CGMA TOOL

How to Develop Non-Financial KPIs

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Two of the world's most prestigious accounting bodies, the AICPA and CIMA, have formed a joint venture to establish the Chartered Global Management Accountant (CGMA) designation to elevate the profession of management accounting. The designation recognises the most talented and committed management accountants with the discipline and skill to drive strong business performance.

INTRODUCTION

In today's knowledge economy, company value is no longer driven primarily by physical or tangible assets, but is increasingly attributable to non-financial business drivers — the intangible assets of an enterprise. Success and future value creation depend on the effective measurement and management of these critical non-financial or intangible resources that comprise the intellectual capital of the business. This includes the knowledge, skills, brands, corporate reputation, relationships, information and data, as well as patents, processes, trust or an innovative organisational culture.

Research underlying the CGMA report *Rebooting Business: Valuing the Human Dimension*[1] showed that 75% of respondents agreed that they need to put more emphasis on measuring and demonstrating the non-financial value of their business. This tool provides guidance for identifying and designing Key Performance Indicators (KPIs) for non-financial performance measures, also referred to as the intangible resources, or intellectual capital of an organisation.

DEFINING INTELLECTUAL CAPITAL

Intellectual capital includes all non-tangible resources that (a) are attributed to an organisation, and (b) contribute to the delivery of the organisation's value proposition. Intangible resources can be split into three components: human capital, structural capital and relational capital.

- **Human capital** includes the skill sets of an organisation's workforce, the depth of expertise and breadth of experience.
- **Relational capital** includes all the relationships that exist between an organisation and any outside person or organisation. These can include customers, intermediaries, employees, suppliers, alliance partners, regulators, pressure groups, communities, creditors and investors.
- **Structural capital** covers a broad range of vital elements. Foremost among these are usually (a) the organisation's essential operating processes; (b) how it is structured; (c) its policies, information flows and content of its databases; (d) its leadership and management style; (e) its culture; and (f) its incentive schemes. Structural capital also can include legally protected intangible resources.

IDENTIFYING VALUE DRIVERS

The first step in developing non-financial performance measures involves understanding the organisation's value drivers. The relative importance or strategic value of intellectual capital can only be assessed in the context of the existing organisation. Intellectual capital interacts with other resources to create a core competency, which in turn helps to deliver the value proposition. To understand the role and strategic importance of intellectual capital in any organisation requires a clear understanding of strategic direction and objectives. The questions to ask are:

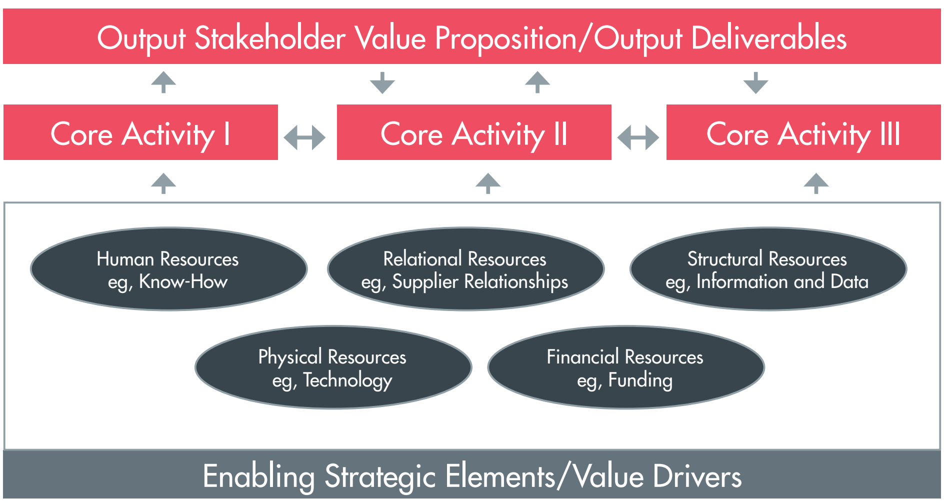
1. How important are our different intellectual capital resources to achieving our overall value proposition?
2. How strong are our existing resources and how can we utilise them more effectively?

