

# Marketing of High-Technology Products and Innovations

Denis Fomenkov

# About Myself



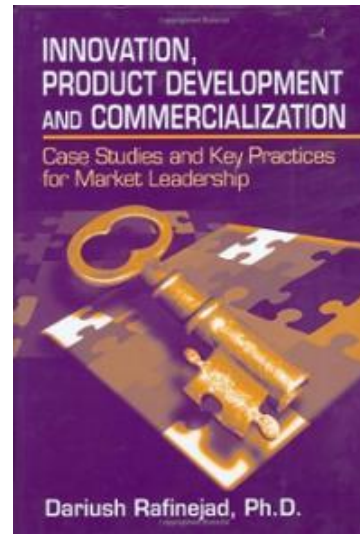
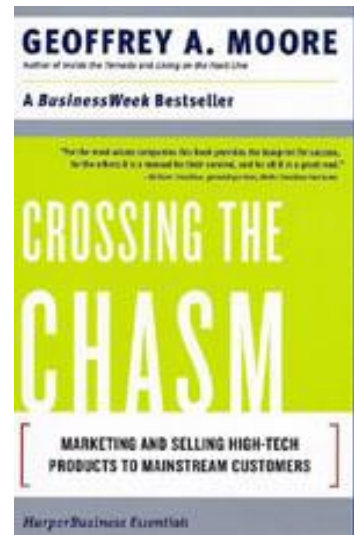
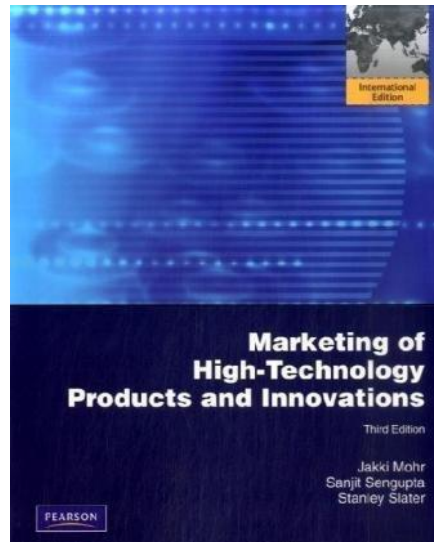
# Professional Certification



## Primary

1. Cooper, Robert G., Winning at New Products
2. Crawford, C. Merle and Anthony DiBenedetto, New Products Management
3. Kahn, Kenneth B., Editor, The PDMA Handbook of New Product Development, 2nd Edition

# Books and Journals



- Journal of Business Venturing
- Journal of Product Innovation Management
- Technovation

# Innovation Imperative

Corporations must be able to adapt and evolve if they wish to survive  
(competitors will inevitably come to the market with a product that changes the basis of competition).

Innovation = theoretical conception + technical invention  
+ commercial exploitation

