Previews of TDWI course books offer an opportunity to see the quality of our material and help you to select the courses that best fit your needs. The previews cannot be printed.

TDWI strives to provide course books that are content-rich and that serve as useful reference documents after a class has ended.

This preview shows selected pages that are representative of the entire course book; pages are not consecutive. The page numbers shown at the bottom of each page indicate their actual position in the course book. All table-of-contents pages are included to illustrate all of the topics covered by the course.

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TDWI Performance Management

Dashboards, Scorecards, and Metrics for Real Business Impact

COURSE OBJECTIVES

You will learn:

- ***Techniques to identify high-impact performance indicators and business metrics***
- ***How measurement and feedback are applied to increase business effectiveness and improve business efficiency***
- ***How to define and design performance management architecture***
- ***How to foster a performance management culture***
- ***When to use scorecards and when to use dashboards***
- ***Design techniques for dashboards and scorecards***
- ***How to integrate dashboards and scorecards including cascading and drill-in***
- ***How to choose the right indicators, metrics, and visual elements for dashboards and scorecards***
- ***Data management techniques for scorecards and dashboards***

TABLE OF CONTENTS

Module 1

Introduction to Performance Management

Defining Performance Management

Performance

- execution
- action
- procedures
- requirements
- skill

Defining Performance Management

Performance

FINDING THE MEANING

A good way to start exploring performance management is to look at the meaning of each word – performance and management – separately. We'll begin with the definition of performance.

PERFORMANCE DEFINED

The Merriam-Webster online dictionary defines performance as "the execution of an action; the fulfillment of a claim, promise or request." Performance is the doing of something.

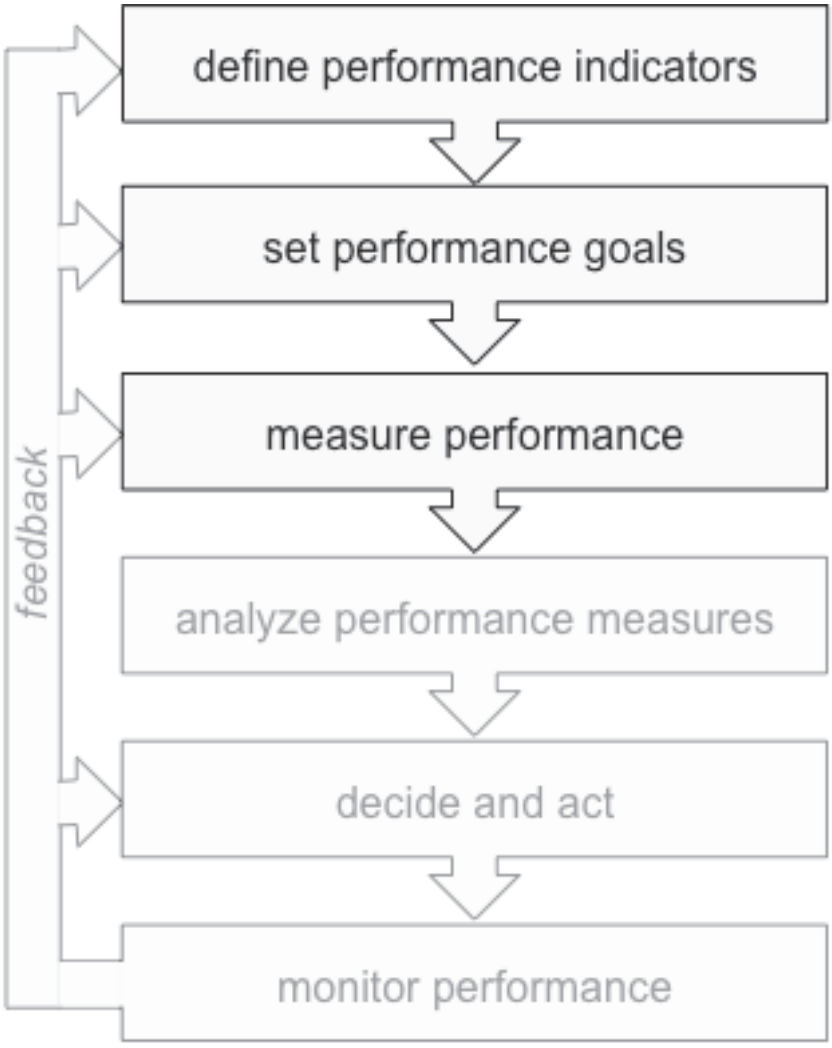
The definition continues, "to perform implies action that follows established patterns or procedures or fulfills agreed-upon requirements and often connotes special skill."

You'll see several key words and phrases from this definition repeated throughout this course:

- Execution
- Action
- Procedures
- Agreed-upon requirements
- Skills

Performance Management Processes

Goal Setting and Measurement



Performance Management Processes

Goal Setting and Measurement

PERFORMANCE INDICATORS

Performance management requires performance measurement, but measures alone don't do the job. Performance measurement to support performance management happens at three levels: *Measures* are quantitative data that assign numeric values to business inputs, activities, or outcomes. *Metrics* are measures with dimensions – time, customer, product, location, etc. – that support aggregation and analysis. *Performance indicators* are metrics with time-based performance targets that align with business strategy.

The "time-based performance targets" of performance indicators are the specific performance goals of business managers and/or business units.

IDENTIFYING INDICATORS

Performance management begins by selecting and defining the right performance indicators. A balanced performance management program includes both effectiveness and efficiency indicators. Well-defined indicators determine the metrics and measures that are needed.

SETTING GOALS

Goal setting is the next step in the process. Each performance indicator needs to have corresponding goals that express both the level of performance to be achieved and the timeframe of the goal. Goals may be different for each manager to whom the indicator applies. Goals take a variety of forms depending on the nature of the indicator:

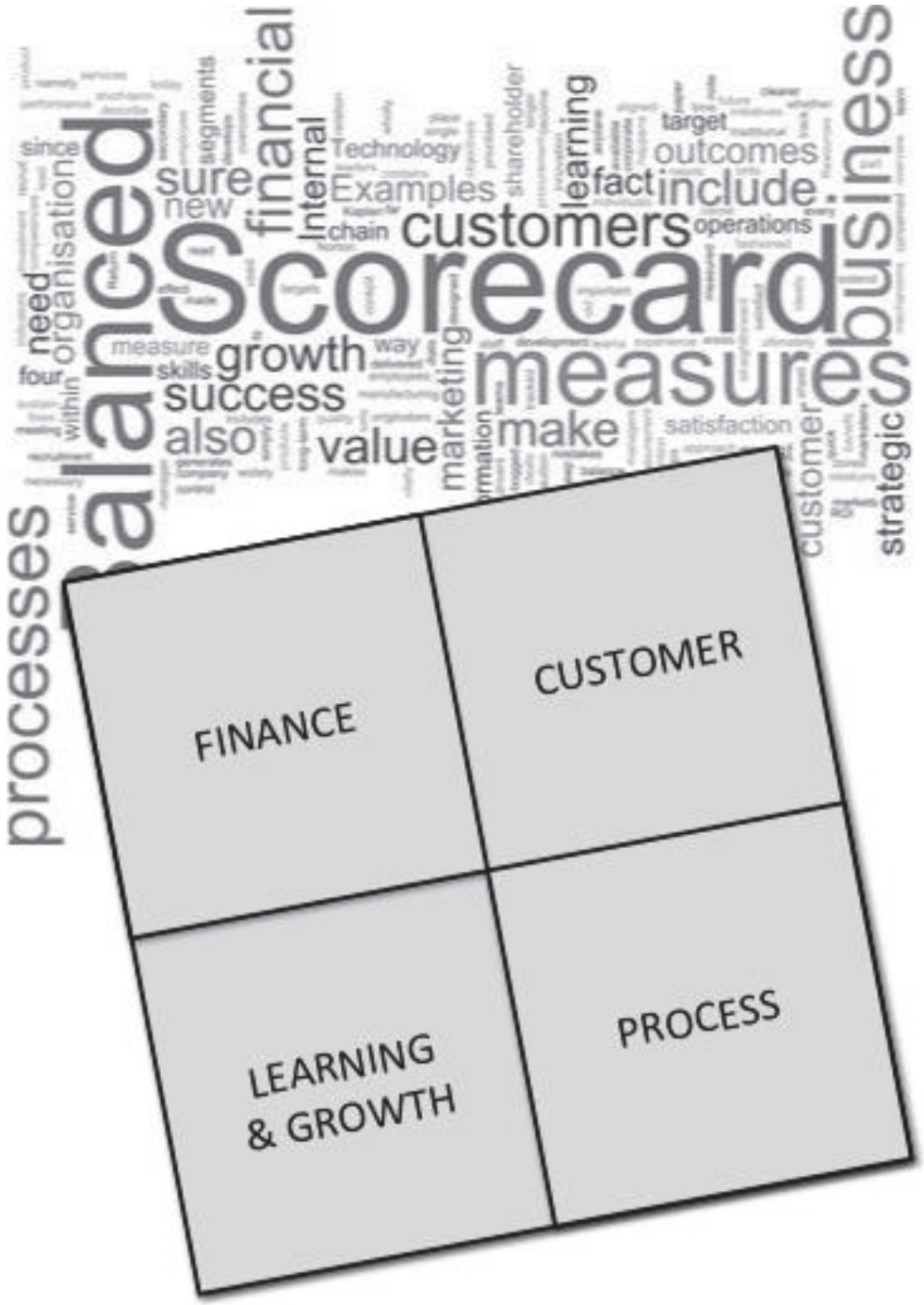
- *Achievement* expresses goals to produce more. Exceeding the target is considered better than meeting it. Examples include revenue and customer satisfaction.
- *Reduction* expresses goals to produce less. A level below the target is better than meeting the target, for example customer attrition.
- *Zero* expresses a goal to entirely eliminate a business outcome or condition. Examples include workplace accidents and product defects.
- *Absolute* goals express an exact number to be achieved, for example delivery time in manufacturing.
- *Fixed range* goals are similar to absolute goals, with the target expressed as minimum and maximum values. Mean time between repairs is an example of a fixed range goal.

MEASURING PERFORMANCE

Measurement collects the data needed to calculate actual performance values for each indicator. Measurement includes quantitative data, reference data to associate measures with dimensions, and identity data needed to trace performance indicators to their sources.

Performance Management Applications

The Balanced Scorecard



Performance Management Applications

The Balanced Scorecard

MEASURING THE RIGHT THINGS

Many businesses have adopted the Balanced Scorecard (BSC) approach to performance management, which is predicated on the idea that financial performance is driven by customers, customer performance by internal processes, and process performance by organizational and individual learning and growth. BSC recommends performance measures in all four of these areas.

Much of performance management depends on measurement, and many of the measures are financial. But financial measures often fail to have real impact on business performance. BSC seeks to guide us away from predominantly financial measures toward a balanced collection of metrics for finance, processes, customers, and people. Yet we have a tendency to drift back to financial measures. One widely used customer metric, for example, is customer lifetime value (CLV). But CLV, however frequently placed in the customer quadrant of a scorecard, is really more about finance than about customers. Just consider the definition of CLV – the present value of future profit from a customer relationship – measuring customers in units of dollars.

