



GE Global Innovation Barometer 2014 Edition - Global report

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



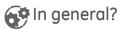
The ideal innovation process Today's Drivers & Barriers

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...





The future of innovation in **specific sectors**:







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?



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?







Detailed findings

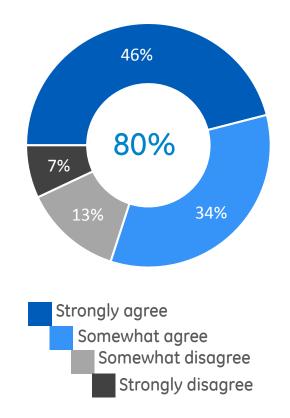


MACRO TRENDS AT WORK TO CHANGE THE INNOVATION ENVIRONMENT

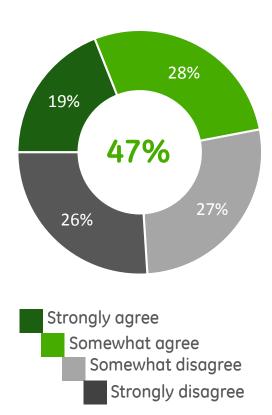


Innovation is acknowledged as a driver of general improvement in countries. But some executives sense a scepticism in national public opinion about the impact of technological innovation on inequalities

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



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

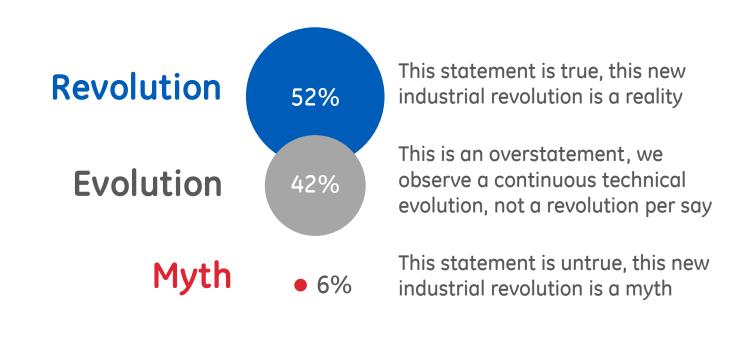






A new Industrial Revolution? Split perceptions

"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"

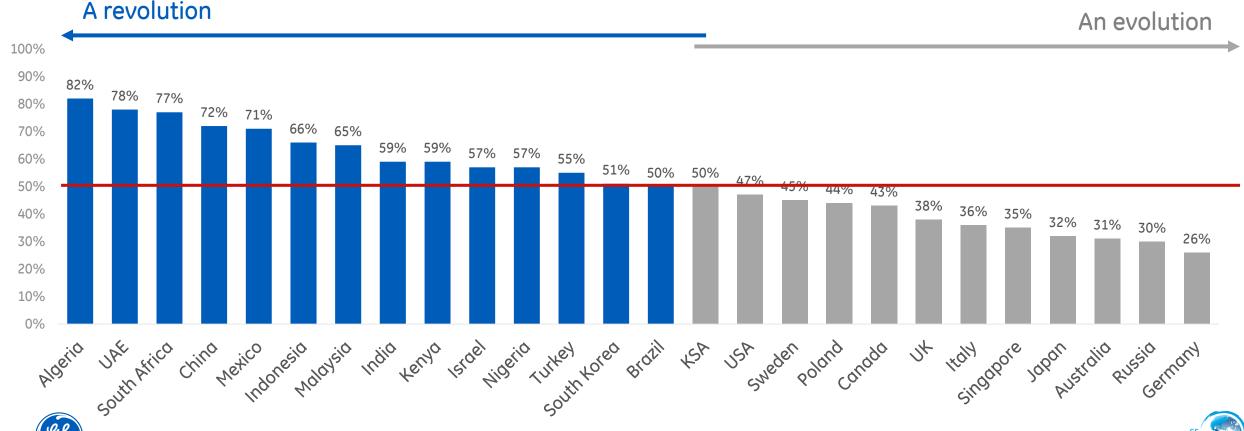






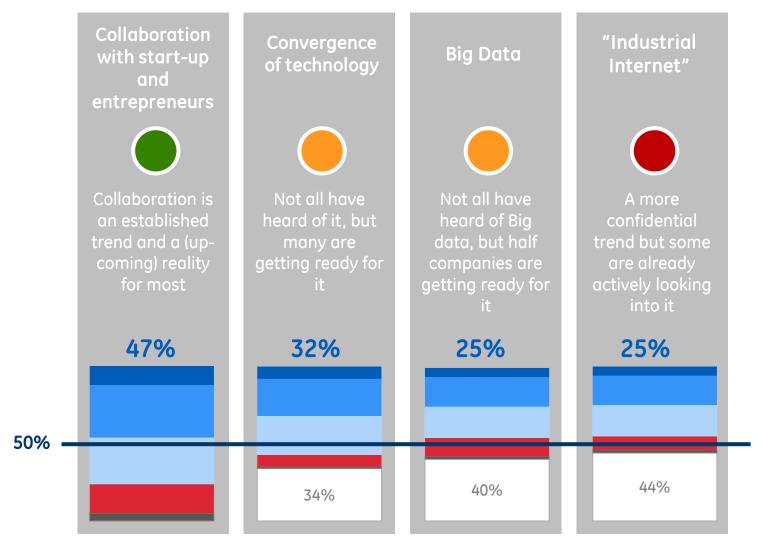
Continuity for developed markets, a radical change for the emerging ones

"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"





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



A multifaceted change, businesses are embracing by stages

% 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

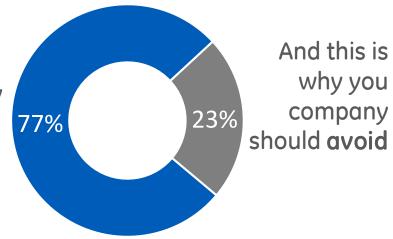




External collaboration is now a reality, and demonstrates to be a profitable risk worth taking

COLLABORATING WITH EXTERNAL BUSINESS
PARTNERS CAN PUT MY BUSINESS AT RISK AS
REGARD INTELLECTUAL PROPERTY AND TRADE
SECRETS...

But this is a risk
worth taking if you
want to successfully
innovate nowadays

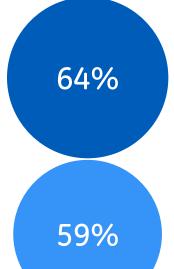


The facts

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



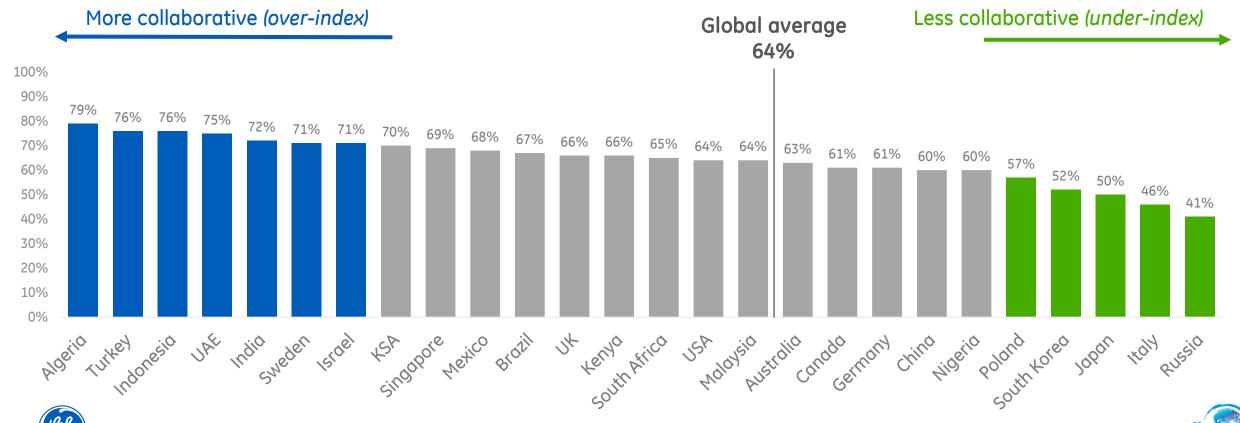






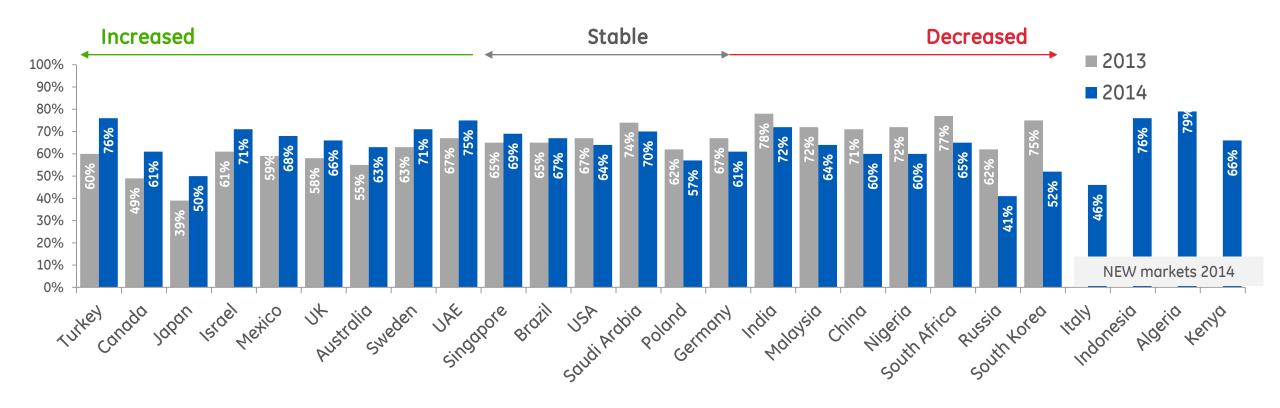
Collaboration, a reality in most markets

