



Profits Down, Spending Steady

The 2009 Global Innovation 1000



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Barry Jaruzelski co-authors the annual Global Innovation 1000 Study and co-leads the Global Innovation Practice



Barry Jaruzelski
Partner

Mr. Barry Jaruzelski is a Florham Park, NJ -based partner who leads Booz & Company's work for high technology and industrial clients. He specializes in corporate and product strategy and the transformation of core innovation processes. He is co-leader of the firm's Global Innovation Practice. He previously served as the firm's Chief Marketing Officer.

A recognized thought leader, Barry is frequently quoted in publications like *The Wall Street Journal*, the *Financial Times*, and *The New York Times* on the technology industry and the challenges of innovation. He often appears as an expert commentator on *ABC News*, *CNBC*, *NPR*, and the *BBC*. He has been a guest lecturer at Columbia, Tuck, NYU, and MIT Sloan business schools.

Barry is a three-time recipient of Booz & Company's Professional Excellence Award, which was given in recognition of outstanding and innovative client service. He has also received the firm's Eagle Award for his outstanding contributions to the firm.

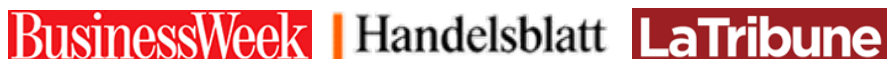
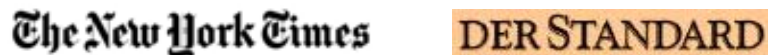
Barry is a member of *BusinessWeek's* Innovation Advisory Board, and a member of the panel of judges for *The Wall Street Journal's* annual Technology Innovation Awards.

This marks the 5th annual Global Innovation 1000 Study, our annual assessment of the world's 1000 largest R&D spenders

Global Media Coverage

- Covered by ABC News & MSNBC television
- Featured on NPR & BBC Radio
- Cited in 170+ publications across 27 countries
- 2009 study cited in over 100 press articles

Representative Publications



Furthering the Innovation Dialogue

2005

- Initiated study to better understand how organizations can maximize their return on innovation investment
- Found no statistical relationship between R&D spending and key measures corporate success

2006

- Confirmed lack of relationship between R&D after adding additional data (e.g., patent records) and analyzing using more complex methods
- Defined "High Leverage Innovators" who produced better results per R&D dollar than industry peers
- Awarded "2006 Special Achievement Award for Advancing Innovation" by Innovate Forum



2007

- Examined the connection between performance and the elements of innovation strategy, including customer focus and alignment of strategies

2008

- Studied the correlation of a globalized R&D footprint to performance and identified factors of innovation networks that relate to higher performance
- Awarded "Best of Visions" award from Product Development and Management Association
- Awarded Silver Award for Editorial Excellence & Bronze Award for Graphics Excellence by American Society of Business Editors



2009

- Corporations continued to increase R&D spending inspite of the impact of the Global Recession

Year after year we find that higher R&D spending doesn't ensure better performance

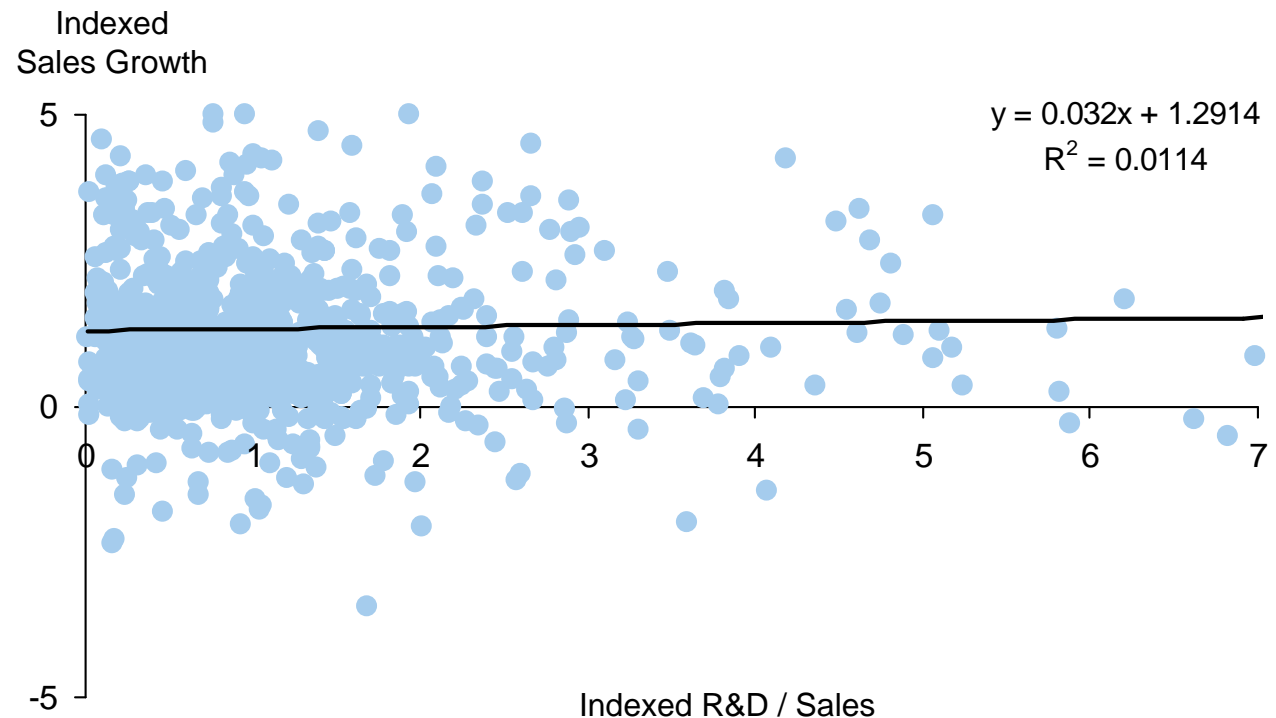
EXAMPLE ANALYSIS

The Performance Disconnect

Example analysis showing relation between R&D and financial performance

~10,000 analyses found **NO** statistical relationship between R&D spend and:

- *Sales growth*
- *Gross profit growth*
- *Operating profit growth*
- *Operating Margin*
- *Net profit growth*
- *Net Margin*
- *Market cap growth*
- *Total shareholder return*



Source: Booz & Company Global Innovation 1000, 2006

There are three distinct innovation strategies...

