



HR ANALYTICS

Data-Driven Decisions · People Analytics · Workforce Strategy

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CHAPTER

1

- ## Introduction to HR Analytics

The Talent Architect's Blueprint

Fusing HR Analytics & Design Thinking to Build the Modern Workforce.



System Status: Optimized
Paradigm: Experience-Led

What is HR Analytics?

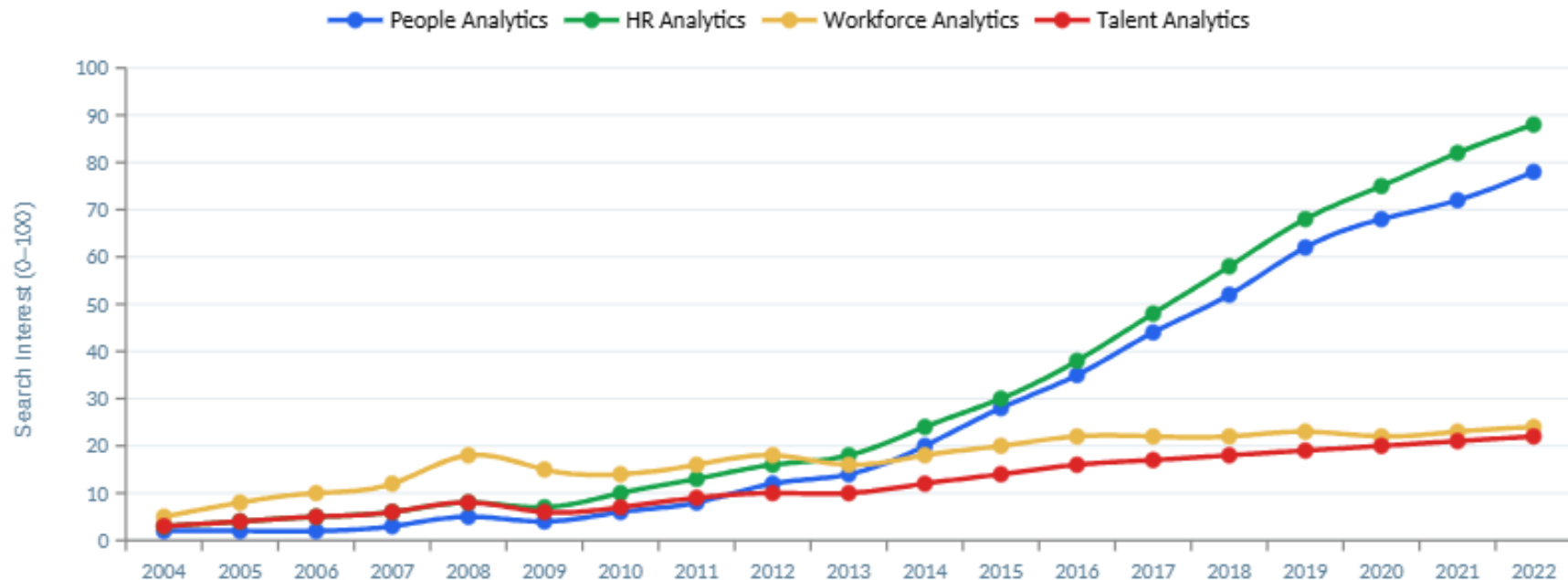
- HR analytics is the application of statistics, modelling, and analysis of employee-related factors to improve business outcomes.
- Also known as: People Analytics, Talent Analytics, Workforce Analytics
- Enables HR professionals to make data-driven decisions to attract, manage, and retain employees — improving ROI.

HR analytics is also often referred to as:

- People analytics
- Talent analytics
- Workforce analytics

Google Trends — Search Interest Over Time (2004 – Present)

Source: Google Trends - Worldwide - Web Search - All Categories



Key Insight: "HR Analytics" and "People Analytics" have seen the sharpest rise since 2013, while "Workforce Analytics" and "Talent Analytics" remain comparatively stable — confirming the dominance of data-driven HR as a field.

OVER VIEW : The 4 Levels of HR Analytics

1 Reporting

What happened in the past — descriptive records of HR activities.

2 Analysing

Why it happened — identifying causes and root factors behind events.

3 Predictive

What will happen — using past data to forecast future outcomes.

4 Prescriptive

What should we do — actionable recommendations based on predictions.

➤ **HR analytics enables HR professionals to make data-driven decisions to attract, manage, and retain employees, which improves ROI.**

OVEE VIEW : HR Data Sources

HR professionals gather data points across the organization from sources like:

- Employee surveys
- Telemetric data
- Attendance records
- Multi-rater reviews
- Salary & promotion history
- Employee work history
- Demographic data
- Recruitment process data
- Employee databases

Analytics Usage Overview

Analytical Methods

- Reporting
- Text Analysis
- Data Mining
- Benchmarking

Systems & Tools

- Performance Management Systems (PMS)
- Analytics Dashboards
- Predictive Analytics
- Diagnostic Analytics

CHAPTER

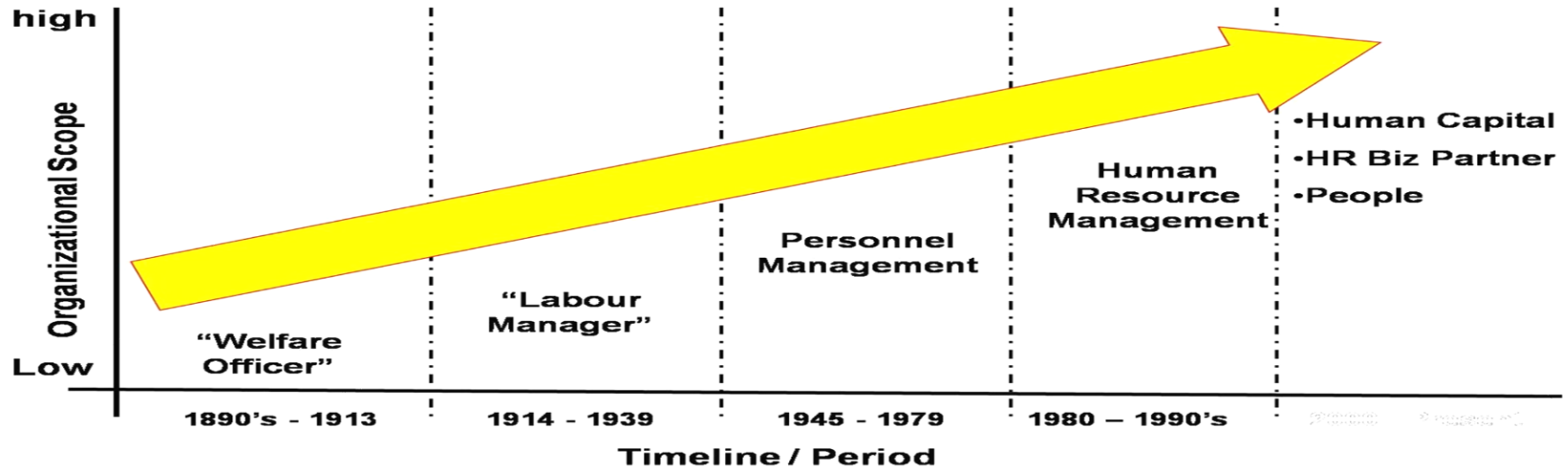
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- ## Evolution of HR Analytics

HR's Strategic Evolution

- HR has long struggled with its identity and for the most part has succeeded in breaking away from a traditional support role.
- HR is evolving to a more strategic, data-driven function within organisations.

Evolution of HRM ...



THE TALENT ARCHITECT'S BLUEPRINT



Key Areas of HR Evolution

1 Employee Churn Analytics

Understanding and reducing employee turnover through data.

3 Strategic Thinking

Analytics as a core HR competency.

5 Performance Prediction

Using data to forecast employee and team performance.

2 Employee Engagement

Measuring and improving engagement metrics across the workforce.

4 Workforce Analytics

Holistic view of workforce trends and planning.

6 Future of Hiring

AI-powered sourcing and screening technologies.

C H A P T E R

3

- ## Importance of HR Analytics

Why HR Analytics Matters

- HR analytics enables HR professionals to make data-driven decisions to attract, manage, and retain employees, improving ROI.



Key Components of HR Analytics

1 Collecting the Right Data

Years of experience, age, qualification — targeting meaningful data points.

2 Data Cleansing

Filtering and validating collected data to ensure quality.

3 Re-Engagement

Maintaining candidate records even after positions are closed.

4 Attrition Analytics

Predicting expected employee attrition rates before they occur.

5 Workforce Forecasting

Planning for future job market trends and skill demands.

CHAPTER

2



People Analytics

What is People Analytics?

