

booz&co.

Why Culture Is Key

The 2011 Global Innovation 1000

Introduction

2010 Innovation 1000 Spend Analysis

Innovation Culture Summary

For the past seven years, Booz & Company has examined innovation spending and linkages to corporate performance

Previous Global Innovation 1000 Studies



2005:
Money Isn't Everything



2006:
Smart Spenders



2007:
The Customer Connection



2008:
Beyond Borders



2009:
Profits Down,
Spending Steady



2010:
How Top Innovators
Keep Winning

2011: Why Culture is Key



Our 7th annual study of the world's 1000 largest corporate R&D spenders focuses on the links between strategy, culture, and organization on innovation and the impact on financial performance.

The Innovation 1000 study continues to be well recognized as an important contributor to the study of R&D and innovation

Selected Media Coverage Highlights

- Covered by ABCNews and MSNBC television
- Featured on NPR radio in US and BBC Radio in UK
- Cited in over 170 publications across 27 countries
- Called “The most comprehensive assessment of the relationship between R&D investment and corporate performance” by *The Economist*

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 of 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 corporate and innovation strategies

2008

- Identified characteristics of global innovation networks (i.e. R&D footprint) that correlated with higher performance
- Awarded “Best of Visions” award from PDMA
- Awarded Silver Award for Editorial Excellence: Original Research and National Bronze Award for Graphics Excellence by American Society of Business Publication Editors



2009

- Reported impact of 2008-09 global recession on worldwide R&D spend

2010

- Identified the critical capabilities required for successful innovation and their relationship to corporate performance

The focus of this year's Innovation 1000 study is how culture and organization support innovation and its impact on performance



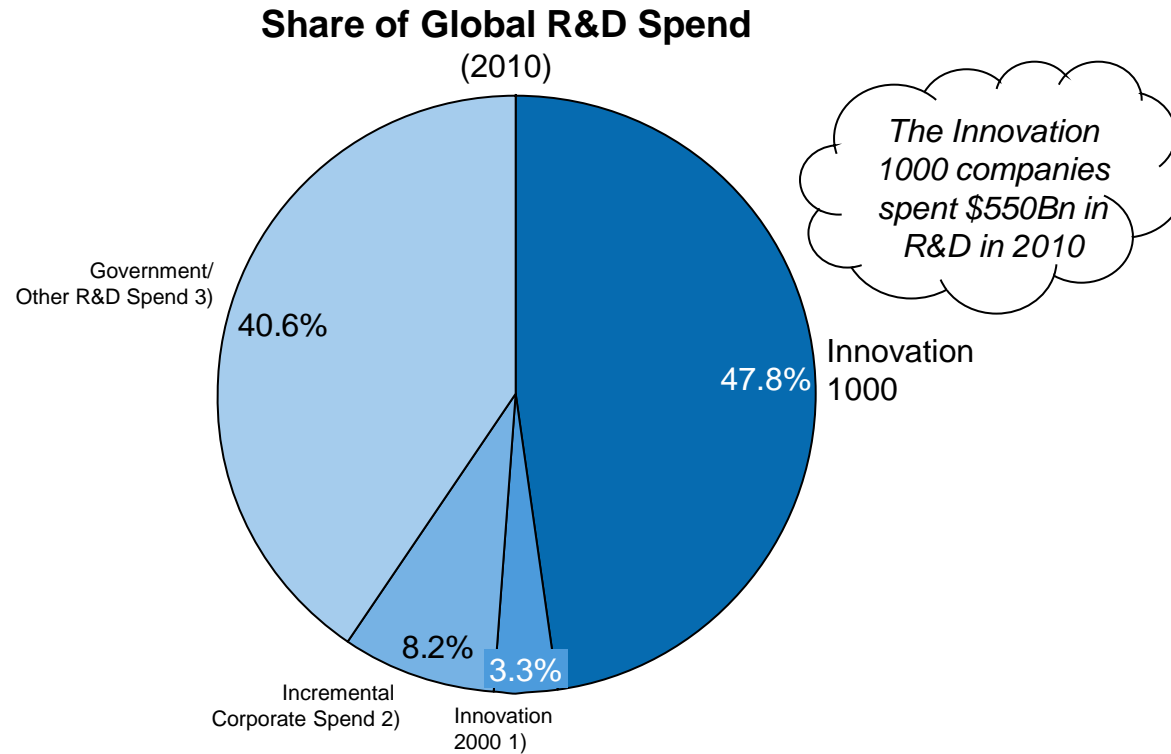
- Our 7th annual study of the world's 1000 largest corporate R&D spenders focuses on the links between strategy, culture, organization on innovation and the impact on financial performance
- The study profiles how strategy, culture and organization differ across the three fundamental innovation strategies
- We show that nearly half of respondents reported that their company culture does not support their business strategy as well as which elements of culture are most important to innovation success
- As in years past, we also profile the R&D spend of the world's 1000 largest R&D spenders

Introduction

2010 Innovation 1000 Demographics Analysis

Innovation Culture Summary

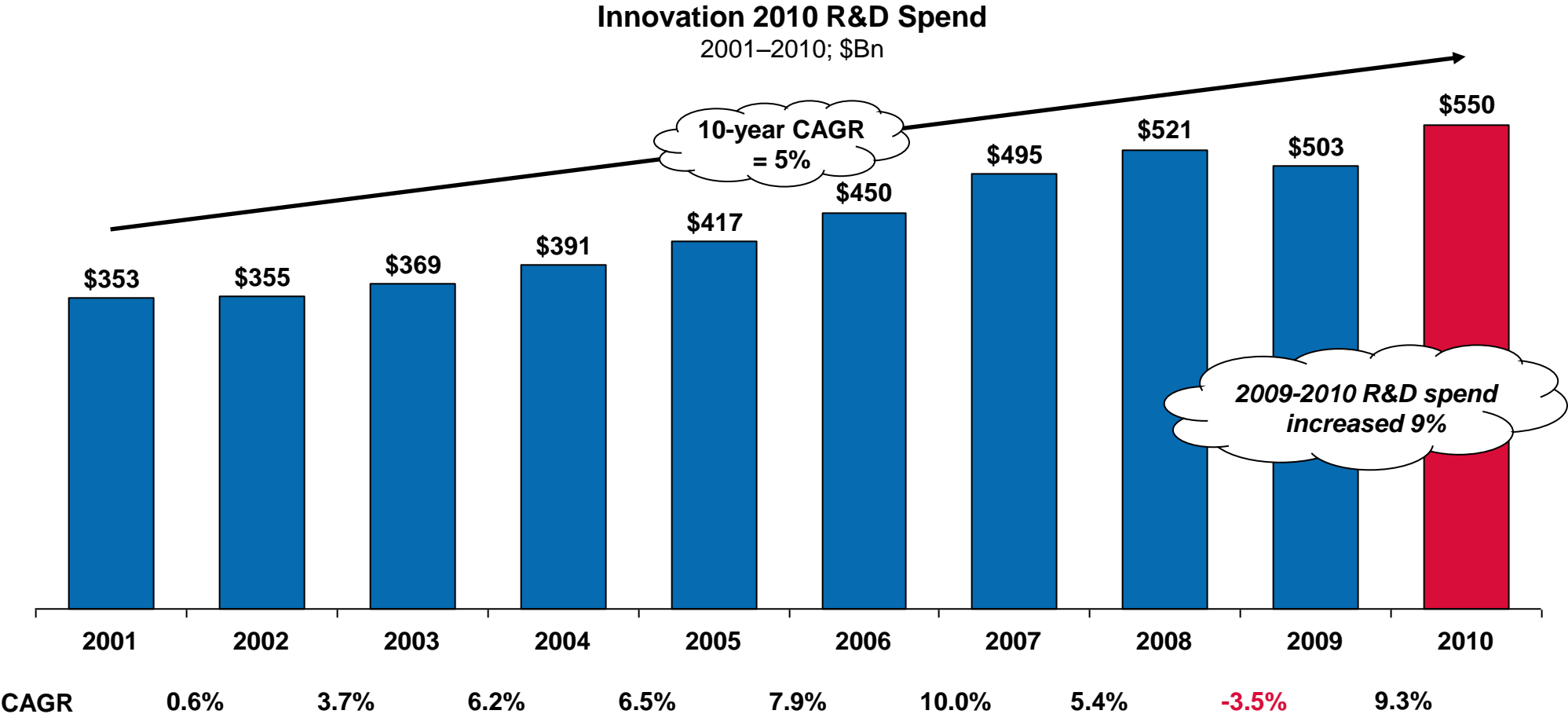
In 2010, total Global R&D was ~ \$1.15 Trillion - the Innovation 1000 represent \$550 Billion nearly 50% of it



Total ~ \$1,150Bn
Our study captures ~48% of total Global R&D

- 1) Innovation 2000 spend for Innovation 2010 companies ranked 1001–2000. Innovation 2000 spend increased slightly from 2009 global spend (2010 Innovation study)
 - 2) Incremental corporate spend calculated using 2.1% growth rate. Growth calculated using companies ranked 1001–2000 for 2010 Innovation 1000 and 2010 Innovation 1000
 - 3) Government/Other R&D spend calculated using Government spend in 2008 and 2009 Innovation 1000 studies; *Global 2011 R&D Estimate*, R&D Magazine December 2010.
- Source: Booz & Company analysis

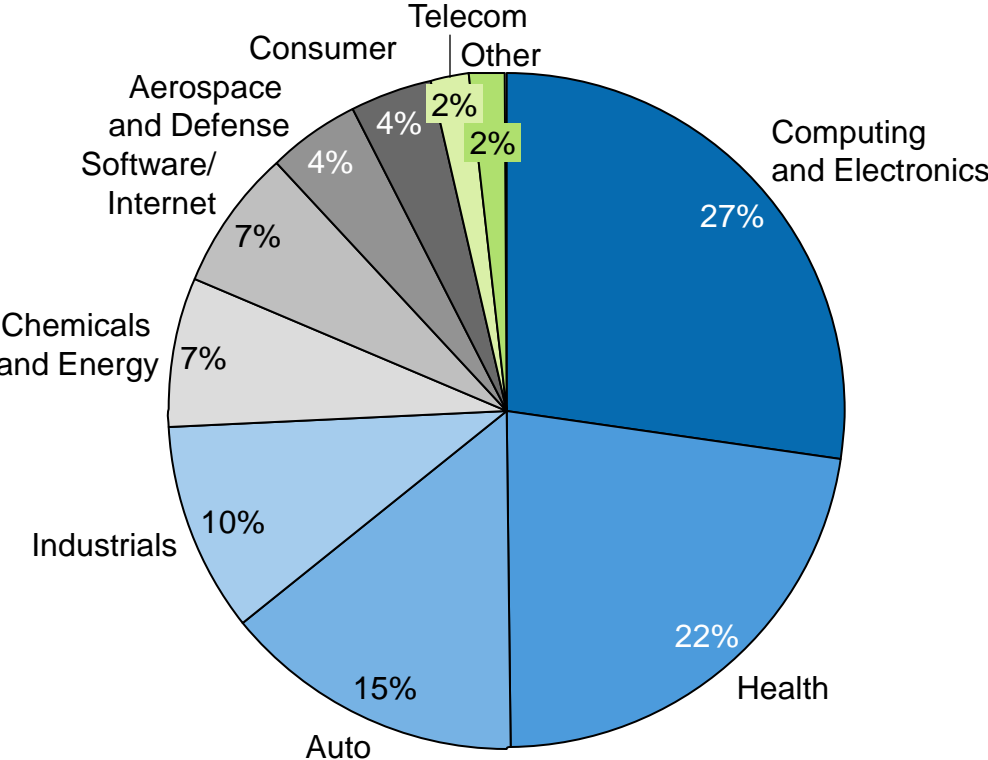
R&D spend grew 9%, bouncing back from 2009's unprecedented decline