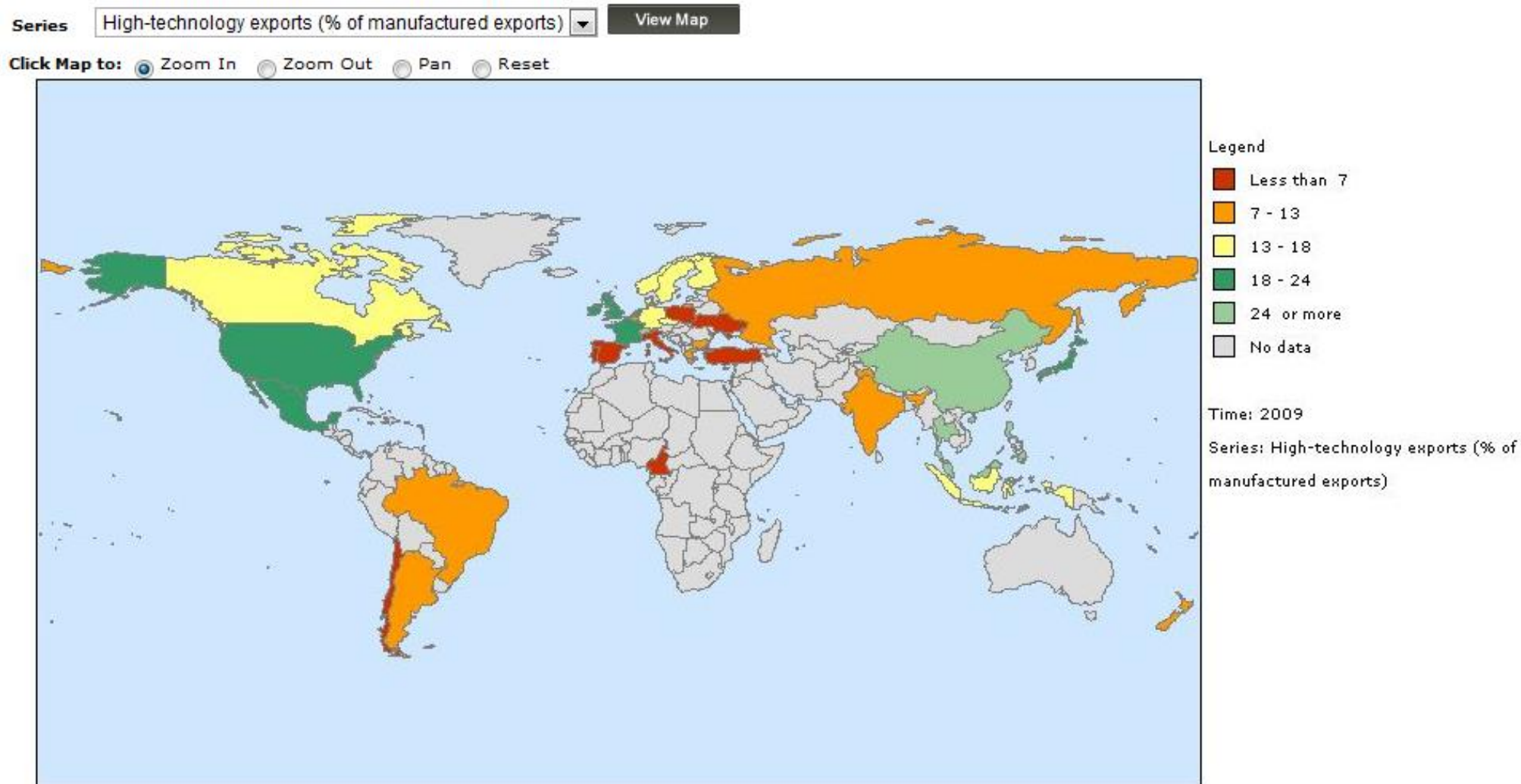


# Jeff Bezos about Russia

“Russia was ignored for most of the past decade by venture capitalists even as they poured money into the rest of the BRIC cohort—Brazil, India, and China. Conventional wisdom has said that Russia was too corrupt, too unpredictable, and too