- **People analytics (also: talent analytics or HR analytics) refers to methods of analysis that help managers and executives make decisions about their employees or workforce.**

MAJOR TOOLS OF HR ANALYTICS

-  SAP
-  EXCEL (Using pivot tables, graphs)
-  POWER BI: VISUALIZED DASHBOARD
-  PYTHON
-  R TOOLS
-  TABLEAU : Business Analytics
-  SPSS

Major Tools of HR Analytics

Enterprise Platforms

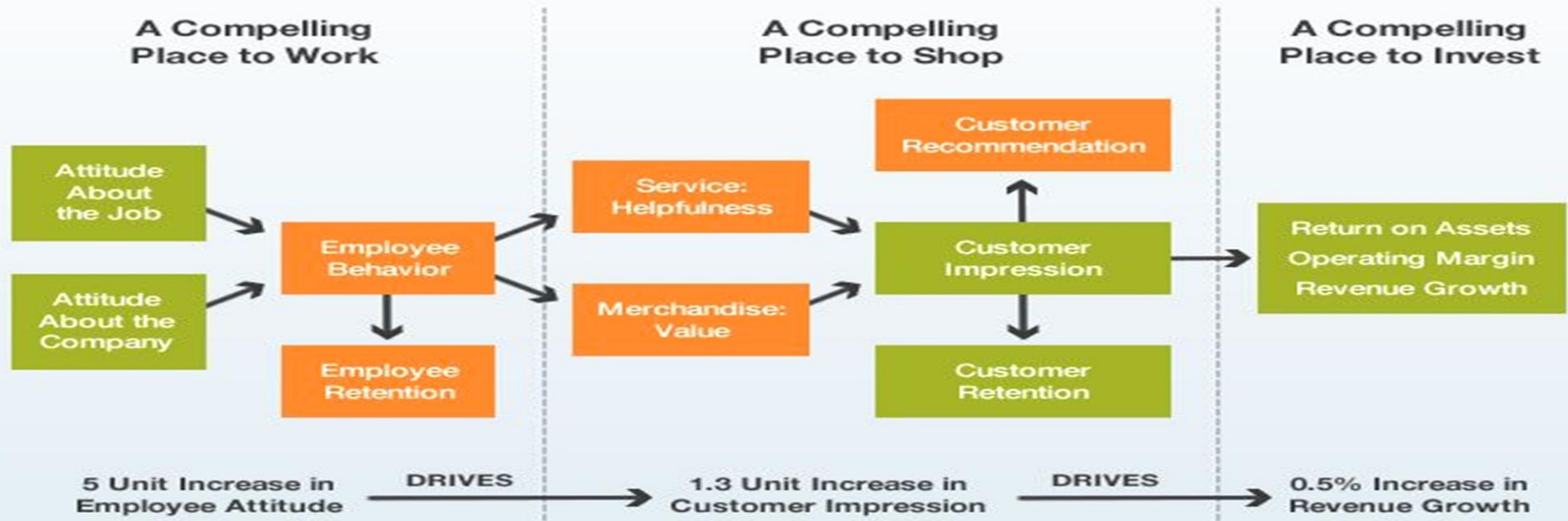
- SAP
- Excel (Pivot Tables, Graphs)
- Power BI — Visualised Dashboard
- Python

Analytics Languages & BI

- R Tools
- Tableau — Business Analytics
- SPSS

Employee Customer Profit Chain

The Revised Model: The Employee-Customer-Profit Chain



In this model, the rectangles represent survey information, the ovals, hard data. The measurements in grey are collected and distributed in the form of Total Performance Indicators.

Key Characteristics of HR Analytics

1

Improved Hiring Decision

Derive the best candidates from historical data patterns.

2

Process Improvement

Use accumulated data to make recruitment quicker and more efficient.

3

Good Training

Identify and close training gaps, reducing unnecessary costs.

4

Attrition Management

Identify retention rates and understand why employees leave or stay.

5

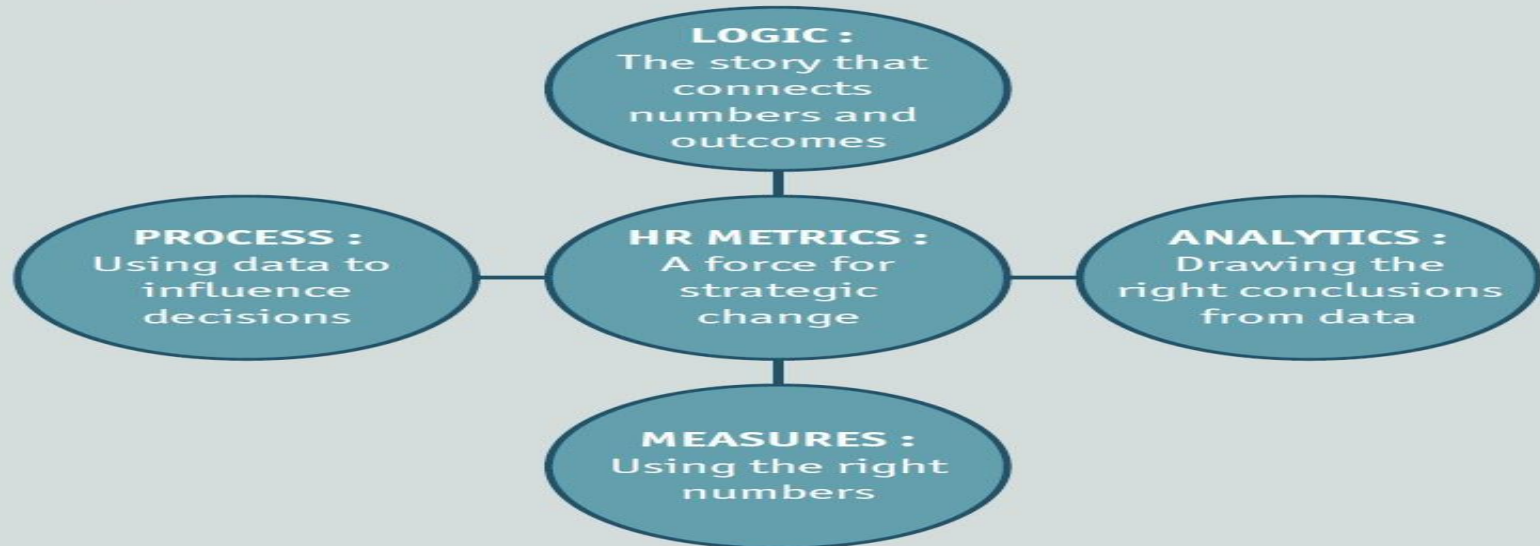
Improved Employee Experience

Swift recruitment processes create positive candidate impressions.

The LAMP Framework in HR Analytics

- Developed by Professor John W. Boudreau.
- LAMP = Logic · Analytics · Measures · Process
- Provides an approach to understand and improve employee performance and enhance organisational effectiveness.

The LAMP framework



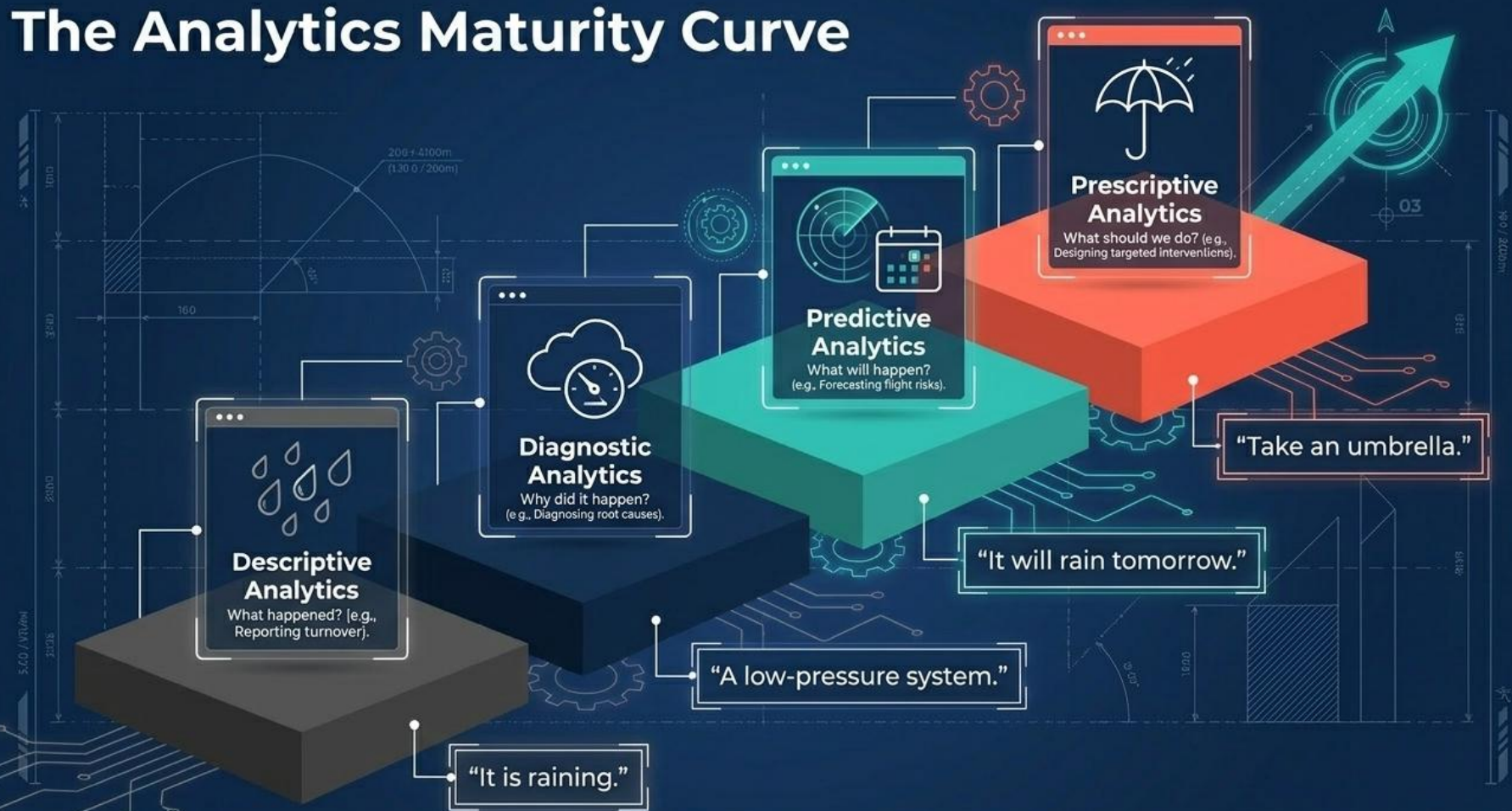
Source: Cascio, W. and John Boudreau, Investing in People, 2011 page 10.

Classifying HR Data?

Analytic Value Escalator



The Analytics Maturity Curve



The 4 Types of HR Analytics



Classifying HR Data: 4 Types

1

Descriptive Analytics

Describes what has already happened or what's currently happening.

2

Diagnostic Analytics

Identifies the causes and reasons behind events revealed by descriptive analytics.

3

Predictive Analytics

Focuses on what might happen in the future, based on past events.

4

Prescriptive Analytics

Suggests decision options and actions based on predictive outputs.

CHAPTER

4

- ## Workforce Analytics

What is Workforce Analytics?

Workforce analytics is the approach of measuring behaviours of people (candidates, employees) and analysing them to improve people and business performance.