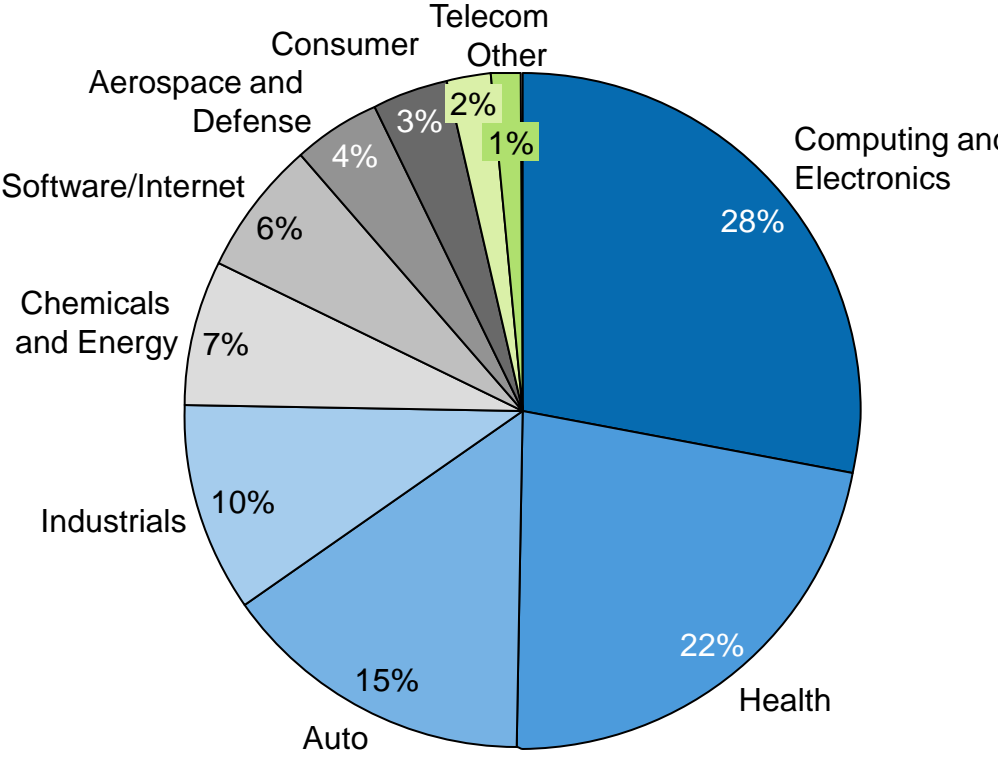
Sources: Bloomberg data; Booz & Company Innovation 1000 articles strategy + business; Booz & Company analysis

Nearly 2/3rd's of spend is in just three industries: Computing & Electronics, Health, and Auto

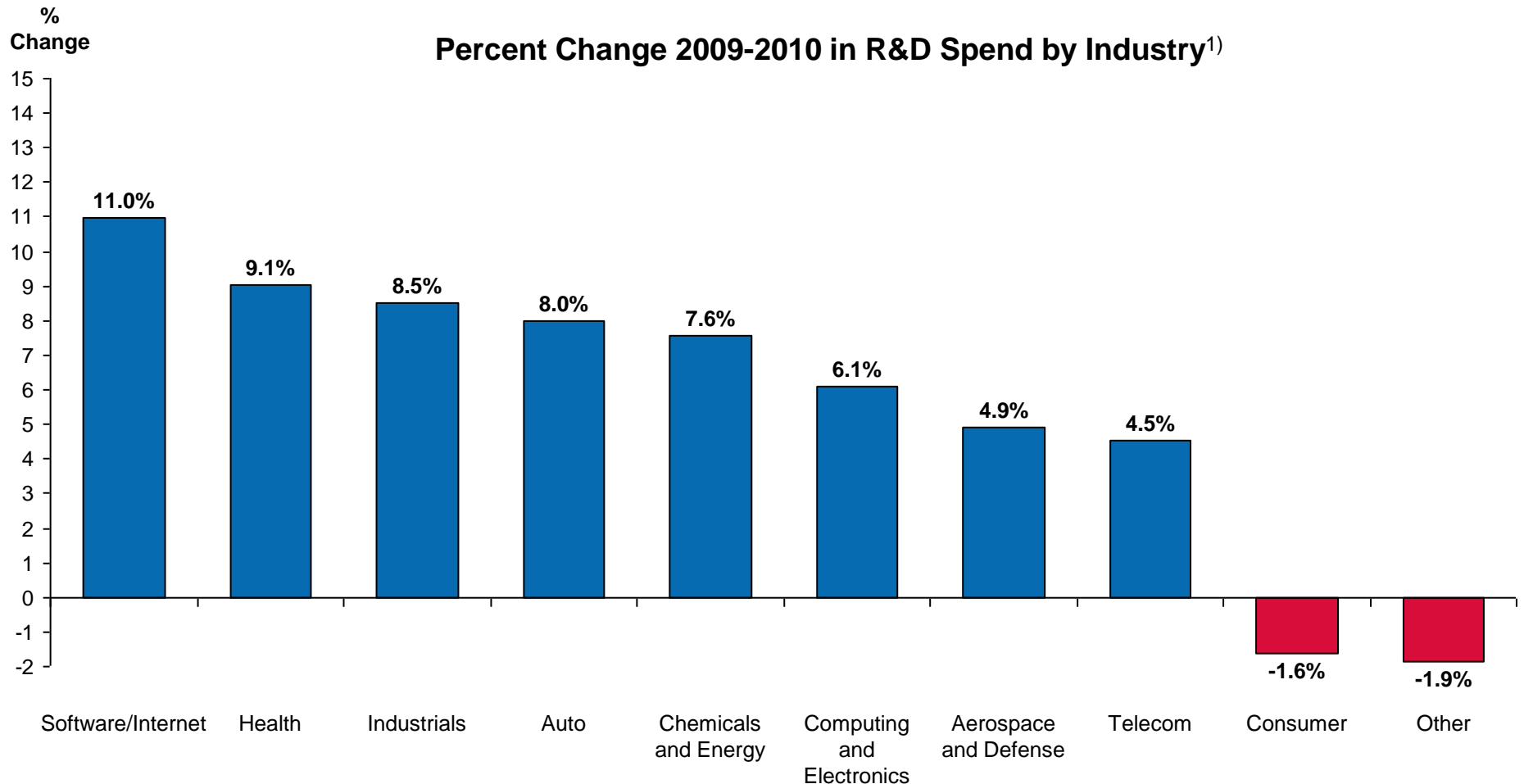
2009 R&D Spend by Industry
(\$503B)



2010 R&D Spend by Industry
(\$550B)

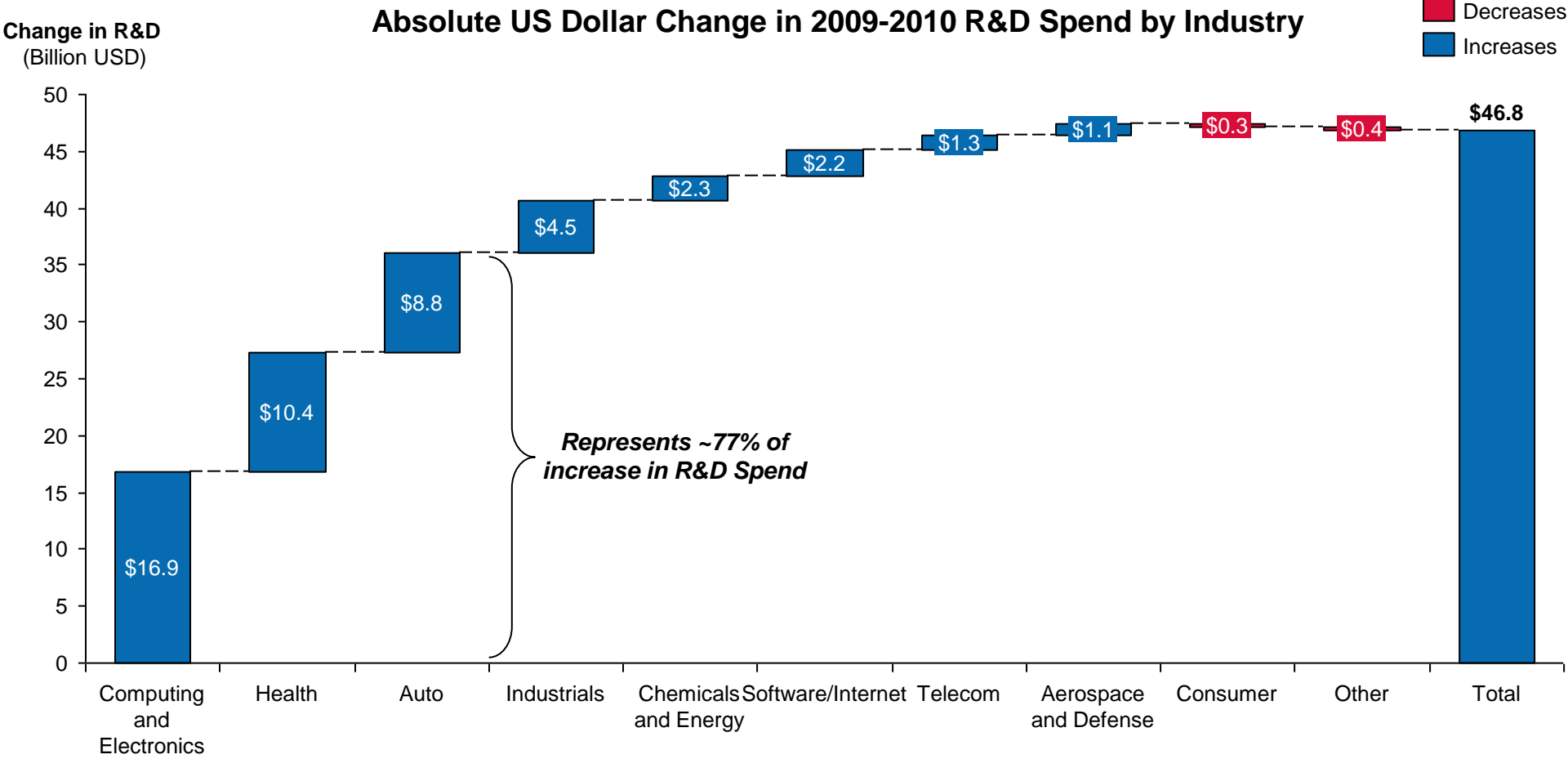


R&D spending increased across nearly all industries over the past year - most significantly in Software/Internet, Health and Industrials



