

HR Analytics

Sides for Reference

Organizational Capital

Asset that can be utilized for the benefit of organization

Financial Capital

Organizations are imaginary entities largely made up of human thought and action.

Intellectual Capital

Intellectual capital consists of the stocks and flows of knowledge available to an organization.

These can be regarded as intangible resources which, together with tangible resources (money and physical assets), comprise the market or total value of a business.

Elements of Intellectual Capital

- Human Capital
- Social Capital
- Organizational Capital

Web of Intellectual Capital

While it is individuals who generate, retain and use knowledge (human capital), this knowledge is enhanced by the interactions between them (social capital) to generate the institutionalized knowledge possessed by an organization (organizational capital)

Human Capital

Intangible collective resources possessed by individuals and groups within a given population

HRM and HCM

- Resource and Capital
- Cost vs Benefit
- Mistrust vs Trust
- Belief vs Scepticism

Human Capital explained

Human capital represents the human factor in the organization; the combined intelligence, skills and expertise that gives the organization its distinctive character.

The human elements of the organization are those that are capable of learning, changing, innovating and providing the creative thrust which if properly motivated can ensure the long-term survival of the organization.

Investing in Human Capital

When investing in individuals, firms have fewer guarantees, than they do with machines, that they can secure the continuing use of their services. Individuals, unlike machines, can always decide to leave the firm, or they can decide to withdraw their labour, strike, go absent or work badly.

Human capital theory proposes that individuals will invest in human capital if the private benefits exceed the costs they incur and that they will invest up to the point at which the marginal return equals the marginal cost.

Human Capital Management

Human capital management is an integrated effort to manage and develop human capabilities to achieve significantly higher levels of performance.

Objectives of HCM

- determine the impact of people on the business and their contribution to shareholder value;
- demonstrate that HR practices produce value for money in terms, for example, of return on investment (ROI);
- provide guidance on future HR and business strategies;
- provide diagnostic and predictive data that will inform strategies and practices designed to improve the effectiveness of people management in the organization.

Measuring Human Capital

That which can't be measured, can't be managed

'Human capital management is not primarily about measurement. It is about creating and demonstrating the value that great people and great people management add to an organization'

Why measure?

- To focus the attention of the organization on what needs to be done to find, keep, develop and make the best use of its human capital.
- To provide the basis for resource-based HR strategies.
- To monitor progress in achieving strategic HR goals and generally to evaluate the effectiveness of HR practices.

HCM Value Addition

HCM is about creating value through people

The value of human capital is inherently dependent upon its potential to contribute to the competitive advantage or core competencies of the firm

Human Capital Value Addition

- Human Capital Value Addition (HCVA) is a concept that implies an indicator of measurable value an average employee brings in to the organization
- $HCVA = \text{Net Profit} / \text{Total number of employees}$

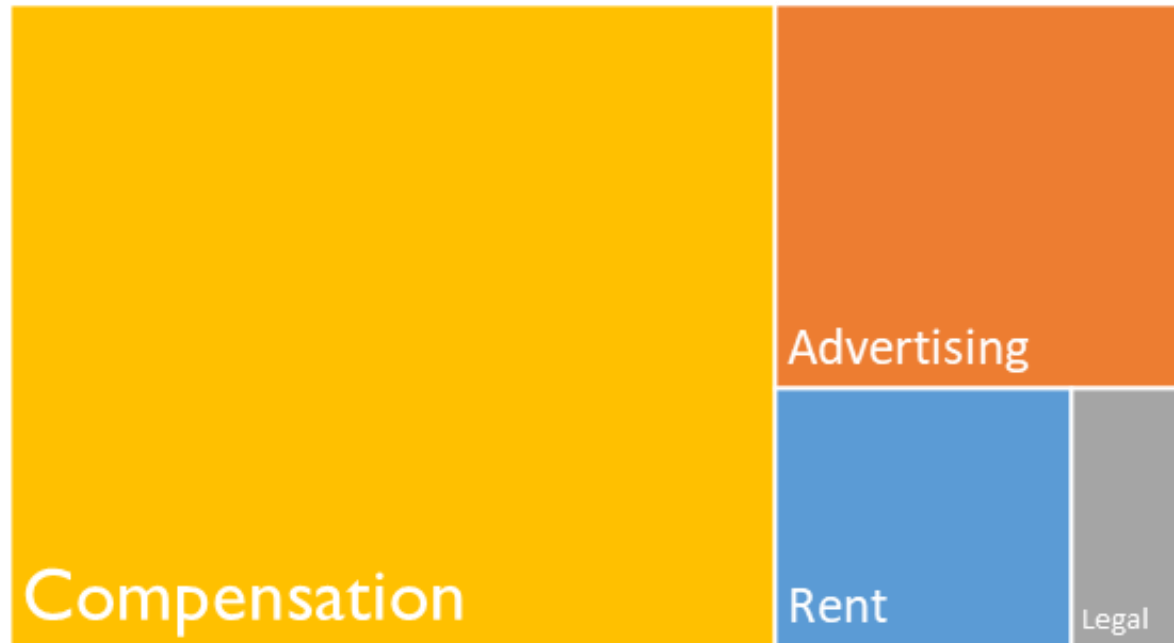
Capital and Revenue Inflow



Organizational Cost Centres

Major Cost centres

■ Rent ■ Advertising ■ Legal ■ Compensation



HR Costing

- HR Costing is aimed at ascertaining the cost (in monetary terms) of every HR activity

HR Accounting

- the process of identifying and measuring data about human resources and communicating this information to interested parties
- the measurement and reporting of the cost and value of people in organizational resources

Historical Cost Method

- sum total of all the costs related to human resources is calculated to find out the value of a human resource

Replacement Cost Method

- cost which is incurred on replacing the existing human resource by an identical one

Opportunity Cost Method

- Alternative utilization of an employee
- managers bid for any scarce employee
- human asset will have a value only if it(?) is a scarce resource

Economic Value Method

- Lev and Schwartz's Model
- Value of a human resource is calculated on the basis of the contribution made by the employees in the organization till their retirement

$$V_{\tau} = \sum_{t=\tau}^T \frac{I(t)}{(1+r)^{t-\tau}}$$

where,

V_{τ} = the value of human capital of a person t years old.

$I(\tau)$ = the annual earnings of the person upto retirement.

r = the discount rate of the cost of capital.

T = the age of retirement.

Reward Valuation model

- Flamholtz Model
- Improvisation over 'Present Value of Future Earnings Model'
- Probabilistic model

Human Asset Multiplier Method

- Giles and Robinson Method
- Linked to individual performance
- Value = Remuneration
- individual's remuneration, or the remuneration of a group of persons in the same grade, may be multiplied by a factor determined on the basis of his contribution to the success of the business
- Total value = Sum(Individual value)

Aggregate Payment Approach

- S.K. Chakraborty
- This should be treated as deferred revenue expenditure and may be written off over the expected average stay of the employee in the organization. The deferred portion, not written off, should be shown in the Balance Sheet of the organization
- 'human assets' should be shown under the heading "Investment " in the Balance Sheet of an organisation.

Worth of Employees

Companies know what their employees cost but not what they're worth

Employee Value Added

- Productivity measures are not sufficient for this purpose because they are so greatly influenced by systems, technology, procedures and other factors beyond the individual employee's control
- such a measure would enable businesses to assess the effectiveness of the human resource and management policies and practices which are intended to produce such effort from employees

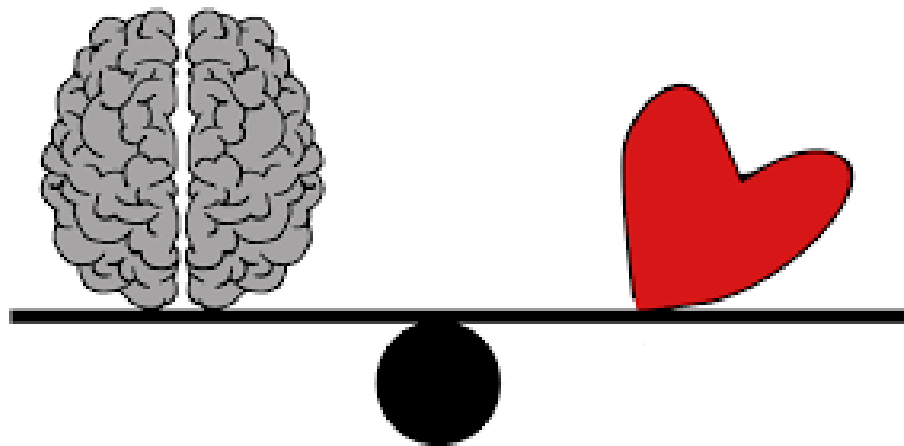
people are our greatest asset!

