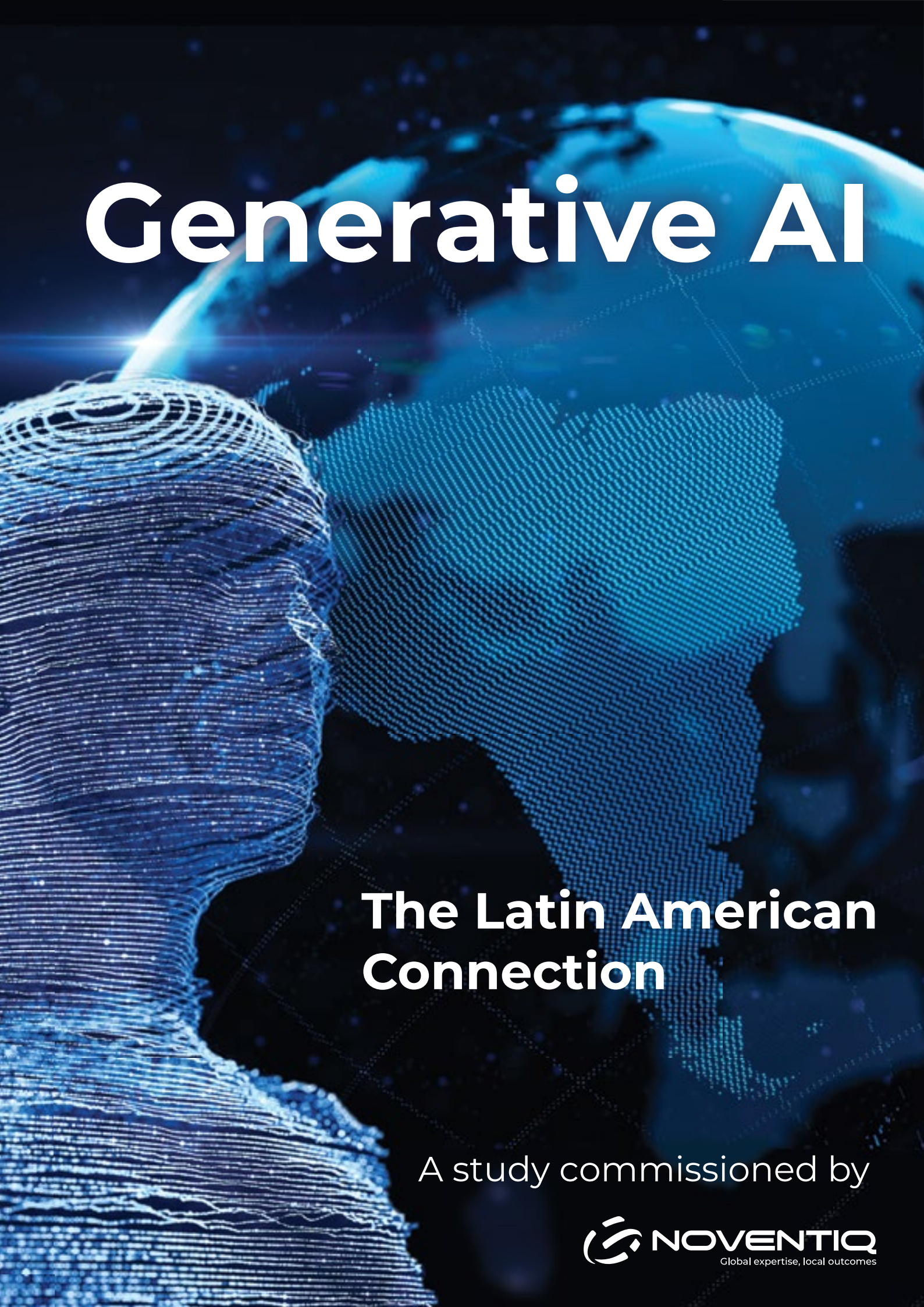


Generative AI

The Latin American Connection

A study commissioned by

NOVENTIQ
Global expertise, local outcomes

Contents

Sebastian Sack
Vice President – Latin America,
Noventiq

Introduction

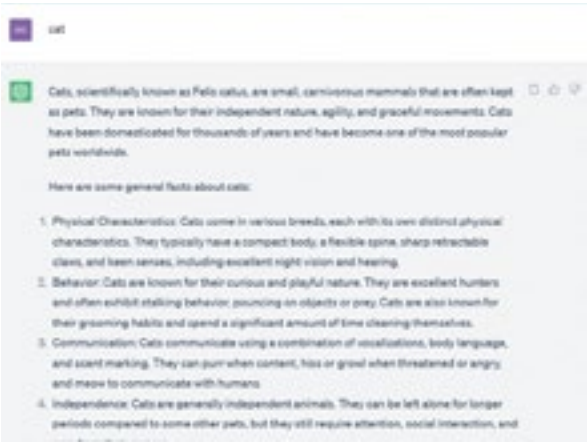
On November 2022, ChatGPT was launched by San Francisco–based OpenAI, an independent research body founded by – amongst others – Elon Musk, Sam Altman and Peter Thiel. By the beginning of the following year – just one month later – ChatGPT had become the fastest-growing app of all time, according to research from investment bank, UBS[1].

