

THE BRAIN STORM

BURSON-MARSTELLER'S
REPORT ON ARTIFICIAL
INTELLIGENCE



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“Europe has strong assets to be a leader in artificial intelligence: innovative startups, excellent researchers and a strong industry. We need to unlock data and investments – this is exactly one of the aims of creating a Digital Single Market – and encourage SMEs and public services to adopt artificial intelligence. This requires collective efforts: all EU countries need to join forces.”

Andrus ANSIP,

Vice-President for the Digital Single Market,
European Commission

“Statistics prove that robotics and AI are promising fields for European industry. The debate is ongoing and it is fascinating. Let’s not turn a blind eye: robots and AI are already a reality. We have to give ourselves codes of conduct and rules which allow us to organise this man-machine coexistence in the most harmonious way possible. The arrival of robots is a great opportunity, now it depends on us, humans, to put it to good use.”

Mady DELVAUX,

Member of the European Parliament

“Putting human values at the core of AI systems is essential to ensure trust and will ultimately determine the future of AI.”

Dr. Virginia DIGNUM,

Executive Director Delft Design for Values Institute;
Associate Professor, Social Artificial Intelligence,
Delft University of Technology

FOREWORD

THE MISSING LINK

Practical experience is invaluable, whatever the venture. Familiarity builds understanding, which leads to expertise. What stands out for me in ‘The BrAlnstorm’ is the voice of those with practical experience of using AI. Its key finding is that AI and machine learning may not be as scary as many seem to think.

Some results were expected. It is no surprise that policymakers think we need more regulation. But some are less so. All three groups surveyed – suppliers, users and policymakers – are split on whether AI will create or destroy jobs.

These results point to two broad conclusions. First, we need regular surveys to capture the experience of those implementing AI. And second, we need a well-managed multi-stakeholder dialogue on AI, where key players can share knowledge and debate the issues. This would be the start of a process that could help chart a course to harness the benefits of AI and manage the issues that will undoubtedly arise.

Burson-Marsteller is pleased to publish ‘The BrAlnstorm’ report and we stand ready to play our part in ensuring we maximise the benefits of AI while minimising its risks.

John Higgins

(CBE), Burson-Marsteller’s
Senior Advisor on digital technology



It is easy to get artificial intelligence wrong. Many people tend to be dystopian about AI, expecting machines to take control of humanity. Others have the opposite view, saying the world is unlikely to change in the future as we have not seen major changes until now (or have we?). The reality will be somewhere between these two views.

The economist Rüdiger Dornbusch said in the 1970s that a crisis “takes a much longer time coming than you think, and then it happens much faster than you would have thought”. So, should we be scared of AI? Will we fully realise it, when it happens? Will robots take over, not just our jobs but also our freedom? Will Alan Turing’s 1940s prophecy be eventually fulfilled that, “the use of words and general educated opinion will have altered so much that one will be able to speak of machines thinking without expecting to be contradicted.”

Today’s discussions on AI show that we still have choices to make. We are still *faber fortunae suae*, or masters of our own destiny when it comes to delegating tasks to machines. If AI is an existential risk to mankind, like some say, it may only be due to the risk if we mess it up. ‘The BrAIInstorm’ gives us a sense of what experts and practitioners expect from the upcoming AI age. It shows how many of us believe that AI is here to stay, and how it can change society for good. But the level of uncertainty is high, and opinions are split. The responses point to Civil Law and Justice as the number one priority area for public policy: in this respect, it is aligned with EU institutions, who are already taking actions in that domain.

These perceptions may change over time. As we deal with the policy implications of AI, we need to stay tuned to public opinion. ‘The BrAIInstorm’ can help us already, showing what key stakeholders think about the prospects for this exciting technology.

Andrea Renda

(LL.M, Ph.D.), Senior Research Fellow
at Centre for European Policy Studies

“AI has unimaginable potential. In the coming years, it will revolutionise all aspects of our lives. It will also redesign healthcare completely – and for the better. It has the potential to identify and predict healthcare situations (i.e. potential high-risk patients), and could become powerful enough to anticipate, diagnose and treat medical conditions. We’re only now beginning to explore the depths of healthcare innovation that AI technology can unlock.”

Maxime BUREAU,

Director of Government Affairs, Europe & MEA, 3M

“AI will support and outperform us in many ways, giving us a fantastic opportunity to excel in being human. This is the era of curious, empathic, innovative team players.”

Aurore BELFRAGE,

Head of Early Stage, EQT Ventures

“The AI era is here. It offers opportunities and possibilities that we have never seen or even thought of before. Even though there is a huge potential for AI, it is sometimes associated with risks and threats. To reassure people we need to ensure that everyone works together. At SwissCognitive, we aim to bring together different industry sectors so they can work closely together with the governing bodies. This joint work will help build trust in AI and reveal all its opportunities.”

Dalith STEIGER and Andy FITZE,

Founders, SwissCognitive



PREFACE

WHY BRAINSTORM?

'The BrAlnstorm' presents data on AI's strengths, weaknesses and opportunities. It aims to help regulators and industries shape their strategies to support the development of AI. It identifies areas of action for both the public and private sectors.

This report aims to help readers navigate institutional relationships, engage constructively in policy debates and build meaningful initiatives with a sharper focus on AI opportunities. We believe in the transformative power of these technologies. There may be risks but we believe that AI can be a force for good in the world.

Even if you do not know exactly what it means, you've heard about artificial intelligence (AI). It is broadly defined as a simulation of thinking processes by machines, using computing power to solve real world problems. Simply put, AI is technology that mimics human-like intelligence.

Strong AI changes the parameters of computing. Most AI used today is described as weak or narrow: only some programmes have reached the performance levels of human experts and professionals in certain specific tasks. Narrow AI can be found in applications as varied as search engines or voice recognition programmes. By contrast, strong AI, or artificial general intelligence (AGI) is machine intelligence applied to any problem that a human could face, rather than a specific and predefined set of problems.

It means AI's reach now extends into previously untouched areas of technology, business and society. While technology companies have been working on AI systems for years, this is a pivotal moment. We are now at a point where questions about rules need to be addressed. Unless there is a clear regulatory structure that sets guidelines for using the technology, it will be hard to create the right conditions to invest in AI innovation.

Policymakers and businesses are well aware of the role technology can play in sustaining productivity and social cohesion. But it is not always clear how best to foster innovation, and how best to nurture its deeper societal role. AI could well become the next frontier in computer technology, but there is still little awareness about its potential benefits and risks. There are no platforms to discuss best practices on AI technologies, to advance public understanding of AI, or to debate AI's impact on society.

The European Union is only now starting to grapple with the issue. In January 2015, the European Parliament's Legal Affairs Committee (JUR) set up a Working Group on Legal Questions related to the Development of Robotics and Artificial Intelligence in the EU. Its final report, published in January 2017, addressed issues like liability for damages caused by a robot, and called for a European agency to regulate robotics and AI.

But despite the efforts of MEPs and others there has been only limited research in this area. Although it has the potential to transform our economy and society, AI remains a relatively untested field of study. We hope 'The BrAlnstorm' can contribute to the ongoing discussions on AI and make an original addition to the field, while promoting thoughtful collaboration and open dialogue about the influences of AI on people and society.

What laws will govern this new technology? Will people lose jobs, or will more be created? Will businesses be left behind if they fail to use AI? These are the questions that this report hopes to answer.

Karen Massin

CEO, Burson-Marsteller Brussels



EXECUTIVE SUMMARY

HUMAN AFTER ALL

AI is not science fiction. It is science fact. And it is here already. AI is spreading into almost every area of IT. Entire businesses are being built on AI. And policymakers are wondering whether they need to regulate it.

But the first challenge is to understand AI, which is why this report looks at perceptions and tries to examine common misconceptions surrounding AI. The content was collected using an online questionnaire sent to hundreds of respondents, as well as interviews gathering the opinions of top-tier executives, senior managers, policymakers and technology developers.

Respondents were divided into three different groups:

- ▲ **policymakers**
- ▲ **businesses using AI**
- ▲ **AI suppliers.**

These are the movers and shakers as far as AI is concerned.

A collaborative approach is essential. Europe needs to choose its path wisely. It needs to help build trust among its citizens and ensure that the economy and society can benefit from both the use and supply of AI. We need to maintain dialogue between academia, businesses, customers, civil society and decision-makers. We should promote best practices as we continue raising awareness of AI's risks and opportunities. We should continue 'The BrAIInstorm'.

