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Software Product Management

Product Strategy

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Focus

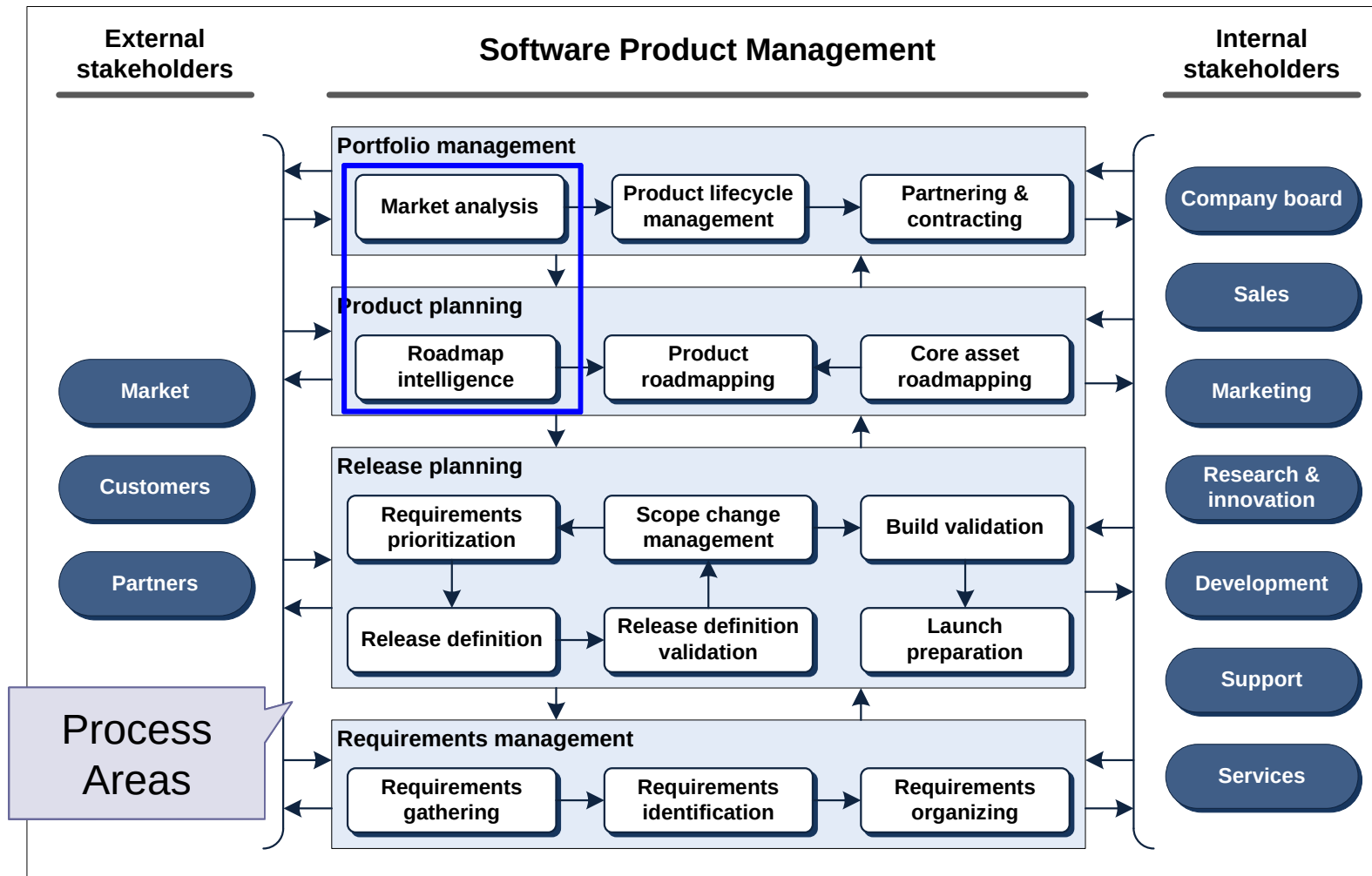


	Market Analysis	Product Analysis	Product Strategy	Product Planning	Development	Marketing	Sales and Distribution	Support and Services
Often on corporate level			Portfolio Management	Resource Allocation	Resource Allocation	Marketing Strategy and Plan	Sales Strategy and Plan	
Product (family) level	Market Research Market Sizing Market Problems Technology Assessment Competitive Analysis	Product Performance Customer Satisfaction Win/loss Analysis Opportunities	Positioning Delivery Model Pricing Model Pricing Business Case Make or buy Ecosystem Legal terms Protection of Intellectual Property	Roadmap Release Plan Requirements Management Functional Specification	Project Plan Technical Specification Project Requirements Management Implementation Quality Assurance Technology Innovation	Launch Plan Customer Analysis Partner Management Operational Marketing Material	Channel Preparation Operational Sales Operational Distribution Material	Customer Support Technical Support Marketing Support Sales Support Services Preparation Operational Services Provision

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Contents

Learning Objectives

- Understand Selected Approaches for defining Product Strategy
- Understand Selected Inquiry Methods for defining Product Strategy

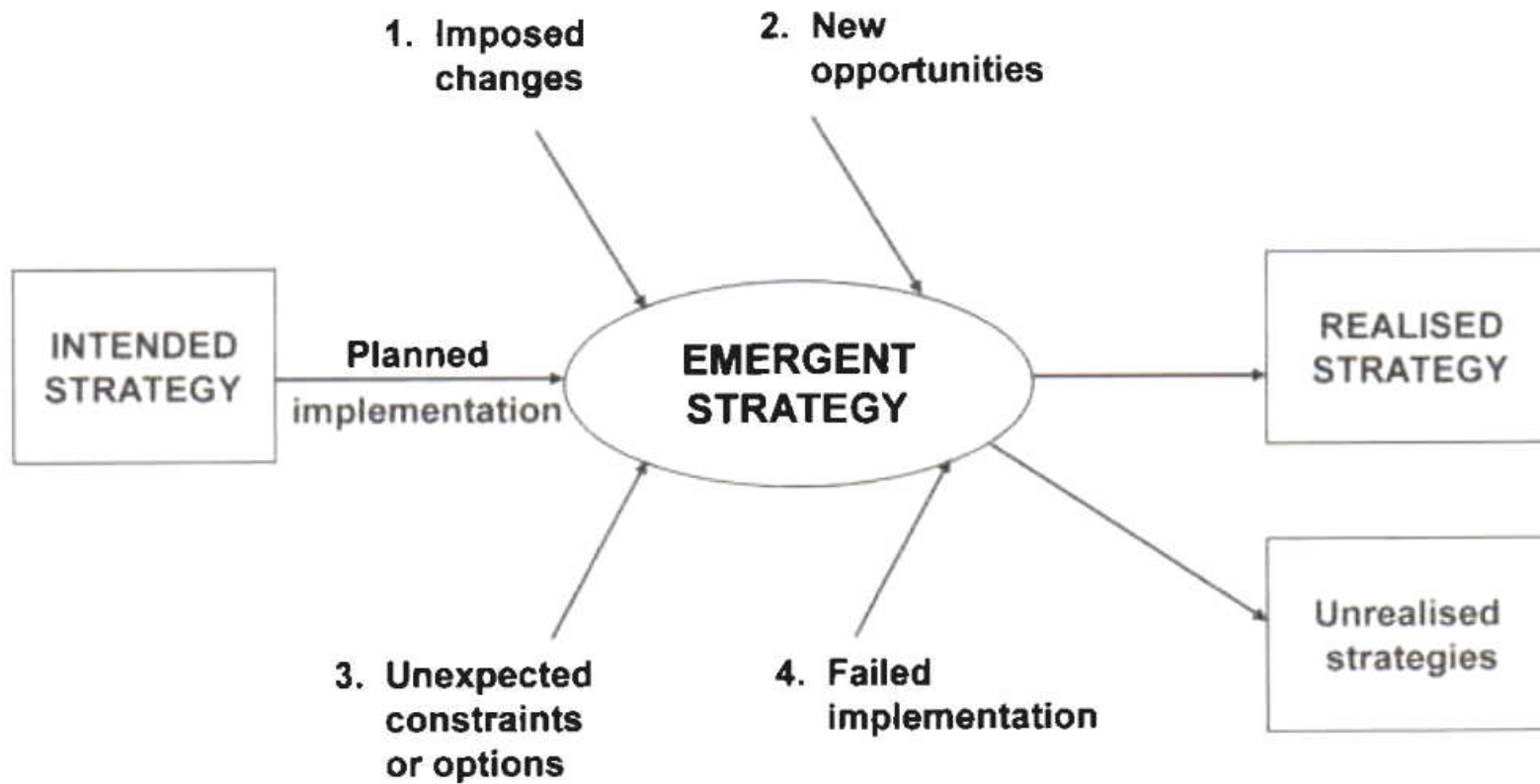
Agenda

- Product Strategy
 - Contextual Analysis
 - Product Positioning
- Inquiry Methods
 - Monitoring