HR Analytics deals with analysing the data related to HR department.

Work force Analytics is related to other departments like, Customer relationship, Research and Development, Sales, Advertising and Branding.



Workforce Analytics vs HR Analytics

Workforce Analytics

- Measures behaviours of people (candidates, employees) and analyses them to improve performance.
- Related to other departments: Customer Relations, R&D, Sales, Advertising & Branding.

HR Analytics

- Analyses data specifically related to the HR department.
- Focuses on internal HR processes: hiring, onboarding, retention, training.

COMPANY AUDIENCE

PURPOSE

CEO & Board of Directors

**STRATEGIC
WORK
FORCE
ANALYTICS**

**Business Impact
(HCM)**

HR LEADERS

**WORK FORCE METRICS
& ANALYTICS**

**TALENT OPTIMIZATION
(HCM)**

HR STAFF & LEADERS

**HR METRICS, ANALYTICS
MIDDLE LEVEL**

**PRACTICE EFFICIENCY,
DESIGN SYSTEM & PROCESSES
(HRM)**

HR STAFF & LEADERS

**REPORTING
(DESIGN
THINKING)**

**OPERATIONAL REQUIREMENT
(HRM)**

Major Challenges in HR Analytics

1 Holding Information

HRIS, LMS (Learning Management System), ATS systems contain vast, relevant data — but it must be accessed strategically.

2 Broad Data

Focusing on metrics too large to assess (e.g. voluntary vs involuntary termination).

What if the right people are voluntarily leaving?

3 Analysis Skills

Organisations need to enhance analytical and data evaluation capabilities.

4 Big Data vs Small Data

Large organisations have more data; smaller ones must work with limited datasets.

5 Technology Selection

Identifying the best HR technologies to track and manage data effectively.

Data Reliability & Validity

- **Reliability:** the consistency and repeatability of data across different measurements or conditions.
- **Validity:** how well data accurately reflects the real-world scenario it is supposed to represent. (**ensures the data measures what it's intended to measure.)**
- Example (Reliability): A survey that consistently yields similar results when administered to the same group demonstrates reliability.
- Example (Validity): Survey responses that accurately reflect respondents' actual satisfaction levels are considered valid.

Data Purification

- Data purification (also: data cleaning or data scrubbing) is the process of identifying and correcting or removing inaccurate, incomplete, or irrelevant data.
- By implementing data purification techniques, organisations can improve data quality, leading to more accurate and reliable results.

Cronbach's alpha	Internal consistency
$\alpha \geq 0.9$	Excellent
$0.9 > \alpha \geq 0.8$	Good
$0.8 > \alpha \geq 0.7$	Acceptable
$0.7 > \alpha \geq 0.6$	Questionable
$0.6 > \alpha \geq 0.5$	Poor
$0.5 > \alpha$	Unacceptable

Cronbach's Alpha — Internal Consistency

- Cronbach's alpha (coefficient alpha α) measures the internal consistency of tests and measures. Named after psychologist Lee Cronbach.
- It's about how well the different questions in a survey all point to the same thing. A reliable set of items will produce similar results when used repeatedly.
- Range: 0 to 1. Values of 0.70+ are acceptable; 0.80+ is good; 0.90+ is excellent.
- Negative values can occur with significant reverse coding or negatively correlated items.

CHAPTER

5

● RESEARCH METHODOLOGY

Measurement & Scaling

Scales of Measurement · Data Types · Properties & Applications

WHAT IS MEASUREMENT?

Definition: A process of associating numbers or symbols to different observations in a study.



Physical Objects

We use standards to measure weight, height, and other physical attributes.



Abstract Concepts

We also measure songs, paintings, or a person's personality.



Latent Traits

Measuring motivation or engagement is harder — numbers are assigned by convention.

Example: Marital status → 1 = Single 2 = Married 3 = Divorced 4 = Widowed

NOMINAL SCALE

SCALE 1 OF 4

What is it?

- Numbers are used as labels only — not for ranking or arithmetic.
- Each number identifies a category.
- You CANNOT say $4 > 2$ or compute $3 - 1 = 4 - 2$.
- Only counting (frequency) and finding the Mode are valid.

Examples of Nominal Data

1

Single

2

Married

3

Divorced

4

Widowed

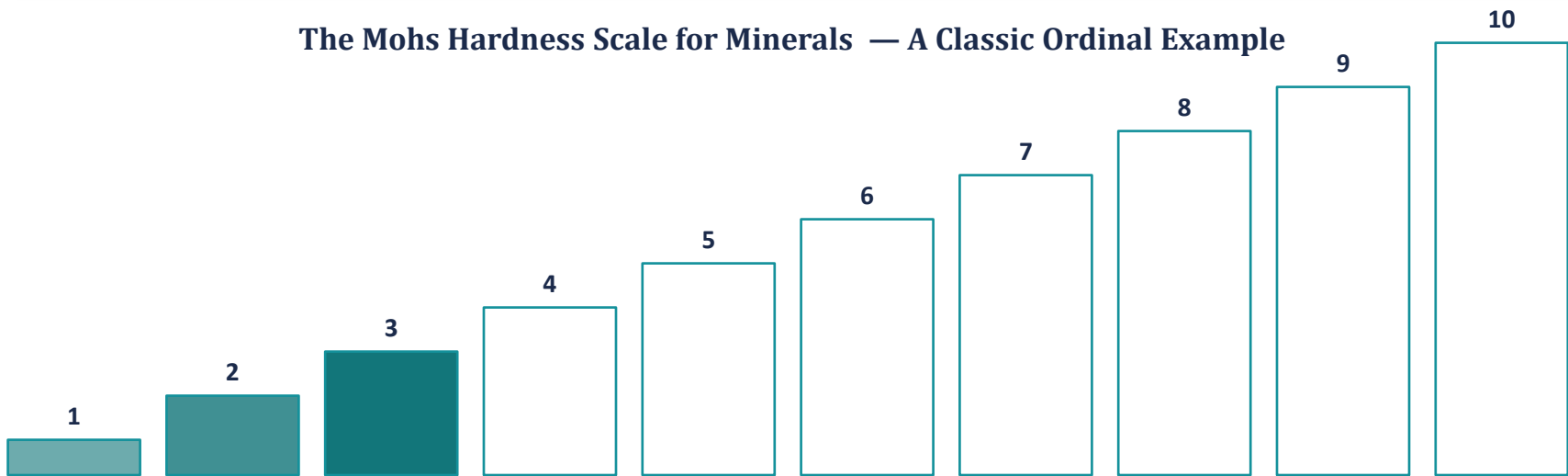
Other examples: Gender, Religion, ZIP Code

ORDINAL SCALE

SCALE 2 OF 4

Ordinal Scale: Places events in order, but the intervals between categories are NOT equal.

The Mohs Hardness Scale for Minerals — A Classic Ordinal Example



NOTE: $5 > 2$, and $6 < 9$ — but $10 - 9$ is NOT equal to $5 - 4$ (the gap between Diamond & Sapphire differs from Apatite & Fluorite)

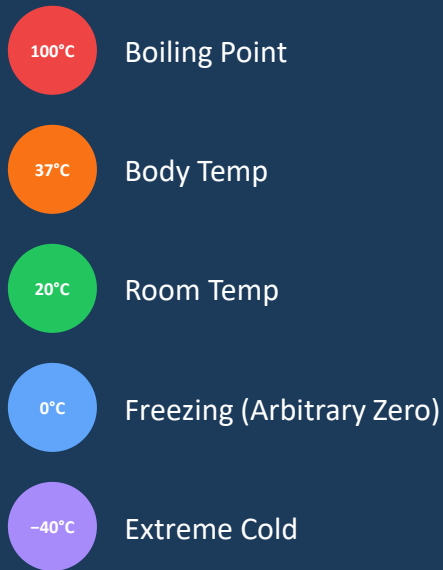
INTERVAL SCALE

SCALE 3 OF 4

Key Features

- ✓ Ordered categories
- ✓ Equal intervals between points
- ✓ Addition & subtraction valid
- ✗ NO true (absolute) zero
- ✗ Ratios are meaningless

Temperature: The Classic Example



0°C is an arbitrary zero — it doesn't mean "no temperature"

RATIO SCALE

SCALE 4 OF 4

Zero on a ratio scale means complete absence of the quantity — e.g., 0 cm = no length

+ Ordered

+ Equal Intervals

+ True Zero

+ All Operations

WT

Weight

Weight is a ratio scale.

HT

Height

Height is a ratio scale.

AG

Age

Age is a ratio scale.

INC

Income

Income is a ratio scale.

SPD

Typing Speed

Typing speed is a ratio scale.

DIS

Distance

Distance is a ratio scale.

COMPARING THE FOUR SCALES

Scale	Description	Example	Operations Allowed
Nominal	Labels only — no order	Gender, Religion	Counting, Mode
Ordinal	Ordered, but unequal intervals	Satisfaction Rating	Mode, Median, Rank Order
Interval	Equal intervals, no true zero	Temperature (°C / °F)	Add, Subtract, Mean, Median
Ratio	Equal intervals + true zero	Height, Weight, Age	All arithmetic operations

Property Comparison

Property	Nominal	Ordinal	Interval	Ratio
Ordered	No	Yes	Yes	Yes
Equal Intervals	No	No	Yes	Yes
True Zero	No	No	No	Yes

6

- **HRIS — Human Resources Information System**

What is HRIS?

- An HRIS is a software solution designed to manage and automate core human resources processes within an organisation.
- It streamlines payroll, benefits administration, and time tracking.
- Provides a centralised hub for employee information — improving efficiency, data accuracy, and strategic decision-making.