85%

OF RESPONDENTS AGREE THAT AI BENEFITS MANY DIFFERENT PARTS OF SOCIETY.

59%

OF AI SUPPLIERS FEEL THAT END CONSUMERS ARE UNAWARE OF HOW COMPANIES USE AI.

43%

OF BUSINESSES SEE AI AS RISKY GIVEN THE WIDE RANGE OF POSSIBLE UNCERTAINTIES. POLICYMAKERS ARE MORE CONCERNED ABOUT THE RISKS THEN BUSINESS REPRESENTATIVES.

40%

THINK AI WILL DESTROY MORE JOBS THAN IT CREATES. HOWEVER, 34% THINK THE OPPOSITE.

BOTH AI SUPPLIERS AND POLICYMAKERS FORESEE MORE REGULATION, WHILE MOST BUSINESSES USING AI PREFER TO SEE REGULATION AT THE CURRENT LEVEL.

CIVIL LAW AND JUSTICE IS A COMMON POLICY PRIORITY FOR ALL GROUPS, FOLLOWED BY HEALTH AND MEDICAL CARE AND EMPLOYMENT AND SOCIAL POLICY.

WHAT DOES THIS ALL MEAN?

Artificial intelligence is sliding into more and more areas of our lives, and yet, as this survey shows, there is much uncertainty about the eventual impact. So, how should the European Union regulate AI?

The EU must adopt policies to develop and deploy AI in Europe so that it works for rather than against society. We welcome recent European Commission initiatives to set up a high level expert group⁴ on AI, set an ethical framework⁵ and invest 20M€ of funds in AI projects⁶ – and we look forward to the results.

A European AI strategy should ensure a level playing field in the EU. And it should seek open AI markets for European industry in non-EU countries. The following recommendations are aimed at promoting AI not simply for technology's sake, but for society as a whole:

Policy makers should encourage a consistent and informed dialogue with all relevant stakeholders.

We should look both inside and outside Europe, speak to consumer organisations and academia, sit down with businesses, with people working with AI and with those developing AI. A European model should not be built in isolation. It should take account of global developments and discussions. Many global and European businesses are already working together, and we believe such practices should continue in policy making as well.

Learning by monitoring, teaching by example.

Public authorities need more awareness of the current state of AI across Europe. Many public authorities are already adopting AI technologies and should continue to do so to improve services and to demonstrate that it can yield tangible benefits to citizens.

Policy makers must create a favorable EU regulatory framework.

This is not a call for specific AI regulation. Nonetheless, action is needed to ensure existing frameworks tackle the opportunities arising from AI and foster an environment where innovation works for all.

Businesses should actively engage in the policy process and play a part in raising awareness about AI.

Businesses should share information about AI to improve understanding on technological advances and opportunities. This will help prepare the ground for a possible legal framework. Industry

representatives should work cohesively, to help decision makers break through the noise and realise what is important and what is not. Many companies have published white papers with recommendations on AI. There should be a unified code of good practice to help ensure AI development respects European values, morals and legal standards.

Labour markets should prepare for AI.

Although there is debate on the net employment impact of AI, there is no doubt that many jobs will change. The future jobs will be marked by human-machine collaboration. Both businesses and policymakers should ensure employees in Europe have the skills they need to exploit AI rather than compete with it. Human wellbeing should be the driving force behind all decisions. Policymakers should ensure that school curricula follow technological advancements.

Build innovation hubs.

We should bring business, academia and researchers together. Many businesses and researchers have amazing projects and programmes that can speed up European innovation. We need to create innovation hubs to compete with those in the US and China.

Share data.

Europe's diversity is its strength. We are all creating huge amounts of data, and we could build an incredible learning resource if all that data was combined and analysed. While our different languages might look like obstacles, collaborative approaches and open-data policies should help data clusters support one another, learn from each other and accelerate the growth.

Support SMEs.

Small and medium-sized enterprises (SMEs) represent over 99% of businesses in the EU. They are also at the forefront of AI, both in developing new systems and in finding new ways to use the emerging applications. It is crucial to support their growth and innovation.

4. Digital Single Market. (2018). Call for a High-Level Expert Group on Artificial Intelligence. [online] Available at: <https://ec.europa.eu/digital-single-market/en/news/call-high-level-expert-group-artificial-intelligence> [Accessed 12 Mar. 2018].

5. Ec.europa.eu. (2018). [online] Available at: http://ec.europa.eu/research/ege/pdf/ege_ai_statement_2018.pdf [Accessed 14 Mar. 2018].

6. Digital Single Market. (2018). Attitudes towards the impact of digitisation Digital Single Market. (2018). The European Artificial Intelligence-on-demand-platform – Information day and brokerage event. [online] Available at: <https://ec.europa.eu/digital-single-market/en/news/european-artificial-intelligence-demand-platform-information-day-and-brokerage-event> [Accessed 12 Mar. 2018].

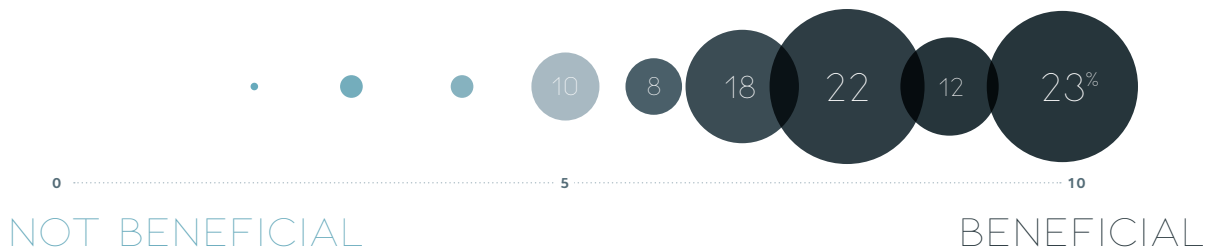
RESULTS

HOW DID THEY RESPOND?

POLICYMAKERS

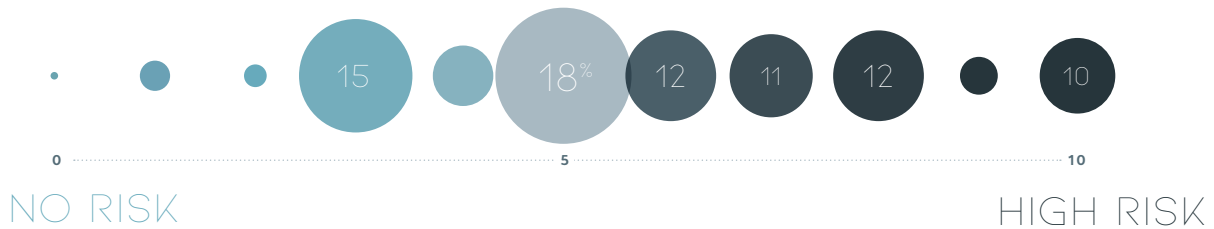
HOW **BENEFICIAL** DO YOU THINK AI CAN BE TO YOUR COUNTRY GENERALLY? (Q1)

AVERAGE **7.6**



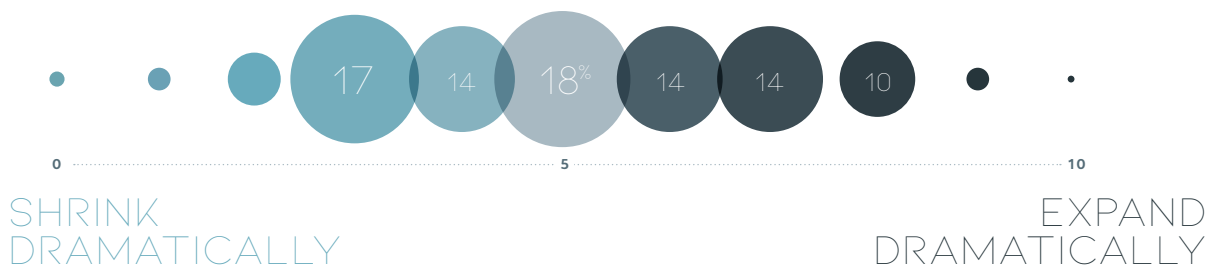
WHAT **RISK** DO YOU THINK AI WILL POSE TO YOUR COUNTRY GENERALLY? (Q2)

AVERAGE **5.7**



WHAT **EFFECT** DO YOU EXPECT AI TO HAVE ON EMPLOYMENT IN YOUR COUNTRY? (Q3)

AVERAGE **5.0**



POLICYMAKERS

“MOST TAILORED AI IMPLEMENTATIONS IMPLY SYSTEMIC CONCEPTS THAT ARE NOT CONVEYED IN THE CURRICULA OR TRAINING OF TRADITIONAL ACADEMIA. HENCE, THE LARGE DEFICIT OF GENERALISED AI EXPERTISE.”