A value creation map is a visual representation of the organisational strategy. A value creation map brings together the three key elements of an organisational strategy, namely, its value proposition, its core activities and its enabling strategic elements or performance drivers:

- The *value proposition* (or output deliverables) identifies an organisation's purpose and its roles and deliverables. It also identifies the key output stakeholders of the organisation and the value delivered to them.
- The *core activities* are the vital few things at which an organisation has to excel to deliver its value proposition. They essentially define (a) what an organisation should focus on and (b) what differentiates it from others. Core activities are directly linked to the organisational core competencies.
- The *enabling strategic elements* (or value drivers) are the other strategic elements or objectives an organisation requires to perform its core activities and to deliver its value proposition. These enabling elements or value drivers derive from the assessment of the organisation's resource architecture and intellectual capital.

The basic template of a value creation map is shown in Figure 1.

Figure 1: Value Creation Map Template



Source: Marr, B. (2008). Managing and delivering performance, Elsevier Ltd., Oxford.

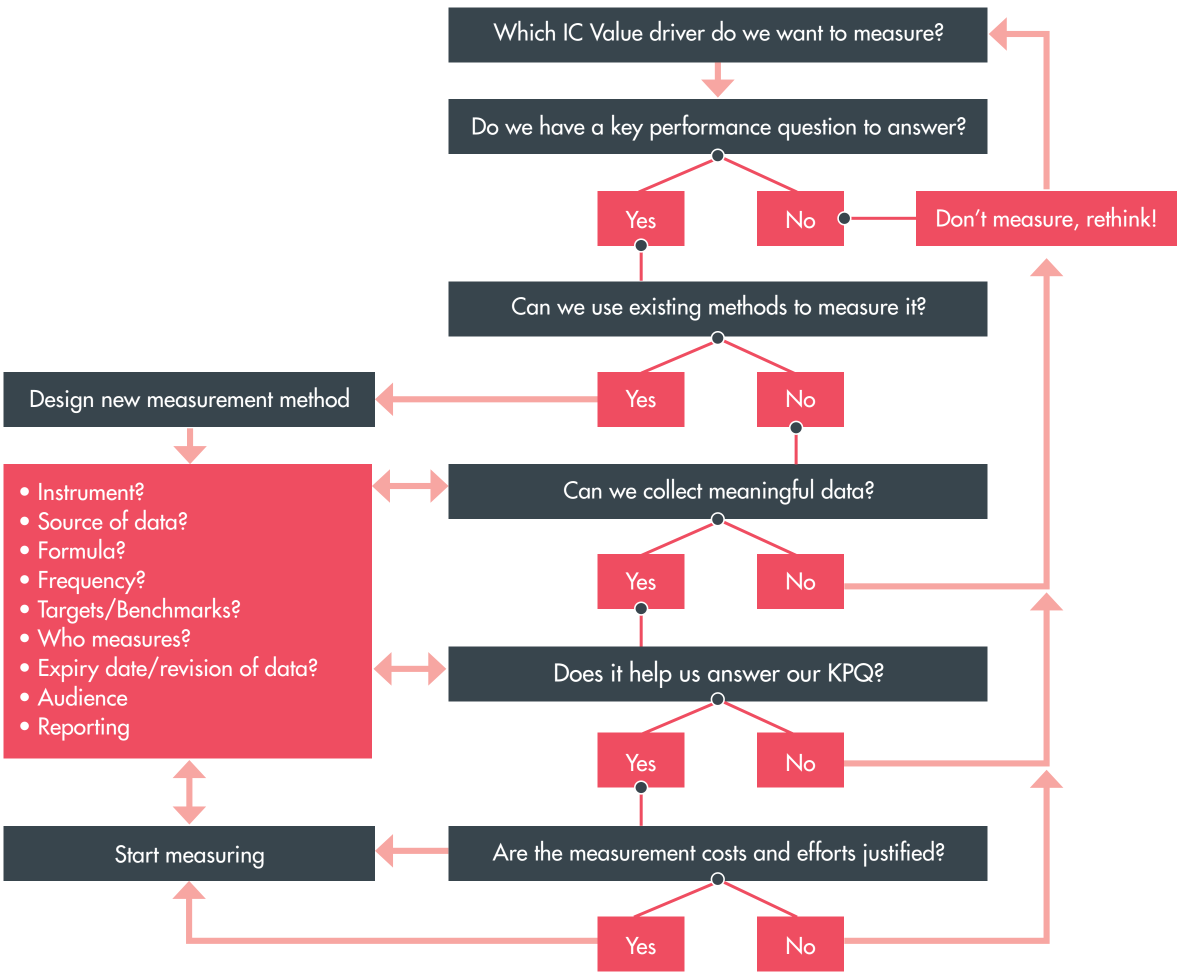
DESIGNING NON-FINANCIAL KPIs

After identifying and mapping the intellectual capital value drivers, organisations can start measuring performance. A decision tree for developing non-financial performance measures, the Intellectual Capital Performance Indicator Design Model, is shown in Figure 2.

For each measure, it is important to decide whether it is worth measuring in the first place. If we start collecting data without knowing what we are looking for, we often collect wrong or unnecessary data. We also will fail to develop answers to the really important questions.

An excellent way of determining whether an indicator is worth measuring is to establish the question(s) the indicator will help to answer. Key Performance Questions™ (KPQs) are designed to identify what managers want to know about the various intellectual capital value drivers. KPQs make sure that our indicators are useful and meaningful and that we are clear about what it is we want to know. If there is no question that needs to be answered, then there is no need for measurement.

Figure 2: Intellectual Capital Performance Indicator Design Model



Developing Key Performance Questions™

KPIs should not be designed solely in the boardroom. Developing KPQs provides a great opportunity to engage everyone in the organisation, as well as some external stakeholders, in the performance management process. See Box 1 for examples of key performance questions. The following are some guidelines for designing KPQs:

- **Design between one and three KPQs for each intellectual capital value driver.** If the intangibles matter in delivering your strategy, then you should develop management questions you want answered. Try to keep them to the vital few.

