SINGAPORE

GE GLOBAL INNOVATION BAROMETER

2014 Edition
About the GE Global Innovation Barometer

Now in its **fourth edition** and spanning across **26 countries**, the GE Global Innovation Barometer is an international opinion survey of **senior business executives**, all actively engaged in the management of their firm’s innovation strategy.

The survey is conducted by **Edelman Berland** a consulting and research company on behalf of GE. The Barometer explores how the perception of innovation is changing in a complex, globalized environment.

It examines the way business executives around the world appreciate the **framework for innovation** their country has developed, it also details the perspective from business on the most efficient **policies** to support Innovation.

Finally it adopts a **firm centric approach** to better understand the way international businesses adapt their innovation practices and strategies in a challenging economic environment.
Sample and fieldwork details

3,209 phone interviews (in local languages)

Interview average duration: 35-40 minutes

Period: April 2nd to May 30th 2014

All respondents directly involved in the innovation strategy or process within their company. (31% C-Level).

28% of companies operate globally, average company size is 650 employees

Average age of respondent is 44 years old
A comprehensive assessment of innovation

1. The ideal innovation process
   Today’s Drivers & Barriers

   Is the ideal innovation process...
   • Planned or spontaneous?
   • Integrated or autonomous?
   • Internal or collaborative?
   • Protective or offensive?
   • Local or global

   What are the drivers and barriers of successful innovation...
   • In general?
   • In your company?

   The future of innovation in specific sectors:
   • The best type of innovation to drive the quality of healthcare
   • The ability of innovation to solve today’s and tomorrow’s energy challenges

2. Countries & Public policies
   State of the National Innovation Framework

   Which country is the leading innovation champion?

   What does your country do well?
   • Cross-disciplinary research? Effective IP system? Private funding?

   What do the Public Authorities in your country do well, or less well?
   • Sufficient support to SMEs? To larger companies?
   • Adequate budget allocation?

   Public policies – your country’s priorities should be:
   • IP protection?
   • Curriculum and talent management?
   • Relationship between public / private sectors?
   • To lead innovation through public procurement’s decisions?

3. Innovation trends & practices
   Myths & Realities

   Familiarity, relevance, readiness for your company:
   • Convergence of technology
   • Collaboration
   • Industrial internet
   • Big data

   The impact of the Industrial internet...
   • On the job market
   • On energy consumption and dependency
   • Leading the new Industrial Revolution

   Big data, data sciences and analytics: buzz word or ...
   • A critical priority?
   • A source of internal power/ influence?
   • A rewarding investment?
Singapore executive summary
Macro findings

Executives in Singapore perceive innovation as a positive force with 88% agreeing that people in their country live better today than 10 years ago because of the impact of innovation – this is 8 points above than the global average.

95% of executives in Singapore agree that innovation is increasingly becoming a global game, merging and combining talents, ideas, insights and resources across the world is the only way to be successfully innovative – above the global average (82%).

Regarding collaboration, Singaporean executives are less inclined than other executives globally to say that despite the risks associated with collaboration and IP infringements, collaboration is a risk worth taking if you want to successfully innovate nowadays (55% compared to 77% global average).

However, Singaporean executives are recognizing the value of collaboration with 69% of executives reporting that the revenue generated by collaborative innovation activities has been growing over the last year, a percentage which has increased by 4 points from 2013 (65%).

Contrary to the global average, only one fifth of Singaporean executives (20%) perceive smaller businesses such as SMEs and start-ups as driving innovation in Singapore – 21 points below the global average (41%). Public authorities at both local and national level, however, are recognized by nearly half of executives, 46%, as driving innovation in Singapore.
Executives in Singapore highlight several priorities that their companies need to master to innovate successfully. Understanding customers and market trends comes as a clear priority. To 76% of executives, to understand customers and anticipate market evolutions is a critical factor—lower than the global average (84%). The second crucial ability is to attract and retain the most talented and skilled individuals (72%). To encourage creative behaviours and disruptive processes in the business comes in third, at 55% - below the global average (64%).

When asked about their company performance against these necessary abilities, only 28% of executives said that their company performed extremely well at understanding customers and anticipating market evolutions and 19% thought their company performed extremely well at retaining new talent.

When looking at what Singaporean executives consider key challenges for innovation, talent comes within the priority list once again, with 30% feeling that a lack of talent/ inadequate skillset is a critical issue— 8 points higher than the global average. The lack of internal support from leadership team (27%) is also mentioned as a key innovation killer, followed by the difficulty to define an effective business model to support new ideas and make them profitable at 21%.
Macro findings

Internal organisation – how Singaporean businesses go about innovating

55% of Singaporean executives recognise the need for companies to encourage creative behaviours and disruptive processes in the business in order to be able to innovate successfully – 9 points lower than the global average (64%).

73% of Singaporean executives believe that when innovating, it is best to protect the core business' profitability as much as possible, so as to support research & innovation efforts compared to 27% that say it is best not to worry about the potential short term negative impact on the core business' revenue – in line with the global average (72% and 28%, respectively).

On the other hand, 54% believe the most successful innovations are planned, emerging through a structured innovation process compared to 46% who say they are spontaneous, emerging through the interactions of creative individuals, showing a relatively even distribution on this debate in comparison with the global average (62% and 38% respectively).

In terms of organizational design, 67% say it is best to position innovative teams and activities inside the existing lines of businesses and structured teams – in line with the global average of 68%.

When innovating, Singaporean executives prefer to push forwards, with 59% believing it is best to get to market as quickly as possible to keep an edge on competition (50% global average), as opposed to 41% who would prefer not to rush and take all the time needed to perfect the innovation (below the 50% global average).
Macro findings

The appreciation of predictive analytics is lower in Singapore with 39% saying this is a crucial ability, 14-points lower than the global average (53%). Singaporean businesses are behind the global average on big data, with only 15% of executives reporting that their company is either totally or quite prepared to make the most out of big data. Additionally, a significant 34% say they have not increased their ability to analyze large and complex amounts of data over the last year and won’t (compared to 29% global average).

More than half (56%) of Singapore respondents say they have never heard of big data before and 5% say that big data is more of a buzz word than a reality –in line with the global average (6%).

Concerning the industrial internet, only 52% of Singapore executives say they have never heard of the industrial internet compared to a global average of 44%. 37% believe the industrial internet will have a positive or neutral impact on the job market, 12 points below the global average (49%).

7% of Singapore executives believe their business is already totally prepared with a strategy or process to make the most of industrial internet – in line with the global average (6%).
Macro findings

Singapore’s framework for innovation is evaluated quite positively by executives from other markets with 54% saying that Singapore has developed a framework conducive to innovation. Singaporean executives' self-evaluation of their overall framework for innovation has gone down this year, with 58% reporting Singapore has developed an innovation-conducive environment this year compared to 66% 18 months ago – an 8 point decrease.

There has been an increase regarding the perception of the efficiency of government support for innovation, with 88% of Singaporean executives agreeing that government support for innovation is efficiently organised (13 points higher than in 2013), Singapore scoring significantly higher than many of the countries surveyed on this point (40% global average).

When it comes to the priorities for government to tackle, Singaporean executives are more adamant towards evaluating the impact some of its local content requirement and regulatory policies that the global average (79% compared to 71% globally). The priority, however, seems to lie with ensuring that business confidentiality and trade secrets are adequately protected (87%) as well as reinforcing IP to encourage stronger collaboration between companies (81%), both in line with the global average (86% and 80% respectively). They are lower than executives around the world in calling for governments to fight bureaucracy and red tape for companies willing to access funds and incentives allocated to innovation (76%), and facilitating research cooperation with other countries (78%).

Public authorities’ financial support towards innovative companies continues to be above the global average, with 83% agreeing that government and public authorities allocate an adequate share of their budget to support innovative companies. 42% of executives highlight an insufficient support to SMEs – a figure lower than the global average (61%). 28% of Singapore executives are more in favour of giving subsidies/preferences to local business only to favour the development of local solutions – in line with the global average (29%) – whilst 54% think the best policy would be to give subsidies/preferences to both local and international businesses willing to bring innovative solutions to their market – this is in line with the global average of 51%.
At a glance

The game has changed

"WE ARE CURRENTLY IN A NEW INDUSTRIAL REVOLUTION AT THE MEETING OF HARDWARE AND SOFTWARE, A HISTORICAL SHIFT INTO THE AGE OF ADVANCED MANUFACTURING AND INDUSTRIAL INTERNET – Agree 35% 2013

INNOVATION IS INCREASINGLY BECOMING A GLOBAL GAME, MERGING AND COMBINING TALENTS, IDEAS, INSIGHTS AND RESOURCES ACROSS THE WORLD IS THE ONLY WAY TO BE SUCCESSFULLY INNOVATIVE – net agree 95% 2014

MORE THAN EVER BEFORE, INNOVATION NEEDS TO BE LOCALIZED TO SERVE SPECIFIC MARKET NEEDS 82% 2013

THE CONSTRAINTS EXPERIENCED BY SOME EMERGING COUNTRIES CREATE INNOVATION OPPORTUNITIES FOR COMPANIES, WILING TO INVEST IN OVERCOMING THEM 85% 2014

DRIVING INNOVATION THE MOST TODAY IN YOUR COUNTRY

SMALLER BUSINESSES (NET:SMES+ START-UPS & INDIVIDUALS) 20% 2013

MULTINATIONALS 18% 2013

LARGE ENTERPRISES HEADQUARTERED IN YOUR COUNTRY 5% 2013

PUBLIC ORGANISATIONS 46% 2013

Over-indexes compared to global average

Under-indexes compared to global average
<table>
<thead>
<tr>
<th>Changing business model</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>WHEN INNOVATING, COMPANIES MUST ENCOURAGE <strong>CREATIVE BEHAVIOURS</strong> AND <strong>DISRUPTIVE PROCESSES</strong> IN THE BUSINESS, ESPECIALLY</td>
<td>55%</td>
</tr>
<tr>
<td>THE DIFFICULTY TO COME UP WITH <strong>RADICAL AND DISRUPTIVE IDEAS</strong> AS A KEY CHALLENGE KILLING YOUR BUSINESS’S ABILITY TO INNOVATE EFFICIENTLY, INDEPENDENTLY FROM THE PROFILE OF THEIR COMPANY</td>
<td>19%</td>
</tr>
<tr>
<td>WHEN INNOVATING, IT IS BEST TO <strong>PROTECT THE CORE BUSINESS’ PROFITABILITY</strong> AS MUCH AS POSSIBLE, SO TO SUPPORT RESEARCH &amp; INNOVATION EFFORTS</td>
<td>73%</td>
</tr>
<tr>
<td>THE MOST SUCCESSFUL INNOVATIONS ARE <strong>PLANNED</strong>, EMERGING THROUGH A STRUCTURED INNOVATION PROCESS</td>
<td>54%</td>
</tr>
<tr>
<td>IN TERMS OF ORGANIZATIONAL DESIGN, IT IS BEST TO POSITION <strong>INNOVATIVE TEAMS</strong> AND ACTIVITIES <strong>INSIDE</strong> THE EXISTING LINES OF BUSINESSES AND STRUCTURED TEAMS</td>
<td>67%</td>
</tr>
<tr>
<td>WHEN INNOVATING, IT IS BEST TO <strong>GET TO MARKET AS QUICKLY</strong> AS POSSIBLE TO KEEP AN EDGE ON COMPETITION</td>
<td>59%</td>
</tr>
</tbody>
</table>
**At a glance**