Strategy



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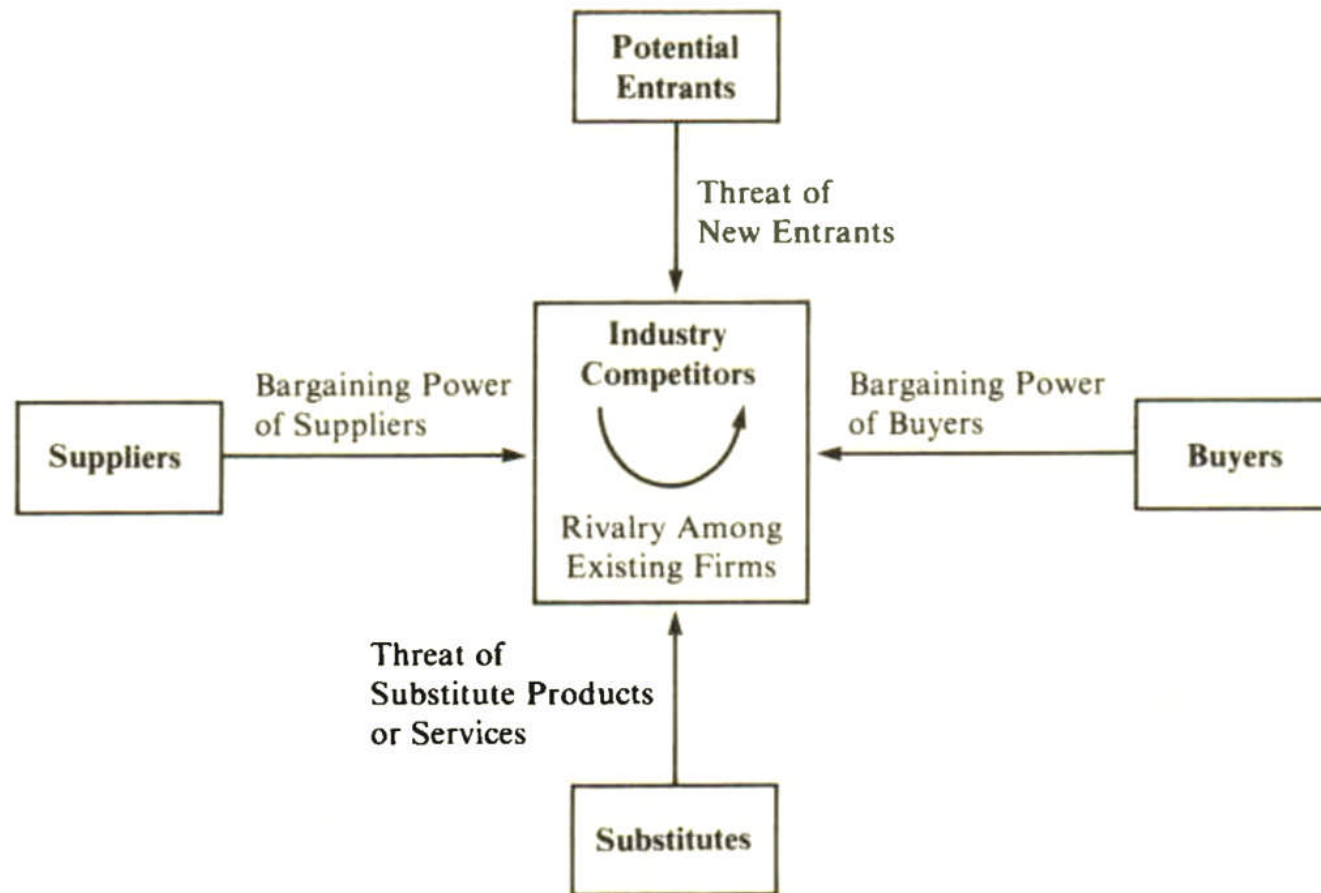
Software Product Strategy

- For a time span of 1-5 years:
 - Product Scope: Features
 - Target Market and Target Market Segments
 - Product Delivery Model*
 - Product Positioning*
 - Business Expectations: Market Share, Sales...*
 - Financial and Resource Budget*
 - Roadmap: Rough Plan

*: Focus of Business Case



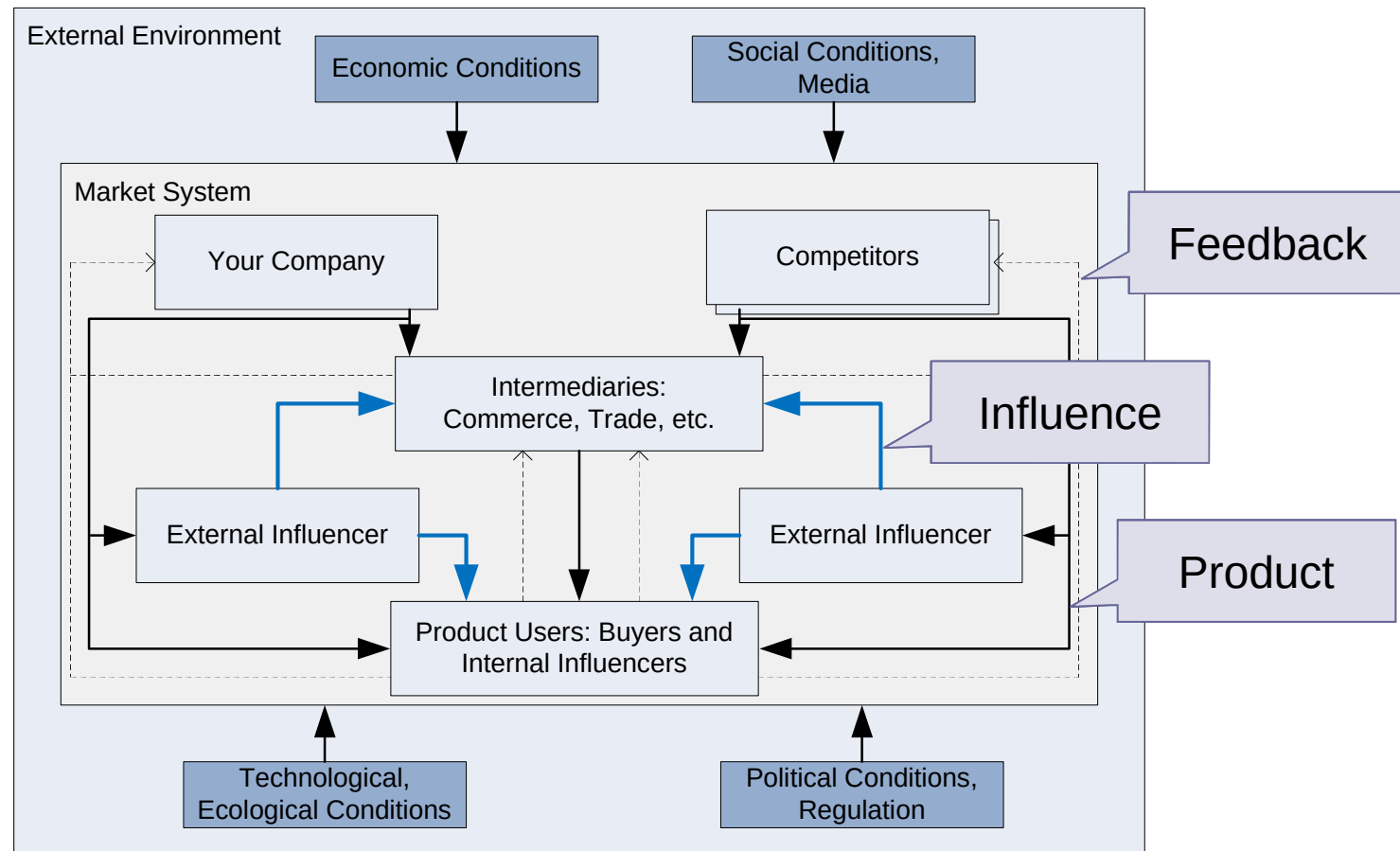
Product Positioning



Analysis of the Wider Product Context: PEST



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Taxonomy of Contextual Factors

- Scope of Market and Environmental Analysis:
What are the interests of...
 - ...Market Partners and Their Needs, Market Potential, Trends, Competition, Suppliers, Investors, Job Market
 - ...Economic, Ecologic, Technical, Political, and Social Influencers
- Scope of Company Analysis:
What are your capabilities in terms of..
 - ...Services, Publicity, Processes, Production, Finances, Infrastructure, IPR (Intellectual Property), Team, Organization and Leadership



Impact Analysis: SWOT

Internal factors: processes, capabilities, technology, finances, infrastructure, IPR, team, organization, leadership, benefits, services, handling of the markets

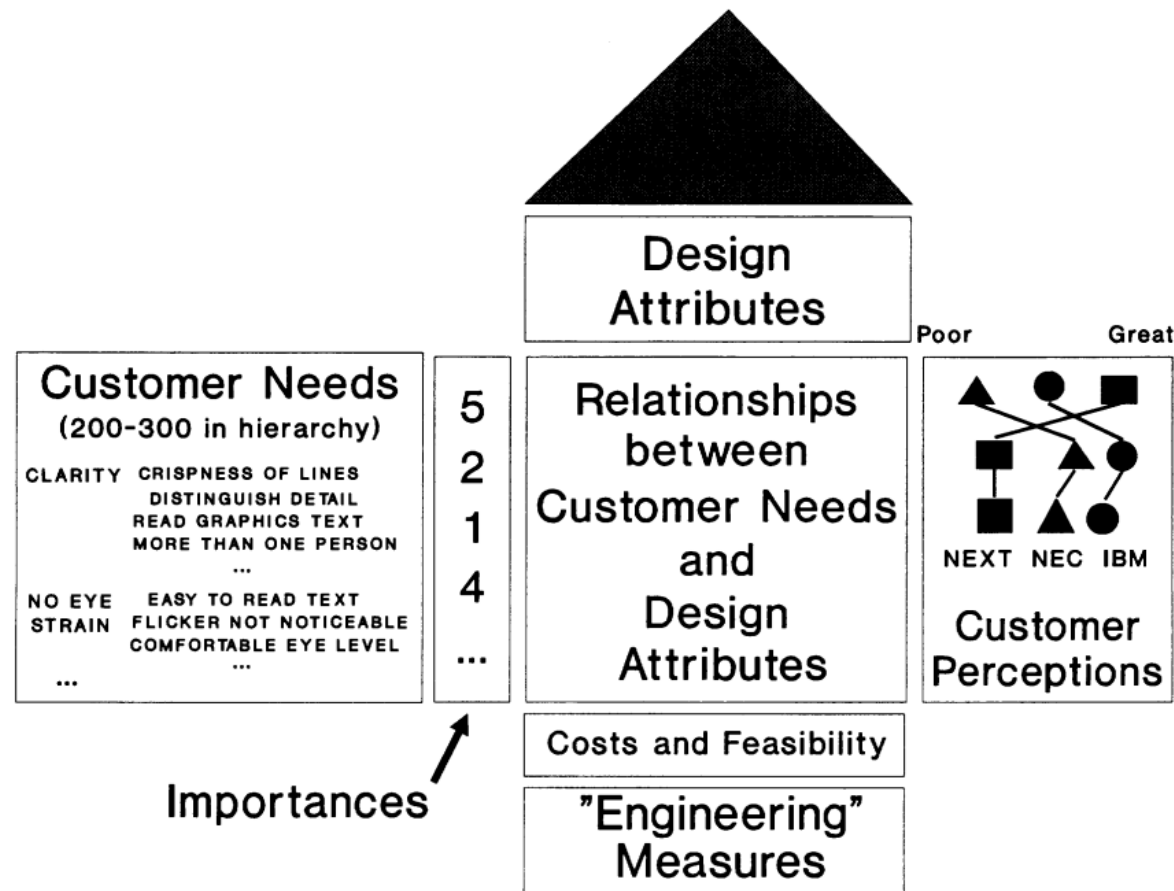
Strengths - - -	Weaknesses - - -
Opportunities - - -	Threats - - -