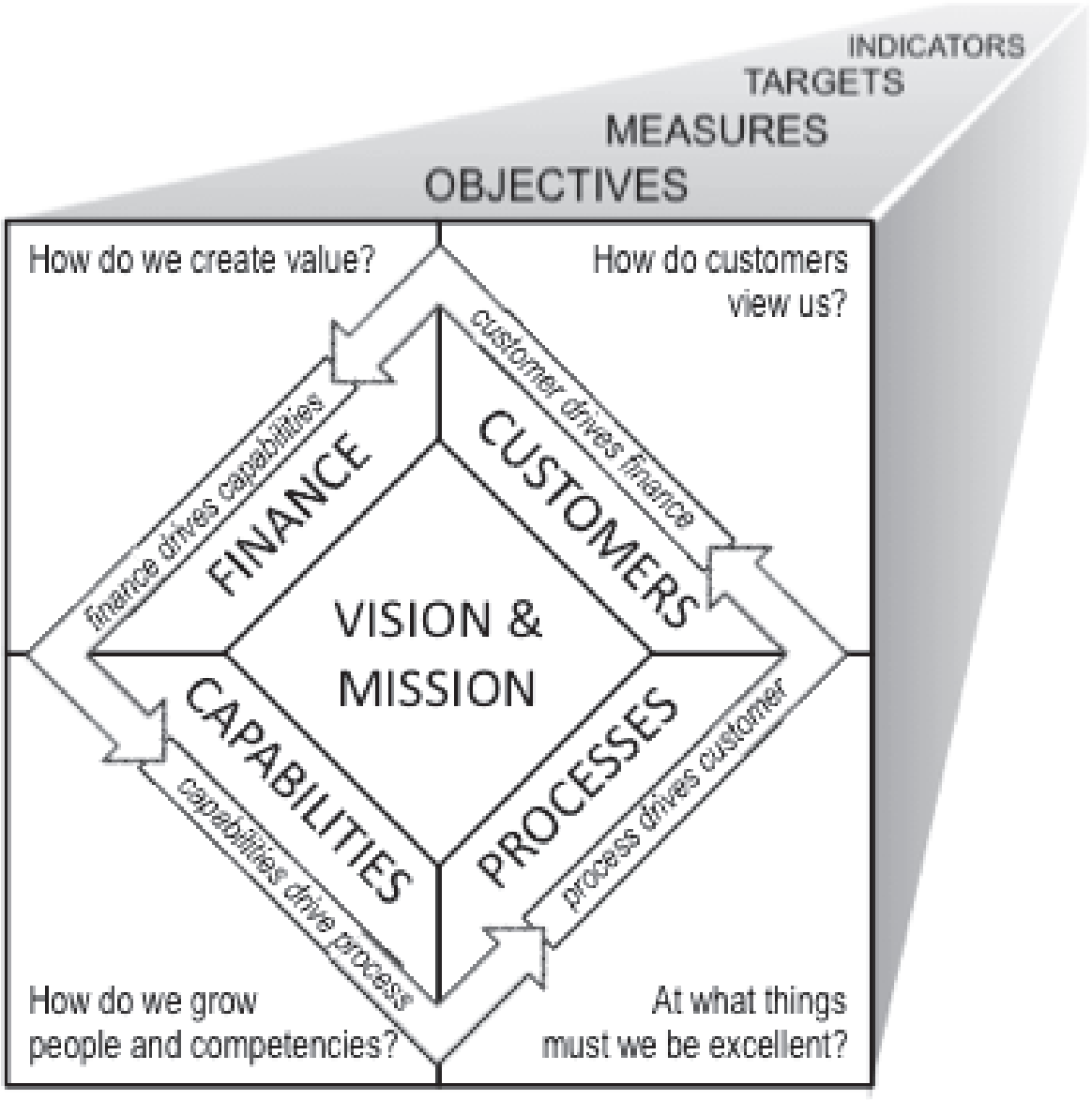
The problem is that CLV tells us nothing about customer behaviors, and thus yields no opportunity to understand or influence those behaviors. This problem isn't unique to customer measures. The same tendency to drift back to financials is found in other quadrants of the scorecard. A predominant process measure is cost-of-rework – actually a financial measure that tells us little about process effectiveness and certainly offers no clues about the causes of rework. Similarly, in the learning and growth quadrant, we find financial measures such as cost-of-hiring and cost-of-retention.

Module 2

Business Aligned Performance Management

The Balanced Scorecard

PM Foundation



The Balanced Scorecard

PM Foundation

STRATEGIC SCORECARD STANDARD

The BSC approach is founded on these principles:

- Customer outcomes drive financial performance.
- Internal process excellence drives customer performance.
- Organizational capability (learning and growth) drives process performance.

Robert Kaplan and David Norton (Harvard Business School) first introduced BSC in 1992. Since that time it has evolved substantially and become the de facto standard for strategic business scorecards. The first generation of BSC focused largely on measures and metrics (performance indicators.) The second generation extended to focus on objectives and targets. The third (and current) generation further expanded to focus on how to execute strategy and achieve objectives, introducing the concept of strategy maps.

ADAPTING THE STANDARD

We'll dive deeper into strategy maps shortly. But first let's consider some variations of BSC. The business driver concept described above:

capabilities → process → customer → finance

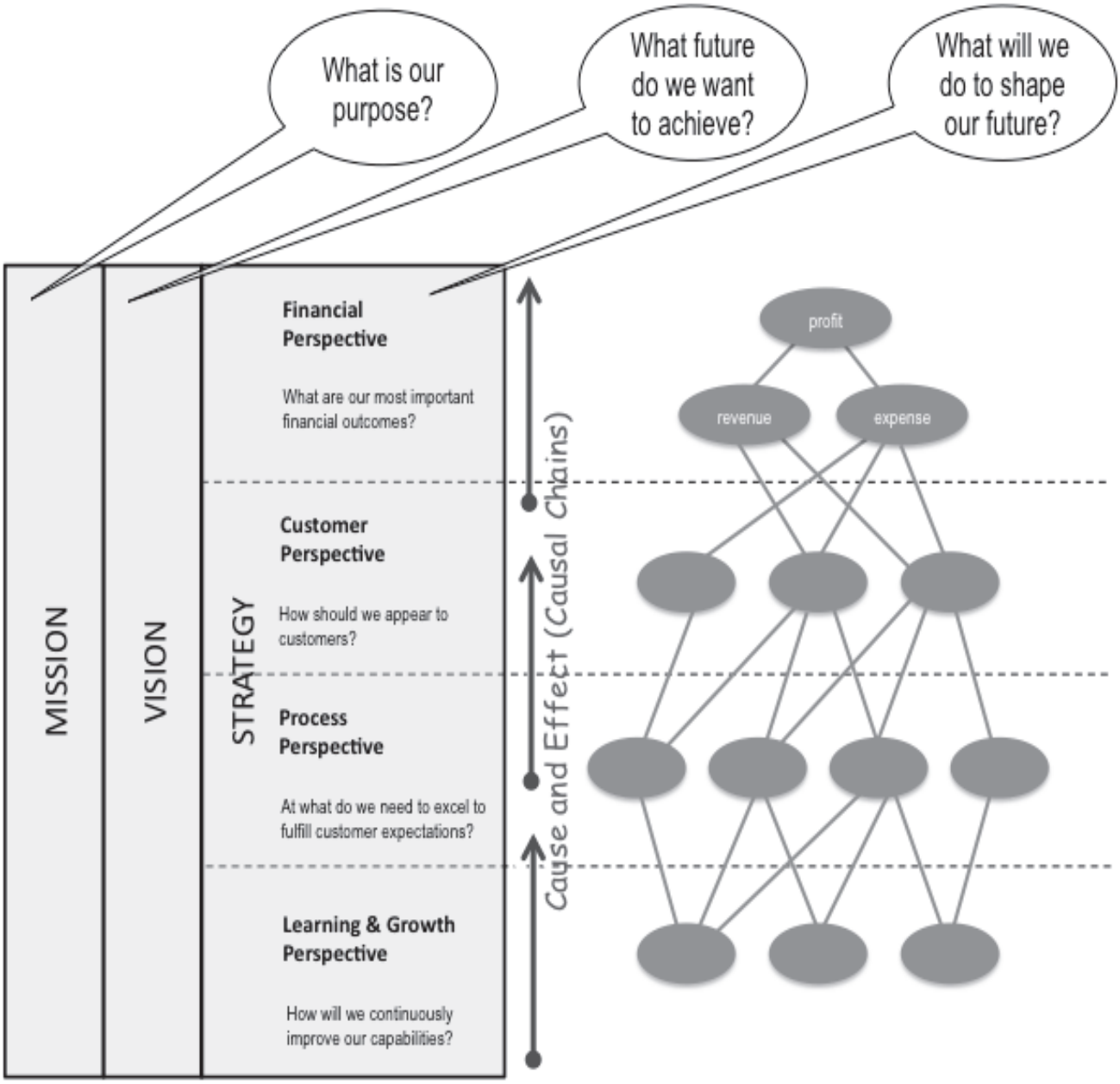
suggests a linear chain of cause and effect with finance at the end of the line. The reality is more of a cause-effect loop where:

capabilities → process → customer → finance → capabilities → process …

in a never-ending cycle of stimulus and response. In fact, finance is only the top-level category of objectives in for-profit enterprises. What about government, non-profit, education, and similar enterprises?

Strategy Mapping

A Cause-Effect View of the Business



Strategy Mapping

A Cause-Effect View of the Business

VISION AND MISSION

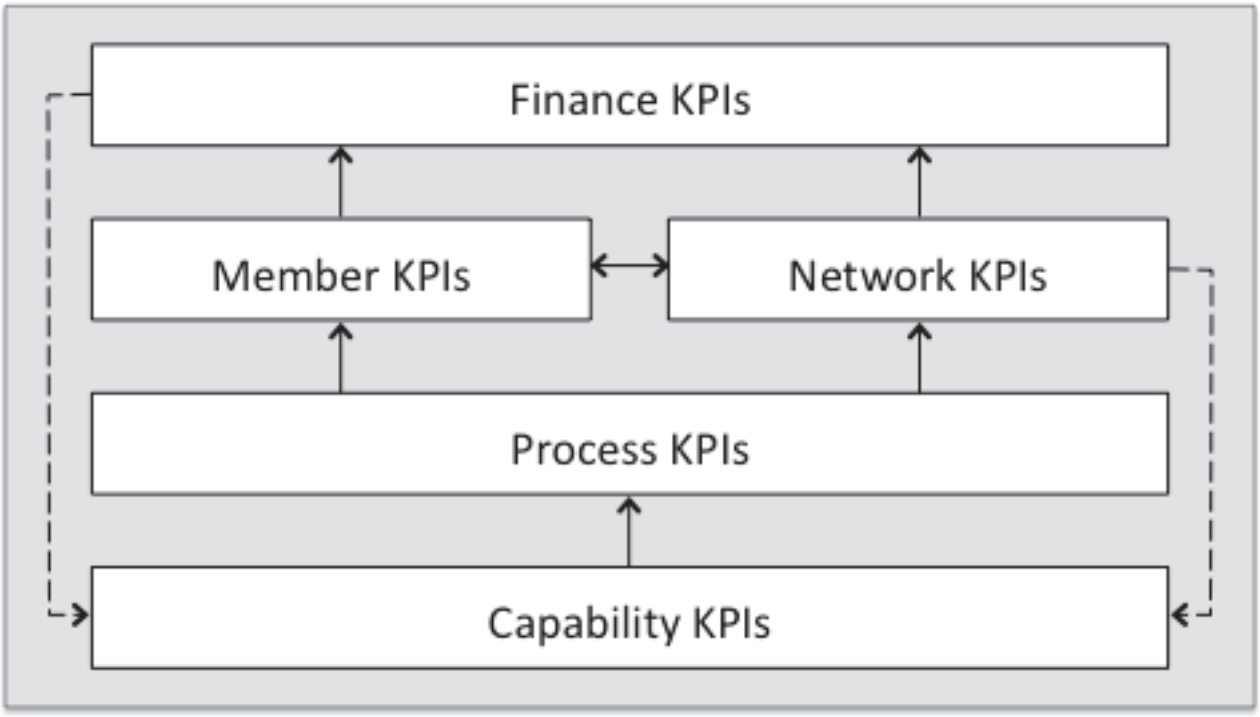
We've not yet discussed the *vision and mission* core at the center of the BSC model. They represent the common element and strongest connection among the scorecard perspectives. Mission describes the purpose of the organization. Vision describes the desired future. Results for each of the perspectives should make meaningful and identifiable contributions to achieving the stated purpose and realizing the desired future.