### Embracing new innovation abilities

<table>
<thead>
<tr>
<th>Activity</th>
<th>2013 %</th>
<th>2014 %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaborating with external business partners can put my business at risk as regards intellectual property and trade secrets but this is a <strong>risk worth taking</strong> if you want to successfully innovate nowadays.</td>
<td>55%</td>
<td></td>
</tr>
<tr>
<td>The revenue and profit generated by <strong>collaborative innovation activities</strong> has been growing over the last year.</td>
<td></td>
<td>69%</td>
</tr>
<tr>
<td>Have <strong>never heard of big data</strong></td>
<td>56%</td>
<td></td>
</tr>
<tr>
<td>Have <strong>not increased</strong> their ability to analyze large and complex amounts of data over the last year and <strong>won’t</strong></td>
<td>34%</td>
<td></td>
</tr>
<tr>
<td>Business <strong>already fully / quite prepared</strong> with a strategy or process to make the most of big data.</td>
<td>15%</td>
<td></td>
</tr>
<tr>
<td>Have <strong>never heard of the industrial internet</strong></td>
<td>52%</td>
<td></td>
</tr>
<tr>
<td><strong>Industrial internet:</strong> Positive impact on the job market, fuelling companies performance and growth and creating new demand for employment.</td>
<td></td>
<td>25%</td>
</tr>
<tr>
<td>Business already fully / quite prepared with a strategy or process to make the most of industrial internet.</td>
<td>23%</td>
<td></td>
</tr>
</tbody>
</table>

Over-indexes compared to global average

Under-indexes compared to global average
### At a glance

#### 2014: Innovation framework ranking 11th*

<table>
<thead>
<tr>
<th>INNOVATION FRAMEWORK EVALUATION: COUNTRY HAS “INNOVATION-CONDUCTIVE ENVIRONMENT?”</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>63%</td>
<td>54%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GOVERNMENT SUPPORT FOR INNOVATION IS EFFICIENTLY ORGANIZED</th>
<th>75%</th>
<th>88%</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOVERNMENT AND PUBLIC AUTHORITIES ALLOCATE AN ADEQUATE SHARE OF THEIR BUDGET TO SUPPORT INNOVATIVE COMPANIES</td>
<td>81%</td>
<td>83%</td>
</tr>
</tbody>
</table>

### What do you think is the best public policy?

<table>
<thead>
<tr>
<th>WHAT DO YOU THINK IS THE BEST PUBLIC POLICY?</th>
<th>54%</th>
<th>28%</th>
<th>18%</th>
<th>42%</th>
<th>62%</th>
<th>84%</th>
</tr>
</thead>
<tbody>
<tr>
<td>GIVE SUBSIDIES/PREFERENCES TO BOTH LOCAL AND INTERNATIONAL BUSINESSES WILLING TO BRING INNOVATIVE SOLUTIONS TO THE MARKET</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GIVE SUBSIDIES/PREFERENCES TO LOCAL BUSINESS ONLY TO FAVOR THE DEVELOPMENT OF LOCAL SOLUTIONS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SUBSIDIES AND PREFERENCES ARE NOT AN EFFECTIVE WAY TO SUPPORT INNOVATION AS THEY INTRODUCE STRONG BIAS AND HAVE ONLY SHORT TERM EFFECTS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PUBLIC AUTHORITIES DO NOT SUPPORT SME’S IN THEIR INNOVATION EFFORTS ENOUGH</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRIVATE INVESTORS ARE SUPPORTIVE OF COMPANIES THAT NEED FUNDS TO INNOVATE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Based on the 31 markets covered in Q9
## Innovation success priorities

<table>
<thead>
<tr>
<th>Priority</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>To understand customers and anticipate market evolutions</td>
<td>79%</td>
<td>76%</td>
</tr>
<tr>
<td>To attract and retain the most talented and skilled individuals</td>
<td>67%</td>
<td>72%</td>
</tr>
<tr>
<td><strong>To quickly adapt and implement emerging technologies</strong></td>
<td>55%</td>
<td></td>
</tr>
<tr>
<td>To encourage creative behaviours and disruptive processes in the business</td>
<td>55%</td>
<td></td>
</tr>
<tr>
<td>To identify and work collaboratively with the best external business partners</td>
<td>60%</td>
<td>55%</td>
</tr>
<tr>
<td>To allocate and secure a specific budget for innovation activities</td>
<td>48%</td>
<td>47%</td>
</tr>
<tr>
<td>To prioritize longer term innovation goals over shorter term financial objectives</td>
<td></td>
<td>53%</td>
</tr>
<tr>
<td>To adopt a test fast, fail fast, adjust fast approach</td>
<td></td>
<td>45%</td>
</tr>
<tr>
<td>To use analytics and predictive knowledge</td>
<td></td>
<td>39%</td>
</tr>
<tr>
<td>To make the most of public authorities' incentives, subsidies, tax credit</td>
<td></td>
<td>44%</td>
</tr>
<tr>
<td>To attract investors to fund innovative programs</td>
<td>30%</td>
<td>34%</td>
</tr>
</tbody>
</table>

#### Over-indexes compared to global average

#### Under-indexes compared to global average
At a glance

## Innovation killers

<table>
<thead>
<tr>
<th>Innovation Killer</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>THE INCAPACITY TO SCALE UP SUCCESSFUL INNOVATIONS, TO A WIDER OR INTERNATIONAL MARKET</td>
<td>22%</td>
</tr>
<tr>
<td>THE DIFFICULTY TO COME UP WITH RADICAL AND DISRUPTIVE IDEAS</td>
<td>19%</td>
</tr>
<tr>
<td>THE DIFFICULTY TO DEFINE AN EFFECTIVE BUSINESS MODEL TO SUPPORT NEW IDEAS AND MAKE THEM PROFITABLE</td>
<td>21%</td>
</tr>
<tr>
<td>TO LACK SUFFICIENT INVESTMENT AND FINANCIAL SUPPORT</td>
<td>16%</td>
</tr>
<tr>
<td>A LACK OF TALENT / INADEQUATE SKILLSET</td>
<td>30%</td>
</tr>
<tr>
<td>TO LACK INTERNAL SUPPORT FROM LEADERSHIP TEAM/TOP MANAGEMENT</td>
<td>27%</td>
</tr>
<tr>
<td>THE INTERNAL INERTIA AND THE INCAPACITY TO BE NIMBLE, FAILING AT RAPIDLY CONVERTING IDEAS INTO ACTIONS</td>
<td>11%</td>
</tr>
<tr>
<td>THE INCAPACITY OF THE BUSINESS TO TAKE RISKS</td>
<td>16%</td>
</tr>
</tbody>
</table>

Over-indexes compared to global average

Under-indexes compared to global average
### At a glance

#### MAIN PRIORITIES COUNTRY SHOULD FOCUS ON TO EFFICIENTLY SUPPORT INNOVATION

<table>
<thead>
<tr>
<th>Priority</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FIGHT BUREAUCRACY</strong> AND RED TAPE FOR COMPANIES WILLING TO ACCESS FUNDS AND INCENTIVES ALLOCATED TO INNOVATION</td>
<td>93%</td>
<td>76%</td>
</tr>
<tr>
<td>ENSURE THAT <strong>BUSINESS CONFIDENTIALITY</strong> AND <strong>TRADE SECRETS</strong> ARE ADEQUATELY PROTECTED</td>
<td>95%</td>
<td>87%</td>
</tr>
<tr>
<td>BETTER ALIGN <strong>STUDENTS CURRICULA</strong> WITH THE NEEDS OF BUSINESS</td>
<td>93%</td>
<td>74%</td>
</tr>
<tr>
<td>FACILITATE <strong>RESEARCH COOPERATION</strong> WITH OTHER COUNTRIES</td>
<td>78%</td>
<td></td>
</tr>
<tr>
<td>ACTIVELY PROMOTE <strong>PARTNERSHIPS</strong> BETWEEN THE <strong>PUBLIC</strong> AND <strong>PRIVATE</strong> SECTORS</td>
<td></td>
<td>74%</td>
</tr>
<tr>
<td><strong>REINFORCE IP</strong> TO ENCOURAGE STRONGER COLLABORATION BETWEEN COMPANIES</td>
<td>81%</td>
<td></td>
</tr>
<tr>
<td><strong>ENCOURAGE THE COLLABORATION</strong> OF PRIVATE COMPANIES WITH <strong>SOES</strong></td>
<td>78%</td>
<td></td>
</tr>
<tr>
<td>ENSURE <strong>PUBLIC PROCUREMENT</strong> LEADS THE <strong>EARLY ADOPTION</strong> OF MAJOR INNOVATIONS</td>
<td>70%</td>
<td></td>
</tr>
<tr>
<td><strong>EVALUATE</strong> THE IMPACT SOME OF ITS <strong>LOCAL CONTENT REQUIREMENT</strong> AND <strong>REGULATORY POLICIES</strong></td>
<td></td>
<td>79%</td>
</tr>
<tr>
<td>ENSURE <strong>PUBLIC PROCUREMENT</strong> ALWAYS <strong>FAVOR</strong> THE MOST INNOVATIVE SOLUTIONS EVEN IF THEY COME FROM <strong>FOREIGN COUNTRIES</strong></td>
<td></td>
<td>72%</td>
</tr>
<tr>
<td><strong>ENCOURAGE AND EASE THE HIRING OF TALENTED FOREIGN CITIZENS</strong></td>
<td>70%</td>
<td></td>
</tr>
</tbody>
</table>

Over-indexes compared to global average

Under-indexes compared to global average
Global findings
Innovation executives are acutely aware that powerful trends are at work that will change the business environment.

Collaboration, convergence, Industrial Internet, Data-analytics change(d) the way business are innovating

Collaboration is already embraced and delivering positive results, the risk is worth taking

Convergence of technology and big data are more than buzz words, they become a reality but create implementation challenges

Firms broadly boosted their analytics capabilities but a small majority have leveraged the predictive dimension of Big data. Those who did recognized the value it added to their innovation process and the influence it conferred data scientists in their organization

Awareness of the Industrial Internet is significant, but the concept still needs to demonstrate its true revolutionary nature. High tech, Telecom and Energy industries have already prepared to embrace the revolution, Manufacturing and Healthcare slower to adopt

The debate around the impact of Industrial internet on the job market is not settled, but a majority reject the hypothesis of a net negative impact on employment
Increasingly Innovation is about finding the right talent, partners, resources, ideas and insight on a global scale.

Constraints in emerging markets can be converted into opportunities, even if some interesting differences emerge on this notion.

The focus on local needs and specificities is being recognized.

In most emerging economies, multinational companies drive Innovation much more prominently than local governments or academia, and more so than local businesses.

The GloCal nature of Innovation is becoming table-stake, the innovation playground knows no borders.

Infrastructure challenges of emerging economies don’t stop innovative businesses, even if scaling up is a clear issue for them.
The need for disruption in processes and behaviors is established as a criterion for success.

But business leaders are still very much focused on short term profitability.

And struggle to adopt more spontaneous, creative and interactive innovation models.

More traditional organizational design attached to Innovation activities remain the norm.