Environmental factors: market potential, social trends, competition, economic trends, technological / ecological / political trends, suppliers, investors, employment market, market partners and their needs

Quality Function Deployment (QFD)



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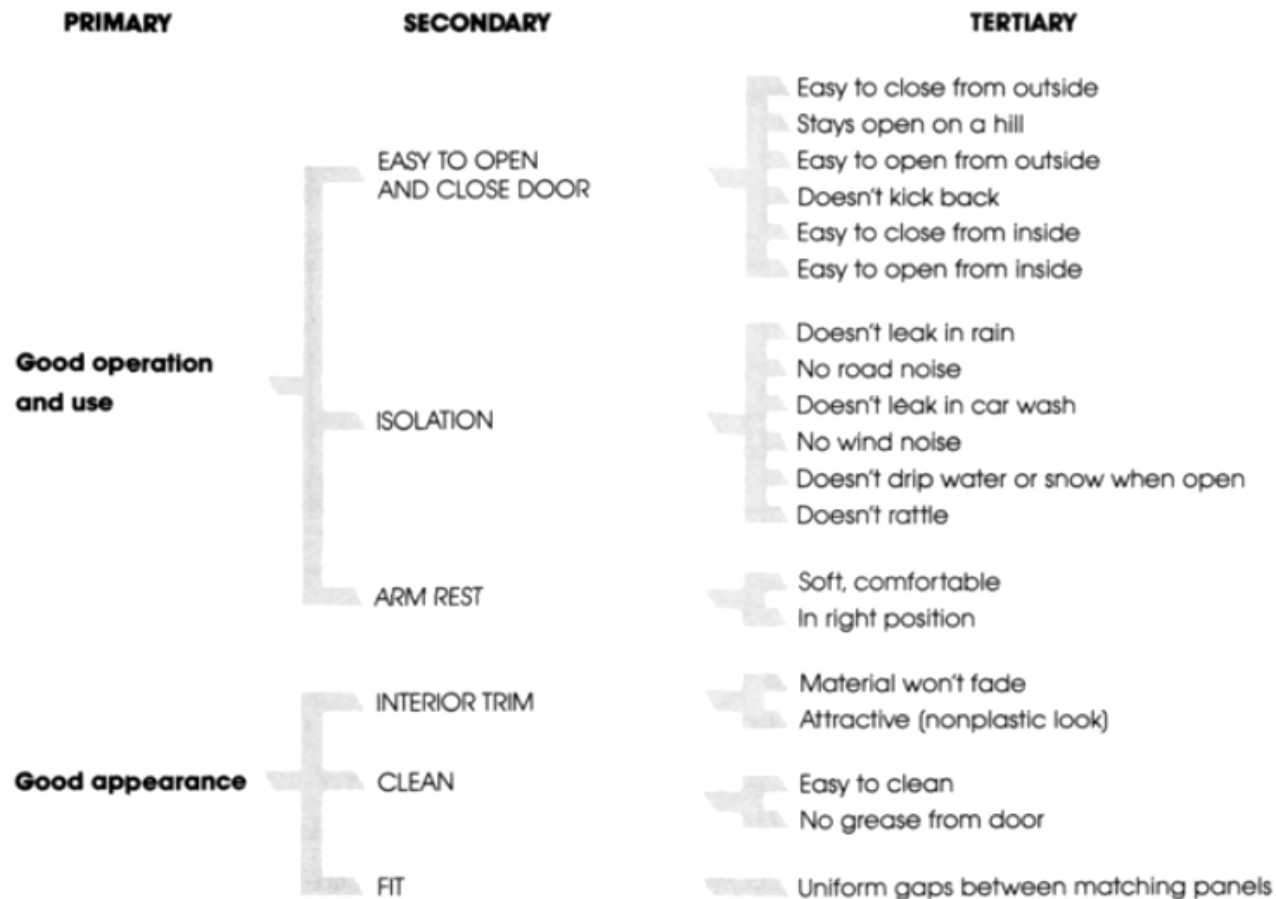


QFD Example: Toyota

Customer Needs



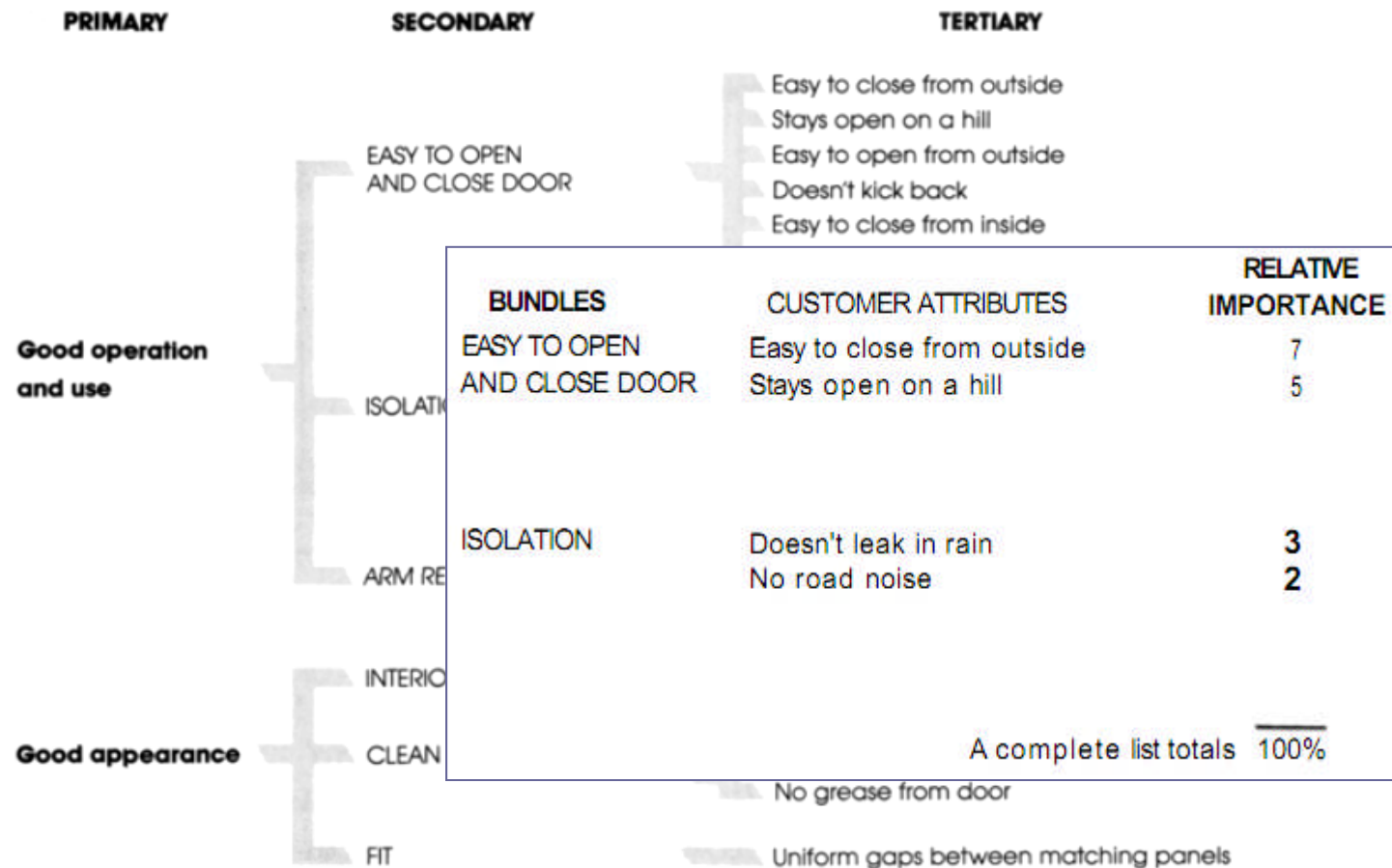
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QFD Example: Toyota Prioritized Customer Needs