What defines ChatGPT – and the entire concept of Generative AI – is its ability to collate, assess and analyze unimaginable volumes, and different types of data, before developing and then testing hypotheses about the same, and, ultimately, 'learning' from its mistakes to continuously create new content, which can, in turn, be scrutinized to extract more knowledge. It does all this through an interface that is completely intuitive to use – it understands and responds to natural human language and answers questions as colloquially as any other person, or even better – at a price that makes it accessible to virtually anyone on earth.

Generative AI is distinct from 'traditional' classification AI. Both require learning on existing data (text, images, audio, and video) but their post-learning functioning is fundamentally different. When presented with a picture of a cat or a dog, the classification AI will answer whether it is a cat or a dog. The generative AI works somewhat differently – when presented with a word 'cat', it will draw a cat or eloquently describe the cat with text or audio clip or present a video clip of the same.

1 https://www.cbsnews.com/news/chatgpt-chatbot-tiktok-ai-artificial-intelligence/

So Generative AI can use the 'whole sum of human knowledge' to produce entirely new content and knowledge! This is the first time in human history that such content – and knowledge – can be produced at scale and with unprecedented quality by machines.



Detailed description of a cat in ChatGPT when inserting the word "cat"

As a leading global digital transformation solutions and services provider, Noventiq is no stranger to using Classification AI to identify trends and predict future behaviour in equipment or, even, people (shoppers, passengers or drivers, for instance).

With the emergence of Generative AI, we see an even bigger opportunity for our teams and clients to drive productivity and create new sources of value, particularly in Latin America.

And this is why we commissioned this report. We believe that the region exhibits unique economic, social and cultural conditions that will enable it benefit disproportionately from the emergence of Generative AI. Let me share a few examples.

A new 'lingua franca' for the Americas

The recent history of Latin America remains a paradox: despite its geographical proximity to the world's largest economies – the US and Canada – the common time-zone it shares with large parts of both, as well as the presence of an active Latino diaspora, particularly in the US, the

Latin American economy has yet to fully benefit from such inherent synergies.

One explanation could be that the biggest inhibitor is the lack of English language capability; 60% of the Web content is in English[2] – compared to just 4.3% in Spanish and 1.5% in Portuguese. It could be that Latin Americans' struggle – or reticence – to consume the full range of content available on the Web and in scientific literature has impacted the rate at which they, in turn, can innovate and create content. Not only in terms of leisure and entertainment but also work-related materials – code, customer interactions, etc. limiting their capability to offer services

Generative AI has the potential to simply remove the traditional language barrier altogether.

Time-zone leverage

The entire continent shares common, workable time-zones with Latin America; Mexico and the most of Central America operate on the US Central Time zone. Panama, Colombia, Peru, and Ecuador run on the US East Coast time, while the region's biggest economy, Brazil, together with Argentina, Chile, Uruguay, and Bolivia operate just one hour ahead.

2 https://www.statista.com/statistics/262946/most-common-languages-on-the-internet/

The practical and logistical advantages of these longitudes – ranging from common market opening times for financial transactions, to real time customer support – helped drive the region's near-shore sector towards revenues of $78 billion in 2022, according to the Inter-America Development Bank[3]. And that's without considering the impact of Generative AI.

Mitigating monopolies

Another characteristic of Latin American business has been the domination of certain sectors by a few dominant players, creating disincentives and invisible barriers for new entrants. The banking sector is a case in point: in Brazil, 80% deposits are concentrated within the country's top five banks[4], while other markets are alarmingly underserved – in Mexico, there are a total 51 banks, in Colombia only 25; for countries with populations of 127 million and 51 million respectively[5]. The result: these have some of the highest banking fees in the world. And, in addition to that, according to the Bank of International Settlements[6], cash remains overwhelmingly as the most common form of transaction (90% of payments in Mexico[7], 70% in Brazil[8]).

Multiple sectors are characterized by such dominant incumbents across the region, ranging from logistics and transport, to construction and retail, according to research by the UN Development Program[9].

Generative AI – and the synergies and scale that can result because of it – has the potential to render such monopolies irrelevant; new entrants will be able to compete directly in markets traditionally reserved for the incumbents. And in Latin America, that represents a large part of the economy.

User-driven innovation

History demonstrates that consumers and end-users themselves – rather than concerted vendor campaigns or public policy – have been the biggest driver for new technology adoption in Latin America. The adoption of crypto currencies is a case in point: last year, US$500 billion was sent to Latin America from abroad in crypto[10]; much of which represented essential remittances for families with little access to traditional banking services. They didn't – or couldn't – wait for crypto services to be provided by incumbent banks, nor for the public sector to facilitate affordable cross-border remittances. The use of crypto payments offered by numerous fintechs offered an affordable, viable alternative; so, they adopted it.