Most organizations will say “people are our greatest asset. Yet, few practice what they preach, let alone truly believe it. Most still believe, though perhaps not consciously, what nineteenth-century employers believed: people need us more than we need them.”

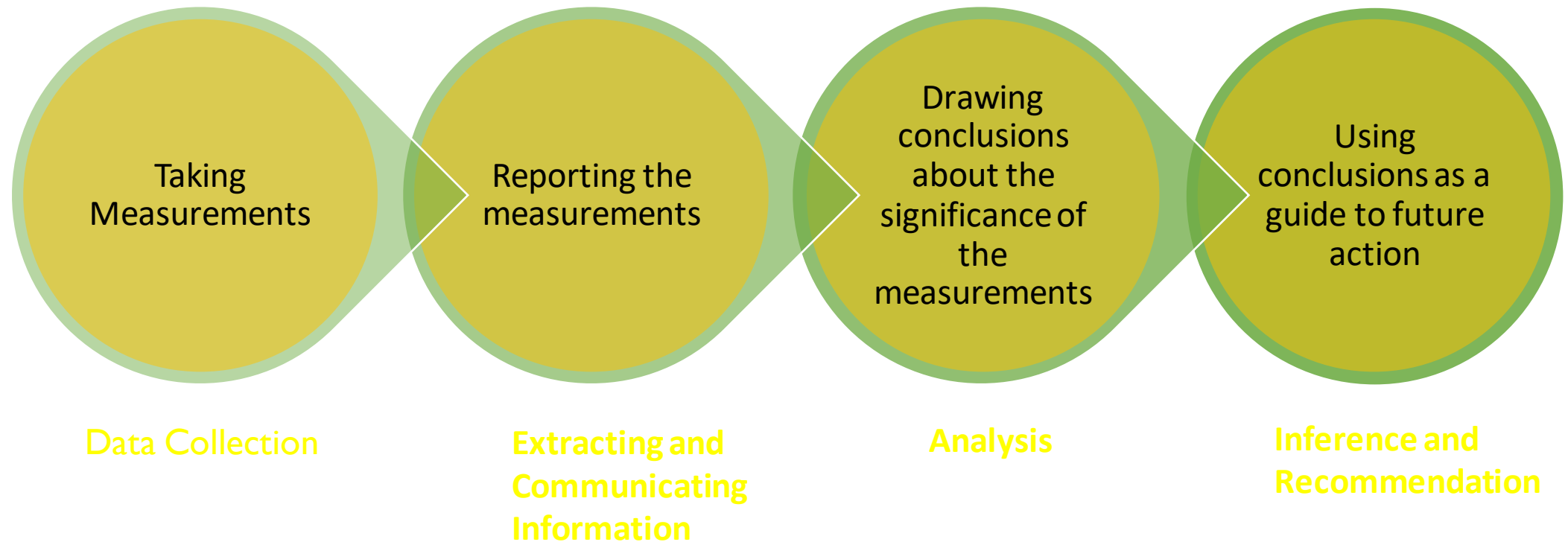


Think..

What makes HR Analytics different from other functional analytics?



HCM Process



Human Capital Measurement

HCM is about finding links, correlations and, ideally, causation, between different sets of (HR) data, using statistical techniques

HCM and HR Strategy

- HR is a system embedded within the larger system of an organization's strategy implementation
- High performance perspective (holistic and upgraded)

High Performance Work System (HPWS)

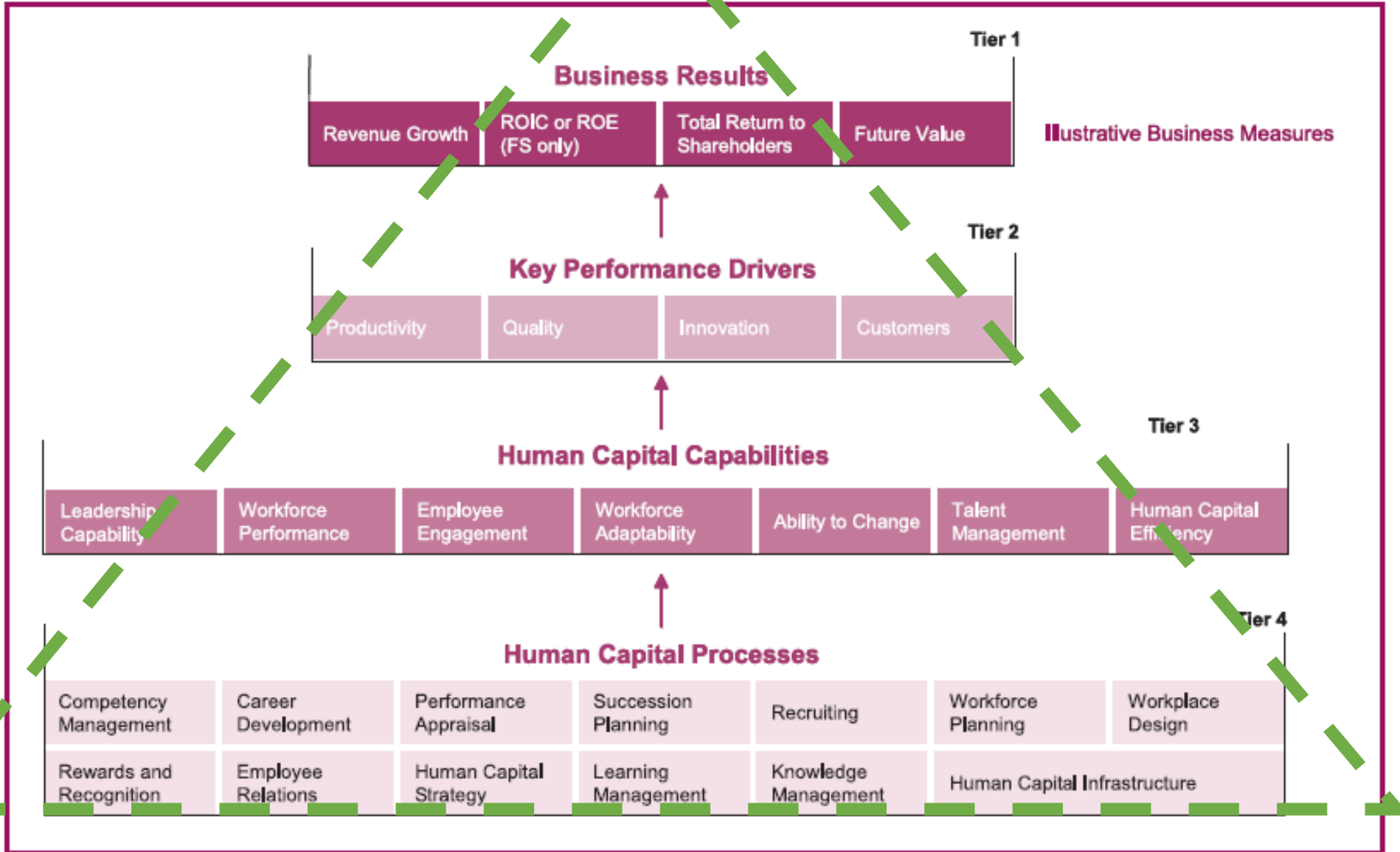
An internally consistent and coherent HRM system that is focused on solving operational problems and implementing the firm's competitive strategy - Becker and Huselid (1998)

