DESIGNING AND TRACKING KNOWLEDGE MANAGEMENT METRICS

WORKING METHODS FOR KNOWLEDGE MANAGEMENT

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INVESTOR IN PEOPLE

CONTENTS

INTRODUCTION TO THE SERIES – WORKING METHODS IN KNOWLEDGE MANAGEMENT

Knowledge sciences as a discipline has a rich and diverse history dating back to the 1950s. In the past 70 years, the discipline has drawn theory and practice from economics, engineering, communications, learning sciences, technology, information sciences, psychology, social sciences, and business and organization management. To craft this discipline, we have developed our own language and terminologies, established our own peer-reviewed journals and built a rich research foundation, created a gray literature, and established a series of networks and conferences. Over the decades, there have been many knowledge management education programs, but there is no consistent curriculum and few have sustained. It has been challenging for new practitioners to gain an understanding of the field. And, while the practice of knowledge management is growing around the world, it has not yet achieved the expected organizational stature. For knowledge management to rise to the stature of other business functions and operations, it must be able to speak the language of business, align with, and support the way the organization works.

This series is designed for business and knowledge management practitioners. Working Methods in Knowledge Management is a multi-year and multi-volume series designed to address each and all of the methods required to establish and sustain an organization-wide knowledge management function. The goal of the series is to provide a business perspective of each topic. Each book begins by grounding the method in the business context – then translates established business models and methods to a knowledge management context. It is often the case that this translation expands and extends the business model and method.

The knowledge management literature is rich with introductory handbooks, guidebooks, cookbooks, toolkits, and practical introductions. This literature is an important starting point for anyone new to the discipline. We recommend any and all of these books as a way to build a fundamental understanding of the scope and coverage of the field. These texts will provide a good 10–20-page introduction to all of the key issues you need to be aware of as you embark on a new career in the field or have been assigned a new knowledge management role or responsibility. Once you have that grounding, though, we recommend that you look to the Working Methods in Knowledge Management texts as an intermediate source for understanding "What comes next? What now?"

Just as this series is not intended as a starting point for the field, neither is it an ending point. Each text is designed to support practical application and to foster a broader discussion of practice. It is through practical application and extended discussion that we will advance theory and research. The editors anticipate that as practice expands, there will be a need to update the texts – based on what we are learning. Furthermore, the editors hope the texts are written in a way that allows business managers to extend their work to

include knowledge management functions and assets. We will learn most from expanding the discussion beyond our core community.

JOINT ENTERPRISE, MUTUAL ENGAGEMENT, AND A SHARED REPERTOIRE

From the outset, the publisher and the editors have established a new and different approach for designing and writing the books. Each text is supported by a team of authors who represent multiple and diverse views of the topic. Each team includes academics, practitioners, and thought leaders. Every author has grappled with the topic in a real-world context. Every author sees the topic differently today than they did when the project began. Over the course of several months, through weekly virtual discussions, the scope and coverage were defined. Through mutual engagement and open sharing, each team developed a joint enterprise and commitment to the topic that is enduring. Every author learned through the discussion and writing process. Each project has resulted in a new shared repertoire. We practiced knowledge management to write about knowledge management. We "ate our own dog food."

ACKNOWLEDGMENTS OF EARLY SUPPORT

The series is a massive effort. If there is value in the series, much of the credit must go to two individuals – Dr. Elias Carayannis, George Washington University, and Dr. Manlio Del Giudice, University of Rome. It was Dr. Carayannis who first encouraged us to develop a proposal for Emerald Publishers. Of course, this encouragement was just the most recent

form of support. He has been a mentor and coach for close to 20 years. It was Dr. Carayannis who first taught me the importance of aligning knowledge management with business administration and organizational management. Dr. Del Giudice has been generous with his guidance – particularly in setting a high standard for any and all knowledge management research and practice. We are grateful to him for his careful review and critique of our initial proposal. His patience and thoughtful coaching of colleagues are rare in any field. The field will reach its full potential as long as we have teachers and editors like Dr. Del Giudice.