1) Innovation 2010 yearly R&D spend comparison for the 909 companies for which R&D spend available for both 2009 and 2010
Sources: Bloomberg data; Booz & Company Innovation 1000 articles strategy + business; Booz & Company analysis

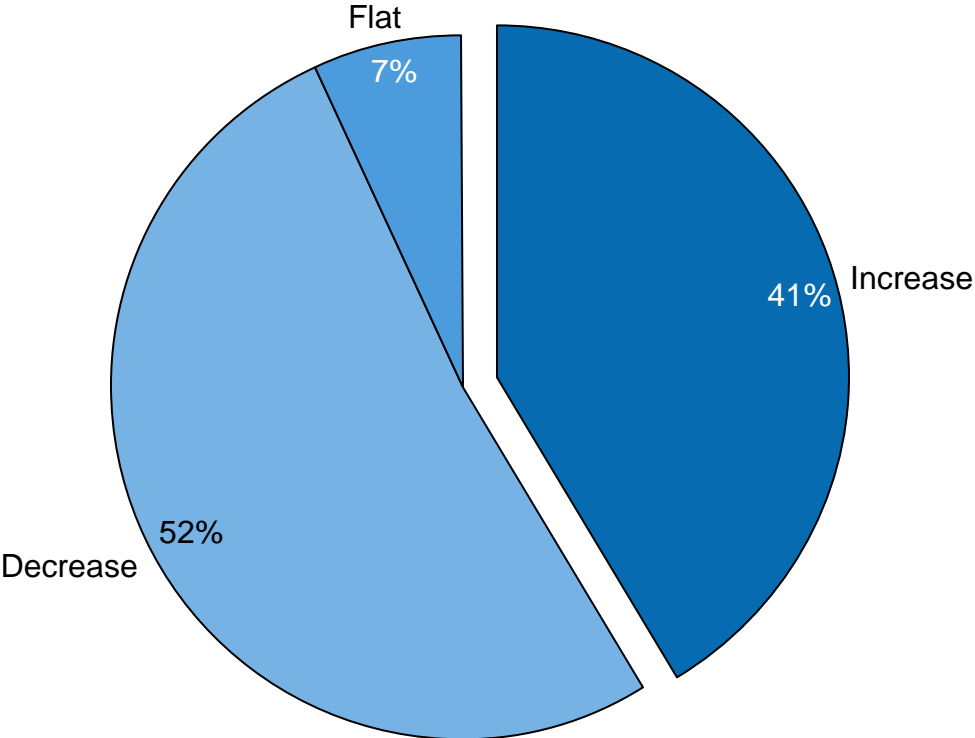
More than 3/4's of the \$47B total increase in R&D spend came from Computing & Electronics, Health and Automotive



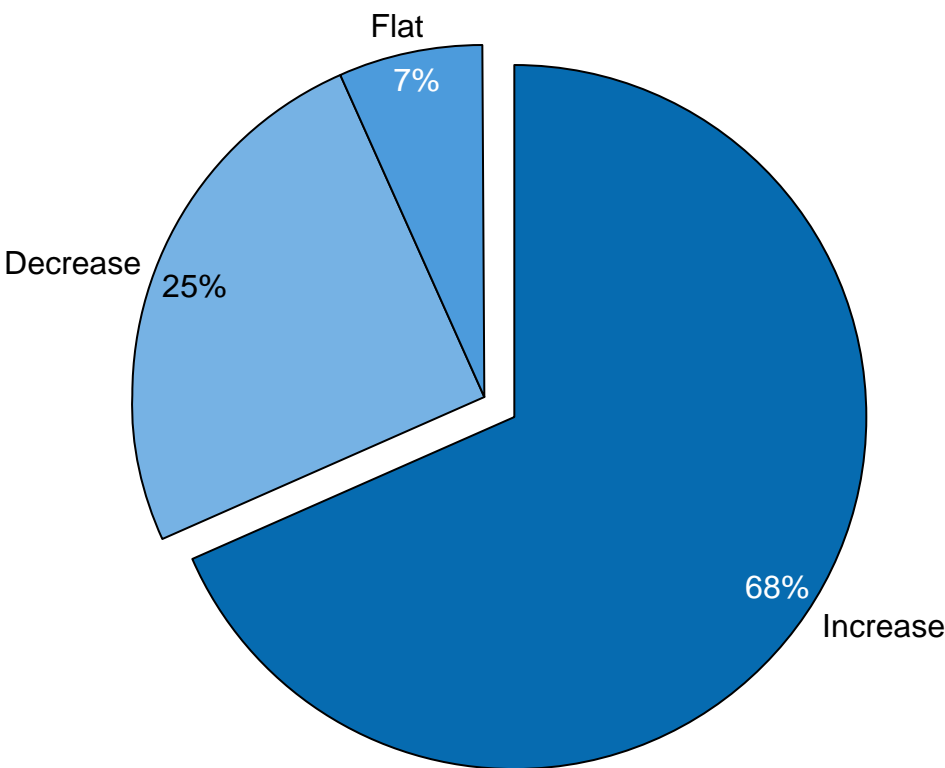
Sources: Bloomberg data; Booz & Company Innovation 1000 articles strategy + business; Booz & Company analysis

R&D expenditures increased at the majority of Innovation 1000 companies - a significant reversal from last year

2008-2009 Change in R&D Spend



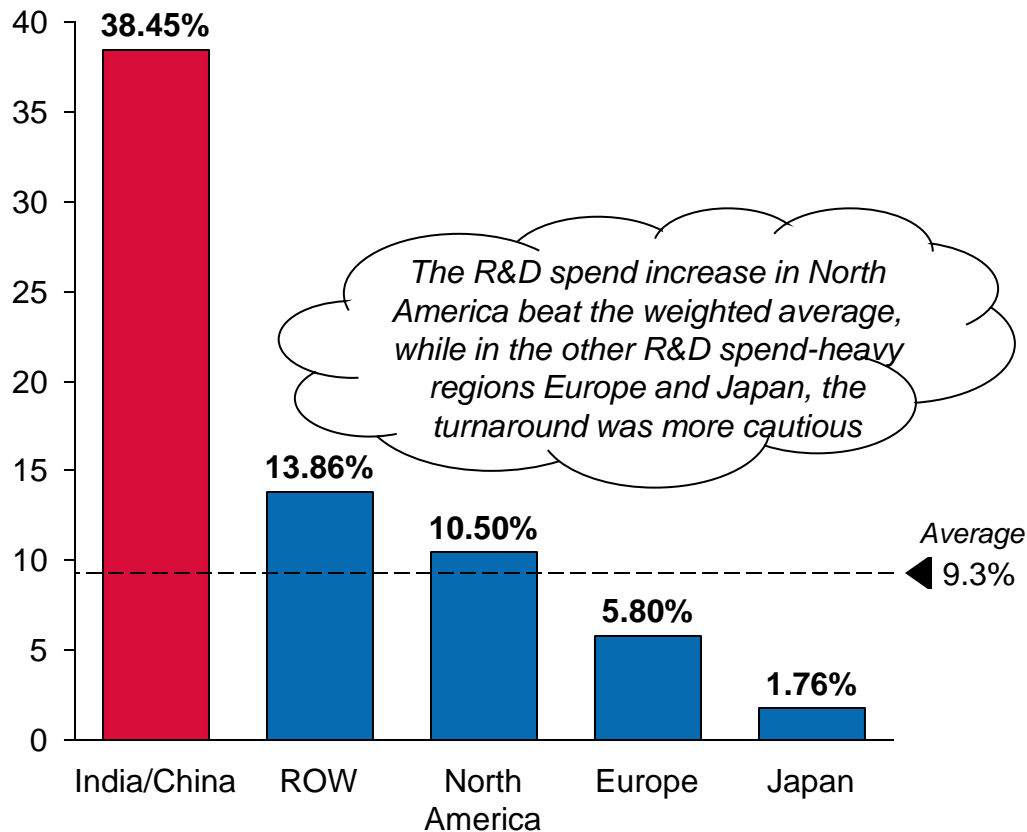
2009-2010 Change in R&D Spend¹⁾



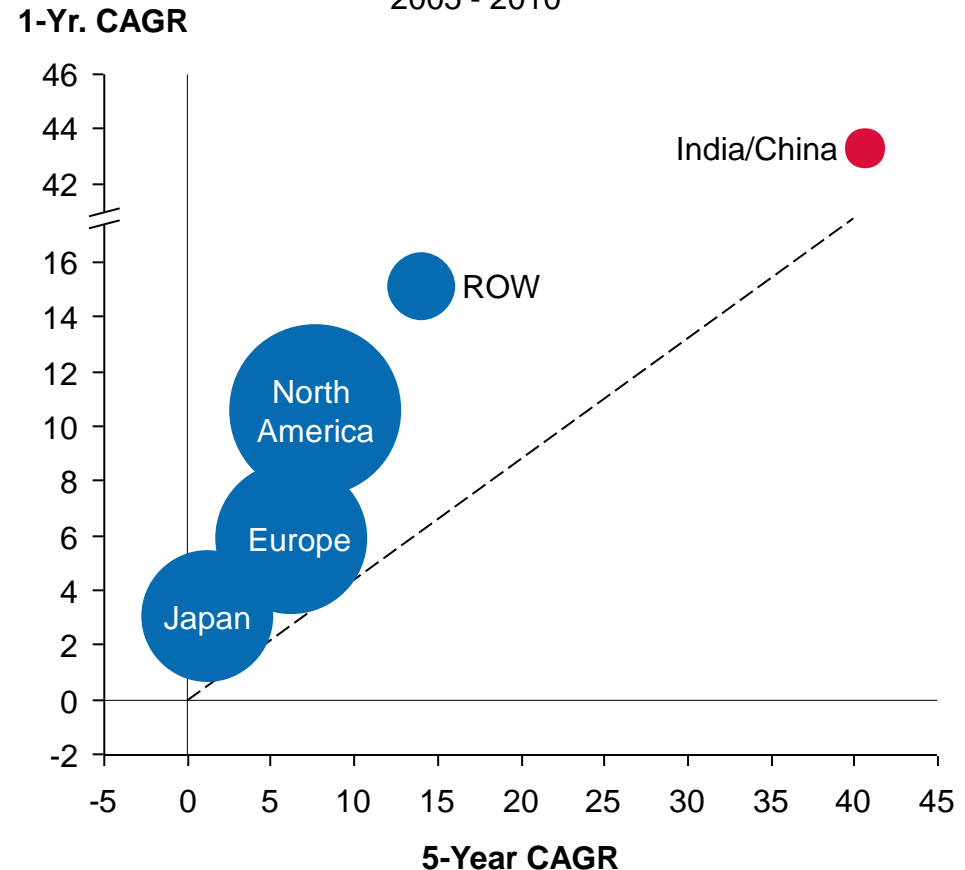
1) Innovation 2011 yearly R&D spend comparison for the 909 companies for which R&D spend available for both 2009 and 2010
Sources: Bloomberg data; Booz & Company Innovation 1000 articles strategy + business; Booz & Company analysis