- **Involve people in the process.** Try to involve people in the design of KPQs by asking them what questions they believe are most relevant. After designing a list of KPQs, get feedback from the subject matter experts or different stakeholders within and outside the organisation. For example, ask the marketing department to discuss and refine the KPQs that relate to brand and reputation. Remember that KPQs communicate to everyone what really matters to an organisation. The more people who understand and agree with these questions, the more likely it is that everybody will pull in the same direction.

- **KPQs should be short and clear.** A good KPQ is short and clear, and contains only one question. Asking a string of questions makes it much harder to guide meaningful and focused data collection. The language should be straightforward and not contain any jargon or abbreviations that might not be understood. Likewise, ensure that the question is written using language with which those in your organisation (and those consulted outside) are comfortable and familiar.

- **KPQs should be formulated as open questions.** Closed questions such as "How many people in our organisation have higher education qualifications?" or "Have we met our employee satisfaction target of 89%?" can be answered simply, without any further discussion or expansion on the issue. However, open questions such as "To what extent are we sharing knowledge?" or "How well are we increasing our corporate reputation?" trigger a wider search for answers by seeking more than a "yes" or "no" response. Open questions make us reflect; they engage our brains to a much greater extent, and they invite explanations and ignite discussion. All of this is vital when it comes to intellectual capital.

- **KPQs should focus on the present and future.** Questions should be phrased in a way that addresses the present or future: "Are we increasing our market share?" instead of questions like "Has our market share increased?" By focusing on the future, we open up a dialogue that allows us to "do" something about the future. We then look at data in a different light, trying to understand what the data and management information means for the future. This helps with data interpretation and ensures that we collect data that help to inform our decision making.

- **KPQs are refined through usage.** After KPQs have been created, their answers should be evaluated to see how well (a) the performance indicators answer the questions, and (b) the indicators help people to make better informed decisions. Once KPIs are in use, they can be refined to improve their focus.

Box 1: Example Key Performance Questions

Below, we have listed some example KPQs to illustrate how organisations have developed key performance questions for some of their intellectual capital value drivers:

- How well are we sharing our knowledge?
- To what extent are we retaining the talent in our organisation?
- How well are we promoting our services?
- How do our customers perceive our service?
- How effective are we in managing our relationships?
- How well are we innovating?
- How successful are we at building our new competencies in X?
- To what extent are we continuing to attract the right people?
- How well are we fostering a culture of innovation and continuous improvement?
- To what extent do people feel passionate about working for our organisation?
- How well are we helping to develop a coordinated network to perform clinical trials?
- How motivated is our workforce?
- How successful are we at sharing one set of values?
- How effective are we at protecting our intellectual property?