HRIS Needs & Types

Why Organisations Need HRIS

- Improved Efficiency
- Centralised Data
- Better Decision-Making
- Enhanced Employee Experience
- Regulatory Compliance
- Cost Reduction

Types of HRIS

- Operational HRIS
- Tactical HRIS
- Strategic HRIS
- Comprehensive HRIS
- Limited-Function HRIS

HRIS Implementation Steps

1. Needs Assessment
2. System Selection
3. Planning & Preparation
4. Data Migration
5. System Configuration & Customisation
6. Training
7. Go-Live & Support

Top Advantages of HRIS



Record-Keeping



Time Saving



Performance
Management



Better
Compliance



Recruitment
& Onboarding



Improved
Efficiency



Self-Service HR



Employee
Experience

HRIS: Benefits & Limitations

Benefits

- Increased Efficiency
- Improved Data Accuracy
- Enhanced Employee Experience
- Better Decision-Making
- Cost Savings
- Improved Compliance

Limitations

- Implementation Costs
- Potential for Errors
- Resistance to Change
- Integration Challenges
- Dependence on Technology
- Security Risks

Recruitment & Selection Metrics



What is Recruitment Analytics?

- 72.8% of companies experience difficulties sourcing skilled candidates (ManpowerGroup).
- 45% of employers are concerned about finding employees with the right talents.
- **What Is Recruitment Analytics?**
- Recruitment analytics: using data-driven metrics and insights to improve sourcing of the best candidates — cutting costs and understanding influencing factors.
- Recruitment analytics is a process of using data-driven metrics and insights to improve the sourcing of the best candidates for different roles within the organization that will help cut costs and better understand factors that are influencing the hiring process.

Lifecycle Phase 1: Recruitment Sourcing

Time to Fill

(Requisition Approval Date)
to
(Offer Accepted Date)

Yield Ratio

(Candidates progressing
to next stage)

(Total candidates in
current stage) * 100

Sourcing Channel Cost

(Total Cost)

(Number of Hires)

Offer Acceptance Rate

(Accepted Formal Offers)

(Total Formal Offers) * 100



Recruitment Metrics

1

Time to Fill

The time it takes to find and hire a new candidate — measured by days between publishing a job opening and hiring.

FORMULA: Start Date – Date of Interview; Start Date – Date of Joining; 1st Interview – Date of Joining

CASE EXAMPLE

Number: 45 days (customer service role) | Unit: Days | TAT: Avg. 49 days across departments | Profit relation: Y (less time = more profit)

What is Recruitment Analytics?

Identify the health of the recruitment system

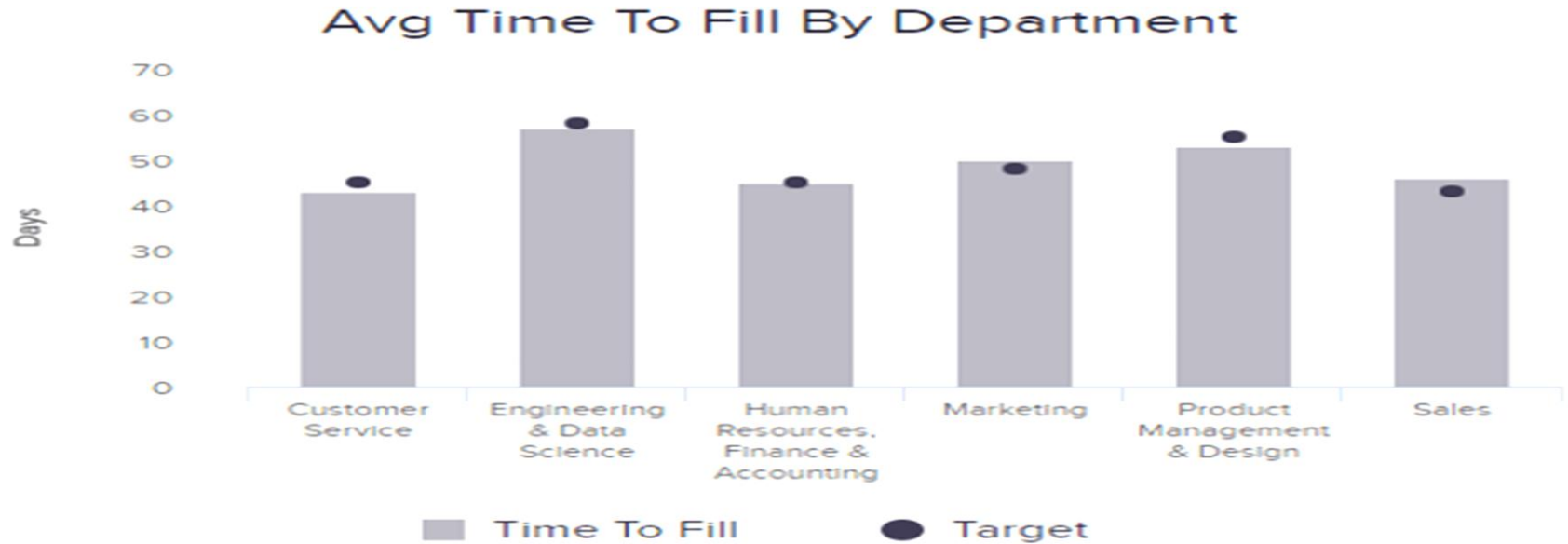
1. TIME TO FILL:

This refers to the time it takes to find and hire a new candidate, often measured by the number of days between publishing a job opening and hiring the candidate.

- *Start Date – Date of Interview (a)* *a-b*
- *Start Date – Date of Joining (b)* *b-c*
- *1st interview - Date of Joining (c)* *c-a*

MAJOR RECRUITMENT METRICS : RECRUITMENT TRACKER, Matrices Analysis

CASE:



49 days

Avg Time to Fill An Open Position

MAJOR RECRUITMENT METRICS : RECRUITMENT TRACKER, Matrices Analysis

Factors of Evaluation:

- ✚ Number : 45 days; Number of days between job posting and hiring a candidate. (customer service)
- ✚ Unit: Days
- ✚ Turn Around Time (TAT): Avg. turnaround time : 49 days across department
- ✚ Relation wrt Company's profit(Y/N) : Lesser the time more the profit: Y
- ✚ Measurable (Y/N): Y

Recruitment Metrics

2

Quality of Hire

Indicates whether the person hired is a good fit for the organisation and performing well.

FORMULA: $\text{Quality of Hire} = (\text{Satisfactory Hires} / \text{Total Hires}) \times 100$

CASE EXAMPLE

Total hired: 350 | Good Performers: 120 = 34% | Average: 80 = 23% | Poor: 150 = 43%

MAJOR RECRUITMENT METRICS : RECRUITMENT TRACKER, Matrices Analysis

Factors of Evaluation:

- ✚ Number : 45 days; Number of days between job posting and hiring a candidate. (customer service)
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- ✚ Relation wrt Company's profit(Y/N) : Lesser the time more the profit: Y
- ✚ Measurable (Y/N): Y

MAJOR RECRUITMENT METRICS : RECRUITMENT TRACKER, Matrices Analysis

Factors of Evaluation:

- ✚ Number : ½ year, 1 year;
- ✚ Unit: Year/ Month
- ✚ Turn Around Time (TAT): Avg. turnaround time : 6 months / 1 year
- ✚ Relation wrt Company's profit(Y/N) : Lesser the time more the profit: Y (For Good appraisals)
- ✚ Measurable (Y/N): Y

Case:

Total hired last financial year: 350

Good Performers: 120: Quality of hire: $(120/350)*100 = 34\%$

Average Performers: 80 : Quality of hire: $(80/350)*100 = 23\%$

Poor Performers : 150: Quality of hire: $(150/350)*100 = 43\%$

Recruitment Metrics

3

Source of Hire

Tracks which sources attract new hires, helping evaluate the effectiveness of different recruiting channels.

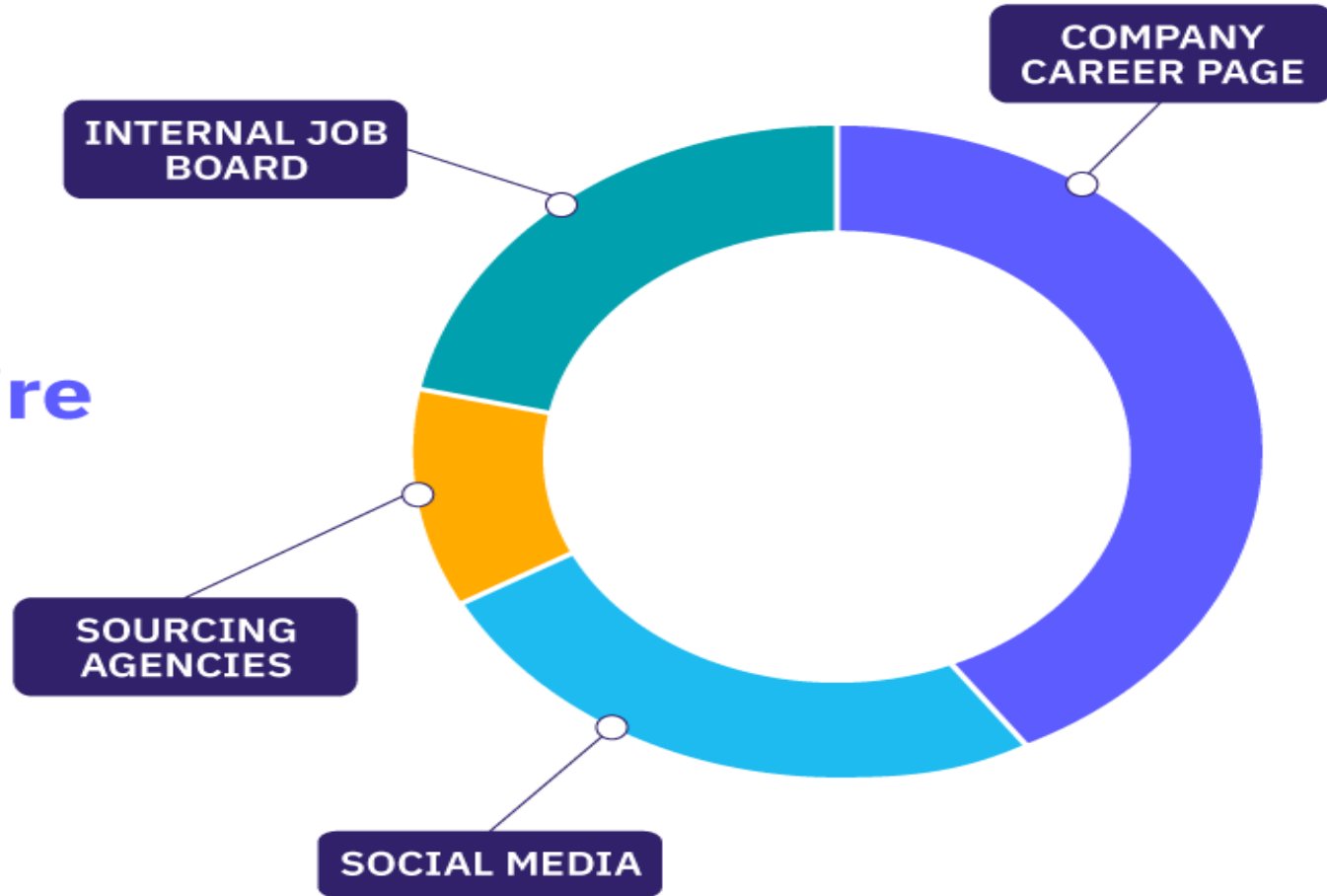
FORMULA: $\text{Employee Referral Rate} = (\text{Referrals} / \text{Open Jobs}) \times 100$