PREFACE

OVERVIEW OF THE SUBJECT MATTER

The focus of this book is on designing and tracking knowledge management metrics. It is clear from the extensive research conducted by the authors that metrics are context specific – organization specific and decision specific. The metrics research, the metrics discourse, and the use of metrics are so extensive that one can find justification for almost any approach they choose to take. Unfortunately, metrics misuse and metrics malpractice is as widespread in business as is reputable and trustworthy use. To avoid these pitfalls, the authors walk the reader through designing and implementing a knowledge management metrics strategy that is both rigorous and relevant to the context.

The authors conducted extensive reviews of the peer-reviewed and gray literature of business and knowledge management metrics. What we learned is that the most successful metrics strategies are designed to support leaders and managers as they make decisions everyday – at all levels, in all functions, in any kind of organization, in any kind of structure, and in any business environment. Metrics have the greatest value in a decision-making context. Metrics are not just "for show" – they are essential management tools. Everyday leaders and managers analyze situations, weigh options, and measure what an organization does. Everyday managers

and leaders make decisions. A decision is a course of action purposely chosen from a set of alternatives to achieve organizational or managerial goals and objectives. There is a metric at the foundation of every decision. Sometimes, these metrics are explicit and transparent. Other times, they are implicit and embedded in the thought process. Decision-making is a continuous and indispensable component of managing every organization's activities. The use of metrics in decision-making is the most comprehensive and effective way to understand an organization's metrics strategy and culture.

An organization's knowledge metrics strategy must align with its business metrics strategy if it is to be trusted and accepted by executives, managers, and individuals. Knowledge management metrics must describe how an organization uses knowledge in all of its business functions and processes, how it supports knowledge management functions, and how it manages its knowledge assets. Organizations make decisions about how their knowledge assets every day. They make decisions about how to use knowledge in business decisions. They make decisions about how to manage, account for and evaluate knowledge assets. And, they make decisions that are integral to everyday management processes. Yet, the current literature on knowledge management metrics describes metrics that are generally out of the mainstream thinking about metrics. Knowledge management metrics frequently focus on project level metrics – specifically on measures that might be used to justify or close down knowledge management projects.

This focus ignores the decisions everyday made by knowledge management practitioners. This focus prevents us from focusing on metrics as a practical tool for both business and knowledge managers. And, this focus hides the richness and complexity of knowledge-related activities across the organization.

This book makes the case for a consistent, reliable, trusted management-level approach to knowledge management metrics. The book argues for the need to formulate a knowledge management metrics strategy, to align that strategy with the organization's decision-making and metrics culture, to engage business managers in its implementation, and to integrate it with the organization's data management and communication architectures.

The authors highlight the need for every organization to develop its own knowledge management measurement strategy. Every organization has unique business goals and objectives. Every organization makes business decisions to achieve those goals and objectives. How an organization uses knowledge to achieve those goals, and how it manages its knowledge resources can only be assessed by that organization. The intention of the book is to guide the reader through the process of developing that measurement strategy. The authors offer guidance based on their practical and research experience in knowledge management, in operationalizing knowledge management for different kinds of businesses, and their experience with measurement.

WHERE THE TOPIC FITS IN THE WORLD TODAY

Like the other books in the series, this text draws from and integrates research and practice from several different disciplines. The primary goal of the series is to create stronger ties between the business management and knowledge management disciplines. Knowledge management metrics is a relatively new topic – there is an opportunity to grow the topic by anchoring it in and aligning it with good business design and practice. There is a need in the business management literature to pay greater attention to the use of

knowledge in the making of strategic, operational, and tactical decisions. In the 21st century there is increased recognition of the role that knowledge plays as a capital asset in all economic sectors. Taking a more deliberate approach for designing and tracking knowledge metrics in business decisions is critical for building the organization's knowledge capacity. While there are selective discussions of the relationships of decision-making and metrics in the business literature, there is a need for a more direct and robust connection. The authors attempt to address these challenges as they walk through these topics in the text.