CAUSE AND EFFECT

The strategy map is a collection of nodes (the bubbles) linked with arrows to illustrate the chains of influence among the nodes. Nodes may represent objectives, critical success factors, and business outcomes. Each node is unique to one of the scorecard perspectives. No node should appear in more than one perspective or "sit on the fence" between perspectives.

Performance Indicators

From Mapping to Metrics



Performance Indicators

From Mapping to Metrics

KPI DEFINED

Key performance indicators are "financial and non-financial metrics used to help an organization define and measure progress toward organizational goals."[1] This definition from the book *Business Dashboards: A Visual Catalog for Design and Deployment,* contains several key concepts:

- All KPIs are metrics but not all metrics are KPIs.
- KPIs include both financial and non-financial metrics.
- KPIs help to define organizational goals.
- KPIs help to measure progress toward goals.

A metric refers to a measurement of business activity. But in a performance management system, we want to do more than just measure business activity; we want to measure performance aligned with business strategy.

LINKING KPIs

With the strategy map as a guide it is practical to deduce the influences among KPIs – the cause-effect relationships among the business results that are measured with KPIs. Linkage among KPIs is a key concept of performance management and a critical element of informed decision processes. When downstream influences of a KPI are known, you've found the key to business leverage – pulling the right levers to get desired results and shape the future. When upstream influences on a KPI are known, you've captured the essence of "actionable" – knowing where you can take action to change business outcomes.

[1] *Business Dashboards: A Visual Catalog for Design and Deployment,* pp. 24, Rasmussen, Chen, and Bansal

Measures and Metrics

Measurement Concepts – Why Measure?

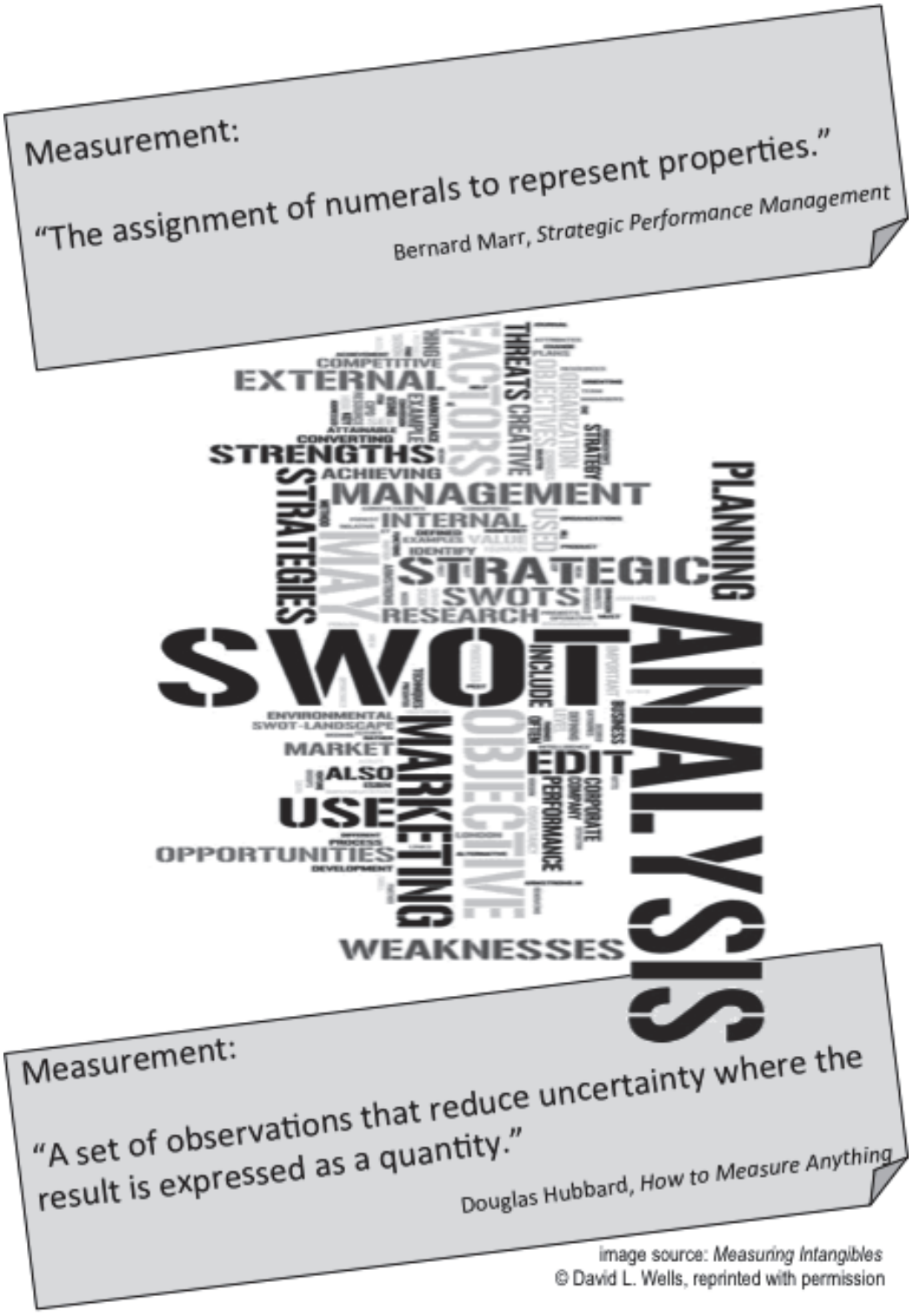


image source: *Measuring Intangibles*
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Measures and Metrics

Measurement Concepts – Why Measure?

DEFINING MEASUREMENT

Bernard Marr defines measurement as "the assignment of numerals to represent properties."[1] There are three key thoughts in this short definition:

- A measurement represents a property of something.
- Properties are represented as numbers.
- The numbers are not the properties. They are artifacts that are assigned by people.

Douglas Hubbard offers a perspective on measurement that provides an interesting contrast to Marr's definition. Hubbard defines measurement as "a set of observations that reduce uncertainty where the result is expressed as a quantity."[2]

USING MEASURES

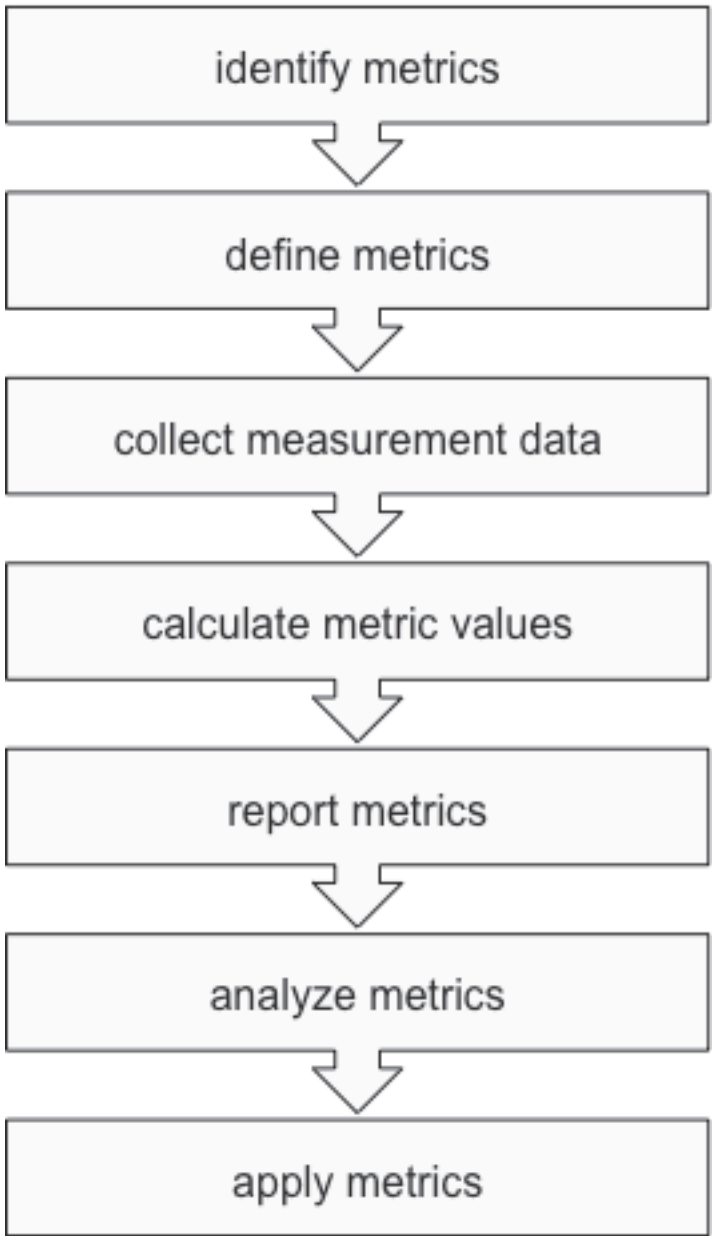
The purpose of business measurement is to provide information and expand the base of knowledge used to make business decisions. From strategic planning to day-to-day operational decisions, managing business is a knowledge-intensive activity.

Andy Neely describes four common reasons to measure – to check position, to communicate position, to confirm priorities, and to compel progress.[3] The most powerful of these reasons is clearly to compel progress. That is the future-looking purpose. The other reasons focus on past and present.

[1] *Strategic Performance Management,* Marr
[2] *How to Measure Anything,* Hubbard
[3] *Business Performance Measurement,* Neely

Implementing Metrics

Process Overview



Implementing Metrics

Process Overview

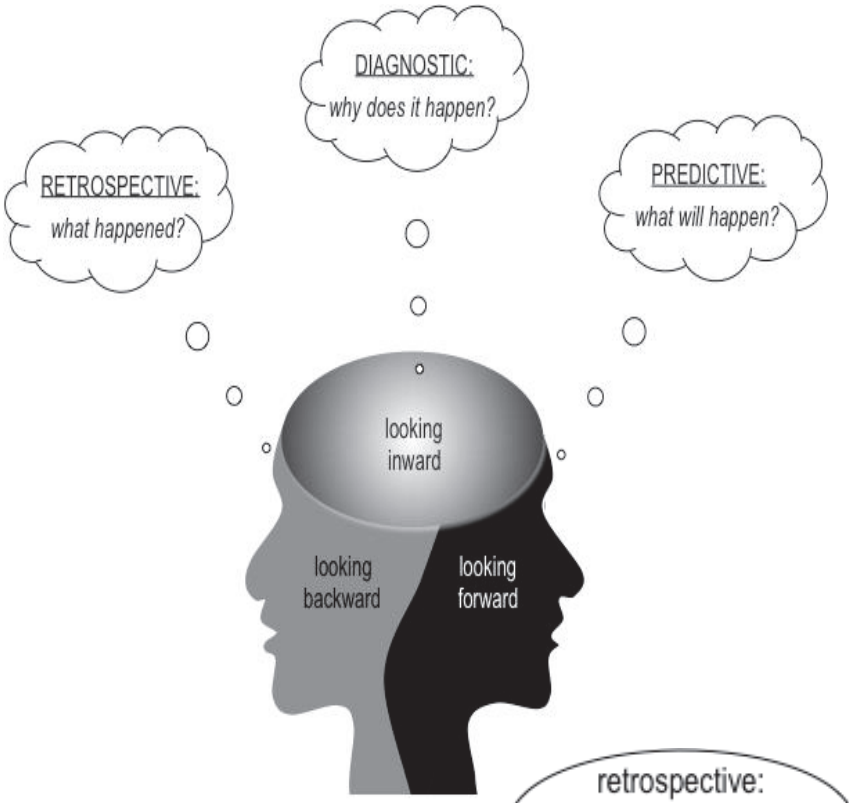
WORKING FROM IDENTIFICATION TO APPLICATION

Metrics implementation involves a sequence of activities that begins with identification and concludes with application of metrics, as outlined below.

