

# Advanced Strategic Human Resource Management



## Session 5-6

# AI-driven Competency Mapping: SkyHive

- Continuously collects and analyzes millions of real-time labor market data points on jobs, skills, training, performance - Quantum Labor Analysis
- Automatically extracts skills from existing employee data. Can create unique skills profiles of employees from resumes in 6 minutes.
- Matches workers with targeted learning to fill precise skill gaps
- Matches talent to career pathways through AI-driven skill proximity and reskilling pathway identification
- Provides insights into competitors and identifies future workforce skills requirements

# DON'T:

- Make competency models too detailed
- Make surveys too long
- Ignore results or wait too long for giving feedback and acting
- Accidentally scare employees into thinking that you look for a substitute
- Panic if results are lower than expected
- Assume that everything is great, if self-assessments are all top marks

# 2. HR Planning

# Human Resource Planning / Workforce Planning

*The process by which a firm determines its need for human resources in a given period and plans to acquire it*

**SUPPLY = DEMAND**

- Environmental Scanning
- Forecasting supply and demand
- Action Plans

# ENVIRONMENTAL SCANNING

Methods: Strengths Weaknesses Opportunity and Threats (SWOT) analysis, Political, Economic, Social and Technological (PEST) analysis, Industry Trends



## DEMAND FORECASTING

### ELEMENTS

- Firm Strategy
- Resources Available
- Location and expansion plans
- Quantity and composition of future workforce



## METHODS

- **Estimation:** by existing officers
- **Delphi Technique:** Estimates by experts
- **Sales Force estimate:** based on demand for product
- **Trend Analysis:** extrapolating past relationships and projecting on future
- **Simulation:** based on probable future events to estimate future HR needs
- **Workload analysis:** HR required for targeted output
- **Markov Analysis:** Predicting internal mobility based on past patterns

## SUPPLY FORECASTING

### ELEMENTS

- Internal and External supply
- Retention capability
- Capability of current employees

### METHODS

- **External Supply**: govt. estimates, industrial shifts, migration
- **Internal Supply**:
  - **Human Resource Inventory/Human Resource Information System (HRIS)**: information about each employee, employee replacement charts
  - **Succession Planning**: identifying & preparing incumbents for top positions
  - **Labour Wastage Analysis**: Turnover, absenteeism

# Workload and Demand Analysis

Yum Yum Milk has a workforce of 300 workers. It has 8-hour workdays and 300 working days a year. In addition, the company has a policy of maintaining 10% buffer, and 2% of work hours for training. The average labour time needed per product is 5 hours. The average annual output is 150,000 units. In 2025, the projected growth in demand is 20%.

Mr. Raheja, the owner, believes that the company is overstaffed. Is he correct, or do you need to hire additional people in 2025?

Labour hours presently required per year:

$$1,50,000 * 5 = 7,50,000 \text{ hrs}$$

$$\text{Workers needed} = 7,50,000 / 8 * 300 = 313$$

$$\begin{aligned} \text{Employee hours presently needed} &= \text{Total work hours} \\ &+ \text{buffer} + \text{training} \\ &= 7,50,000 + (0.1 * 7,50,000) + (0.02 * 7,50,000) \\ &= 8,40,000 \end{aligned}$$

$$\text{Workers needed} = 8,40,000 / 8 * 300 = 350$$

Employee hours needed in future = Total work hours + buffer + training

$$\begin{aligned} &= 9,00,000 + \{0.1 * 9,00,000\} + \{0.02 * 9,00,000\} \\ &= 10,08,000 \text{ hours} \end{aligned}$$

$$\text{Workers needed} = 10,08,000 / 8 * 300 = 420$$

$$\text{Workers available} = 300$$

$$\text{Need to hire} = 120 \text{ workers}$$

Projected growth: 150,000 + 20% of 1,50,000 = 1,80,000 units

Labour Hours needed: 180,000 \* 5 = 9,00,000 hours

# Markov Analysis

- A marketing department has 3 levels – Sales Manager (N = 4), Sales Executive (N = 20), and Sales Assistant (N = 20). The organization presently has a no-fire policy, but the voluntary attrition tends to be at 5% for each level. In addition, 20% of the personnel every year gets promoted to the next level (*except for the Marketing Manager level; being the topmost spot, there is no further scope for promotion*).
- For 2025-26, the market forecast is a period of stability. Hence you wish to maintain the same number of personnel at each level.

Is there need for a policy change? What would you recommend?

	<b>N (2024)</b>	<b>Promotion</b>	<b>Exit</b>
<b>Sales Manager</b>	4		5%
<b>Sales Executive</b>	20	20%	5%
<b>Sales Assistant</b>	20	20%	5%

[Demand Forecasting](#)

		Sales Manager	Sales Executive	Sales Assistant	Exit
	<b>N (2024)</b>				
Sales Manager	4	3			0.2
Sales Executive	20	4	15		1
Sales Assistant	20		4	15	1
<b>Expected N (2025)</b>		7	19	15	
Ideal N (2025)		4	20	20	
<b>HR Move</b>		- 3	+ 1	+ 5	

## WHAT WE NEED TO CALCULATE

20%

People who receive promotion to the next level

5%

People who exit (5% of the total no. of employees at a given level)

**Expected N (2024)**

employees static at a level at the start of the target year+employees promoted from the previous level

**Need for Hire**

Need for hire in 2025 (Ideal N - Expected N)



	Workforce leaving due to attrition	Workforce getting promoted	2024	2025	2026	2027	2028	2029	2030	2031	2032
<b>Workforce at the year's start</b>											
<b>Workforce in Sales Manager Level (SM)</b>	5%	0	4	7							
<b>Workforce in Sales Executive Level (SE)</b>	5%	20%	20	19							
<b>Workforce in Sales Assistant Level (SA)</b>	5%	20%	20	15							
<b>Hiring at SA level</b>											
<b>Hiring at SE level</b>											
<b>Total Workforce</b>			44	41							

Bishakha Majumdar. Advanced Strategic Human Resource Management. IIM Visakhapatnam. April-September 2025.

bishakha@iimv.ac.in

**DEMAND AND SUPPLY FORECASTING**

**DEMAND FORECASTING**

**ELEMENTS**

- Firm Strategy
- Resources Available
- Location and expansion plans
- Quantity and composition of future workforce

**METHODS**

- **Estimation:** by existing officers
- **Delphi Technique:** Estimates by experts
- **Sales force estimate:** based on demand for product.
- **Trend Analysis:** extrapolating past relationships and projecting on future
- **Simulation:** based on probable future events to estimate future HR needs
- **Workload analysis:** HR required for targeted output
- **Markov Analysis:** Predicting internal mobility based on past patterns