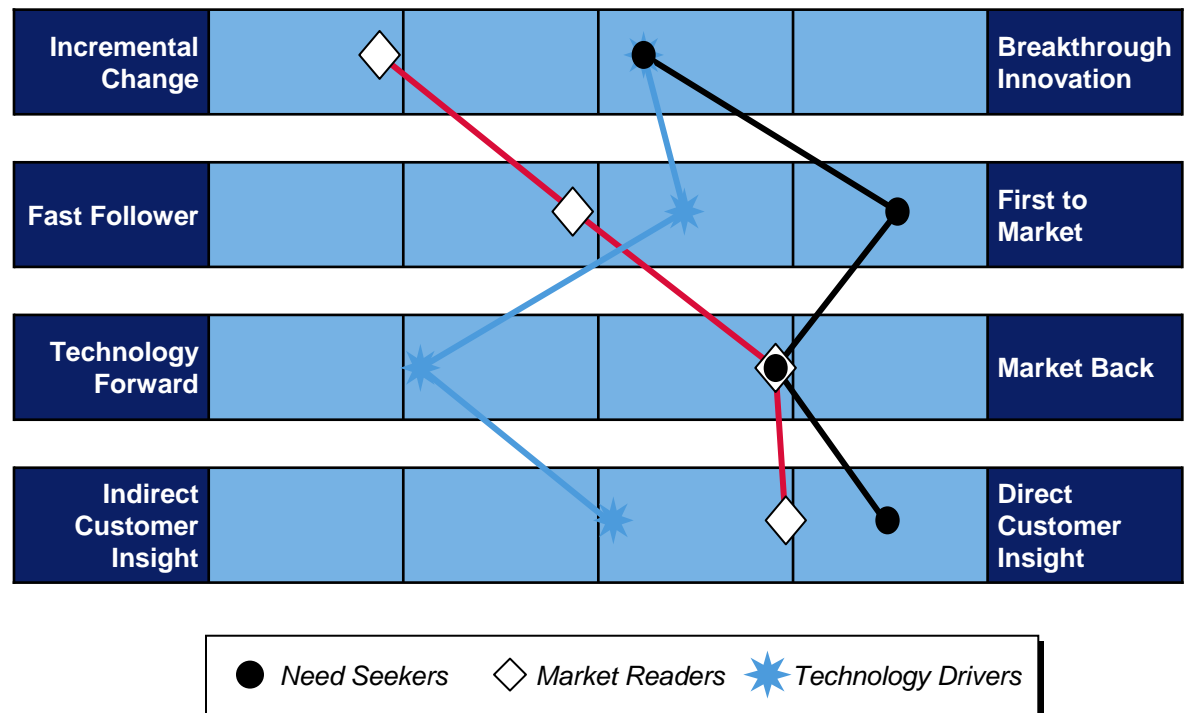
Three Innovation Strategies

Need Seekers – Consistently strive to be first movers; Proactively engage customers to determine needs and shape new innovations; Determine new innovations market back from market need identification

Market Readers – Adopt a 2nd mover strategy; Focus on driving value through incremental change; New innovations determined market back, although not as proactively as Need Seekers

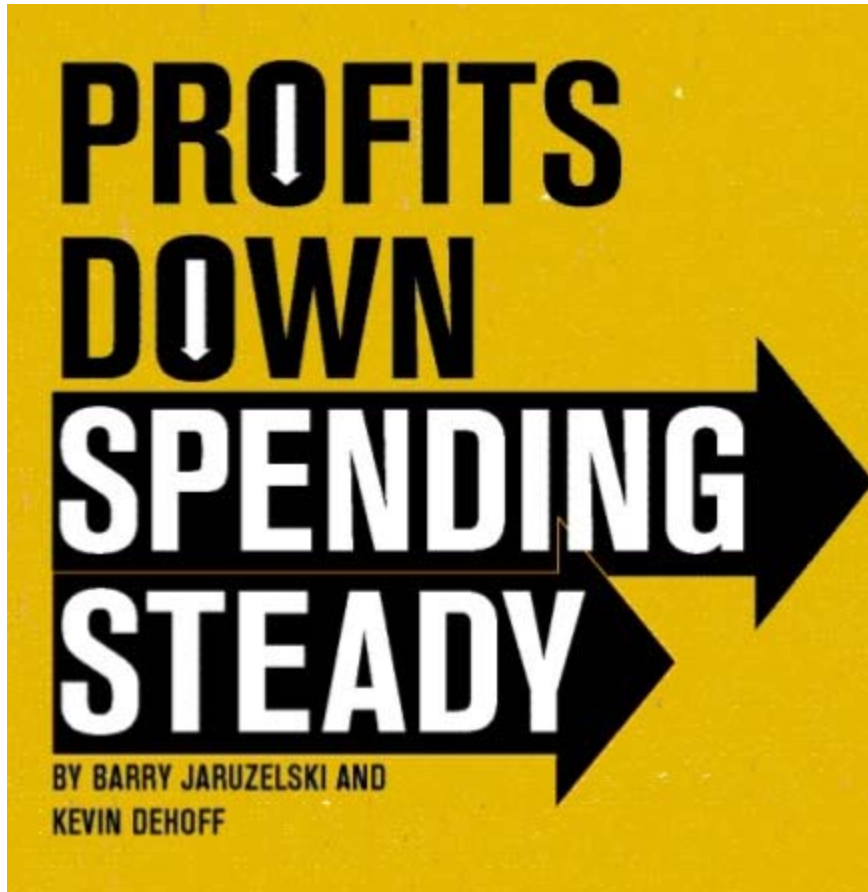
Technology Drivers – Drive innovation via technological achievement; Leverage technology for both incremental and breakthrough change. The least proactive of the three strategies in directly contacting customers.

Innovator Strategies Relative Position On Strategic Elements



...if aligned to corporate strategy, all can be successful

This year's study focused on the impact of the global recession

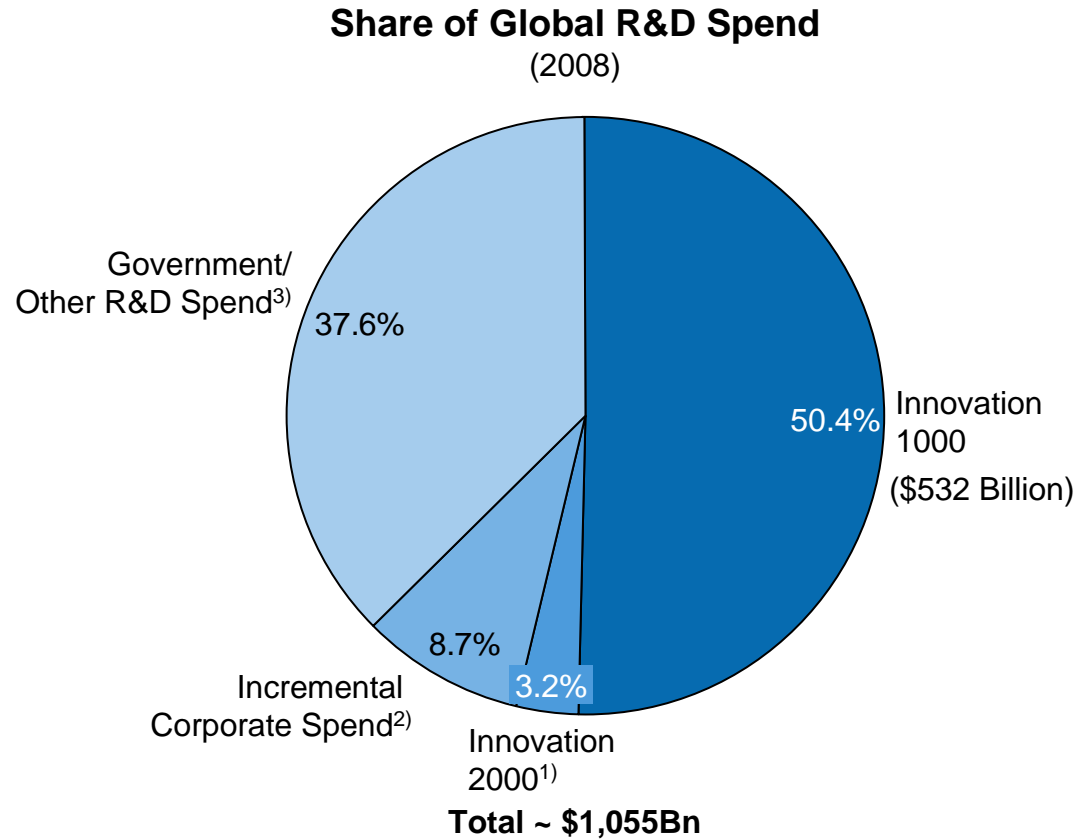


- Our 5th annual study of the world's biggest corporate R&D spenders focuses on the impact of the global recession on R&D
- Most companies have stuck with their innovation programs despite the recession ...
- ... and many are actually boosting spending to compete more effectively

