). Corporate Contribution carries the highest weight, reflecting IT's primary accountability to business value.



# Step 9: Measurement Framework Setup

Integrating with **COBIT 2019** ensures KPIs map to recognized governance goals (Naufal M. Fadilah et al., 2022).

## Alignment Goals Mapping

Map each KPI to specific COBIT 2019 alignment goals. Example: "System Availability" maps to *"Managed Availability and Capacity."*

## Data Collection Methods

- **Automated:** System monitoring tools for uptime and response time
- **Manual:** User surveys and interview data
- **Hybrid:** Performance reports with stakeholder validation

# Step 10: Evaluation & Grading System

**Formula:** Final Score =  $\Sigma(\text{Achievement \%} \times \text{KPI Weight})$

**Example Calculation** (M. Rokhim et al., 2017):

KPI	Achievement vs Target	Weight	Points
IT ROI	18% vs 15% = 120%	15%	18.0
User Satisfaction	4.0 vs 4.2 = 95%	15%	14.25
System Uptime	99.7% vs 99.5% = 100%	10%	10.0
<b>Total Score</b>			<b>85.5/100</b>

# Performance Grading Scale

A standardized grading scale ensures consistent interpretation of KPI scores across teams and management levels (M. Rokhim et al., 2017).

1	<60 — Unsatisfactory Immediate corrective action required
2	60–69 — Needs Improvement Targeted interventions and closer monitoring
3	70–79 — Satisfactory Meeting baseline expectations
4	80–89 — Good Strong performance, minor gaps to address
5	90–100 — Excellent Exceeding targets; share best practices



## PHASE 5

# Continuous Improvement

KPIs are not static. Phase 5 embeds a rhythm of regular review and annual recalibration to keep the measurement system aligned with evolving business needs.