“THE JOBS WILL CHANGE. THE ISSUE THEN IS WHETHER – AND HOW FAST – DISPLACED WORKERS CAN ADAPT TO NEW WORK PATHS.”

“AI IS THE BIGGEST OPPORTUNITY OF OUR TIME. WE NEED TO PREPARE FOR IT, BE AT THE FOREFRONT OF INNOVATION AND KNOWLEDGE, AND AT THE SAME TIME PROTECT OURSELVES FROM MALICIOUS AI.”

Respondents from
policymakers group

PERCEPTIONS OF AI AMONG POLICYMAKERS

Policymakers tend to see AI as beneficial to Europe, with 83% of respondents answering positively (scoring 6 and above on scale of 0 to 10) and 23% seeing it as very beneficial (Q1).

Interestingly, however, when asked about the risks (Q2), half of respondents (50%) see potential dangers with AI.

Policymakers are divided on whether AI will expand or shrink employment (Q3).

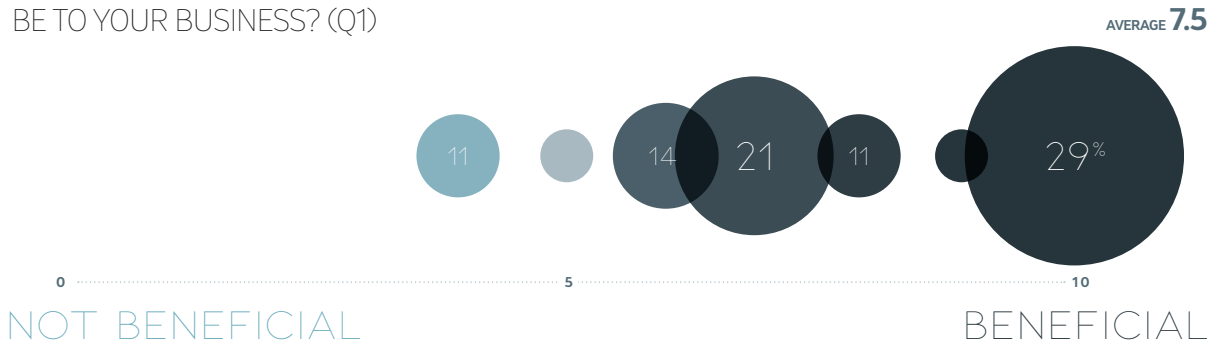
When asked about the ideal amount of AI regulation (see page 19), 54% of policymakers say more is needed, with 38% of respondents saying it should stay at the same level. Policymakers say Civil Law and Justice (39%) should be a priority for AI regulation, followed by Employment and Social Policy (32%), Digital Platforms (29%) and Health and Medical Care (28%).

“For a safe AI future, we need smart rules and principles as we might have only one chance to make things right. We need to: create a task force on disruptive AI; set European rules and strengthen cybersecurity; monitor the geopolitical impact and the inequalities arising from the intelligence race and autonomous technology; respect privacy rights from machine learning while rewarding data use; address job losses, bias or discrimination arising from AI; set protective measures to prevent an unbalanced concentration of data by multinationals, and against efforts to replace or harm humans; guarantee transparency and open access to AI algorithms; create a right to disconnect from AI.”

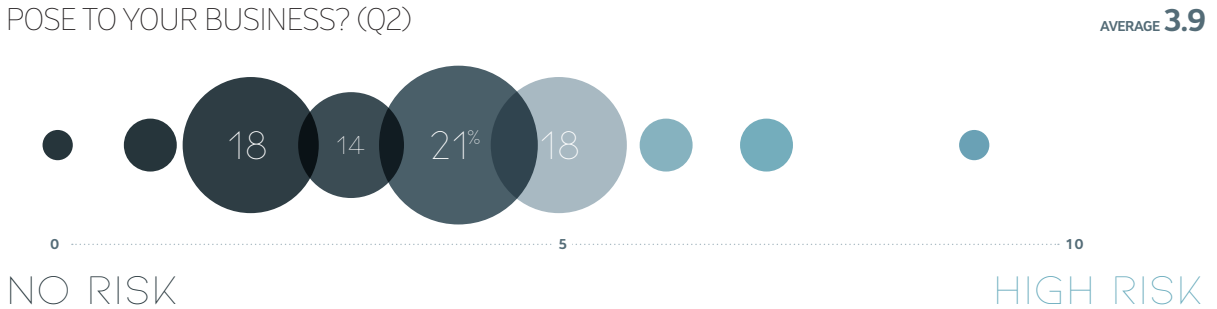
Eva KALLI,
Member of the European Parliament

BUSINESSES USING AI

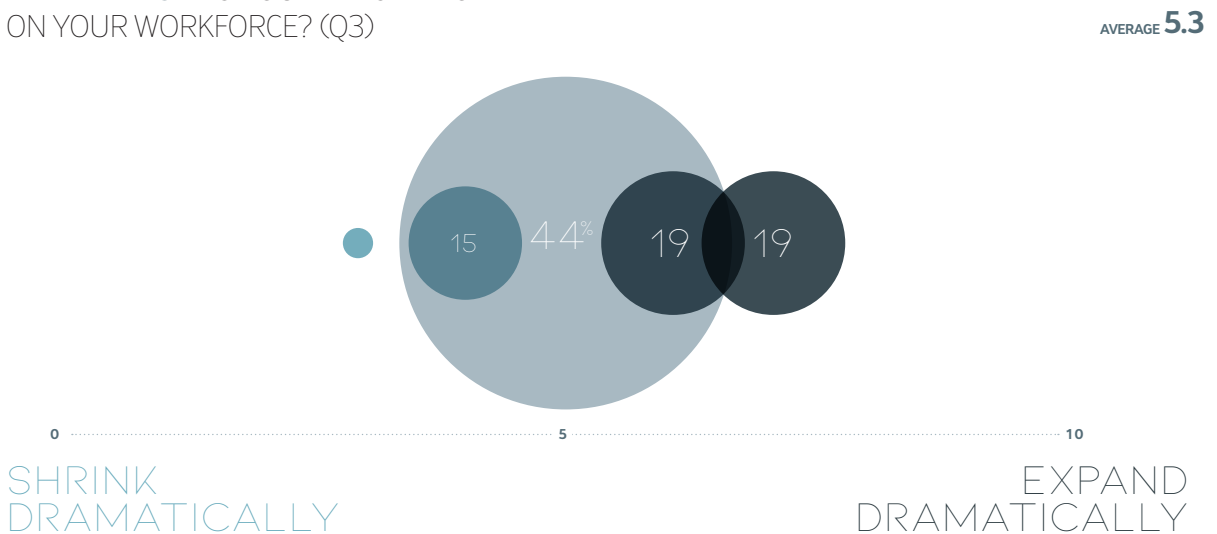
HOW **BENEFICIAL** DO YOU THINK AI CAN BE TO YOUR BUSINESS? (Q1)



WHAT **RISK** DO YOU THINK AI WILL POSE TO YOUR BUSINESS? (Q2)



WHAT **EFFECT** DO YOU EXPECT AI TO HAVE ON YOUR WORKFORCE? (Q3)



BUSINESSES USING AI

“WOULD LOVE TO HAVE SAID ‘DIFFERENT REGULATION’ AND NOT MORE/SAME/LESS.”

“WE NEED TO BUILD TRUST IN AI BY BUILDING A RESPONSIBLE APPROACH.”

“AI TODAY IS NOT ABOUT DARK SCI-FI SCENARIOS. IT IS A POSITIVE CHANGE, BRINGING MANY BENEFITS.”

Business respondents

“AI is a game changer with far-reaching consequences for our society and our businesses. It is already offering innovative solutions for the well-being of European citizens, shifting industrial value chains and opening massive business opportunities. AI is at the top of policy priorities around the globe. To win the AI race Europe needs to valorise its AI industrial and scientific excellence and concentrate on the deployment of critical industrial AI applications in non-tech sectors. Europe can become the global hub for industrial AI applications.”

Dana ELEFThERiADOU,

Team Leader for Advanced Technologies,
European Commission, DG Internal Market, Industry,
Entrepreneurship and SMEs

PERCEPTIONS OF AI AMONG BUSINESSES USING AI

This was by far the biggest group surveyed, but it received the least traction. The response rate of this group is just one third that of AI suppliers, and half that of policymakers. This suggests that AI is not yet of major interest to their business models or corporate governance.