To maximize the potential of this new environment business leaders need to make some « tough calls »

Innovation is disrupting the business status-quo, business leaders face uneasy trade-offs.
Internal agility and speed clearly identified as pre-requisites to Innovation success

“Fast works” related concepts are getting traction, but old reflexes are hard to shake-off

Internal inertia is identified as a strong « innovation killer »

How to foster an environment fully ready for disruptive and radical innovation is a key challenge

The ability to adopt and implement emerging technologies fast is clearly identified as a business driver and competitive advantage, but only a few excel at it

The acceleration of the go-to market process (test fast, fail fast, pivot fast) is embraced by half of Innovation executives, but still generate considerable nervousness
Designing effective and sustainable business models lays at the very core of innovation executives’ concerns and priorities.

Managing collaboration, articulating revenue streams, funding innovation activities and finding them a «home» in the company are identified as focus areas.

The difficulty to scale up Innovative business is the number one “Innovation killer”

How to articulate revenue streams coming from innovative activities and more core business operations is challenging. Only a minority of respondents are ready to risk disrupting current profit streams to enable innovative business to grow.

How to fund innovation aggressively both from public and private sources is a challenge, due to internal and external factors.

Deciding where best to embed and integrate the new functions and external partners can have important consequences on the operations and on the culture of the firm.
What are business leaders’ expectations regarding the role of government and public authorities?

Provide a conducive Innovation framework, set the right incentives for Innovation, invest in talent, support SMEs and harness the power of multinationals

Governments have to provide the right framework for Innovation (IP protection, minimal red tape and bureaucracy, public private partnership)

They should also harness the power of public procurement to support innovation and manage subsidies carefully

They should make sure they prepare and give access to the talent pool needed to innovate better

They should focus innovation incentives on the value created beyond geographic or national considerations

They should amplify the support to Innovative SMEs and at the same time capitalize on the drive Multinationals can bring to their Innovation landscape
Country specifics, there is no one size fits all model for Innovation

Innovation champions like USA and Germany, display contrasted perceptions and priorities. Emerging economies are not a consistent block, Asia emerging markets doing more positively than African markets

The efficacy of government support to Innovation is increasingly contrasted (Singapore, UAE, China and KSA still and even more leading on this indicator than before, USA is stable at a low level of satisfaction)

USA confirms and amplifies its status as a leader for Innovation (Innovation champion, and most innovation conducive environment) at least from a reputation standpoint (macro economic indicators providing a more contrasted picture)

South Korea, Singapore, India are less perceived as innovation-friendly environments by the Global community
The Energy industry is facing multiple challenges, but driving economic growth through new and more sustainable sources of energy is identified as the absolute priority.

The contribution from energy to broader economic growth is identified as the number one challenge.

The reduction of the environmental impact of energy and the diversification of the energy mix comes second.

The rising role of analytics in helping the industry become more efficient is recognized but less prominent in energy respondents’ opinion.

Technical and medical innovation such as imaging devices and diagnosis tools are expected to drive the most progress in quality of healthcare.

This is the first driver identified by Healthcare industry respondents.

Scientific innovation and especially applied genetic science to diagnostic are also very high in the ranking.

Policy innovation (awareness campaigns, early detection of diseases) is also expected to play a leading role.
Innovation executives are acutely aware that powerful trends are at work that will change the business environment.

Collaboration, convergence, Industrial Internet, Data-analytics change(d) the way business are innovating.

Collaboration is already embraced and delivering positive results, the risk is worth taking.

Convergence of technology and big data are more than buzz words, they become a reality but create implementation challenges.

Firms broadly boosted their analytics capabilities but a small majority have leveraged the predictive dimension of Big data. Those who did recognize the value it added to their innovation process and the influence it conferred data scientists in their organization.

Awareness of the Industrial Internet is significant, but the concept still needs to demonstrate its true revolutionary nature. High tech, Telecom and Energy industries have already prepared to embrace the revolution, Manufacturing and Healthcare slower to adopt.

The debate around the impact of Industrial internet on the job market is not settled, but a majority reject the hypothesis of a net negative impact on employment.
Innovation is acknowledged as a driver of general improvement in countries. But some executives sense a scepticism amongst their national public opinion about the impact of technological innovation on inequalities.

“PEOPLE IN MY COUNTRY LIVE BETTER TODAY THAN 10 YEARS AGO BECAUSE OF THE IMPACT OF INNOVATION ON THEIR LIFE AND ON OUR COUNTRY”

Q6-3. Would you say that you strongly agree, somewhat agree, somewhat disagree or strongly disagree with the following opinions? Q10-4. Thinking about your country in particular, how far do you agree with the following statements? There is a strong fear that technological innovation will increase inequalities. Base: Global results N= 3,209 / Base Singapore N= 100

Strongly agree 46%
Somewhat agree 34%
Somewhat disagree 13%
Strongly disagree 7%

“THERE IS A STRONG FEAR THAT TECHNOLOGICAL INNOVATION WILL INCREASE INEQUALITIES”

Strongly agree 19%
Somewhat agree 28%
Somewhat disagree 27%
Strongly disagree 26%

The country is over-indexing compared to the global average
The country is under-indexing compared to the global average

Q6-3. Would you say that you strongly agree, somewhat agree, somewhat disagree or strongly disagree with the following opinions? Q10-4. Thinking about your country in particular, how far do you agree with the following statements? There is a strong fear that technological innovation will increase inequalities. Base: Global results N= 3,209 / Base Singapore N= 100
The apprehension of the impact of technological innovation on inequalities varies across countries

"THERE IS A STRONG FEAR THAT TECHNOLOGICAL INNOVATION WILL INCREASE INEQUALITIES"

Q10-4. Thinking about your country in particular, how far do you agree with the following statements? There is a strong fear that technological innovation will increase inequalities. Base: Country results N= 100–300 per market / Base Singapore N= 100

More pessimist (over-indexing)

More optimistic (under-indexing)
A new Industrial Revolution? Split perceptions

“We are currently in a new Industrial Revolution at the meeting of hardware and software, a historical shift into the age of advanced manufacturing and industrial internet”

Revolution 52%
Evolution 42%
Myth 6%

This statement is true, this new industrial revolution is a reality
This is an overstatement, we observe a continuous technical evolution, not a revolution per say
This statement is untrue, this new industrial revolution is a myth

Q18-2. Now we are going to present different views on these emerging trends, we would like you to pick the one you feel is the truest or the most relevant. Base: Global results N= 3,209
Continuity for developed markets, a radical change for the emerging ones

“We are currently in a **new Industrial Revolution** at the meeting of hardware and software, a historical shift into the age of advanced manufacturing and industrial internet”

Q18-2. Now we are going to present different views on these emerging trends, we would like you to pick the one you feel is the truest or the most relevant. Base: Country results N= 100– 300 per market / Base Singapore N= 100
A more confidential trend but some are already actively looking into it

% OF BUSINESSES ALREADY EQUIPPED WITH A STRATEGY OR PROCESS TO MAKE THE MOST OF...

<table>
<thead>
<tr>
<th>Collaboration with start-up and entrepreneurs</th>
<th>Convergence of technology</th>
<th>Big Data</th>
<th>“Industrial Internet”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaboration is an established trend and a (upcoming) reality for most</td>
<td>Not all have heard of it, but many are getting ready for it</td>
<td>Not all have heard of Big data, but half companies are getting ready for it</td>
<td>A more confidential trend but some are already actively looking into it</td>
</tr>
</tbody>
</table>

50% 47% 32% 25% 25%

% Totally /quite prepared
- Totally prepared
- Quite prepared
- Not quite prepared but planning to
- Not at all prepared and not planning to
- Don’t know
- Never heard of it

Q17. Is your business already equipped with a strategy or process to make the most of…
Base: Global results N= 3,209
External collaboration is now a reality, and demonstrates to be a profitable risk worth taking. But this is a risk worth taking if you want to successfully innovate nowadays. And this is why you company should avoid collaborating with external business partners can put my business at risk as regard intellectual property and trade secrets...

Q14. Which of these two statements is closer to your opinion? Q13. Which of the following apply in your company? Base: Global results N= 3,209 / Base Singapore N= 100

The revenue and profit generated by collaborative innovation activities has been growing over the last year. My company embraces open source innovation – involving external stakeholders such as entrepreneurs in the internal development of new ideas. My company has already resorted to crowdsourcing soliciting contributions (ideas, content, investment, etc.) from a large and varied group of stakeholders for its innovation activities.

The country is over-indexing compared to the global average. The country is under-indexing compared to the global average.

64% 69%
59% 53%
34% 43%
55% 45%
Collaboration, a reality in most markets

AND THE REVENUE AND PROFIT GENERATED BY COLLABORATIVE INNOVATION ACTIVITIES HAS BEEN GROWING OVER THE LAST YEAR

Q13. Which of the following apply in your company? YES Base: Country results N= 100–300 per market / Base Singapore N= 100

Q13. Which of the following apply in your company? YES Base: Country results N= 100–300 per market / Base Singapore N= 100
Some countries have increased their collaboration effort even further than last year.

AND THE REVENUE AND PROFIT GENERATED BY **COLLABORATIVE INNOVATION ACTIVITIES** HAS BEEN GROWING OVER THE LAST YEAR.
The ability or willingness to embrace change varies size of company

The revenue and profit generated by **collaborative innovation activities** has been growing over the last year

And similarly, **reinforcing IP** to encourage stronger collaboration between companies is critical especially for companies with 501 to 1,000 employees

---

Q13-1. Which of the following apply in your company? (% Yes) & Q12-1. What are the main priorities your country should focus on to efficiently support innovation? (% critical priority)

Base: <100 employees N= 907; 101-500 employees N= 1045; 501-1,000 employees N=588; >1,000 employees N= 669
And it also varies by sector

- My company has already resorted to crowdsourcing
- My company embraces open source innovation

Q13-2&3. Which of the following apply in your company? Base: Sectors – Min n=140 – Max n=469
Big data is not longer a buzz word

Do you believe in the importance of data sciences and analytics in enabling innovation?

- Big data is critical to optimize the business operational efficiency of all types of businesses: **31%**
- Big data is a critical tool to optimize the business efficiency, but only for certain types of businesses: **39%**
- Data sciences and analytics can be useful tools but not as critical as often said: **23%**
- Big data is more of a buzz word than a reality: **6%**
- Buzz Word: **5%**

Q19. Do you believe in the importance of data sciences and analytics in enabling innovation? By “Data sciences and analytics”, also often referred to as “Big data”, we mean the ability for a company to use analytics to create strategic knowledge from large and complex datasets. Base: Global results N= 3,209 / Base Singapore N= 100

The country is over-indexing compared to the global average
The country is under-indexing compared to the global average

Base: Global results N= 3,209 / Base Singapore N= 100
But not all markets are familiar with Big data

Q15-3. Are you familiar with the following notions? Big data
Base: Country results N= 100–300 per market / Base Singapore N= 100
Big Data, the reality:

**THE BUSINESS NEED**
- 84% Believe it is critical to understand customers and anticipate market evolutions to innovate successfully

**THE SOLUTION**
- 53% Believe it is critical to use analytics and predictive knowledge to innovate successfully
- But only half identify Big Data as being the solution

**THE FACTS**

- **HAS YOUR COMPANY INCREASED ITS ABILITY TO ANALYZE LARGE AND COMPLEX AMOUNTS OF DATA OVER THE LAST YEAR?**
  - Yes: 47%
  - No, but we are planning to: 29%
  - No and we won’t: 24%

Q1-3 Q2-9 – innovation priorities, Base all n=3,209. Q21. Big data is / will be a real challenge for my company as it forces to allocate resources and budget at the expense of more traditional activities (e.g. marketing, insight, research, etc). Base Those which increased/planning to increase ability N= 1,851 //Q22/Has your company managed to make the most out of the data collected and convert this into added value for the innovation process? Base: Big Data users global N= 1,135 //20 bis/ Do data scientists, i.e. those who able to make sense of large amounts of data, have strong influence and authority in your company . Base Big data enabled companies N=721
The planning of increased analytical capabilities is polarising across countries

HAVE NOT INCREASED THEIR ABILITY TO ANALYZE LARGE AND COMPLEX AMOUNTS OF DATA OVER THE LAST YEAR AND WON’T

Q20. Has your company increased its ability to analyze large and complex amounts of data over the last year? (% Yes)
Base: Country results N= 100–300 per market / Base Singapore N= 100
Sectors with more advanced technical expertise or more structured sets of data lead the change, but better be a larger company.