Knowledge management metrics is a relatively young topic. The greatest concentration is found in the gray literature, specifically the conference literature, consulting columns, and training workshops. Much of what we find in the literature today derives from case studies or represents a specific context – they may not be reliable or generalizable to other contexts. And, few if any of the metrics recommended by researchers or practitioners address business interests. Most reflect the knowledge management perspective. If we expect business managers to bear witness to the value of knowledge to their operations, they must have practical and reliable metrics. If we want executives to take knowledge management seriously, reports of its value must be more than anecdotes and occasional stories. If we expect executives and managers to trust our metrics, they must be as rigorous and relevant as business metrics.

There is no overarching framework for designing a metrics strategy for an organization. Every guidebook, handbook, or introductory text in knowledge management devotes a few pages to metrics. The texts highlight the importance of thinking about metrics and developing a metrics strategy, but little in-depth guidance is offered. The authors attempt to meet this challenge with this text. A search of the peer-reviewed

literature for the term "metrics strategy" produced one result from the field of engineering. As knowledge management gains stature in organizations, as it moves from a project to an organizational function stature, it should be supported by a rigorous set of management methodologies. Perhaps the most significant gap is the representation of knowledge management functions as business capabilities and processes. We need to understand how we manage our own functions – we need to understand where metrics are needed and which metrics best suit the function. This is a critical piece of every knowledge management metrics strategy.

Any book on metrics will have some connection to the current analytics and data science topic. Analytics and data sciences focus on the computational analysis of structured and unstructured data. In these fields, the focus is on the source and the use of computational resources and analytical methods to discover and extract knowledge. There is some overlap in the treatment of sources of evidence in analytics and in metrics. Analytical methods can be important tools to analyze data to support metrics. Analytics are more of a general methodology, whereas metrics are a deliberate decision-making and management tool.

WHERE THE BOOK FITS IN THE LITERATURE TODAY

This is the fourth book in the Working Methods in Knowledge Management series. The text focuses on metrics as a practical business method. The text walks the reader through designing knowledge management metrics for an organization. The text does not provide solutions but helps reader to decide what a solution might look like.

In the knowledge management literature, there is a significant gap on the topic of metrics. It is the intent of the authors

to fill this gap, in hopes of generating a broader discussion of practice and experience with metrics. There are only a handful of peer-reviewed papers on the topic of knowledge management metrics (Liebowitz, 2005; Liebowitz & Suen, 2000; Liebowitz & Write, 1999; Martin, 2004). The majority of the advice is found in the conference and consulting literature. While there is good advice on general practice, this literature often confuses statistics and indicators with metrics, limits the discussion to quantitative and ignores qualitative metrics, tends to focus on intangibles and to ignore business applications, offers little discussion of reliability and validity concerns, and generally focuses on knowledge management as a project rather than a function. Additionally, the literature presents a heavy focus on one particular metric – Return on Investment (ROI) – without consideration for whether an investment has been made and whether it is substantial enough to warrant a return.

THE INTENDED AUDIENCE FOR THE BOOK

This text is written for organizational executives and business managers who are interested in expanding their metrics strategy to address the use of knowledge in business capabilities, the general performance and value of their knowledge management capabilities, and their knowledge capital assets. The book is written for knowledge management practitioners and professionals who need to design and operationalize a knowledge management metrics strategy that will have the trust of organizational leaders and business colleagues. Finally, the book is written for analysts and data sciences who are interested in expanding the scope of their discipline to include knowledge processes and knowledge assets.

STRUCTURE OF THE BOOK

The book is organized into four sections and 12 chapters. Section 1 sets a context for the discussion of measurement. The chapters in this section examine why organizations make decisions, how they frame business decisions, and how they use measurement to improve their business decisions. Section 2 explores the kinds of knowledge management decisions that are made by business and knowledge managers. The chapters in this section examine decisions that pertain to how knowledge is leveraged by the business, decisions about core knowledge management functions and processes, and decisions about how the organization manages knowledge capital. Section 3 provides a high-level review of measurement methods and sources. The chapters in this section guide the reader through choosing a measurement method, an instrument, and sources of evidence for a knowledge management decision. Finally, Section 4 focuses on designing and implementing a custom measurement strategy for an organization. The chapters in this section consider how to integrate knowledge management measures into a whole organization strategy, to promote that strategy to the business stakeholders, and to define support architecture for the measurement strategy.