HR Value Chain

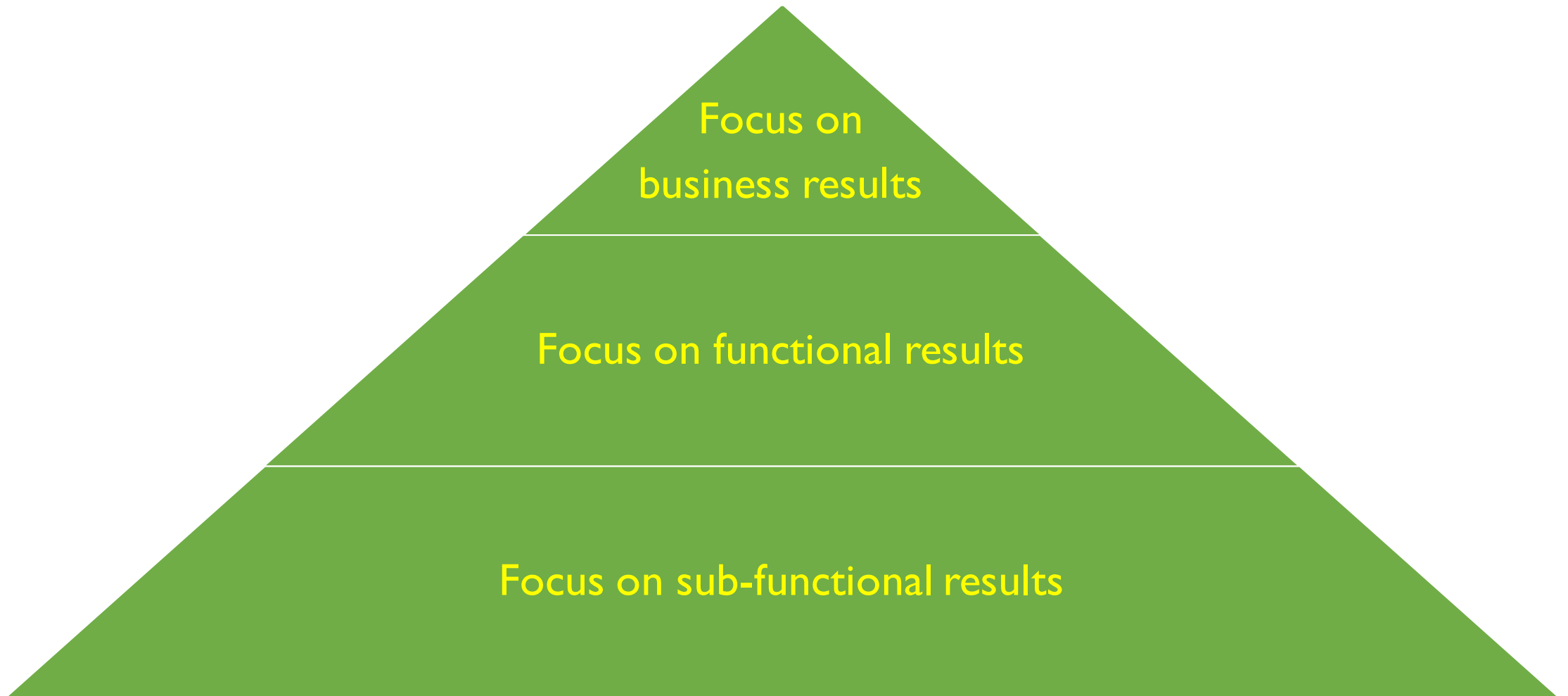
The increasing contribution of HR towards adding value to the organization.

Who gets benefitted and how much?

Exhibit 1 The human capital development framework



HR Value Chain and Impact



Organizational Decision Making



Decision Making

the process of choosing among two or more alternative courses of action for the purpose of attaining one or more goals

Have you made any poor decisions?

If you were to make the same decision today, would you make a different decision?

Informed Decision

If only I knew it earlier, I would have....

Information for decision

The Regional Sales Manager (South Zone) of Moon Pharmaceuticals has just communicated his resignation. The sales director goes frenzy, and suddenly need to appoint someone in place of the Regional Sales Manager, as it is a key account for Moon Pharma compared to the North, West and East zones.

Decision Scenario: Find a replacement as soon as possible.

What information is/are required?

Value of Information

What is the information worth?

In quantifiable terms (monetary), value of information is the amount a person would be willing to pay for information prior that would enable her make a better decision

How much would you be willing to pay..

- For having an extra feet of legroom
- For someone to leave you alone
- For the rain to stop/ start?

Human Decision Making Process

A 65-year-old relative of yours suffers from a serious disease. It makes her life miserable, but does not pose an immediate risk to her life. She can go through an operation that, if successful, will cure her.

Would you recommend that she undergoes it?

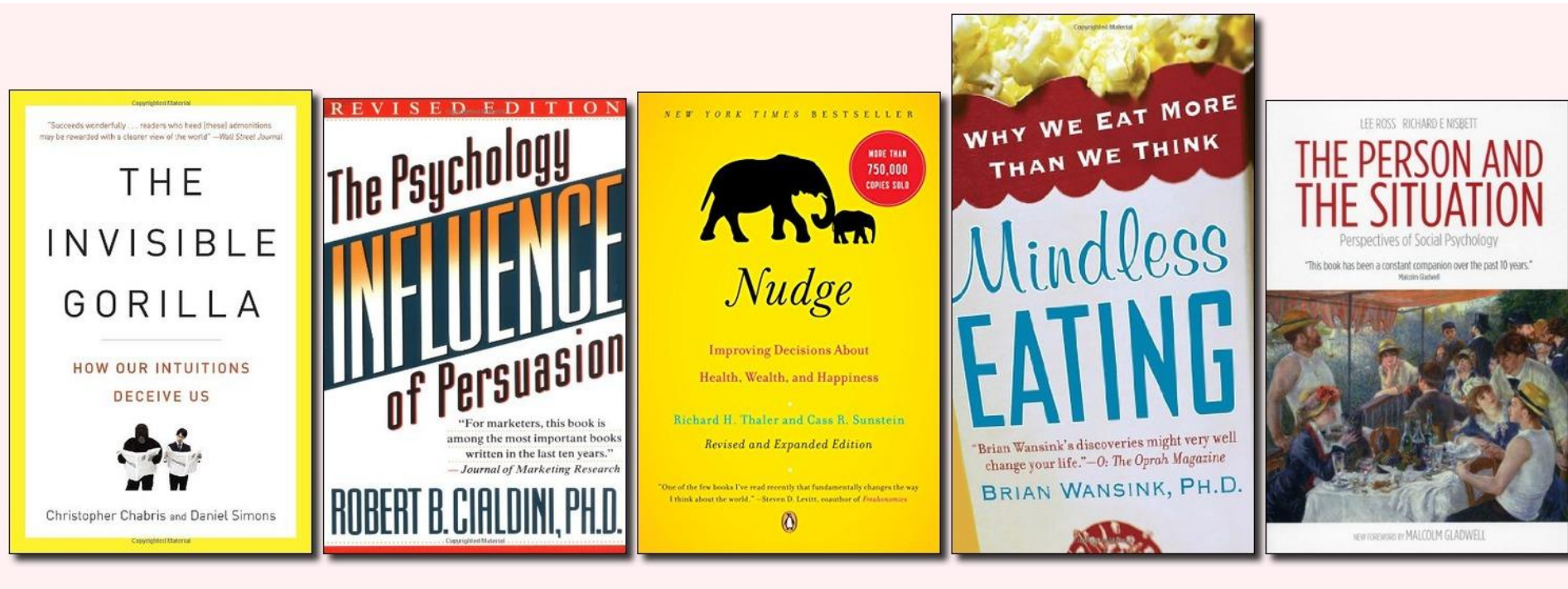
Human Decision Making Process

A 65-year-old relative of yours suffers from a serious disease. It makes her life miserable, but does not pose an immediate risk to her life. She can go through an operation that, if successful, will cure her. Although, the operation is risky; 70% of the patients undergoing it survive.

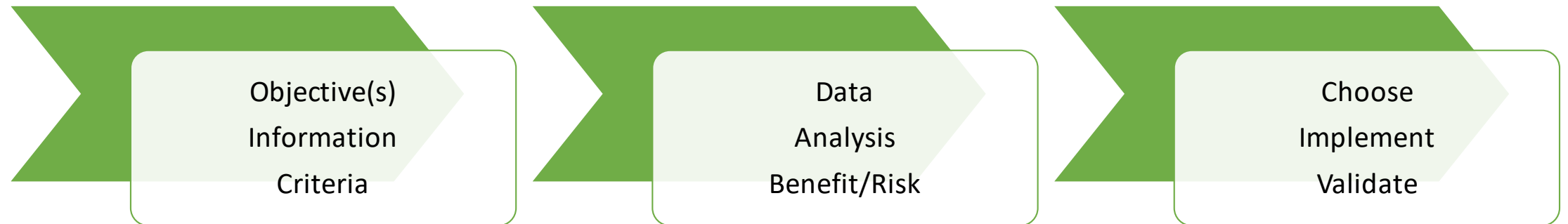
Would you recommend that she undergoes it?

How much higher this needs to be so that you change your decision?