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



Some countries have increased their collaboration effort even further than last year

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

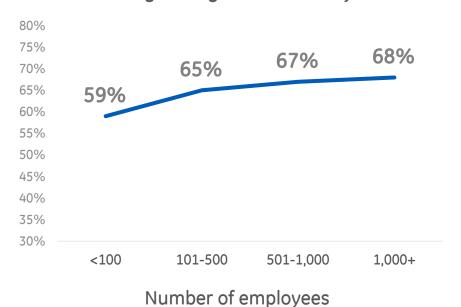




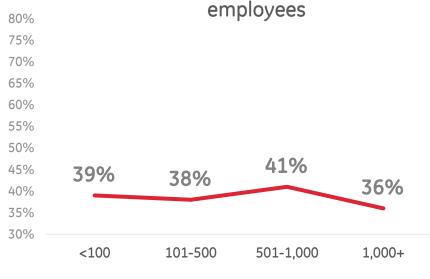


The ability or willingness to embrace change varies by size of company

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



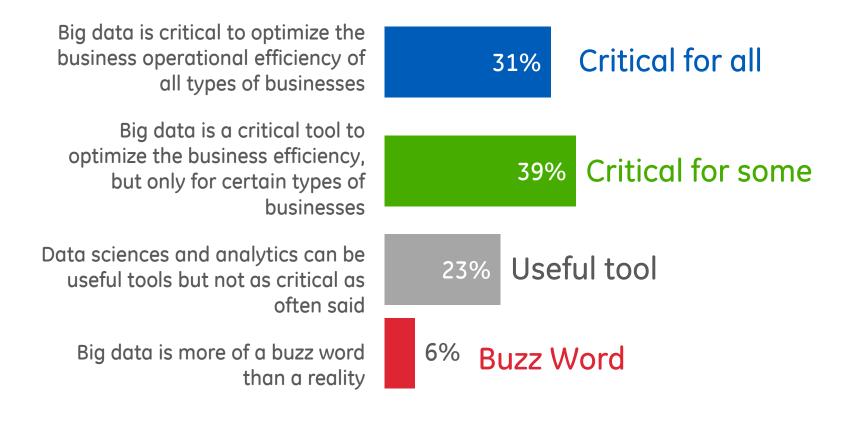






Big data is no longer a buzz word

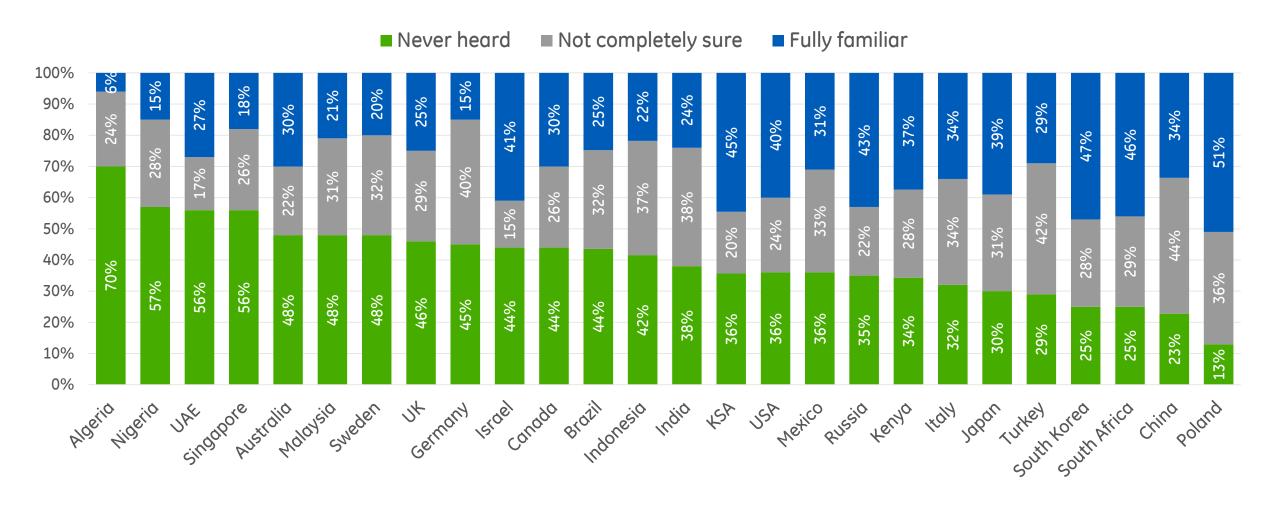
Do you believe in the importance of data sciences and analytics in enabling innovation?







But not all markets are familiar with Big data







Big data, the reality:

THE BUSINESS NEED

THE SOLUTION

Most identify the need for predictive data

But only half identify Big Data as being the solution

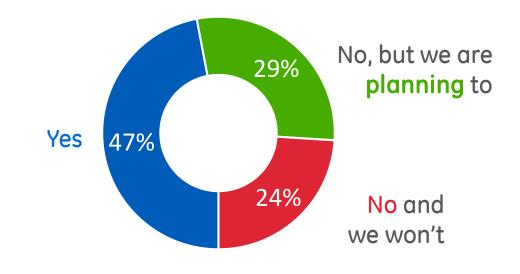
84%

Believe it is critical to understand customers and anticipate market evolutions to innovate successfully

53%
Believe it is critical to use analytics and predictive knowledge to innovate successfully

THE FACTS

HAS YOUR COMPANY INCREASED ITS ABILITY TO ANALYZE LARGE AND COMPLEX AMOUNTS OF DATA OVER THE LAST YEAR?

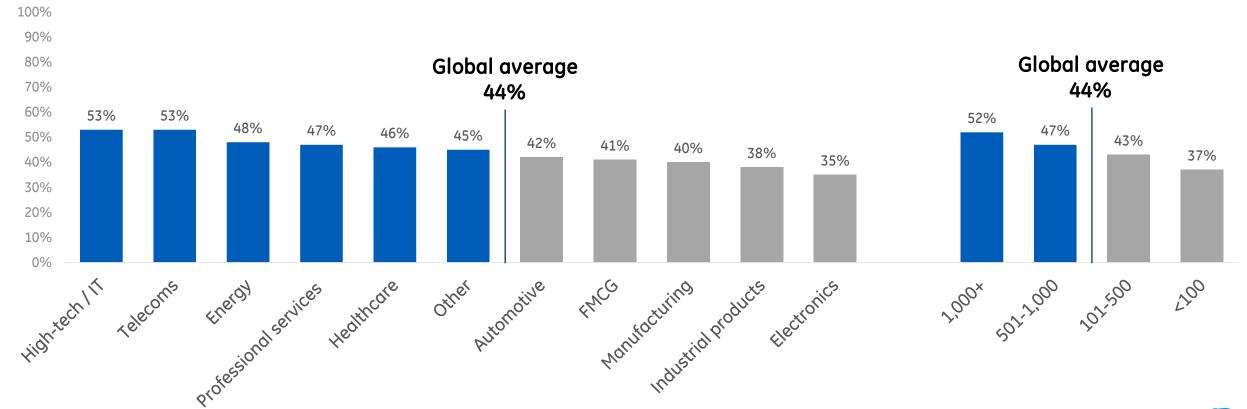






Sectors with more advanced technical expertise or more structured sets of data lead the change, but better be a larger company

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







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



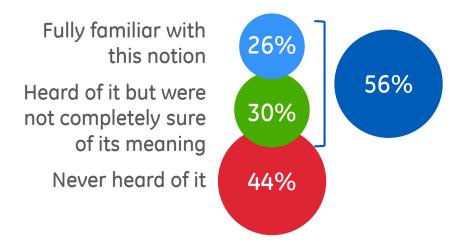


"Industrial Internet": an emerging understanding

"Industrial internet" or "Internet of things" =

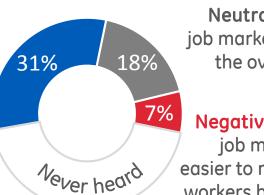
"The next generation of internet integrating complex physical machinery with networked sensors and software"

FAMILIARITY WITH THE NOTION



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



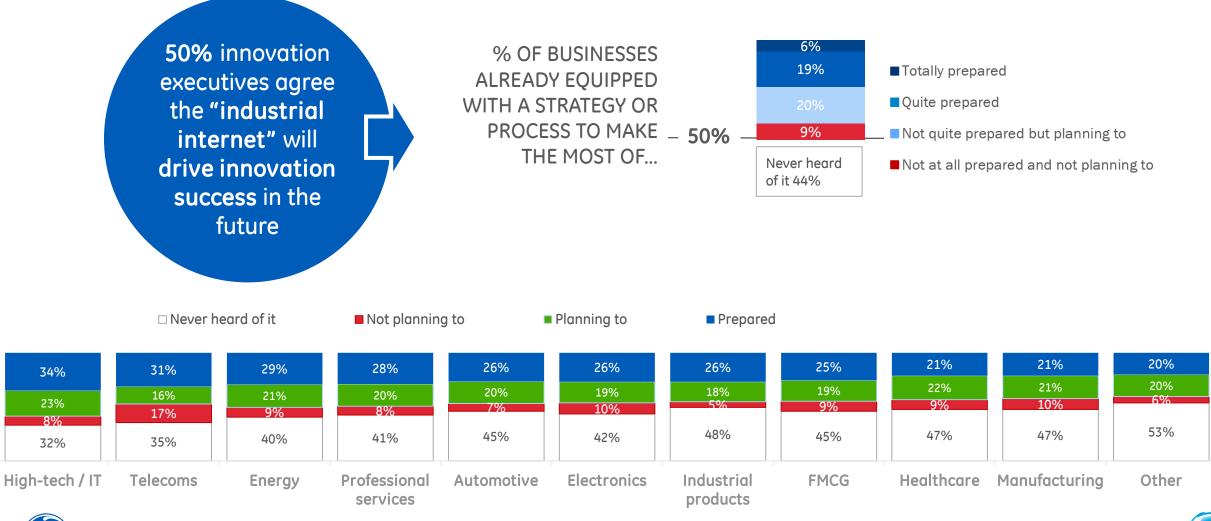
Neutral impact on the job market, transforming the overall job market