Businesses executives, as well as policymakers, see the benefits of AI, with 89% responding positively when asked about how they see AI impacting their business, and 29% saying it is very beneficial for their business (Q1). They do not see AI as a risk to their business (Q2): 64% of responses to this question are at the lower end of the scale.

When asked about the impact on the workforce (Q3), 38% of respondents responded positively. Business responses to this question are mostly neutral or positive. By contrast, responses from policymakers are spread across the scale. Almost half (44%) of respondents believe AI will neither shrink or expand the workforce.

Concerning the need for AI regulation (see page 19), 63% of businesses say it should stay the same. However, one third of businesses think more regulation is needed. When compared with the policymakers group, businesses are almost half as likely to agree on having more regulation in place.

When asked which policy areas need to be prioritised (see page 20), businesses suggest Antitrust and Competition Policy (36%), followed by Civil Law and Justice (32%), Labour Law and Protection (28%) and Digital Platforms (24%).

“The rise of AI seems both ineluctable and inextricable. Ineluctable because we fundamentally need AI to sustain growth and development and to deal with global issues including climate change which mandates do more with less. Ineluctable also because it is fueled by the prevailing strategic competition between countries. The rise of AI is also inextricable since the fantastic opportunities it creates to revolutionize healthcare, transportation, security and work among others... are profoundly entangled with very serious challenges in terms of privacy, dignity, security and control potentially affecting the very fabric of human societies.”

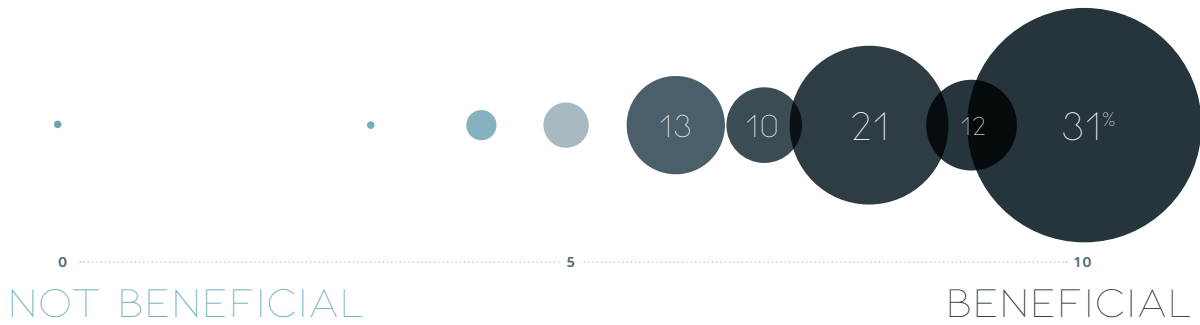
Nicolas MIALHE,

Co-Founder and President The Future Society

AI SUPPLIERS

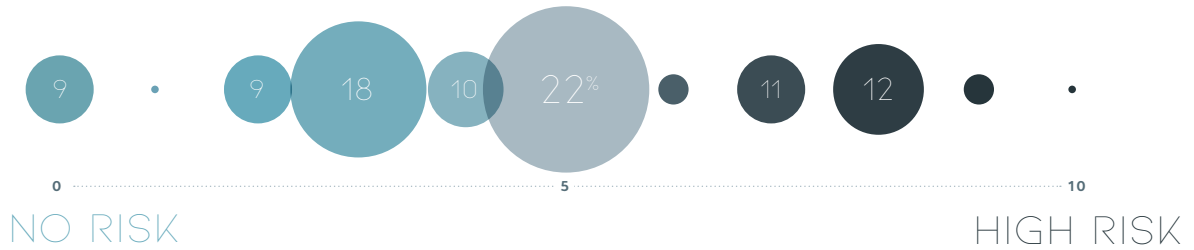
THINKING ABOUT YOUR BUSINESS CUSTOMERS,
HOW **BENEFICIAL** DO THEY THINK AI CAN BE TO THEIR BUSINESS? (Q1)

AVERAGE **7.8**



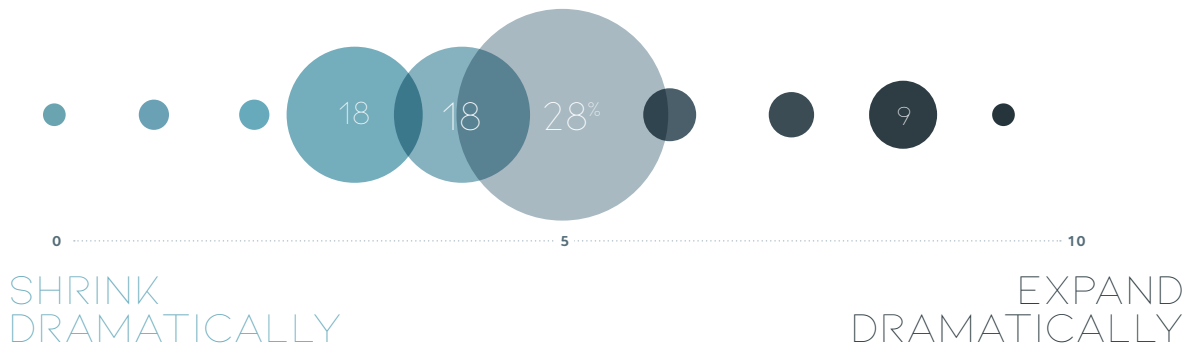
THINKING ABOUT YOUR BUSINESS CUSTOMERS,
HOW HIGH A **RISK** DO THEY THINK AI WILL BE TO THEIR BUSINESS? (Q2)

AVERAGE **4.6**



THINKING ABOUT YOUR BUSINESS CUSTOMERS,
WHAT **EFFECT** DO THEY EXPECT AI TO HAVE ON THEIR WORKFORCE? (Q3)

AVERAGE **4.6**



AI SUPPLIERS

“I BELIEVE THAT THE AI HAS TO DEMOCRATISE THE LABOUR MARKET AND THE ECONOMY, AND WE HAVE TO AVOID CREATING MONOPOLIES OF INFORMATION.”

“WE SHOULD SHARE KNOWLEDGE TO RAISE AWARENESS OF THE BENEFITS.”

“DO NOT OVERTHINK. CREATE A FRAMEWORK THAT SHOWS POSITIVE RESULTS AND GIVES DIRECTION.”

**Representatives
from AI suppliers**

“AI will drive productivity and economic growth, enabling the “intelligent enterprise” through human-machine collaboration. AI will help address critical societal challenges and yield tangible benefits for citizens. Europe must lead AI development to ensure future competitiveness and citizen well-being. Multi-stakeholder dialogue is needed to explore the economic and societal benefits AI can bring and ensure a human-centric approach and broad acceptance of the new technology in Europe.”

Dr. Andreas TEGGE,
Head Global Policy, SAP

PERCEPTIONS OF AI AMONG AI SUPPLIERS

A large majority (71%) of the AI suppliers say they are not concerned that it will undermine their overall success in the market. The rest of the respondents do not have major concerns, given that business innovators altogether marked this type of risk at an average of three out of ten.

More than 87% of businesses see AI as beneficial (Q1) over the next five years, with 31% thinking it will be very beneficial to their customers (B2B). Just under half of AI suppliers (48%) think the technological development might be risky for their business clients (B2B) (Q2).

Technology innovators, such as policymakers and other industries, do not have a strong opinion on the impact on jobs (Q3).

Business developers estimate that only 28% of customers using products and services powered by AI (B2C), are actually aware of the companies using AI technology (see page 21).

When it comes to potential customer concerns about AI risks, there is a 44% score, suggesting the group is evenly divided on whether this may be an issue or not (see page 21).

Only 13% of AI suppliers think consumers want less regulation. 39% think levels should stay the same and 48% believe more regulation is needed (compared to 54% of policymakers who wish to see more regulation).

When it comes to areas to prioritise in policy making, Health and Medical Care (38%) comes in first, followed by Education and Training (30%), Labour Law and Protection (29%), and Civil Law and Justice (29%).

“Users need to be able to trust technologies and the decisions that they produce. That is certainly the case for AI driven innovations where a big part of the current discussions are focused on ensuring transparency and respecting privacy. If we want to reach the full potential of AI, organisations as modern software factories, will need to have a clear grasp on how they collect, manage, protect, build, and learn from data, including personal data.”