Some books

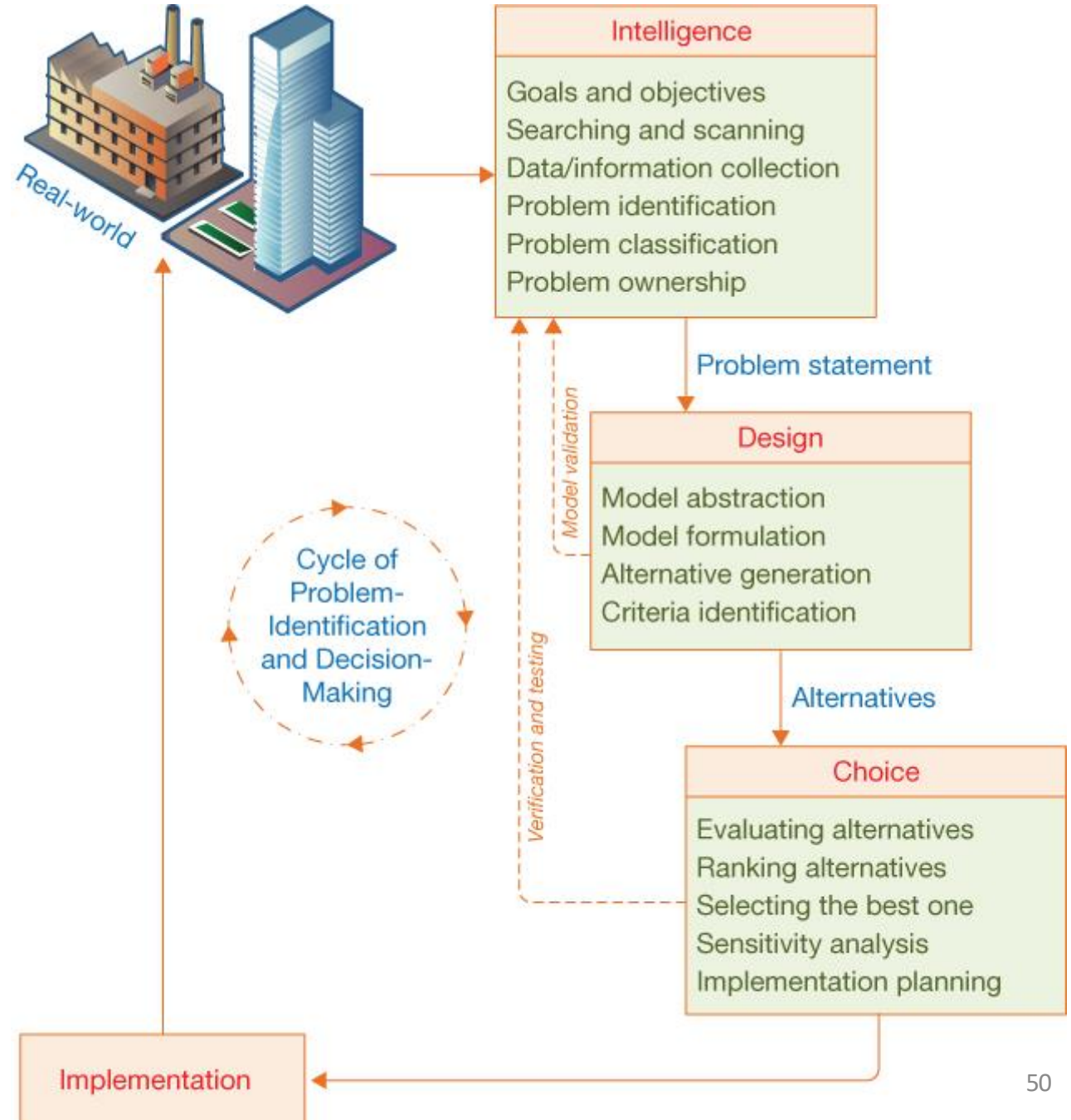


Human Decision Making Process



Decision Making Process

Simon (1977)



Decision Validity

- Information Availability
- Choice Availability
- Mental State
- Time pressure

How good is the decision?

- Rational
- Rationalizable

Bounded Rationality

Humans have a limited capacity for rational thinking

We generally construct and analyze a simplified model of a real situation by considering fewer alternatives, criteria, or constraints than actually exist.

Our behavior with respect to the simplified model may be rational. However, the rational solution for the simplified model may not be rational for the real-world problem.

Bounded Rationality

Rationality is bounded not only by limitations on human processing capacities, but also by individual differences, such as age, education, knowledge, and attitudes.

Analytics

Informed Decision Making
Prediction

Business Analytics

Business analytics is a set of statistical and operations research techniques, artificial intelligence, information technology and management strategies used for framing a business problem, collecting data, and analysing the data to create value to organizations.

Business Analytics, sans decoration

Analysing data to make better business decisions

HR Analytics

Applying principles of data science for people decisions in organizations.

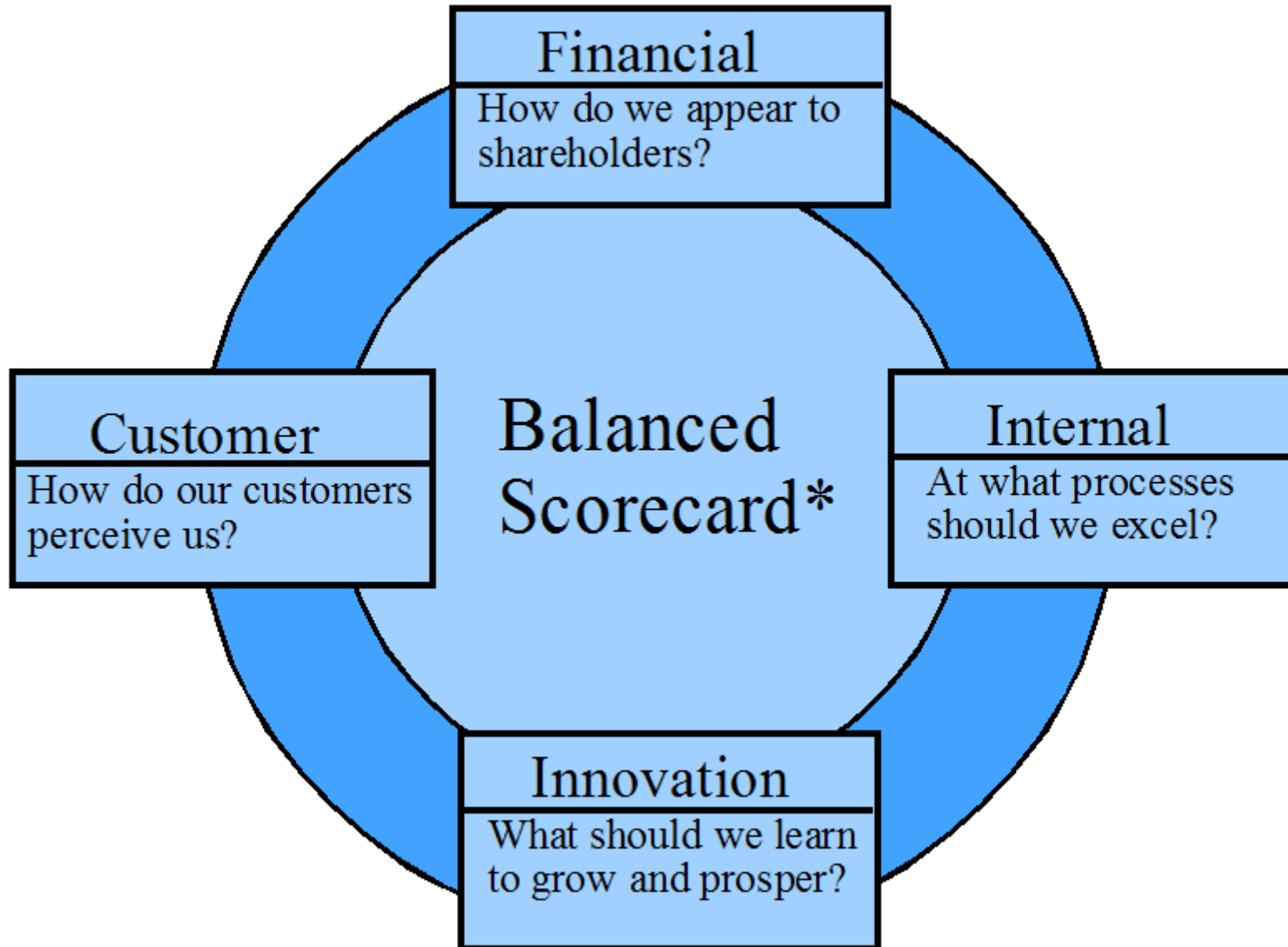
HR analytics is the application of analysis and data processing procedures to HR/people data to provide information and insights about the nature of individuals in organisations and the value that they add - *CIPD*

Synonyms of HR Analytics

- People Analytics
- Workforce Analytics
- Talent Analytics

Balanced Scorecard

- A balanced scorecard is a strategic management performance metric used to identify and improve various internal business functions and their resulting external outcomes.
- Balanced scorecards are used to measure and provide feedback to organizations.



HR Scorecard

- The **HR scorecard** is a strategic **HR** measurement system that helps to measure, manage, and improve the strategic role of **HR**
- A method for Human Resources to position itself as a strategic planning partner

HR Scorecard

HR SYSTEMS <ul style="list-style-type: none">• Align• Integrate• Differentiate	Workforce Mindset and Culture <p>Does the workforce understand our strategy and embrace it, and do we have the culture we need to support strategy execution?</p>
HR Workforce Competencies <ul style="list-style-type: none">• Strategic partner• Change agent• Employee advocate• Administrative expert	HR Practices <ul style="list-style-type: none">• Work design• Staffing• Development• Performance management• Rewards• Communication

Workforce Scorecard

- The **Workforce Scorecard** offers a framework that identifies and measures the outcomes, behaviors, competencies, mind-set, and culture required for workforce

Workforce Scorecard

Leadership and Workforce Behaviours Are the leadership team and workforce consistently behaving in a way that will lead to achieving our strategic objectives?	Workforce Success Has the workforce accomplished the key strategic objectives for the business?
Workforce Mindset and Culture Does the workforce understand our strategy and embrace it, and do we have the culture we need to support strategy execution?	Workforce Competencies Does the workforce, especially in the key or 'A' positions, have the skills it needs to execute our strategy?