Beyond publicly reported data, this year's study also surveyed senior executives at 230+ companies



In 2008, the Innovation 1000 spent over half a trillion dollars on R&D - representing over 50% of all global R&D



For the 3rd year in a row Toyota is #1 spender

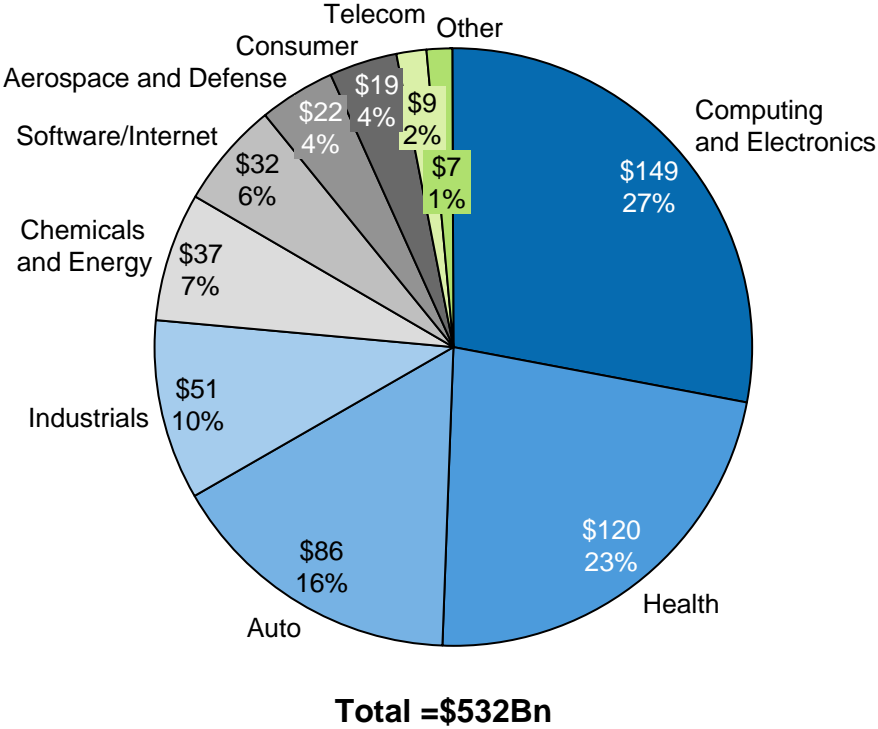
Rank	Company	R&D Spend (\$Mn)	Net Income (\$Mn) ²⁾	Geography	Industry	R&D/Sales ³⁾	2007 Rank	R&D Intensity % Change Over 2007	R&D Spend % Change Over 2007 ⁴⁾
1	Toyota Motor Corp	\$8,994	\$(4,347)	Japan	Auto	4.4%	1	20.7%	-5.7%
2	Nokia OYJ	\$8,733	\$5,836	Finland	Computing and Electronics	11.8%	4	6.4%	5.7%
3	Roche Holding AG	\$8,168	\$8,283	Switzerland	Health	19.4%	8	6.7%	5.5%
4	Microsoft Corp.	\$8,164	\$17,681	United States	Software/Internet	13.5%	7	-3.0%	14.6%
5	General Motors Corp.	\$8,000	\$(30,860)	United States	Auto	5.4%	2	20.1%	-1.2%
6	Pfizer Inc.	\$7,945	\$8,104	United States	Health	16.5%	3	-1.5%	-1.8%
7	Johnson & Johnson	\$7,577	\$12,949	United States	Health	11.9%	5	-5.4%	-1.3%
8	Ford Motor Co.	\$7,300	\$(14,672)	United States	Auto	5.0%	6	14.8%	-2.7%
9	Novartis AG	\$7,217	\$8,195	Switzerland	Health	17.4%	11	3.1%	12.2%
10	Sanofi-Aventis SA	\$6,695	\$5,635	France	Health	16.6%	12	2.6%	0.8%
11	GlaxoSmithKline PLC	\$6,425	\$8,434	Britain	Health	14.4%	10	1.0%	8.3%
12	Samsung Electronics Co. Ltd	\$6,413	\$5,021	South Korea	Computing and Electronics	5.8%	9	-5.6%	16.2%
13	International Business Machines Corp.	\$6,337	\$12,334	United States	Computing and Electronics	6.1%	13	-1.8%	3.0%
14	Intel Corp.	\$5,722	\$5,292	United States	Computing and Electronics	15.2%	14	1.4%	-0.6%
15	Siemens AG	\$5,680	\$8,593	Germany	Industrials	4.9%	21	4.3%	11.3%
16	Honda Motor Co. Ltd.	\$5,603	\$1,363	Japan	Auto	5.6%	16	14.8%	-4.2%
17	Volkswagen AG	\$5,429	\$6,955	Germany	Auto	3.3%	19	2.1%	6.7%
18	AstraZeneca PLC	\$5,179	\$6,101	Britain	Health	16.4%	15	-6.2%	0.3%
19	Cisco Systems Inc.	\$5,153	\$8,052	United States	Computing and Electronics	13.0%	22	1.2%	14.5%
20	Panasonic Corp.	\$5,152	\$(3,770)	Japan	Computing and Electronics	6.7%	18	9.1%	-6.6%
		\$135,886 Total¹⁾	\$75,179 Total			8.0% Average		8.1% Average	3.2% Average