Today, one-in-two Latin Americans claim to have made a crypto transaction[11]. Many will have been completed through a traditional bank or, even, Government approved programmes such as PIX[12] in Brazil. But make no mistake, it was the region's user themselves who drove adoption; and – given its ease-of-use and accessibility – this is the path that Generative AI could follow in Latin America.

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3 *https://www.iadb.org/en/news/nearshoring-can-add-annual-78-bln-exports-latin-america-and-caribbean*

4 https://www.bnamericas.com/en/analysis/brazil-banks-set-to-see-stronger-loan-demand-competition-in-2020

5 https://a16z.com/2021/04/13/latin-america-fintech/

6 https://www.bis.org/publ/qtrpdf/r_qt2012f.htm

7 https://www.cashmatters.org/blog/cash-accounts-90-consumer-transactions-mexico-pymnts-2018/

8 https://valor.globo.com/financas/noticia/2019/10/04/para-71-dinheiro-e-principal-meio-de-pagamento.ghtml?origem=G1&utm_source=g1.globo.com&utm_medium=referral&utm_campaign=materia

9 https://www.undp.org/latin-america/publications/concentration-economic-and-political-power#:~:text=Markets%20in%20Latin%20America%20tend,efficient%20technology%20and%20hindering%20innovation.

10 https://blog.chainalysis.com/reports/latin-america-cryptocurrency-geography-report-2022-preview/

11 https://www.coindesk.com/business/2022/07/01/half-of-latin-americans-have-used-cryptocurrencies-mastercard-survey-shows/

12 https://www.bcb.gov.br/en/financialstability/pix_en

It should be noted that our research covered, not only the professional sphere, but respondents' views and use of Generative AI in a private and societal context; according to our findings **62.8%** had already used the technology at work (to research and compile presentations), while over a third **(35.7%)** have used it at home (to research and create content for social events).

As regulations and protocols attempt to keep pace with the speed of this technology, these are the voices that will ultimately define its daily use at work, at home and in society in Latin America.

The Legal Context

In terms of laws and legislation, there are few precedents regarding the level of concern and anxiety associated with the sudden emergence of Generative AI.

Politicians and legislators were caught completely off-guard by speed and scale with which the technology took hold. Similarly, the scientific community – including the creators of ChatGPT themselves – had developed little in the way of frameworks to manage risk associated with transformational technologies like Generative AI.

In addition, the broader accompanying discussion about existential risks associated with AI in general have contributed little to addressing the practical issue of day-to-day regulations.

Italy was the first to fire a salvo regarding regulation and ChatGPT, announcing a blanket ban in March '23; one month later services were restored following OpenAI's 'clarification' regarding issues raised by the Italian Data Protection Authority – or the European Union's General Data Protection Regulation (GPDP) –.

When it comes to regulation, where the European Union goes, Latin American jurists eventually follow; Brazil's own version of GDPR came into force in 2021, with the inspired law originally proposed in 2018 and finally coming into (nearly) full effect in 2021, while similar law changes in Argentina, Colombia, and Mexico are currently being tabled[13].

It is extremely likely that – once the dust settles in Italy (and the European Union, as a whole) regarding acceptable use and deployment of Generative AI – Latin American countries will apply equivalent versions locally.

The first full standalone AI strategies announced in Latin America – effectively relating to Classification AI – were published by Argentina and Colombia in 2019, just two years after countries such as the UAE, Canada, China, and Singapore, for example, followed by France, the UK, and South Korea a year later.

Most major Latin American countries have published either guidelines or national plans around AI[14] reflecting each country's priorities. While Argentina's focuses on encouraging private sector growth around AI supported by incentives and Government initiatives to aid start-ups, countries such as Colombia and Chile have established legal and ethical frameworks to manage the deployment of the technology.

Colombia's framework includes standards around accessibility and inclusivity around AI as part of a national AI ethics framework, while Chile's framework will ensure – not only service and availability levels for relevant data-sets – but 'legal clarity' for developers and users of the same.

It should be noted that none of the policies or legislation published to date – July 2023 – around AI in Latin America refers to its *Generative* iteration; in fact, there is currently no mention of the same in any of the texts. So, public policy and legislation will have to adapt rapidly to keep pace with the technology.