Each chapter is written like a project description. While the authors can explain how to establish the foundation for and how to conduct assessments, we cannot tell you what to assess and what the result should be. Only an organization can make these decisions. Each chapter provides background information on the topic as well as references to additional resources – both theory and practice. Each chapter highlights the thought leaders and practitioners in that topic. Finally, the Appendix provides a high-level project plan that the reader can use as a template for designing their own approach. Each

task and subtask in the project plan traces back to a chapter in the book.

Section 1. Metrics as a Decision-making Tool

- Chapter 1. Metrics in Business and Knowledge Management
- Chapter 2. Decision-making Models and Factors
- Chapter 3. Decision Processes and Methods
- Chapter 4 Whole Organization Metrics Strategy

Section 2. Building the Organization's Capacity for Knowledge Management Metrics

- Chapter 5. Knowledge Management Metrics Architecture and Infrastructure
- Chapter 6. Metrics for Knowledge in the Business Process
- Chapter 7. Metrics for Knowledge Management Capabilities
- Chapter 8. Metrics for Knowledge Capital Assets

Section 3. Measurement Methods and Sources

- Chapter 9. Measurement, Reliability, and Validity
- Chapter 10. Sources of Evidence for Your Metrics

Section 4. Implementing the Measurement Strategy

- Chapter 11. Engaging Around Metrics
- Chapter 12. Governance – Sustaining the Metrics Strategy

SECTION SUMMARIES

Section 1 focuses on metrics as a management and specifically as a decision-making tool. This section offers a definition and characterization of metrics, explains why metrics are important, and distinguishes metrics and measurement. This section provides important grounding for knowledge management metrics – ensuring that they align with the way the organization behaves, how it makes decisions and how it describes its performance. This section offers a decision-making model and identifies factors that influence how decisions might be made and how metrics might be chosen. The role that metrics can play in decision-making processes is also considered. Finally, these sections consider how metrics may be influenced by or reflect a healthy or toxic organizational environment.

Section 2 provides greater detail on how decision-making and metrics help us to understand and manage an organization's capacity to survive and thrive in the knowledge economy. Specifically, this section considers how knowledge is used in different types of decisions made throughout the organization. The section focuses on how to select and support metrics to reflect the use of knowledge in business process decisions. The section breaks new ground in the literature by considering how we made decisions in common knowledge management functions – and how these decisions might also be reflected in knowledge metrics. Metrics for knowledge capital assets – including human capital, structural capital, and relational capital assets – are also discussed. Finally, metrics are also suggested for organizations where knowledge is still managed at a project level.

Section 3 explains some basic issues related to measurement and instruments, including common considerations such as reliability, validity, credibility and trustworthiness of sources, and evidence collection methods.

Finally, Section 4 addresses designing and implementing an organization-wide knowledge management metrics strategy. This section also considers how to communicate and report these metrics.

CHAPTER SUMMARIES

Chapter 1 provides a definition and characterization of metrics, and explains the value of metrics as a management tool for reducing uncertainty and managing risk. The authors provide some fundamental assumptions about metrics, and explain how metrics relate to measurement. The chapter identifies common business metrics. The current state of knowledge management metrics is discussed. The authors make the case for aligning knowledge management metrics with business metrics. Caution is encouraged against using metrics defined by other organizations or developed for different business environments. Each organization must define and develop their own knowledge management metrics.

Chapter 2 positions the question of metrics in the decision-making context. Decision-making and decision makers are the primary producers and consumers of metrics. This chapter also describes the types of decisions that organizations and people make. The chapter explains how the external business environment, the internal business environment, and the nature of the decision define your metrics strategy and culture. This is the context knowledge managers need to target in order to design a knowledge management metrics strategy. How do decision makers use knowledge to make decisions? How does knowledge affect business metrics?

Chapter 3 defines decision processes and describes the basic steps in a decision process model. The authors explain how each step might align with metrics and how knowledge

might be used in that stage of the process. The chapter explores how decision models might help us to expose the use of knowledge in business decision processes. The chapter also considers how we might apply the decision process model to knowledge management functions, and why the choice of a metric is critical to these models. The chapter also highlights why it is important to focus on in-process metrics as well as the standard performance, production and financial metrics.