India/China headquartered firms continued to rapidly increase R&D spend, all regions accelerated the growth of R&D in 2010

Change (%) in R&D Spend by Region
2009 – 2010¹⁾



R&D Spend by Region
2005 - 2010



1) Innovation 2011 yearly R&D spend comparison for the 909 companies for which R&D spend available for both 2009 and 2010
Sources: Bloomberg data; Booz & Company Innovation 1000 articles strategy + business; Booz & Company analysis

Top 20 R&D spenders increased R&D by 10%

2011 Rank	2010 Rank	Company	Geography	Industry	% R&D Spend Change 2009 to 2010	2010 R&D Expenditure \$B USD	2010 Sales Revenue \$B USD	Intensity 2010 R&D/Sales	Change in Intensity FY 2009 to 2010
1	1	Roche Holding AG	Europe	Health	1.5%	9.6	45.7	21.1%	4.9%
2	5	Pfizer Inc	North America	Health	20.0%	9.4	67.8	13.9%	-11.5%
3	6	Novartis AG	Europe	Health	21.4%	9.1	50.6	17.9%	6.2%
4	2	Microsoft Corp	North America	Software/Internet	-3.3%	8.7	62.5	14.0%	-9.6%
5	14	Merck & Co Inc	North America	Health	53.0%	8.6	46.0	18.7%	-8.7%
6	4	Toyota Motor Corp	Japan	Auto	0.7%	8.5	222.2	3.9%	0.5%
7	10	Samsung Electronics Co Ltd	ROW	Computing and Electronics	23.2%	7.9	133.8	5.9%	10.7%
8	3	Nokia OYJ	Europe	Computing and Electronics	-0.8%	7.8	56.3	13.8%	-4.2%
9	11	General Motors Co	North America	Auto	16.0%	7.0	135.6	5.1%	-10.5%
10	7	Johnson & Johnson	North America	Health	-2.0%	6.8	61.6	11.1%	-1.5%
11	13	Intel Corp	North America	Computing and Electronics	16.3%	6.6	43.6	15.1%	-6.3%
12	18	Panasonic Corp	Japan	Computing and Electronics	10.7%	6.2	101.7	6.1%	-5.6%
13	9	GlaxoSmithKline PLC	Europe	Health	0.3%	6.1	43.9	14.0%	0.2%
14	15	Volkswagen AG	Europe	Auto	19.4%	6.1	168.3	3.6%	-1.0%
15	12	IBM	North America	Computing and Electronics	3.5%	6.0	99.9	6.0%	-0.7%
16	8	Sanofi	Europe	Health	-4.0%	5.8	40.3	14.5%	-7.4%
17	19	Honda Motor Co Ltd	Japan	Auto	5.2%	5.7	104.6	5.5%	1.0%
18	22	AstraZeneca PLC	Europe	Health	20.6%	5.3	33.3	16.0%	18.9%
19	17	Cisco Systems Inc	North America	Computing and Electronics	1.3%	5.3	40.0	13.2%	-8.7%
20	16	Siemens AG	Europe	Industrials	-1.4%	5.2	103.1	5.1%	-0.5%
Total					10.1%	141.8	1,660.8	11.2%	-1.7%

■ Reduced R&D Spend in 2010

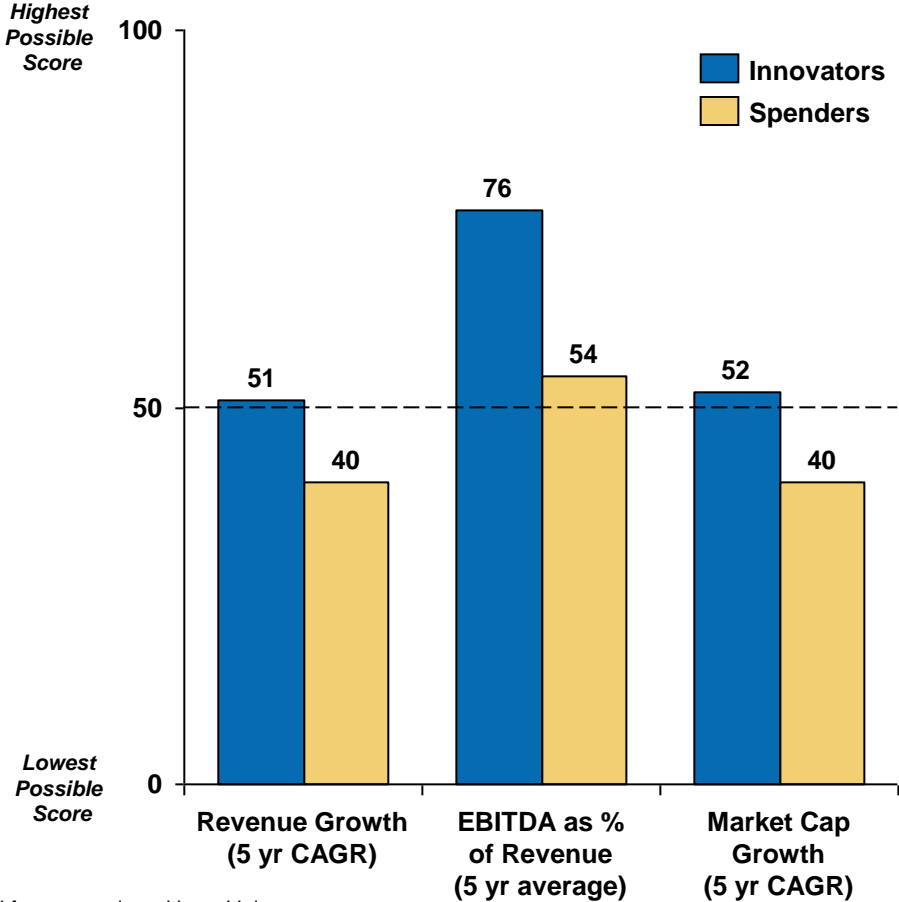
Sources: Bloomberg data; Booz & Company Innovation 1000 articles strategy + business; Booz & Company analysis

Consistent with last year's findings, the Top 10 innovators outperform the top 10 spenders across three key financial metrics

Top 10 Most Innovative Companies
2011 Innovation 1000 Survey Poll (N=595)

Vote Rank	Company	R&D Spend \$M	R&D Spend Rank	Revenue \$M	R&D Intensity
1	Apple	1,782	70	65,225	2.7%
2	Google	3,762	34	29,321	12.8%
3	3M	1,434	86	26,662	5.4%
4	GE	3,939	32	149,060	2.6%
5	Microsoft	8,714	4	62,484	14.0%
6	IBM	6,026	15	99,870	6%
7	Samsung	7,873	7	133,789	5.9%
8	P&G	1,950	61	78,938	2.5%
9	Toyota	8,546	6	222,249	3.9%
10	Facebook	Not Reported	NA	~2,000 ²⁾	Not Reported

Financial Performance of Top 10 Innovators vs. Top 10 R&D Spenders



1) Strategy Model designation based on 2011 Innovation Survey responses; multiple models were identified for companies with multiple survey responses.
 2) Bloomberg Estimate, December 2010 (<http://www.bloomberg.com/news/2010-12-16/facebook-sales-said-likely-to-reach-2-billion-this-year-beating-target.html>)
 Sources: Bloomberg data; 2011 Booz & Company Innovation 1000 survey

The 10 most innovative firms are more likely to be Need Seekers

Top 10 Spenders on R&D

2011 Innovation 1000 (2010 Financial Data)

Company	Revenue \$M	R&D Spend \$M	R&D Intensity
Roche Holding	45,672	9,646	21.1%
Pfizer	67,809	9,413	13.9%
Novartis	50,624	9,070	17.9%
Microsoft	62,484	8,714	14.0%
Merck & Co	45,987	8,591	18.7%
Toyota	222,249	8,546	3.9%
Samsung	133,789	7,873	5.9%
Nokia	56,309	7,778	13.8%
General Motors	135,592	6,962	5.1%
Johnson & Johnson	61,587	6,844	11.1%

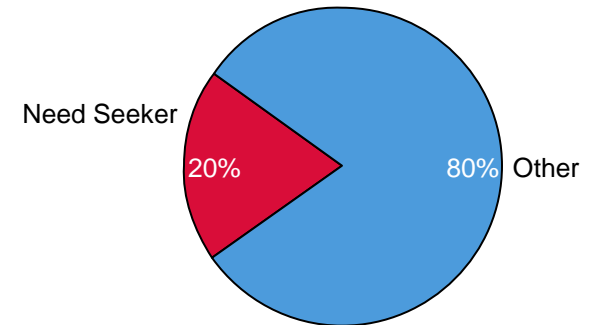
Top 10 Most Innovative Companies

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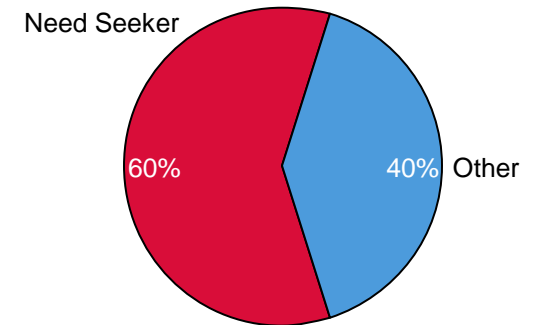
Company	Revenue \$M	R&D Spend \$M	R&D Intensity
Apple	65,225	1,782	2.7%
Google	29,321	3,762	12.8%
3M	26,662	1,434	5.4%
General Electric	149,060	3,939	2.6%
Microsoft	62,484	8,714	14.0%
IBM	99,870	6,026	6%
Samsung	133,789	7,873	5.9%
Proctor & Gamble	78,938	1,950	2.5%
Toyota	222,249	8,546	3.9%
Facebook	~2,000 ²⁾	Not Reported	Not Reported

Proportion of Strategy Models

Top 10 Spenders on R&D



Top 10 Innovators



Companies appearing on both lists

1) Strategy Model designation based on 2011 Innovation Survey responses; multiple models were identified for companies with multiple survey responses.