Negative impact on the job market, making it easier to replace unskilled workers by machines and automated processes





High tech / IT and Telecoms are paving the way





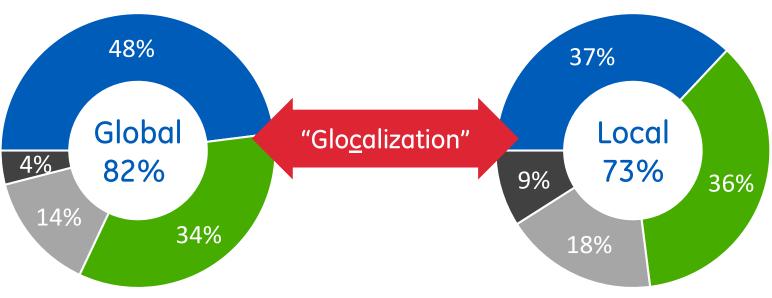


A GLOBAL PLAYGROUND FOR INNOVATION

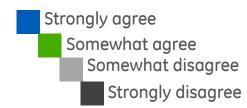


Think "glocal"!

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



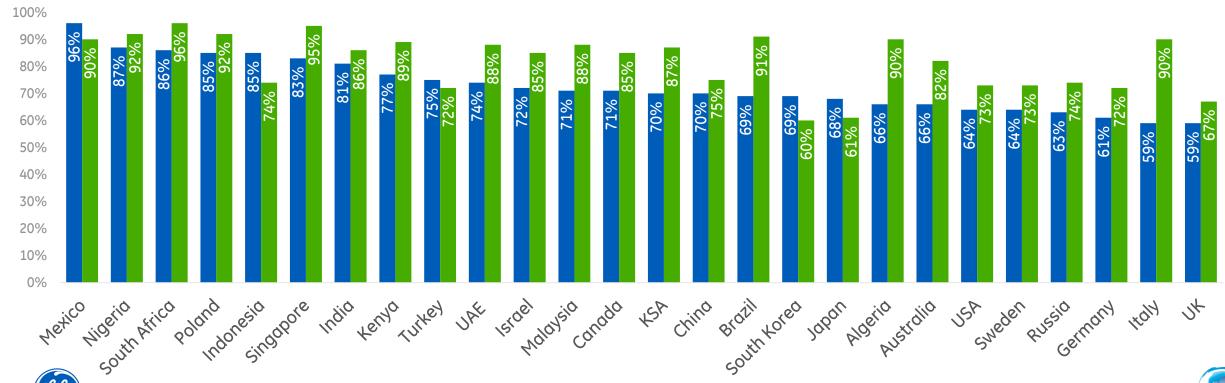




Localized innovation is more polarizing

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

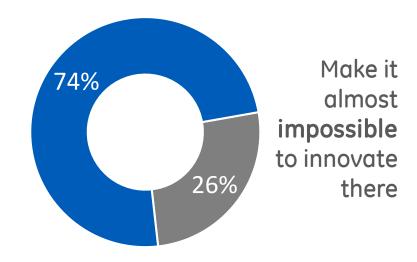




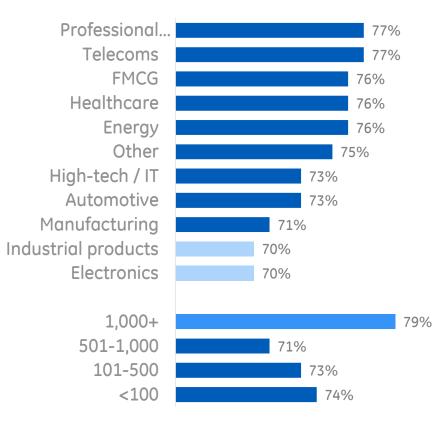
Constraints in emerging markets mostly seen as an innovation opportunity

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



CREATE INNOVATION OPPORTUNITIES

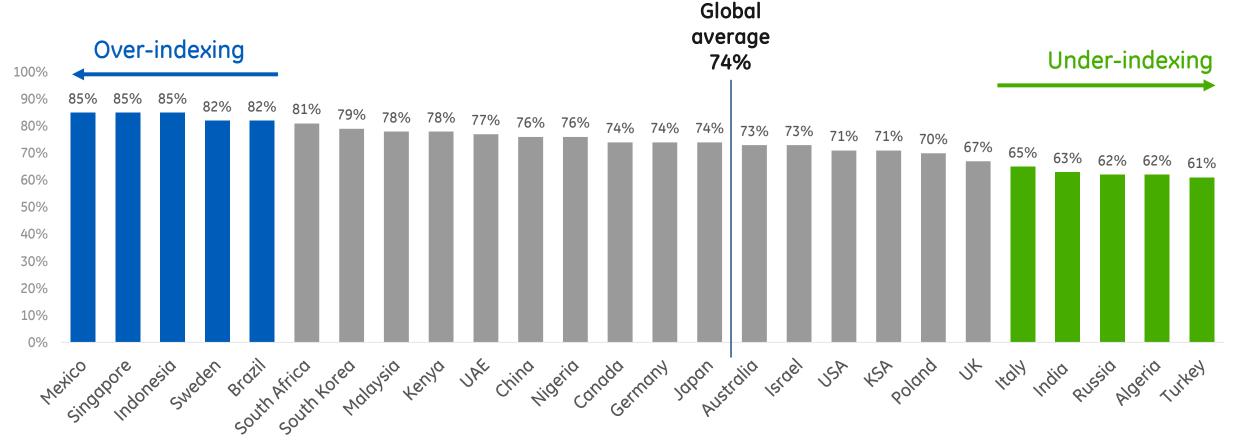






No consensus amongst emerging markets

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







INTERNAL DISRUPTION AND TRADE-OFFS



Being truly innovative is a challenge, requiring to change mind-sets, behaviours and processes to become 'disruption ready'

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%

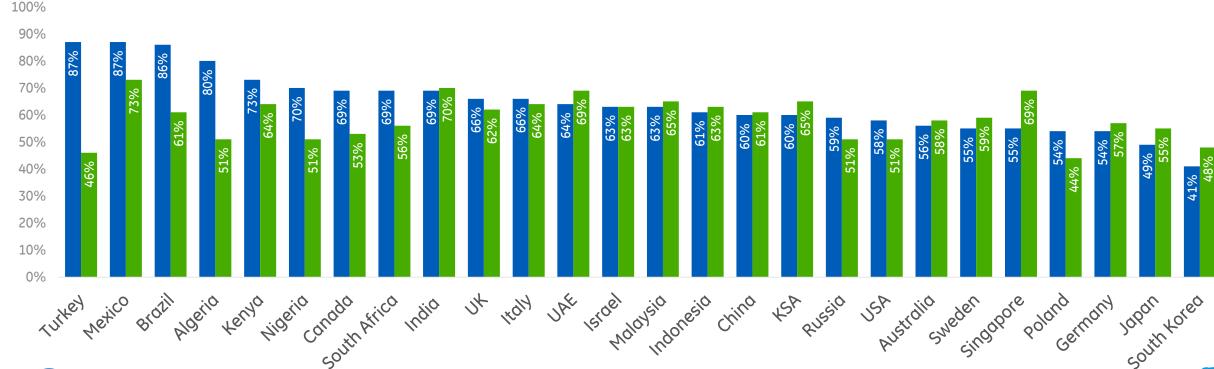
consider the difficulty to come up with radical and disruptive ideas as a key challenge killing your business's ability to innovate efficiently, independently from the profile of their company





Emerging countries are the most open 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

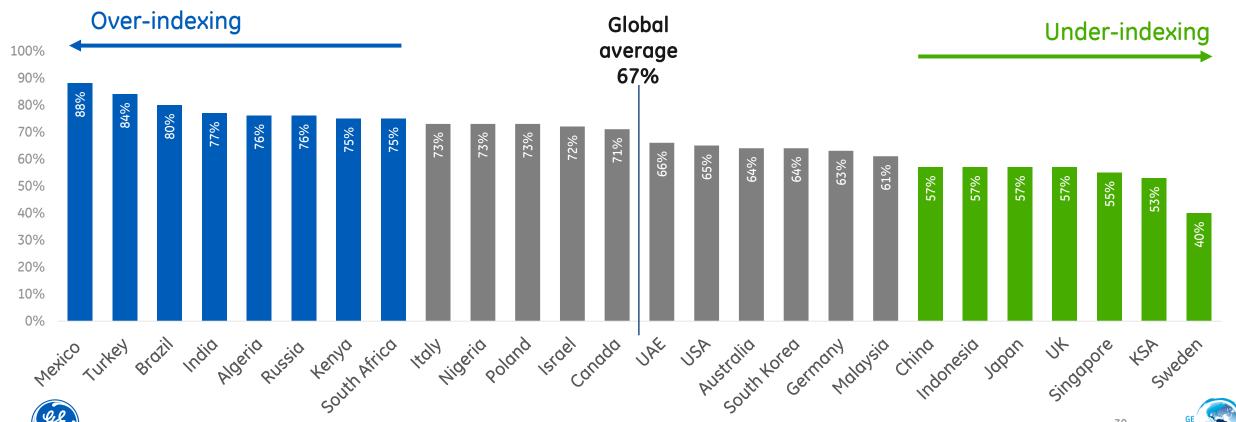




Q5-1. Do you consider any of the following as key challenges killing your business's ability to innovate efficiently? Q1_5. Thinking about how companies *manage innovation*, how important are the following for a company to be able to innovate successfully? (Grades from 8 to 10) Base: Country results N= 100-300 per market

Adopting emerging technologies quickly is a necessity for most to be successfully innovating

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



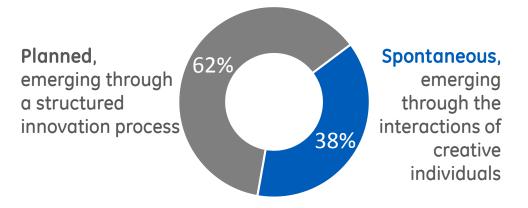
But behind good "disruptive" intentions, most prefer to stick to well-established and more conservative practices and processes

WHEN INNOVATING, IT IS BEST..