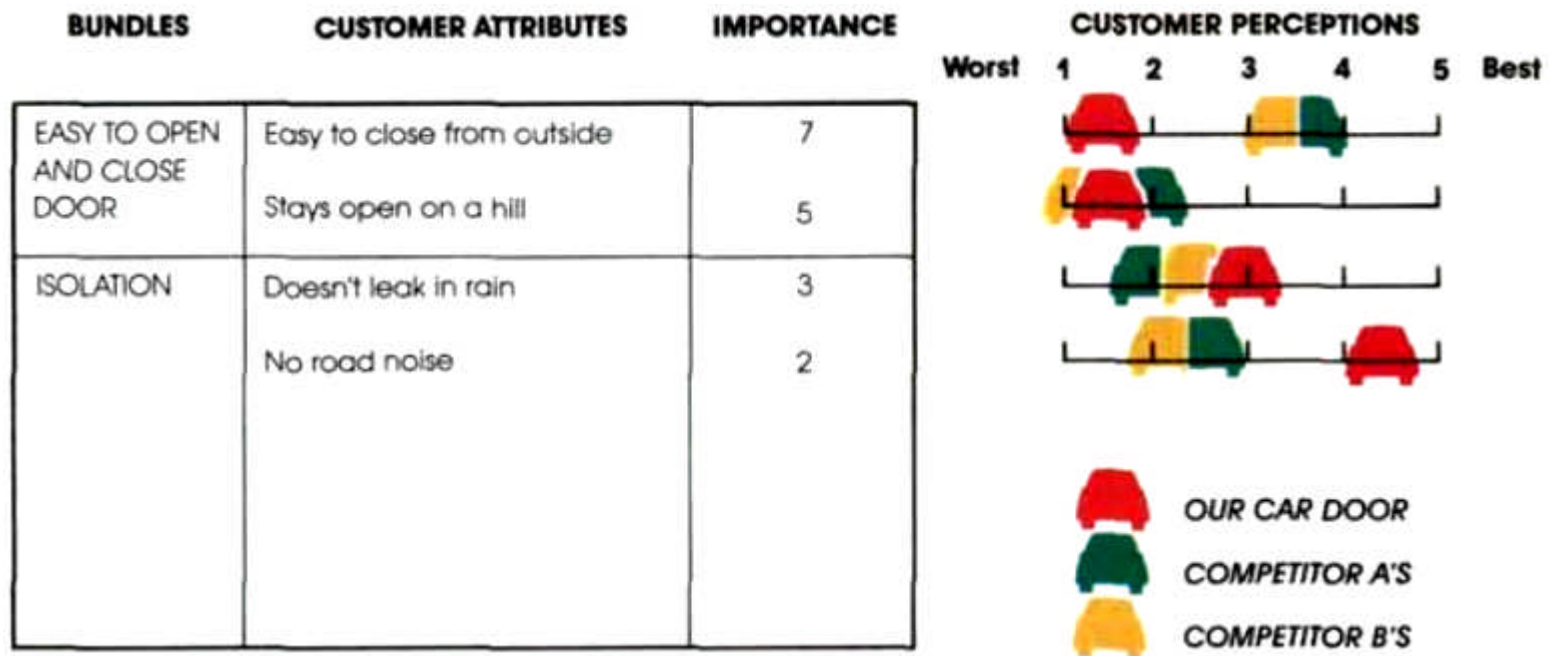
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QFD Example: Toyota Customer's Competitor Evaluation



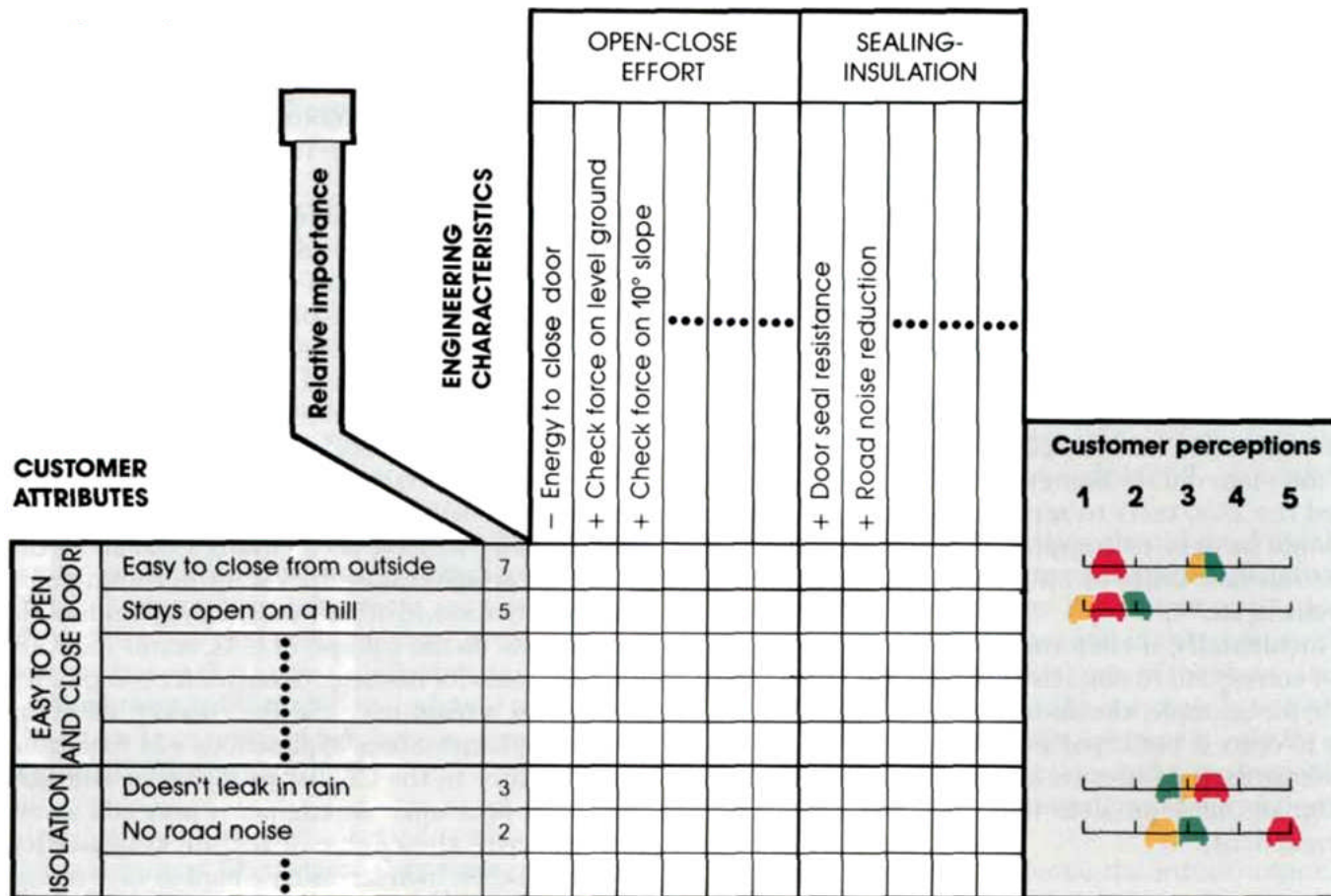
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QFD Example: Toyota Design Options



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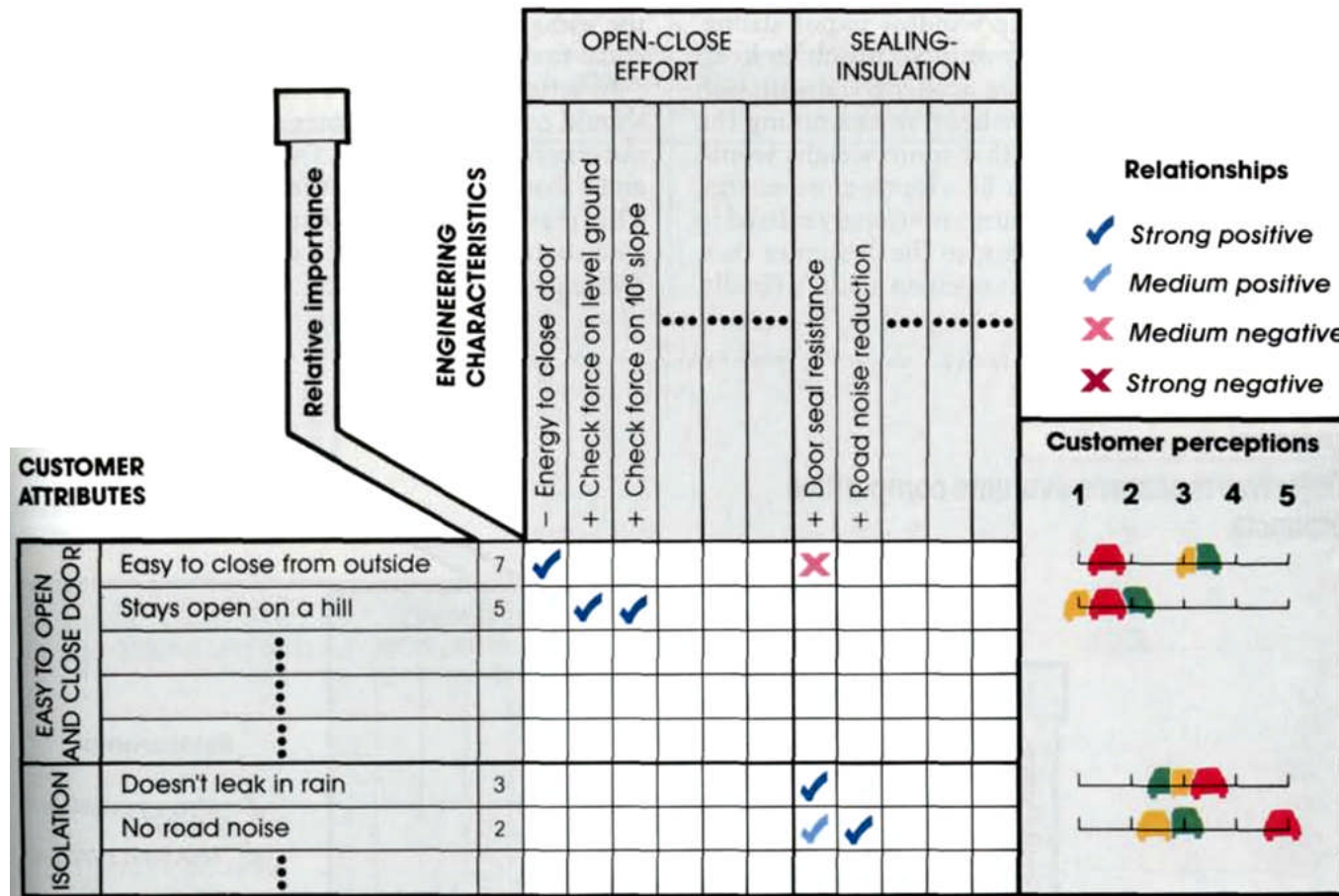