2) Bloomberg Estimate, December 2010 (<http://www.bloomberg.com/news/2010-12-16/facebook-sales-said-likely-to-reach-2-billion-this-year-beating-target.html>)

Sources: Bloomberg data; 2011 Booz & Company Innovation 1000 survey

Key Takeaways – Innovation 1000 Spend

- In 2010, R&D spend grew 9%, bouncing back from 2009's unprecedented decline
- 68% of all companies raised R&D spending in 2010, and 3 industries accounted for more than ¾'s of the total \$47 billion increase: Computing & Electronics, Health and Automotive
- All regions increased innovation spending in 2010, a significant turnaround compared to 2009
- The turnaround was cautious in Europe and Japan, regions that saw 5.8% and 1.8% increases in R&D spending respectively...
- ...while India and China-based firms increased R&D outlays at a higher proportionate rate than those in the three largest regions, albeit from a small base
- The Top 20 R&D spenders averaged 10% R&D growth, compared with a 9% increase overall
- The Top 10 innovators outperformed the Top 10 R&D spenders across key financial metrics -- revenue growth, EBITDA as a percentage of revenue and market cap growth

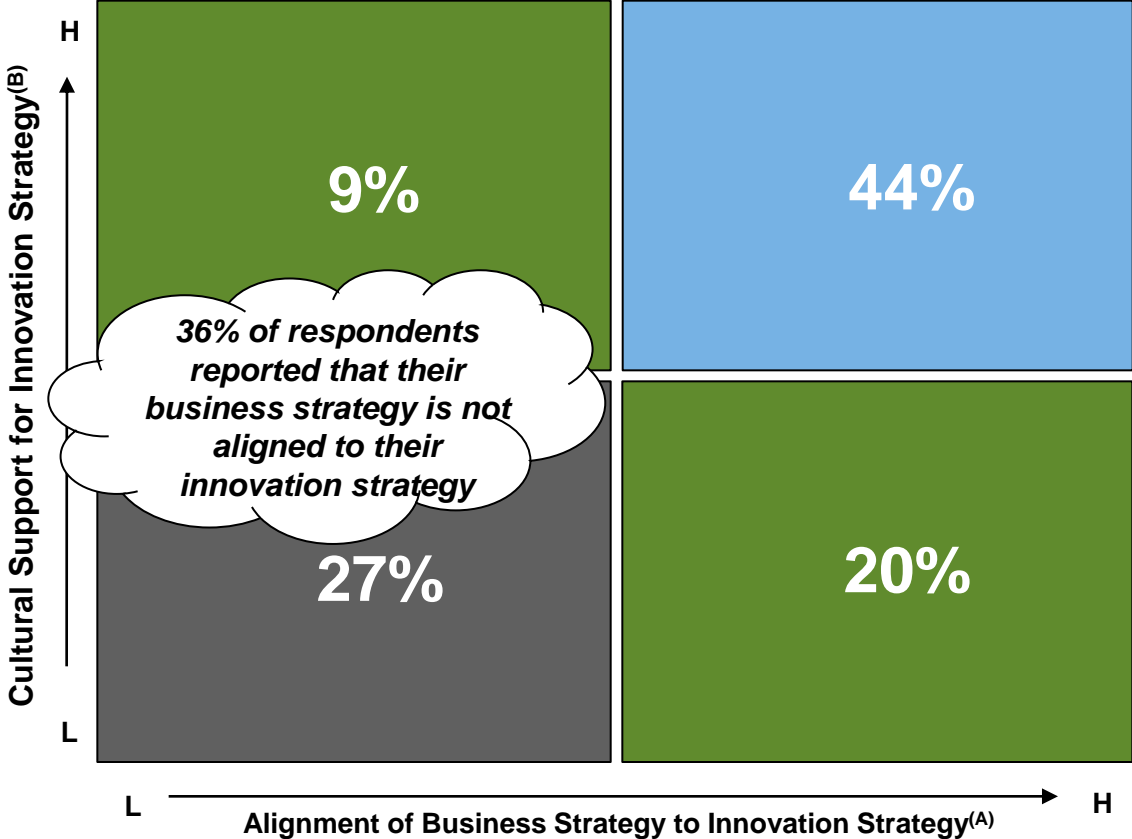
Introduction

2010 Innovation 1000 Spend Analysis

Innovation Culture Summary

Over half of companies report inadequate strategic alignment and poor cultural support for their innovation strategies

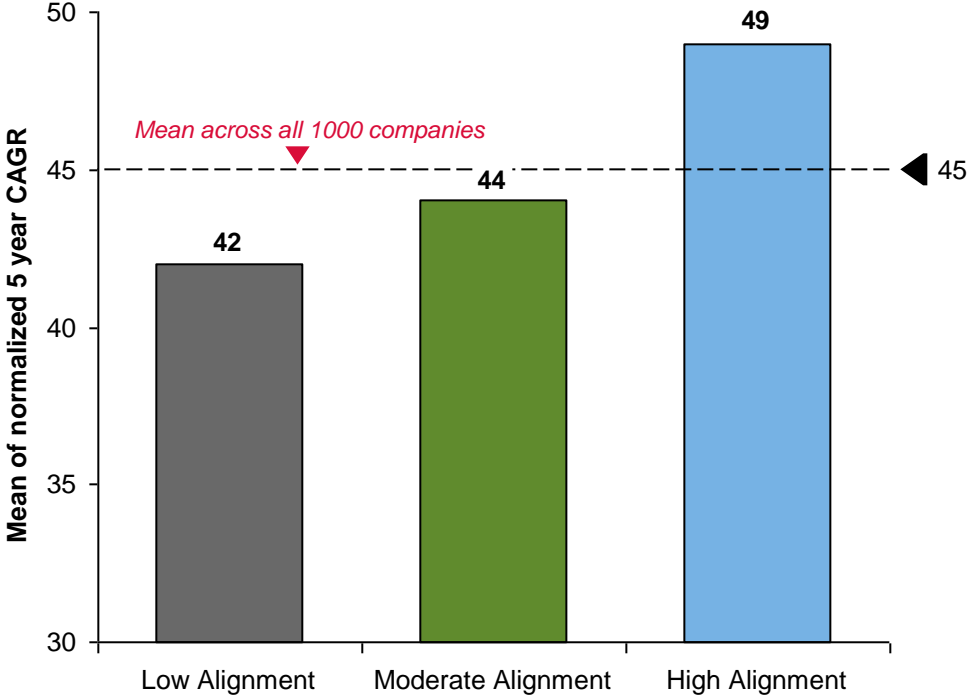
Innovation Strategy and Cultural Alignment Matrix^(C)



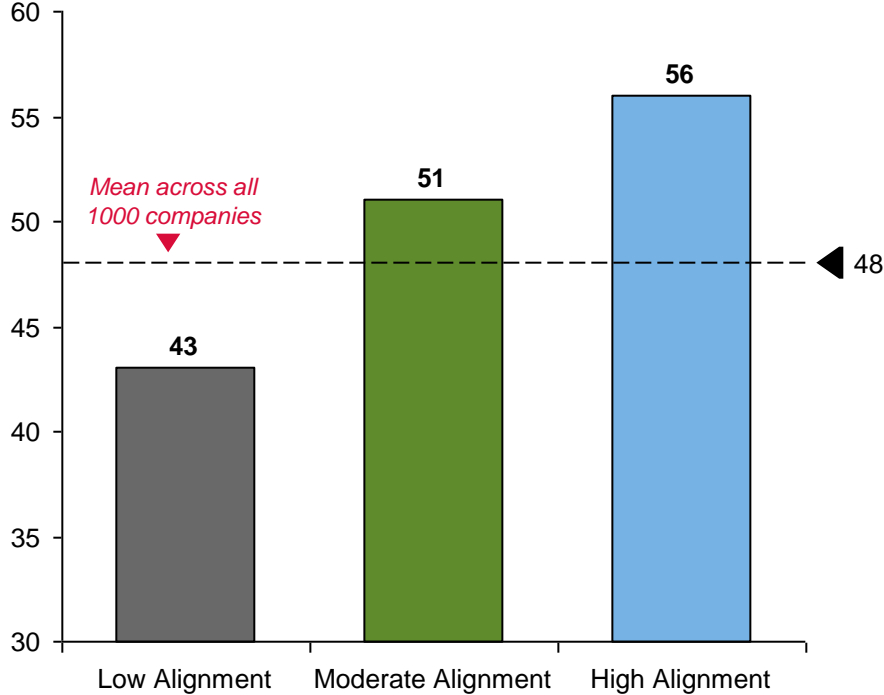
Note:
 (A) Q.5. For your company, how closely aligned are the 4 dimensions above with your overall business strategy?
 (B) Q.8 How well does your company culture support your innovation strategy?
 (C) Concordance categories were created by combining Q.5 and Q.8. "Low alignment = respondents having responses below 4 in both the questions Q.5 and Q.8", "Innovation alignment only = respondents having responses above 3 for Q.5 but below 4 for Q.8", "Cultural alignment only = respondents having responses below 4 for Q.5 but above 3 for Q.8" and "High alignment = respondents having responses above 3 for both Q.5 and Q.8"

Companies achieving high alignment on both innovation strategy and culture enjoy superior financial performance

Gross Profit (5 year CAGR) by Concordance Categories



Enterprise Value (5 year CAGR) by Concordance Categories



Concordance Categories^(B)

Concordance Categories^(B)

Note:
 (A) Normalized 5 year CAGR for gross profit and enterprise value were considered for analysis.
 (B) Concordance categories were created by combining Q.5 and Q.8. "Low alignment = respondents having responses below 4 in both the questions Q.5 and Q.8", "Innovation alignment only = respondents having responses above 3 for Q.5 but below 4 for Q.8", "Cultural alignment only = respondents having responses below 4 for Q.5 but above 3 for Q.8" and "High alignment = respondents having responses above 3 for both Q.5 and Q.8."