R&D Spend % Change > 10%
 R&D Spend % Change < 0%

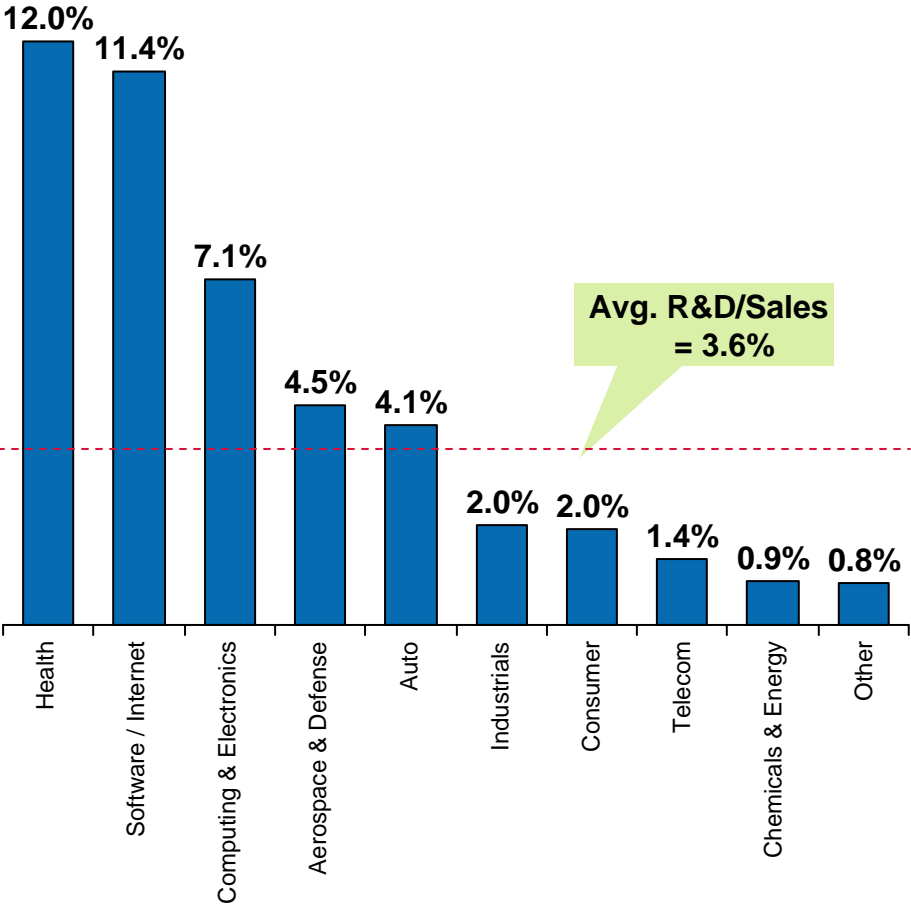
Computing & Electronics, Health and Auto continue to be the three highest spending industries

Innovation Spending by Industry

\$Bn¹⁾

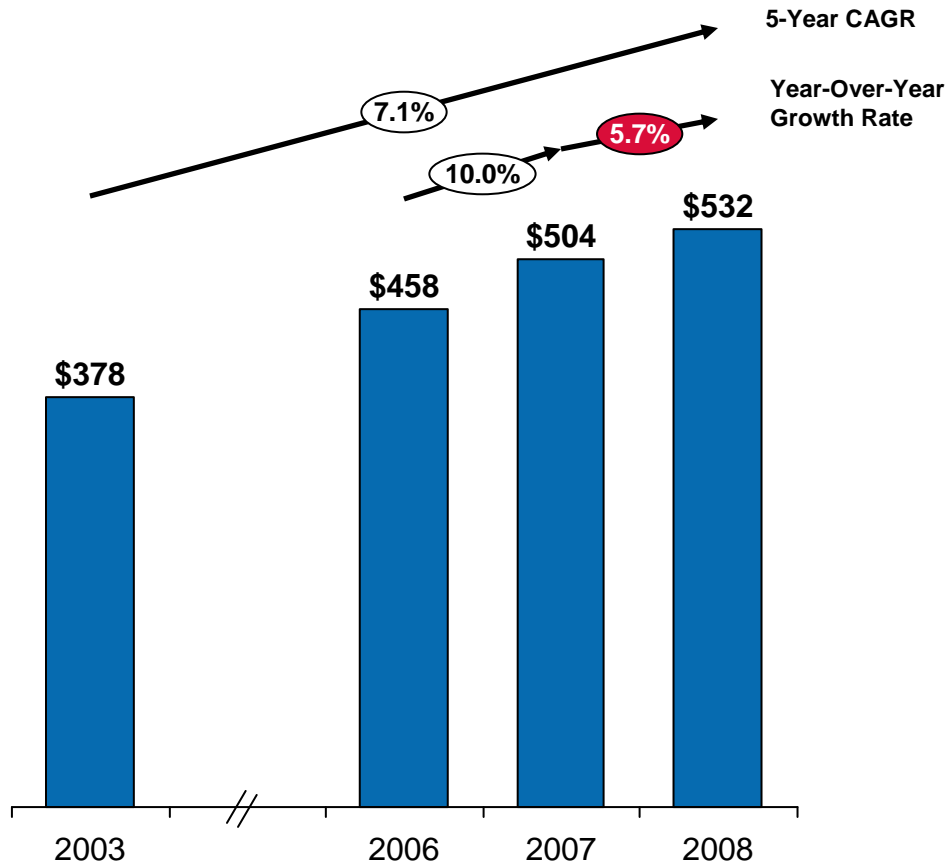


R&D % of Sales by Industry

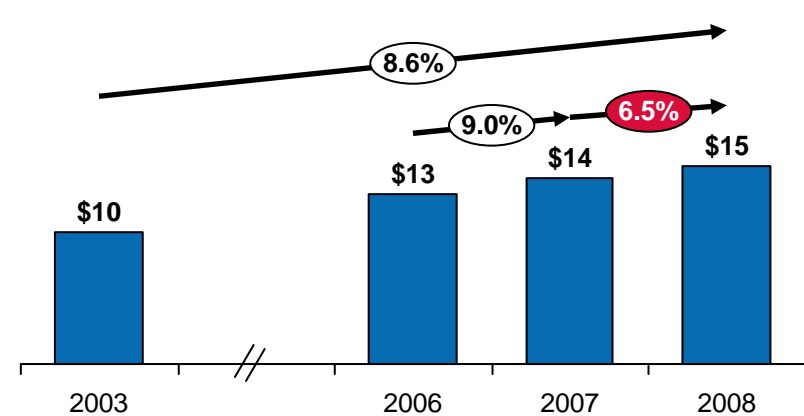


Despite the Recession, R&D spending grew in 2008

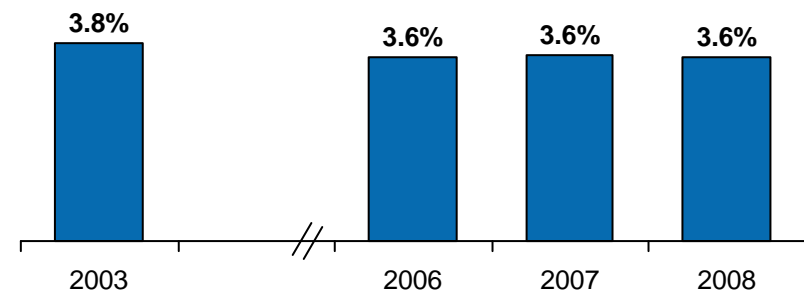
Innovation 1000 R&D Spend Slowed vs. Previous Years
R&D Spend \$ Billion