CASE EXAMPLE

Open positions: 10 | Employee referrals that led to hire: 5 | Referral Rate: $(5/10) \times 100 = 50\%$

MAJOR RECRUITMENT METRICS : RECRUITMENT TRACKER, Matrices Analysis

Source of Hire Example



MAJOR RECRUITMENT METRICS : RECRUITMENT TRACKER, Matrices Analysis

Factors of Evaluation:

- ✚ Number : Amount (Rs) (Money spent for each source: internal / external)
- ✚ Unit: Rs
- ✚ Turn Around Time (TAT): Avg. turnaround time : 1 day to few months till the job opening is valid
- ✚ Relation wrt Company's profit(Y/N) : Y
- ✚ Measurable (Y/N): Y

Case:

Employee Referral rate: (Number of rereferrals /. Number of Open Jobs) *100

% numbers of hiring done through employee referral. Number of open positions : 10

Employee Referral rate: $(5/10)*100 = 50\%$

Recruitment Metrics

4

Cost per Hire

The money spent during the recruitment process — helps allocate spending efficiently across sourcing channels.

FORMULA: $\text{Cost per Hire} = \text{Total Recruitment Cost} / \text{Total Hires}$

CASE EXAMPLE

Unit: Rs | TAT: Days to close job opening | Relation to profit: Y (higher costs over time reduce profitability)

MAJOR RECRUITMENT METRICS : RECRUITMENT TRACKER, Matrices Analysis

$$\text{Cost per hire} = \frac{\text{Total recruitment cost}}{\text{Total number of hires}} = \frac{\text{Total internal cost} + \text{Total external cost}}{\text{Total number of hires}}$$

TOTAL RECRUITMENT COST	
External cost	Internal cost
Advertising cost	Time spent by recruiter - (avg. wages * hours spent)
Agency fees	Time spent by manager - (avg. wages * hours spent)
Candidate expenses	New hire onboarding time - (avg. wages * hours spent)
New hire training cost	Lost productivity
Other external costs	Other internal costs

MAJOR RECRUITMENT METRICS : RECRUITMENT TRACKER, Matrices Analysis

Factors of Evaluation:

- ✚ Number : Amount
- ✚ Unit: Rs
- ✚ Turn Around Time (TAT): No. of days to get the job opening closed.
- ✚ Relation wrt Company's profit(Y/N) : Y (When it takes time)
- ✚ Measurable (Y/N): Y
- ✚

MAJOR RECRUITMENT METRICS : RECRUITMENT TRACKER, Matrices Analysis

CASE:

Sources	Expenses	Per source expense	Expense Rate (%)	Number of hires	Per Hire Cost/ Source	Cost
Job Portal	200000	200000/600000	33	30	200000/30	6667
Consultancy	250000	250000/600000	42	20	250000/20	12500
Employee Referral	50000	50000/600000	8	10	50000/10	5000
Campus Drive	100000	100000/600000	17	45	100000/45	2222

Recruitment Metrics

5

Recruitment Funnel Effectiveness (Yield Ratio)

Recruitment is a funnel from sourcing to signed contract. Yield ratio measures efficiency at each stage.

FORMULA: $\text{Yield Ratio} = (\text{Candidates moving to next stage} / \text{Total candidates at current stage}) \times 100$

CASE EXAMPLE

Tracks dropout rates at each funnel stage to identify bottlenecks in the hiring process.

MAJOR RECRUITMENT METRICS : RECRUITMENT TRACKER, Matrices Analysis

$$\text{Yield ratio} = \frac{\text{Number of applicants who successfully competed the stage}}{\text{Total number of applicants who entered this stage}}$$



MAJOR RECRUITMENT METRICS : RECRUITMENT TRACKER, Matrices Analysis

Source	Number of Application Received	Number of hiring	Yield Ratio/ Effectiveness	Level of performance
Employee Referral	10	3	$3/10 \times 100 = 30\%$	High
Job Portals	50	25	50%	Low
Social networks	20	8	40%	Medium

Recruitment Metrics

6

Applicants per Opening

Gauges the popularity of a job opening and helps assess if the job description needs refinement.

FORMULA: Applicants per Opening = Total Applications / Number of Job Openings

CASE EXAMPLE

Job Openings: 5 (all closed) | Applications: 240 | Applicants per Opening: $240/5 = 48$

MAJOR RECRUITMENT METRICS : RECRUITMENT TRACKER, Matrices Analysis

Factors of Evaluation:

- ✚ Number :candidate (nos.)
- ✚ Unit: Number
- ✚ Turn Around Time (TAT): No. of days to get the applications for the job posting with in the days prescribed.in the advertisement and they get hired.
- ✚ Relation wrt Company's profit(Y/N) : Y
- ✚ Measurable (Y/N): Y

Recruitment Metrics

7

Offer Acceptance Rate

Compares the number of candidates who accepted a job offer to the total number of offers made.

FORMULA: Offer Acceptance Rate = (Offers Accepted / Total Offers) × 100

CASE EXAMPLE

Vacancies: 15 | Offers made: 20 | Accepted: 12 | Rate: $(12/20) \times 100 = 60\%$ | **Note:** Every industry has 10% to 15% rejected ratio
8 rejections (high) — reasons: salary, incentive structure, bonds

MAJOR RECRUITMENT METRICS : RECRUITMENT TRACKER, Matrices Analysis

Factors of Evaluation:

- ✚ Number: candidate (nos.)
- ✚ Unit: Number
- ✚ Turn Around Time (TAT): 1 day : No. of days candidates takes to give acceptance to offer after being offered.
- ✚ Relation wrt Company's profit(Y/N) : Y
- ✚ Measurable (Y/N): Y

Recruitment Metrics

8

% of Open Positions

Percentage of open positions compared to total positions — tracks how quickly vacancies are being filled.

FORMULA

$$\% \text{ of open positions} = \frac{\text{total number of open positions}}{\text{total number of positions in the organization}}$$

CASE EXAMPLE

700 vacancies | 25 joined: $675/700 = 96\%$ open | 50 more joined: $625/700 = 89\%$ | 300 joined: $325/700 = 46\%$

Case:

Suppose there are 700 vacancies

25 joined = $(700 - 25)/700 * 100 = (675/700)*100 = 96\%$ (% of Open Position)

50 joined = $(675 - 50)/700 * 100 = (625/700)*100 = 89\%$

300 joined = $(625 - 300)/700*100 = 325/700*100 = 46\%$

Factors of Evaluation:

- ✚ Number : No. of vacancies
- ✚ Unit: Number
- ✚ Turn Around Time (TAT): Number of days it takes between job posting and candidates getting hired
- ✚ Relation wrt Company's profit(Y/N) : Y
- ✚ Measurable (Y/N): Y

Recruitment Metrics

9

Application Completion Rate

Tracks drop-out rates in the online application process — indicating usability or technical problems.

Many large corporate firms require candidates to manually input their entire CV in their systems before they can apply for a job. Drop-out in this process is indicative of problems in this procedure, e.g. web browser incompatibility with the application system, or a non-user-friendly interface.

FORMULA: Completion Rate = (Completed Applications / Total Applications) × 100

CASE EXAMPLE

Key factors: browser compatibility, user interface design, form complexity. Unit: Number of candidates | TAT: As per job posting dates.

MAJOR RECRUITMENT METRICS : RECRUITMENT TRACKER, Matrices Analysis

Factors of Evaluation:

- ✚ Number : Candidates applying for vacant post through web portals
- ✚ Unit: Number
- ✚ Turn Around Time (TAT): As per the job posting candidates apply online date mentioned in ad.
- ✚ Relation wrt Company's profit(Y/N) : Y
- ✚ Measurable (Y/N): Y

8

- **Attrition Metrics**



What is Attrition in HR?