In 2007 we defined three distinct innovation strategies which we further explored in this year's study

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

Example Companies



StanleyBlack&Decker

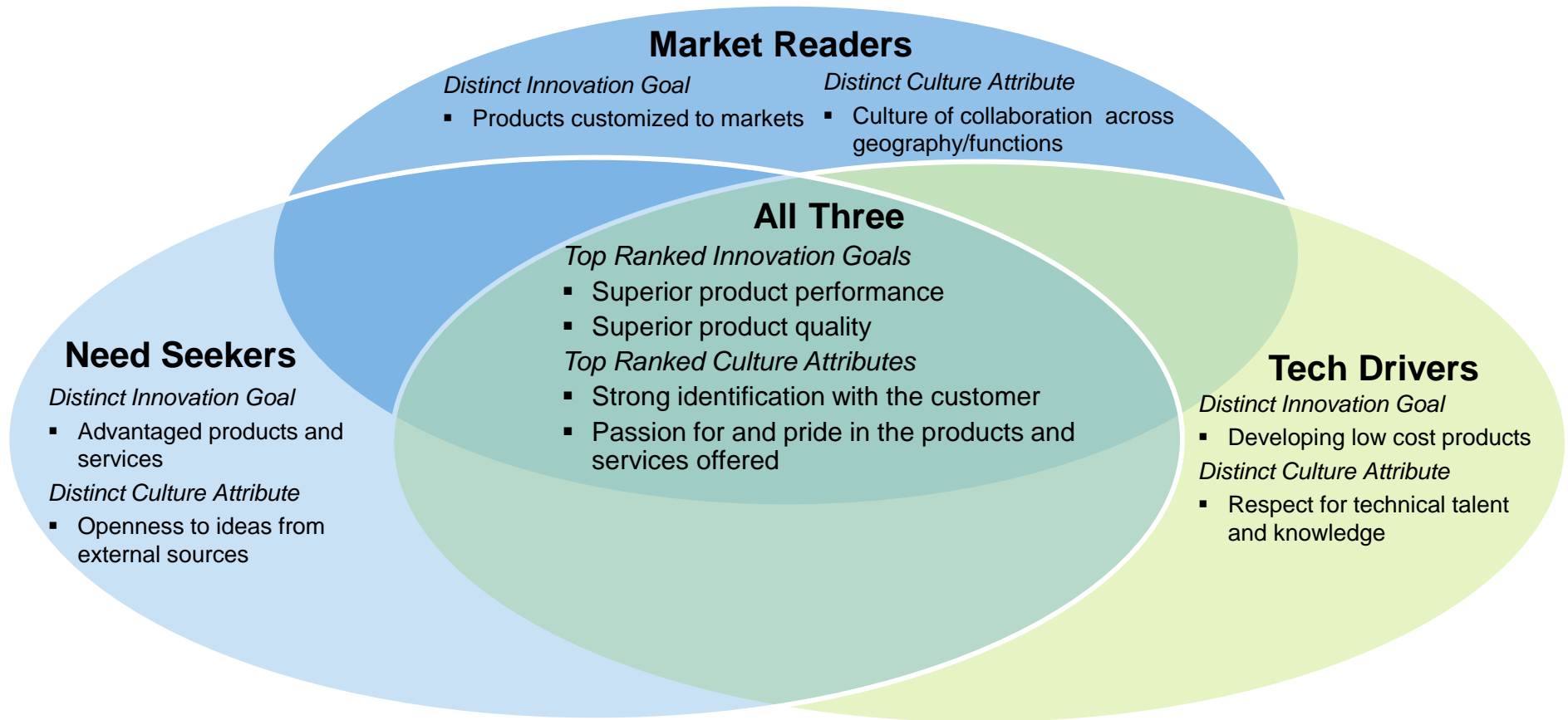
Market Readers – Adopt a **2nd mover strategy**; Focus on driving value through incremental change; New innovations determined **market back**; although not as proactively as Need Seekers



Tech 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



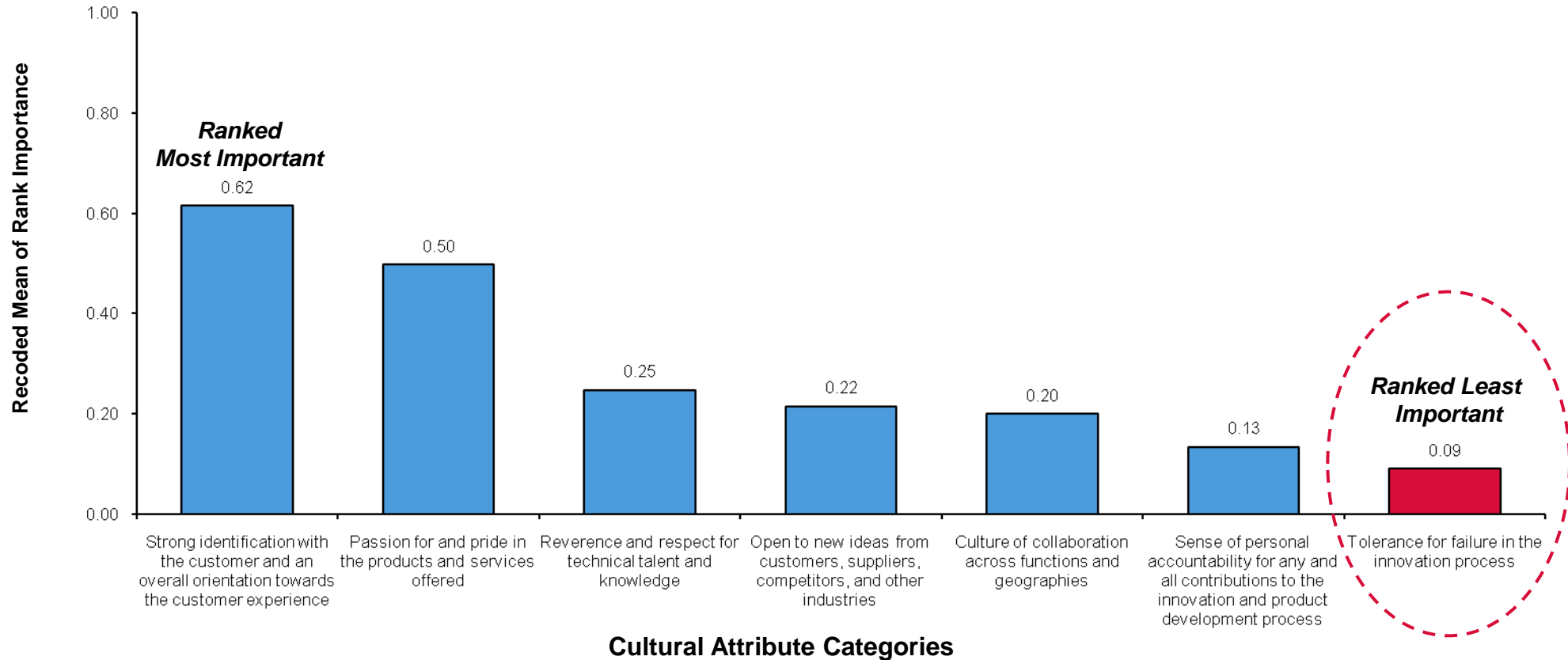
Similar to our 2010 finding on capabilities, each Innovation Model has a distinct set of innovation goals and cultural attributes



Sources: Bloomberg data; 2010 Booz & Company Innovation 1000 survey; 2011 Booz & Company Innovation 1000 survey

Interestingly, the lowest-ranked cultural attribute across all models was “tolerance for failure in the innovation process”

Rank of Importance^(A) of Cultural Attributes

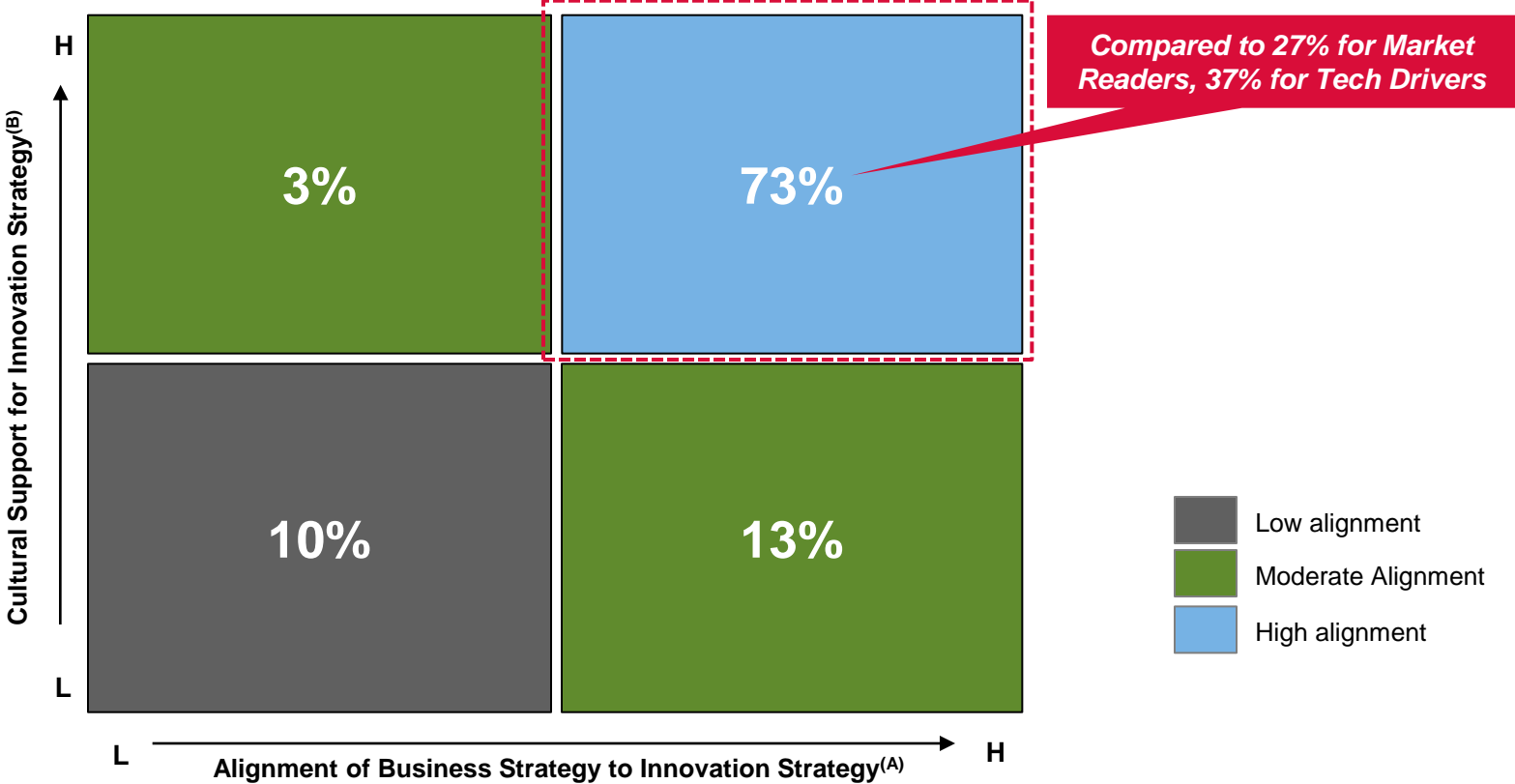


Note:

(A) “Please force-rank the following cultural attributes in order of the relative level of importance to your company and the degree of prevalence. Rank the most important 1st , the next most important 2nd and so on.” -- Responses above reflect the recoded means, that is, responses of 1 or 2 = 1, all others = 0