- Metrics identification
  - What to measure
  - Purpose: predictive, diagnostic, retrospective
  - Structure: subject, quantum, strata
  - Application: audience and intent
- Metrics definition
  - Name and description
  - Measurement scale and units
- Measurement
  - Data sources and data collection methods
  - Data requirements: quantity, identity, timing, reference data
  - Comparative data
- Metrics calculation
  - Base measures to derived measures
  - Derived measures to metrics
  - Aggregation
- Metrics reporting
  - OLAP
  - Scorecards
  - Dashboards
- Metrics analysis
  - Comparative analysis
  - Causal analysis
  - Predictive analysis
- Metrics application
  - Awareness and understanding
  - Decision and action

Metrics Application

Purpose of the Numbers



retrospective: reports past performance

diagnostic: with drill down to analyze variation

Underwriter Simple Loss Ratio	
Description	Underwriter Simple Loss Ratio is the percent of earned premium dollars that is lost as claims expense for each underwriter. It quantifies financial risk inherent in policies, and is a key measure of underwriter performance.
Unit of Measure	Percentage
Calculated as	(claim payments + adjustment expenses) / earned premium
Aggregated by	Month, Line of Business, Underwriter, Agent
Classified as	☐ finance ☐ customer ☑ process ☐ people ☐ strategic ☑ tactical ☐ operational

Metrics Application

Purpose of the Numbers

RESTROSPECTIVE Retrospective metrics measure process performance and conditions that exist on completion of a process. Retrospective analysis looks at past performance to know what happened. Retrospective metrics help to validate predictive metrics and are an integral part of learning and growth through feedback.

DIAGNOSTIC Diagnostic metrics measure relationships and correlations among the components of a process. Diagnostic analysis seeks to know why things happen, and to understand variance of actual outcomes from what is expected. This kind of cause-and-effect analysis is essential, when performance falls below expectations, to determine how to improve.

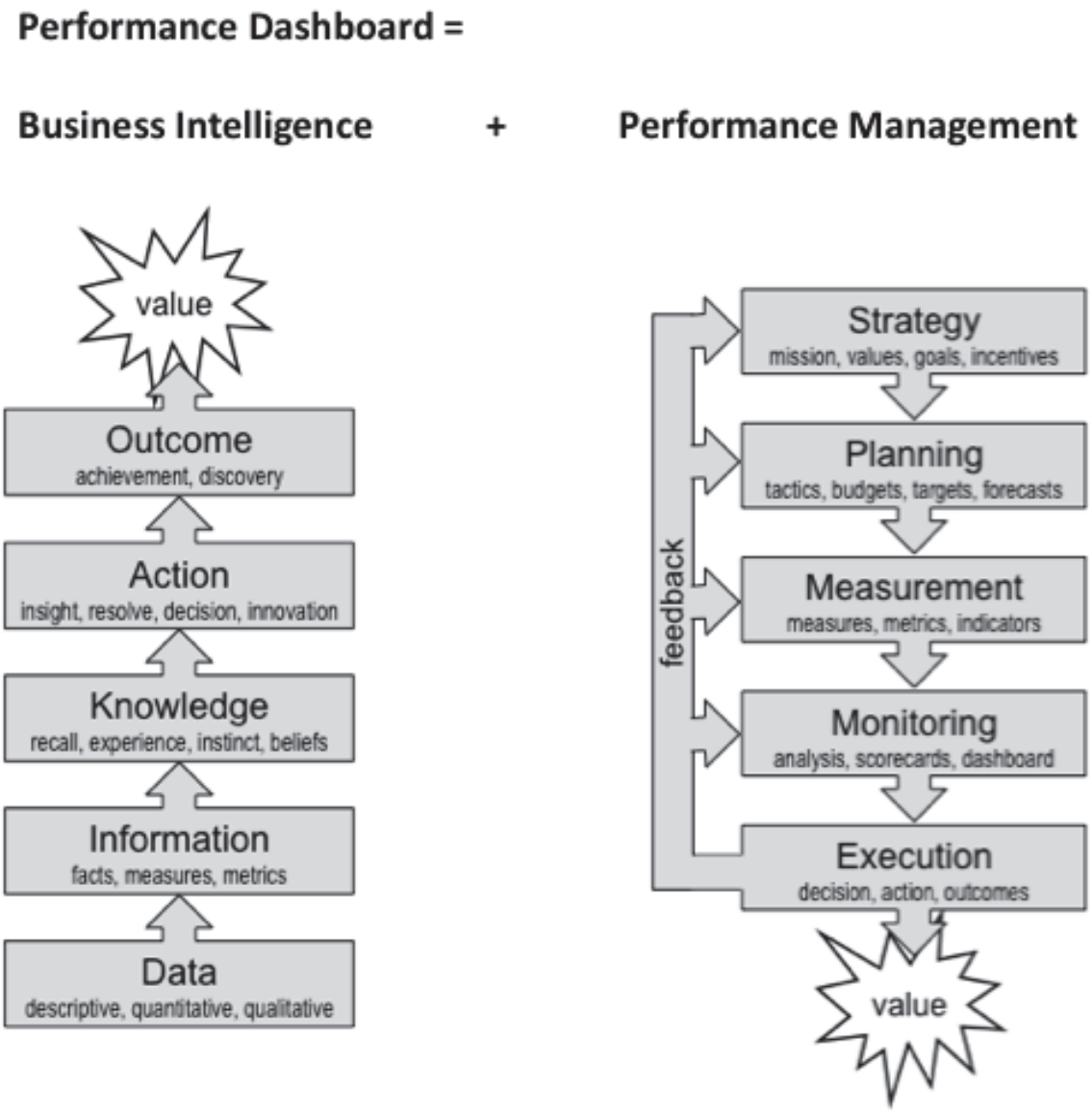
PREDICTIVE Predictive metrics are measures of future performance expectations. As measures of the future they have no corresponding true value at the time they are reported. Every predictive metric is a forecast – an estimate of future outcomes and conditions. Predictive analysis builds on diagnostic analysis to forecast future performance. Predictive information is valuable when revising and adjusting performance goals.

Module 3

Performance Dashboards for Performance Management

Performance Dashboard Concepts

Performance Dashboard Defined



Performance Dashboard Concepts

Performance Dashboard Defined

PERFORMANCE MANAGEMENT WITH BUSINESS INTELLIGENCE

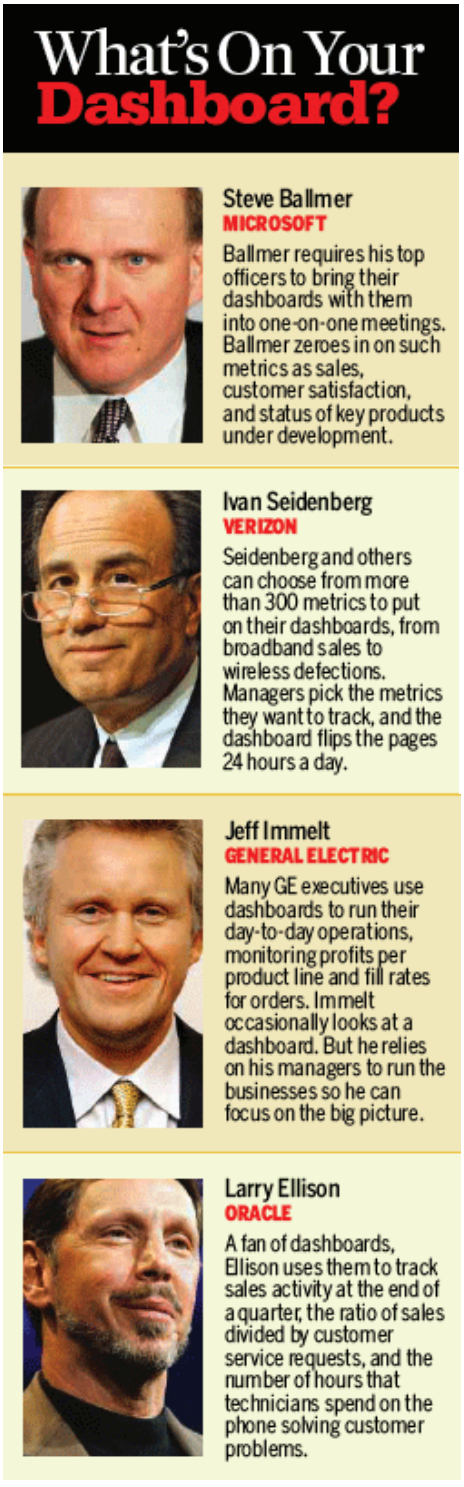
Performance dashboards are the combination of two different disciplines:

- Business intelligence (BI), which combines data integration with reporting and analysis tools to support informed business decisions and actions.
- Performance management (PM) to provide strong linkage from business strategy to execution. Performance management depends on measurement and feedback to connect strategy, tactics, and operations.
- The combination of BI and PM is necessary to create a performance dashboard. The dashboard is more than a screen filled with charts and graphs. It is a tool for business executives, managers, and knowledge workers to quickly see the state of the business and to monitor key trends in business performance.

Using Dashboards

Who, When, and Why?

Business Week Cover Story- February 13, 2006



What's On Your Dashboard?

Steve Ballmer
MICROSOFT
Ballmer requires his top officers to bring their dashboards with them into one-on-one meetings. Ballmer zeroes in on such metrics as sales, customer satisfaction, and status of key products under development.

Ivan Seidenberg
VERIZON
Seidenberg and others can choose from more than 300 metrics to put on their dashboards, from broadband sales to wireless defections. Managers pick the metrics they want to track, and the dashboard flips the pages 24 hours a day.

Jeff Immelt
GENERAL ELECTRIC
Many GE executives use dashboards to run their day-to-day operations, monitoring profits per product line and fill rates for orders. Immelt occasionally looks at a dashboard. But he relies on his managers to run the businesses so he can focus on the big picture.

Larry Ellison
ORACLE
A fan of dashboards, Ellison uses them to track sales activity at the end of a quarter, the ratio of sales divided by customer service requests, and the number of hours that technicians spend on the phone solving customer problems.

Using Dashboards

Who, When, and Why?

MANAGEMENT MAINSTREAM

The *Business Week* cover story shown on the facing page indicates that dashboards have been part of mainstream business management for several years. Dashboards are not new and they are expected today in most business management cultures. Top executives use them, and they tumble down through all levels of management.

DECISION-MAKING INFORMATION

Well designed performance dashboards are effective tools whenever insight is needed to communicate the state of the business or to inform decision-making processes. They are useful for:

- Communication and discussion focus in meetings and conversations.
- Mobile connection to the business when away from the office.
- Keeping informed with real-time views of the business.
- Staying on top of day-to-day business operations.
- Managing business alignment.
- Navigating business change.
- Charting business direction and making course corrections.