Chapter 4 explains why knowledge capacity building is important for organizations transitioning to the knowledge economy. The authors consider how knowledge capacity is developed at each level and role in the organization. The role of knowledge management metrics in tracking and building knowledge capacity is discussed. Leading and lagging metrics are described and explained in the context of business decisions, knowledge management functions and processes, and in relationship to knowledge assets.

Chapter 5 reviews why knowledge management metrics lag behind metrics in other business functions and disciplines. The authors describe the value of creating a vision of a knowledge management metrics dashboard. The vision of a knowledge management metrics dashboard is translated to a metrics architecture. Each layer of the architecture is described. Key questions are identified to help the reader think about what might be needed in each layer. The chapter also considers the process you might follow to develop a knowledge management metrics dashboard.

Chapter 6 explores the decisions that pertain to the business, and the role that knowledge plays in making those decisions. The use of knowledge in decisions made in the organization's core lines of business is particularly important. The chapter suggests approaches that can be used to identify key decision points, who makes them and how they are made. The authors also discuss how to measure the use of

knowledge in decision-making and how to measure the effect that knowledge has on the decision outcome. This chapter also highlights the need for business managers to adopt and take ownership of knowledge measurements.

Chapter 7 considers the kinds of decisions that are made in core knowledge management functions. The chapter describes commonly accepted knowledge management functions. The authors suggest examples of decisions that might be made in each function, and walk through the decision factors, how the decisions are typically made, who makes them, and what measurements might be appropriate to the decisions. The chapter also suggests how these measures might improve the decision outcome. The authors explain how readers might develop an organization-wide measurement strategy for knowledge management. The chapter also highlights the importance of identifying stakeholders and decision makers across the organization.

Chapter 8 focuses on decisions related to the organization's management and use of its knowledge capital assets. This chapter is grounded in the definition of knowledge capital which includes human capital (i.e., the capital of individuals), structural capital (i.e., the capital of the organization in aggregate), and relational capital (i.e., the capital of the network of individuals in the organization's environment). The chapter considers who is best positioned to assess knowledge assets. Should individuals self-assess their human capital? Should teams jointly self-assess their structural knowledge assets? Should the organization take responsibility for assessing networks?

Chapter 9 begins with a definition and characterization of measurement and relates measurement to metrics, uncertainty, and risk. The authors asset that contrary to much of the discussion in the knowledge management literature no factor in unmeasurable. The chapter walks through Hubbard's

approach for defining decision problems and measurements. The authors also define reliability and validity and remind the reader of the importance of these factors for trust and creditability of metrics. The authors also recommend striving for a balance between the rigor of measurement for metrics and the relevance of the metric to the business goals and objectives.

Chapter 10 focuses on identifying and collecting sources of evidence to support the measurement. The chapter provides a high-level overview of the kinds of evidence and data that are important to knowledge management measures and the collection methods. Who has the evidence? Who needs the evidence? Who is responsible for ensuring the quality of the evidence? The chapter also highlights data specification questions and considerations, as well as the general management of sources. These issues are important for measures which are required for repeated and routine decisions.

Chapter 11 considers how the organization might engage around knowledge management metrics and create a healthy metrics culture. The authors consider how metrics are supported at every level of the organization. The chapter explores the importance of engaging every individual in creating sources of evidence to support knowledge metrics. The authors highlight the important roles of business managers and leaders in identifying, defining and using knowledge management metrics. The authors also discuss the critical role of senior executives and leaders in communicating around and promoting knowledge management metrics.

Chapter 12 addresses governance models and processes to ensure the organization manages and maintains its knowledge management metrics. The authors explain why governance should be designed at the executive level and apply to all functions across the organization. The chapter descries the components of a governance model and walks through the tools and processes that should be in place for knowledge

management metrics, the composition of a metrics governance review board, the process for receiving and reviewing proposals for new metrics, or changes to metrics and sources.

Finally, the Appendix presents a high-level project plan of activities and tasks the reader might follow to design and implement a metrics strategy for their organization. Activities and tasks align with the treatment of issues in chapters. Each activity in the project plan is supported with full chapter explanations and examples.