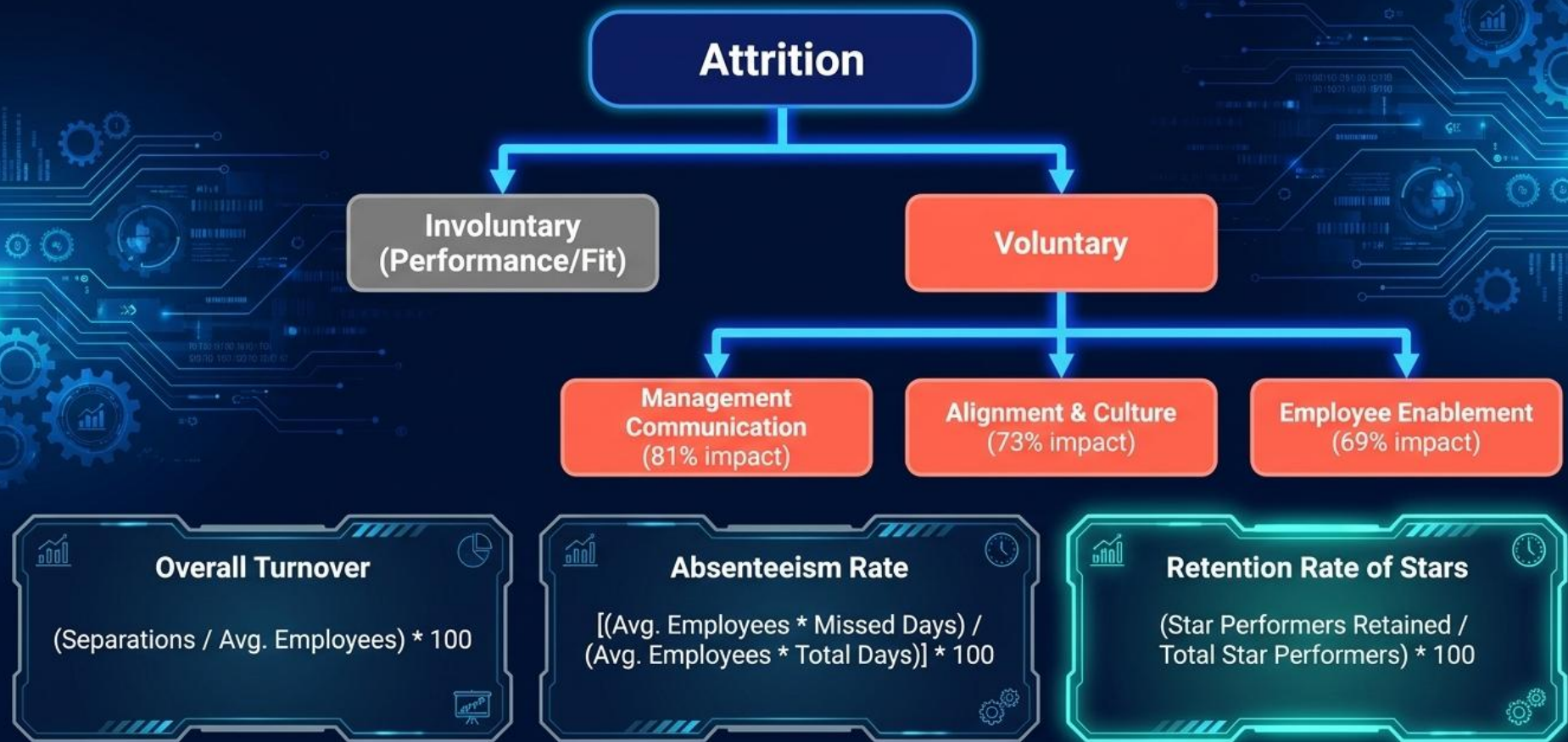
- Attrition: the gradual loss of employees over time.
- HR plays a leadership role in designing compensation programs, work culture and motivation systems.
- Credit Suisse an US based financial service company recently implemented a program built upon the data provided by HR Analytics to curb their own attrition issues.
- Case Study — Credit Suisse: Implemented HR Analytics to curb attrition. Moved 300 employees to other positions. Saved between \$75M–\$100M in 2014 alone.

Identifying Data for Attrition

- **What happened:** Employee turnover, attrition rate.
- **Why it happened:** Compensation gaps, low morale, cultural issues.
- **What will happen:** With data, you can identify when employees are most at risk of leaving.

Category	All Employees
Alignment & Involvement	73%
Collaboration & Teamwork	65%
Company Confidence	46%
Company Performance	21%
Employee Enablement	69%
Compensation & Benefits	53%
Management	81%
Feedback & Recognition	62%
Investment in People	57%
Social Connection	26%

Lifecycle Phase 2: The Attrition Diagnostic



Talent Retention Metrics

1

Employee Retention Rate

A set of tactics and strategies aimed at ensuring employees are satisfied, qualified and prepared to excel in their current jobs.

FORMULA: Retention Rate = (Total no. of Employees – No. of. Employees Departed) / Total Employees

CASE EXAMPLE

Tracks the percentage of employees retained over a specific time period.

Employee Retention Rate

Retention rate per Manager: Case

	Team Size	Left empl.	Attrition rate (%)	Retention Rate (%)
Manager 1:	30	3	10	90
Manager 2:	25	2	8	92
Manager 3:	45	4	9	91
Manager 4:	35	5	14	86

The **Gallup Q12 score** represents the average of the **scores** of 12 items that **Gallup** has consistently found to measure employee engagement as linked to business outcomes.

Measurement That Means Something:

- Employees answer 12 simple questions, available in over 30 languages including Arabic, Chinese, Spanish, French, German **and more**, that tie directly to performance outcomes.
- Scores are on a 1 to 5 scale, which clearly highlights strengths and opportunities.
- **Scoring** : 1 to 5 point scale statements; 1 : Strongly Disagree to 5 : Strongly agree. Score between 1 to 3 :
Not attached to the company.

Gallup Q12 Questions Case:

1. Do you know what is expected of you at work?
2. Do you have the materials and equipment to do your work right?
3. At work, do you have the opportunity to do what you do best every day?
4. **In the last seven days, have you received recognition or praise for doing good work? Scale : $4/5 = 4/5 * 100 = 80\%$**
5. Does your supervisor, or someone at work, seem to care about you as a person?
6. Is there someone at work who encourages your development?
7. At work, do your opinions seem to count?
8. Does the mission/purpose of your company make you feel your job is important?
9. Are your associates (fellow employees) committed to doing quality work?
10. Do you have a best friend at work?
11. In the last six months, has someone at work talked to you about your progress?
12. In the last year, have you had opportunities to learn and grow?

NPS

Net Promoter Score

Net Promoter Score (NPS) is a management tool that can be used to gauge the loyalty of a firm's [customer relationships](#). NPS has been widely adopted with more than two thirds of Fortune 1000 companies using the metric

FORMULA: $NPS = \% \text{ Promoters (9-10)} - \% \text{ Detractors (0-6)}$

CASE EXAMPLE

Promoters (9–10): Loyal enthusiasts | Passives (7–8): Satisfied but unenthusiastic | Detractors (0–6): Unhappy | Target: NPS ≈ 75%



Talent Retention Metrics

Respondents are grouped as follows:

Promoters (score 9-10) are loyal enthusiasts

Passives (score 7-8) are satisfied but unenthusiastic customers (Neither support nor against)

Detractors (score 0-6) are unhappy customers

Case:			
Respondents	Ratings/10		
1	7		
2	8		
3	9		
4	9		
5	7		
Promoter	2	2/5*100	40%
Passive	3		

NPS = 40% - 0% = 40% (Promoter – Detractor)

The more the NPS the more customers are liking the company/ product

- NPS should be around 75% standardised

Talent Retention Metrics

4

Absenteeism Rate

Highly motivated employees take up to 37% fewer sick days (Gallup). Tracks unplanned absences.

FORMULA: Absenteeism = $[(\text{Avg Employees} \times \text{Missed Days}) / (\text{Avg Employees} \times \text{Total Working Days})] \times 100$
Avg. No. of emp. : $(\text{Employees at starting period} + \text{Employees at End period}) / 2$

CASE EXAMPLE

Period: Jan–Mar | Working days: 78 | Absent days: 12 | Avg employees: 1st Jan= 80; 31st Mar: 84; Avg = $(80+84)/2 = 82$ | Avg no. of absent days : 12/82 = 0.14 | Rate: $(82 \times 0.14) / (82 \times 78) \times 100 = 0.179\%$

Understanding of Talent Retention Metrics

Factors of Evaluation:

- Number : Number of employees remaining absent
- Unit: Number
- Turn Around Time (TAT): Period of absence; Can be calculated monthly, quarterly, half-yearly
- Relation wrt Company's profit(Y/N) : N
- Measurable (Y/N): Y

Talent Retention Metrics

5

Overall Turnover Rate

Measures the number of employees leaving an organisation over a specific time period.

FORMULA: Turnover Rate = (No. of separation during a time period / Avg no. of Employees) × 100

CASE EXAMPLE

Left: 24 | Start: 110 | End: 104 | Avg: 107 (110+104/2) | Attrition Rate: $(24/107) \times 100 = 22.4\%$ (should be minimised)

Understanding of Talent Retention Metrics

Factors of Evaluation:

- Number : No. of employees leaving the organization
- Unit: Number
- Turn Around Time (TAT): Can be calculated monthly, quarterly, half-yearly
- Relation wrt Company's profit(Y/N) : N
- Measurable (Y/N): Y

Talent Retention Metrics

6

Voluntary Turnover

Occurs when an employee chooses to resign and leave the team or company.

FORMULA: Voluntary Turnover = (Total no. of Voluntary Departures / Total number of Employees) × 100

CASE EXAMPLE

TAT: 1 week / 1 month / 3 months (probation or confirmation period)

Talent Retention Metrics

7

Involuntary Turnover

Occurs when an employee is forced to leave or is terminated by the organisation.

FORMULA: Involuntary Turnover = (Number of Involuntary Departures / Total number of Employees) × 100

CASE EXAMPLE

TAT: Based on non-performance; costs involved in termination process.