Measuring Human Capital

In today's knowledge economy, the adage that "people are our most valuable asset" is more than simply a trite saying. For all companies, it is the performance of employees that provides competitive advantage. Human capital – the skills, competence and motivation of employees – is what determines the extent to which a company is able to leverage its physical and financial capital to greatest advantage. It is human capital that enables companies to serve customers effectively and to develop new products and services that will ensure the long-term success of the business.

As such, talent management has become a top priority for successful businesses. Some leading companies have begun to assign an overall value to their workforce and disclose that value in reported financial information. Many are harnessing the power of analytics in their attempt to garner insight into the critical causal links in the human capital value chain to drive performance and to increase the value of this critical asset.

Box 2 highlights some frequently used human capital indicators that could be useful in the areas of employee recruitment, retention and development. As with basic ratios of efficiency or productivity, these measures of recruitment and retention efforts are, for the most part, reflections of past performance. Sophisticated companies will address the following questions in conjunction with their analytics capabilities to gain a deeper understanding of the factors that will contribute most significantly to their future performance and value creation potential and help formulate forward-looking performance indicators:

- What are the competencies that we need in our organisation to drive success?
- What are the other qualities and characteristics of employees that perform well in leadership positions or other key roles?
- How well are we doing at creating a culture that motivates and engages our employees?

- How effective are our leaders and managers in developing our people and our next generation of leaders?
- How effective are our leadership development and other employee training programmes in developing our needed competencies? What is our ROI on training?
- How well are our employees working together to execute our growth and innovation strategies?

Box 2: Human Capital Performance Indicators

Recruitment

- Average time to fill vacancies
- Job offer acceptance rate
- Average cost to recruit
- Average number of responses for open positions
- Average number of interviewees
- Performance of new employees within initial review period

Retention and Development

- New employee retention
- Average turnover of employees
- Average time employees are in same job or function
- Number of employees trained per period
- Average hours of training per employee
- Training and development costs per employee or % of budget
- Employee/manager evaluation of training effectiveness
- Employee satisfaction scores

Measuring Customer Experience

The key priority for all organisations is building value and creating long-term sustainable success. Perhaps not surprisingly, customer relationships were ranked as the No. 1 driver of organisational value creation in the aforementioned CGMA Report, *Rebooting Business: Valuing the Human Dimension*. Successful businesses heed the time honoured maxim to "put the customer first."

In today's rapidly changing competitive global marketplace, companies recognise that they must be customer-focused. Leading businesses are using sophisticated analytics to better understand the demographics, preferences and purchasing patterns of their customers in order to maximise sales and profitability.

Successful companies also realise that to achieve and sustain a competitive advantage, their business strategies must address their entire value proposition from the perspective of the customer. They recognise the fact that customers derive value not only from quality products and services, but they also attach significant value to a company's brand and, perhaps most importantly, their relationship with the firm.

For many companies and products, brand plays a significant role. The feelings of safety, security, well-being, prestige, economy or other perceived value that a customer derives from a product or company brand are often paramount in customer purchasing decisions. A company's relationship with the customer is vital in many respects. Customer satisfaction is critical to securing and fostering loyalty among customers. In addition, customer interaction and feedback is increasingly critical to the continual refinement of product and service delivery and innovation.

Box 3 displays KPIs that some companies have developed to gauge the experience of their customers and answer key performance questions about how well they are doing at delivering on their value proposition.

Box 3: Sample Customer Experience Measures

Air Products (chemical supplier)	Customer loyalty index Turnaround time for samples
Caterpillar Financial (construction equipment)	Customer satisfaction index First-contact resolution Time to respond to customer request for quote Turnaround time for credit approval decision Turnaround time to fund loan
Cisco (information technology)	Dashboard of metrics by call type Customer satisfaction Customer loyalty Value per transaction
Harrah's (gaming)	Customer loyalty Customer satisfaction Cross-market play First-contact resolution Consolidated play/Share of gaming budget
Lands' End (clothing)	Answer 90% of incoming calls in less than 20 seconds First-contact resolution (currently 94%) Call abandon rate of less than 1.5%

Adapted from APQC Publications, *Managing the total customer experience.* Aug. 23, 2005.

