

Prof. Dr. Reinhard Doleschal - SuSe 2020

IDS Exercises

Learning and training Manual for Students

In this manual you can find the most important questions and themes for Knowledge Management and a training tool for the Portfolio Analysis. Please read question after question and use the three Knowledge Management Presentation, the Portfolio Manual and the Excel tool for answers. In general you find there enough information. If do you want more detailed information you can read further books:

Nonaka/Takeuchi: The knowledge-creating company, 1995
Gilbert Probst et al.: Managing Knowledge, 1999

Regarding Part One:

Do you know the differences of the previous knowledge and innovation waves and what are the current global and local risks of knowledge creation and innovation?

Can you describe the difference between traditional industries and knowledge industries?
What are the fundamental drivers?

What kind of tools and instruments enables the productivity in the fourth industrial revolution?

Regarding Part Two:

Do you know the difference of symbols, data, information and knowledge? Build up two or three examples with the distinct attributes.

Do you know the three dimensions and six fundamental generic types of knowledge?
In what kind of quality and constellation knowledge exist or generate?

Do you understand the Gettier-Problem? What does it mean: "Knowledge as justified true belief"

In companies or organizations one can organize a knowledge management process or cycle. Gilbert Probst has a build up an typical knowledge loop with eight steps. Do you know the step by step model?

Another model is from Nonaka and Takeuchi. Do you know the principles of this concept?

Do you know the difference and the functionality of closed and open innovation?

Regarding Part Three:

What are the major success factors for Knowledge Management in a company or organization?

Do you know the European Guide to good Practice in Knowledge Management prepared by the European Committee for Standardization (CEN)?

What is the framework and what are the three layers?

How many phases has the implementation concept and what are the thirteen barriers of Knowledge Management Practices?

What are the major impacts of Low and High Competencies for the implementation of a Knowledge Management Strategy (KMS)?

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Learning Manual

First Session: Portfolio Analysis

HERE YOU CAN FIND THE FUNCTIONALITY OF TWO STRATEGIC BUSINESS TOOLS

Do you know the functionality of the GE-McKinsey Portfolio Matrix and the BCG Growth-Share Matrix?

Working with the BCG (Boston Consulting Group) Growth-Share Matrix

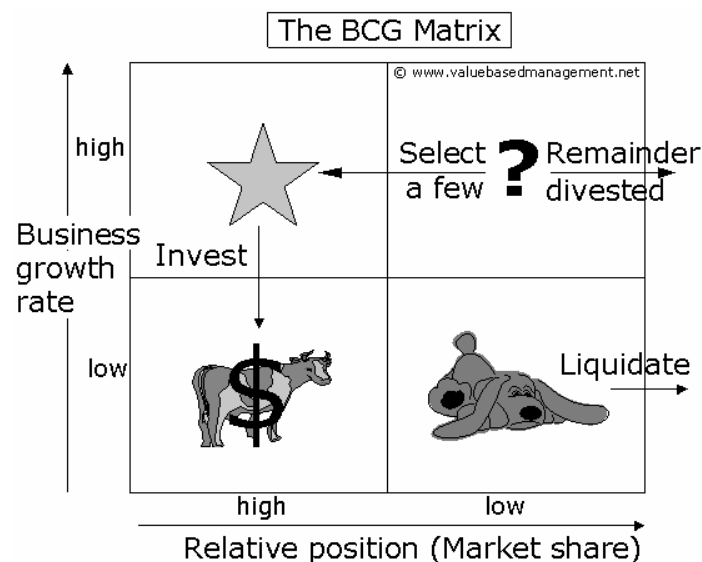
The BCG matrix is the oldest (dating back to the 70s) and perhaps most renowned of all the matrices. Based on our experience it is perhaps the most common portfolio matrix to be taught around the world. The BCG Matrix, like the Ansoff Matrix, is generally used to analyse the standing of single business unit or company enterprise.

It can, however, be extended to include more than one SBU² as in the case of business portfolio analysis. In this sense it provides a *helicopter view*. The analysis is based on the combination of two dimensions: Business Growth and Market Share.

The idea is that the bigger the market share the product has, the more cash it can earn, and the faster the product grows, the more investments are needed. The BCG Matrix (www.bcg.com) tackles four types of scenario: *Stars*, *Cash Cows*, *Poor Dogs*, and *Question Marks*, as shown below.

The creation of value of a company, following this model, is given from the best composition of the product portfolio of it. Hence it may be considered as a useful tool to counteract the substitutes and rivalry forces. The scope in the long-term is to ensure value creation by combining product offering while generating the largest amount of cash at the lowest level of capital investment. In this way the same tool highlights those products that demand high investment efforts for low-growth products and that should be avoided .

The BCG Matrix



² SBU – Strategic Business Unit or division

Types of SBU regarding BCG Growth-Share Matrix

Stars - Stars are high growth businesses or products competing in markets where they are relatively strong compared with the competition. Often they need heavy investment to sustain their growth. Eventually their growth will slow and, assuming they maintain their relative market share, will become cash cows.

Cash Cows - Cash cows are low-growth businesses or products with a relatively high market share. These are mature, successful businesses with relatively little need for investment. They need to be managed for continued profit - so that they continue to generate the strong cash flows that the company needs for its Stars.

Question marks - Question marks are businesses or products with low market share but which operate in higher growth markets. This suggests that they have potential, but may require substantial investment in order to grow market share at the expense of more powerful competitors. Management have to think hard about "question marks" - which ones should they invest in? Which ones should they allow to fail or shrink?

Poor Dogs - Unsurprisingly, the term "dogs" refers to businesses or products that have low relative share in unattractive, low-growth markets. Dogs may generate enough cash to break-even, but they are rarely, if ever, worth investing in.