Talent Retention Metrics

8

Retention Rate of Star Performers

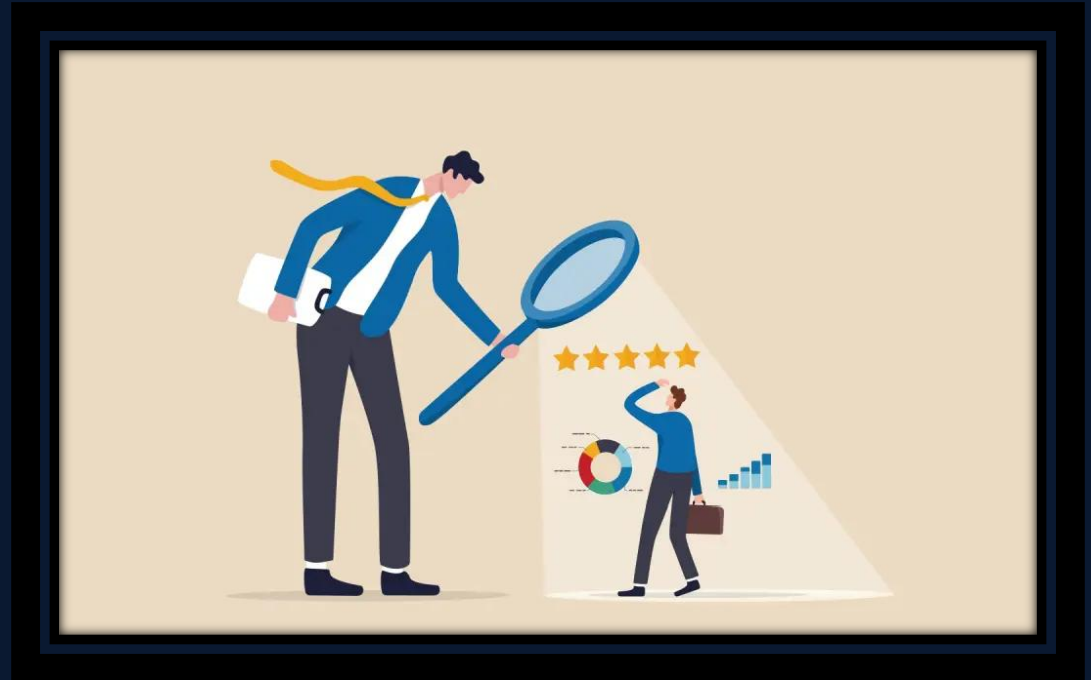
Stars are not just high performers but also those with the right attitude and motivation to encourage others.

FORMULA: Retention Rate of Stars = (No. of Star Performers Retained / Total no. of Employees) × 100

CASE EXAMPLE

TAT: 1 day / 7 days / training program | Profit relation: Y

Performance Appraisal Metrics



Understanding Performance Gaps

- Performance Gap = Gap between delivery and expectation.
- Positive Gap: Delivery exceeds expectations.
- Negative Gap: Delivery is less than expectation.
- Gap is numeric: set a target/benchmark, then measure delivery against it.
- HR analytics helps identify performance gaps and work to address them.
- **HR analytics** helps employers identify **performance** gaps and work to help address them, using the data that **analytics** offers.

Key Performance Indicators (KPIs)

- **Goal setting:** Communicate what employees should do AND how much they should do.
- KPIs help understand how an individual is performing against set objectives.

A typical business may use KPIs at various performance management levels:

- **Strategic KPIs:** Reflect the health of the business.
- **Operational KPIs:** Focus on core activities (product development, marketing, internal projects).
- **Individual KPIs:** Track whether an employee is applying their skills effectively.

Key Performance Indicators (KPIs)

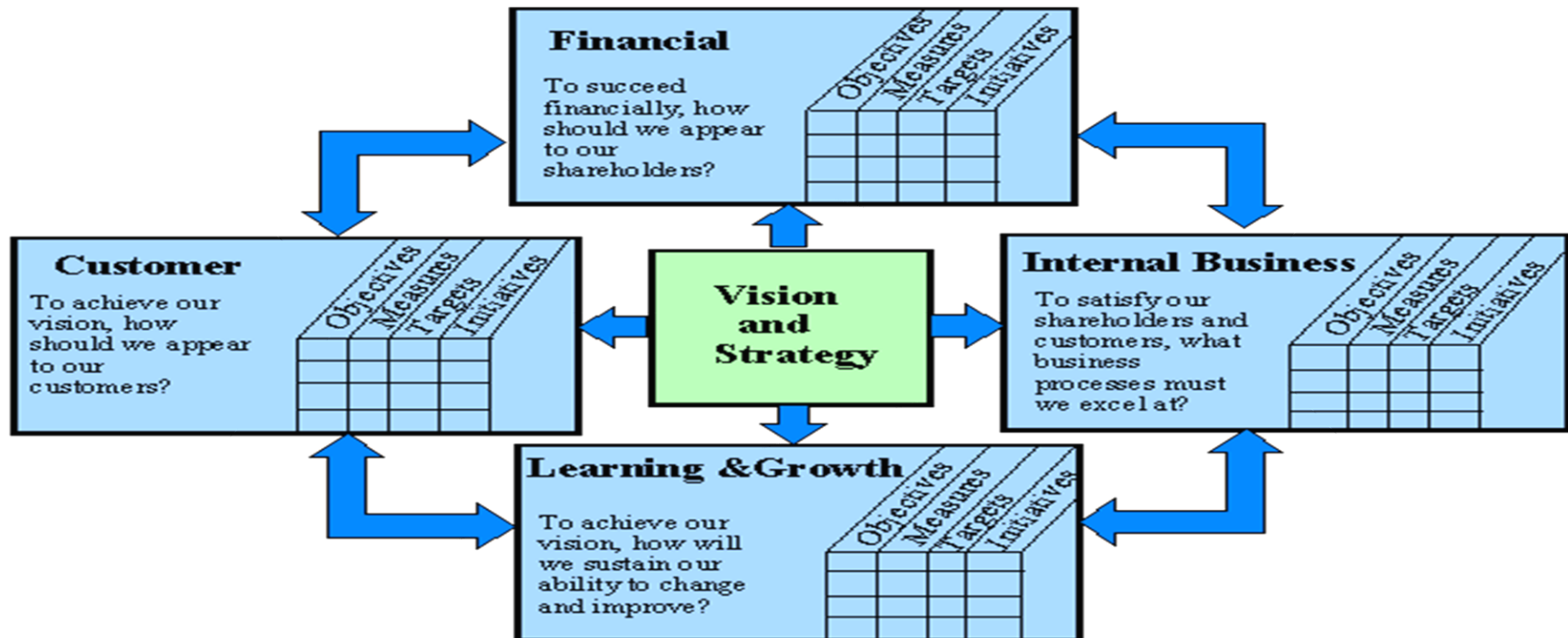
S.No.	Key Result Area	Key Performance Indicators
1	What to do? (Texts)	How much to do? Number related to KRA
2	Job Responsibilities	Monitor performance against set objectives
3	Qualitative	Quantitative
4	Customer Care Exec * Out bound calls * Resolve customer query	50 calls/ day * 80% of queries must be resolved.

Balanced Scorecard Overview

- A performance management framework used by strategic decision makers.
- **Balanced Scorecard** is a performance management framework used by strategic decision makers to make the right decisions about their business.
- Provides both internal AND external perspectives on organisational performance.
- Perspective 1: Customer — Meeting customer needs and satisfaction.
- Perspective 2: Internal Business Process — Efficiency in delivering products and services.
- Perspective 3: Learning & Growth — Knowledge, tools, and motivation for the future.
- Perspective 4: Finance — Aligning priorities with revenue-generating activities.

Balanced Scorecard Overview

Balanced Scorecard Framework*



Balanced Scorecard Overview

Perspective 1: Customer

“How well are we meeting the needs of our customers, and how can we make them more satisfied?”

Whether job responsibilities has an impact on customer experience : Yes or No: If Yes : It's a part of BSC.

Perspective 2: Internal-business process

“How do our internal processes function to efficiently deliver products and services, and how can we improve our efficiency?”

Whether job responsibilities has an impact on internal process/ efficiency : Yes or No: If Yes : It's a part of BSC.

Balanced Scorecard Overview

Perspective 3: Learning and growth

Employees need to keep educating themselves and the company needs to provide them the right tools and motivation.

“How well are we positioned to ensure that goals are met in the future?”

Whether job responsibilities has an impact on increase the knowledge of the employees : Yes or No: If Yes : It's a part of BSC.

Perspective 4: Finance

A business needs to align its priorities with activities that bring in revenue,

“How well are our finances managed to achieve our mission?”

Whether job responsibilities has an impact on company's revenue : Yes or No: If Yes : It's a part of BSC.

NOTE : If any 1 is YES, then it is eligible to be a part of BSC parameter

Balanced Scorecard Overview

- Balance Score card Metric

S.No.	Performance	Metric	Worst Case	Best Case	Your	Metric Score (%)	BSC (%)
	Metrics	Weigh (%)	Performance Range	Performance Range	Performance		
1	Inbound Contact	20	3	65	10	11.29	2.26
2	Customer	25	5	45	5	0	0
	Satisfaction						
3	Technology	25	7	23	15	50	12.5
	utilization						
4	Query reso	5	23	77	45	40.7	2.03
5	Job satisf	15	45	45	45	0	0
6	Call ans. I	10	6	12	10	66.6	6.67
	Total						23.47

Balanced Scorecard Overview

Balance Score card Metric : STEPS

Step 1: Select 6 critical performance					
Step 2: Weigh each metrics as per importance					
Step 3: Record highest and lowest performance					
Step 4: Record actual performance of each met					
Step 5: Interpolation: [(Worst Case - Actual Performance) / (Worst case - Best Performance)]*100					
1. Parameter 1: $[(3-10) / (3-65)]*100 = 11.29 \%$ = metric score : BSC: metric score * metric weight : $11.29\%*20=$ $(11.29/100)*20 = 2.26$					
2. Parameter 2: $[(5-5)/5-45)]*100=0$ = metric sc					
3. Parameter 3: $[(7-15)/7-23)]*100=50\%$ = metric score: BSC: $50\%*25 = 12.5$					
4. Parameter 4: $[(23-45)/23-77)]*100 = 40.7\%$ = metric score: BSC: $40.7\%*5=2.03$					
5. Parameter 5: 45-45: 0: metric score: BSC: 0					
6. Parameter 6: $[(6-10)/6-12)]*100=66.6\%$ =metric score: BSC: $66.6\%*10=6.67$					

Performance Metrics

2

360-Degree Feedback

To assess an employee's score, peers, subordinates, customers, and manager provide feedback on specific topics.

FORMULA: Average Score from all feedback sources $\times 100$

CASE EXAMPLE

Unit: Marks/percentage | TAT: Quarterly, bi-annually, or annually | Profit relation: Y

Quality	Manager	Peer	Customer	Sub Ordinates	Total	Avg. Score
Helping nature	3	4	2	3	12	$12/4=3$
Learning	4	5	5	4	18	$18/4=4.5$

Performance Metrics

3

Profit per Employee

Focuses on profit (not just revenue). Assesses the financial contribution per head. A company's profit is its total revenue minus expenses.