Composition of the Workforce scorecard

Wc

HR Scorecard ←		Workforce Scorecard ←	Balanced Scorecard
		Customer Success What specific customer desires and expectations must be satisfied?	Financial Success What specific financial commitments must be met?
		Leadership and Workforce Behaviours Are the leadership team and workforce consistently behaving in a way that will lead to achieving our strategic objectives?	Operational Success What specific internal operational processes must be optimized?
HR SYSTEMS <ul style="list-style-type: none"> Align Integrate Differentiate 		Workforce Mindset and Culture Does the workforce understand our strategy and embrace it, and do we have the culture we need to support strategy execution?	Workforce Competencies Does the workforce, especially in the key or 'A' positions, have the skills it needs to execute our strategy?
HR Workforce Competencies <ul style="list-style-type: none"> Strategic partner Change agent Employee advocate Administrative expert 		HR Practices <ul style="list-style-type: none"> Work design Staffing Development Performance management Rewards Communication 	

OKR

- Objectives and Key Results



KRA

- Key Result Area (KRAs) in simple terms may be defined as the primary responsibilities of an individual.
- KRAs varies from individual to individual. Employees are predominantly appraised on their mutually agreed KRAs.

How are KRAs different from JD?

- JD is for a position
- KRA is for an individual in that position

Indicators

- a quantifiable measure used to express the presence or absence of some process / event / task
- KPI



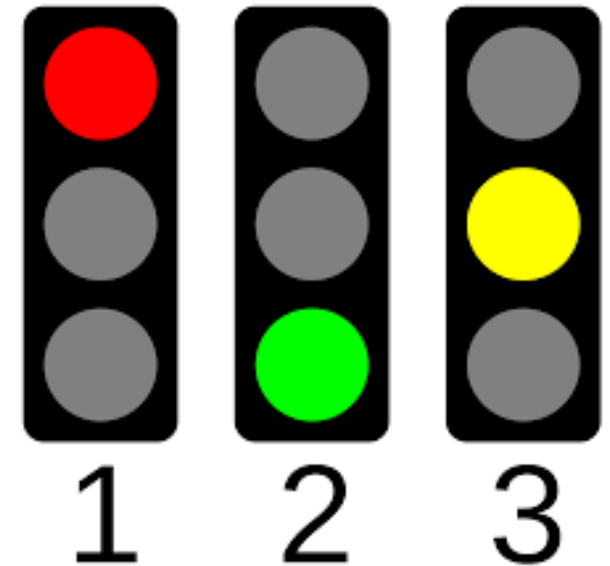
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KPI

- Key Performance Indicators (KPIs) may also be called as KSIs (Key Success Indicators) are the metrics used to define and measure the progress of the organisation's goal.
- It is a cumulative indicator of the fact that individual KRAs were achieved or will be achieved (or not)

Lead and Lag Indicators

- A leading indicator is a predictive measurement
 - Before the event
 - Looks forward
 - Eg. Anticipated Performance after training
- A lagging indicator is an output measurement
 - After the event
 - Looks backwards
 - Eg. Available performance rating



Your KRA, KPI and Lead/Lag

KRA	KPI	Lead/ Lag
Improve the quality of information input	Designing a valid and reliable experiment/ questionnaire	Lead
Prepare informative dashboards	Key metrics to be included in dashboard	Lead
Understand the theoretical concepts in HR Analytics	Test Score	Lag