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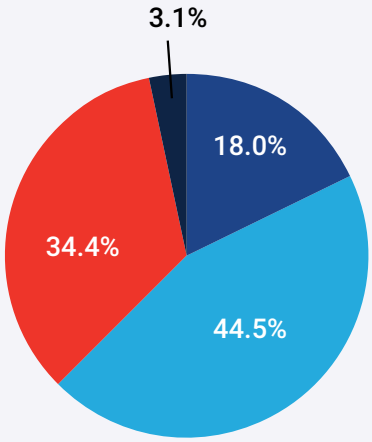
13 A Look-Back and Ahead on Data Protection in Latin America and Spain | Electronic Frontier Foundation (eff.org)

14 Seizing the opportunity: the future of AI in Latin America; Economist Intelligence Unit

According to our own research amongst Latin American business decision-makers, **37.5%** describe themselves as 'uncomfortable' with the current legal status of Generative AI, and will be delaying deployment within their companies until the framework is clear. Interestingly, it's the technologists who are actually demonstrating the highest level of concern regarding legal clarity – **47.8%** of CTOs/CIOs would prefer to delay deployment (due to legal concerns) compared to just **31.2%** of CEOs and Managing Director respondents.

From a business perspective, how clear/comfortable do you feel about the legal implications of Generative AI being used to help engage clients, suppliers, employees and partners etc.?



- **100% comfortable;** we need to take advantage of the technology - the legal system will eventually catch up
- **Sufficiently comfortable** to trial Generative AI on a limited basis
- **Not yet comfortable;** we are analyzing internally, but without a clear legal framework, we won't be deploying externally
- **100% uncomfortable;** my organization will not be implementing Generative AI anywhere, until the legal protocols are clear

In terms of business sectors, respondents from the retail sector are currently the most hesitant – **50.0%** would prefer to delay deployment of Generative AI until legal clarification is confirmed – compared to just **31.0%** in banking and finance, for instance.

One approach that will facilitate legal clarification are increasing levels of cross-border and multi-regional approaches to ethics and legislation including initiatives with the European Union and the African Union, collaboration among Nordic-Baltic states and Arab nations, as well as efforts within the G7 and the G20[15]. Additionally, advisory organs such as the OECD AI Policy Observatory exist as tools designed to suggest innovative approaches to address the legal and ethical challenges posed by AI and – more recently – its Generative iteration[16].

Recent opinion polls have demonstrated that the European Union is Latin America's preferred option in relation to forming a digital alliance (over countries such as China and Russia). As outlined above, the former has been the traditional and generally accepted starting point for legislation in Latin America – particularly relating to technology, data and privacy.

Such collaboration is only likely to be enhanced through this year's Spanish presidency of the European Union, where the formalization of a 'digital alliance' with Latin America and the Caribbean is on the agenda[17]. According to Government submissions, the latter will focus on 'connectivity investments, cybersecurity, and rights to support Latin American countries' digital transitions'; and a common legal and ethical basis will be central to the same.

A counter argument suggests that 'excessive' regulation – including around issues such as privacy and data protection – could inhibit the development of Generative AI and the public benefits that could result. Here, we are seeing the emergence of a type of Generative AI 'arms race'; Latin America is emerging as a prominent

15 https://www.oecd-ilibrary.org/sites/db4d2773-en/index.html?itemId=/content/component/db4d2773-en

16 https://oecd.ai/en/wonk/how-the-oecd-ai-policy-observatory-has-shaped-colombia-and-latin-americas-approach-to-ai-policy

17 https://ecfr.eu/wp-content/uploads/2022/10/Byting-back-The-EUs-digital-alliance-with-Latin-America-and-the-Caribbean.pdf

destination for start-ups and tech entrepreneurs, providing home to 34 new unicorns in 2021[18] alone, more than half of which will benefit from or use Generative AI in their offering in the future[19].

Latin American Governments, therefore, have a careful path to navigate; entrepreneurs (and their investors) want legal assurances and stability, but they don't want to be subject to draconian restrictions that will inhibit their ability to create new products or put them at a disadvantage to competitors based elsewhere.

While legal protocols are being debated, actors from all sides of the legal process are making use of Generative AI to analyse precedents, research their cases and prepare their arguments. One recent example involved a Colombian judge who turned to ChatGPT to better understand how a particular law could be applied to the case of an autistic child's medical funding[20].

In the last week of March, a judge in Peru[21] and a magistrate in Mexico[22] openly used OpenAI's ChatGPT to trigger a second instance ruling and to illustrate arguments in their respective court hearings. Reporting on both cases highlighted the positive impact of Generative AI on court proceedings, with no issues or ethical concerns being raised.

The Colombian cases could contribute to a global discussion on the importance of digital literacy of judges, their aides, and attorneys, as well as the need of having clear guidelines of when and how to use AI systems in the judicial system.

Juan David Gutiérrez, Associate Professor, the Universidad del Rosario (Colombia)[23]

Earlier that month, five of the ten Court of Appeals judges participating in a selection process for the Supreme Court of Chile discussed the use of artificial intelligence (AI) in the judiciary. One of them even referred to the above case of the Colombian judge who transcribed four prompts and answers direct from ChatGPT to support his ruling[24].

These examples perfectly demonstrate Generative AI's potential, as well as Latin Americans' openness to utilizing it for help and support.

According to our own research**, 18%** respondents describe themselves as '100% comfortable' with deploying the technology within their organizations Q.2, while – even more notably – **62%** claim to have already used it in a professional context.