Christoph LUYKX,
Chief Privacy Evangelist, CA Technologies

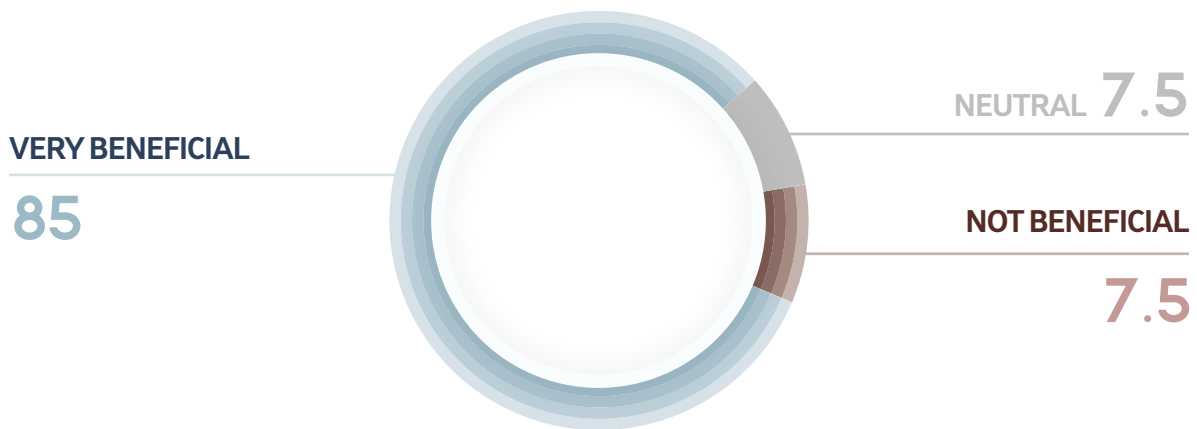
KEY FINDINGS

IT'S MOSTLY POSITIVE ...BUT KEEP AN EYE ON AI

THE OVERALL BENEFITS OF AI (%)

ALL THREE GROUPS AGREE THAT AI BRINGS BENEFITS - BUT SOME ARE MORE CONVINCED THAN OTHERS

Each of the three groups think that AI would help businesses and society (benefits averaged 7.7 out of 10). AI suppliers have the fewest reservations.



PERCEPTIONS ON AI BENEFITS

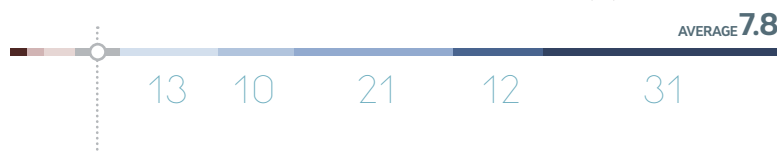
POLICYMAKERS:

HOW BENEFICIAL DO YOU THINK AI CAN BE TO YOUR COUNTRY GENERALLY? (%)



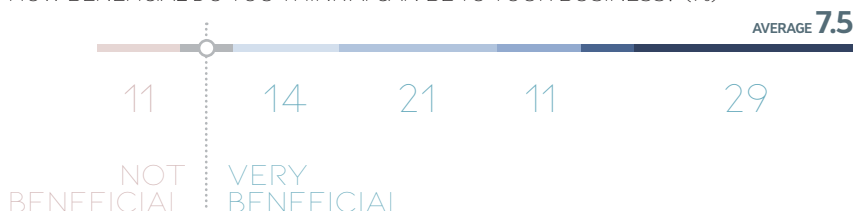
AI SUPPLIERS:

THINKING ABOUT YOUR BUSINESS CUSTOMERS, HOW BENEFICIAL DO THEY THINK AI CAN BE TO THEIR BUSINESS? (%)



BUSINESSES USING AI:

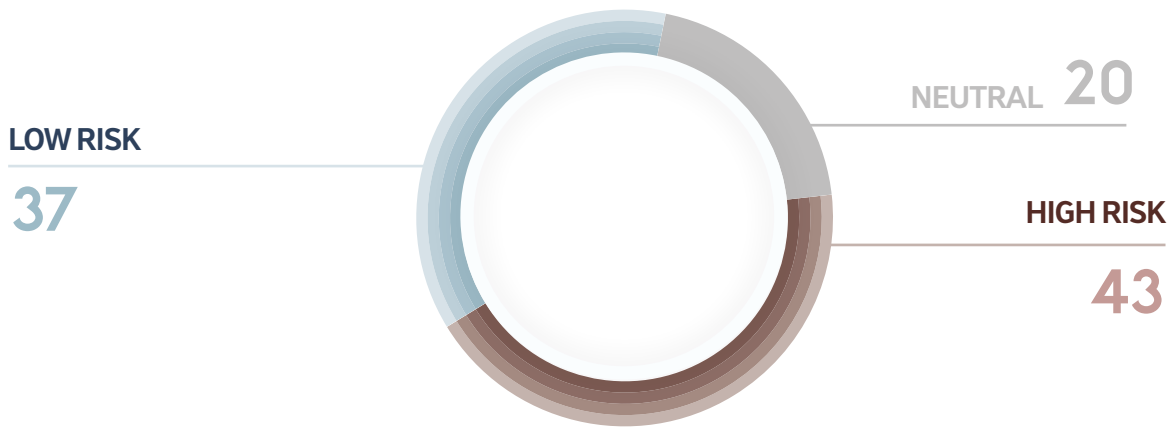
HOW BENEFICIAL DO YOU THINK AI CAN BE TO YOUR BUSINESS? (%)



THE OVERALL AI RISKS (%)

PRACTICAL EXPERIENCE REDUCES PERCEPTION OF RISK

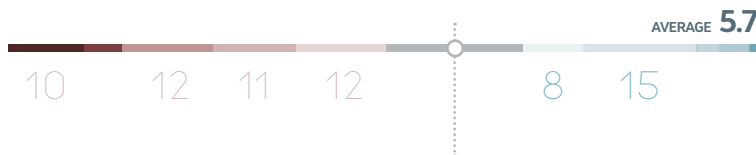
Policyholders gave the highest risk ratings for AI (5.7): they tend to be twice as sceptical as business representatives. AI suppliers have a more nuanced view, with a broader spread of opinion (4.6). Again, those who have already deployed AI have the fewest reservations. This is an area that could be researched further, as the public's risk perception is expected to influence the eventual policy responses.



PERCEPTIONS ON AI RISKS

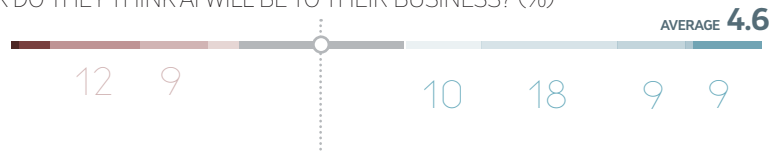
POLICYMAKERS:

WHAT RISK DO YOU THINK AI WILL POSE TO YOUR COUNTRY GENERALLY? (%)



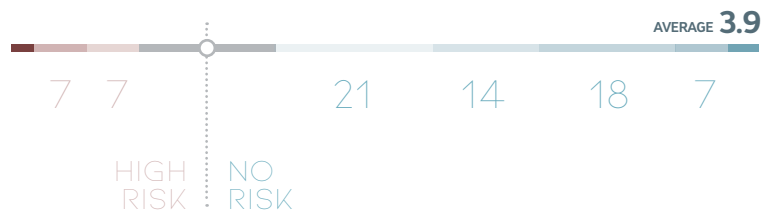
AI SUPPLIERS:

THINKING ABOUT YOUR BUSINESS CUSTOMERS, HOW HIGH A RISK DO THEY THINK AI WILL BE TO THEIR BUSINESS? (%)



BUSINESS USING AI:

HOW HIGH A RISK DO YOU THINK AI WILL BE TO YOUR BUSINESS? (%)



IMPACT OF AI ON EMPLOYMENT (%)

EFFECT OF AI ON THE WORKFORCE: ALL GROUPS SHARE THE SAME VIEW

When it comes to the potential impact of AI on jobs, there is no significant variation across the three groups. Overall, there are slightly more who think AI will make the workforce grow rather than shrink. However, while responses from policymakers and AI suppliers vary widely on the scale, most businesses using AI are in the middle ground, not showing the extremes of optimism or pessimism of the other two groups. This suggests that respondents think robots will create as much new work as they will take.