To protect the core business' profitability as much as possible, so to support research & innovation efforts

Not to worry about the potential short term negative impact on the core business' revenue

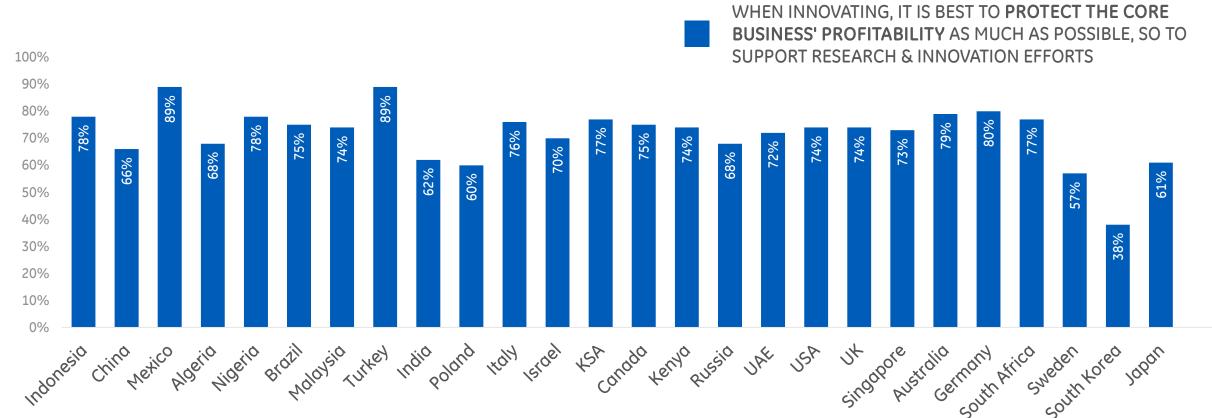
THE MOST SUCCESSFUL INNOVATIONS ARE







Some markets are more disruptive than others in regard to the ideal innovation process, but the large majority agree on its importance in protecting the core business' profitability







SPEED AND AGILITY TO INNOVATE BETTER



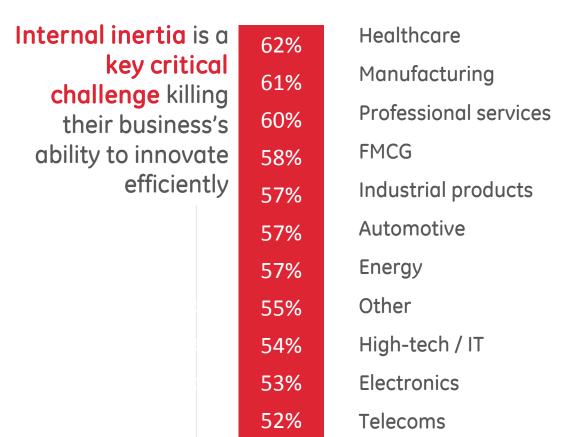
There is a strong consensus on the need for internal agility, and the difficulty in achieving it

67%

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

57%

to be nimble, failing at rapidly converting ideas into actions is a challenge limiting their business's ability to innovate efficiently

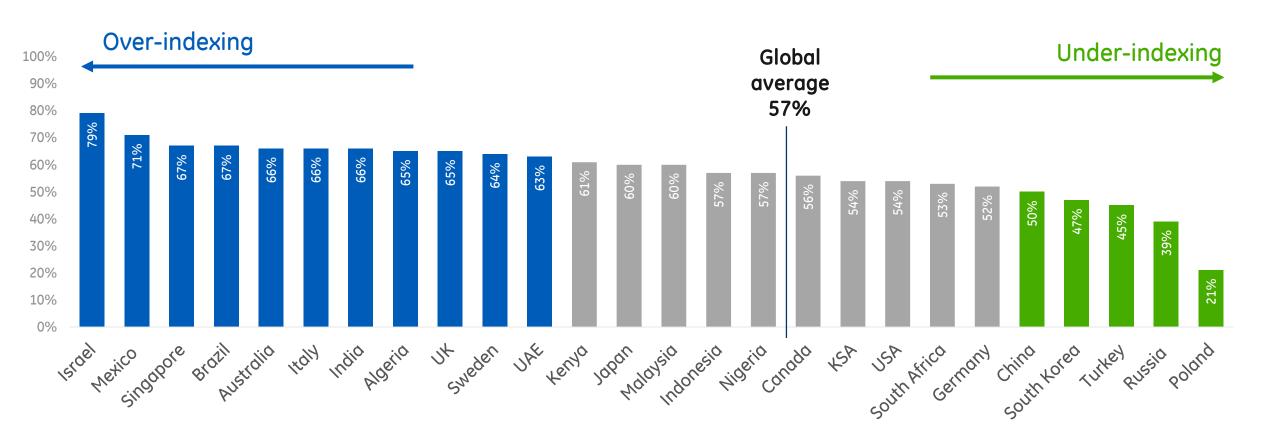






Internal inertia is an innovation challenge in most countries

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



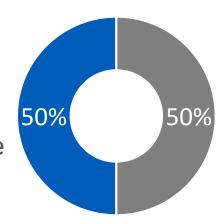




Speed to market remains a tougher decision dividing innovation executives into 2 camps

WHEN INNOVATING, IT IS BEST..

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

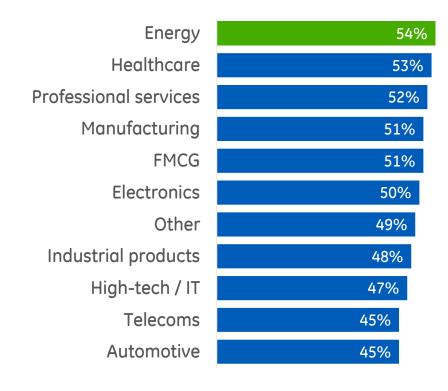


Not to rush and take all the time needed to perfect the innovation

50%

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

IT IS CRUCIAL FOR COMPANIES TO ADOPT A TEST FAST, FAIL FAST, ADJUST FAST APPROACH IN ORDER TO INNOVATE SUCCESSFULLY...



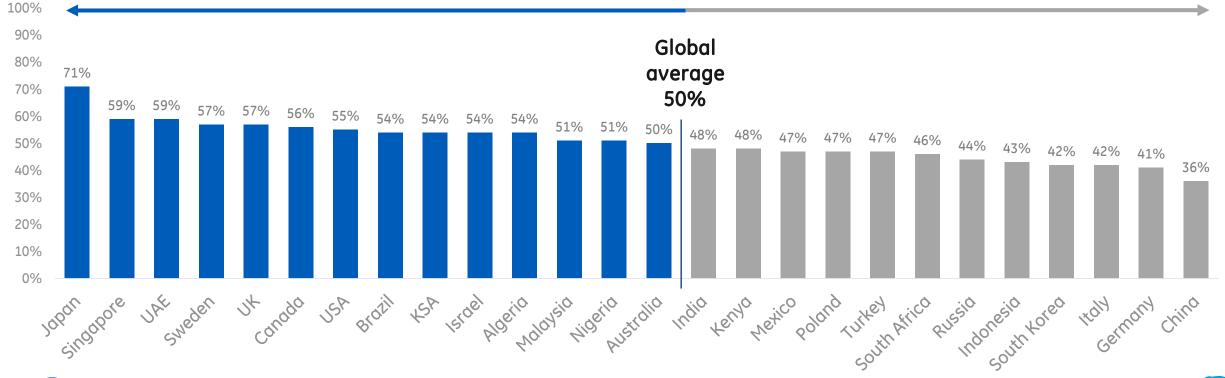




Speed to market, Japan leads the race

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



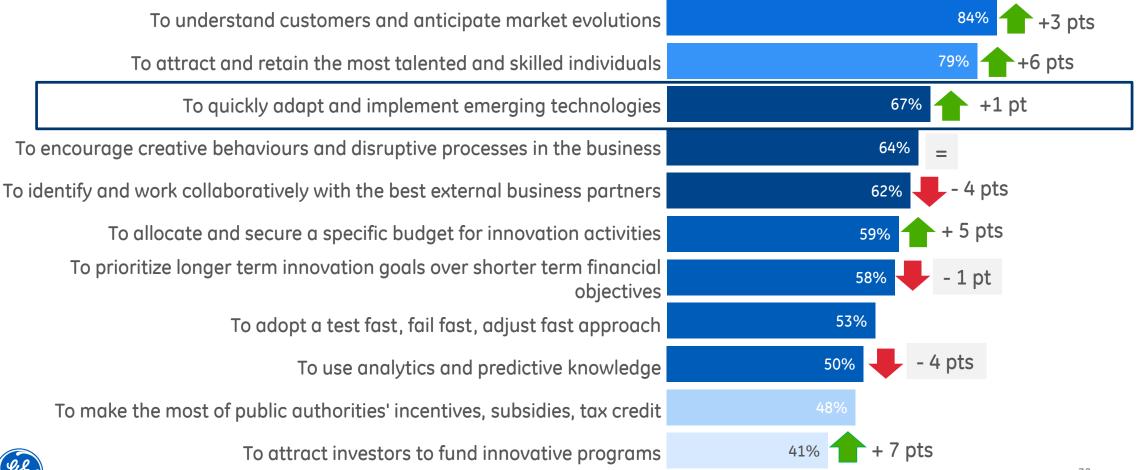






The speed at which business adopts emerging technologies is critical

TO INNOVATE EFFICIENTLY AND SUCCESSFULLY, IT IS CRITICAL FOR COMPANIES...