BUSINESS FRIENDLY

Performance dashboards resonate with a majority of business managers. The interface is business friendly. It conforms to how a typical manager wants to view and consume information, and doesn't force conformity to how the tools work. Managers like performance dashboards because they:

- Make it easy to monitor status of several areas simultaneously.
- Require little or no training to use.
- Graphically display performance information.
- Alert managers to exception conditions.
- Allow click-through drilling to analyze causes and view detail.
- Provide timely information.
- Replace hundreds or thousands of reports.

Using Scorecards

Who, When, and Why?

Corporate Scorecard

	Actual	Target	
Financial Perspective			
Increase Shareholder Value			
Productivity	43.2%	35.0%	-23%
Growth	-9.88 %	0.00 %	10%
Customer Perspective			
Customer Satisfaction	8.1	7.5	8%
Market Share	5.0%	10.0%	-50%
Internal Perspective			
Inventory Turnover	20	30	-33%
Resource Usage	73.0%	75.0%	-3%
Order Fulfilment	81.0%	85.0%	-5%
Learning and Growth			
Employee Satisfaction	87.0%	95.0%	-8%
Training and Development	75.0%	90.0%	-17%

Basic scorecard showing actual value, target value, status and variance.

Sales scorecard showing actual values, performance to target, variance, status, and trends.

13-Month Trend	Categories	YTD Sales and Contribution Levels		YTD Sales to Target
	Electronics	120,808	32%	93%
	Hardware	118,733	31%	102%
	Software	52,270	14%	84%
	Peripherals	47,259	12%	97%
	Photo	43,634	11%	113%
	Grand Total	**382,704**	**100%**	**104%**

Using Scorecards

Who, When, and Why?

THE SCORECARD CONCEPT

A performance scorecard presents a collection of metrics (performance indicators) that are the basis to judge performance. Quantitative data presented for each metric normally includes the actual value, a comparative value such as a target or goal, and the variance between actual and target. Visual data typically includes indicators of status and directional trend.

Richard Chang and Mark Morgan define a performance scorecard as "a selected set of measures that provides a balanced and timely view of business performance specific to an area of responsibility."[1]

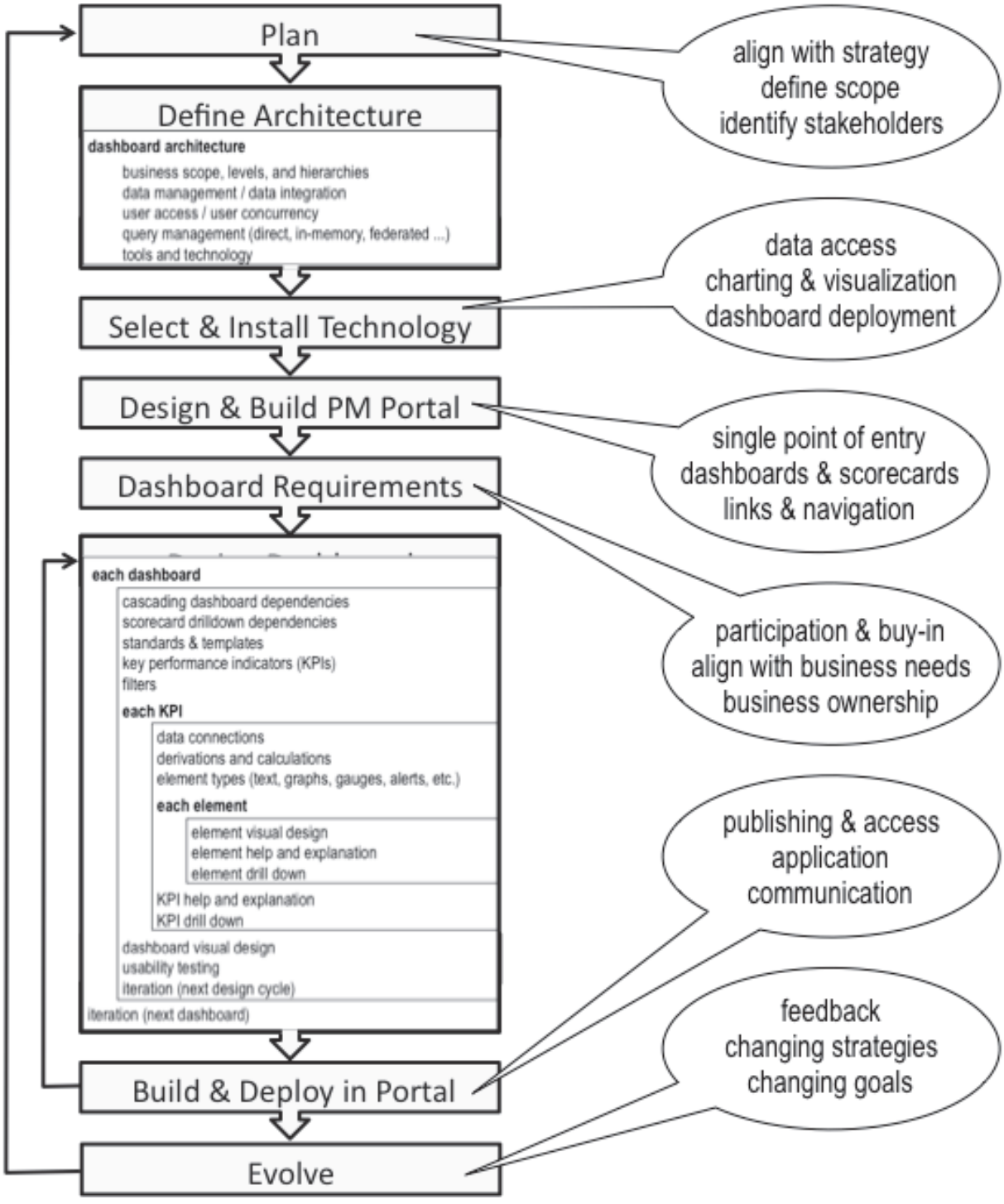
[1] *Performance Scorecards: Measuring the Right Things in the Real World,* pp. 9, Chang and Morgan

Module 4

Dashboard and Scorecard Design Techniques

Implementing Dashboards

From Planning to Production



Implementing Dashboards

From Planning to Production

MORE THAN DESIGN

As with scorecards, design is only one step in the implementation of a dashboard. From planning to evolution, implementation includes these steps:

- Planning to align dashboards with business strategy, set the scope, and identify the business stakeholders.
- Architecture, as previously discussed, to build the foundation for dashboard development and deployment.
- Technology selection and installation. It is impractical to build your own dashboard solution, and many commercial dashboard products are available. Consider data access, charting and visualization, and publishing/deployment.
- Creation of a performance management portal. Avoid random scattering of disconnected dashboards by providing a single point of entry for performance management information. Provide users with an integrated view into dashboards and scorecards including the tools to understand how they are linked and how to navigate among them.
- Define dashboard requirements with attention to participation, buy-in, alignment with business needs, and creating a sense of business ownership of the dashboards.
- Dashboard design, as previously discussed, including the set of KPIs and the visual elements for presentation.
- Deployment of dashboard in a portal. As with scorecards, dashboard deployment goes beyond publishing to include application with the human activities of analysis and communication.
- Evolution of performance management with feedback, recognition and responsiveness to change, and iteration.

Dashboard Requirements

The Big Picture

Scope
- entire organization or single process, product, function, etc.

Business Role
- strategic, tactical, or operational

Timeframe
- historical, snapshot, real-time, or predictive

Customizing
- standard display, user selectable, or user customizable

Granularity
- high level summary or drill to detail

Business Purpose
- describe, prescribe, or explore

Media and Mobility
- printable, big screen, browser, tablet, smartphone

Structure
- flow, relationships, or grouping

Form Factor
- single page, scrollable, tabbed, linked

Navigation and Interaction
- tabs, filters, drilldown, annotation, export

Dashboard Requirements

The Big Picture

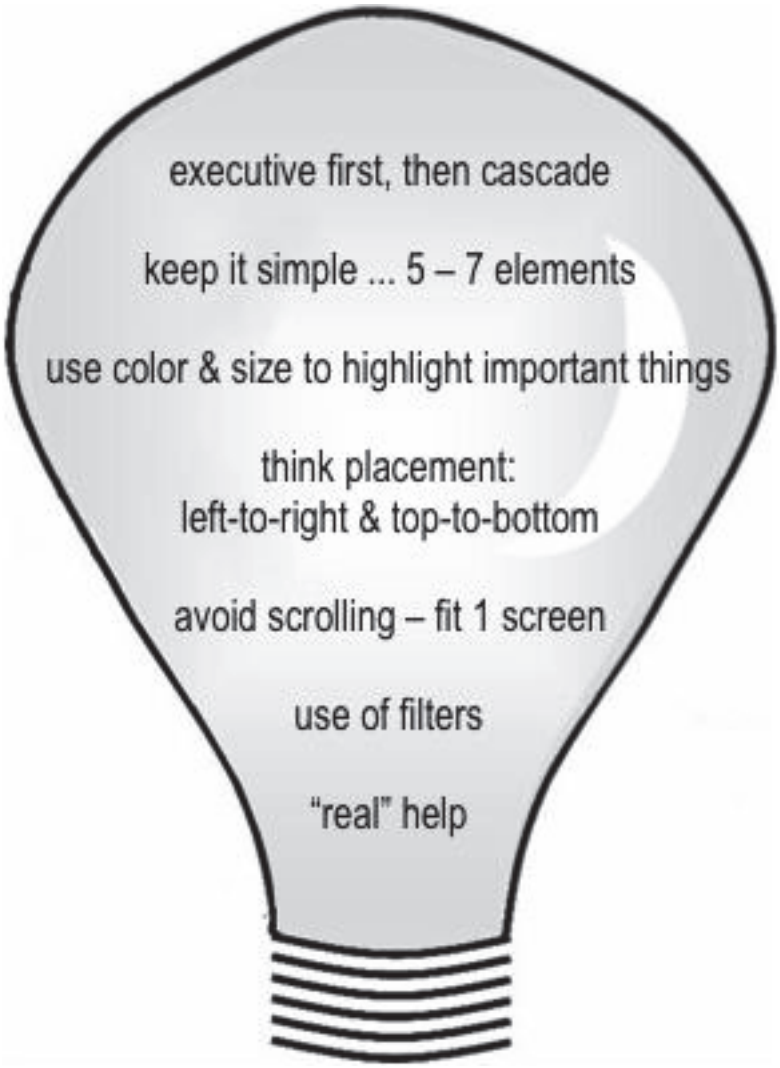
COMPLETE REQUIREMENTS

Dashboard requirements are many and complex. It is easy to focus on the visual and navigation requirements for a dashboard and lose sight of some equally important but less obvious requirements. The following set of questions is useful to ensure a complete set of requirements:

- *What is the scope of the dashboard?*
  Is it intended to monitor an organization, a process, a product, a business function, or another kind of entity or activity?
- *What is the business role of the dashboard?*
  Will it be used strategically, tactically, or operationally?
- *What is the timeframe of the dashboard?*
  What data is required – historical, point-in-time, real-time, or forecasts and predictions?
- *What kinds of customization are needed?*
  Presentation using a single standard display? Or will users be able to select metrics and visual elements? Can they personalize the layout?
- *What levels of granularity are needed in the data?*
  Will the dashboard show only high-level summary? Will it support drill down? To what levels of detail?
- *What is the business purpose of the dashboard?*
  Is it intended to describe and inform, to recommend and prescribe actions, or to drive exploration and simulation?
- *On what media and devices will the dashboard be presented?*
  Will it be printable? Will it be displayed on large screens? What about web browsers? Will you support mobility on tables and smartphones?
- *How will you organize and structure metrics on the dashboard?*
  Based on workflow or process flow? Emphasize relationships such as cause/effect or leading/lagging relationships? Grouping based on categories such as balanced scorecard perspectives?
- *What form factor is needed?*
  Single page without scrolling? Scrollable? Tabbed interface? Linked pages?
- *How will you support navigation?*
  Will you (and how will you) use tabs, filters, breadcrumbs, drill down, and annotation? Will you support export to MS Office?

