

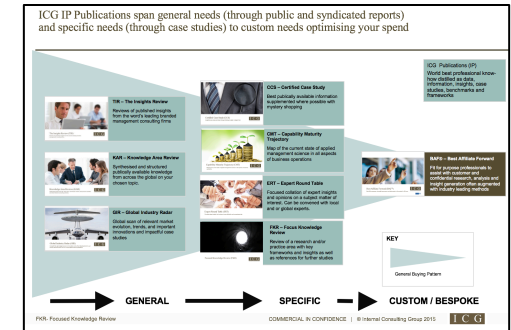
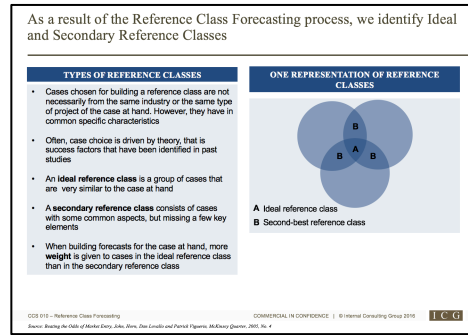


Focused Knowledge Brief (FKB 002)

Reference Class Forecasting – Product Brochure

March 2016

Focused Knowledge Brief (FKB) 002– RCF– Reference Class Forecasting




Focused Knowledge Brief

FKBs (Focused Knowledge Brief) are documents containing information rich slides summarizing leading articles, books and key frameworks, along with any published materials on areas of research and/or practice.

This FKB on Reference Class Forecasting comprises 17 pages of PowerPoint slides that contain:

- What RCF is and why is a useful complement to other forecasting techniques, such as regression analysis, to build accurate forecasts about costs, benefits and implementation horizon of crucial strategic and operational decisions
- Discussion of RCF as a practical application of the Outside View, a forecasting and decision making approach that has been proposed by Nobel Prize Daniel Kahneman
- Discussion of RCF as a technique to overcome cognitive biases such as anchoring, optimism, overconfidence and the planning fallacy
- Case studies of applications of RCF in market entry decisions as well as large IT infrastructure investments, including background information and key insights
- Certification by ICG that no information was obtained as part of any engagement ICG may have had

Agenda



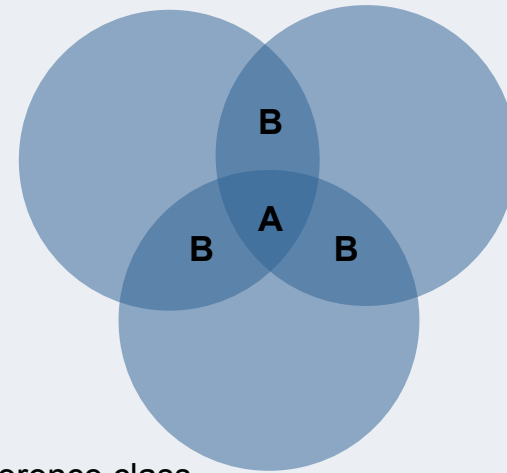
Section	Component	Description
1	Overview	<ul style="list-style-type: none">• Reference Class Forecasting - What is it?
2	Context	<ul style="list-style-type: none">• Problems with current forecasting methods• Typical Forecasting biases
3	Detailed Description	<ul style="list-style-type: none">• Reference Class Forecasting – Definition• The process of building a reference class
4	Relevant Case Studies	<ul style="list-style-type: none">• Market Entry• Large IT infrastructure projects
5	Appendix	<ul style="list-style-type: none">• Relevant published material• Other ICG source of insights

Sample 1: As a result of the Reference Class Forecasting process, we identify ideal and secondary reference classes

TYPES OF REFERENCE CLASSES

- An **ideal reference class** is a group of cases that are very similar to the case at hand
- A **secondary reference class** consists of cases with some common aspects, but missing a few key elements
- When building forecasts for the case at hand, more weight is given to cases in the ideal reference class than in the secondary reference class. However, both types of classes are useful in improving the forecasts for the case at hand
- Cases chosen for building a reference class are not necessarily from the same industry or the same type of project of the case at hand. However, they have in common specific characteristics
- Often, case choice is driven by theory or success factors that have been identified in past studies

ONE REPRESENTATION OF REFERENCE CLASSES



A Ideal reference class

B Second-best reference class

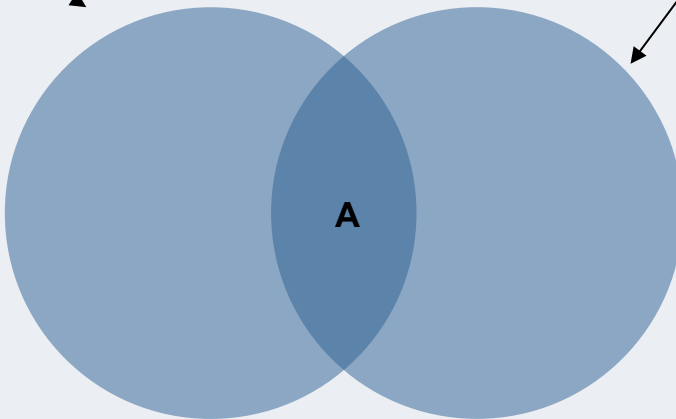
Sample 2:

Segway could have predicted the size of the market by using the Reference Class approach to compare to other industries

REFERENCE CLASSES (RC) FOR SEGWAY

Early transportation manufacturers (i.e., automobiles in early 1900s), fuel cell cars, private airplanes, bicycles, scooters, and motorcycles)

Other entrants requiring unique infrastructure (electric power, telephones, and high-definition television)



A Ideal reference class

THE PROBLEM

- Segway was proposing to introduce a new type of two-wheeled vehicle
- An estimation of sales of Segways was needed

MARKET SIZE PREDICTIONS

- Using RC to determine the size of the market for Segways would have provided a number of important insights:
 1. Early transportation manufacturers
 2. Other entrants requiring unique infrastructure

WHAT ACTUALLY HAPPENED

- Segways greatly undersold compared to their original sales predictions
- Without RC, some key insights were missed. Many cities refused to allow the use of Segways on sidewalks
- Had Segway used RCF they would have seen the importance of securing the rights to ride Segways in cities and more accurately predict costs, entry timing and market size.



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