MANAGING CHANGE
INTERNALLY TO SUPPORT
INNOVATION WITH A
SUSTAINABLE BUSINESS
MODEL



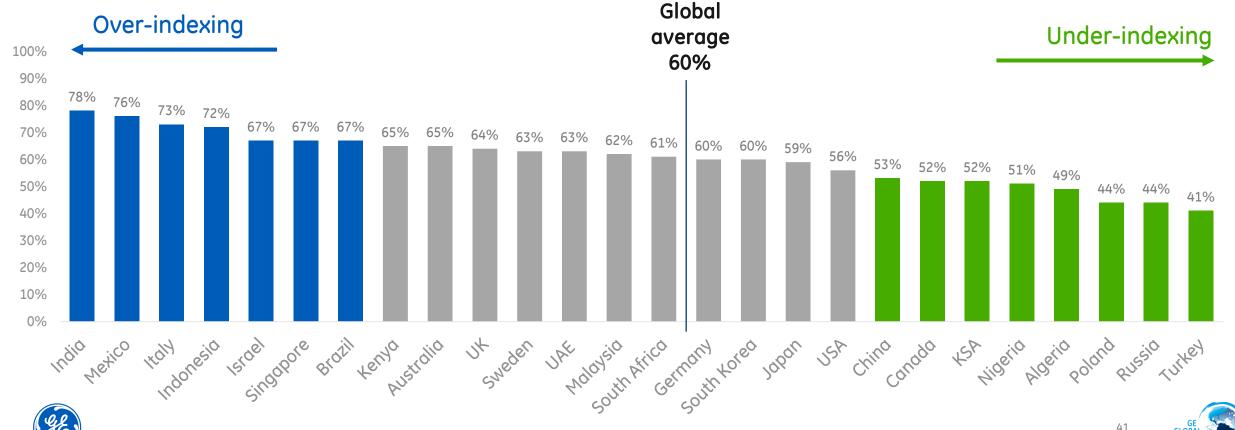
The difficulty to define an effective business model to support new ideas and make them profitable is a challenge killing the ability to innovate for 60%





Some markets express a stronger need to define a new business model to support successful innovation

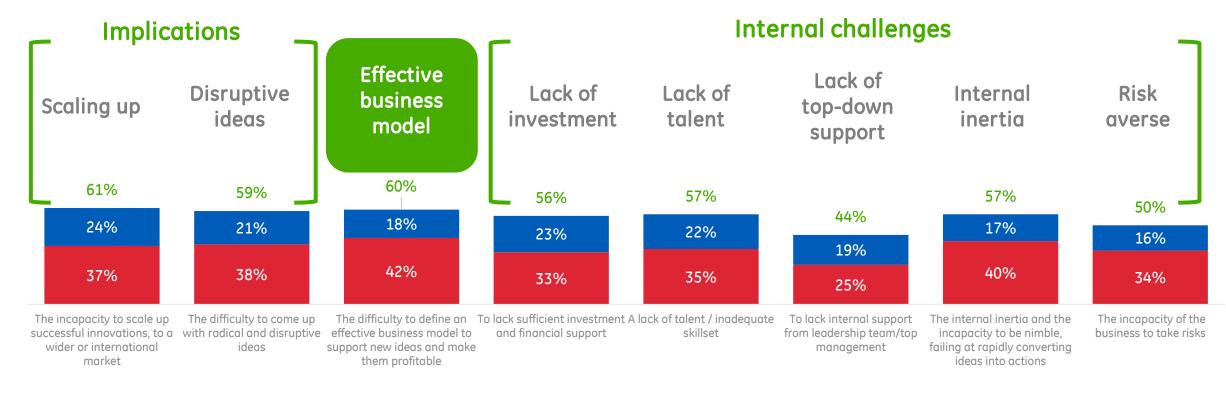
THE DIFFICULTY TO DEFINE AN EFFECTIVE BUSINESS MODEL TO SUPPORT NEW IDEAS AND MAKE THEM PROFITABLE IS A CHALLENGE KILLING THE ABILITY TO INNOVATE



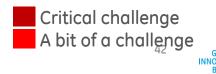


Businesses face many challenges limiting their ability to lead more radical and larger scale innovation

KEY CHALLENGES KILLING THEIR BUSINESS'S ABILITY TO INNOVATE EFFICIENTLY

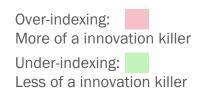






Unsurprisingly, smaller and younger businesses suffer the most from these challenges

		Number of employees			Age of company			
	Global average	<100	101-500	501-1000	1000+	< 5 yrs	5 yrs+	C-level
The incapacity to scale up successful innovations, to a wider or international market		26%	26%	23%	17%	30%	23%	23%
To lack sufficient investment and financial support	23%	28%	22%	20%	20%	18%	23%	26%
The difficulty to come up with radical and disruptive ideas		23%	20%	20%	21%	21%	21%	23%
A lack of talent / inadequate skillset	22%	26%	20%	20%	18%	24%	21%	24%
The difficulty to define an effective business model to support new ideas and make them profitable	1 2 0/2	18%	18%	16%	19%	28%	18%	17%
To lack internal support from leadership team/top management	19%	21%	18%	18%	16%	23%	18%	16%
The internal inertia and the incapacity to be nimble, failing at rapidly converting ideas into actions	17%	15%	18%	18%	20%	12%	18%	16%
The incapacity of the business to take risks	16%	19%	16%	14%	15%	15%	16%	16%

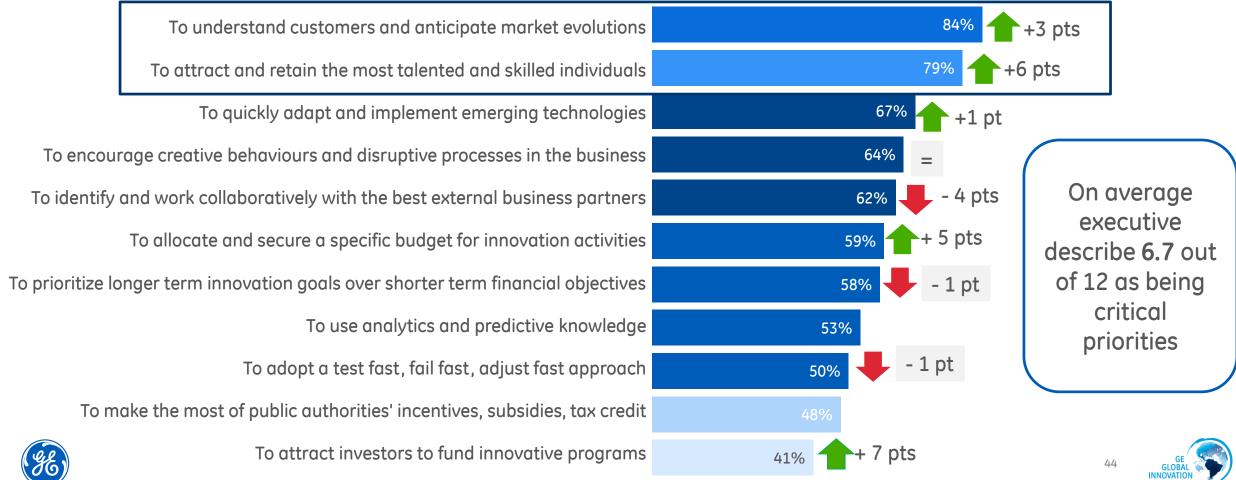






Understanding customers/markets and attracting /retaining talents are increasingly the top priority drivers of successful innovation

TO INNOVATE EFFICIENTLY AND SUCCESSFULLY, IT IS CRITICAL FOR COMPANIES...