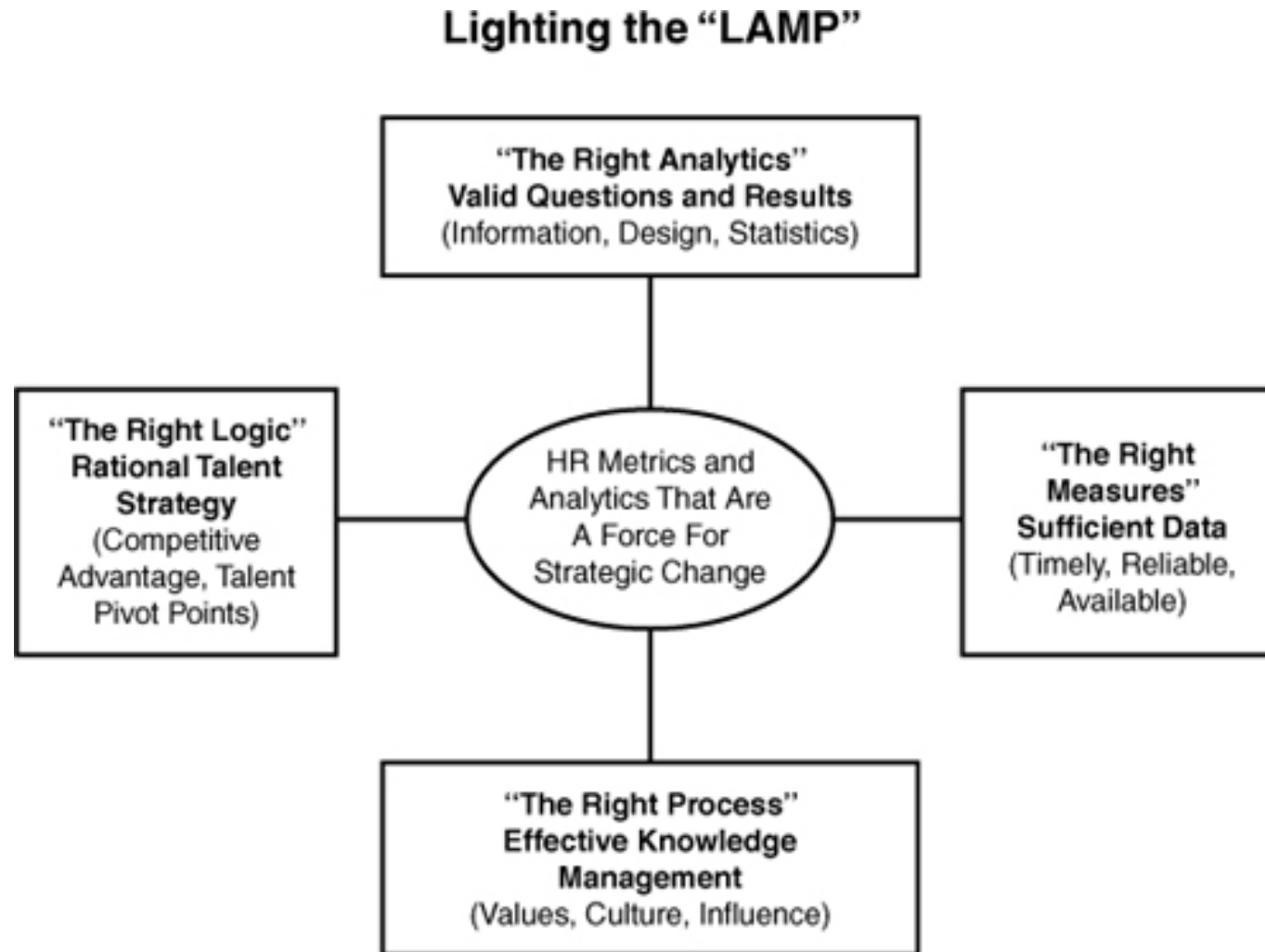
Frameworks in HR Analytics

- LAMP Framework
- HC Bridge Framework
- HCM 21

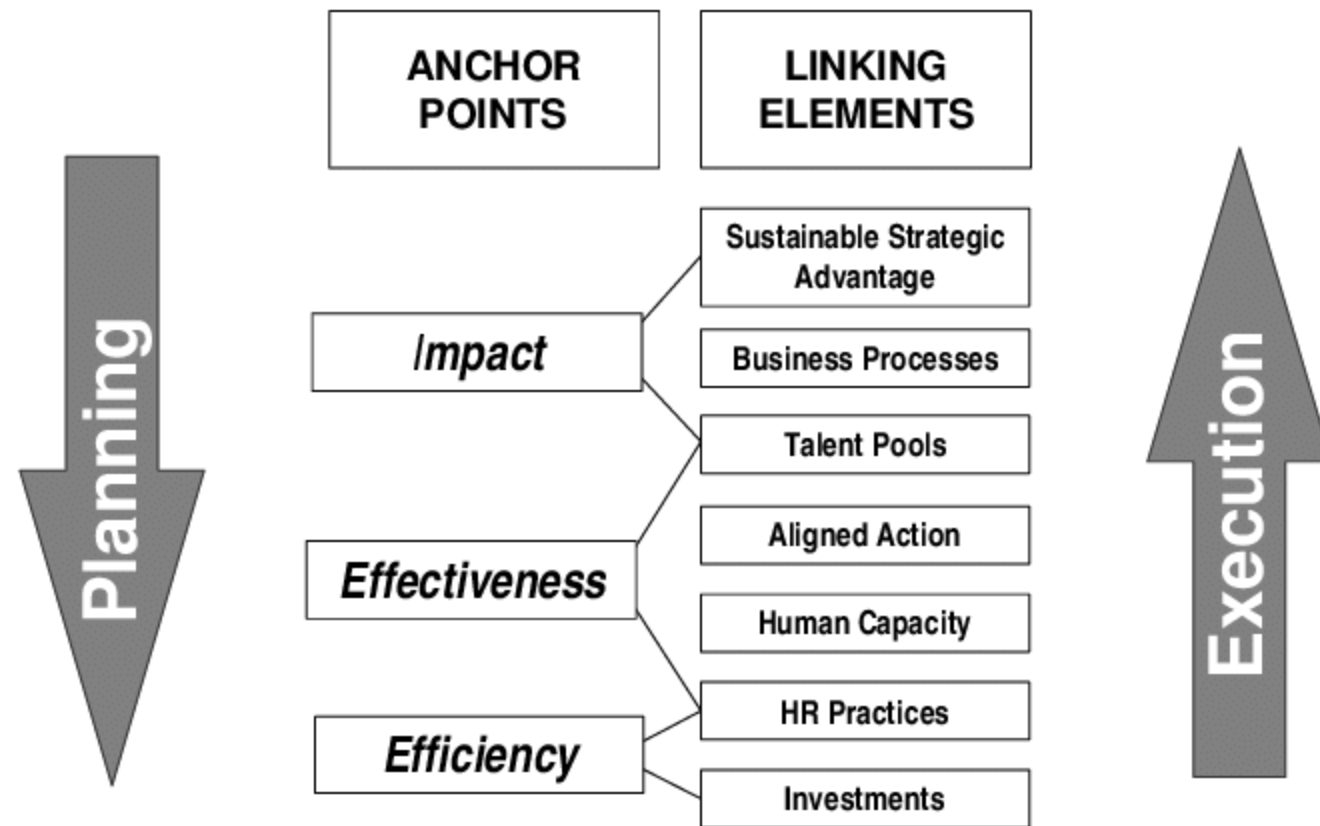
Talentship

- We have coined the term “talentship” for this emerging decision science, by combining the word “stewardship” with the word “talents,” which focuses on the hidden and apparent talents of current and potential employees.”
- ***John W. Boudreau and Peter M. Ramstad***