NUMBER OF COMPANIES WHICH HAVE **INCREASED ABILITY** TO ANALYZE LARGE AND COMPLEX AMOUNTS OF DATA OVER THE LAST YEAR?

Q20. Has your company increased its ability to analyze large and complex amounts of data over the last year? (% Yes) Base: Sectors – Min n=140 – Max n=469 / company size: <100 employees N= 907; 101-500 employees N= 1045; 501-1,000 employees N=588; >1,000 employees N= 669
Big Data, the reality:

And many dread the **challenge**/ impact of its implementation on the business model

61% of those who have made the move or are planning so, Declare Big data is / will be a **real challenge** as it forces to allocate resources and budget at the expense of more traditional activities

Those experiencing increased data analytics capabilities see the **added value** Big Data brings into their innovation process

69% declare they made the most out of the data collected and converted it into added value for the innovation process
“Industrial Internet”: more confidential.

“Industrial internet” or “Internet of things” = “The next generation of internet integrating complex physical machinery with networked sensors and software”

FAMILIARITY WITH THE NOTION

Fully familiar with this notion: 26%
Heard of it but were not completely sure of its meaning: 30%
Never heard of it: 44%

THE ‘INDUSTRIAL INTERNET’ OR ‘INTERNET OF THINGS’ WILL HAVE A RATHER...

Positive impact on the job market, fuelling companies performance and growth and creating new demand for employment: 31%
Neutral impact on the job market, transforming the overall job market: 18%
Negative impact on the job market, making it easier to replace unskilled workers by machines and automated processes: 7%

Q15. Are you familiar with the following notions? Base: Global results N= 3,209 // Q18-1. Now we are going to present different views on these emerging trends, we would like you to pick the one you feel is the truest or the most relevant. Base: Global results N= 3,209
High tech / IT and Telecoms are paving the way

50% innovation executives agree the “industrial internet” will drive innovation success in the future

% OF BUSINESSES ALREADY EQUIPPED WITH A STRATEGY OR PROCESS TO MAKE THE MOST OF...

- 50%

- Not quite prepared but planning to
- Not at all prepared and not planning to
- Totally prepared
- Quite prepared
- Never heard of it 44%

Q17. Is your business already equipped with a strategy or process to make the most of... Base: Global results N= 3,209 / Sectors – Min n=140 – Max n=469
Increasingly Innovation is about finding the right talent, partners, resources, ideas and insight on a global scale.

Constraints in emerging markets can be converted into opportunities, even if some interesting differences emerge on this notion.

The focus on local needs and specificities is being recognized.

In most emerging economies, multinational companies drive Innovation much more prominently than local governments or academia, and more so than local business.

The GloCal nature of Innovation is becoming a table-stake, the innovation playground knows no borders.

Infrastructure challenges of emerging economies don’t stop innovative businesses, even if scaling up is a clear issue for them.
Think “glocal”!

INNOVATION IS INCREASINGLY BECOMING A **GLOBAL GAME**, MERGING AND COMBINING TALENTS, IDEAS, INSIGHTS AND RESOURCES ACROSS THE WORLD IS THE ONLY WAY TO BE SUCCESSFULLY INNOVATIVE

MORE THAN EVER BEFORE, INNOVATION NEEDS TO BE **LOCALIZED** TO SERVE SPECIFIC MARKET NEEDS

Q6-2&1. Would you say that you strongly agree, somewhat agree, somewhat disagree or strongly disagree with the following opinions? Base: Global results N= 3,209

**Global**
- Strongly agree: 48%
- Somewhat agree: 34%
- Somewhat disagree: 14%
- Strongly disagree: 4%

**Local**
- Strongly agree: 37%
- Somewhat agree: 36%
- Somewhat disagree: 18%
- Strongly disagree: 9%
Localized innovation is more polarizing

More than ever before, innovation needs to be localized to serve specific market needs.

Innovation is increasingly becoming a global game, merging and combining talents, ideas, insights and resources across the world is the only way to be successfully innovative.

Q6-2&1. Would you say that you strongly agree, somewhat agree, somewhat disagree or strongly disagree with the following opinions?

Base: Global results N= 3,209. Base: Country results N= 100–300 per market / Base Singapore N= 100
Constraints in emerging markets mostly seen as an innovation opportunity

THE CONSTRAINTS EXPERIENCED BY SOME EMERGING COUNTRIES (E.G. LOWER PURCHASING POWER, ENERGY CHALLENGES, LACK OF INFRASTRUCTURES, ETC.)

Create **innovation opportunities** for companies, willing to invest in overcoming them.

Make it **almost impossible** to innovate there.

Q4-5. Now we are going to present different views on the ideal innovation process, we would like you to pick the one you feel is the truest or the most relevant in driving successful innovation. Base: Global results N=3,209 / Base: Country results N=100–300 per market / Base Singapore N=100

CREATE INNOVATION OPPORTUNITIES

<table>
<thead>
<tr>
<th>Industry</th>
<th>Score</th>
<th>Singapore</th>
<th>Global</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional services</td>
<td>77%</td>
<td>79%</td>
<td>77%</td>
</tr>
<tr>
<td>Telecoms</td>
<td>77%</td>
<td>77%</td>
<td>77%</td>
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<tr>
<td>FMCG</td>
<td>76%</td>
<td>77%</td>
<td>76%</td>
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<tr>
<td>Healthcare</td>
<td>76%</td>
<td>79%</td>
<td>76%</td>
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<tr>
<td>Energy</td>
<td>76%</td>
<td>70%</td>
<td>75%</td>
</tr>
<tr>
<td>Other</td>
<td>75%</td>
<td>70%</td>
<td>71%</td>
</tr>
<tr>
<td>High-tech / IT</td>
<td>73%</td>
<td>70%</td>
<td>73%</td>
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<tr>
<td>Automotive</td>
<td>73%</td>
<td>71%</td>
<td>73%</td>
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<tr>
<td>Manufacturing</td>
<td>71%</td>
<td>70%</td>
<td>71%</td>
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<tr>
<td>Industrial products</td>
<td>70%</td>
<td>70%</td>
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<tr>
<td>Electronics</td>
<td>70%</td>
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<tr>
<td>1,000+</td>
<td>79%</td>
<td>79%</td>
<td>79%</td>
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<tr>
<td>501-1,000</td>
<td>73%</td>
<td>74%</td>
<td>73%</td>
</tr>
<tr>
<td>101-500</td>
<td>73%</td>
<td>74%</td>
<td>73%</td>
</tr>
<tr>
<td>&lt;100</td>
<td>74%</td>
<td>74%</td>
<td>74%</td>
</tr>
</tbody>
</table>

85% The country is over-indexing compared to the global average.
15% The country is under-indexing compared to the global average.
No consensus amongst emerging countries

THE CONSTRAINTS EXPERIENCED BY SOME EMERGING COUNTRIES CREATE INNOVATION OPPORTUNITIES FOR COMPANIES, WILLING TO INVEST IN OVERCOMING THEM

Q4-5. Now we are going to present different views on the ideal innovation process. We would like you to pick the one you feel is the truest or the most relevant in driving successful innovation. Base: Country results N=100–300 per market / Base Singapore N=100
Multinationals more likely to be the local innovation champion than large national enterprises

Q7. Who do you think is driving innovation the most today in your country? Base: Country results N= 100–300 per market / Base Singapore N= 100
The business fabric of innovation varies across countries, each picking a combination of business types to lead it.

Public organisations
mostly
Singapore
Turkey
Algeria

Public organisations & Multinationals
Malaysia
UAE / KSA
Kenya
Mexico

Public organisations & Large national companies
Russia

Public organisations & Multinationals
Malaysia
UAE / KSA
Kenya
Mexico

Smaller businesses & Large national companies
Germany
Japan
Canada

Smaller businesses & Multinationals
Australia / Indonesia

Large national companies mostly
South Korea

Smaller businesses
mostl y
US
Sweden
Italy
Israel
South Africa
Poland

Multinationals mostly
Nigeria

Smaller businesses & Public organisations
China
UK
To maximize the potential of this new environment business leaders need to make some « tough calls »

Innovation is disrupting the business status-quo, business leaders face uneasy trade-offs

The need for disruption in processes and behaviors is established as a criterion for success

But business leaders are still very much focused on short term profitability...

...And struggle to adopt more spontaneous, creative and interactive innovation models

More traditional organizational design attached to Innovation activities remain the norm
Being truly innovative is a challenge, requiring to change mind-sets, behaviours and processes. Disrupt!

64% agree that to be successful when innovating, companies must encourage creative behaviours and disruptive processes in the business, especially:

- 70% in the Healthcare sector Vs. 64% in all other sectors
- 67% Amongst those that already collaborate Vs. 60% for those who don’t
- 68% Amongst those already use open sources Vs. 60% for those who don’t
- 69% Amongst those already use big data Vs. 63% for those who don’t

Very consistently across audience, 59% consider the difficulty to come up with radical and disruptive ideas as a key challenge killing your business’s ability to innovate efficiently, independently from the profile of their company.

Q5-1. Do you consider any of the following as key challenges killing your business’s ability to innovate efficiently? Q1.5. Thinking about how companies manage innovation, how important are the following for a company to be able to innovate successfully? (Grades from 8 to 10) Base: Global results N= 3,209
Emerging countries are the most opened to disrupt their internal business model

WHEN INNOVATING, COMPANIES MUST ENCOURAGE **CREATIVE BEHAVIOURS AND DISRUPTIVE PROCESSES** IN THE BUSINESS, ESPECIALLY

THE DIFFICULTY TO COME UP WITH **RADICAL AND DISRUPTIVE IDEAS** AS A KEY CHALLENGE KILLING YOUR BUSINESS’S ABILITY TO INNOVATE EFFICIENTLY, INDEPENDENTLY FROM THE PROFILE OF THEIR COMPANY

Q5-1. Do you consider any of the following as key challenges killing your business’s ability to innovate efficiently? Q1_5. Thinking about how companies **manage innovation**, how important are the following for a company to be able to innovate successfully? (Grades from 8 to 10) Base: Country results N= 100–300 per market / Base Singapore N= 100
But behind good “disruptive” intentions, most prefer to stick to well-established and more conservative practices and processes.