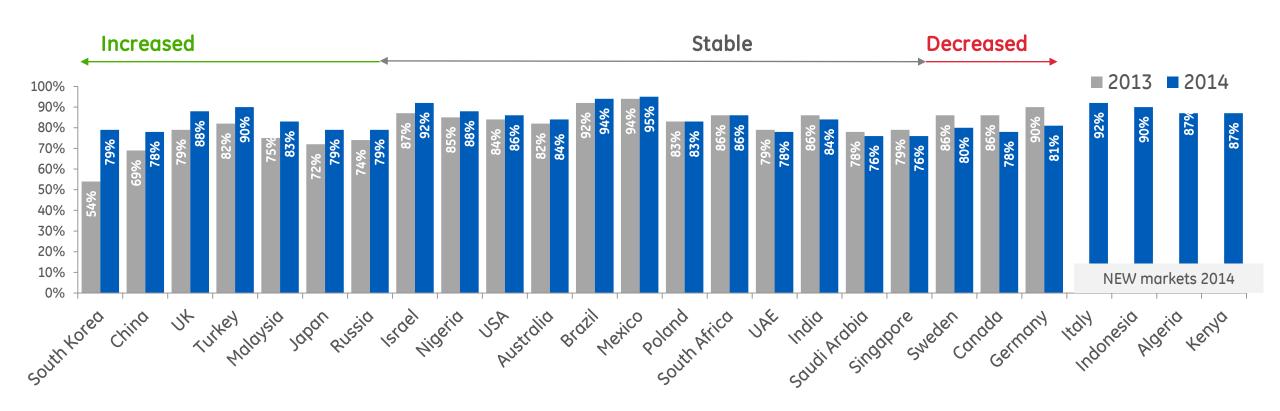
Despite seeing a factor as a critical innovation driver, only some excel in delivering it in their company

Critical for companies **CONVERSION** THE **PERFORMANCE** OF **THEIR COMPANY** AGAINST INNOVATION DRIVERS Performs extremely well **RATE** Only 39% of those 84% 39% To understand customers and anticipate market evolutions who said it was an 33% important driver 79% 32% To attract and retain the most talented and skilled individuals think their 25% company is 67% 42% To quickly adapt and implement emerging technologies excelling at 28% delivering it 64% 41% To encourage creative behaviours and disruptive processes in the business 26% 62% To identify and work collaboratively with the best external business partners 44% 27% 59% To allocate and secure a specific budget for innovation activities 39% 23% 58% To prioritize longer term innovation goals over shorter term financial objectives 43% 25% 53% To use analytics and predictive knowledge 47% 25% 50% To adopt a test fast, fail fast, adjust fast approach 48% 24% 48% To make the most of public authorities' incentives, subsidies, tax credit 56% 27% 41% To attract investors to fund innovative programs 51% 21%



Identifying future opportunities is a core and constant priority for all

TO UNDERSTAND CUSTOMERS AND ANTICIPATE MARKET EVOLUTIONS

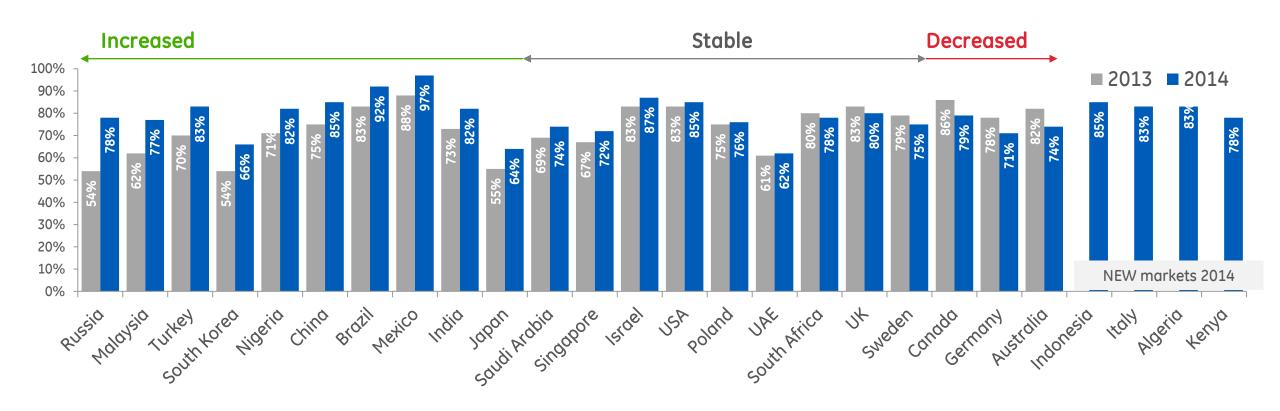






In many countries, the need for talent is becoming even more strategic

TO ATTRACT AND RETAIN THE MOST TALENTED AND SKILLED INDIVIDUALS

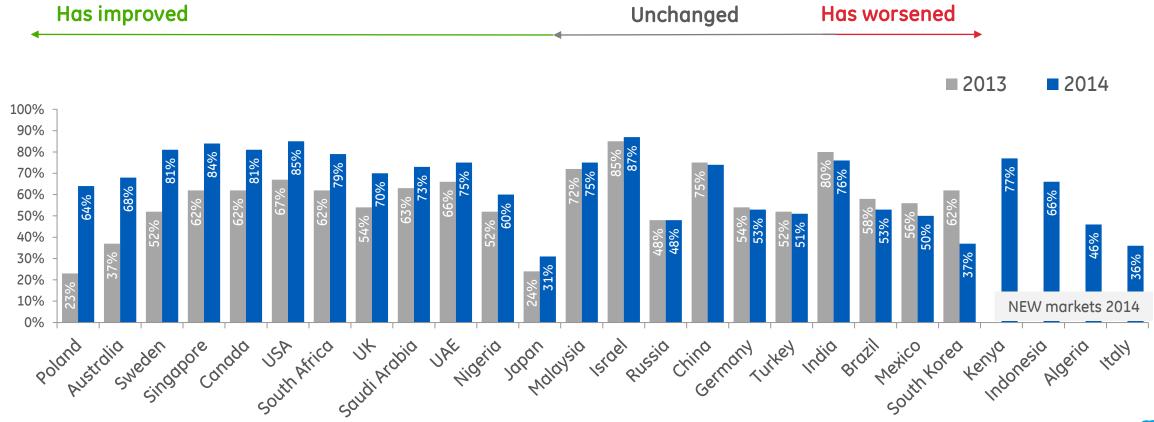






Overall, a consolidated support from private investors

PRIVATE INVESTORS ARE SUPPORTIVE OF COMPANIES THAT NEED FUNDS TO INNOVATE

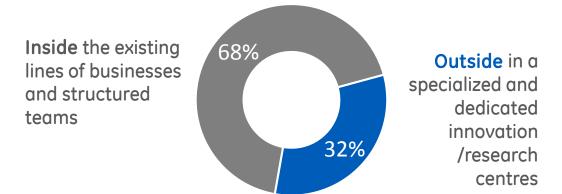




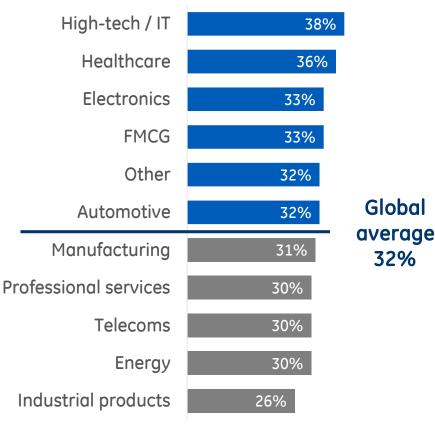


Positioning innovative teams and activities inside the business is the dominant model, only High-tech and IT companies tend to be more open to an outside model

IN TERMS OF ORGANIZATIONAL DESIGN, IT IS BEST TO POSITION INNOVATIVE TEAMS AND ACTIVITIES



Outside in a specialized and dedicated innovation /research centres





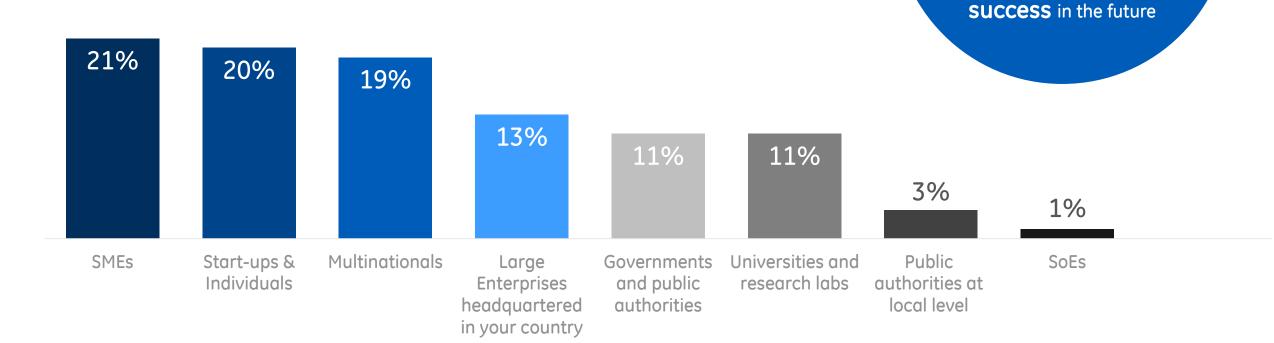


INNOVATION POLICIES:
THE PERSPECTIVE FROM
BUSINESS ON INNOVATION
POLICIES AND
FRAMEWORK



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?