underdeveloped. That's the country I imagined I'd find, one full of gangsters, oligarchs, and bad drivers (The last I verified firsthand.)”



# World Development Indicators (High-Technology Export)



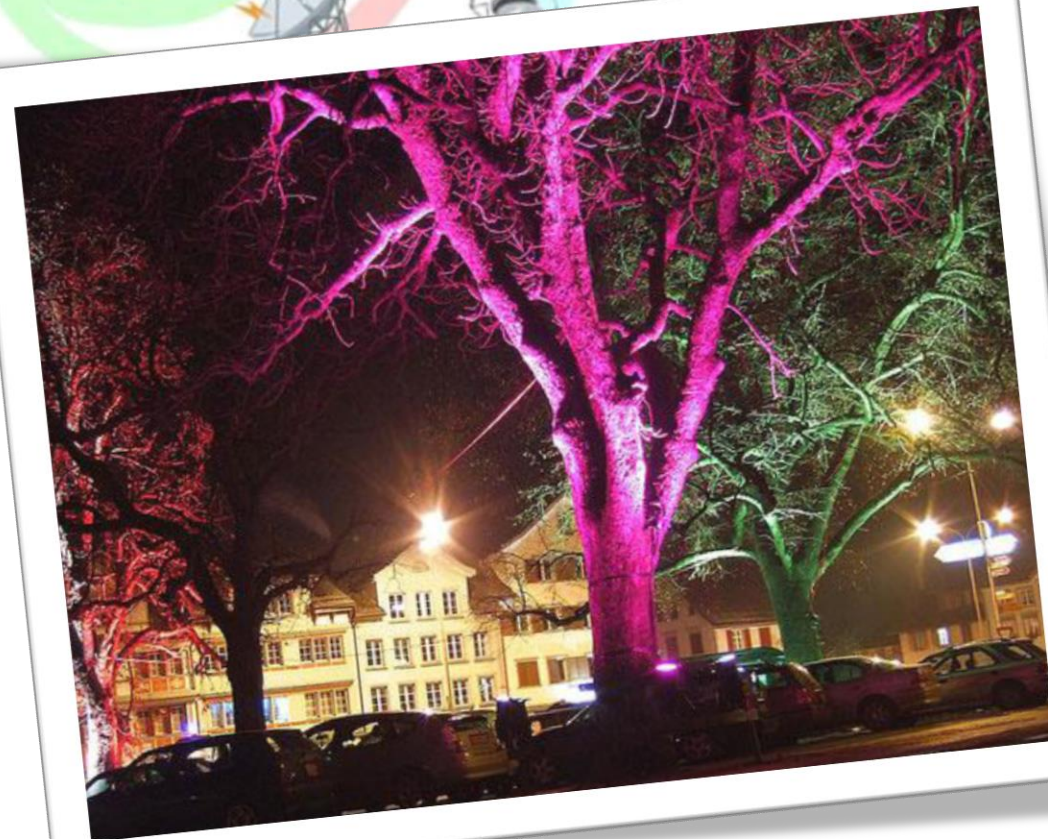
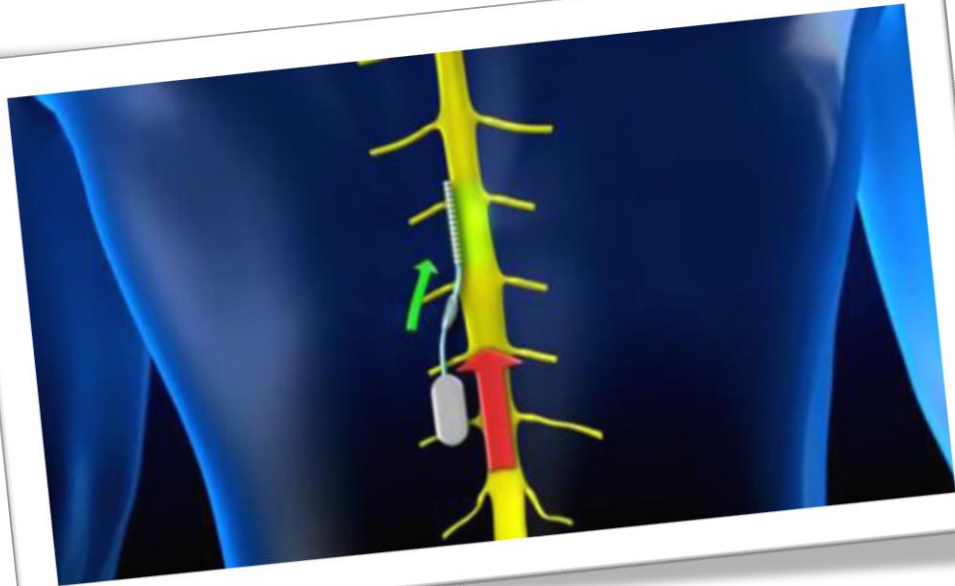
# Examples of Implications of Contingency Theory