18 https://latam-investor.com/2022/03/latin-americas-booming-tech-scene/

19 https://latinamericareports.com/the-progression-of-advanced-ai-where-do-latin-american-governments-stand/8056/

20 https://www.theguardian.com/technology/2023/feb/03/colombia-judge-chatgpt-ruling

21 https://img.lpderecho.pe/wp-content/uploads/2023/03/Expediente-00052-2022-18-3002-JP-FC-01-LPDerecho.pdf

22 https://www.youtube.com/watch?v=OwaZg3quyls&t=3679s

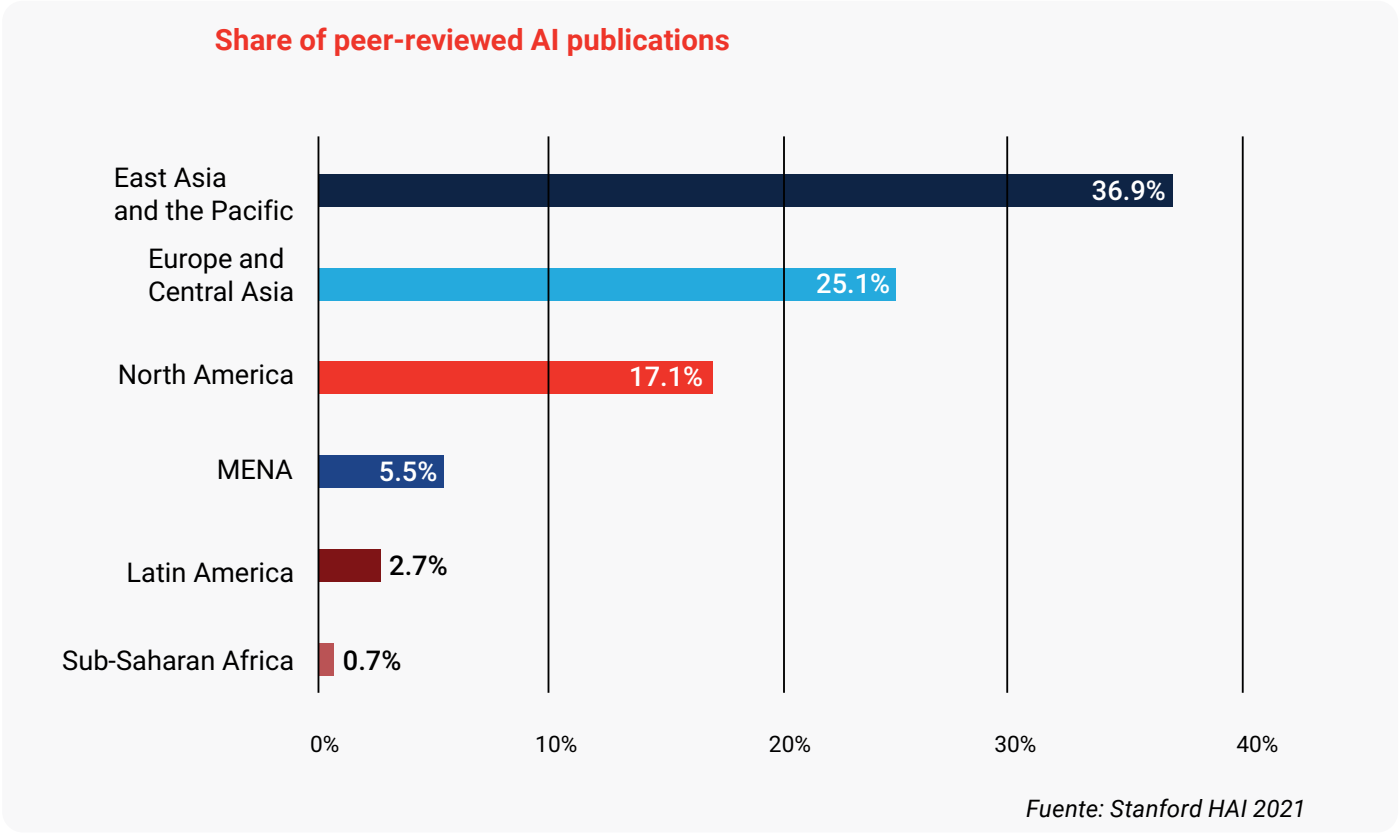
23 ChatGPT in Colombian Courts – Verfassungsblog

24 https://verfassungsblog.de/colombian-chatgpt/

The Educational Systems

Generative AI's capacity to not just collate and synthesize unprecedented volumes and types of content but also apply a critical assessment of the same makes its transformative for the educational sector[25]. Its capacity to replicate natural human conversations and swiftly generate academic texts as per user demand continues to evoke astonishment and apprehension within the Latin American educational community.[26]

From an academic research perspective, Latin America has so far been under-represented in most aspects of traditional AI-related research, as the data from Stanford University (below) confirms.