LAMP



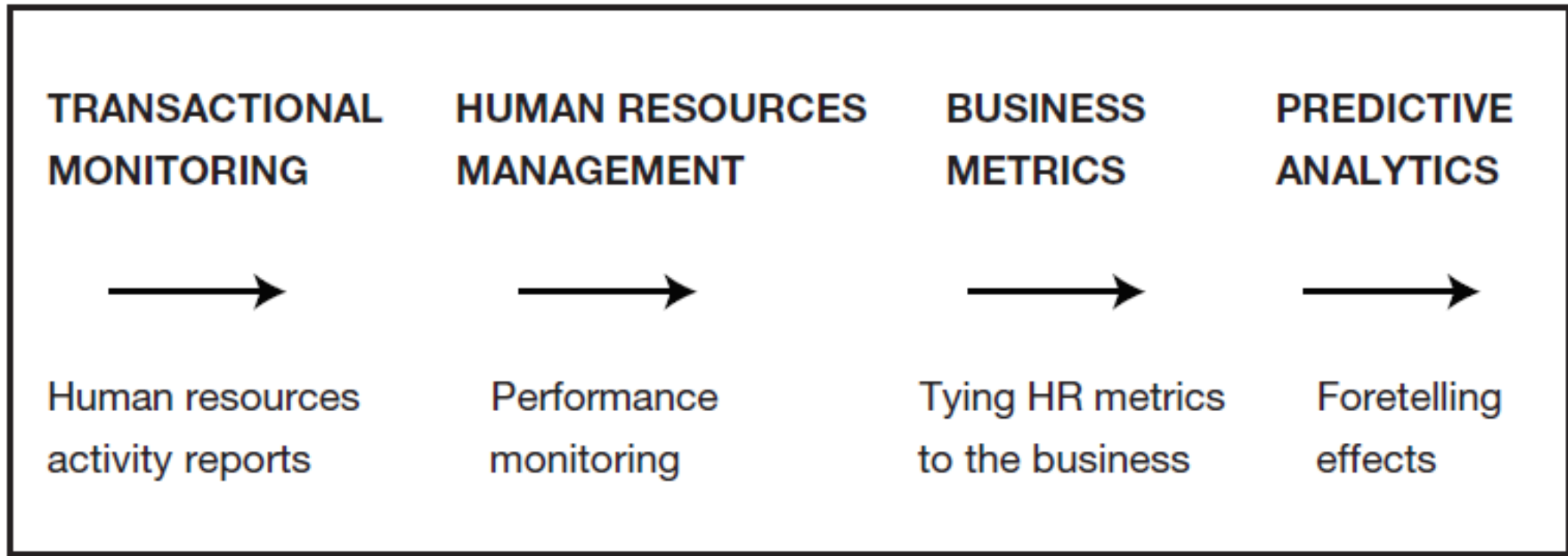
HC BRidge Framework

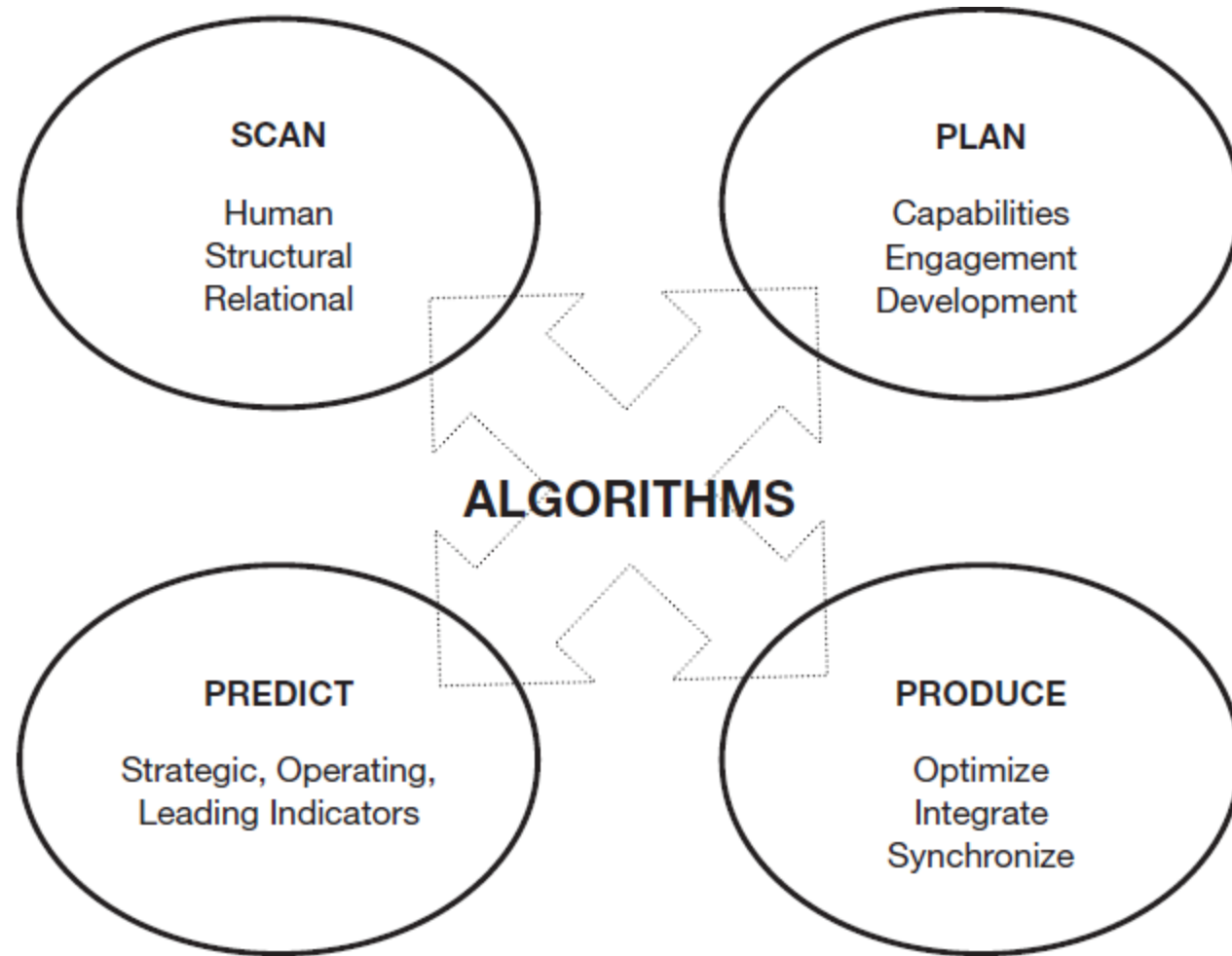


HCM21



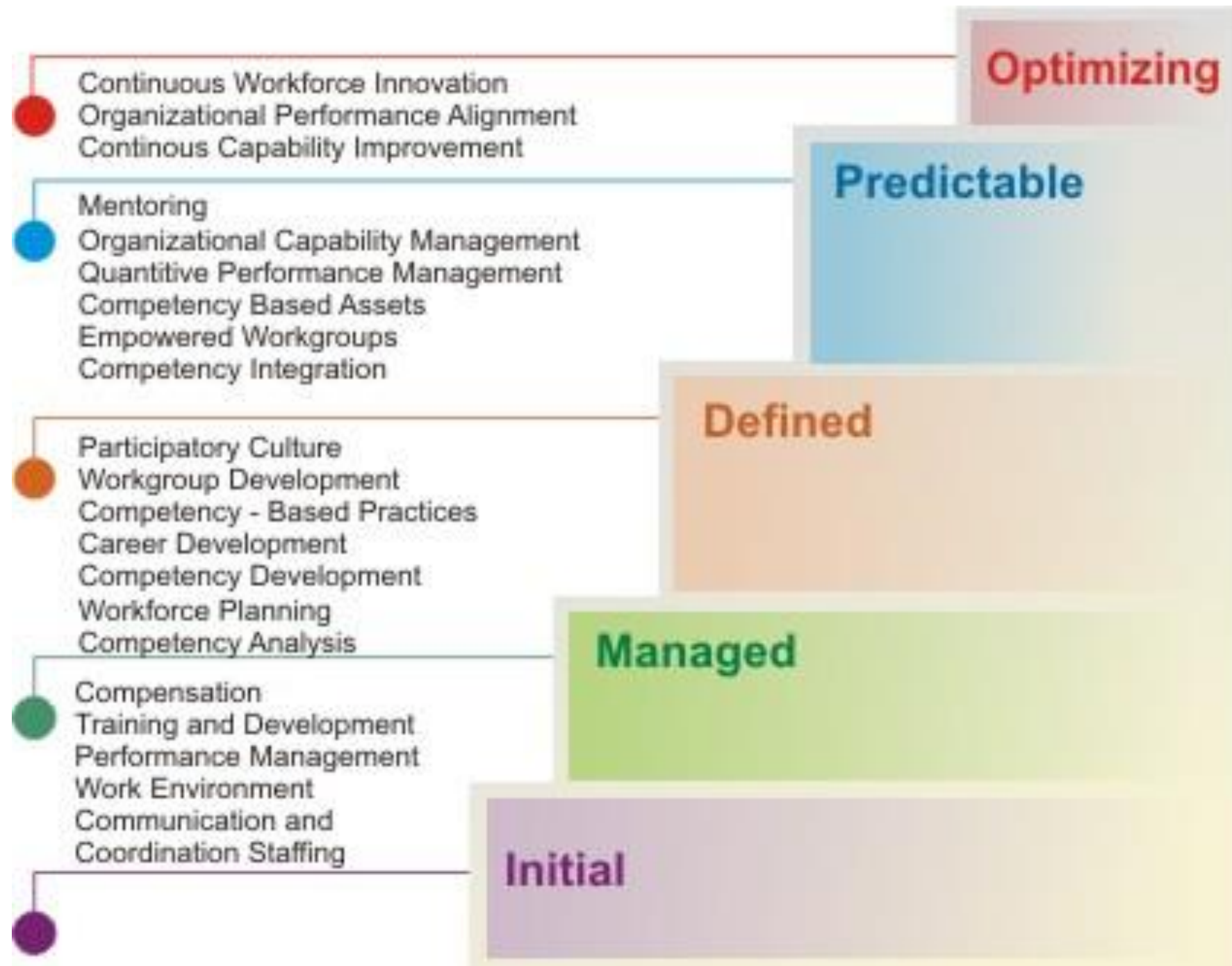
Evolution of HCM Metrics





Capability Maturity Model

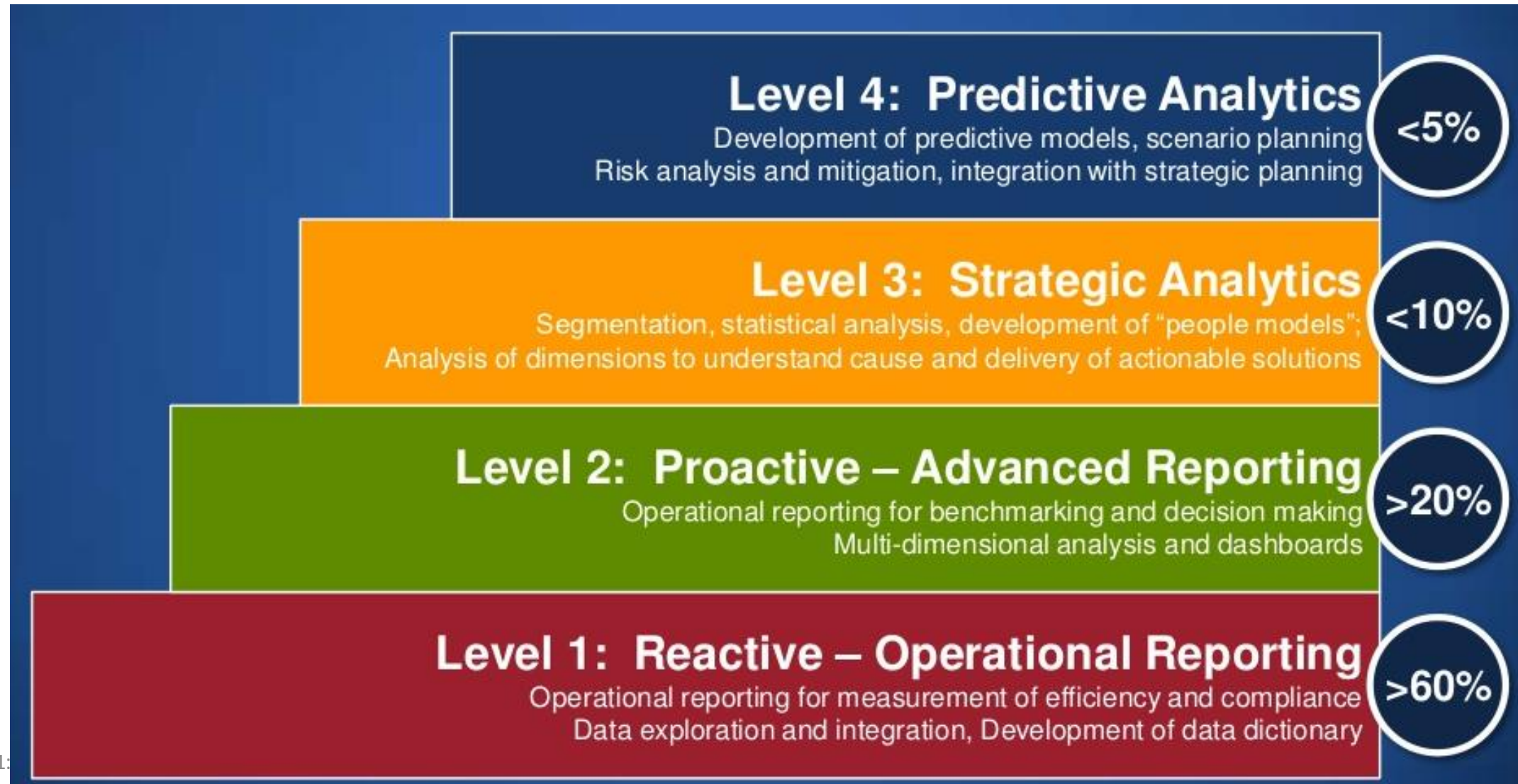
- The People Capability Maturity Model® (People CMM®) is a maturity framework developed at the Software Engineering Institute (SEI) that guides organizations in **improving their ability to attract, develop, motivate, organize, and retain talent.**