## **Breakthrough**

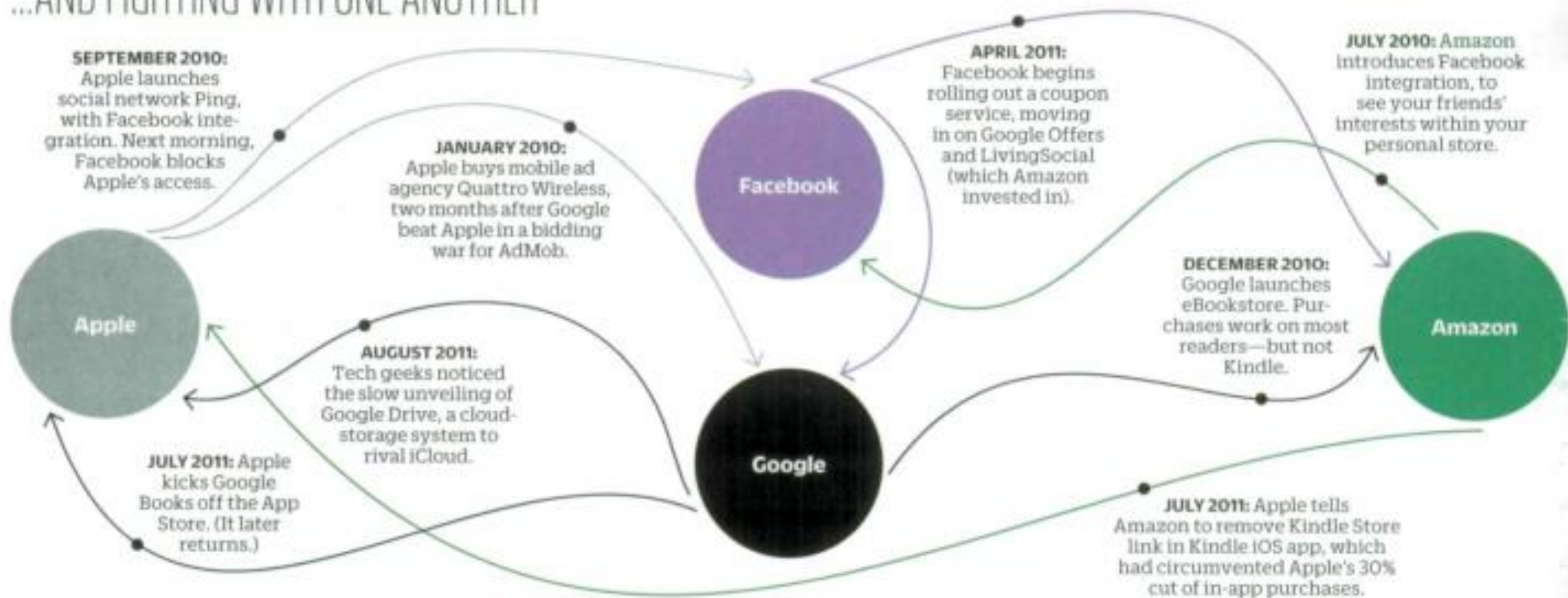
## **Incremental**

R&D/Marketing Interaction	R&D leads; “technology push”	Marketing leads; “customer pull”
Type of Marketing Research	Lead users; empathic design	Surveys; focus groups
Role of Advertising	Primary demand; customer education	Selective demand; build image
Pricing	May be premium	More competitive