When innovating, it is best:

- **To protect the core business’ profitability** as much as possible, so to support research & innovation efforts: 72%
- **Not to worry** about the potential short term negative impact on the core business’ revenue: 28%

The most successful innovations are:

- **Planned**, emerging through a structured innovation process: 62%
- **Spontaneous**, emerging through the interactions of creative individuals: 38%

Q4-1&2. Now we are going to present different views on the ideal innovation process, we would like you to pick the one you feel is the truest or the most relevant in driving successful innovation. Base: Global results N= 3,209 / Base Singapore N= 100

The country is over-indexing compared to the global average

The country is under-indexing compared to the global average
Some markets are more disruptive than others regarding the ideal innovation process, but the large majority agrees on the importance to protect the core business' profitability.

When innovating, it is best to protect the core business' profitability as much as possible, so to support research & innovation efforts.

Q4-1&2. Now we are going to present different views on the ideal innovation process, we would like you to pick the one you feel is the truest or the most relevant in driving successful innovation. Base: Country results N= 100–300 per market / Base Singapore N= 100.
Internal agility and speed clearly identified as pre-requisites to Innovation success

“Fast works” related concepts are getting traction, but old reflexes are hard to shake-off

Internal inertia is identified a strong « innovation killer »

How to foster an environment fully ready for disruptive and radical innovation is a key challenge

The ability to adopt and implement emerging technologies fast is clearly identified as a business driver and competitive advantage, but only a few excel at it

The acceleration of the go-to market process (test fast, fail fast, pivot fast) is embraced by half of Innovation executives, but still generate considerable nervousness
There is a strong consensus on the need for internal agility, and the difficulty of achieving it.

67% agree that to be successful when innovating, companies must quickly adapt and implement emerging technologies.

57% consider the internal inertia and the incapacity to be nimble, failing at rapidly converting ideas into actions is a challenge limiting their business’s ability to innovate efficiently.

Internal inertia is a key critical challenge killing their business’s ability to innovate efficiently.

<table>
<thead>
<tr>
<th>Industry</th>
<th>Critical Challenge (%)</th>
<th>A Bit of a Challenge (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthcare</td>
<td>62%</td>
<td>61%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>60%</td>
<td>58%</td>
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<tr>
<td>Energy</td>
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<td>53%</td>
</tr>
<tr>
<td>Other</td>
<td>52%</td>
<td>52%</td>
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<tr>
<td>High-tech / IT</td>
<td>50%</td>
<td>50%</td>
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<tr>
<td>Electronics</td>
<td>49%</td>
<td>49%</td>
</tr>
<tr>
<td>Telecoms</td>
<td>47%</td>
<td>47%</td>
</tr>
</tbody>
</table>

Q1/Q2. Thinking about how companies manage innovation, how important are the following for a company to be able to innovate successfully? (Grades 8-10)
Q5-7. Do you consider any of the following as key challenges killing your business’s ability to innovate efficiently (A critical challenge/ A bit of a challenge)?
Base: Global results N= 3,209
Emerging technologies are a priority for most

TO BE SUCCESSFUL WHEN INNOVATING, COMPANIES MUST QUICKLY ADAPT AND IMPLEMENT EMERGING TECHNOLOGIES

Global average 67%

Q1/Q2. Thinking about how companies manage innovation, how important are the following for a company to be able to innovate successfully? (Grades 8-10)
Base: Country results N= 100–300 per market / Base Singapore N= 100
Internal inertia is an innovation challenge in most countries

Q5-7. Do you consider any of the following as key challenges killing your business’s ability to innovate efficiently (A critical challenge/ A bit of a challenge)?

Base: Country results N= 100–300 per market / Base Singapore N= 100

INTERNAL INERTIA IS A KEY CRITICAL CHALLENGE KILLING THEIR BUSINESS’S ABILITY TO INNOVATE EFFICIENTLY

Global average 57%
Speed to market remains a tougher decision dividing innovation executives into 2 camps

When innovating, it is best...

To get to market as quickly as possible to keep an edge on competition

Not to rush and take all the time needed to perfect the innovation

50% think it is crucial for companies to adopt a test fast, fail fast, adjust fast approach in order to innovate successfully

The country is over-indexing compared to the global average

59%

The country is under-indexing compared to the global average

41%

IT is crucial for companies to adopt a test fast, fail fast, adjust fast approach in order to innovate successfully...

- Energy: 54%
- Healthcare: 53%
- Professional services: 52%
- Manufacturing: 51%
- FMCG: 51%
- Electronics: 50%
- Other: 49%
- Industrial products: 48%
- High-tech / IT: 47%
- Telecoms: 45%
- Automotive: 45%

Q4-4. Now we are going to present different views on the ideal innovation process, we would like you to pick the one you feel is the truest or the most relevant in driving successful innovation. Q1/Q2. Thinking about how companies manage innovation, how important are the following for a company to be able to innovate successfully? (Grades 8 to 10) Base: Global results N= 3,209 & Base: Global – sectors N= min n=40 (Telecomms) max n=469 (Manufacturers)/ Base Singapore N= 100
Speed to market, Japan leads the race

WHEN INNOVATING, IT IS BEST TO GET TO MARKET AS QUICKLY AS POSSIBLE TO KEEP AN EDGE ON COMPETITION

Q4-4. Now we are going to present different views on the ideal innovation process. We would like you to pick the one you feel is the truest or the most relevant in driving successful innovation. Base: Country results N= 100–300 per market / Base Singapore N= 100
The speed at which business adopt emerging technologies is critical

To innovate efficiently and successfully, it is **Critical** for companies...

- To understand customers and anticipate market evolutions: 84% (+3 pts)
- To attract and retain the most talented and skilled individuals: 79% (+6 pts)
- To quickly adapt and implement emerging technologies: 67% (+1 pt)
- To encourage creative behaviours and disruptive processes in the business: 64% (unchanged)
- To identify and work collaboratively with the best external business partners: 62% (-4 pts)
- To allocate and secure a specific budget for innovation activities: 59% (+5 pts)
- To prioritize longer term innovation goals over shorter term financial objectives: 58% (-1 pt)
- To adopt a test fast, fail fast, adjust fast approach: 53% (-4 pts)
- To use analytics and predictive knowledge: 50% (-1 pt)
- To make the most of public authorities' incentives, subsidies, tax credit: 48% (-4 pts)
- To attract investors to fund innovative programs: 41% (+7 pts)

Q1/Q2: How important do you think the following elements are for a company to be able to innovate successfully? (Grades from 8 to 10)
Base: Global results N= 3,209
Identifying future opportunity is a core priority for all

TO UNDERSTAND CUSTOMERS AND ANTICIPATE MARKET EVOLUTIONS

Q1/Q2.. How important do you think the following elements are for a company to be able to innovate successfully? (Grades from 8 to 10)

Base: Country results N= 100–300 per market / Base Singapore N= 100

NEW markets 2014

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

 Increased

 Stable

 Decreased

 2013 2014

South Korea China UK Turkey Malaysia Japan Russia Israel Nigeria USA Australia Brazil Mexico Poland South Africa UAE India Saudi Arabia Singapore Sweden Canada Germany Italy Indonesia Algeria Kenya

54% 69% 79% 79% 82% 90% 75% 79% 79% 83% 87% 92% 85% 88% 84% 82% 92% 94% 95% 83% 83% 86% 86% 79% 86% 82% 82% 84% 86% 76% 78% 76% 76% 80% 86% 76% 90% 91% 96% 87% 88% 88% 84% 84% 86% 94% 95% 83% 86% 78% 76% 76% 80% 78% 81% 92% 90% 87% 87%
In many countries, the need for talent is becoming even more strategic.

TO ATTRACT AND RETAIN THE MOST TALENTED AND SKILLED INDIVIDUALS

Q1/Q2. How important do you think the following elements are for a company to be able to innovate successfully? (Grades from 8 to 10) Base: Country results N= 100–300 per market / Base Singapore N= 100

NEW markets 2014
Less of a consensus on how best to council longer and shorter terms requirements

Q1/Q2.. How important do you think the following elements are for a company to be able to innovate successfully? (Grades from 8 to 10)

Base: Country results N= 100–300 per market / Base Singapore N= 100

TO PRIORITIZE LONGER TERM INNOVATION GOALS OVER SHORTER TERM FINANCIAL OBJECTIVES

NEW markets 2014
More businesses rely on internal funds in emerging markets

Q1/Q2. How important do you think the following elements are for a company to be able to innovate successfully? (Grades from 8 to 10)
Base: Country results N= 100–300 per market; Singapore results N = 100
Attracting investors, still key in emerging markets

Q1/Q2. How important do you think the following elements are for a company to be able to **innovate successfully**? (Grades from 8 to 10)

Base: Country results N= 100–300 per market / Base Singapore N= 100
Designing effective and sustainable business models lays at the very core of innovation executives’ concerns and priorities

Managing collaboration, articulating revenue streams, funding innovation activities and finding them a « home » in the company are identified as focus areas

The difficulty to scale up Innovative business is the number one “Innovation killer”

How to articulate revenue streams coming from innovative activities and more core business operations is challenging. Only a minority of respondents are ready to risk disrupting current profit streams to enable innovative business to grow

How to fund innovation aggressively both from public and private sources is a challenge, both because of internal and external factors

Deciding where best to embed and integrate the new functions and external partners can have important consequences on the operations and on the culture of the firm
The difficulty to define an effective business model to support new ideas and make them profitable is a challenge killing the ability to innovate for 60%
Some markets express a stronger need to define a new business model to support successful innovation

THE DIFFICULTY TO DEFINE AN EFFECTIVE BUSINESS MODEL TO SUPPORT NEW IDEAS AND MAKE THEM PROFITABLE IS A CHALLENGE KILLING THE ABILITY TO INNOVATE

Q5-2. Do you consider any of the following as key challenges killing your business’s ability to innovate efficiently?
Base: Country results N= 100–300 per market / Base Singapore N= 100
Businesses face many challenges limiting their ability to lead more radical and larger scale innovation.