Fuente: Stanford HAI 2021

25 https://reader.elsevier.com/reader/sd/pii/S1472811723000289?token=BBEDC593E0A8EA61D5804AD482A31454F4CFBB59EF66AC19E6E0830AD883381290CA3C54B7CFD5BF6D8DA3F5447D6064&originRegion=eu-west-1&originCreation=20230521011110

26 https://www.unesco.org/en/articles/chat-gpt-considerations-education-latin-america-and-caribbean

From an educational perspective, Generative AI could see the region stepping forward. In many cases, Generative AI is perceived in a positive manner; as a transformative resource for both teaching and learning. Latin American researchers play a vital role in advancing the comprehension of AI's potential for educational innovation, thereby accelerating the adoption of Generative AI technology in the future. Moreover, AI applications are valuable in addressing a wide array of challenges related to learning, teaching, and administration within higher education institutions; from educational inclusion, to resources (and knowledge) that would otherwise remain inaccessible.

For example, during the COVID-19 pandemic creating great limitations for the country's educational system, the Ecuadorian government collaborated with the World Bank to introduce an AI-powered learning platform to overcome this. At the outset of the program, students exhibited proficiency in only 25% of the essential mathematics curriculum necessary for academic achievement. However, following 16 consecutive weeks of utilizing the platform, their mastery of these materials soared to 68.7%[27].

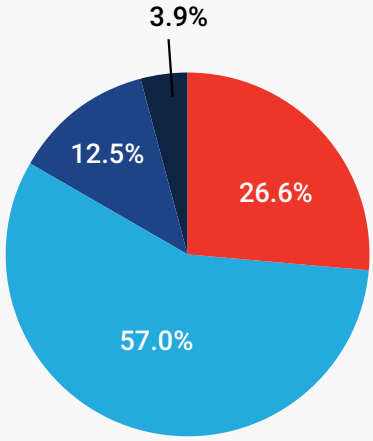
In addition, the country has incorporated Generative AI developments into university curriculums; for example, a Scientific Journalism course at Quito's San Francisco University, now includes a Generative AI technology element as part of its standard course curriculum[28].

On a more strategic level, Brazil's entire AI strategy – published in 2021 (albeit, pre-Generative AI) – commits to reviewing the country's national teaching curriculum to include courses in AI and programming and a national digital literacy programme, as well as retraining opportunities for teachers. The challenge and opportunity being how to teach students who already have access to ChatGPT or GitHub's Copilot to use them as a complement to their learning, rather than simply an alternative.

Based on our findings, the region's business decision-makers are optimistic about Generative AI's potential: **57.0%** of respondents stated that Generative AI will inevitably play a role in the future education, and that young people need to know when and how to use it. Q.6

From a societal perspective, over a quarter (**26.6%**) describe themselves as committed to 'incorporating it into education, in order to make the wealth of human knowledge available to the next generation'.

From a societal perspective, what role do you see for Generative AI in educating the next generation of citizens?



- **Absolute;** we need to make the wealth of human knowledge available to the next generation
- **Selective;** Generative AI will inevitably play a role in the future, young people need to know when/how to use it
- **Minimal;** I would be concerned about too much 'automation' in education, we would need to limit the role of Generative AI
- **Negligible;** we need children/young people to develop their own thinking (rather than simply relying on AI to influence them)

27 https://www.worldbank.org/en/news/feature/2022/02/10/en-ecuador-aprender-matematicas-es-mas-facil-con-inteligencia-artificial-nivelacion-remediacion-academica

28 https://laboratoriodeperiodismo.org/la-ensenanza-de-inteligencia-artificial-generativa-llego-a-las-aulas-universitarias/

Mexico and Chile were the most optimistic about Generative AI's educational capabilities from a societal perspective – **60.0%** and **39.3%** believing that Generative AI should be used to educate the next generation as a priority while (interestingly) **80.0%** of respondents from the education sector believed the same.

Latin American universities and research centres are at the forefront of the discourse regarding the future trajectory of the region concerning AI. For instance, in Brazil, the Getulio Vargas Foundation organized a significant public debate in March 2023, focusing on the ethics and governance of AI within organizations. This event took place following the criticism directed towards Brazil's recent AI regulations, which were issued in September 2022 and were deemed ambiguous[29].

Similarly, in Mexico, the Tec de Monterrey University conducted a virtual forum to examine the impact of emerging technologies such as ChatGPT[30] on business and academia. One of the concerns emerging from the same included the issue of academic and third party referencing; to recognize Generative AI as a legitimate research tool but insufficient to be cited as a valid 'source'. In addition, the broader risk plagiarism– the presentation of sourced material as original – was likely to be exacerbated by Generative AI.

The issue is equally relevant to the academic and corporate arenas, and the forum concluded with the development of a recommended Code of Conduct around the use of Generative AI to be respected not just by the teaching staff and students but also by the latter once they enter the commercial world. The Code – 'an honest use of ChatGPT and other AI systems' – includes commitments to acknowledging the use of such technology in any work, together with full 'formal' referencing of third-party sources.