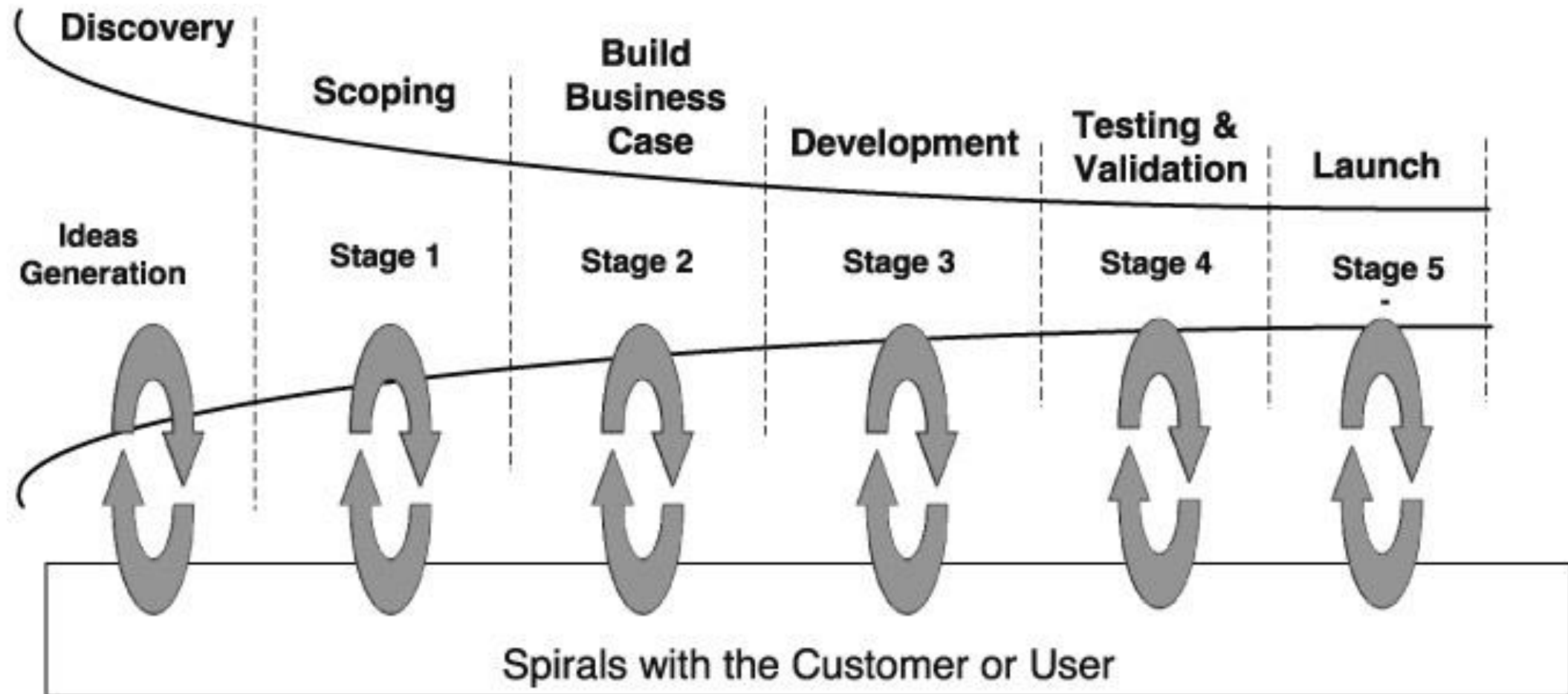


## ...AND FIGHTING WITH ONE ANOTHER





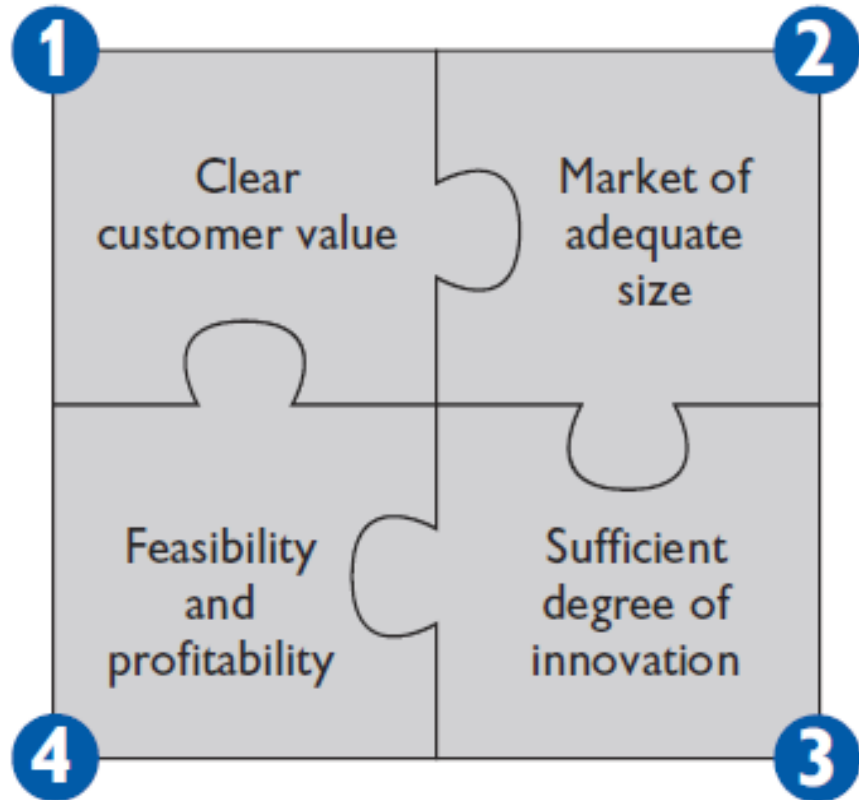
# The General Flow of the Typical Stage-Gate System



# About Ideas

- Studies show that the lion's share of original and successful business ideas were generated by people who had already **several years of relevant experience**.
- But there are also examples of revolutionary ideas brought to life by mere novices

# Elements of a Promising Business Idea



- "Our new device can perform 200 operations per minute"
- "Our new device will save the customer a quarter of the time and therefore 20% of the costs"

A customer value proposition is a statement that describes why a customer should buy a product or use a service (differentiate your product from competitors).



[Sign In](#)

# Start accepting credit cards today.

Sign up and we'll mail you a free Square Reader.

[Get Free Card Reader](#)