QFD Example: Toyota

Contribution of Design to Needs



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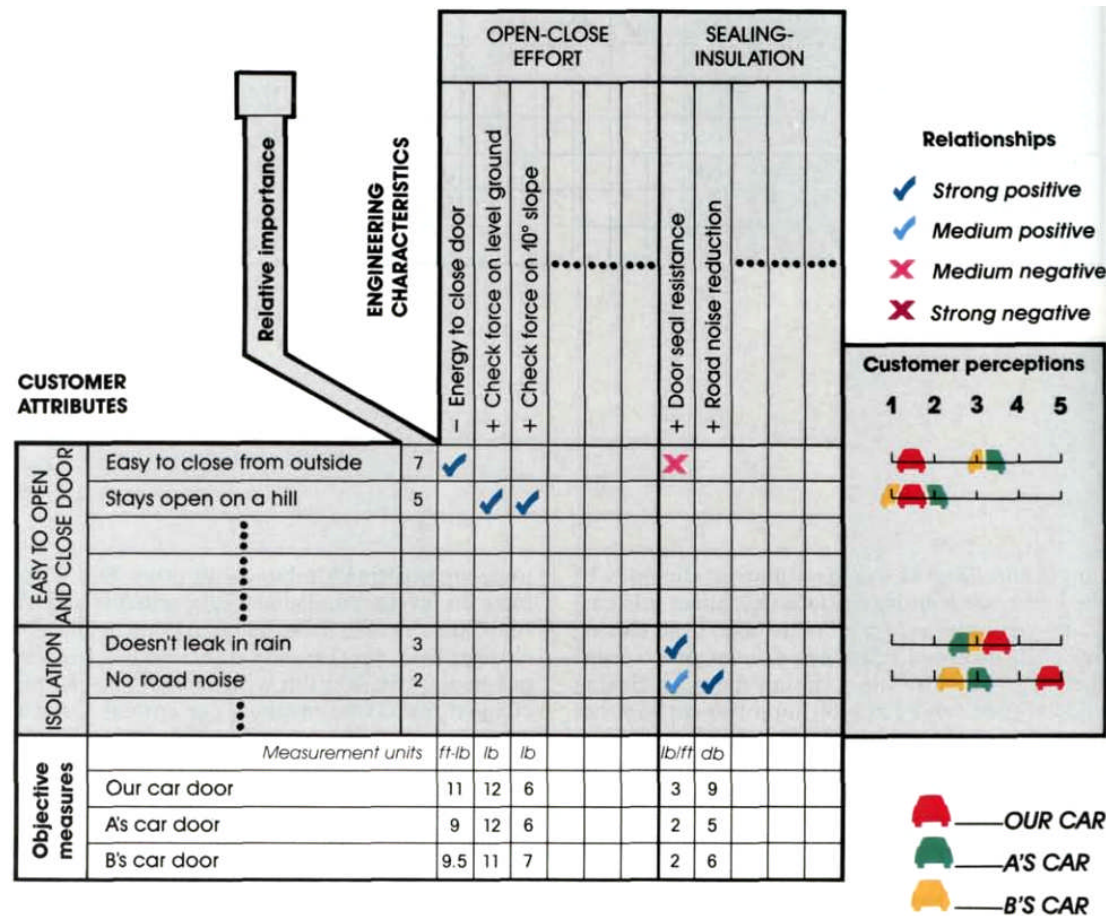


QFD Example: Toyota

Contribution of Design to Needs



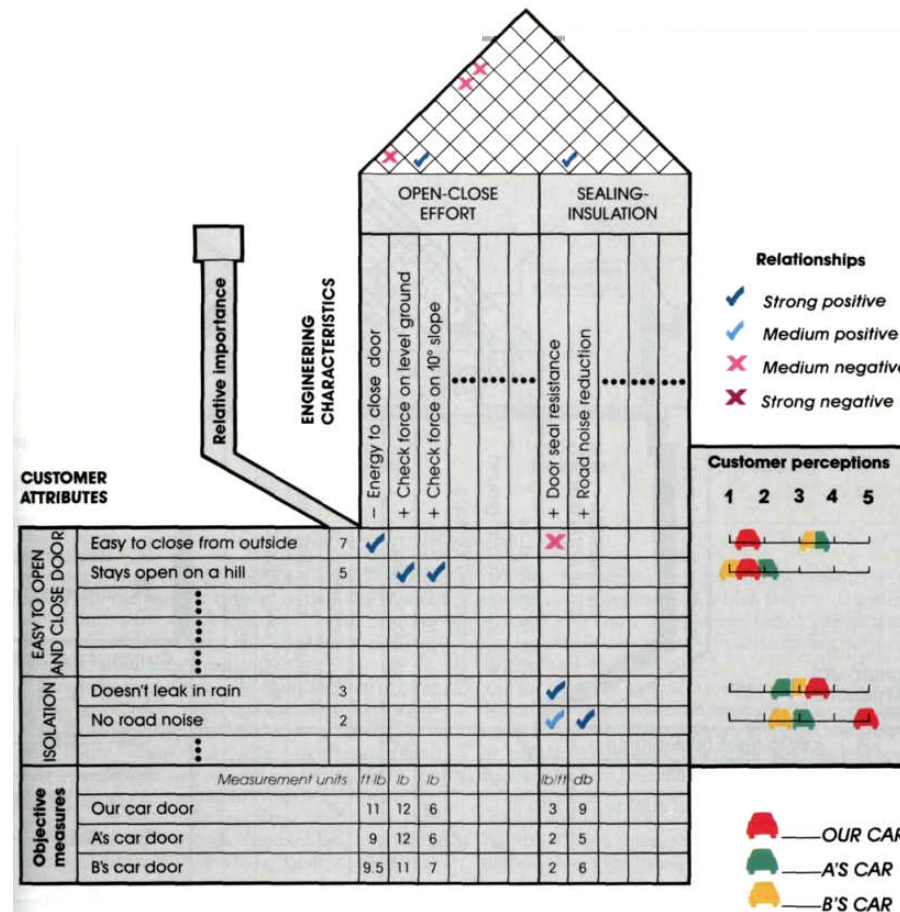
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QFD Example: Toyota Design Correlation



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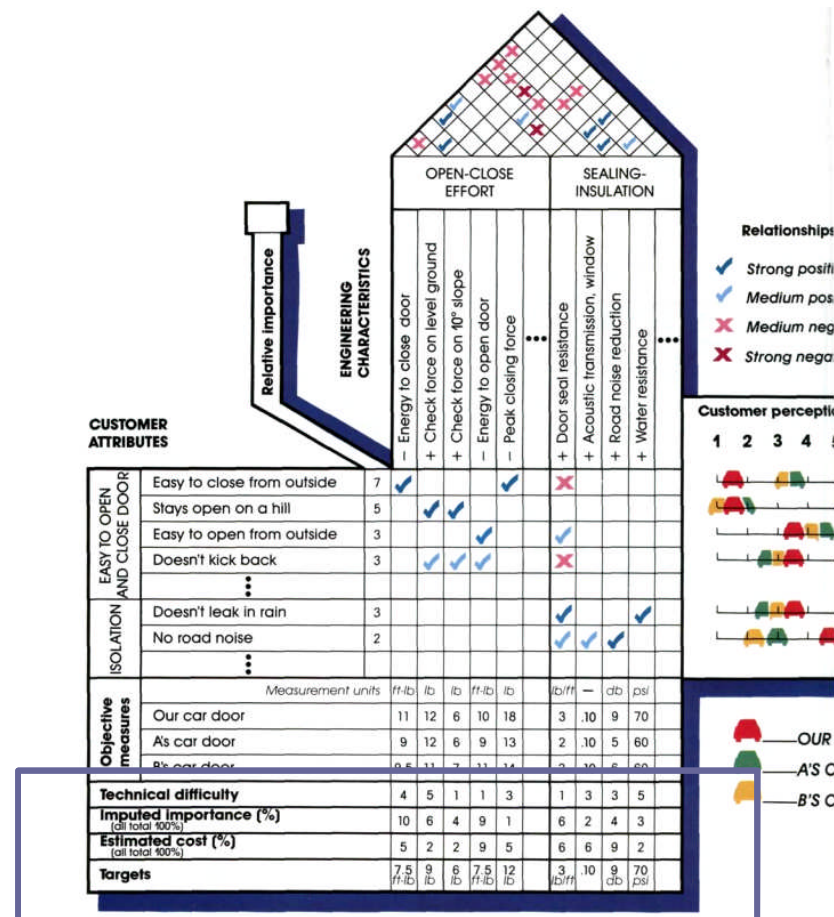


QFD Example: Toyota

Definition of Development Targets



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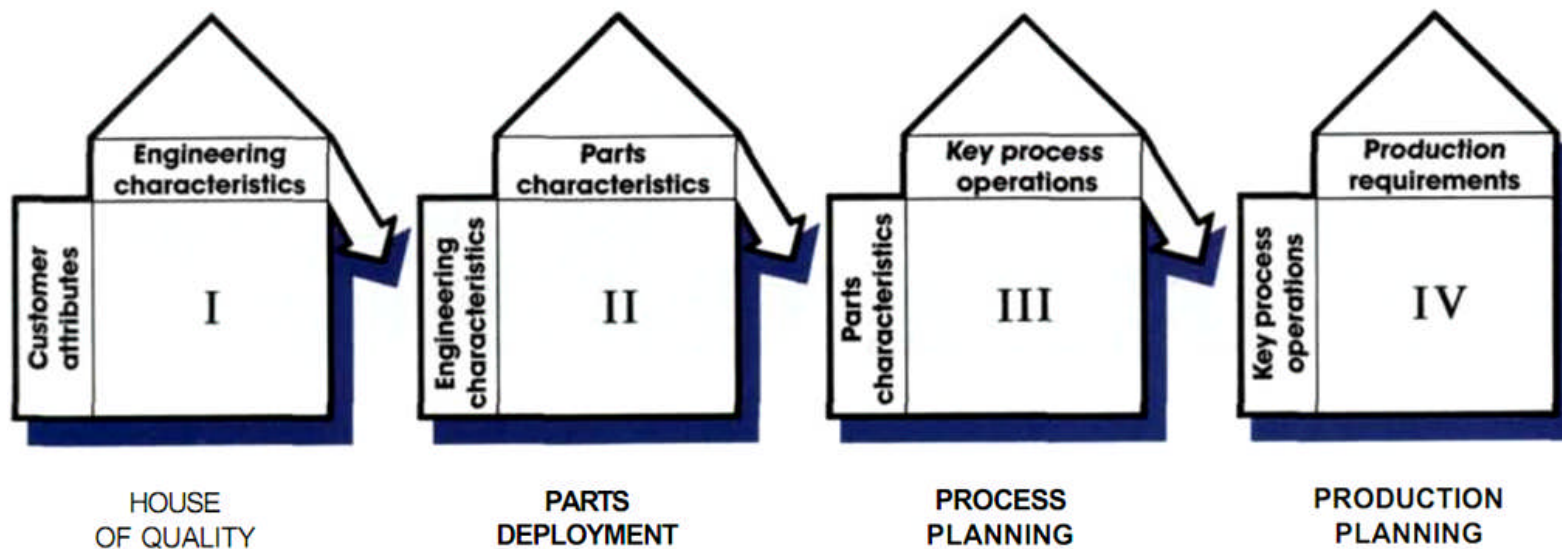