University professors in Peru have mirrored this praise of Generative AI in the context of university education and research. Despite society undergoing a transformative shift and the existence of an underlying narrative that AI is a potential threat,

Peruvian academic, Professor Juan Carlos Dextre from the Pontificia Universidad Católica[31] is on record as believing that teachers have the opportunity to enhance their efficiency with its assistance. He highlights the examples of Grammarly, Thinkester Math and Concensus that enable teachers to incorporate new technologies into the teaching-learning process, thereby benefiting the students.

Peru's openness towards Generative AI in education was also evident in our survey results, which showed that **62.5%** respondents believe it will inevitably play a vital role in the future and that young people should learn to use it, and a further **18.8%** wholeheartedly support the technology's adoption into Peru's educational system.

The comparison with Latin America's involvement and participation in (classification-AI-reviewed academic papers (above) is stark; when it comes to *Generative* AI, the power of attraction is evident from all sides, academics, educationalists and, now, the students themselves.

29 https://portal.fgv.br/en/news/ethics-and-governance-artificial-intelligence-companies-are-central-themes-event

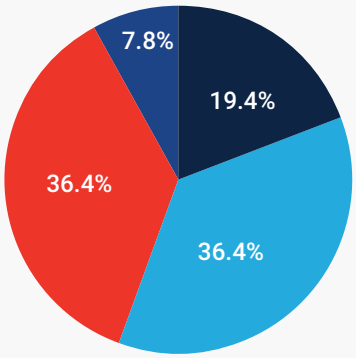
30 https://conecta.tec.mx/es/noticias/nacional/institucion/tec-de-monterrey-recomienda-su-comunidad-uso-inteligente-de-chatgpt

31 https://puntoedu.pucp.edu.pe/comunidad-pucp/inteligencia-artificial-en-la-formacion-universitaria-humanidades-pucp/

Companies and Corporations

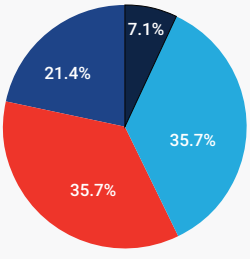
Our data suggests that businesses across the region – and across sectors – are already implementing (**19.4%**) or considering (**36.4%**) the benefits of Generative AI.

In your business, what consideration are you currently giving Generative AI?

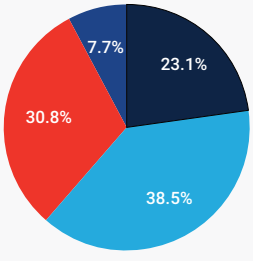


Latin America

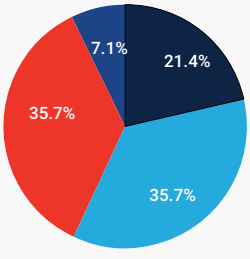
- **Priority;** we are already integrating Generative AI into our offering
- **Selective;** we are currently experimenting with Generative
- **On stand-by;** we are currently analysing whether/how to incorporate Generative AI into our offering
- **Irrelevant;** we have no plans to incorporate Generative AI into any aspect of our business



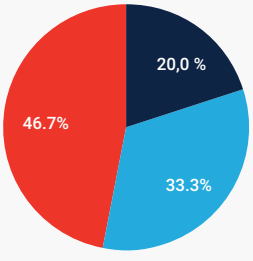
Argentina



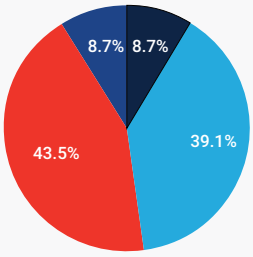
Brazil



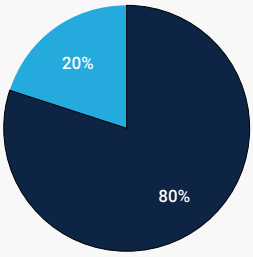
Chile



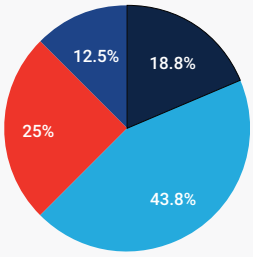
Colombia



Costa Rica



Mexico



Peru

Unsurprisingly, the technology sector is the most bullish, with 33.3% respondents from this sector, claiming to have already started integrating Generative AI into their business processes; while, in terms of job function, C-suite respondents are the most enthusiastic proponents with 68.3% having implemented Generative AI wholly or selectively across their businesses (compared to an average of 47.3% across all job titles).