**2.75%** per swipe, no additional fees,  
and next day deposits ▶

Works with iOS and  
Android devices.



# Paradigm

- It is the way we see, perceive, understand and interpret.
- **“The significant problems we face cannot be solved at the same level of thinking we were at when we created them.”**



Physicians believed that illnesses existed in "bad blood"



Do more. Do it faster. Do it more painlessly. Go to TQM or Six Sigma on bloodletting. Do statistical quality controls, variance analysis.

# Cavemen Rejecting the Idea of Fire

This caveman focus group couldn't grasp the idea of the importance of fire. Here was the collective reasoning:

## Pros

- Fire can be used for cooking as a heat source
- Fire can be used to scare away unwanted wild animals

## Cons

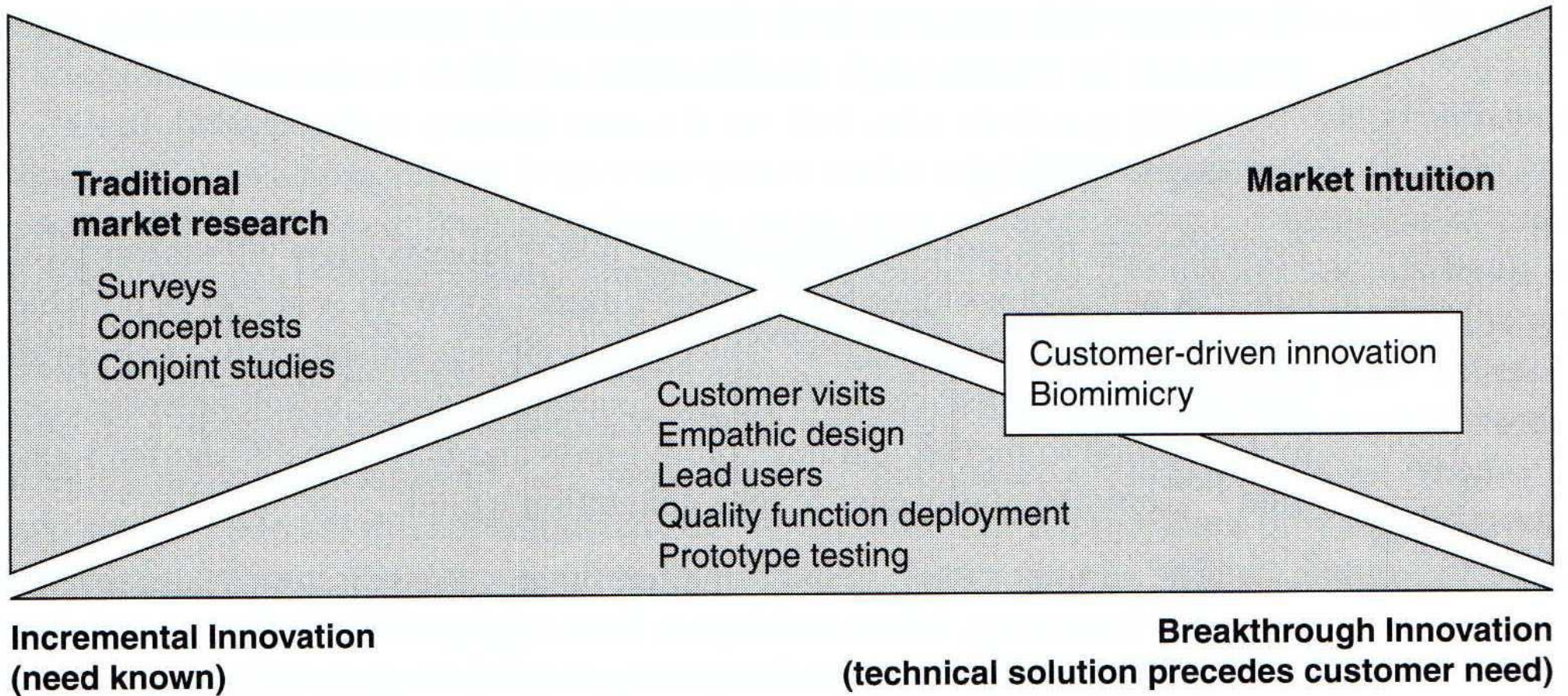
- It looks dangerous, if it gets hot it could burn you
- It's so unsymmetrical
- Don't like the red color, doesn't come in green