QFD Example: Toyota

Contribution of Design to Needs



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More Pragmatic Approach: Requirements Abstraction Model



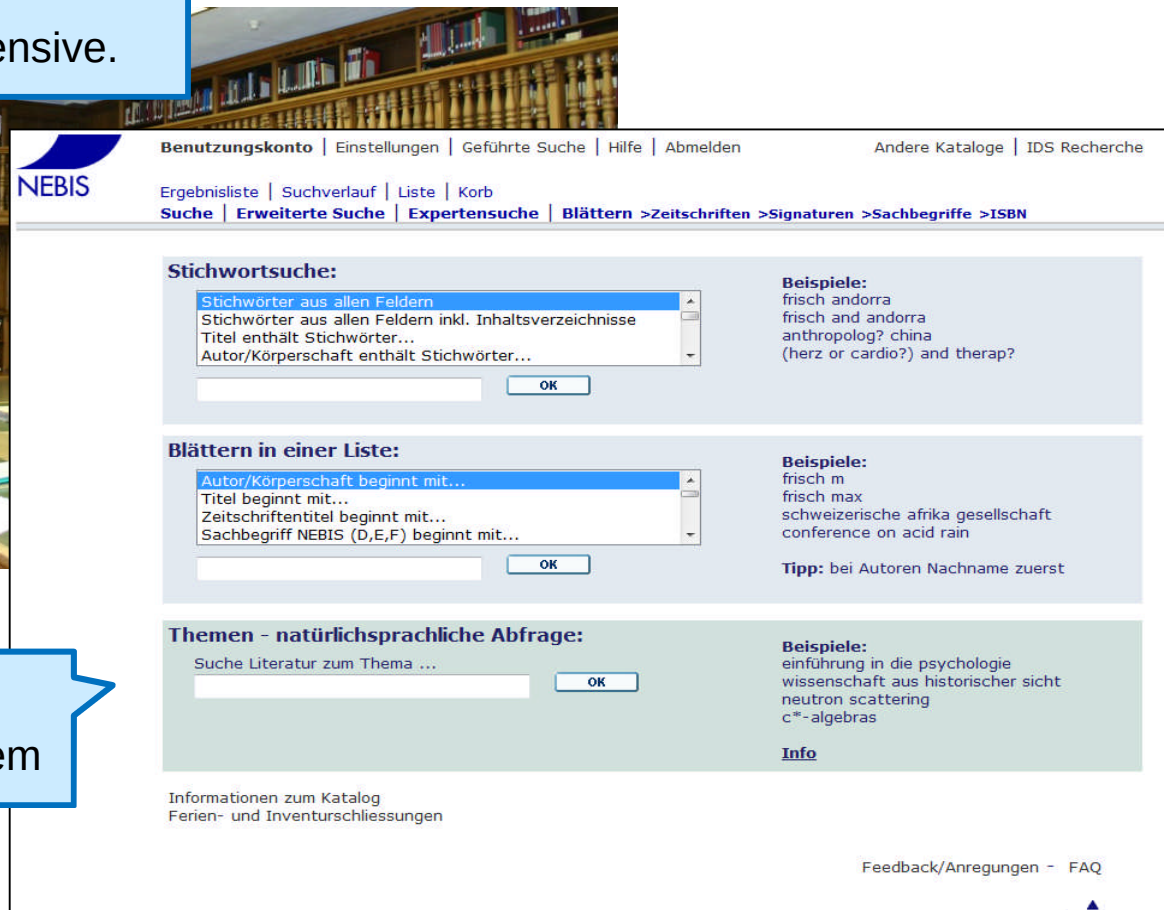
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Problem:
Operations are too expensive.



Solution:
Library Management System

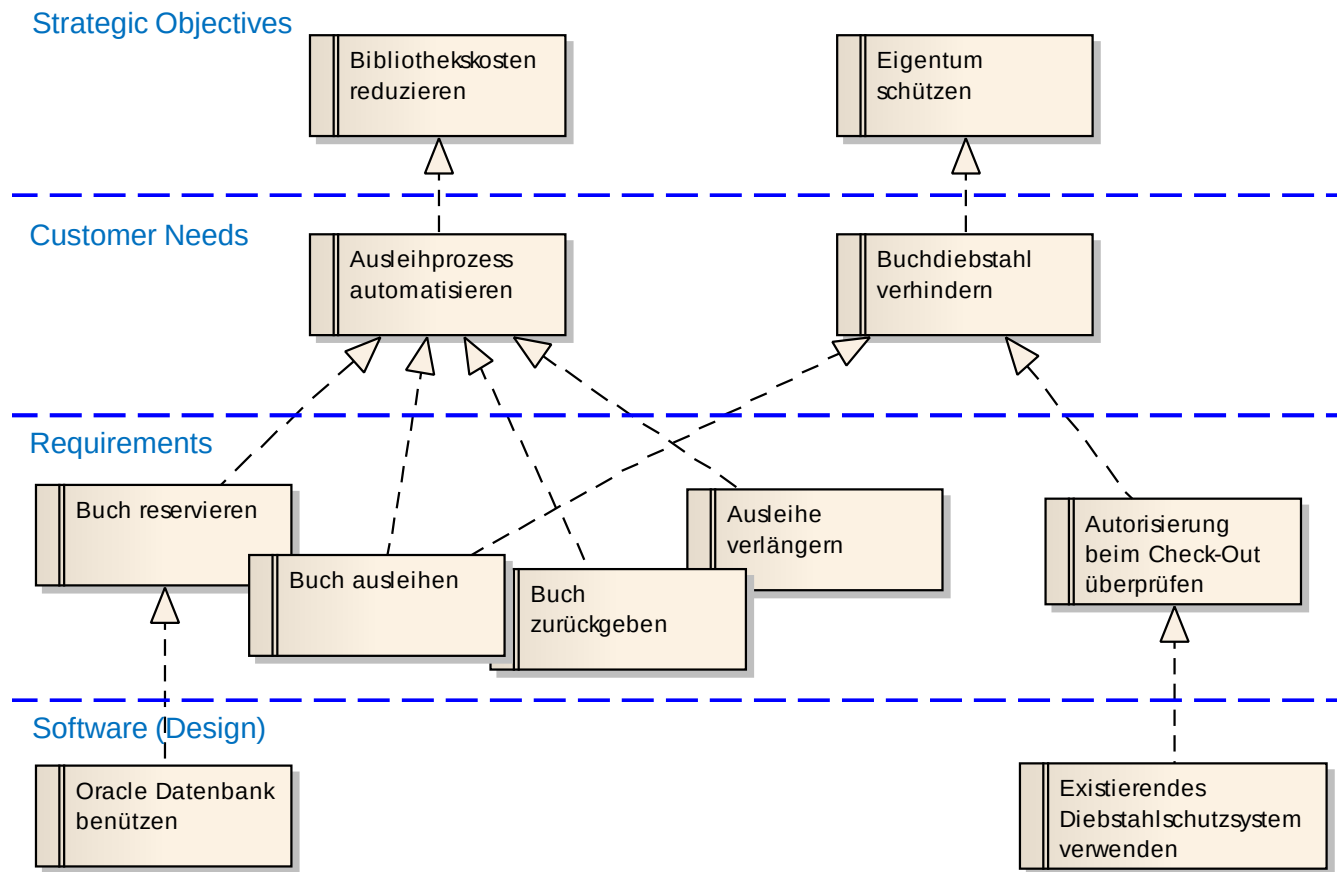


The screenshot shows the NEBIS library management system interface. At the top, there is a navigation bar with links: Benutzungskonto, Einstellungen, Geführte Suche, Hilfe, Abmelden, and Andere Kataloge | IDS Recherche. Below this is a search bar with options: Ergebnisliste, Suchverlauf, Liste, Korb, Suche, Erweiterte Suche, Expertensuche, Blättern > Zeitschriften > Signaturen > Sachbegriffe > ISBN. The main content area is divided into three sections: 1. Stichwortsuche: A search box with a dropdown menu showing 'Stichwörter aus allen Feldern', 'Stichwörter aus allen Feldern inkl. Inhaltsverzeichnisse', 'Titel enthält Stichwörter...', and 'Autor/Körperschaft enthält Stichwörter...'. An 'OK' button is next to the search box. To the right, 'Beispiele:' lists 'frisch andorra', 'frisch and andorra', 'anthropolog? china', and '(herz or cardio?) and therap?'. 2. Blättern in einer Liste: A search box with a dropdown menu showing 'Autor/Körperschaft beginnt mit...', 'Titel beginnt mit...', 'Zeitschriftentitel beginnt mit...', and 'Sachbegriff NEBIS (D,E,F) beginnt mit...'. An 'OK' button is next to the search box. To the right, 'Beispiele:' lists 'frisch m', 'frisch max', 'schweizerische afrika gesellschaft', and 'conference on acid rain'. A 'Tipp:' note says 'bei Autoren Nachname zuerst'. 3. Themen - natürlichsprachliche Abfrage: A search box with the text 'Suche Literatur zum Thema ...' and an 'OK' button. To the right, 'Beispiele:' lists 'einführung in die psychologie', 'wissenschaft aus historischer sicht', 'neutron scattering', and 'c*-algebras'. An 'Info' link is below the examples. At the bottom, there is a footer with 'Informationen zum Katalog', 'Ferien- und Inventurschliessungen', 'Feedback/Anregungen', and 'FAQ'.