Year Over Year Sales Growth
Dollars, Trillion



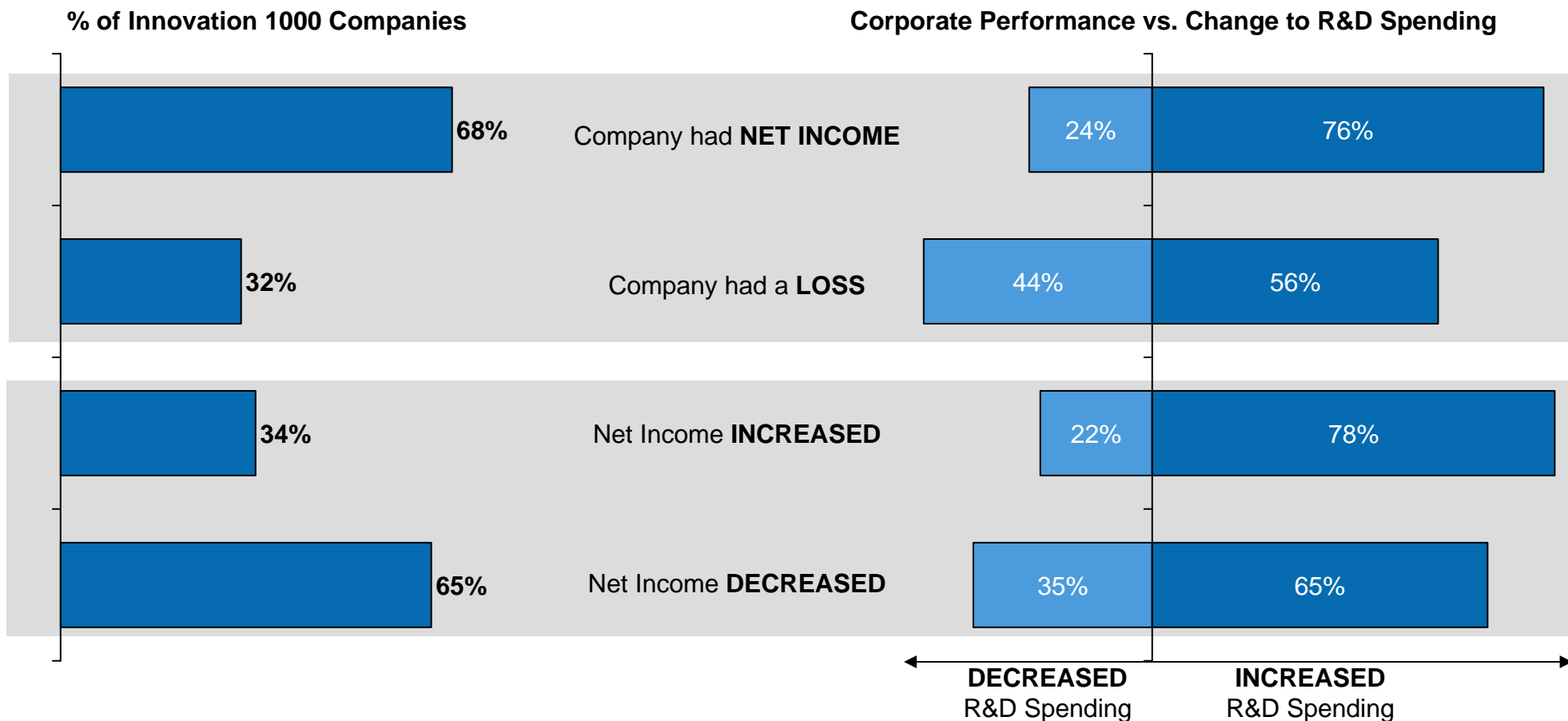
Year Over Year Change in Intensity
R&D as % of Sales



Sources: Bloomberg data; Booz & Company analysis

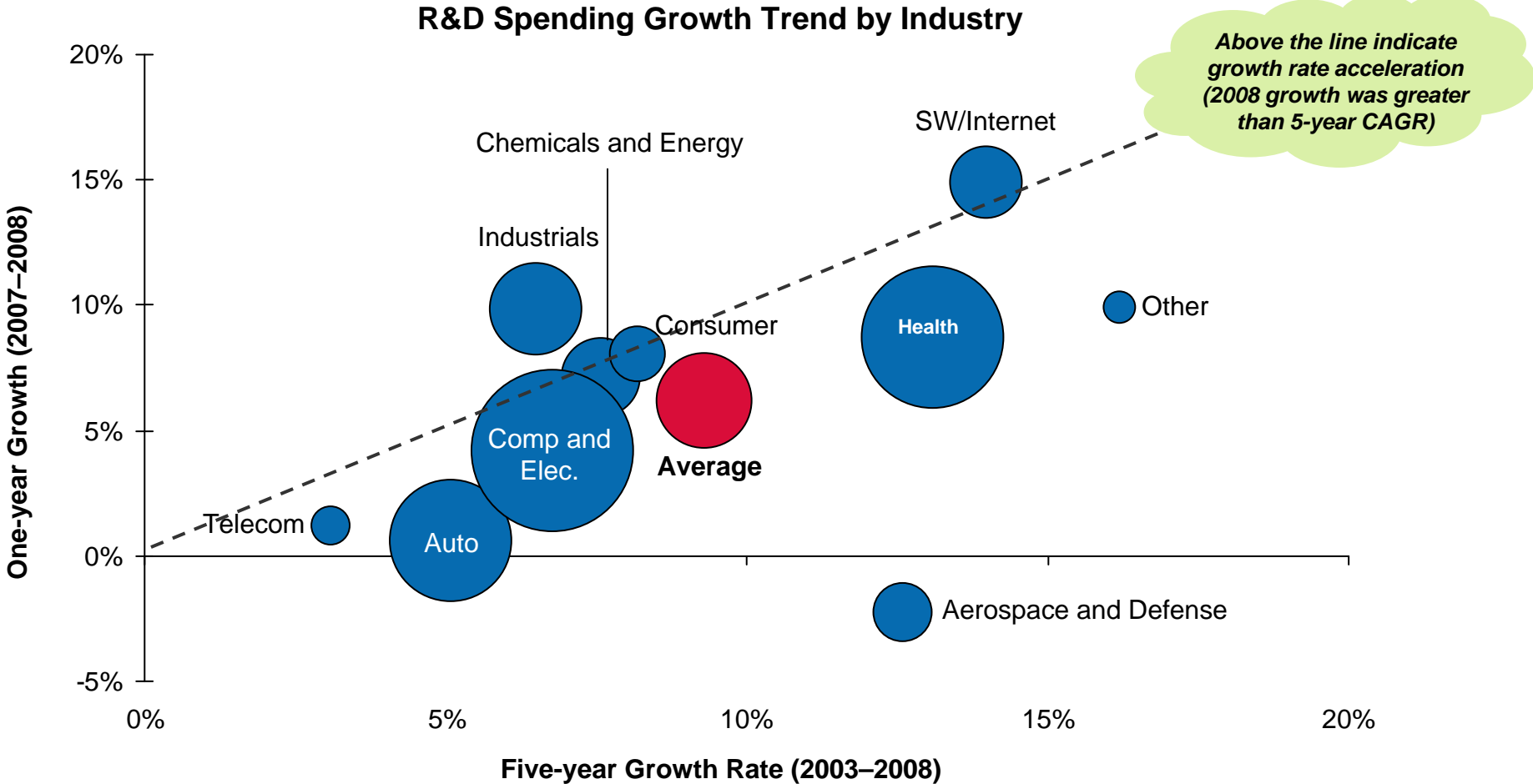
Most companies increased R&D spending in 2008, even if they experienced a net loss

Impact of Financial Performance on R&D Spending



Sources: Bloomberg data; Booz & Company analysis

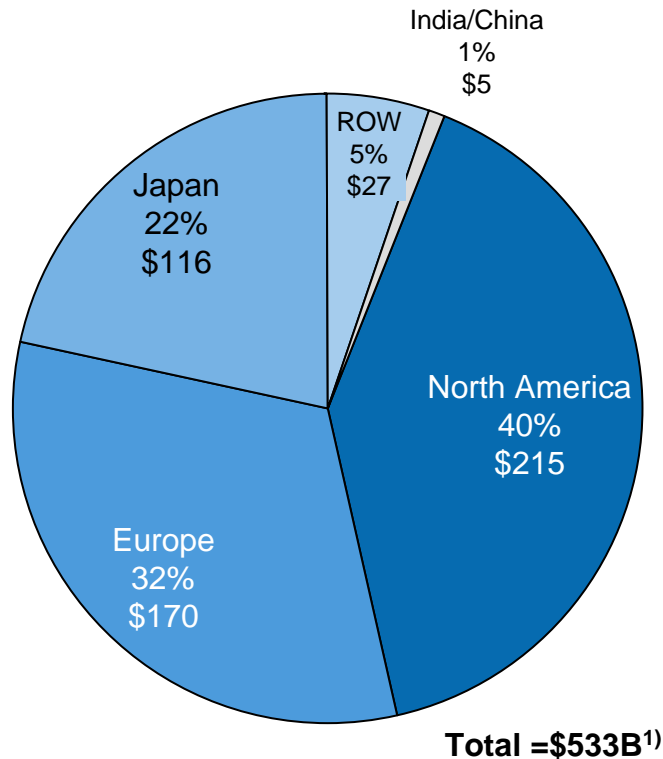
But, the rate of growth in R&D spending slowed across the majority of industries...