## Step 11

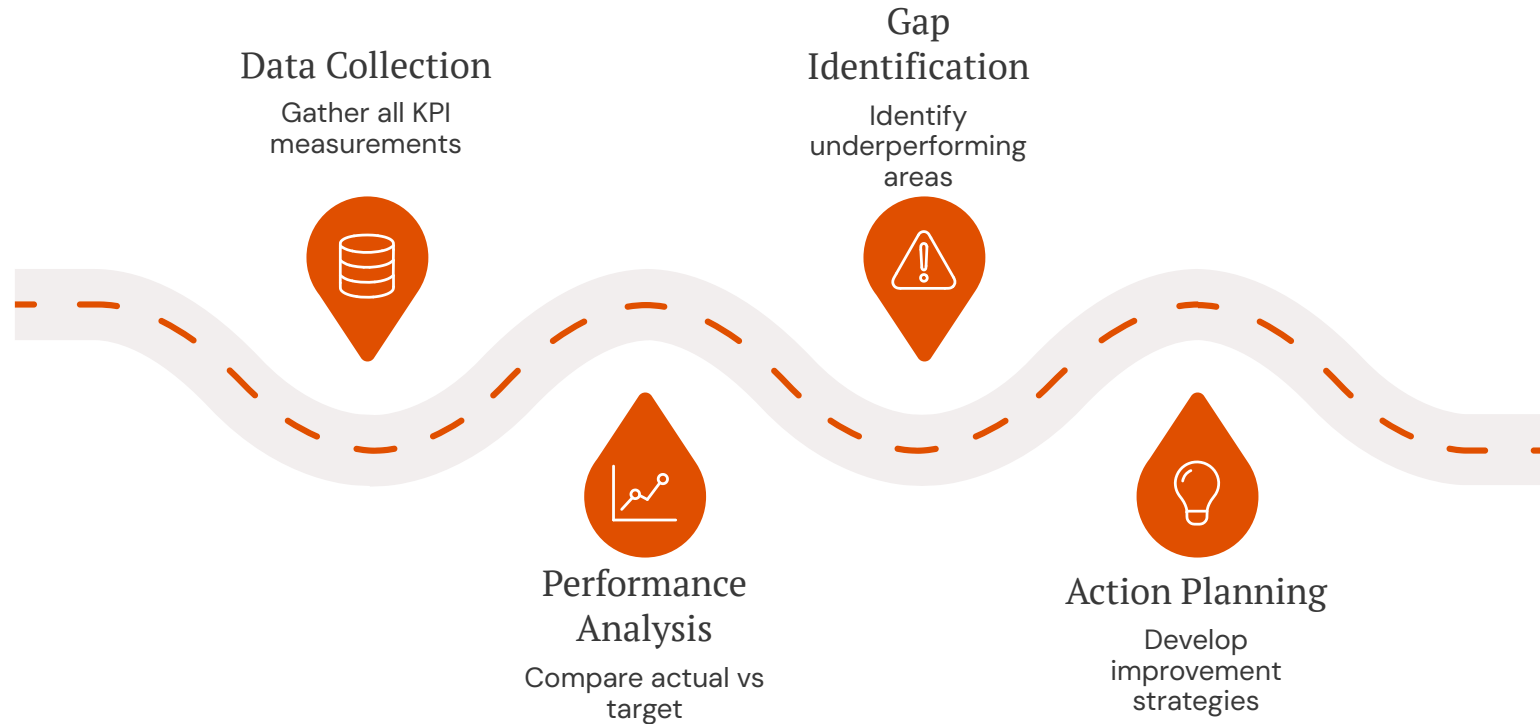
Regular Review & Coaching Process

## Step 12

Annual KPI Review & Adjustment

# Step 11: Monthly Review & Coaching Process

A structured monthly cadence ensures issues are caught early and teams receive timely support (M. Rokhim et al., 2017).



Coaching sessions are a critical component — individual discussions translate data insights into personal accountability and growth.

# Step 12: Annual KPI Review & Adjustment

## 1 Performance Trend Analysis

Review full-year data to identify patterns and long-term trajectories

## 2 Target Relevance Assessment

Evaluate whether existing targets remain appropriate given business changes

## 3 KPI Modification

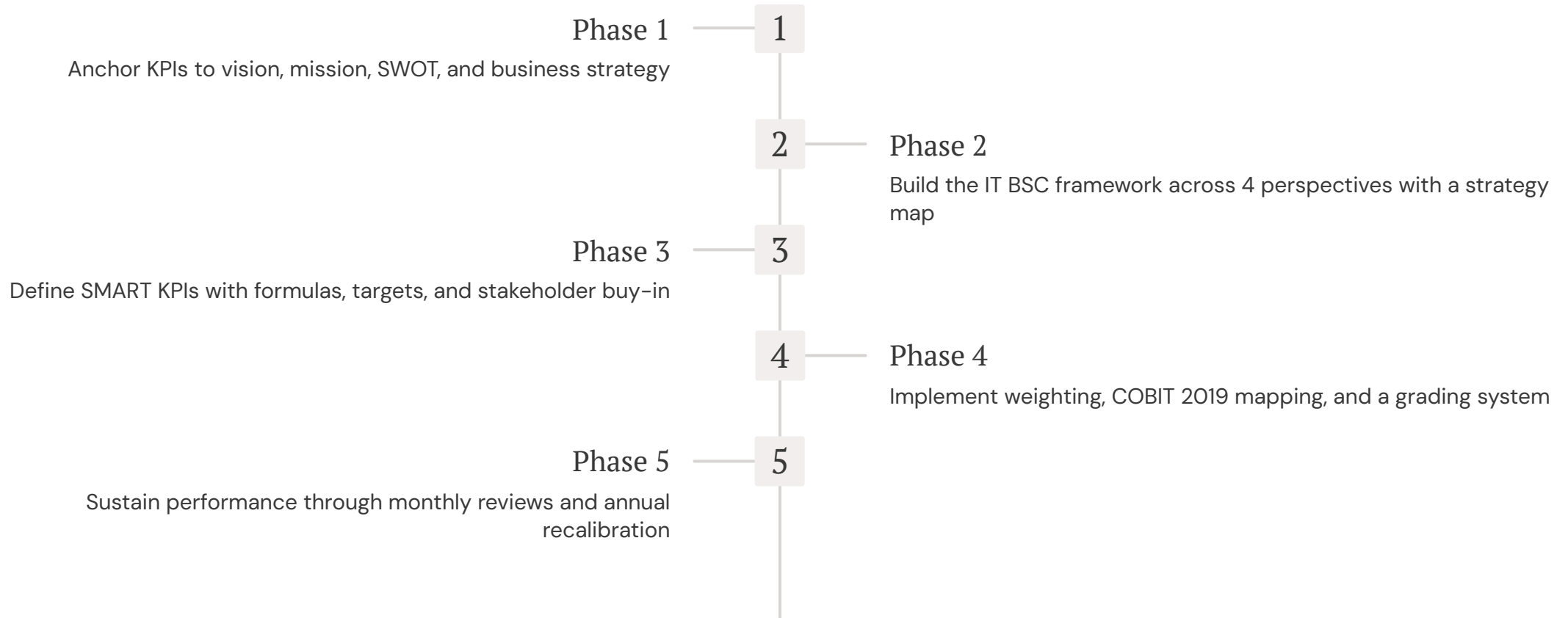
Add, remove, or modify KPIs based on strategic shifts

## 4 Stakeholder Feedback Integration

Incorporate user and management feedback into the updated framework (M. Rokhim et al., 2017)



# Key Takeaways: The Complete KPI Creation Journey



📌 A well-designed KPI system is a living instrument — it must evolve with the organization to remain meaningful and drive real improvement.

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