HOW THE BOOK IMPACTS THE FIELD

The authors hope the book will contribute to the literature of business management by expanding the discourse about metrics to include knowledge and knowledge functions. The book anchors the discussion of knowledge management metrics in a business context and interprets common business metrics for use in knowledge management.

Ideally, the book adds rigor to the discussion of knowledge management metrics and creates an extended body of knowledge grounded in practice. The authors hope the book will increase the visibility of knowledge management to the business community by portraying knowledge management functions as important organizational capabilities. The text also refocuses the discussion within the field from a "knowledge management as project" approach – from sporadic and fragmented initiatives – to a sustainable organization-wide capability.

SECTION 1

METRICS AS A DECISION-MAKING TOOL

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1

METRICS IN BUSINESS AND KNOWLEDGE MANAGEMENT

CHAPTER SUMMARY

This chapter provides a definition and characterization of metrics, and explains the value of metrics as a management tool for reducing uncertainty and managing risk. The authors provide some fundamental assumptions about metrics and explain how metrics relate to measurement. The chapter identifies common business metrics. The current state of knowledge management metrics is discussed. The authors make the case for aligning knowledge management metrics with business metrics. Caution is encouraged against using metrics defined by other organizations or developed for different business environments. Each organization must define and develop their own knowledge management metrics.

METRICS – DEFINITION AND CHARACTERIZATION

Metrics are measures that help us to assess, compare, and track something – often performance, production or progress

against our goals and objectives (Lavorgna, Turavil, & Metz, 2002). Metrics should be selected based on the nature of the business environment, business goals, and the economic sector in which the organization operates. We are all familiar with the adage from Peter Drucker, the noted management guru and the father of business metrics – If you can't measure it, you can't manage it (Drucker, 2012). Metrics are meaningful measurements and calculations that are used to direct and control an organization. Metrics are commonly used to manage business functions, strategy implementation, processes, programs, projects, initiatives, infrastructure, facilities, and technologies – in short, every aspect of an organization's business and operation. Most importantly, though, metrics are critical tools for decision-making at any level and at every point in the functioning of an organization. Wherever an executive, a manager, or a production supervisor makes a decision, analyzes, and chooses among alternatives, metrics are in play. Decision makers use metrics in a context. Decision-making assumes we have choices, and that we are evaluating those choices in the context of achieving business goals and objectives.

Executives use metrics to analyze corporate finance and operational strategies. Analysts use them to form opinions and investment recommendations. Portfolio managers use metrics to guide their investing portfolios. Furthermore, project managers also find them essential in leading and managing strategic projects of all kinds. Every business executive, analyst, portfolio manager, and the project manager has a range of data sources available to them for building and structuring their own metric analysis. This can potentially make it difficult to choose the best metrics needed for important assessments and evaluations. Organizations require performance metrics to monitor progress against goals and evaluate the effectiveness and efficiency of business processes. Organizations use workload measures when allocating and managing resources.

Metrics enhance program processes, boost credibility and can inform decisions about program budgets, priorities, staffing, and program activities. They are also essential for identifying weakness, threats, and deficiencies. In 2019, metrics are often tailored to suit a business and operationalized in the form of a dashboard.

Metrics have been used in accounting, operations, and performance analysis throughout history. Metrics come in a wide range of varieties with industry standards and proprietary models often governing their use. Best practices across industries have created a common set of comprehensive metrics used in ongoing evaluations. However, individual cases and scenarios typically guide the choice of metrics used.

ANALYTICS, METRICS, AND DECISION MODELS

Business metrics have evolved over many decades. The earliest management metrics aligned with financial management and engineering indicators. Over the decades they have grown more sophisticated, more custom-designed for specific business contexts, increasingly automated, and more systematically managed.