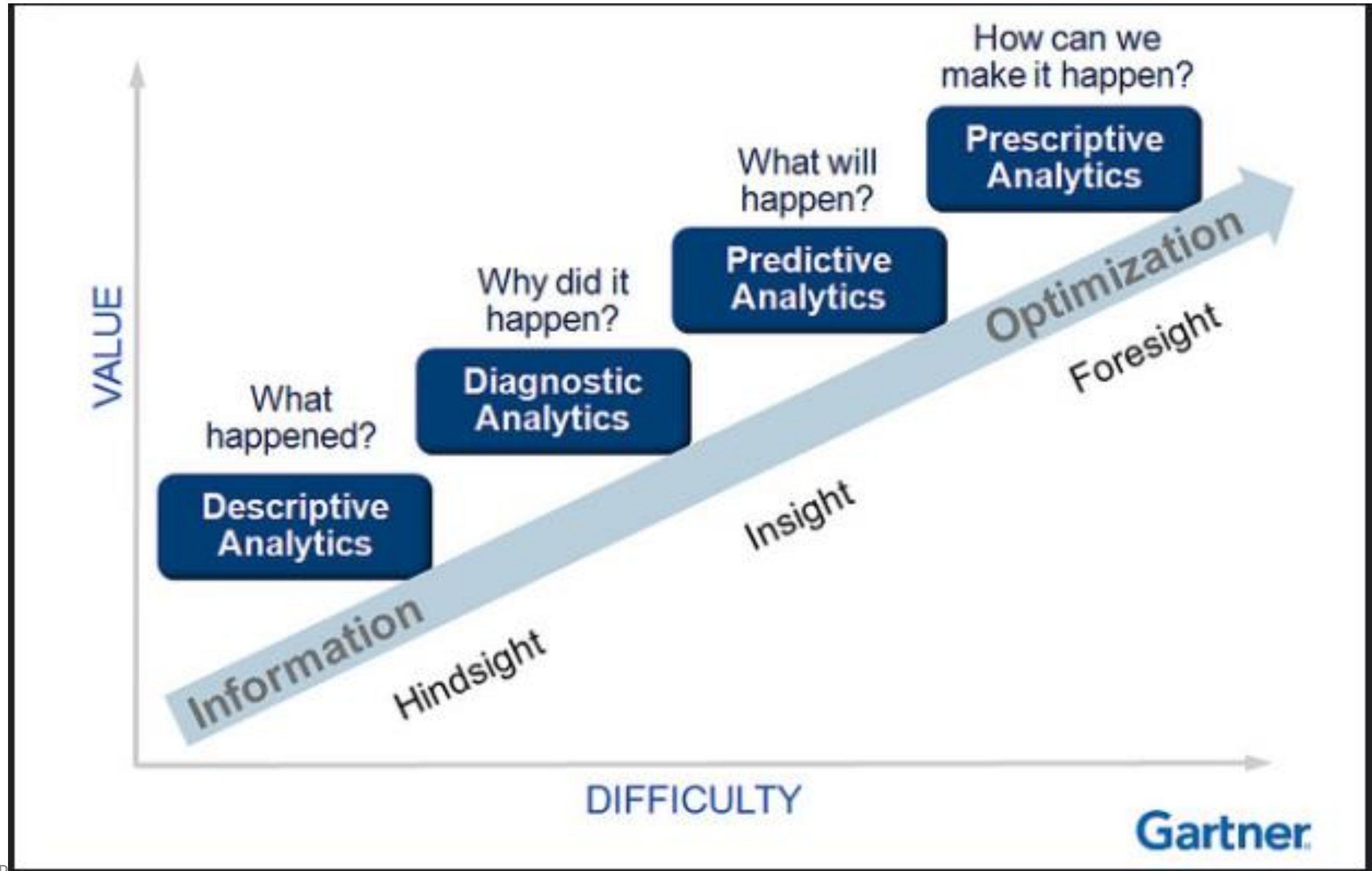


HR Analytics Maturity Model

- Progressive capability and adaptation of organizations to utilize HR Analytics

HR Analytics Maturity Model





Descriptive analytics

- Descriptive analytics is a set of methods used to search and summarize historical data in order to identify patterns or meaning.
- reflective analysis

How Descriptive Analytics

- Data aggregation
 - Data is first gathered and sorted by data aggregation in order to make the datasets more manageable by analysts.
- Data mining
 - This involves a search of the data to identify patterns and meaning. Identified patterns are analyzed to discover the specific ways that learners interacted with the learning content and within the learning environment.

HRIS

- A **human resources information system (HRIS)** is a software solution that maintains, manages, and processes detailed employee information and human resources-related policies and procedures.
- As an interactive system of information management, the HRIS standardizes human resources (HR) tasks and processes while facilitating accurate record keeping and reporting
 - Oracle

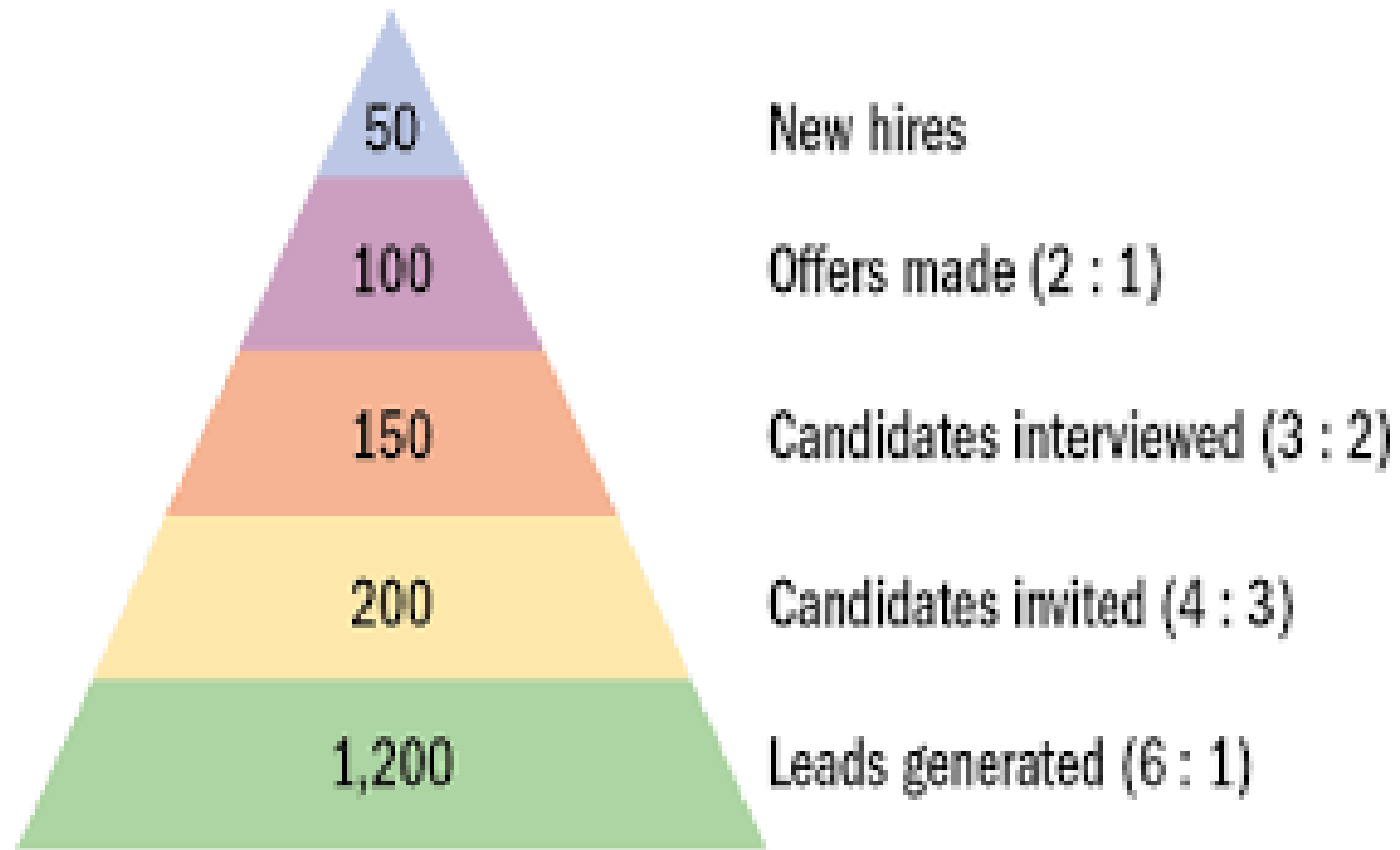
HR Metrics

- HR Measurement

Human resources metrics are different measurements that are used to show the value that the human resources function provides to the organization

Human Resource (HR) metrics refer to data points that measure the cost and effectiveness of the HR process and specific HR initiatives.

Recruiting Yield Pyramid





$$\text{Attrition Rate} = \frac{\text{No. of Employees that Left Workforce}}{\text{Average No. of Employees}}$$