**KEY CHALLENGES KILLING THEIR BUSINESS’S ABILITY TO INNOVATE EFFICIENTLY**

<table>
<thead>
<tr>
<th>Challenges</th>
<th>Implications</th>
<th>Internal challenges</th>
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</thead>
<tbody>
<tr>
<td>Scaling up</td>
<td>The incapacity to scale up successful innovations, to a wider or international market</td>
<td>The incapacity of the business to take risks</td>
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<tr>
<td>Disruptive ideas</td>
<td>The difficulty to come up with radical and disruptive ideas</td>
<td>To lack internal support from leadership team/top management</td>
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<tr>
<td>Effective business model</td>
<td>The difficulty to define an effective business model to support new ideas and make them profitable</td>
<td>To lack internal support from leadership team/top management</td>
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<tr>
<td>Lack of investment</td>
<td>To lack sufficient investment</td>
<td>A lack of talent / inadequate skillset</td>
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<td>Lack of talent</td>
<td>A lack of talent / inadequate skillset</td>
<td>To lack internal support from leadership team/top management</td>
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<td>Lack of top-down support</td>
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<td>The internal inertia and the incapacity to be nimble, failing at rapidly converting ideas into actions</td>
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<td>Internal inertia</td>
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<td>The internal inertia and the incapacity to be nimble, failing at rapidly converting ideas into actions</td>
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<td>Risk averse</td>
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<td>The incapacity of the business to take risks</td>
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</table>

Q5. Do you consider any of the following as key challenges killing your business’s ability to innovate efficiently?
Base: Global results N= 3,209
Executives in Singapore feel the key challenge is a lack of talent, an inadequate skillset

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Global average</th>
<th>SINGAPORE</th>
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<tbody>
<tr>
<td>The incapacity to scale up successful innovations, to a wider or international market</td>
<td>24%</td>
<td>22%</td>
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<tr>
<td><strong>To lack sufficient investment and financial support</strong></td>
<td>23%</td>
<td>16%</td>
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<tr>
<td>The difficulty to come up with radical and disruptive ideas</td>
<td>21%</td>
<td>19%</td>
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<td><strong>A lack of talent / inadequate skillset</strong></td>
<td>22%</td>
<td>30%</td>
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<td>The difficulty to define an effective business model to support new ideas and make them profitable</td>
<td>18%</td>
<td>21%</td>
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<td><strong>To lack internal support from leadership team/top management</strong></td>
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<td>27%</td>
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<td>The internal inertia and the incapacity to be nimble, failing at rapidly converting ideas into actions</td>
<td>17%</td>
<td>11%</td>
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<tr>
<td>The incapacity of the business to take risks</td>
<td>16%</td>
<td>16%</td>
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</table>

Over-indexing: More of a innovation killer than other countries

Under-indexing: Less of a innovation killer than other countries

Q5. Do you consider any of the following as key challenges killing your business’s ability to innovate efficiently? % Critical challenge
Base: Global results N= 3,209 / Singapore N= 100
Unsurprisingly, smaller and younger businesses suffer the most from this challenges

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Number of employees</th>
<th>Age of company</th>
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<td>Global average</td>
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<td>The incapacity to scale up successful innovations, to a wider or</td>
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<td>international market</td>
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<td>26%</td>
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<td></td>
<td>26%</td>
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<tr>
<td>The difficulty to define an effective business model to support new</td>
<td>18%</td>
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<tr>
<td>ideas and make them profitable</td>
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<td></td>
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<td></td>
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<td>18%</td>
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<tr>
<td>The internal inertia and the incapacity to be nimble, failing at rapidly</td>
<td>17%</td>
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<td>converting ideas into actions</td>
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<td></td>
<td>15%</td>
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</tbody>
</table>

Q5. Do you consider any of the following as key challenges killing your business’s ability to innovate efficiently? Base: Global results N= 3,209
Electronics and FMCG are most protected from these challenges

Q5. Do you consider any of the following as key challenges killing your business’s ability to innovate efficiently?

Base: Global results N= 3,209

The incapacity to scale up successful innovations, to a wider or international market: 24%
To lack sufficient investment and financial support: 23%
The difficulty to come up with radical and disruptive ideas: 21%
A lack of talent / inadequate skillset: 22%
The difficulty to define an effective business model to support new ideas and make them profitable: 18%
To lack internal support from leadership team/top management: 19%
The internal inertia and the incapacity to be nimble, failing at rapidly converting ideas into actions: 17%
The incapacity of the business to take risks: 16%
Despite seeing a factor as a critical innovation driver, only some excel in delivering it in their company.

The performance of their company against innovation drivers:

- To understand customers and anticipate market evolutions: 33% critical, 84% perform extremely well.
- To attract and retain the most talented and skilled individuals: 25% critical, 79% perform extremely well.
- To quickly adapt and implement emerging technologies: 28% critical, 67% perform extremely well.
- To encourage creative behaviours and disruptive processes in the business: 26% critical, 64% perform extremely well.
- To identify and work collaboratively with the best external business partners: 27% critical, 62% perform extremely well.
- To allocate and secure a specific budget for innovation activities: 23% critical, 59% perform extremely well.
- To prioritize longer term innovation goals over shorter term financial objectives: 25% critical, 58% perform extremely well.
- To use analytics and predictive knowledge: 25% critical, 53% perform extremely well.
- To adopt a test fast, fail fast, adjust fast approach: 24% critical, 50% perform extremely well.
- To make the most of public authorities’ incentives, subsidies, tax credit: 27% critical, 48% perform extremely well.
- To attract investors to fund innovative programs: 21% critical, 41% perform extremely well.

Q1/Q2. How important do you think the following elements are for a company to be able to innovate successfully? Base: Global results N= 3,209
Q3. To what extent does your company currently perform against these success criteria? Based on those who said it was a critical factor (8-10).
Despite seeing a factor as a critical innovation driver, only some excel in delivering it in their company.

### THE PERFORMANCE OF THEIR COMPANY AGAINST INNOVATION DRIVERS

<table>
<thead>
<tr>
<th>Innovation Driver</th>
<th>Critical for companies</th>
<th>Performs extremely well</th>
<th>CONVERSION RATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>To understand customers and anticipate market evolutions</td>
<td>28%</td>
<td>76%</td>
<td>37%</td>
</tr>
<tr>
<td>To attract and retain the most talented and skilled individuals</td>
<td>19%</td>
<td>72%</td>
<td>26%</td>
</tr>
<tr>
<td>To encourage creative behaviours and disruptive processes in the business</td>
<td>11%</td>
<td>55%</td>
<td>20%</td>
</tr>
<tr>
<td>To quickly adapt and implement emerging technologies</td>
<td>15%</td>
<td>55%</td>
<td>27%</td>
</tr>
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<td>21%</td>
<td>53%</td>
<td>40%</td>
</tr>
<tr>
<td>To allocate and secure a specific budget for innovation activities</td>
<td>23%</td>
<td>47%</td>
<td>49%</td>
</tr>
<tr>
<td>To adopt a test fast, fail fast, adjust fast approach</td>
<td>18%</td>
<td>45%</td>
<td>40%</td>
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<tr>
<td>To make the most of public authorities' incentives, subsidies, tax credit</td>
<td>18%</td>
<td>44%</td>
<td>41%</td>
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<tr>
<td>To use analytics and predictive knowledge</td>
<td>13%</td>
<td>39%</td>
<td>33%</td>
</tr>
<tr>
<td>To attract investors to fund innovative programs</td>
<td>12%</td>
<td>34%</td>
<td>35%</td>
</tr>
</tbody>
</table>

Only 37% of those who said it was an important driver think their company is excelling at delivering it.

Q1/Q2. How important do you think the following elements are for a company to be able to innovate successfully? / Base Singapore N= 100

Q3. To what extent does your company currently perform against these success criteria? Based on those who said it was a critical factor (8-10)
Funding Innovation remains highly complex

**External environment**
- Private investors are supportive of companies that need funds to innovate: 65%
- The lack of sufficient investment and financial support is a key challenge for: 56%
- Government and public authorities allocate an adequate share of their budget to support innovative companies: 47%
- The first priority is to fight bureaucracy and red tape for companies willing to access funds and incentives allocated to innovation: 87%

**Crucial internal Innovation drivers**
- To attract investors to fund innovative programs: 41%
- To make the most of public authorities' incentives, subsidies, tax credit: 48%
- To allocate and secure a specific budget for innovation activities: 59%
- To prioritize longer term innovation goals over shorter term financial objectives: 58%

**Company performance**
- 21% of whom perform extremely well at attracting investors to fund innovative programs
- 27% of whom perform extremely well at making the most of public authorities' incentives, subsidies, tax credit
- 23%* of whom perform extremely well at it
- 25%* of whom perform extremely well at it

Q1/Q2. How important do you think the following elements are for a company to be able to innovate successfully? Base: Global results N= 3,209

Q3. To what extent does your company currently perform against these success criteria? Based on those who said it was a critical factor (8-10).
Overall, a consolidated support from private investors

PRIVATE INVESTORS ARE SUPPORTIVE OF COMPANIES THAT NEED FUNDS TO INNOVATE

Q10-1. Thinking about your country in particular, how far do you agree with the following statements? Private investors are supportive of companies that need funds to innovate. Results for top 2 boxes (somewhat agree + totally agree). Base: Country results N= 100–300 per market / Base Singapore N= 100
Even if disruption is accepted in theory, most prefer to stick to well-established and more conservative practices and processes.

When innovating, it is best:

- To **protect the core business' profitability** as much as possible, so to support research & innovation efforts: 72%
- **Not to worry** about the potential short term negative impact on the core business' revenue: 28%

The most successful innovations are:

- **Planned**, emerging through a structured innovation process: 62%
- **Spontaneous**, emerging through the interactions of creative individuals: 38%

Q4-1&2. Now we are going to present different views on the ideal innovation process, we would like you to pick the one you feel is the truest or the most relevant in driving successful innovation. Base: Global results N= 3,209 / Base Singapore N= 100

- 73% in Singapore vs 27% globally: Singapore is over-indexing compared to the global average.
- 54% in Singapore vs 46% globally: Singapore is under-indexing compared to the global average.
Positioning innovative teams and activities inside the business is the dominant model, only High-tech and IT companies tend to be more open to an outside model.

In terms of organizational design, it is best to position innovative teams and activities inside the existing lines of businesses and structured teams (68%) or outside in a specialized and dedicated innovation/research centres (32%).

Global average is 32% outside and 68% inside.

Q4-3. Now we are going to present different views on the ideal innovation process, we would like you to pick the one you feel is the truest or the most relevant in driving successful innovation. Base: Global results N=3,209 / Base: Global – sectors N= min 140 (Telecoms) max 469 (Manufacturers)
Apart from Japan, the majority of innovative executives prefer to keep innovative teams and activities inside the existing lines of business. However, some are less closed than others to externalization.

IN TERMS OF ORGANIZATIONAL DESIGN, IT IS BEST TO POSITION INNOVATIVE TEAMS AND ACTIVITIES OUTSIDE IN A SPECIALIZED AND DEDICATED INNOVATION /RESEARCH CENTRES.
What are business leaders’ expectations regarding the role of government and public authorities?

Provide a conducive Innovation framework, set the right incentives for Innovation, invest in talent, support SMEs and harness the power of multinationals.

Governments have to provide the right framework for Innovation (IP protection, minimal red tape and bureaucracy, public private partnership).

They should also harness the power of public procurement to support innovation and manage subsidies carefully.

They should make sure they prepare and give access to the talent pool needed to innovate better.

They should focus innovation incentives on the value created beyond geographic or national considerations.

They should amplify the support to Innovative SMEs and at the same time capitalize on the drive Multinationals can bring to their Innovation landscape.
Innovation executives expect Public Authorities to improve the overall innovation framework of their country.

**Q12. What are the main priorities your country should focus on to efficiently support innovation? Global average. Results for top 2 boxes (critical priority & important but not critical priority). Base: N= 3,209**

- **Fight bureaucracy** and red tape for companies willing to access funds and incentives allocated to innovation: 87% (−1 pt)
- Ensure that **business confidentiality** and **trade secrets** are adequately protected: 86% (−3)
- Better align **students curricula** with the needs of business: 85% (−4)
- Facilitate **research cooperation** with other countries: 85%
- Actively promote **partnerships** between the public and private sectors: 83%
- **Reinforce IP** to encourage stronger collaboration between companies: 80%
- Encourage the **collaboration** of private companies with **SoEs**: 72%
- Ensure **public procurement** leads the **early adoption** of major innovations: 76%
- **Evaluate** the impact some of its **local content requirement** and **regulatory policies**: 71%
- Ensure **public procurement** always **favor** the most innovative solutions even if they come from foreign countries: 70%
- Encourage and ease the **hiring of talented foreign citizens**: 67%
Emerging markets put more pressure on policymakers to provide them with the framework they need to innovate successfully.

Innovation executives identify 4.1 priorities out of 12 as being critical to be addressed on average.