IMPACT OF AI ON EMPLOYMENT

AI SUPPLIERS:

THINKING ABOUT YOUR BUSINESS CUSTOMERS, WHAT EFFECT DO THEY EXPECT AI TO HAVE ON THEIR WORKFORCE? (%)



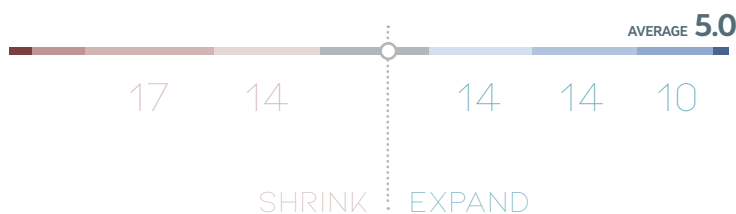
BUSINESSES USING AI:

WHAT EFFECT DO YOU EXPECT TO HAVE ON YOUR WORKFORCE? (%)



POLICYMAKERS:

WHAT EFFECT DO YOU EXPECT AI TO HAVE ON EMPLOYMENT IN YOUR COUNTRY? (%)



AMOUNT OF GOVERNMENT REGULATION OF AI (%)

DIFFERENT VIEWS ON THE NEED FOR MORE REGULATION

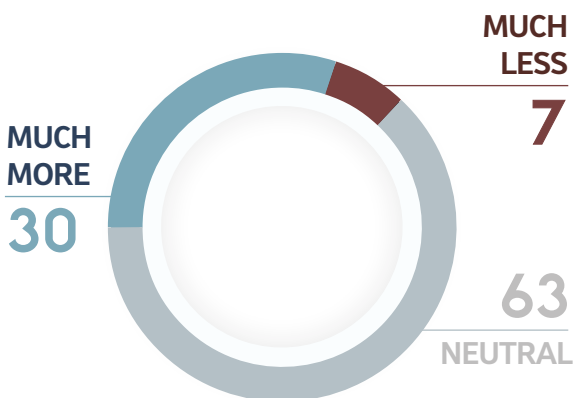
Policymakers overwhelmingly think that more regulation is needed. But amongst business using AI, a large majority think that the level of regulation is about right. Results vary from much more to much less regulation providing an equal weighted average result across all three groups.

The detailed results suggest there is a tendency for policymakers to favour much more regulation (54%), and certainly more regulation than businesses in general (30%). It is clear from the comments and the interviews that AI suppliers do not expect new rules; rather, they want regulation to boost innovation and allow their companies to grow, raising competitiveness and advancing society. Policymakers are more cautious: they want to boost the economy, but also to monitor AI, raise awareness of technology among citizens, and tackle societal challenges such as working conditions and legal practice.

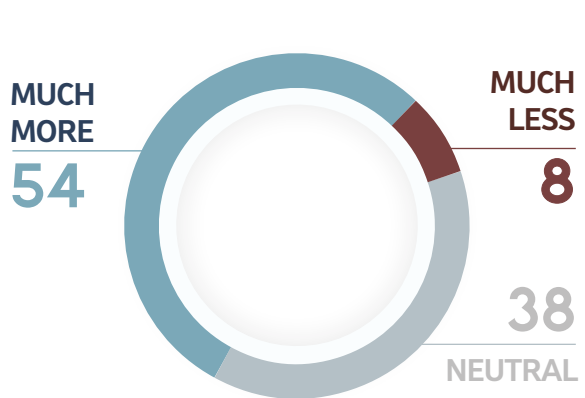
“The world will never be changing as slowly as it is today. We all know that the digital revolution headed by 5G and AI will irreversibly alter our reality. If we want Europe to remain in the forefront of the socio-economic growth, we need to be very well prepared for this challenge. One of our ambitions in the European Parliament is to make legislation that is evidence-based and supported by independent experts. I believe that AI can be a valuable tool to uphold and enforce democracy, not to undermine it – but only if used ethically and in a legitimate way.”

Róza THUN,
Member of the European Parliament

BUSINESSES USING AI: HOW MUCH GOVERNMENT REGULATION DO YOU THINK WE NEED? (%)



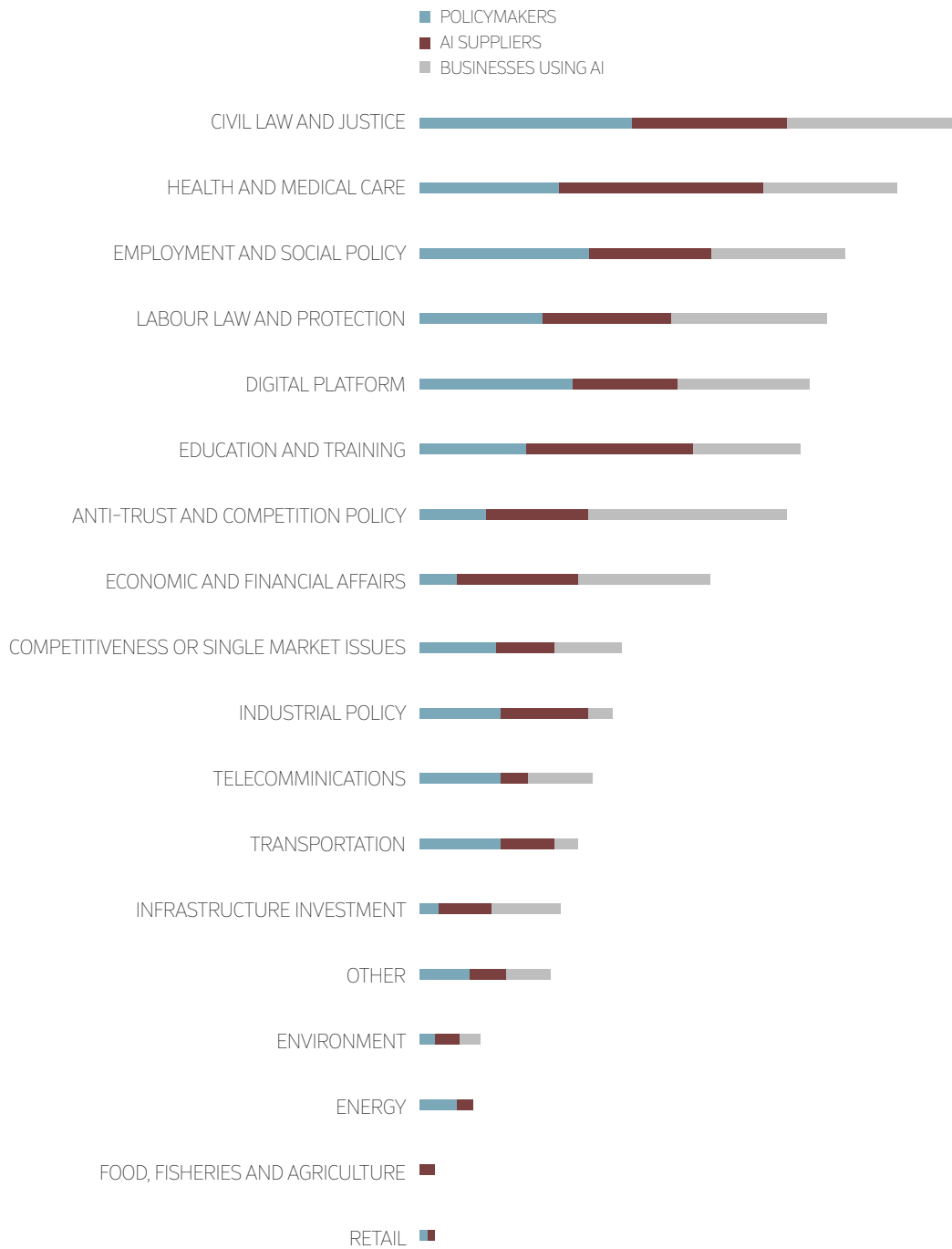
POLICYMAKERS: HOW MUCH REGULATION DO YOU THINK WE NEED? (%)



POLICY PRIORITIES (%)

CIVIL LAW AND JUSTICE IS A COMMON POLICY PRIORITY FOR ALL GROUPS

Most respondents also see Health and Medical Care as a priority, perhaps a reflection on how many public organisations have patient data which feed to AI, from virtual nurse applications to patient care, diagnosis and research. Policymakers and AI suppliers are particularly concerned about Employment and Social Policy.