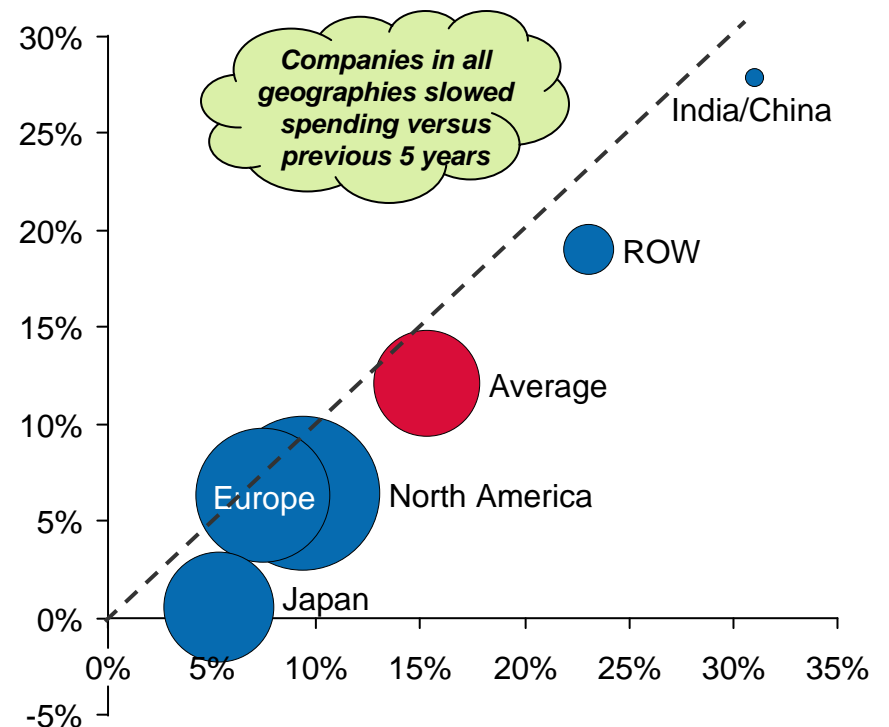
Sources: Bloomberg data; Booz & Company analysis

.. And in every region R&D spending growth slowed

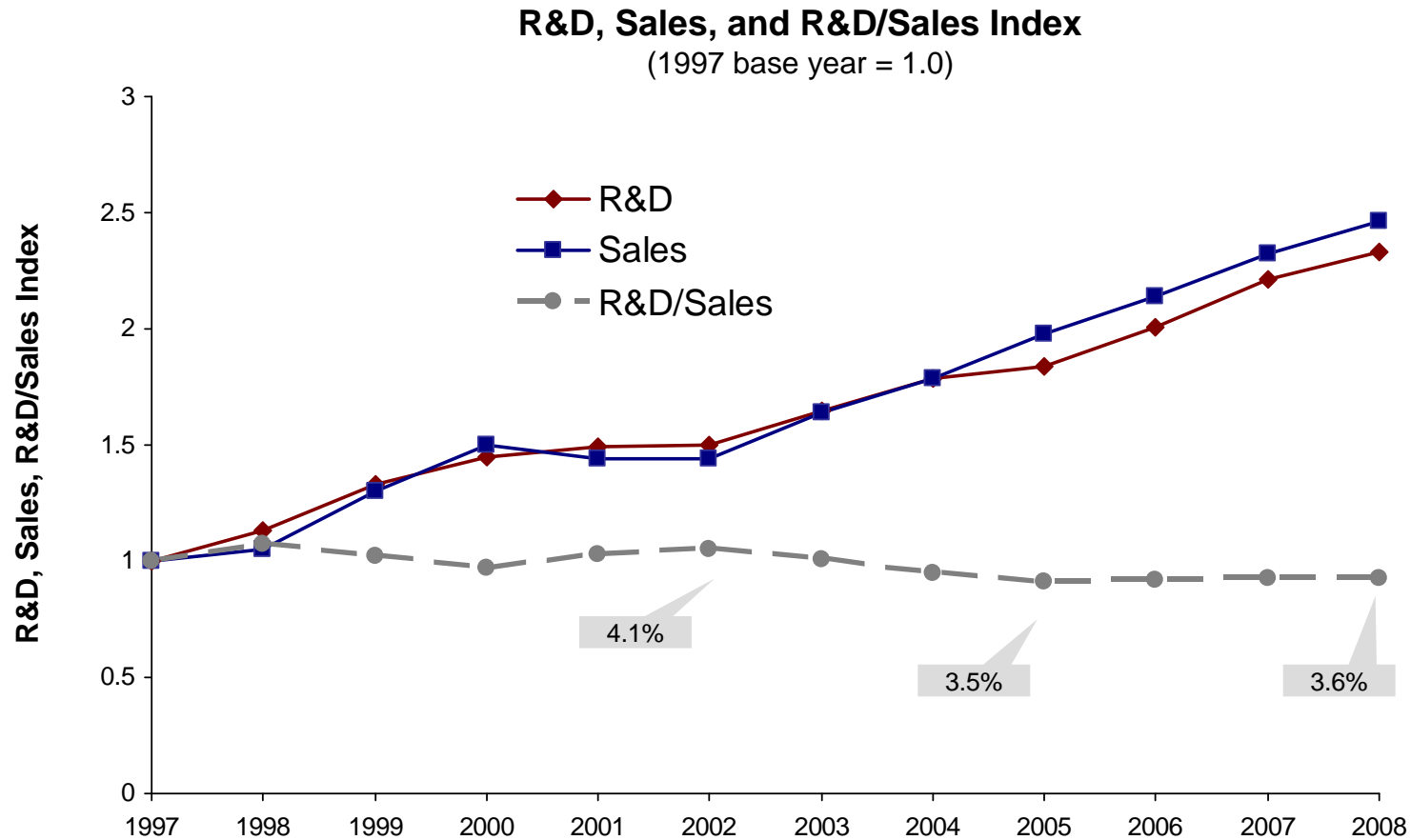
2009 Innovation 1000 2008 R&D Spend by HQ Geography
US\$, Billions¹⁾