SELECTING THE MEASUREMENT INSTRUMENT

Once we have the KPQs and have identified what we want to measure, we can design performance indicators for our intellectual capital. Most measures of intellectual capital are indirect or proxy measures. For example, in measuring work-related competencies, we might use the number of people with vocational qualifications as a proxy measure. Or, if we want to measure trust in our organisations, we collect survey data as proxies. The one danger with using proxy measures is that we sometimes oversimplify the process and simply measure what is easy to count. Another problem is that we tend to focus on numbers more than their meaning.

An important step in designing indicators for intellectual capital value drivers is to decide on the measurement instrument that will be used to collect the data. When deciding on the instrument, it is important to keep the KPQ in mind when assessing whether meaningful data can be collected.

To enable the user to consider different measurement instruments, we present below an overview of different instruments for measuring intellectual capital value drivers.

- **Data tracking and collection systems** are used to collect data from both internal and external sources for performance and market measures.
- **Surveys and questionnaires** provide a relatively inexpensive way of collecting data on intellectual capital from a large pool of people. Surveys are regularly used to measure intellectual capital value drivers such as employee engagement, corporate culture, customer attitudes, innovation climate or brand image.
- **In-depth interviews** are guided conversations with people, rather than the structured queries found in surveys. In-depth interviews can, for example, be used to assess intellectual capital value drivers such as relationship with key customers, suppliers or partners. In addition to providing a performance score, they can also yield invaluable contextual information about, for instance, how to improve relationships between key customers, partners or employees.
- **Focus groups** are facilitated group discussions (5 – 20 participants) in which participants can express and share their ideas, opinions and experiences. Focus groups are good ways of assessing employee- and customer-related intellectual capital value drivers such as customer experience, customer or staff engagement, team-working climate or trust.
- **Mystery shopping approaches** assess a service by using a “secret shopper” posing as a client or customer. Many retail businesses, banks and hotels have used mystery shopping to assess customer experience.

- **External assessments** conducted by external organisations and institutions can provide independent performance assessments and indicators. Good examples of external assessments are independent surveys that measure the brand recognition, customer awareness or market share in specific segments.

- **Observations** allow us to collect information by observing situations or activities with little or no manipulation of the environment. Observations have been successfully used in assessing organisational culture, skill and experience levels of employees, emotional intelligence and creativity. Another example is employee safety. Instead of waiting for accidents and injuries to occur and then count those, "safe behaviour" measures can be used. Observers proactively look for safe behaviours that would prevent the most common accidents and record those on a behavioural observation form.

- **Peer-to-peer** evaluation is the assessment of performance by participants who vote on or assess each other's performance, either openly or anonymously. This process enables people to learn from each other and to consider their own performance from the perspective of others. Peer-to-peer evaluations have been successfully used to gauge intellectual capital value drivers, including trust; knowledge and experience; teamwork; and relationships.

KPI DESIGN CONSIDERATIONS

For both existing and newly developed methods, it is important to assess (a) whether it is possible to collect meaningful data, and (b) whether the data will help to answer your questions. Finally, it is important to assess whether the resultant data warrants the cost and efforts of measurement (which can be significant). If no meaningful data can be collected, if the data are not really helping you to answer the KPQ, or if the costs are not justified, then it is necessary to rethink and design different indicators.

Creating KPI Indices

When it comes to intellectual capital, a single performance indicator will rarely give us sufficient information. We therefore recommend combining different measures into one index. This provides organisations with a more rounded and balanced view on their intellectual capital.

Human health allows us to illustrate the point. Taking your blood pressure alone to assess your heath would not be sufficient. However, taking blood pressure, cholesterol and blood tests, together with a number of other tests, and combining these into a health index provides a much more balanced and reliable assessment of physical health. The same is true in business. If a company wants to measure customer relationships, a number of indicators such as loyalty, trust, commitment, profitability and referrals can be measured and combined into a customer relationship index.