FORMULA: Profit per Employee = Business Profit / Number of Employees

CASE EXAMPLE

Unit: Rs | TAT: Time to finish the project | Profit relation: Y

Profit = Revenue – Expense

	Company 1	Company 2
No. of employees	500	300
Profit	500000	500000
Profit/ employee	1000	1666.7 Effective

Performance Metrics

4

Forced Ranking (Bell Curve)

Employees are ranked best to worst based on performance. Bottom 10% are subject to action.

FORMULA: Forced Ranking = $(10 / 100) \times \text{Total Employees}$

CASE EXAMPLE

50 employees → Forced Ranking: $(10/100) \times 50 = 5$ employees replaced | Introduced by GE | Builds performance-oriented culture. | Employees who perform well are rewarded.

Performance Metrics

5

Human Capital ROI

Assesses the value of human capital — knowledge, habits and personal attributes. (KSA)

FORMULA: $\text{HC ROI} = (\text{Total Revenue} - \text{Total Expense}) / \text{Number of Employees}$

CASE EXAMPLE

Revenue: Rs 30,00,000 | Expense: Rs 22,00,000 | Avg Manpower: $(26+28)/2 = 27$ Beginning strength + End period strength | $\text{HC/ROI} = \text{Rs } 8,00,000 / 27 = \text{Rs } 29,630$ per employee

Performance Metrics

6

Overtime per Employee

Measures average overtime hours per employee over a given period.

FORMULA: $\text{Overtime/Employee} = \text{Total Overtime Hours} / \text{Total Employees}$

CASE EXAMPLE

Employee 1: 2h | Employee 2: 3h | Employee 3: 2h | Employee 4: 1h | Total: 8h / 4 = 2 hrs per employee

Performance Metrics

7

Productivity per Employee

Analyses productivity per head per hour — key for operational efficiency.

FORMULA: Per Head productivity: $\text{No. of raw materials Produced per day} / \text{No. of Employees}$ | Per Hour productivity: $\text{No. of raw materials produced per head} / \text{No. of Working Hours}$

CASE EXAMPLE

50 employees | 10,000 units/day raw materials | 8 working hours | Per head: $10000/50 = 200$ units materials/day | Per hour productivity: $200/8 = 25$ units/hr

Performance Metrics

8

Customer Satisfaction Ratio

Satisfaction level of customers — obtained from questionnaires or surveys.

FORMULA: Customer Satisfaction = (No. of Satisfied Customers / Total no. of Customers) × 100

CASE EXAMPLE

Avg customers: (Beginning period + End period)/2 | (310+320)/2 = 315 | Satisfied: 280 | Satisfaction rate: (280/315) × 100 ≈ 89%

Training & Development Metrics



Training & Development Overview

- **Training & Development:** the art of increasing knowledge, skills and abilities (KSA) of employees to perform a particular job.
- Training offers competitive advantage by removing performance deficiencies.
- Training is an investment in HR which promises better returns in the future.
- **Development:** prepares managerial personnel not just for current roles but for future assignments of enhanced difficulty and scope.

Significance of Learning & Development

- Improves KSA at all levels of the organisation.
- Keeps the workforce motivated and engaged.
- Increases productivity across teams.
- Creates a feeling of achievement and recognition among employees.
- Increases job satisfaction and reduces turnover intent.
- Improves interpersonal skills and team collaboration.

Steps in Training

1. Identify the performance gap — what skills are employees lacking?
2. Conduct Training Need Analysis (TNA) to understand the reason for the gap.
3. Schedule a training calendar with tentative date ranges.
4. Nominate or recommend team members for training.
5. Finalise internal or external trainers.
6. Finalise the training budget.
7. Conduct training.
8. Run a feedback session.
9. Analyse the change in productivity.

Training Need Analysis (TNA)

- **TNA: A model to identify why Actual Performance < Expected Performance (the GAP).**
- Performance deficiency may be due to lack of KSA — making training necessary.
- The Performance Improvement Plan (PIP) plays an integral role in correcting discrepancies.
- Purpose: Identify the skills gaps of learners that prevent them from excelling in their roles.
- Gap Analysis: Identifies strategic and operational gaps between current capabilities and future needs.

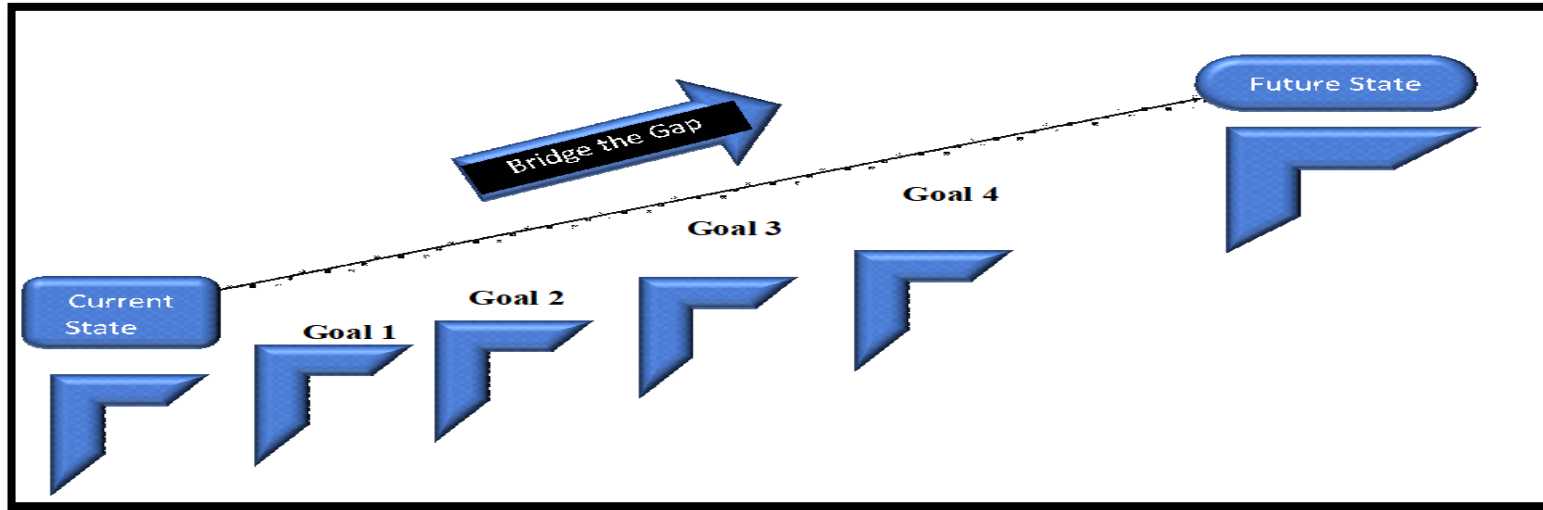
PURPOSE:

TNA is a method of identifying the skills gaps of the learners that are stopping them from effectively performing and excelling in their roles.

Training Need Analysis (TNA)

GAP ANALYSIS:

The Gap analysis is used to identify strategic and operational gaps in performance. It analyses the gap between the current capabilities of a company and the future department.



Lifecycle Phase 4: Training Effectiveness & ROI



True cost includes the opportunity cost of an employee's time. True ROI is measured not by test scores, but by the delta in their post-training output.

Training & Development Metrics

1

Training Cost per Employee

- Tracks development costs per head. Helps HR make smarter investments in personnel development.
- This metric determines the cost of employee training including the travel costs, course fees, time spent etc.

FORMULA: Training Cost/Employee = Total Training Expense / Total number of Employees Trained

CASE EXAMPLE

Total training cost: Rs 29,000 | Employees: 20 | Cost per employee: $29,000 / 20 = \text{Rs } 1,450/-$ per employee

- Turn Around Time (TAT): Total training duration as per training calendar. 1 week/ 1 day/ 1 month
- Relation wrt Company's profit(Y/N) : Y
- Measurable (Y/N): Y

S. No.	Purpose	Cost (Rs)
1	Training fees	15000/-
2	Venue Cost	5000/-
3	Travel cost	5000/-
4	Food cost	4000/-
	Total Cost	29000/-

Training & Development Metrics

2

Training ROI / Training Efficiency :

Measures satisfaction with development opportunities and the return on training investment.

FORMULA: $\text{Training ROI} = (\text{Value of Increased Performance} / \text{Cost of Training}) \times 100$ | *Training ROI = (Cost of employee Training / (Performance before Training – Performance after training) * 100*

CASE EXAMPLE

Avg per head performance: Rs 40,000 → Rs 44,000 (+Rs 4,000) | Training cost increase: Rs 1,400 → Rs 1,800 (+Rs 400) | For Rs 400 extra spend, Rs 4,000 extra output

Training Need Analysis (TNA)

- CASE :

	Avg. No. of Employees	Avg. Performance Turnover(Rs)	Avg. Training Cost (Rs)	Avg. per head Performance turnover(Rs)	Avg. per head Training cost
Past	25	10,00,000	35,000	40000	1400
Current	25	11,00,000	45,000	44000	1800
Past Vs Current		100,000 increased	10,000 increased	4000 increased	400 inc

Avg. per head performance turnover =
 $10,00,000/25 = \text{Rs } 40,000$;
 $11,00,000/25 = \text{Rs } 44,000/-$

- Avg, per head training cost: $35,000/25 = \text{Rs } 1400$;
 $44000/25 : \text{Rs } 1800/-$
- Observation:**
- Spending 400 extra on training cost company gets Rs 4000/- performance turn over

Training & Development Metrics

3

Training Participation Rate

Measures what percentage of nominated employees actually participated in training.

Total no. of employees: 500			
S.No.	Training	Nominated	Participated
1	Excel	100	80
2	Communication	100	100
3	Email etiquette	150	100
	Total	350	280

FORMULA: Training Participation Rate = (No. of Employees Participated / Employees Nominated) × 100

CASE EXAMPLE

Unit: Number | TAT: As per training calendar | Profit relation: Y

Nomination :

$$(280 / 350) * 100 = 80\%$$

Voluntary participation: Open Training:

$$(280/500)*100 = 56\%$$

Thank You

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