More Pragmatic Approach: Requirements Abstraction Model



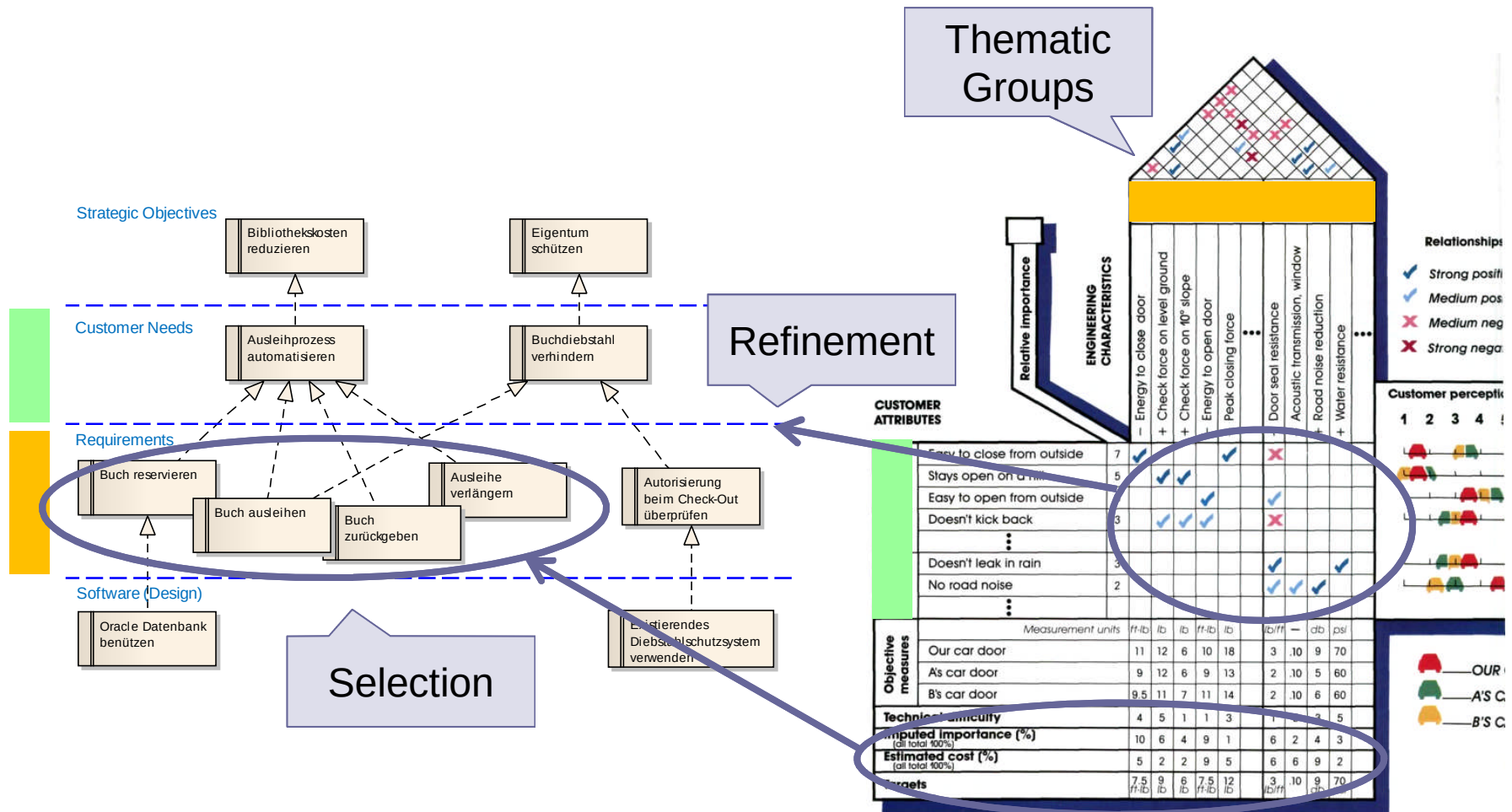
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More Pragmatic Approach: Requirements Abstraction Model



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Inquiry Methods

- Inquiry Methods for forecasting
 - Creativity
 - Monitoring
 - Trend Extrapolation
 - Expert Opinion
 - Simulation
 - Scenarios

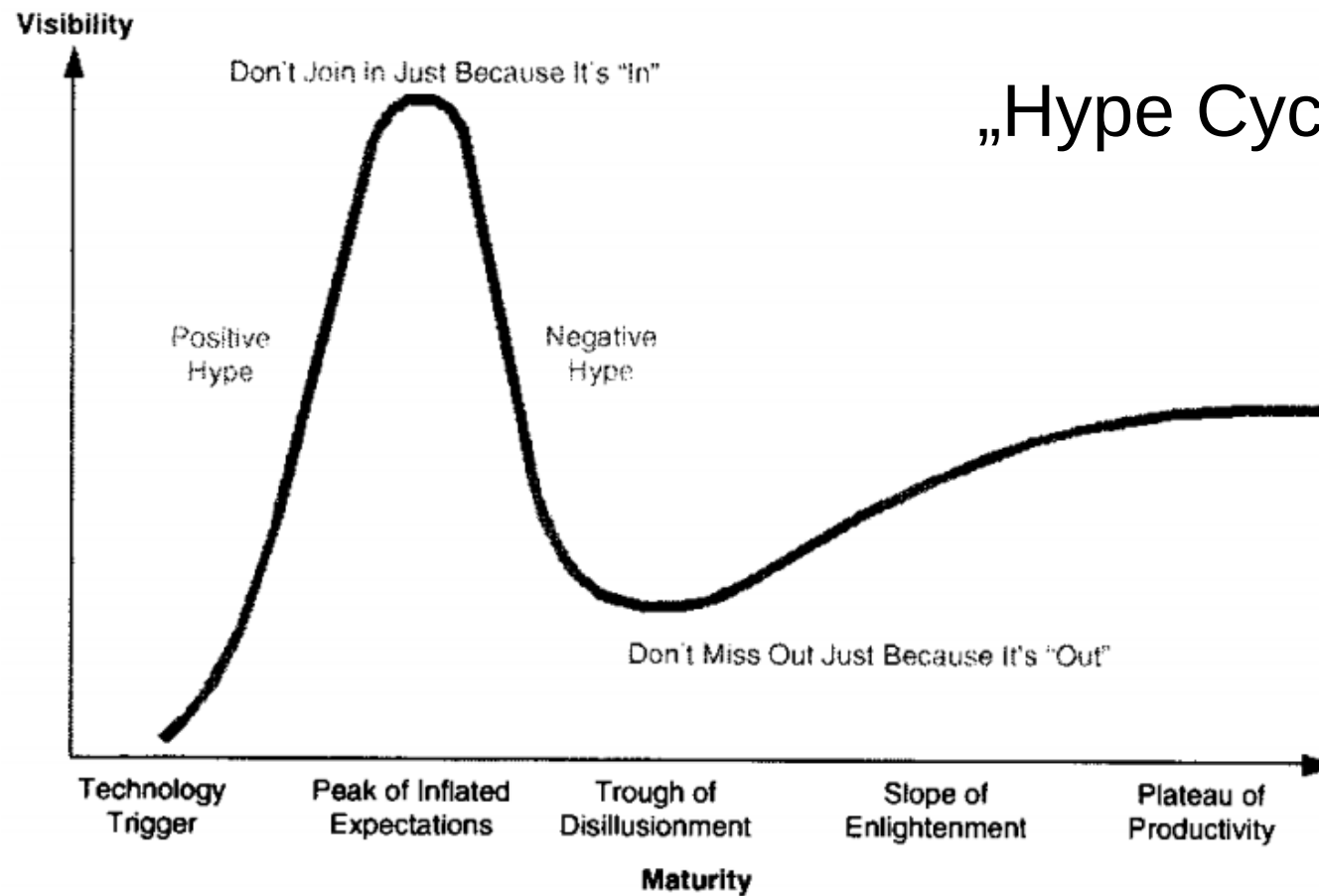


Inquiry: Monitoring

- Monitoring is to watch, observe, check, and keep up with developments, usually in a well-defined area of interest for a very specific purpose.
- Monitoring is an opportunistic technique
 - Track history to predict future
 - Assess state of art to plan how to advance it