2009 Innovation: R&D Spend
By HQ Geography

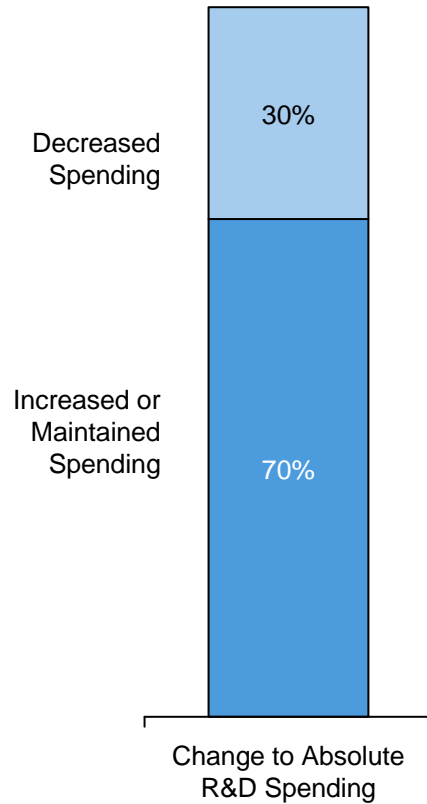


Yet, R&D intensity held steady at 3.6% of sales

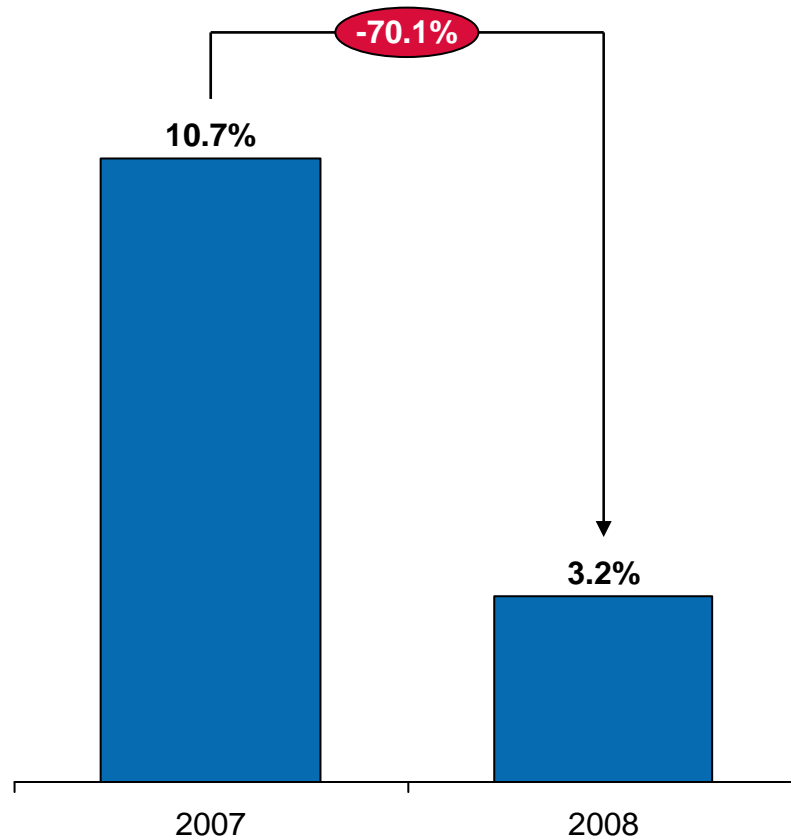


Most planned to slow the rate of growth in 2009

**Planned R&D Spending Change
2008 to 2009**



**Top 20 R&D Spending Companies
% Change vs. Prior Year**



Three key reasons cited for sustained investment in R&D, even when times are tough

Key Reasons Companies are Maintaining R&D Spend

1 Innovation is a fundamental component of the strategy

- It can't be short-sited – companies are playing for the long term
- Funding requires a sustainable, long term model

2 Product development cycles are typically longer than most recessions

- For most industries product development investment decisions occur years in advance
- Most recessions are comparatively short relative to most development cycles

3 The recession is viewed as an opportunity to get a leg-up on competition – to prepare for upturn --- competitive risk of not sustaining new product investments

Executives view innovation as core to their success

“Innovation is what drives our competitive position ... and therefore we can’t back off”

*Robert Lardon
Harman International.*

“The stronger companies want to stay on the same innovation page so that at the end of the cycle, they have a stronger competitive position”

*Hans Stork
Applied Materials*

“We believe innovation is core to how we build the creative and financial capacity to invest in new marketing opportunities and new ways to deliver products and services”

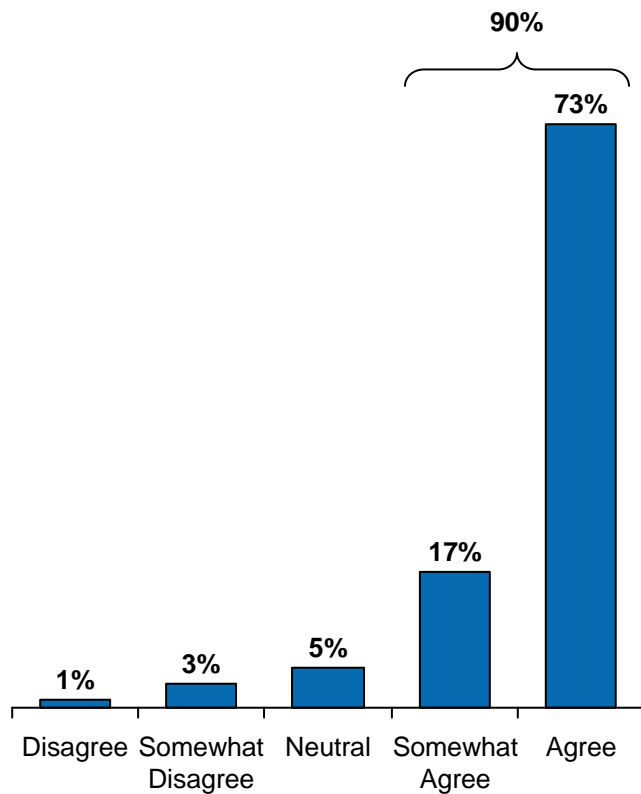
*David Dobson
Pitney Bowes*

“For the past two or three years, we have been looking at our R&D portfolio, focusing on fewer bigger ideas as opposed to lots of incremental little things”

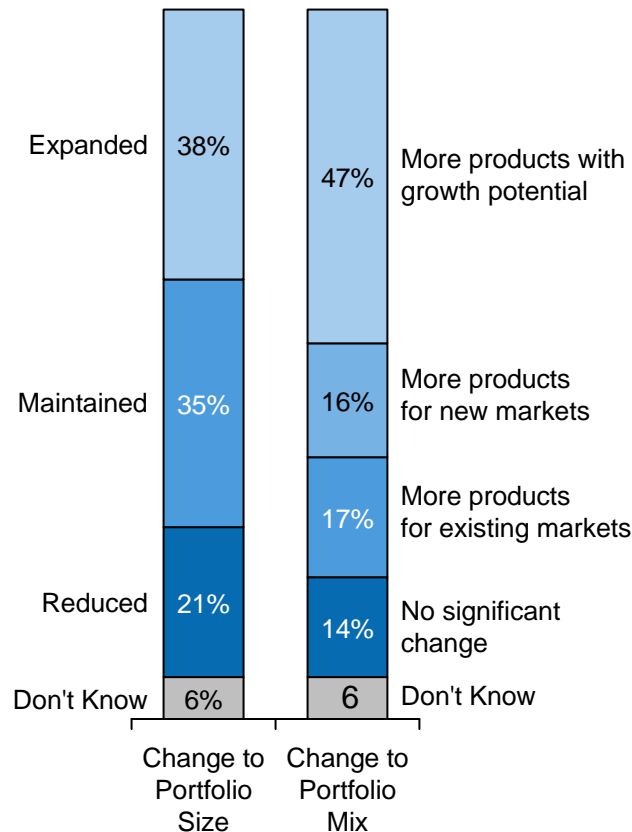
*Alan Grant
Kraft Foods*

Innovation is cited as core to strategy and requiring continued investment in new products/markets