Q12. What are the main priorities your country should focus on to efficiently support innovation? Average number of critical priorities per country out of 12. Base: Country results N= 100–300 per market / Base Singapore N= 100
The efficiency of government support for innovation is variable.

Q11-2. Thinking about the policies and actions undertaken in your country by the government and public authorities, how far do you agree with the following statements. Government support for innovation is efficiently organized. Results for top 2 boxes (somewhat agree + totally agree).

Base: Country results N= 100–300 per market / Base Singapore N= 100
A strong priority: ensure that business confidentiality and trade secrets are adequately protected

ENSURE THAT BUSINESS CONFIDENTIALITY AND TRADE SECRETS ARE ADEQUATELY PROTECTED

Q12-8. What are the main priorities your country should focus on to efficiently support innovation? Ensure that business confidentiality and trade secrets are adequately protected. Results for top 2 boxes (critical priority & important but not critical priority).

Base: Country results N= 100–300 per market / Base Singapore N= 100

82% 83% 81% 88% 91% 85% 90% 94% 93% 91% 85% 90% 94% 93% 96% 98% 95% 89% 82% 87% 93% 93% 93% 88% 91% 87% 89% 90% 90% 87% 79% 72% 74% 79% 92% 88% 88% 83%
Talent management remains an essential priority

Q12. What are the main priorities your country should focus on to efficiently support innovation? Average number of critical priorities per country out of 12. Base: Country results N= 100–300 per market / Base Singapore N= 100

BETTER ALIGN STUDENTS CURRICULA WITH THE NEEDS OF BUSINESS

<table>
<thead>
<tr>
<th>Country</th>
<th>2013</th>
<th>2014</th>
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<tbody>
<tr>
<td>China</td>
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<td>Saudi Arabia</td>
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<td>Malaysia</td>
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<td>Indonesia</td>
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<td>Italy</td>
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NEW markets 2014
The financial support from governments and public authorities varies significantly across countries

GOVERNMENT AND PUBLIC AUTHORITIES ALLOCATE AN ADEQUATE SHARE OF THEIR BUDGET TO SUPPORT INNOVATIVE COMPANIES

Q12. What are the main priorities your country should focus on to efficiently support innovation? Average number of critical priorities per country out of 12. Base: Country results N= 100–300 per market / Base Singapore N= 100
Public Procurement is expected to adopt a first in class practices

MAIN PRIORITIES COUNTRY SHOULD FOCUS ON TO EFFICIENTLY SUPPORT INNOVATION

Lead
To ensure public procurement leads the early adoption of major innovations is a critical priority for 76%

Better regulate
Evaluate the impact some of its local content requirement and regulatory policies 71%

Be open
To ensure public procurement always favor the most innovative solutions even if they come from foreign countries 70%

Q12. What are the main priorities your country should focus on to efficiently support innovation? Global average. Results for top 2 boxes (critical priority & important but not critical priority). Base: N= 3,209
Nuances in expectations in regards to procurement

Q12-10&11. What are the main priorities your country should focus on to efficiently support innovation? Global average. Results for top 2 boxes (critical priority & important but not critical priority). Base: Country results N= 100–300 per market / Base Singapore N= 100

To ensure public procurement...
- always favor the most innovative solutions even if they come from foreign countries
- leads the early adoption of major innovations is a critical priority for

MAIN PRIORITIES COUNTRIES SHOULD FOCUS ON TO EFFICIENTLY SUPPORT INNOVATION

- Mexico
- Algeria
- KSA
- Malaysia
- Indonesia
- China
- Nigeria
- South Africa
- India
- Brazil
- Italy
- Singapore
- UAE
- Kenya
- Japan
- South Korea
- Russia
- Israel
- Canada
- Sweden
- Turkey
- Poland
- UK
- USA
- Australia
- Germany
Public subsidies / preferences are broadly accepted, but nationality bias are favoured by a minority

WHAT DO YOU THINK IS THE BEST PUBLIC POLICY?

Give subsidies/preferences to local business only to favor the development of local solutions

Give subsidies/preferences to both local and international businesses willing to bring innovative solutions to the market

51% [VALUE] [VALUE]

Subsidies and preferences are not an effective way to support innovation as they introduce strong bias and have only short term effects

Q4-6. Now we are going to present different views on the ideal innovation process, we would like you to pick the one you feel is the truest or the most relevant in driving successful innovation. Base: Global results N= 3,209

Sectors
- Automotive 54%
- Healthcare 55%
- Energy 53%
- High-tech / IT 53%
- Telecoms 38%
- Other 34%
- Electronics 32%
- Professional services 29%
- Industrial products 22%
- FMCG 22%
- Manufacturing 21%

More open to both

More local focus only

More rejectors
No consensus on the use of Public subsidies / preferences

- Give subsidies/preferences to **both local** and **international** businesses willing to bring innovative solutions to the market
- Subsidies and preferences are **not an effective way** to support innovation as they introduce strong bias and have only short term effects
- Give subsidies/preferences to local business only to favor the development of local solutions

In Germany, Indonesia and the US, the role for Public Subsidies is rejected by more than 1 in 3 Innovation executives

Q4-6. Now we are going to present different views on the ideal innovation process, we would like you to pick the one you feel is the truest or the most relevant in driving successful innovation. Base: Country results N= 100–300 per market / Base Singapore N= 100
Governments’ support to SMEs is largely seen as currently insufficient

Q11-3. Thinking about the policies and actions undertaken in your country by the government and public authorities, how far do you agree with the following statements. Public authorities do not support SME’s in their innovation efforts enough. Results for top 2 boxes (somewhat agree + totally agree). Base: N= 3,209 / Base Singapore N= 100

Global average 61%

- Italy: 92%
- Poland: 85%
- Brazil: 76%
- Japan: 75%
- Australia: 67%
- Russia: 66%
- USA: 65%
- Mexico: 63%
- Nigeria: 63%
- Canada: 61%
- Germany: 61%
- UK: 61%
- China: 60%
- South Korea: 60%
- Kenya: 58%
- Israel: 57%
- Malaysia: 56%
- South Africa: 56%
- India: 54%
- KSA: 54%
- Algeria: 54%
- Sweden: 51%
- Turkey: 51%
- Indonesia: 51%
- Singapore: 42%
- UAE: 41%

Q11-3

PUBLIC AUTHORITIES DO NOT SUPPORT SME’S IN THEIR INNOVATION EFFORTS ENOUGH

Global average

61%

Over-indexing

Under-indexing
Small is beautiful! SMEs, start-ups and individuals are seen as the innovation champions and the most promising collaboration partners.

WHO IS DRIVING INNOVATION THE MOST TODAY IN YOUR COUNTRY?

- **SMEs**: 21%
- **Start-ups & Individuals**: 20%
- **Multinationals**: 19%
- **Large Enterprises headquartered in your country**: 13%
- **Governments and public authorities**: 11%
- **Universities and research labs**: 11%
- **Public authorities at local level**: 3%
- **SoEs**: 1%

85% of innovation executives agree that collaboration with start-up and entrepreneurs will drive innovation success in the future.

Q7. Who do you think are driving innovation the most today in your country? Base: Global results N= 3,209
SME’s and start-ups are battling for the innovation champions title across countries

WHO IS DRIVING INNOVATION THE MOST TODAY IN YOUR COUNTRY?

- SMEs
- Start-ups & Individuals
- Multinationals
- Large Enterprises headquartered in your country

Q7. Who do you think are driving innovation the most today in your country? Base: Country results N= 100–300 per market / Base Singapore N= 100
Country specifics, there is no one size fits all model for Innovation

Innovation champions, like USA and Germany, display contrasted perceptions and priorities. Emerging economies are not a consistent block, Asian emerging markets are more positive than African markets.

The efficacy of government support to Innovation is increasingly contrasted (Singapore, UAE, China and KSA even more leading on this indicator than before, USA is stable at a low level of satisfaction)

USA confirms and amplifies its status as a leader for Innovation (Innovation champion, and most innovation conducive environment) at least from a reputation standpoint (macro economic indicators providing a more contrasted picture)

South Korea, Singapore, and India are less perceived as innovation-friendly environments by the Global community
Understanding customers/markets and attracting/retaining talents are increasingly the top priority drivers of successful innovation.

To innovate efficiently and successfully, it is **critical** for companies...

<table>
<thead>
<tr>
<th>Element</th>
<th>%</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>To understand customers and anticipate market evolutions</td>
<td>84%</td>
<td>+3 pts</td>
</tr>
<tr>
<td>To attract and retain the most talented and skilled individuals</td>
<td>79%</td>
<td>+6 pts</td>
</tr>
<tr>
<td>To quickly adapt and implement emerging technologies</td>
<td>67%</td>
<td>+1 pt</td>
</tr>
<tr>
<td>To encourage creative behaviours and disruptive processes in the business</td>
<td>64%</td>
<td></td>
</tr>
<tr>
<td>To identify and work collaboratively with the best external business partners</td>
<td>62%</td>
<td>- 4 pts</td>
</tr>
<tr>
<td>To allocate and secure a specific budget for innovation activities</td>
<td>59%</td>
<td>+ 5 pts</td>
</tr>
<tr>
<td>To prioritize longer term innovation goals over shorter term financial objectives</td>
<td>58%</td>
<td>- 1 pt</td>
</tr>
<tr>
<td>To use analytics and predictive knowledge</td>
<td>53%</td>
<td></td>
</tr>
<tr>
<td>To adopt a test fast, fail fast, adjust fast approach</td>
<td>50%</td>
<td>- 1 pt</td>
</tr>
<tr>
<td>To make the most of public authorities' incentives, subsidies, tax credit</td>
<td>48%</td>
<td></td>
</tr>
<tr>
<td>To attract investors to fund innovative programs</td>
<td>41%</td>
<td>+ 7 pts</td>
</tr>
</tbody>
</table>

On average, executives describe **6.7** out of 12 as being critical priorities.

Q1/Q2: How important do you think the following elements are for a company to be able to innovate successfully? Base: Global results N=3,209.
Innovation executives expect Public Authorities to improve the overall innovation framework of their country.

Q12. What are the main priorities your country should focus on to efficiently support innovation? Global average. Results for top 2 boxes (critical priority & important but not critical priority). Base: N= 3,209.