Avoiding Dysfunctional Behaviours

Integration of financial and non-financial performance measures using a Balanced Scorecard type framework has become increasingly popular with today's organisations. This approach combines the traditional backward-looking financial measures with information on what is currently happening in the business, generally using quantitative but non-monetary terms.

When carried out successfully and using well-designed KPIs, the scorecard approach keeps the focus on long-term strategic objectives, emphasising the fact that performance should not be judged solely on short-term financial targets. However, the use of non-financial measures is not without its difficulties. Box 4 gives examples of dysfunctional behaviours that may occur and how they may be overcome.

KPI Design Template

Once you have designed your indicators, the accompanying Indicator and Index Design Template in Box 5 can be used to identify (a) the measurement instrument for collecting data (eg, survey or interviews); (b) the source of the data; (c) the formula used to calculate the indicator; (d) the frequency of measurement; (e) any targets or benchmarks; (f) who will measure; (g) how long the indicator will be collected before it needs to be reviewed; (h) the target audience for this indicator; and (i) the reporting formats.

Box 4: Overcoming Dysfunctional Behaviours

Behaviour	Cause	Consequences	Remedy
Tunnel vision	Over-emphasis on quantifiable data	Equally valid qualitative data may be ignored	Report qualitative data (such as anecdotal feedback) as part of or alongside the scorecard
Losing sight of the goal	Focus on KPIs rather than the strategic objectives of the business	Lack of strategic direction	Incorporate mission statement and strategic objectives into the scorecard to remind managers of the bigger picture focus
Sub-optimisation	Managers focusing upon immediate local objectives	Organisation-wide objectives are sidelined	Incorporate mission statement and strategic objectives into the scorecard to remind managers of the bigger-picture focus
Data manipulation	Reported non-financial data not accurately representing actual performance	Inaccurate management information	Develop a strong understanding of the operational activities of the business to help identify any anomalies
Inflexibility	Lack of innovation and action as a result of focus upon KPIs	Potential impact on growth; conflicts with the forward-thinking associations of the scorecard approach	Suggestions for improvement to existing products, processes and procedures, including the scorecard itself, should be actively encouraged
Discordance	When considered individually, measures for each scorecard perspective are contradictory and inconsistent with each other	Lack of goal congruence	A more holistic approach is required to ensure that KPIs are consistent with each other and with the overall strategy
Loss of direction	Scorecard measures are no longer consistent with the overall strategy	Strategic objectives not achieved	Review the scorecard as part of the strategic planning cycle to ensure that it is kept relevant

Box 5: Indicator and Index Design Template

Template for Designing Key Performance Indicators	
Intellectual Capital Element being assessed:	Name the strategic element from the Value Creation Map, which is being assessed with this indicator.
Key Performance Question(s)™	Name the question(s) related to performance that this indicator is helping to answer.
Ownership/Person Responsible/ Champion/Coordinator	Identify the person(s) or function(s) responsible for the delivery/performance of the measured strategic element.
Indicator Name	Pick short and clear indicator name.
Data Collection Method/Instrument	Describe how the data will be collected.
Source of data	Describe the source of the data.
Frequency	Describe how frequently this indicator will be collected. If possible, include a forward schedule.
Formula/Scale/Assessment	Describe how performance levels will be determined. This can be qualitative, in which case the assessment criteria need to be identified, or it can be numerical, or using a scale, in which case the formula of scales with categories need to be identified.
Targets and performance thresholds	Identification of targets, benchmarks and thresholds for traffic lighting.
Data entry	Name the person or role responsible for collecting the data.
Expiry/Revision date	Identify the validity date of this indicator, or when it will have to be revised.
How much will it cost or what will be the days required to collect the data? Is it justified?	Estimate the costs incurred by introducing and maintaining this indicator.
Reporting	
Audiences/Access	Name the key audience for this indicator and clarify who will have access to it.
Reporting frequency	Outline how frequently this indicator will be reported to the different audiences (if applicable).
Reporting formats	Describe how the performance will be presented (numerical, graphical and narrative formats). Here it is good to especially think about visual representation that makes information easier to understand and digest.

Source: Marr, B. (2006). Strategic Performance Management: Leveraging and measuring your intangible value drivers, Butterworth-Heinemann, Oxford.

Endnote

1 cgma.org/Resources/Reports/Pages/rebooting-business.aspx.

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