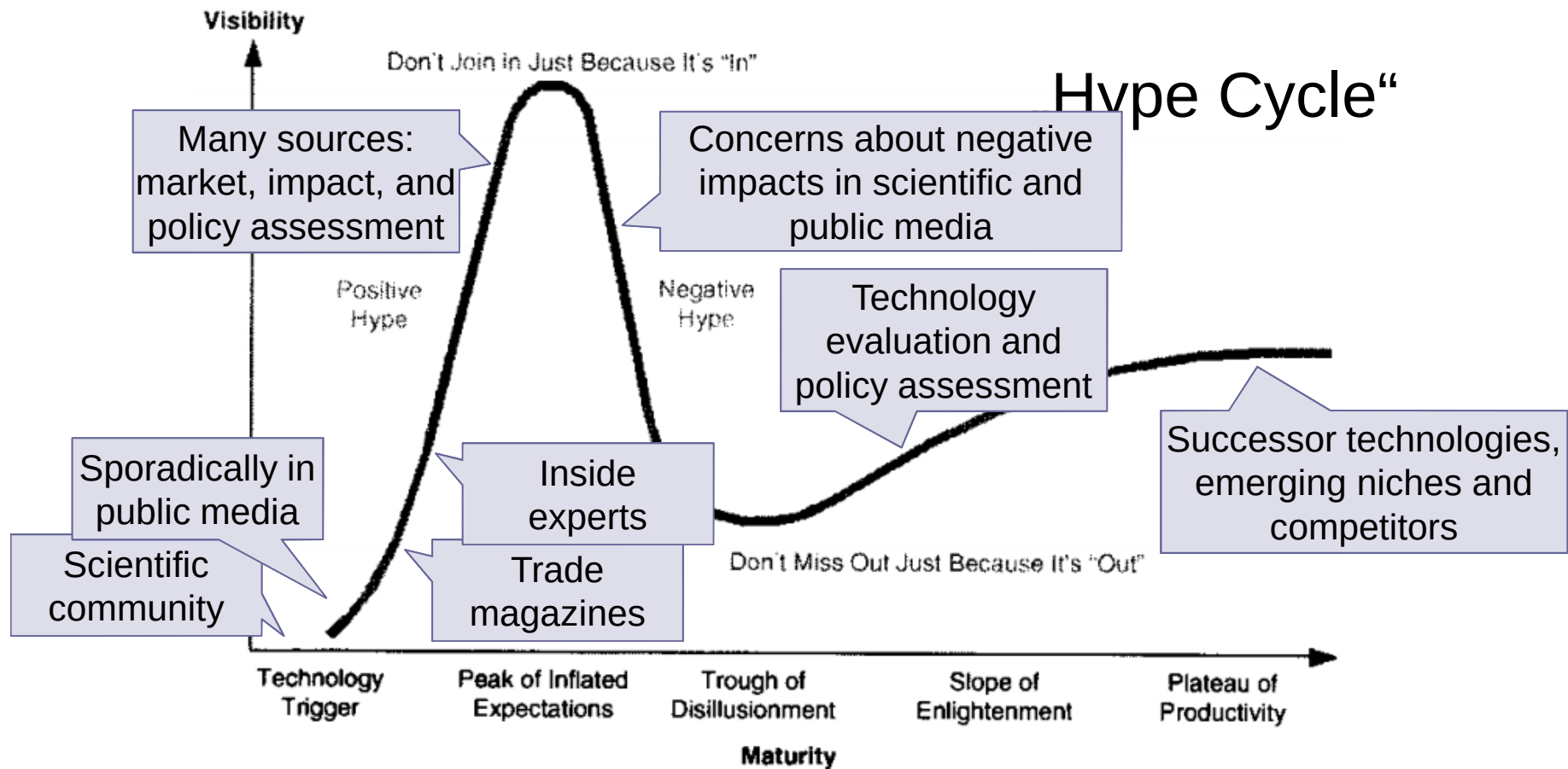
Information Sources



„Hype Cycle“



Information Sources





Focusing the Monitoring

- Time frame
 - Early vs. Pre- vs. Postdecision
- Process
 - One-time study vs. Ongoing monitoring
- Focus
 - Technology vs. Context
- Breadth
 - Macro vs. Micro
- Purpose
 - Choosing vs. Forecasting



Monitoring Strategy

- Cold: you are unfamiliar with the subject
 - What is the product? How is it defined and described? What is the state-of-the-art?
 - How do other technologies relate to it? What other contextual factors effect it?
 - Who are the key players (individuals, organizations, suppliers, regulators, users)?
 - What are plausible future development pathways?
- Information collection
 - Use a "shotgun" approach to gather information—that is, grab anything that is convenient and may be pertinent
 - Emphasize recent literature and review state-of-the-art articles or books
 - Locate one or two accessible professionals with sufficient expertise in the technology to point out information sources and to help ensure that the monitoring does not drift wide of the mark



Example: Historical Overview



TABLE 8.3 Significant Technological Discontinuities in Cement Manufacturing

Industry	Year	Event	Importance	Type of Discontinuity	Locus of Innovation	
					New Firms	Existing Firms
Cement	1872	First production of Portland cement in the United States	Discovery of proper raw materials and importation of knowledge opens new industry	Niche opening	10 of 10	1 of 10
	1896	Patent for process burning powdered coal as fuel	Permits economical use of efficient rotary kilns	Competence-destroying	4 of 5	1 of 5
	1909	Edison patents long kiln (150 ft)	Higher output with less cost	Competence-enhancing	1 of 6	5 of 6
	1966	Dundee Cement installs huge kiln far larger than any previous	Use of process control permits operation of very efficient kilns	Competence-enhancing	1 of 6	7 of 8

Source: Tushman and Anderson, 1986. Reprinted from "Technological Discontinuities and Organizational Environments" by Michael Tushman and Philip Anderson published in *Administrative Science Quarterly* (vol. 31, no. 3) by permission of *Administrative Science Quarterly*.

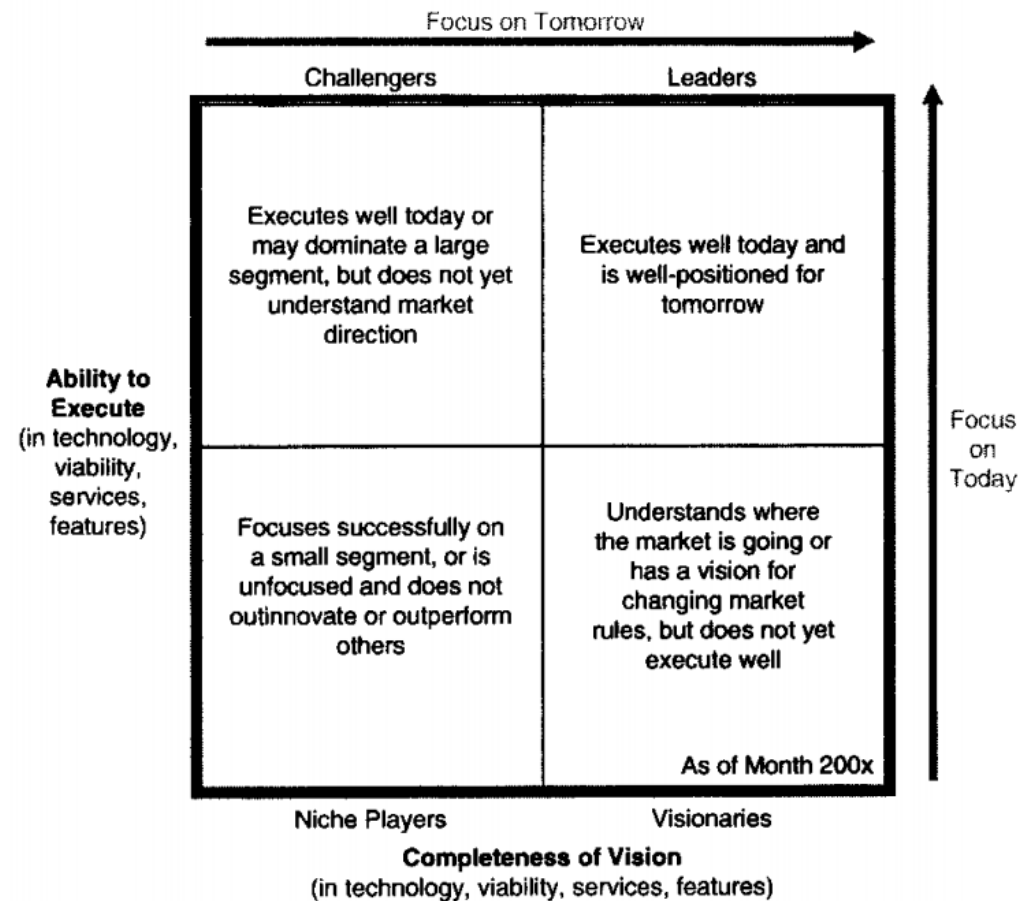


Monitoring Strategy

- Warm: you have some familiarity with the subject
 - What are the driving forces propelling this technology?
 - Can important interdependencies with other technologies or with socioeconomic factors be mapped?
 - What are the key uncertainties along the development path?
- Information collection
 - Literature searches become more focused; on-line searches are likely to be more fruitful; and historical searches now may make sense as a way to identify leading indicators of progress and significant influences.
 - Locating other forecasts for the focal technology can help answer the pivotal questions and help ground forecasts.
 - Networking can be used to identify experts with various perspectives on the technology.

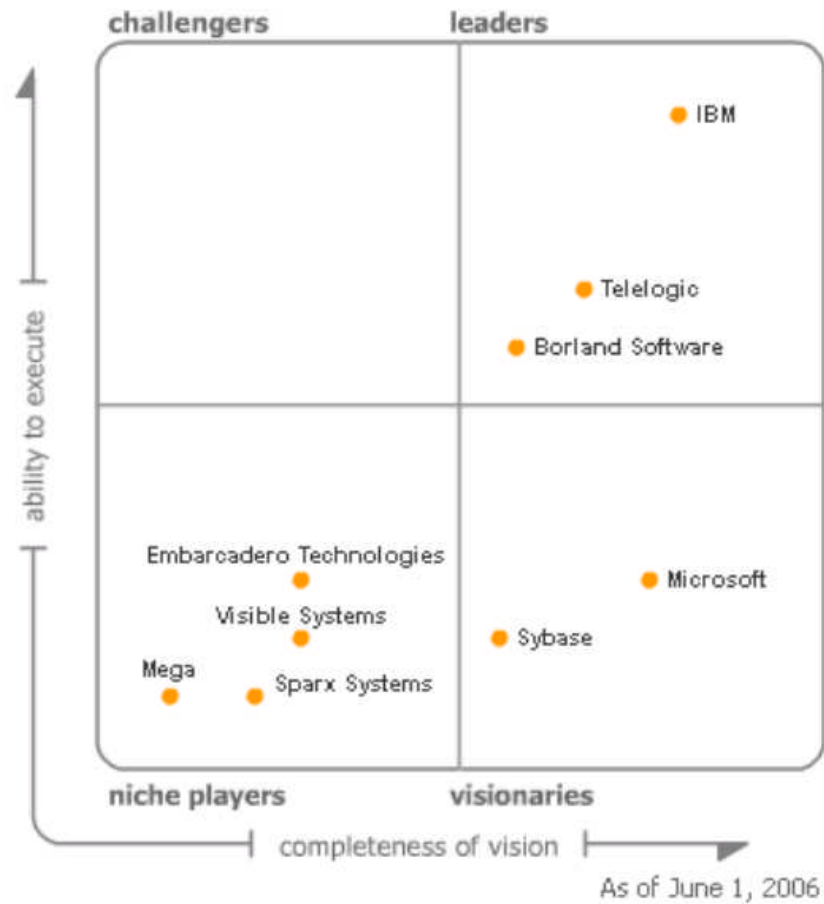


Example: Gartner Magic Quadrant





Example: Gartner Magic Quadrant





Monitoring Strategy

- Hot: you are very familiar with the subject
 - Can you specify the key factors to be watched? What is the most likely development pattern for the immediate future? For the longer term?
 - Can you offer specific projections?
 - What recommendations can you make to help your organization manage development?
- Information collection
 - Extending the information search to be as comprehensive as feasible with regard to the key factors
 - Developing a conceptual model of what drives and what impedes development of this technology
 - Seeking direct confirmation of this model and a review of your projections from experts
 - Generating a credible forecast by integrating the monitoring results with other forecasting techniques
 - Possibly establishing a structure for an ongoing monitoring system



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