- **Fight bureaucracy** and red tape for companies willing to access funds and incentives allocated to innovation: 87% (−1 pt), 86% (−3 pt).
- Ensure that **business confidentiality** and **trade secrets** are adequately protected: 85% (−4 pt), 83% (−2 pt).
- Better align **students curricula** with the needs of business: 80% (−2 pt), 72% (−1 pt).
- **Facilitate research cooperation** with other countries: 85%, 83%.
- Actively promote **partnerships** between the public and private sectors: 80%, 76%.
- **Reinforce IP** to encourage stronger collaboration between companies: 71%, 70%.
- Encourage the **collaboration** of private companies with SoEs: 67%, 67%.
- **Ensure public procurement** leads the early adoption of major innovations: 67%, 67%.
- **Evaluate** the impact some of its local content requirement and regulatory policies: 67%, 67%.
- Ensure public procurement always favor the most innovative solutions even if they come from foreign countries: 67%, 67%.
- Encourage and ease the **hiring of talented foreign citizens**: 67%, 67%.
Overall, a consolidated support from private investors

PRIVATE INVESTORS ARE SUPPORTIVE OF COMPANIES THAT NEED FUNDS TO INNOVATE

Q10-1. Thinking about your country in particular, how far do you agree with the following statements? Private investors are supportive of companies that need funds to innovate. Results for top 2 boxes (somewhat agree + totally agree). Base: N= 3,209 / Base Singapore N= 100

2013 2014

Has improved Unchanged Has worsened

Poland 23% 64% Australia 37% 68% Singapore 52% 81% Canada 62% 81% USA 62% 84% South Africa 79% 79% UK 70% 70% Saudi Arabia 73% 73% UAE 52% 68% Nigeria 69% 66% Japan 31% 72% Malaysia 72% 75% Israel 75% 75% Russia 89% 89% China 76% 76% Germany 75% 75% Turkey 51% 51% India 80% 80% Brazil 53% 53% Mexico 62% 62% South Korea 50% 50% Kenya 54% 54% Indonesia 37% 77% Algeria 48% 66% Italy 36% 36%
A strong priority: ensure that business confidentiality and trade secrets are adequately protected

Q12-8. What are the main priorities your country should focus on to efficiently support innovation? Ensure that business confidentiality and trade secrets are adequately protected. Results for top 2 boxes (critical priority & important but not critical priority).
Base: N= 3,209 / Base Singapore N= 100
The efficiency of government support for innovation is variable

Q11-2. Thinking about the policies and actions undertaken in your country by the government and public authorities, how far do you agree with the following statements. Government support for innovation is efficiently organized. Results for top 2 boxes (somewhat agree + totally agree).

Base: N= 3,209 / Base Singapore N= 100
**Innovation champion**

**WHAT IS THE COUNTRY THAT YOU CONSIDER TO BE THE LEADING INNOVATION CHAMPION?**

<table>
<thead>
<tr>
<th>Country</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>35%</td>
</tr>
<tr>
<td>Germany</td>
<td>16%</td>
</tr>
<tr>
<td>Japan</td>
<td>12%</td>
</tr>
<tr>
<td>China</td>
<td>10%</td>
</tr>
<tr>
<td>South Korea</td>
<td>4%</td>
</tr>
<tr>
<td>Korea</td>
<td>3%</td>
</tr>
<tr>
<td>UK</td>
<td>2%</td>
</tr>
<tr>
<td>India</td>
<td>2%</td>
</tr>
<tr>
<td>Israel</td>
<td>1%</td>
</tr>
<tr>
<td>France</td>
<td>1%</td>
</tr>
<tr>
<td>Singapore</td>
<td>1%</td>
</tr>
<tr>
<td>Sweden</td>
<td>1%</td>
</tr>
<tr>
<td>Switzerland</td>
<td>1%</td>
</tr>
<tr>
<td>UAE</td>
<td>3%</td>
</tr>
<tr>
<td>Other</td>
<td>4%</td>
</tr>
<tr>
<td>Unsure</td>
<td></td>
</tr>
</tbody>
</table>

Exit: Netherlands, Canada

Q8. What is THE country that you consider to be the leading innovation champion? Base: N= 3,209 / Open-ended question
Assessment of the innovation environment in each market

Q9. For each of the following markets, how far would you say that they have developed an Innovation-conducive environment?
Base: N= 3,171 / Note: % of respondents that have given a grade superior or equal to 7/10
A consistency between reputation and performance

<table>
<thead>
<tr>
<th>Rank</th>
<th>Country</th>
<th>Perception</th>
<th>« Reality »*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>USA</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>Germany</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>3</td>
<td>Japan</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>4</td>
<td>UK</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>China</td>
<td>5</td>
<td>13</td>
</tr>
<tr>
<td>6</td>
<td>Canada</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>7</td>
<td>South Korea</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>8</td>
<td>Sweden</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>9</td>
<td>Singapore</td>
<td>9</td>
<td>4</td>
</tr>
<tr>
<td>10</td>
<td>India</td>
<td>10</td>
<td>21</td>
</tr>
<tr>
<td>11</td>
<td>Israel</td>
<td>10</td>
<td>6</td>
</tr>
<tr>
<td>12</td>
<td>Australia</td>
<td>12</td>
<td>9</td>
</tr>
<tr>
<td>13</td>
<td>Italy</td>
<td>13</td>
<td>11</td>
</tr>
<tr>
<td>14</td>
<td>Russia</td>
<td>14</td>
<td>18</td>
</tr>
<tr>
<td>15</td>
<td>UAE</td>
<td>15</td>
<td>14</td>
</tr>
<tr>
<td>16</td>
<td>Brazil</td>
<td>16</td>
<td>20</td>
</tr>
<tr>
<td>17</td>
<td>South Africa</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>18</td>
<td>Turkey</td>
<td>17</td>
<td>22</td>
</tr>
<tr>
<td>19</td>
<td>Malaysia</td>
<td>19</td>
<td>12</td>
</tr>
<tr>
<td>20</td>
<td>Indonesia</td>
<td>20</td>
<td>23</td>
</tr>
<tr>
<td>21</td>
<td>Saudi Arabia</td>
<td>20</td>
<td>15</td>
</tr>
<tr>
<td>22</td>
<td>Poland</td>
<td>22</td>
<td>16</td>
</tr>
<tr>
<td>23</td>
<td>Mexico</td>
<td>23</td>
<td>19</td>
</tr>
<tr>
<td>24</td>
<td>Nigeria</td>
<td>24</td>
<td>25</td>
</tr>
<tr>
<td>25</td>
<td>Kenya</td>
<td>25</td>
<td>24</td>
</tr>
<tr>
<td>26</td>
<td>Algeria</td>
<td>26</td>
<td>26</td>
</tr>
</tbody>
</table>

*INSEAD Global Innovation Index - 2013

The innovation frameworks of Sweden, Malaysia, Singapore are underappreciated.

The innovation frameworks of China, India and Japan are over evaluated.
Q9. For each of the following markets, how far would you say that they have developed an Innovation-conducive environment?

Note: % of respondents that have given a grade superior or equal to 7/10 to their own country Base: Country results N= 100–300 per market / Base Singapore N= 100

The self-evaluation of the innovation framework in own country varies.
The Energy industry is facing multiple challenges, but driving economic growth through new and more sustainable sources of energy is identified as the absolute priority. The contribution from energy to the broader economic growth is identified as the number one challenge. The reduction of the environmental impact of energy and the diversification of the energy mix comes second. The rising role of analytics in helping the industry become more efficient is recognized but less prominent in energy respondents’ opinion.

Technical and medical innovation such as imaging devices and diagnosis tools are expected to drive progress the most in quality of healthcare. This is the first driver identified by Healthcare industry respondents. Scientific innovation and especially applied genetic science to diagnostic are also very high in the ranking. Policy innovation (awareness campaigns, early detection of diseases) is also expected to play a leading role.
Energy – priorities to tackle within 5 years

WHAT ARE THE MAIN CHALLENGES THE ENERGY INDUSTRY WILL HAVE TO FACE IN THE NEXT FIVE YEARS?

- To drive economic growth by developing new sources of energy: 50% (Absolute priority), 86% (Absolute/somewhat a priority)
- Identify and develop more sustainable sources of energy: 50% (Absolute priority), 86% (Absolute/somewhat a priority)
- Reduce the environmental impact of conventional energy sources such as oil and gas: 49% (Absolute priority), 84% (Absolute/somewhat a priority)
- Develop solutions to make conventional energy sources such as oil and gas more efficient and sustainable: 46% (Absolute priority), 85% (Absolute/somewhat a priority)
- Make energy prices lower and more competitive: 43% (Absolute priority), 74% (Absolute/somewhat a priority)
- Develop IT and analytic solutions to improve the control and maintenance of energy production, responding more efficiently to potential /breakage/technical issues: 36% (Absolute priority), 73% (Absolute/somewhat a priority)
- Reduce the geostrategic tensions linked to energy, answering the challenges of energy security: 34% (Absolute priority), 77% (Absolute/somewhat a priority)
- Improve the access to energy for individuals: 30% (Absolute priority), 71% (Absolute/somewhat a priority)
- To be able to operate remotely in inaccessible areas such as deep seas, South pole, etc.: 23% (Absolute priority), 59% (Absolute/somewhat a priority)
- Better answer the increasing need to share revenue and risk between companies involved in a collaborative innovation process: 20% (Absolute priority), 65% (Absolute/somewhat a priority)

E1. What are the main challenges the energy industry will have to face in the next five years?
Base: Global results N= 340*  *Question asked only to executives from the energy sector
Healthcare – what will drive progress in quality of healthcare in next five years

**IN THE NEXT **FIVE YEARS, WHAT WILL DRIVE THE MOST PROGRESS IN THE QUALITY OF HEALTHCARE DELIVERED TO CITIZENS IN YOUR COUNTRY?**

<table>
<thead>
<tr>
<th>Innovation Type</th>
<th>First most important driver</th>
<th>Summary 3 drivers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Scientific innovation</strong></td>
<td>17%</td>
<td>42%</td>
</tr>
<tr>
<td><strong>Technical / Medical innovation</strong></td>
<td>17%</td>
<td>41%</td>
</tr>
<tr>
<td><strong>Policy innovation</strong></td>
<td>10%</td>
<td>25%</td>
</tr>
<tr>
<td><strong>Pharma innovation</strong></td>
<td>8%</td>
<td>26%</td>
</tr>
<tr>
<td><strong>Talent innovation</strong></td>
<td>8%</td>
<td>25%</td>
</tr>
<tr>
<td><strong>Mobile innovation</strong></td>
<td>8%</td>
<td>19%</td>
</tr>
<tr>
<td><strong>System innovation</strong></td>
<td>7%</td>
<td>24%</td>
</tr>
<tr>
<td><strong>Cultural innovation</strong></td>
<td>5%</td>
<td>23%</td>
</tr>
<tr>
<td><strong>Partnership innovation</strong></td>
<td>5%</td>
<td>16%</td>
</tr>
<tr>
<td><strong>Digital Innovation</strong></td>
<td>2%</td>
<td>16%</td>
</tr>
<tr>
<td><strong>Payment innovation</strong></td>
<td>2%</td>
<td>10%</td>
</tr>
<tr>
<td><strong>Reverse innovation</strong></td>
<td>3%</td>
<td>-</td>
</tr>
<tr>
<td><strong>None of these</strong></td>
<td>10%</td>
<td>-</td>
</tr>
</tbody>
</table>

- Innovations in genomics and molecular medicine that can more precisely diagnose disease at the individual level
- New imaging devices, medical techniques or diagnosis tools
- Consumer awareness campaigns, screening and early detection of disease
- New molecules / medicines
- Making sure we train enough healthcare professionals and technicians with the right skills to meet local needs
- Home health solutions, the consumerization of healthcare and the rise of wearable health monitoring devices
- Re-thinking how healthcare systems are organized and managed to build more financially sustainable operating models
- A cultural shift away from a disease based model to the value of healthy life
- Redefining how the private healthcare sector and public authorities collaborate
- The digitization of healthcare; improving healthcare delivery via use of information technology / data
- New financial / reimbursement / incentive models
- The adoption by developed markets of solutions initially created to answer the resource constraints in emerging markets
- Reverse innovation

H1. In the next five years, what do you think will drive the most progress in the quality of healthcare delivered to citizens in your country? Please select 3 options from the most important, to the second most important to the third most important driver.

Base: Global results N= 417*  *Question asked only to executives from the healthcare sector