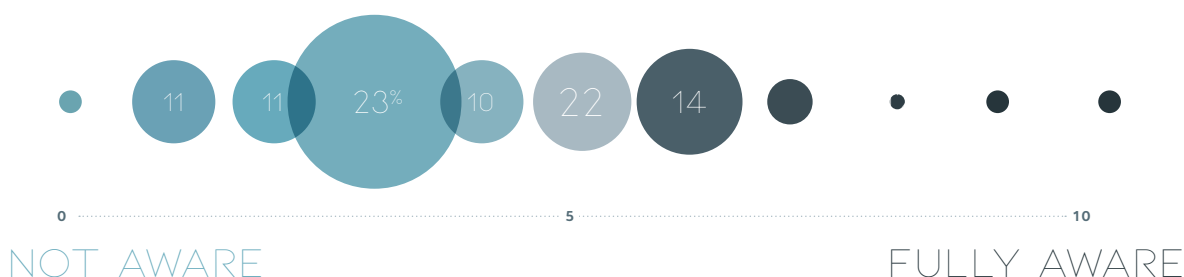


CONSUMERS: UNAWARE AND CONCERNED

We asked tech suppliers if they think consumers are aware of AI being deployed in the products and services they use, and if they think consumers are concerned about its use. The charts are almost mirror images, with awareness leaning towards the low end and concerns towards the high end.

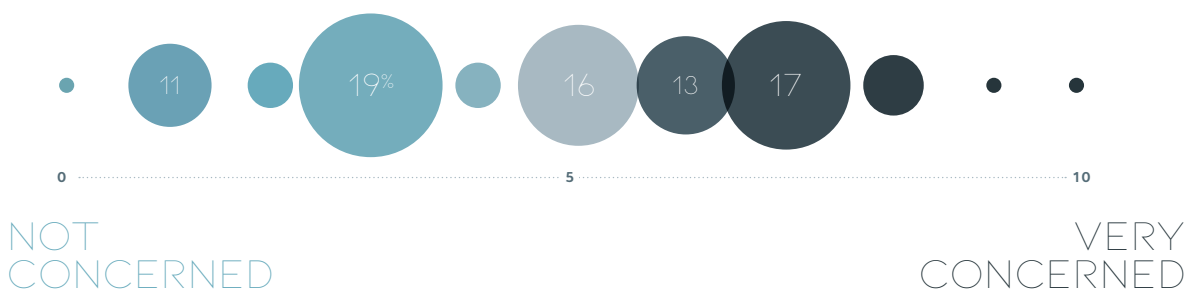
HOW **AWARE** ARE CONSUMERS ABOUT TECH COMPANIES' USE OF AI/MACHINE LEARNING?

AVERAGE **4.1**



HOW **CONCERNED** DO YOU THINK CONSUMERS ARE ABOUT THE PERCEIVED RISKS OF AI?

AVERAGE **4.7**

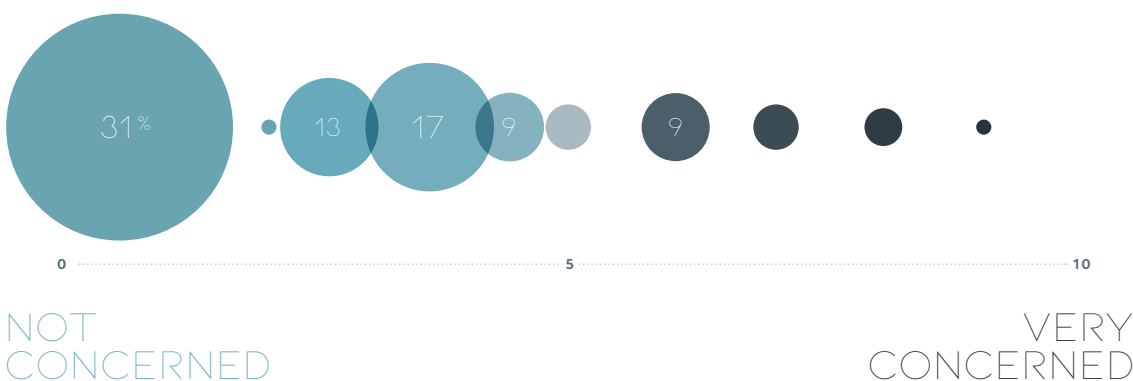


FEARS OF AI COULD DAMPEN EUROPE'S TECH BUSINESS

We asked tech suppliers if they feel that fears of AI was holding back their business. While many are bold and think it is not, some 31% feel that it is. Given that these fears tend to fade with experience, this could nonetheless could have an impact on the tech suppliers, reducing their ability to create supply side jobs in Europe.

HOW **CONCERNED** ARE YOU THAT FEARS WILL HAMPER YOUR BUSINESS SUCCESS?

AVERAGE **3.0**



SURVEY OBJECTIVES AND METHODOLOGY

ORGANISING THE BRAINSTORM

WHAT IS THE POLITICAL CONTEXT?

European leaders and institutions regularly hail the opportunities offered by robotics and AI. In January 2017, for example, the European Parliament called for EU-wide legislation on AI and robots, including an ethical framework for development, distribution and liability. The European Commission is due to publish a comprehensive European approach to AI in the first half of 2018¹, which will address the technological, ethical, legal and socio-economic issues. Countries like France, UK and Germany are making AI a core aspect of their industrial strategies, with Paris launching the 'France is AI' initiative in 2016 to raise its profile.²

“AI could lead to incredible improvements in our working lives, by freeing up staff from dull, repetitive tasks to focus on more valuable and engaging work. It also has fantastic applications in areas including healthcare. At Fujitsu, we have worked with San Carlos Clinical Hospital in Spain to build an advanced technology platform based on AI. The machine-learning platform can diagnose depression, giving doctors more time to focus on treatment and care. Nonetheless there are understandable concerns about the possible negative consequences of AI, from eliminating some jobs to fears about cyber security. Realising the advantages of AI depends very much on how we approach it. Our own research reveals that 84% of global business leaders are in favour of a co-ordinated global response to prepare for change. By bringing governments and businesses together to tackle these challenges and put people first, we can ensure that, as the technology advances, it is to the benefit of everyone.”

Marco CANTON,

Senior European Affairs Executive, Fujitsu

Many businesses already see AI as a routine tool – although it is often at the back-end of the business, helping analyse and sort through data to identify patterns of consumption. There is a growing number of AI-based client-facing products, like think voice assistants, individualised product offerings or chat-bots. Industries have started publishing white papers and reports elaborating their take on AI governance and innovation.

The development of AI also links back to ongoing public debates on the impact of new technologies on our societies, data privacy and ownership, or the role of technology companies in protecting consumers. A recent Eurobarometer³ survey showed that 61% of European citizens have generally positive attitudes towards robots and artificial intelligence. However, the Eurobarometer study also found that 74% expect robots and AI to take away more jobs than they create and that the more informed citizens are, the more likely they are to trust technology.

WHY CONDUCT A SURVEY?

We are one of the world's largest communications and public affairs companies, and we base our work on evidence. With the AI survey, we wanted to advance current discussions on AI and:

- ▲ examine the current EU digital policy landscape;
- ▲ analyse the real and perceived impact of AI on policy regulation, technology innovators and businesses in general;
- ▲ take a deeper look at the opportunities offered by AI.

WHAT IS OUR GOAL?

The survey hopes to identify trends, compare and contrast stakeholder views, and offer a glimpse into the future.

HOW DID WE ASSEMBLE 'THE BRAINSTORM'?

In February and March 2018, Burson-Marsteller and CEPS conducted an online survey on perceptions of AI.

Closed questions used a 0-10 Likert scale to quantify answers. The survey was anonymous and responses were kept confidential.

We also conducted interviews to collect thoughts and opinions. This adds more insight to the quantitative data. The responses represent the interviewee's own perceptions of AI, its weaknesses, strengths and arising opportunities.

WHO RESPONDED

We received 188 responses. Respondents included senior executives and industry specialists, policy experts from relevant branches and working groups across European institutions, government representatives, chief executives in leading technology start-ups and SMEs across Europe. The vast majority of respondents are based in Brussels representing both European and international businesses, and policy directions of different EU member states. The survey does not allow for large sample sizes due to the limited number of executives or policy experts that specialise in this topic.