There are a number of terms that are used synonymously with metrics, including benchmarks, analytics, dashboards, measures, standards, key performance indicators (KPIs), competitive and business intelligence, and data sciences (Fig. 1.1). While there are logical relationships to each of these terms, they are not equivalents to metrics. All metrics leverage measures and measurement but not all measures are metrics. Metrics may be promoted as a standard, but not all metrics are standards. Metrics are displayed in dashboards but not all metrics are or need be automated or machine based. Metrics that are specific to an industry, an economic sector

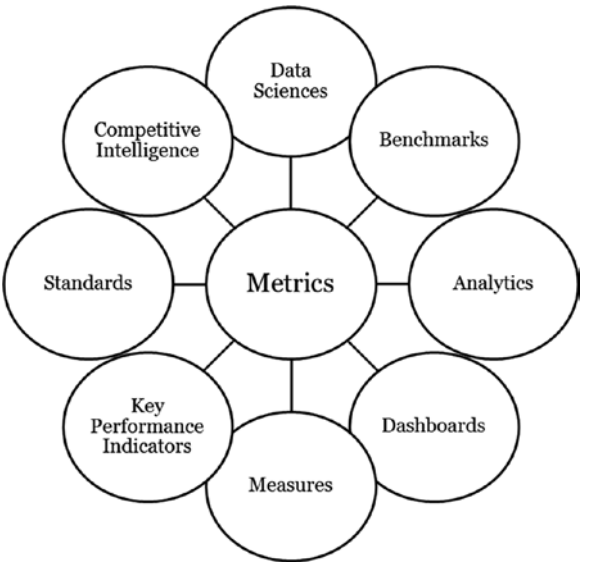

Fig. 1.1. Common Synonyms Related to Metrics.

or a function may be designated as a KPI. Competitive and business intelligence methods all refer to and produce metrics of some form. Finally, data sciences focus on computational methods that may or may not generate a metric.

METRICS IN CONTEXT

Metrics are always used in the context of making a decision. Metrics play a critical role in decision-making – whether formal or informal – they represent what factors you take into consideration, what evidence you use and how you analyze that evidence. We decide which metric to use based on our understanding of the decision and all the factors that affect the decision. Metrics can also help us to determine whether the way we're making decisions is optimal or suboptimal – by

analyzing the use of metrics you can understand where and how you might improve your decision-making processes. One of the challenges we face is that metrics are often discussed "out of context." This is a challenge in the field of business, where we have robust definitions and characterizations of decision-making.

COMMON ASSUMPTIONS ABOUT METRICS

We offer five basic assumptions as a foundation for understanding metrics:

(1) Are *measurable*. Many organizations have established the principle that strategy and performance goals need to be measurable. As such, it is common for metrics to be developed for the purposes of strategic management, goal and performance management. Not all metrics measure goals. For example, metrics can also be used for decision-making, problem solving, and optimization.

(2) May be relevant to *core capabilities and critical to business performance*. Key performance indicator (KPI) is a term for a metric that is critical to an organization. It is common for organizations, departments and teams to develop a large number of metrics. The term KPI is used to distinguish those metrics that are critical to strategy. In most cases, a KPI is used to measure goals.

(3) May be *qualitative or quantitative* or a hybrid. Qualitative metrics are metrics that are based on a human judgment such as a rating. For example, customer satisfaction is typically a qualitative metric that results from asking customers to rate their satisfaction with a product, service, or experience. Although qualitative metrics result from complex

human judgments, they are typically represented as a single number. Quantitative metrics are a class of metrics that are based on numbers. They can be financial or non-financial in nature. Examples of quantitative inputs to metrics include revenue, customer counts, or electricity usage measured in watts.

(4) May be *actionable or simply informational*. Actionable metrics can be useful for making decisions and for optimizing work. It is common for organizations to mandate that all metrics be actionable. Informational metrics are metrics that are not intended to be actionable. People find information interesting and may develop metrics that are unlikely to change the course of decisions. This is widely considered a distraction and unnecessary expense. For example, if a car displayed the temperature of its muffler on its dash, some people might find it interesting but this isn't actionable like a fuel gauge or speedometer. As such, it might be considered an unnecessary distraction. Both informational and actionable metrics are important sources for decision makers.

(5) *Vanity metrics* are designed to influence an impress an audience but they are often thought not to be useful or practical. No source of evidence should be dismissed without understanding how it might apply to an organization. Given the expanded scope and coverage of knowledge organization metrics, the authors do not dismiss vanity metrics as unimportant.

METRICS AND MEASUREMENT

Metrics and measures are two terms that are often used interchangeably. In fact, they have different definitions and