Dashboard Design

Design Tips



Dashboard Design

Design Tips

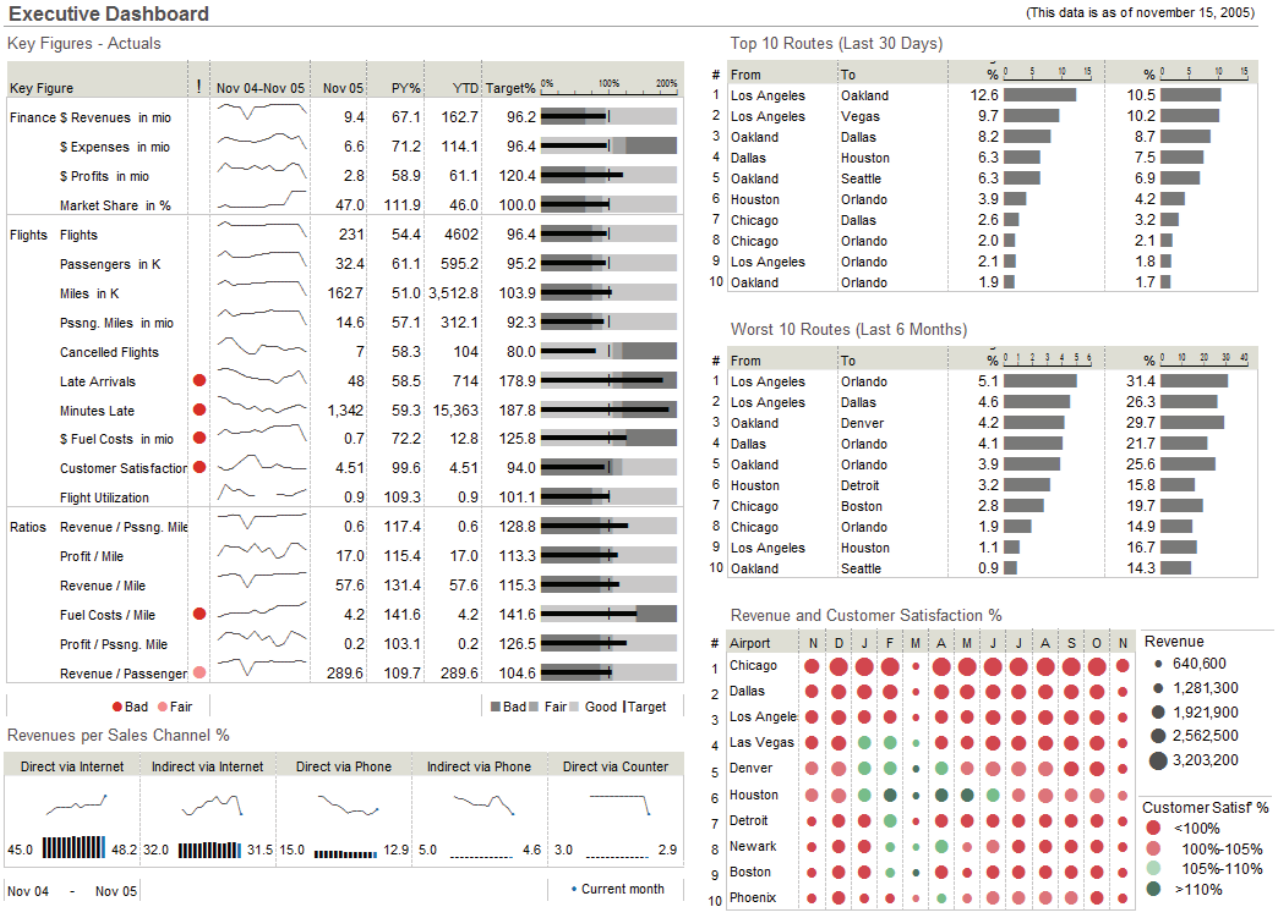
DESIGN GUIDELINES

The facing page illustrates a few best practices identified through experience building and deploying dashboards. These tips are primarily concerned with the viewer experience when working with a dashboard.

- Keep it simple – The goal of a dashboard is a *quick look* at the key indicators of performance. Experience shows that a dashboard with more than seven elements is too complex to absorb quickly.
- Highlight – Aid the quick view by highlighting the most important things with conscious choices about element color and size.
- Placement – Think left-to-right and top-to-bottom. Place the highest priority elements in the upper left corner of the dashboard.
- Avoid scrolling – Keep it all on one screen. Out of sight is not compatible with the idea of a quick look. Fitting it all on a single screen is tough. But it is achievable when you limit the number of elements, avoid decoration, and make every pixel count.
- Use filters – Allow the viewer to quickly limit the data and perspective needed with easy-to-use interactive filters.
- Provide real help – Include help functions at multiple levels: context-sensitive with mouse-over and right-click functionality and greater depth with separate help screens or pages.

Dashboard Examples

Balancing Sparsity and Density



Dashboard Examples

Balancing Sparsity and Density

INFORMATION DENSITY

The facing page shows an example of a dashboard with everything on one screen and no drill-down options. This design balances visual sparsity with information density.

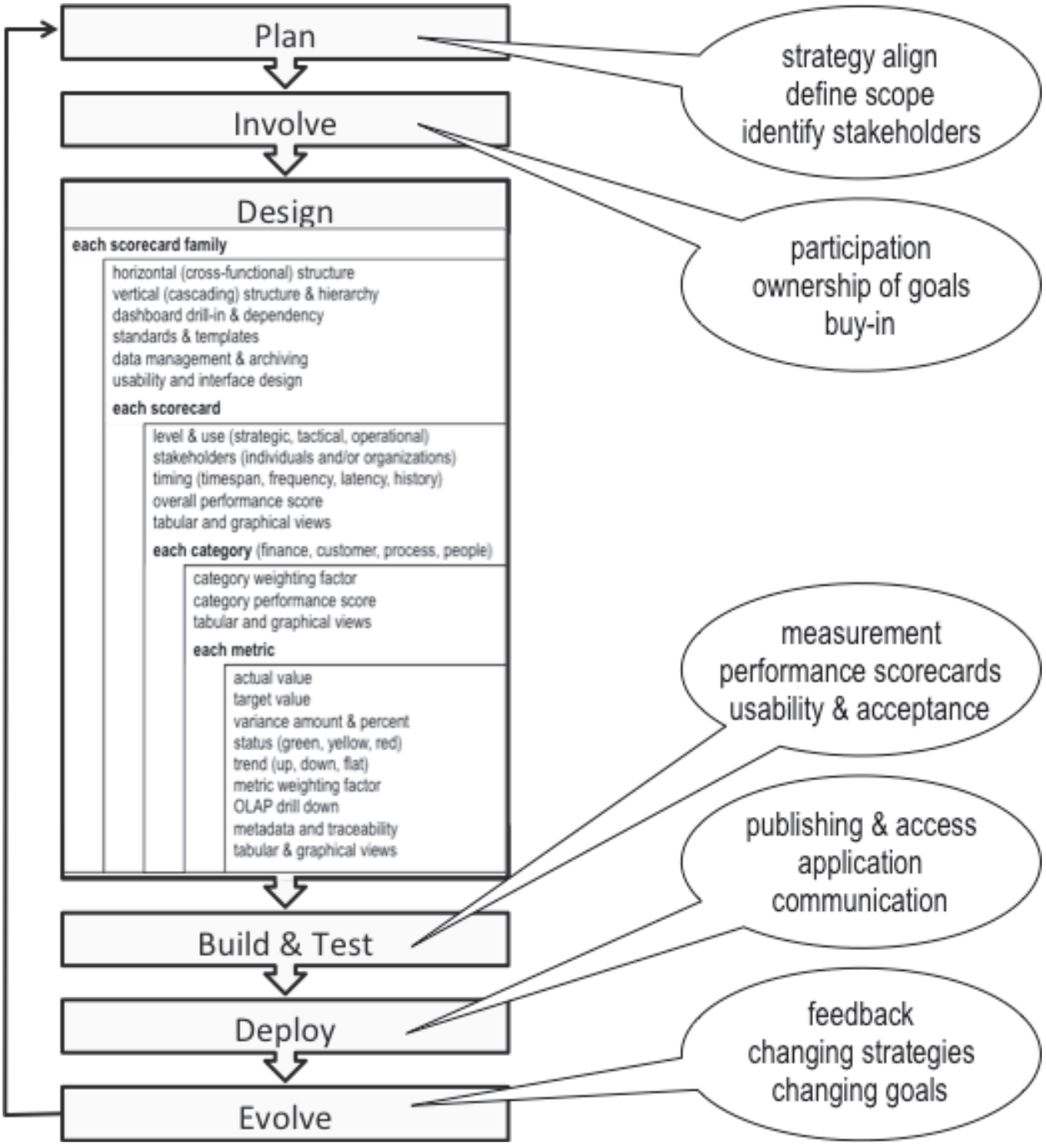
With careful use of visual techniques you can fit a lot on a single screen without it feeling cramped. Key features of this design include:

- Muted dotted lines separating the key figures
- White space between sections
- Careful and calculated use of sparklines, bullet graphs, and stand-alone bars

(Source: Andreas Lipphardt, Bonavista Systems)

Implementing Scorecards

From Planning to Production



Implementing Scorecards

From Planning to Production

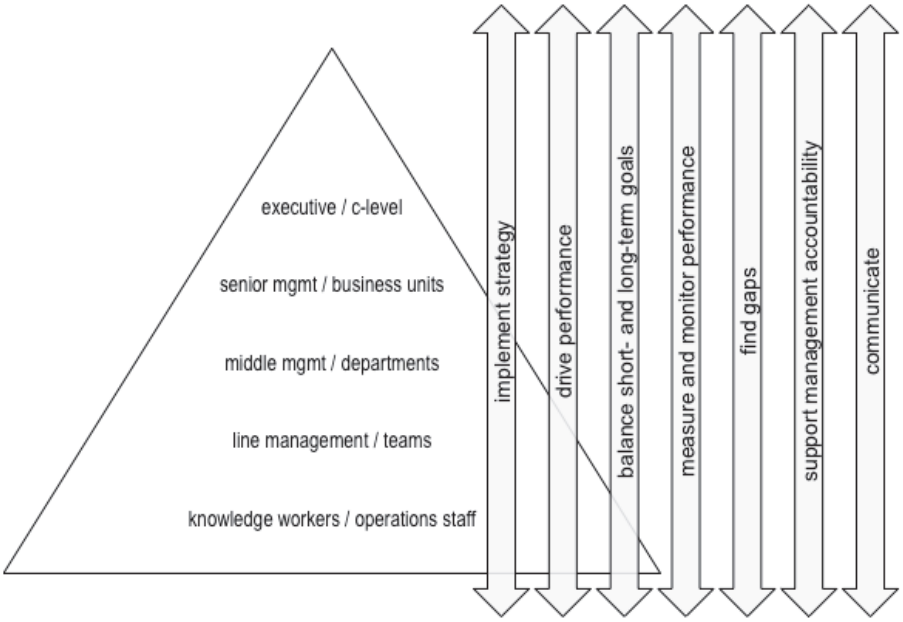
MORE THAN DESIGN

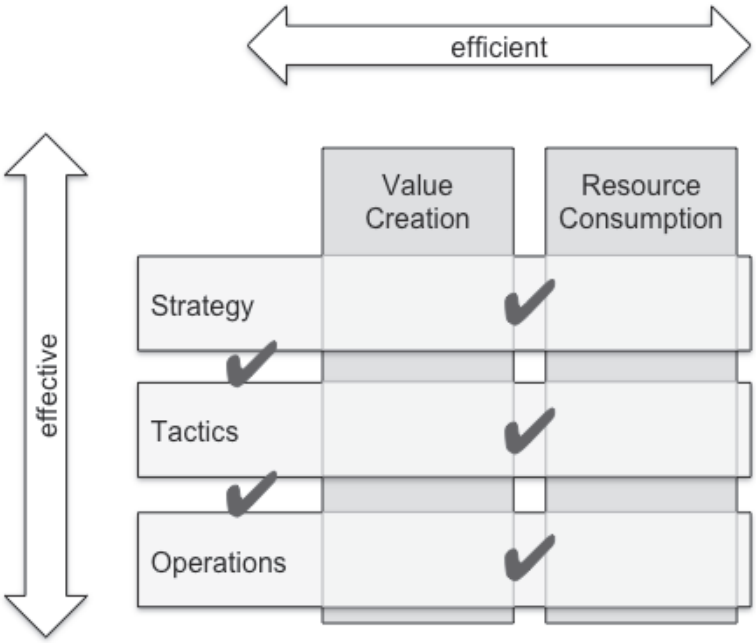
Design is important but is still only one part of scorecard implementation. The entire implementation process encompasses:

- Planning to align scorecards with business strategy, set the scope, and identify the business stakeholders.
- Involvement to engage the participation of stakeholders, and to ensure that the stakeholders buy into performance management processes and take ownership of their performance goals.
- Design, as previously discussed, through the levels of scorecard families, scorecards, performance categories, and individual metrics as performance indicators.
- Development and testing of measurement processes, scorecard production processes, and scorecard usability and acceptance.
- Deployment of scorecards, which goes beyond publishing to include application as the human activities of analysis and communication.
- Evolution of performance management with feedback, recognition and responsiveness to change, and iteration.

Scorecard Requirements

Business Stakeholders





Scorecard Requirements

Business Stakeholders

WHAT

Recall from Module 1 that Richard Chang and Mark Morgan define a performance scorecard as "a selected set of measures that provides a balanced and timely view of business performance specific to an area of responsibility."[1]

WHO AND WHY

Also recall from Module 1 the many uses of scorecards:

- Execute strategy by translating it into concrete terms and measurable objectives that help to track implementation.
- Drive performance by providing feedback to inform people at all levels about how well they perform and what areas need attention.
- Balance long-term and short-term goals by keeping the right balance of strategic, tactical, and operational indicators in view.
- Measure and monitor performance with a carefully designed and strategically aligned model that measures the right things.
- Find gaps through scorecard design and use. The understanding of cause-effect relationships that is needed to link leading and lagging indicators drives awareness of business dependencies and breaks down stovepipes.
- Support management accountability by enabling performance reviews that are regular, thorough, objective, and based on clearly defined targets.
- Communicate by describing business performance clearly and without ambiguity. Well developed scorecards tell the whole story of performance – how many complex variables are being balanced, connected, and collectively optimized.

EFFECTIVENESS AND EFFICIENCY

Also recall the concepts of business effectiveness and efficiency. Connecting these concepts with areas of responsibility is the key to identifying stakeholders and their interests.

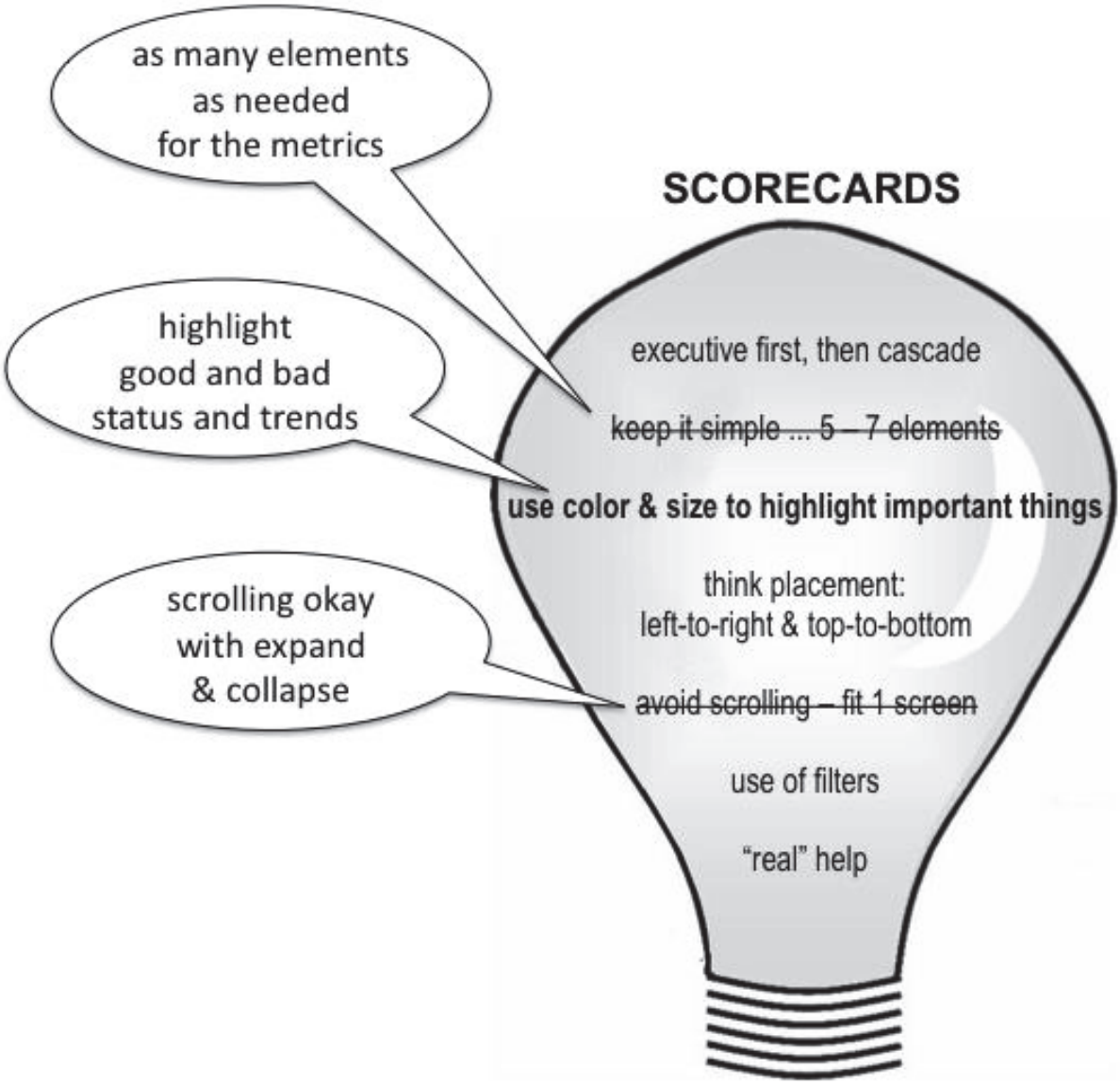
OWNERSHIP AND ACCOUNTABILITY

Gathering scorecard requirements depends on buy-in and participation of the right stakeholders – those who are accountable for goal achievement. Goal owners are also scorecard owners; they are the people who monitor results, make decisions, and take actions to change business results.

[1] *Performance Scorecards: Measuring the Right Things in the Real World,* pp. 9, Chang and Morgan

Scorecard Design

Scorecards vs. Dashboards



Scorecard Design

Scorecards vs. Dashboards

DESIGN TIPS

Many of the design tips described for dashboards also apply to scorecard design. Those guidelines that hold true for scorecards include:

- For best results start at the enterprise (or executive) level and then cascade systematically to business units, departments, work groups, and individuals.
- Left-to-right and top-to-bottom concepts still apply. In a tabular scorecard design, place the most important information – indicator name, status and trend, actual value – in the leftmost columns. Place the most important metrics at the top of the list.
- Use filters to help focus on specific business circumstances.
- Provide real help that makes the indicators understandable and scorecard navigation easy.

SCORECARD DIFFERENCES

Although many of the dashboard design tips apply to scorecard design, there are some subtle differences:

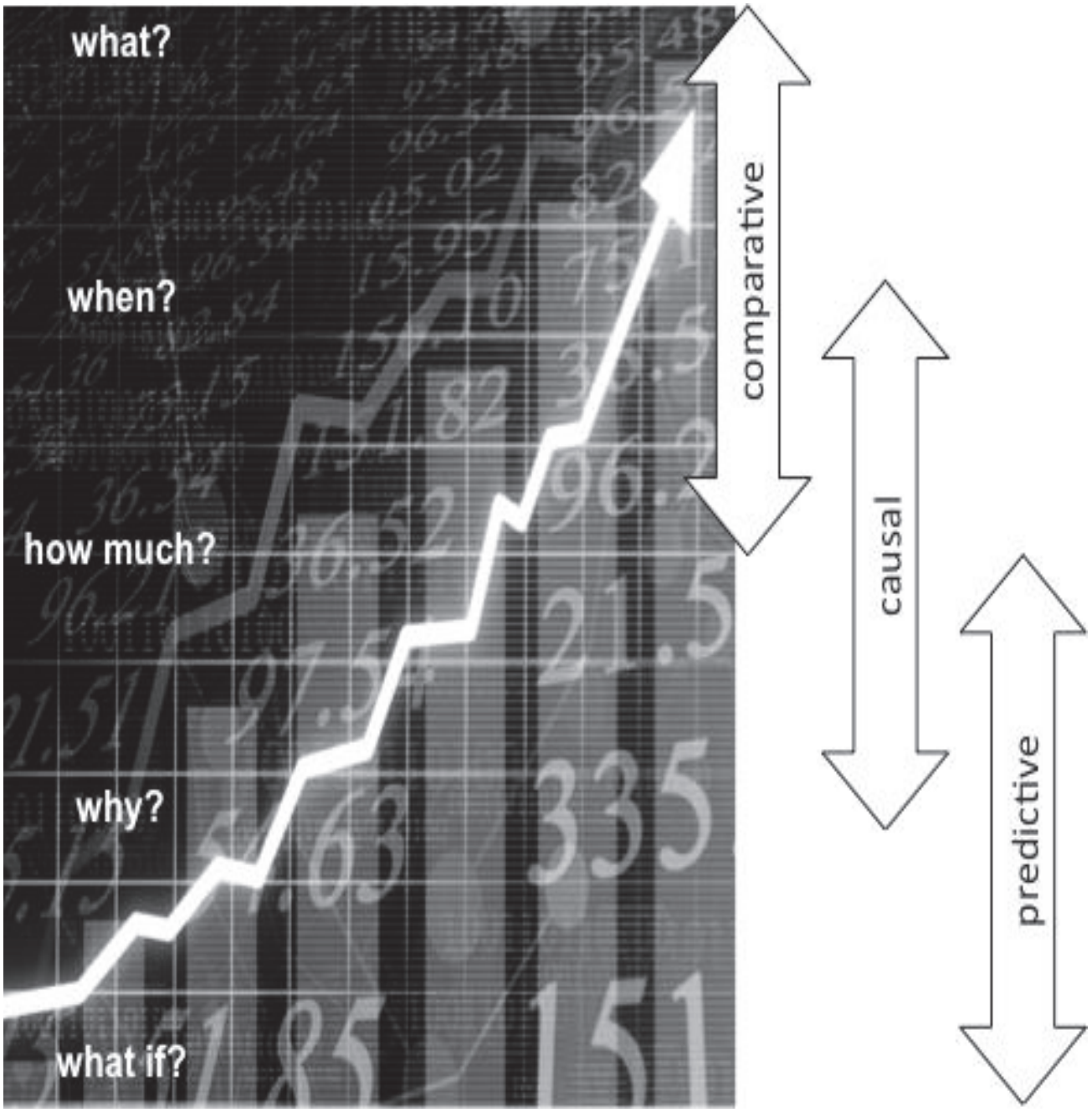
- Dashboards recommend five to seven elements to achieve simple display and rapid absorption. Scorecards should include as many elements as needed to present the right set of performance indicators.
- Dashboards recommend use of color and size to highlight important things. For a scorecard, color and size should be used consistently for highlighting and applied specifically to draw attention to positive and negative status and trends.
- Dashboards recommend fitting a single screen without scrolling. For a scorecard scrolling is acceptable and often unavoidable – especially in a tabular view. Manage long lists and scrolling by:
  - Placing the most important indicators “above the fold”
  - Expand and collapse features for groups of performance indicators
  - Minimizing top-of-page features such as headers, footers, toolbars, and tabs