We grouped our respondents into three different segments:

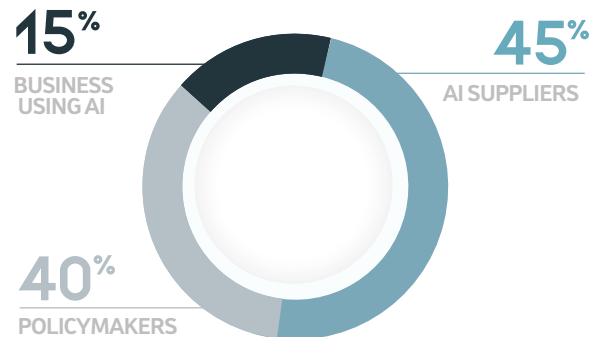
- ▲ **AI SUPPLIERS** - founders and CEOs, co-founders, Vice-Presidents, Heads of European Affairs, Heads of European Relations, Directors and Public Affairs Managers, Regulatory Affairs Experts, Secretary Generals, Chief Communication Officers.
- ▲ **BUSINESSES USING AI** - founders and CEOs, Heads of Public Policy, EMEA Press Officers, Heads and Directors of Public Affairs, Heads and Directors of Corporate Governance.
- ▲ **POLICY MAKERS** - Director-Generals, Deputy Director-Generals, Heads of Sectors, Heads of Units, Deputy Heads of Units, Policy Advisors, Policy Officers, Programme Officers, Case Handlers, Members of the European Parliament (Chairs and Vice Chairs of EP Committees), Members of Working Parties of the Council of the EU, Director-Generals of the Council of the EU, European Digital Champions in the Member States.

“AI is transforming the business landscape at lightning speed and on a global scale. In this changing environment, strategic collaborations and partnerships across the globe become increasingly important. International expertise can create the competitive edge to drive value to the benefit of European society. Let's welcome AI. Let it relieve us of some work and continuously challenge us to be more than robots.”

Rowan BENECKE,

Chair, Global Technology Practice, Burson-Marsteller

REPRESENTATIVENESS OF RESPONDENTS



Almost half of the responses came from AI suppliers (45%), followed by policymakers (40%) and businesses using AI (15%). Given that the number of requests sent was similar for each group, the number of responses implies a strong interest from targeted policymakers and AI suppliers. The lower response rate from businesses using (or potentially using) AI probably reflects that AI's use in the broader business community is in its early stages and/or its use does not yet have a high profile in the business.

QUESTIONS ASKED

We requested all respondents to assess both the benefits and risks of AI, including how they see the impact of AI on employment. We asked them how much government regulation of AI there should be, and what policy areas should be prioritised when regulating it. We also asked specific questions to AI suppliers, so they could respond from a consumer perspective. AI suppliers were also proposed to evaluate how consumers see AI, if they were aware of how it is used, and if they have concerns about such technology.

1. Digital Single Market. (2018). Artificial Intelligence. [online] Available at: <https://ec.europa.eu/digital-single-market/en/artificial-intelligence> [Accessed 7 Mar. 2018].
2. France is AI. (2018). French Artificial Intelligence ecosystem - France is AI. [online] Available at: <https://franceisai.com/> [Accessed 7 Mar. 2018].
3. Digital Single Market. (2018). Attitudes towards the impact of digitisation and automation on daily life. [online] Available at: <https://ec.europa.eu/digital-single-market/en/news/attitudes-towards-impact-digitisation-and-automation-daily-life> [Accessed 7 Mar. 2018].

“The changes that machine learning will bring are so fundamental that everybody should invest some time to understand it, engage others, and evaluate how to best prepare organizations to benefit from it.”

Risto SIILASMAA,

Chairman of the Nokia Board

“AI can be a game changer. In order to know what’s mainstream tomorrow, policy makers should look at what startups are doing today. European initiatives should be measured against their impact on startups as the tech-telescope for tomorrow’s trends.”

Lenard KOSCHWITZ,


Director European Affairs,
Allied for Startups

“Economies and businesses are changing, and artificial intelligence is one facet of that change. The fourth industrial revolution is going to drive further transformation, and understanding the wider repercussions of that is critically important. The industry needs to think about how technologies like AI are going to be developed and deployed, and take responsibility for working with governments and other organisations to make that process as smooth and manageable as possible. That means taking a lead on skills programmes, and working with governments to help them understand the impact of this technology on the workforce and the sort of skills required in the future. We should not think about AI in terms of job losses; instead there will be job displacement. Current job categories will be replaced by other categories as demands and requirements change. The challenge for us is ensuring that we have people with the right skills to fill those new roles. To do so we must have the right skills programmes. Cisco has undertaken many skills development initiatives, including the Networking Academy programme which celebrated its 20th anniversary at the end of 2017. The initiative exists through partnerships with schools right across the world and constantly evolves alongside the latest technology.”

Matt HOULIHAN,

Director, Government and Corporate Affairs, Cisco





CLOSING THE GAP PICKING OUR BRAINS

Burson-Marsteller believes in the transformative power of technology to contribute to the economy and deliver positive societal change.

While it may be decades before we reach the so-called singularity – where machine intelligence catches up with human intelligence – deep learning, machine learning and algorithms are all around us. Our report, 'The BrAlnstorm', examines trends in the current use of AI. We hope this contributes to the strategic dialogue and helps AI innovation flourish with a human-centric approach. We want to create an environment where policymakers and industries engage in inclusive dialogue and share good practice, raising awareness to the wider public.

Europe has a huge opportunity with AI. It can lead the innovation, while fostering a strong and healthy AI sector. But it will only succeed if companies and policymakers face the challenges of digitalisation together.

Tom Korman

Manager, Burson-Marsteller
Ph.D. candidate on AI

Burson-Marsteller is a leading global public relations and communications firm. We provide strategic thinking and manage integrated campaigns across a full range of services, including public affairs, positioning, crisis management, advertising, digital and trainings. We have a particular focus on areas like online platforms, taxation, competition, data, and cybersecurity.

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CEPS is a leading think tank and forum for debate on EU affairs, with an exceptionally strong in-house research capacity and an extensive network of partner institutes throughout the world. In April 2018 CEPS will launch a new Task Force on Artificial Intelligence that will look into emerging ethical and policy challenges, and will generate policy recommendations for EU institutions. The Task Force will be a multi-stakeholder group with strong participation from industry, civil society, academia and institutions.

ANDREA RENDA

Senior Research Fellow and Head of GRID (Global Governance, Regulation, Innovation and the Digital Economy) at CEPS. He also holds the Google Chair for Digital Innovation at the College of Europe in Bruges, Belgium.

A

Algorithm

A process or set of rules for solving a problem. In computer science, an algorithm is a math formula or programming command in the form of a set of steps to accomplish a task. The steps need to be in the right order, like the order people might have for getting dressed in the morning.

Artificial intelligence

The ability of a computer or computer-controlled robot to perform tasks commonly associated with intelligent beings. The term is frequently applied to systems capable of gathering data and making decisions and/or solving problems based on the analysis of datasets.

B

Black box

An event where the algorithms or calculations used by the AI programme are too complex to be understood or interpreted by a human. We may know the rules it used to get there, but we cannot know how the computer arrived at its decisions.

Bots

Computer assistants or applications that communicate with humans to perform an automated task, such as setting an alarm, telling you the weather or searching online. Bots often have a narrow use, but they can answer questions and help you get things done faster without needing to speak to another human.

C

Crowdsourcing

The practice of distributing tasks to a large audience and get things done quickly.

D

Data mining

The process of sorting through large data sets to extract usable information. This is used to find patterns and solve problems.

Deep learning

A machine learning technique allowing computers to learn by example. It replicates the learning processes that humans do naturally. Deep learning is a key technology behind driverless cars, helping them recognise road signs or distinguish pedestrians from street lamps.

GLOSSARY

F

Facial recognition

The ability of a machine to recognize faces and emotional states in images or video signals. This is commonly done through point annotations called landmarks.

N

Neural networks and deep learning

A neural network or artificial neural network (ANN) is a computer system modelled on the human brain and nervous system. Closely tied to the idea of deep learning, neural networks 'learn' complex tasks by considering examples, generally without task-specific programming. For example, they learn to identify penguins by processing images that have been manually labelled as "penguins" or "not penguins" rather than learning about their characteristics like wings, beaks and feathers.

M

Machine learning

The use of algorithms to find patterns in data without explicit instruction. It is a system that allows machines to learn without being programmed, changing their programming when exposed to new data.

S

Singularity

A point when advances in artificial intelligence leads to the creation of an intelligence smarter than humans. This intelligence could theoretically result when humankind merges with artificial intelligence.

Speech recognition

The ability of a machine to recognize words and emotional states in an audio signal.

Superintelligence

A machine intellect that surpasses the best human brains in almost every field, including scientific understanding, creativity, perception and social skills.

T

Turing test

A test of AI's ability to pass as human. Named after Alan Turing, the British World War II codebreaker and computer pioneer who conceptualised the idea. The test was conceived as a way to determine if an AI can fool a person into believing they're seeing or interacting with a real person.

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