"Killing good ideas can harm your future".





# Aligning Market Research with Type of Innovation



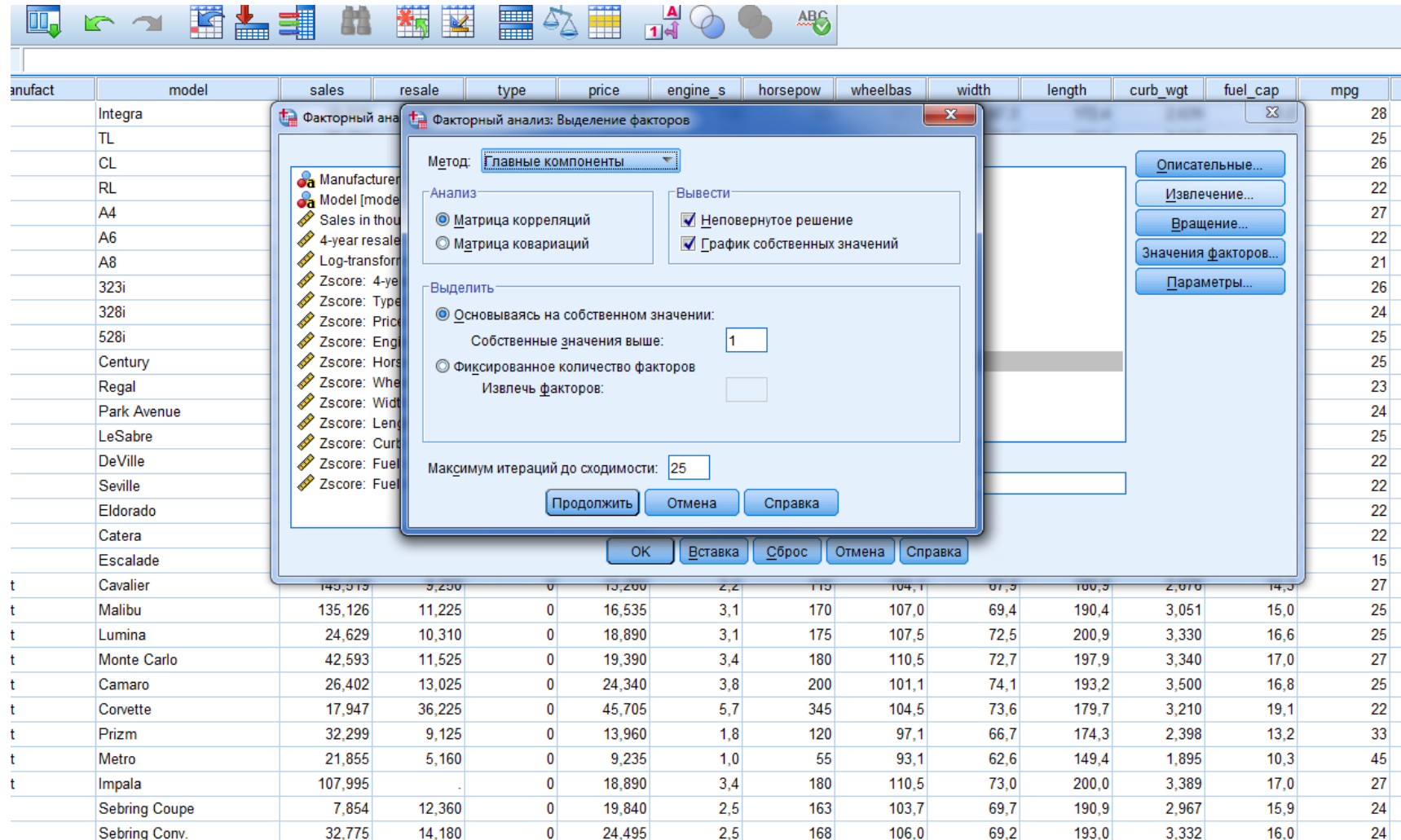
# Conjoint Analysis

- Is survey research tool that can statistically predict which combination of product attributes customers will prefer to buy.
- One of the first steps is to develop a set of attributes and levels of those attributes that adequately characterize the range of product options.
- Ordinary least squares regression → consumer utility function.
- Willingness to pay (WTP) exceeds the cost of providing attribute.
- Cases





# Factor Analysis

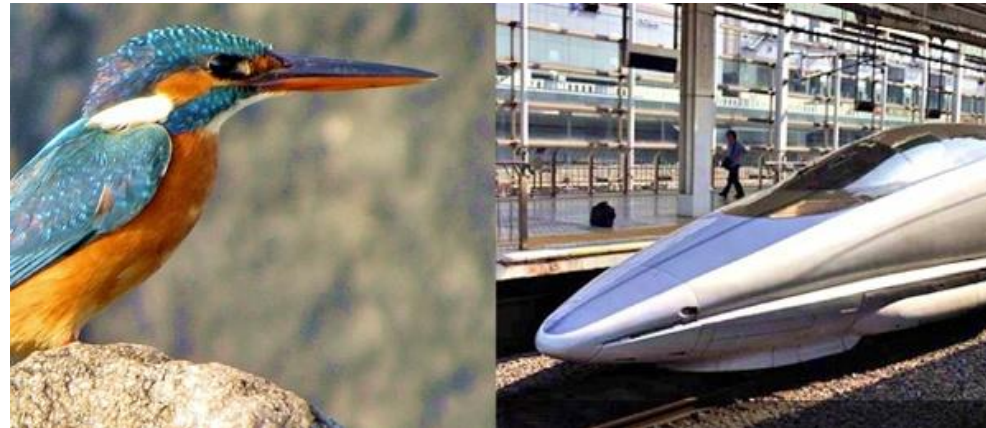


The image shows a screenshot of the SPSS Factor Analysis dialog box. The background is a data view of a car dataset with columns: manufact, model, sales, resale, type, price, engine\_s, horsepower, wheelbas, width, length, curb\_wgt, fuel\_cap, and mpg. The dialog box is titled 'Факторный анализ: Выделение факторов' (Factor Analysis: Selection of Factors). It has several sections: 'Метод' (Method) set to 'Главные компоненты' (Principal components); 'Анализ' (Analysis) with 'Матрица корреляций' (Correlation matrix) selected; 'Вывести' (Output) with 'Невернутое решение' (Unrotated solution) and 'График собственных значений' (Eigenvalue plot) checked; 'Выборить' (Select) with 'Основываясь на собственном значении' (Based on eigenvalue) selected and 'Собственные значения выше:' (Eigenvalues greater than:) set to 1; 'Максимум итераций до сходимости:' (Maximum number of iterations to convergence:) set to 25; and buttons 'Продолжить' (Continue), 'Отмена' (Cancel), and 'Справка' (Help).