Module 5

The Human Side of Performance Management

Working with Performance Indicators

Comparative, Causal, and Predictive Analysis



Working with Performance Indicators

Comparative, Causal, and Predictive Analysis

FROM METRICS TO KNOWLEDGE

Analysis is the work of examining the metrics to develop knowledge. Three layers of analysis include:

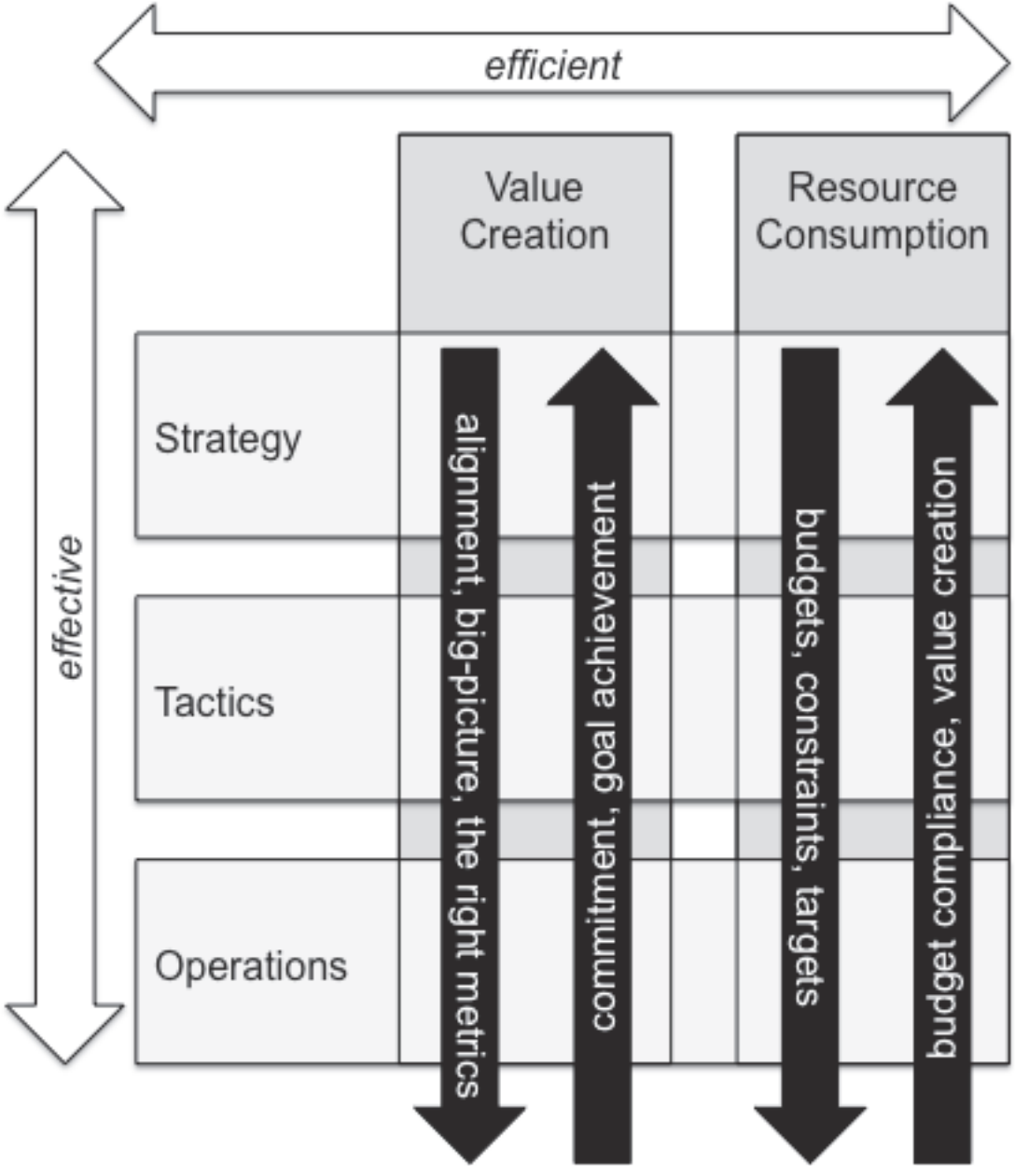
- Comparative analysis that looks at the variance of actual values from target values, and variance among different dimensions. Comparative analysis answers questions of *what, when,* and *how much.*

- Causal analysis that examines correlation among various performance indicators to identify influences and understand cause-and-effect chains. Causal analysis answers the question *why.*

- Predictive analysis that uses patterns and correlations in past performance data to develop inferences about future performance. Predictive analysis answers questions of *what-if* and *what next.*

Performance Management Principles

Responsibility and Accountability



Performance Management Principles

Responsibility and Accountability

PERFORMANCE AND PEOPLE

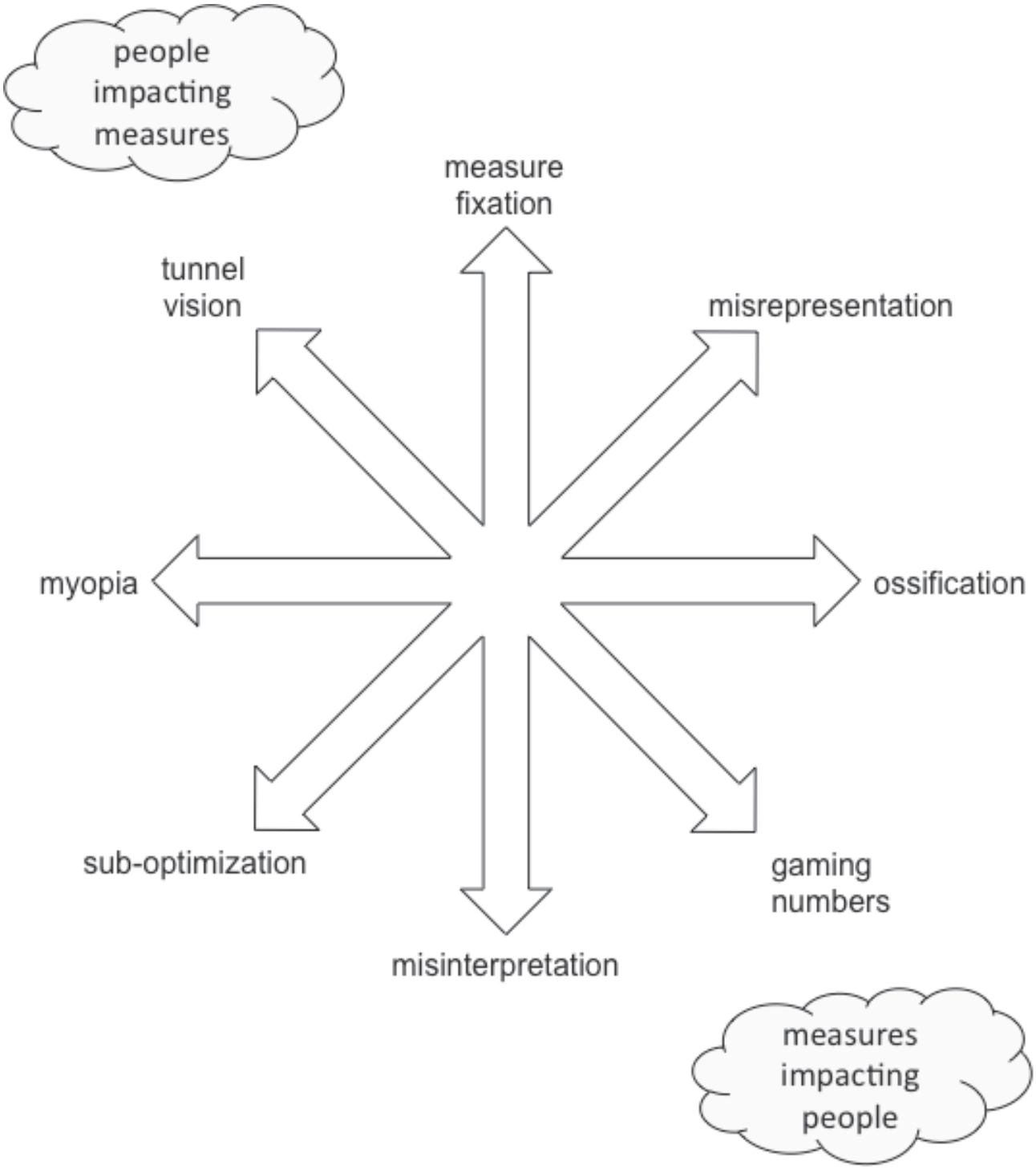
If performance is translation of strategy to results, business performance depends on people fulfilling their obligations to contribute to achievement of business strategy – their responsibilities and accountabilities.

Responsibility is the obligation to take actions and produce results that help to achieve strategic or tactical goals. Responsibility flows downward from strategy to operations with both value and cost components. Value-based responsibilities depend on alignment across the three levels of business activity, organization-wide communication of a "big picture" view, and use of the right metrics. Budgets, constraints, and targets drive cost-based responsibilities.

Accountability is the condition of being answerable to an authority for results and achievement of goals. Accountability flows upward from operations to strategy – operations personnel are accountable to tactical managers, who are accountable to executives at the strategic level. Value-based accountability drives commitment to goal achievement. Cost-based accountability is based on budget compliance and value creation in return for resources consumed.

Performance Management Organizations

Measurement and People



Performance Management Organizations

Measurement and People

UNINTENDED CONSEQUENCES

Measurement is a form of observation, and people, when observed, change how they behave (the Hawthorne Effect). The changes in behavior may be improvements, but it is also possible that undesirable behaviors result from measurement. In *Performance Leadership,* Frank Buytendijk identifies eight unintended consequences of performance management.[1]

- Tunnel vision occurs when we focus on what is easy to measure instead of measuring the important things.
- Measure fixation is a condition of redefining (or attempting to redefine) the meaning of the measures to make the numbers look better.
- Misrepresentation is the act of cheating the system by forging or faking the numbers.
- Ossification is the act of presenting outdated (but presumably better than current) information.
- Gaming the numbers is the behavior of underachieving once targets are met.
- Misinterpretation is incorrect or incomplete interpretation of the meaning in the metrics.
- Sub-optimization uses company resources to drive local goals instead of corporate and strategic objectives.
- Myopia is the condition of focusing on short-term numbers and quick wins at the expense of long-term goals.

[1] *Performance Leadership*, pp 38-41, Buytendijk