85%

Of innovation executives

agree collaboration

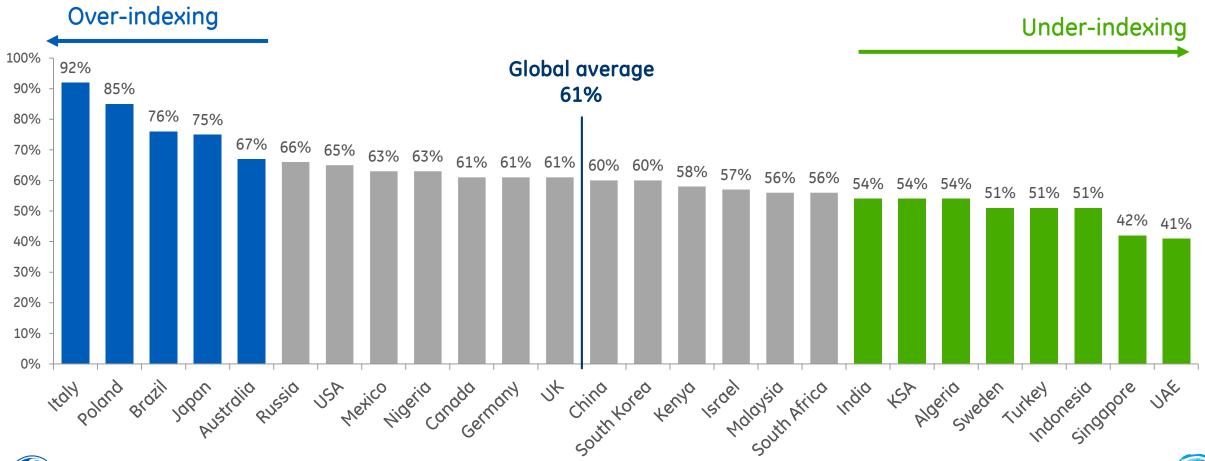
with start-up and

entrepreneurs will

drive innovation

Governments' support to SMEs is largely seen as currently insufficient

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



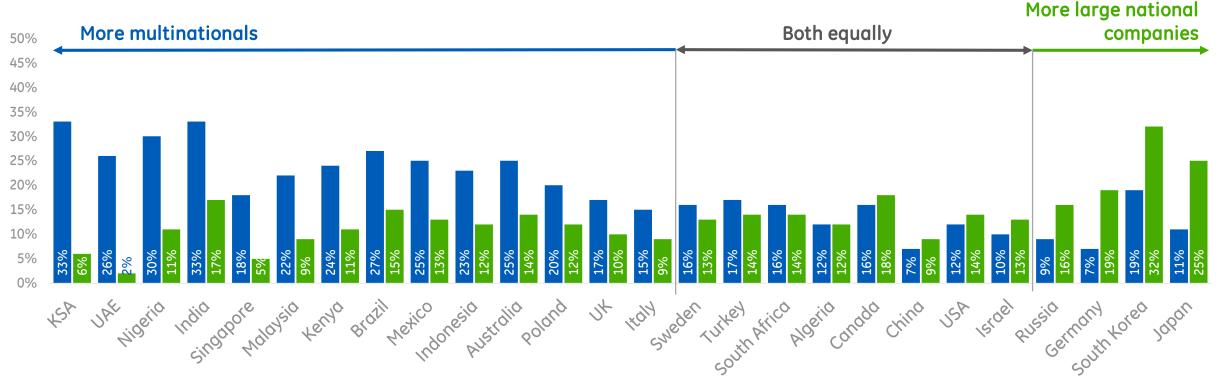




Multinationals more likely to be perceived as driving innovation compared to local large companies

WHO IS DRIVING INNOVATION THE MOST TODAY IN YOUR COUNTRY?

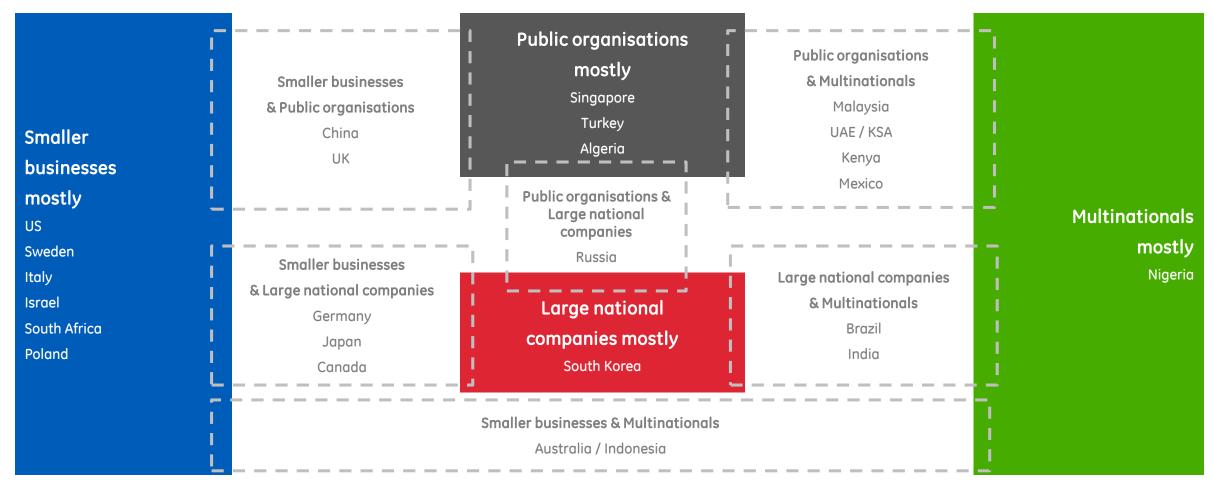
■ Multinationals ■ Large enterprises headquartered in your country







The business fabric of innovation varies across countries, each picking a combination of business types to lead it







Innovation executives expect Public Authorities to improve the overall innovation framework of their country



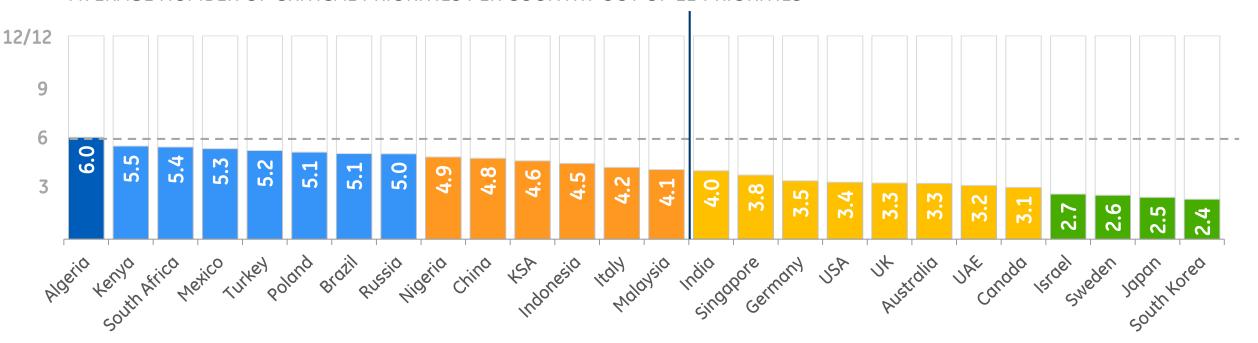




Emerging markets put more pressure on policymakers to provide them with the framework they need to innovate successfully

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

AVERAGE NUMBER OF CRITICAL PRIORITIES PER COUNTRY OUT OF 12 PRIORITIES

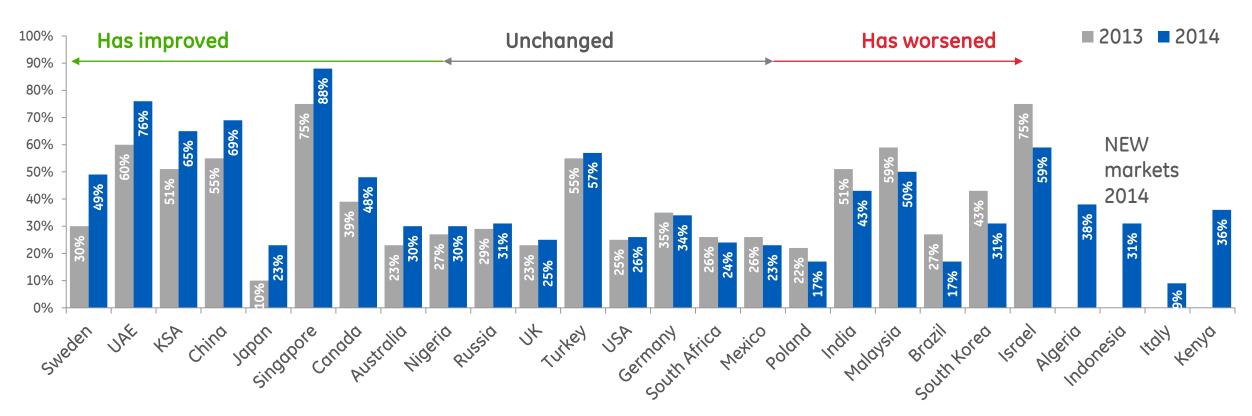






The efficiency of government support for innovation is variable

GOVERNMENT SUPPORT FOR INNOVATION IS EFFICIENTLY ORGANIZED

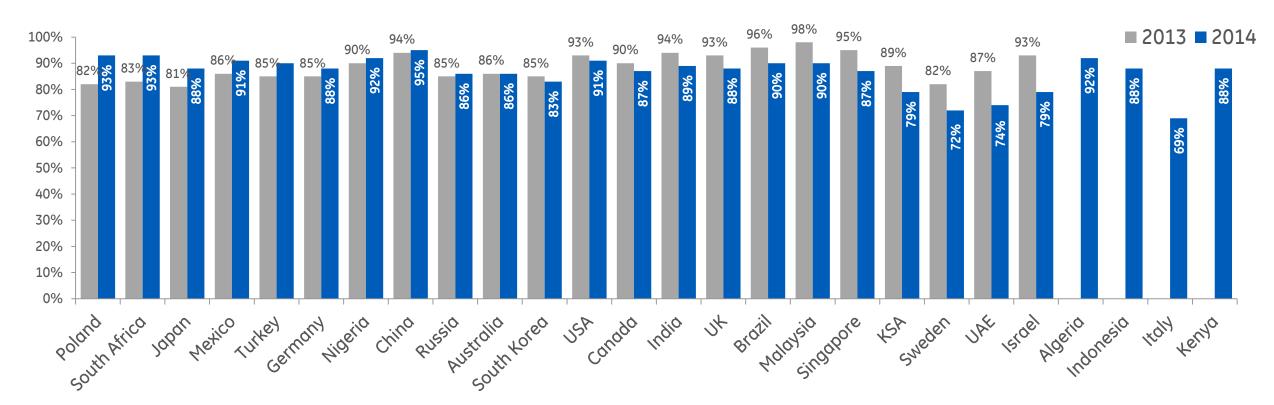






A strong priority: ensure that business confidentiality and trade secrets are adequately protected