“Innovation will be essential as my company prepares for the upturn”
Percent of Companies Responding

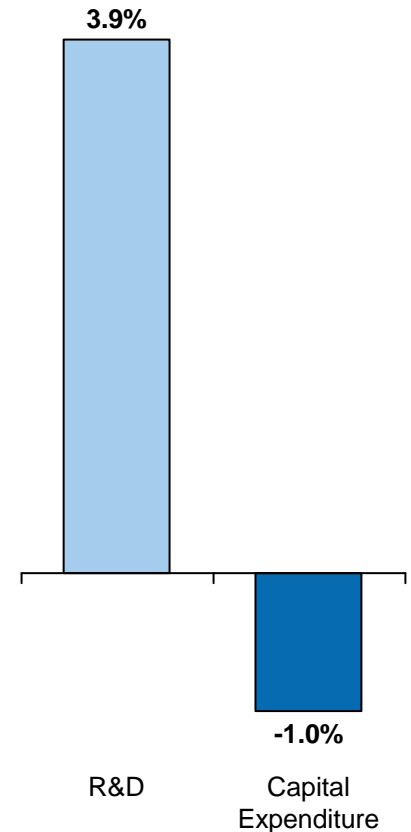


Project Portfolios Focused on Growth



Investment Decisions Reflect Importance of R&D

Top 100 Companies



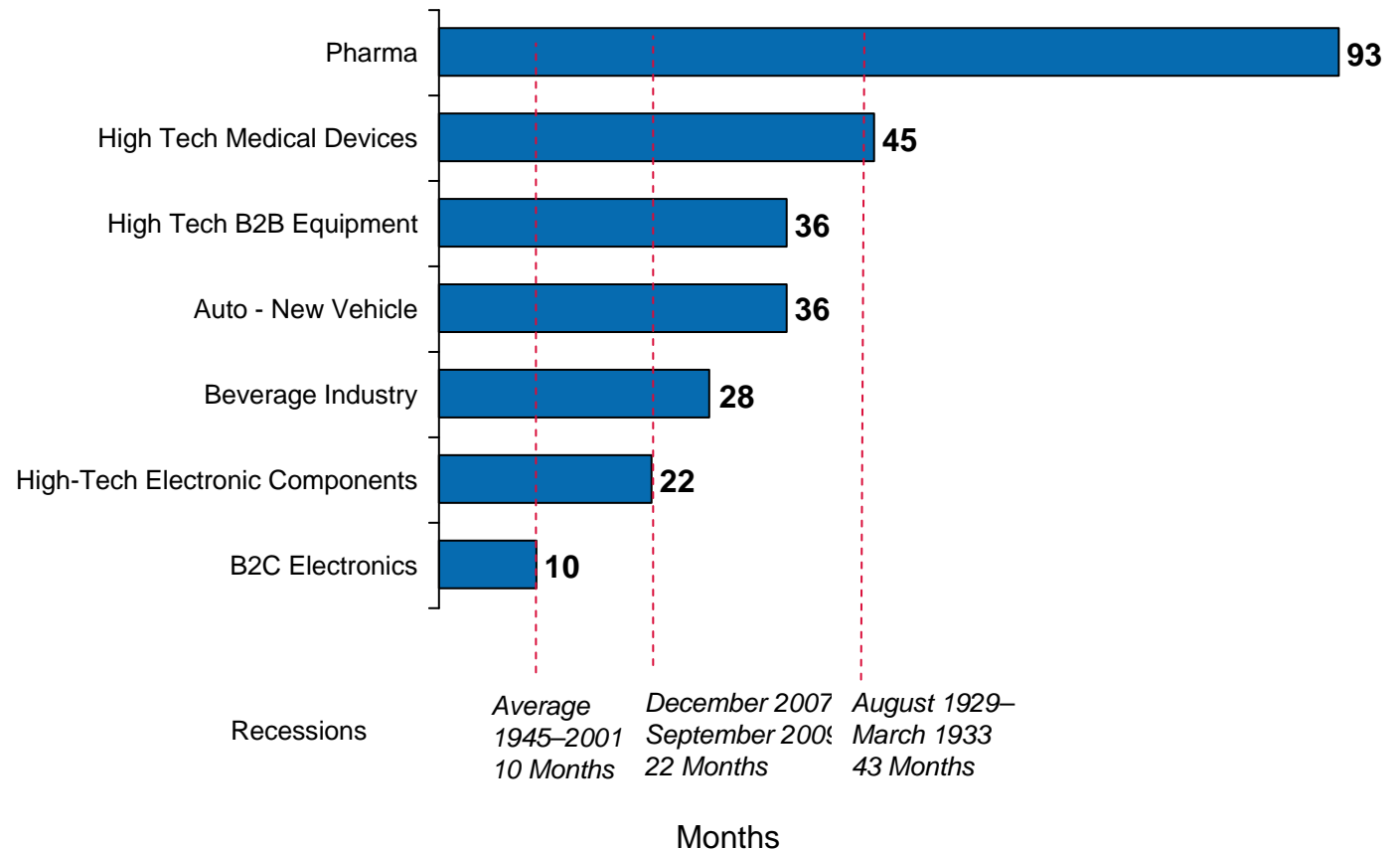
Source: 2009 Booz & Company Innovation 1000 Survey

Product development cycles are typically far longer than recessions

“You cannot all of a sudden just dry-up the investment pipeline... if you miss a cycle, you’re out of the market”

*Adalio Sanchez
IBM*

Comparing Typical Product Development Cycles vs. Historical Recessions



1Source: National Bureau of Economic Research, Center for Automotive Research, Drug Discovery and Development: Understanding the R&D Process, www.innovation.org; CBO, Research and Development in the Pharmaceutical Industry, 2006

The focus of the majority of R&D executives is to improve the returns on their innovation investments

- **Although continuing to invest, companies (40%) are becoming more conservative in their R&D investment choices**
- **Even companies that have not cut total innovation spending are tightening process and focusing their R&D project portfolio**
 - Over 40% are focusing on process improvements to make them more efficient
 - 44% are getting better at killing projects
 - 36% are terminating strictly exploratory projects with undefined timelines
- **Despite rigid product development cycles, companies are making adjustments based on changing customer/consumer requirements**
 - 63% say customers are more price sensitive
 - 70% of companies have adjusted their strategy to respond to Recession
- **Companies are performing less pure and applied research**
 - 40% are shifting resources from basic research to development
 - 44% say they spend less than 20% on basic research

“Increased innovation doesn’t always have to be about more dollars. It’s about how you use those dollars and how you accelerate some products just to bring them out.”

*Adalio Sanchez
IBM*

As we head into a better business environment, executives view the recession as a learning experience

Six Keys to Managing Innovation Through the Recession

- 1 Move with your Customers
- 2 Kill Weak Projects
- 3 Act to Retain Key Talent
- 4 Double Down on Advanced Innovations
- 5 Aggressively Scout Advanced Technology
- 6 Fix Innovation Capability Gaps



Q&A