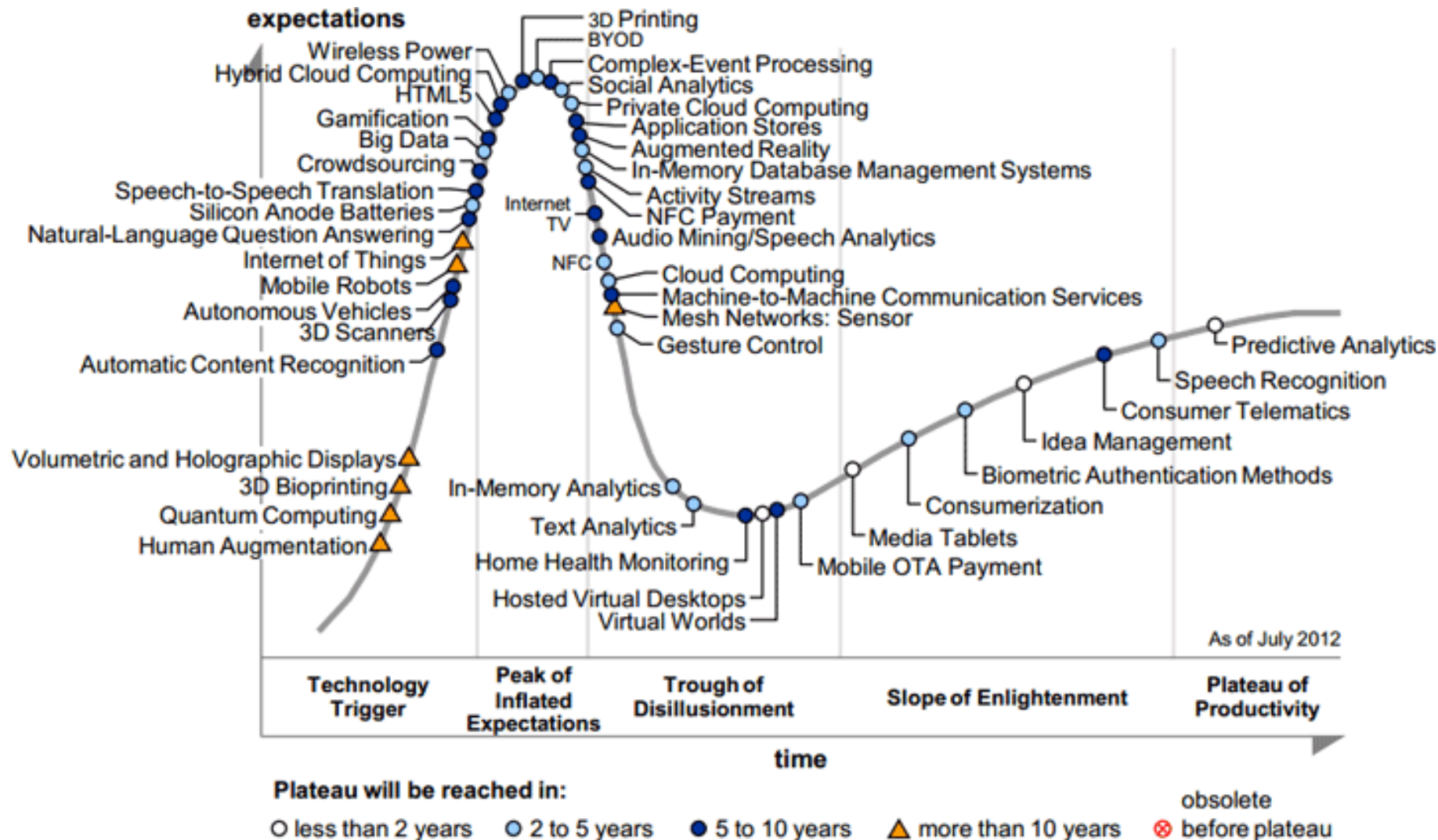
	manufact	model	sales	resale	type	price	engine_s	horsepow	wheelbas	width	length	curb_wgt	fuel_cap	mpg
		Integra												28
		TL												25
		CL												26
		RL												22
		A4												27
		A6												22
		A8												21
		323i												26
		328i												24
		528i												25
		Century												25
		Regal												23
		Park Avenue												24
		LeSabre												25
		DeVille												22
		Seville												22
		Eldorado												22
		Catera												22
		Escalade												15
t		Cavalier	149,319	9,290	0	15,280	2,2	115	104,1	67,5	180,9	2,670	14,5	27
t		Malibu	135,126	11,225	0	16,535	3,1	170	107,0	69,4	190,4	3,051	15,0	25
t		Lumina	24,629	10,310	0	18,890	3,1	175	107,5	72,5	200,9	3,330	16,6	25
t		Monte Carlo	42,593	11,525	0	19,390	3,4	180	110,5	72,7	197,9	3,340	17,0	27
t		Camaro	26,402	13,025	0	24,340	3,8	200	101,1	74,1	193,2	3,500	16,8	25
t		Corvette	17,947	36,225	0	45,705	5,7	345	104,5	73,6	179,7	3,210	19,1	22
t		Prizm	32,299	9,125	0	13,960	1,8	120	97,1	66,7	174,3	2,398	13,2	33
t		Metro	21,855	5,160	0	9,235	1,0	55	93,1	62,6	149,4	1,895	10,3	45
t		Impala	107,995	.	0	18,890	3,4	180	110,5	73,0	200,0	3,389	17,0	27
		Sebring Coupe	7,854	12,360	0	19,840	2,5	163	103,7	69,7	190,9	2,967	15,9	24
		Sebring Conv.	32,775	14,180	0	24,495	2,5	168	106,0	69,2	193,0	3,332	16,0	24

# Biomimicry

- Is conscious seeking of inspiration, the search for finding new and better ways to do things, through understanding nature and the principles of biology; looking for nature's advance to solve human challenges (P&G, Nike, General Mills).
- [www.AskNature.org](http://www.AskNature.org)



# Gartner's Hype Cycle



# Kia Silverbrook



Silverbrook Research is established in Australia to develop color printing technology based on micro-electro-mechanical systems (MEMS).

Principal financier - The George Kaiser Family Foundation

Technology is protected by approximately 5,000 patents.

# Group Assignments

- Group1 - License know-how only.
- Group2 - Sell commercial-grade components to OEMs.
- Group3 - License know-how and sell final products
- Group4 - Sell final products or systems with all essential components, ready for use "out-of-the-box".