Working with the GE-McKinsey Matrix

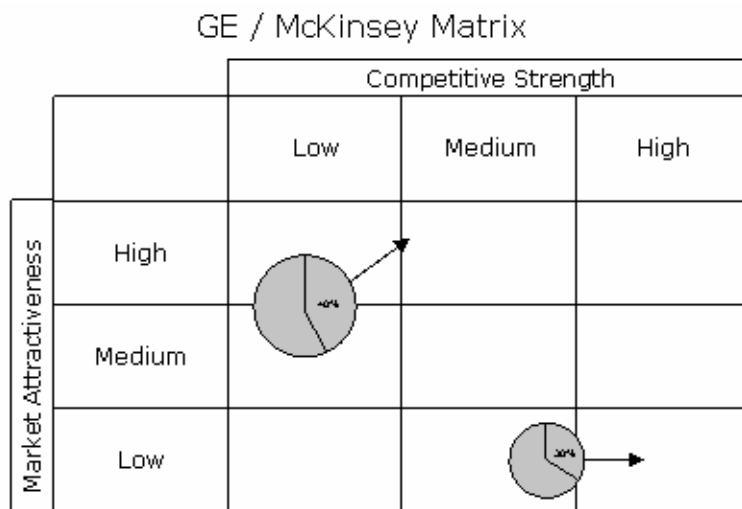
The GE/McKinsey Matrix is again a model built to assess Strategic Business Units (SBU) and is essentially a revised version of the BCG Matrix. It is built on two dimensions: *Market Attractiveness* and *Competitive Strength* thus providing a *satellite view*.

The main differences are:

- Market Attractiveness replaces the Market Growth in the BCG Matrix. This is considered an improvement because it includes more factors upon which the degree of the attractiveness of an industry can be determined.
- At the same time the dimension of Competitive Strength replaces the Market Share and includes more factors that determine the strengths of an industry in addition to the firm's market share. The GE-McKinsey Matrix (depicted in figure 6) also has three degrees of assessment (high, medium, low) hence allowing for more nuances in the results compared to the two degree version in the BCG matrix i.e. only high or low (valuebasedmanagement.net, 2004). It could be argued that three degrees make it harder to compare with the BCG results and, moreover, greater discrepancy occurs because interpretation by managers is higher. However, the finer detail provides better visualization of direction for managers, especially upper managers.

The GE/McKinsey Matrix

Some of the drivers that can be included under the two GE/McKinsey Matrix dimensions are:



Drivers of the GE/McKinsey Matrix dimensions

Typical factors or external KPI's (Key Performance Indicators) that condition **Market Attractiveness** Factors

- Market size
- Market growth rate
- Market profitability
- Pricing trends
- Competitive intensity / rivalry
- Overall risk of returns in the industry
- Opportunity to differentiate products and services
- Demand variability
- Segmentation
- Distribution structure

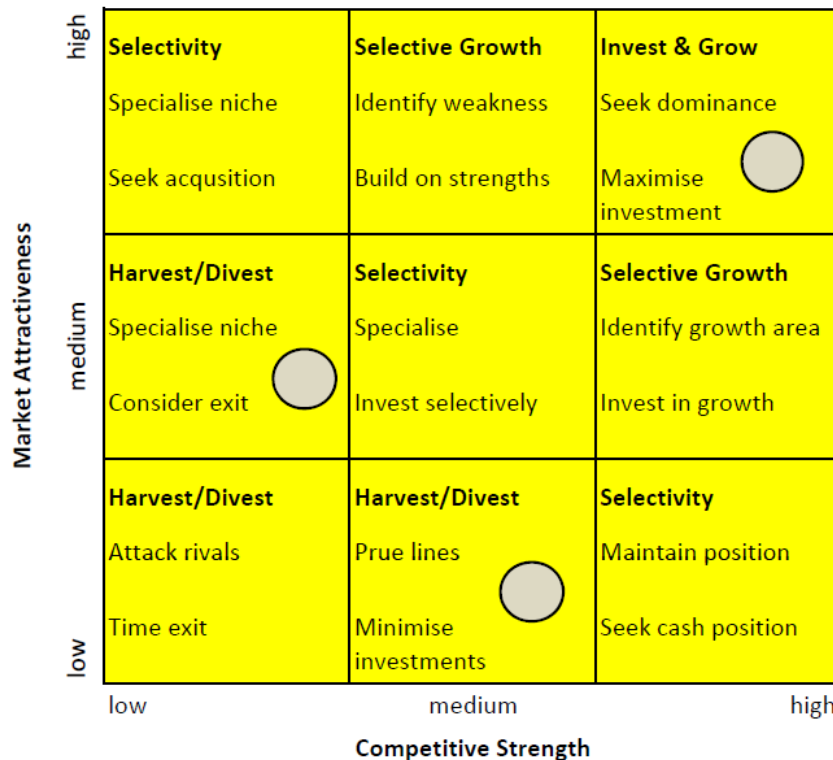
Typical factors or internal KPI's (Key Performance Indicators) condition **Competitive Strength**

- Strength of assets and competencies - Relative brand strength
- Market share
- Market share growth
- Customer loyalty
- Relative cost position (cost structure compared with competitors)
- Relative profit margins (compared to competition)

- Distribution strength and production capacity
- Record of technological or other innovation
- Access to financial and other investment resources

In the graphic below you can find several strategic business options in nine boxes.

Use the result of your MCK Excel-tool and make a decision for the three SBU's:



ATTENTION!

Additional material you can find in the internet: BCG Matrix and GE-MCK Matrix!