ENSURE THAT BUSINESS CONFIDENTIALITY AND TRADE SECRETS ARE ADEQUATELY PROTECTED

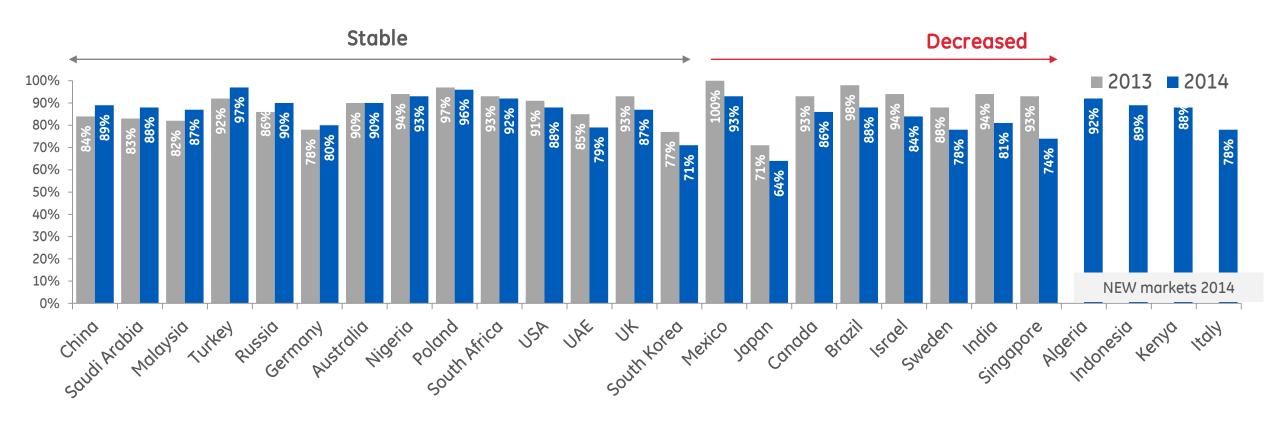






Talent management remains an essential priority

BETTER ALIGN STUDENTS CURRICULA WITH THE NEEDS OF BUSINESS

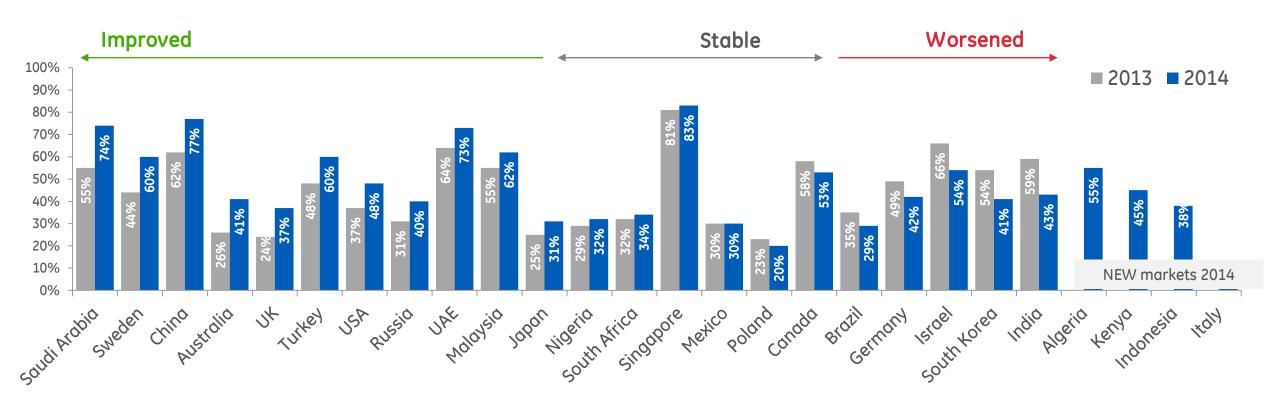






The financial support from governments and public authorities varies significantly across countries

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







Public Procurement is expected to adopt 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%





Public subsidies / preference are broadly accepted, but nationality bias is favored 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



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

	More open to bot	h	Мо	re local focus only	— More rejectors -	
Sectors	Automotive Healthcare Energy High-tech / IT	54% 55% 53% 53%	•	Telecoms 38% Other 34% Electronics 32% Professional services 29%	Industrial productsFMCGManufacturing	22% 22% 21%



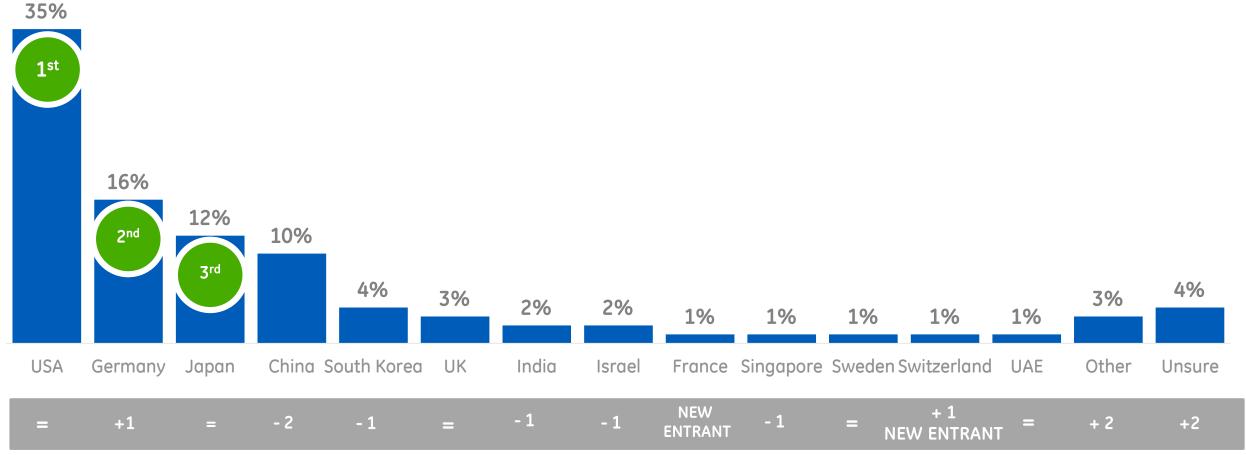


COUNTRY REPUTATION FOR INNOVATION, SELF ASSESSEMENT AND EVALUATION BY GLOBAL RESPONDENTS



Innovation champion: If you had to choose only one

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

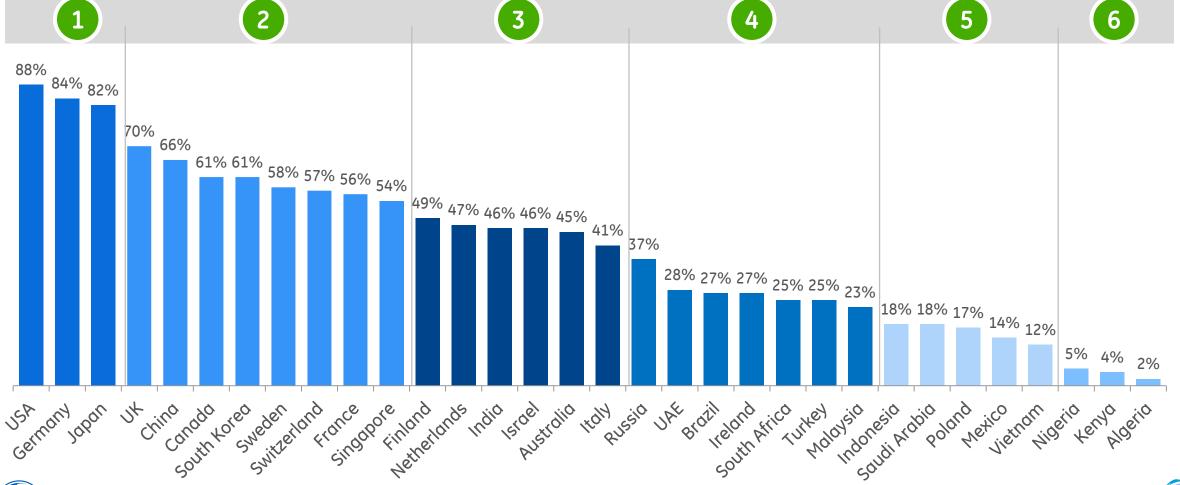


Exit: Netherlands, Canada





Assessment of the innovation environment in each market: how innovation conducive are they?

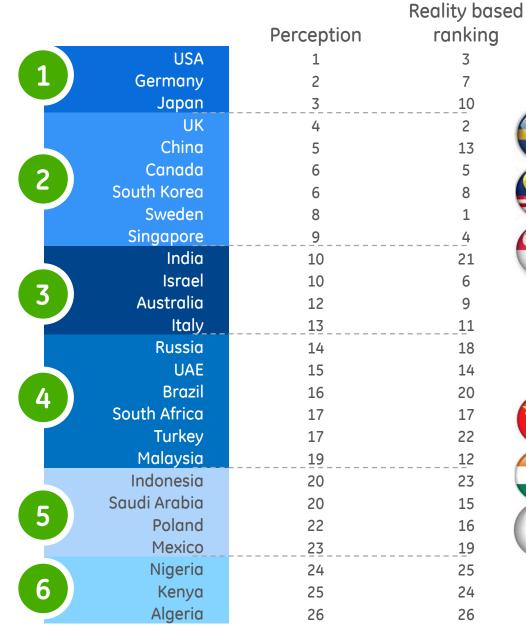








A consistency between reputation and performance





The innovation frameworks of Sweden, Malaysia, Singapore are underappreciated



The innovation frameworks of China, India and Japan are over evaluated





The self-evaluation of the innovation framework in respondents' own country varies