Nearly 3/4's of Need Seekers report high alignment of both business strategy and cultural support for their innovation strategy

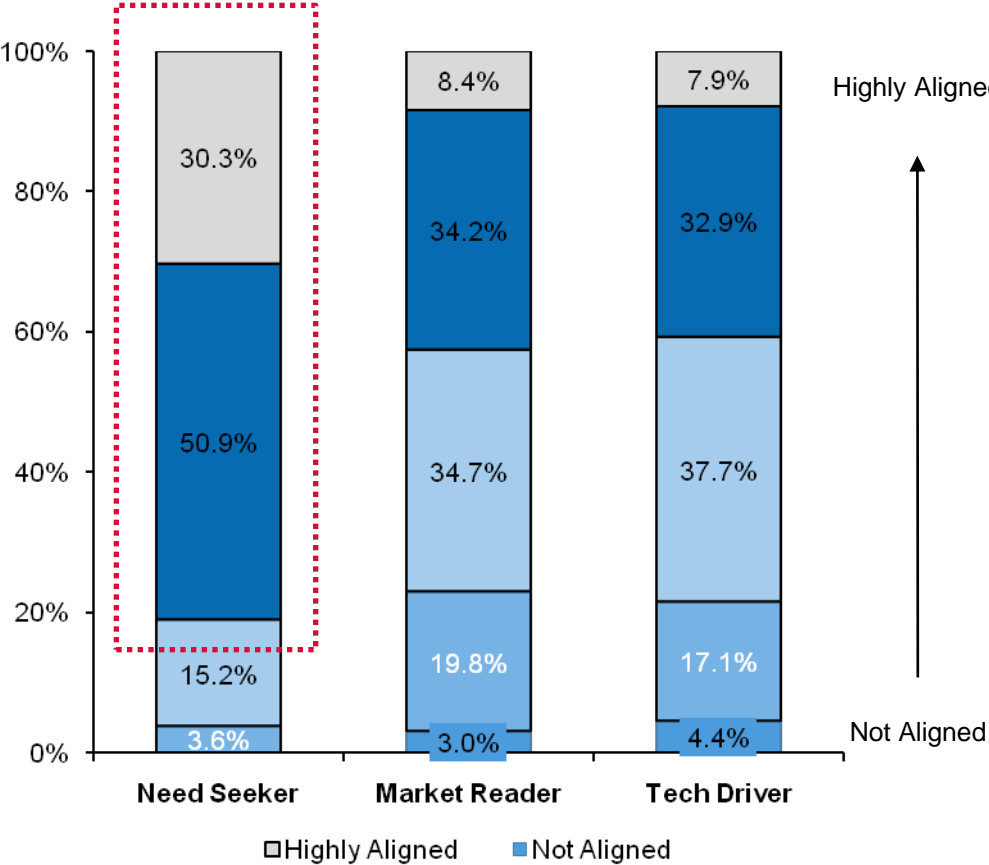
Need Seekers – Innovation Strategy and Cultural Alignment Matrix^(C)



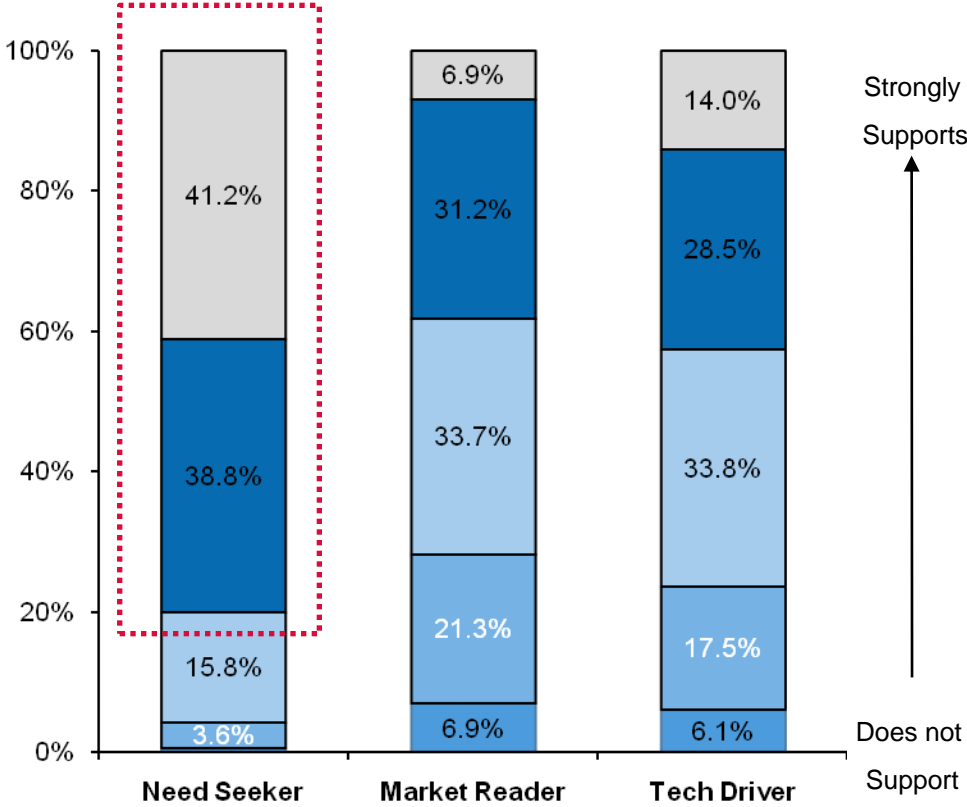
(A) Q.5. For your company, how closely aligned are the 4 dimensions above with your overall business strategy?
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The Need Seekers possess the highest level of strategic alignment and cultural support by a wide margin

Innovation Strategy Alignment with Business Strategy^(A)



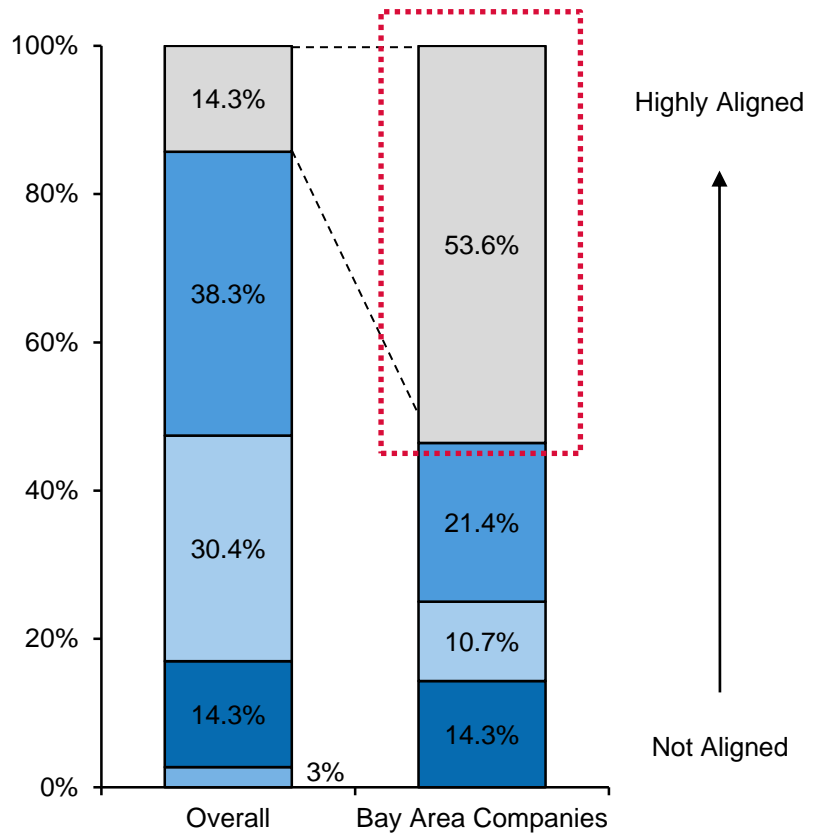
How well does your company culture support your innovation strategy? ^(B)



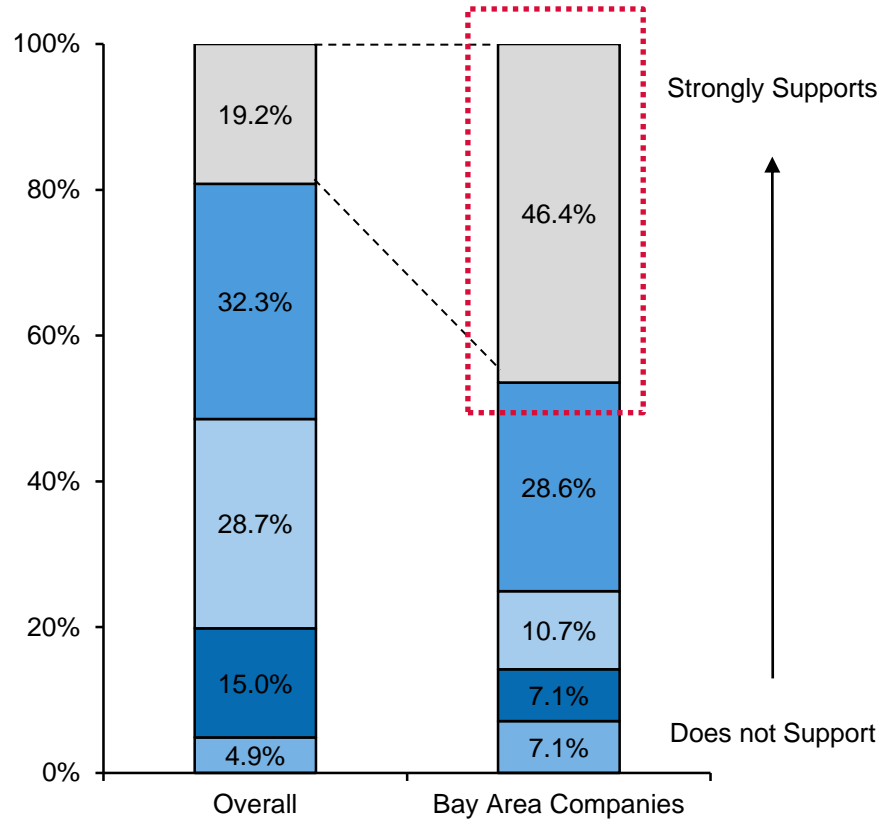
(A) For your company, How closely aligned are the 4 dimensions above with your business strategy?
 (B) How well does your company culture support your innovation strategy, with "1 being does not support and 5 being strongly supports".

Silicon Valley-based companies also have much higher levels of strategic alignment and cultural support

Innovation Strategy Alignment with Business Strategy^(A)



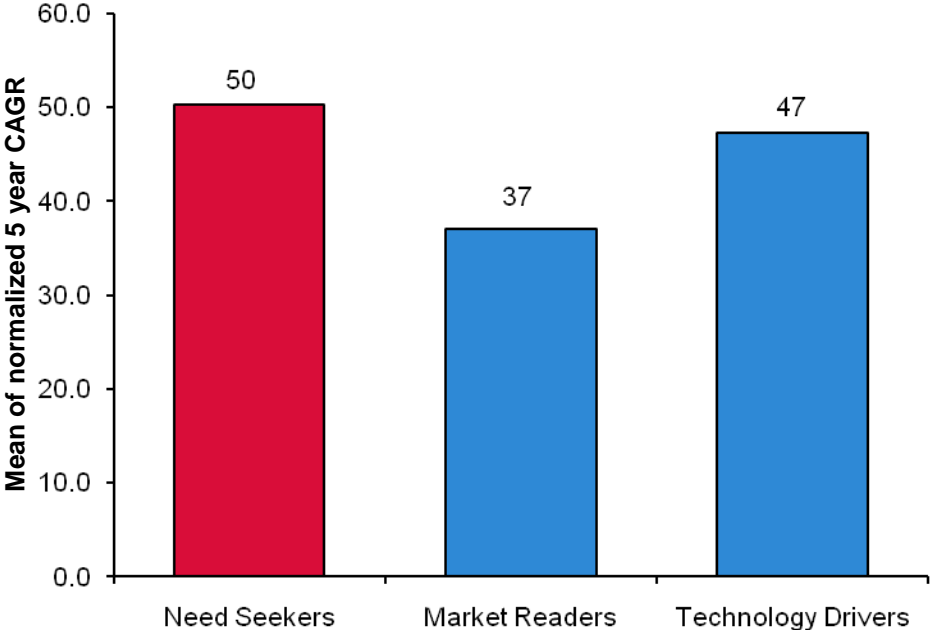
How well does your company culture support your innovation strategy? ^(B)



(A) For your company, how closely aligned are the 4 dimensions above with your business strategy, with 1 being "Not Aligned" and 5 being "Highly Aligned".
 (B) How well does your company culture support your innovation strategy, with "1 being does not support and 5 being strongly supports"

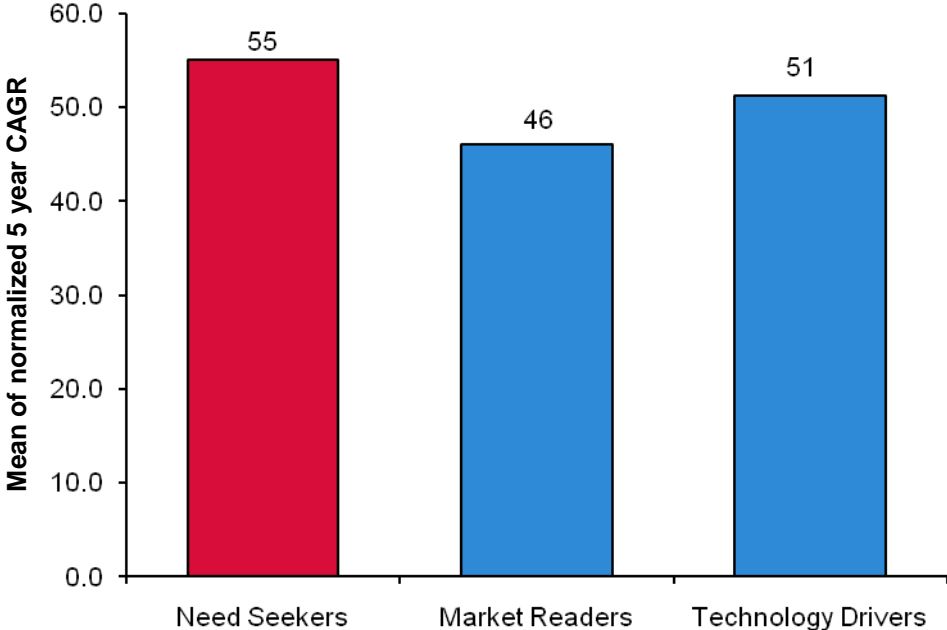
Need Seekers outperform their peers in both profitability and EV

Gross Profit^(A) (5 year CAGR) by Strategy



Strategy Models

Enterprise Value^(B) (5 year CAGR) by Strategy

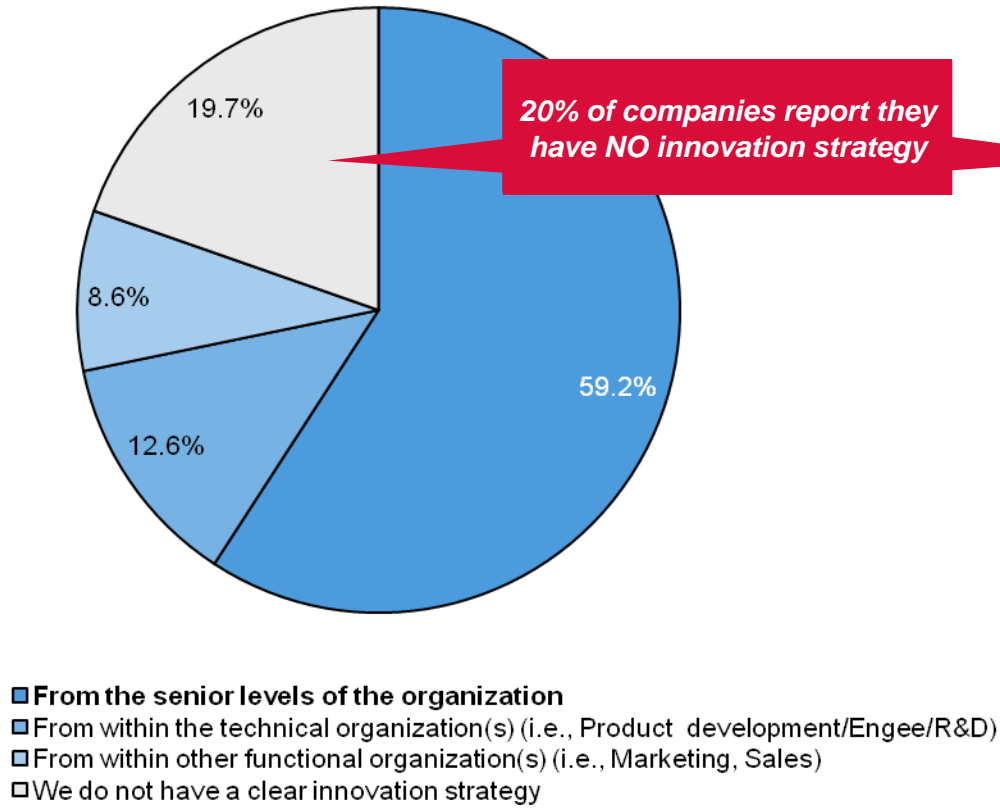


Strategy Models

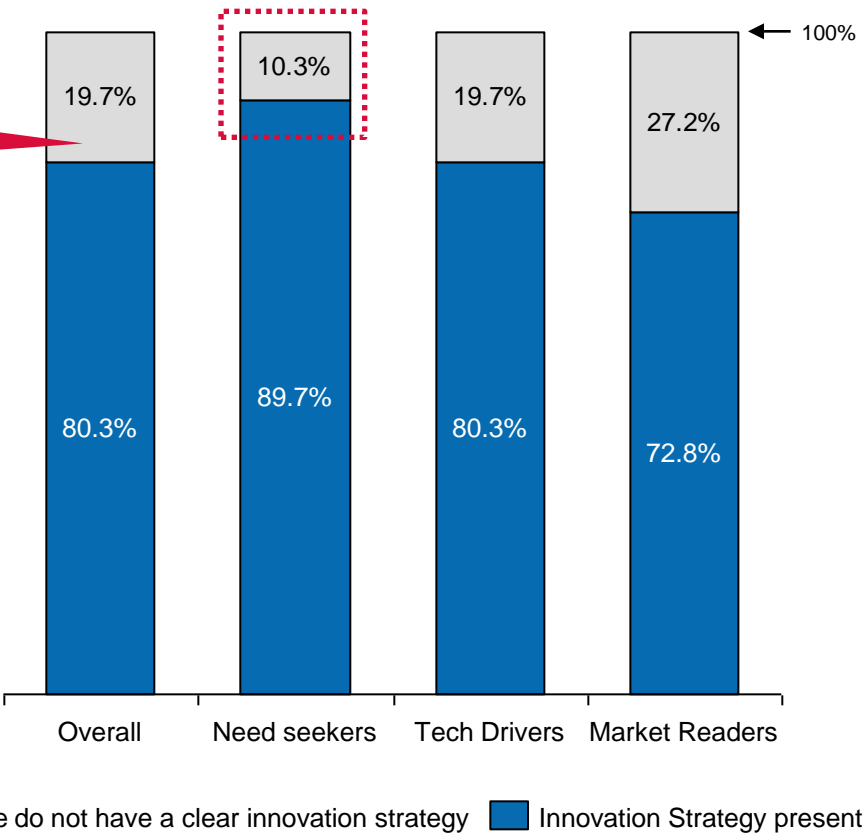
(A) Normalized 5 year CAGR for gross profit.
(B) Normalized 5 year CAGR for enterprise value.

...not surprisingly, Need Seekers also had the highest proportion of their innovation agendas developed and communicated top-down

Overall: Organization's Innovation Strategy Agenda Developed and Communicated^(A)...



Presence of Innovation Strategy by Strategy Model



(A) Your organization's innovation strategy agenda is developed and communicated - Choose one - "From the senior levels of the organization, from within the technical organization, from within other functional organization, We do not have a clear innovation strategy"

Key Take Aways - Innovation Culture:

- **+50% of companies reported that their innovation strategy was mis-aligned with their business strategy and that their culture poorly supported it...**
- **...while the 44% of companies reporting high alignment of both innovation strategy and culture had superior profitability and enterprise value growth**
- **20% of companies indicated that they have no innovation strategy – but only 10% of Need Seekers reported this deficiency, half the rate of companies in general**
- **Need Seekers are disproportionately represented in the 10 Most Innovative Companies and in Silicon Valley firms**
- **Need Seekers reported the highest level of alignment with both business strategy and cultural support for innovation strategy and rated themselves higher on:**
 - Performance on innovation goals/outcomes
 - Prevalence of cultural attributes related to innovation
 - Perceived financial performance in relation to peers – and actual performance
 - Development and communication of innovation strategy



For the complete study and additional information on the annual Booz & Company Global Innovation 1000 Study

Please Visit:

www.booz.com/innovation-1000

To assess your company's innovation strategy and the capabilities needed to succeed

Visit our Innovation Strategy Profiler:

www.booz.com/innovation-profiler

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