Our data compares and corroborates research from NTT DATA/MIT Technology Review, suggesting that 40% of companies in Latin America are already leveraging Artificial Intelligence, with a total of 69% 'acknowledging the significance of AI', for their business.[32]

The single most compelling benefit promised from Generative AI to Latin American business is productivity, across all aspects of the business process; from product development to sales. Productivity – or lack of – has remained a consistent and longstanding barrier to Latin America growth; according to research from the Inter-American Development Bank[33] points to the region's 'slower (economic) growth due to slower productivity growth'; and that overall productivity is about 'half its potential'. Research from the Fundação Getúlio Vargas (FGV) in Brazil reveals that the country's productivity actually fell 4.5% in 2022[34].

Research from MIT found that ChatGPT increased productivity of white-collar writing tasks, such as composing a sensitive company-wide email or, even, a compelling press release, by almost 40%[35]. Could generative AI provide the antidote for Latin America's productivity malaise?

In certain business functions, potentially. According to our research, customer experiences ranked number one on the list of opportunities for Generative AI to create value for business.

From a business perspective, what do you consider to be the biggest opportunities for Generative AI in Latin America? Please rank in order of importance (1 (most important…)).

1. **Customer experience** (brand differentiation)
2. **Sales and marketing** (including market research)
3. **Product/service development/R&D**
4. **Operational efficiencies** (cost savings)
5. **Supply chain/logistics optimisation** (fault resolution etc)
6. **Financial management/control/analysis**

This finding corresponds to other research regarding the importance of personalized experiences for Latin Americans, compared to other markets[36]; particularly in the banking and finance sector. Our own research reveals that over half (**56.3%**) respondents from the latter consider customer experience/brand differentiation will be the function most impacted by Generative AI over the coming 5 years, compared to an all-sector average of just **27.1%.**

When it comes to the barriers impeding such implementation (and potential efficiencies), our research revealed a lack of 'technical knowledge' as the principal issue; ranking higher than consumer confidence in AI and, even, the absence of a clear legal framework.

32 https://tekiosmag.com/2022/09/26/informe-ntt-data-y-mit-technology-review-40-de-las-empresas-en-america-latina-ya-utiliza-la-ia/

33 https://publications.iadb.org/publications/english/viewer/The-Productivity-Gap-in-Latin-America-Lessons-from-50-Years-of-Development.pdf

34 Paulo Feldmann – Jornal da USP

35 https://www.ft.com/content/96a1877f-0bbb-48c7-be8f-4fed437810e8

36 https://www.el-mexicano.com/cienciaytecnologia/experiencias-inmersivas-la-solucion-a-las-frustraciones-de-atencion-al-cliente/2173391

From a business perspective, what do you consider to be the biggest barriers facing Generative AI in Latin America? Please rank in order of importance (1 (most important…)

1. **Lack of technical knowledge and awareness amongst businesses**
2. **Absence of clear legal framework for commercial use**
3. **Consumer mistrust/lack of confidence**
4. **Lack of vision for Generative AI amongst business leaders**
5. **Slow rate/absence of digital transformation in general across businesses**
6. **Concerns about the societal implications of Generative AI** (on employment etc)

Interestingly, while our respondents ranked concerns regarding Generative AI's impact on employment relatively low, such issues are being openly discussed across the region.

While the OECD[37] suggests that more than 25% of jobs in Latin America may be at risk of replacement from automation, the Inter-American Development Bank (IADB) puts the figure between 36% and 43% of current jobs[38].

The reality is likely to be a combination of redundancy and job creation. Our own data suggests that – both in terms of current use/trialling and potential impact over the coming 5 years – sales and marketing departments are likely to witness the biggest Generative AI-driven transformation.

Companies such as Yalo (a Mexican chatbot platform that uses AI, including ChatGPT, to help businesses automate their customer service and sales processes), Adext AI (a Mexican digital advertising platform that uses Generative AI to optimize ad campaigns), and Cognitiva (a Chilean chatbot platform that provides automated customer service and sales solutions for businesses) are good examples of this. Latin America's largest country also hosts a number of organizations which are spearheading Generative AI adoption in the region[39] – focusing, too, on customer experience – including Bradesco who is employing ChatGPT for both customer-facing and internal operations.[40]

According to a study by ESE Business School, part of the University of the Andes, a third of Chile's largest companies have 'already incorporated' artificial intelligence into their processes.[41] It remains to be seen how much of the latter will include Generative AI, but its ease and convenience suggests an equally prompt incorporation.

Given the technology's rapid ascent, and the resolution of issues such as a shortage of technical skills and a clear regulatory framework, we should consider market predictions regarding the impact of AI in Latin America to account for 5.4% by 2030[42] as conservative to say the least.

37 https://medium.com/berkman-klein-center/generative-ai-what-should-governments-in-latin-america-do-9ca8a1f73051
38 https://impact.economist.com/perspectives/sites/default/files/seizing-the-opportunity-the-future-of-ai-in-latin-america.pdf
39 https://decrypt.co/125329/emerging-countries-more-artificial-intelligence-trust-ai-study
40 https://www.bnamericas.com/en/news/bradesco-invests-in-starlink-satellite-generative-ai-tools-in-digital-push
41 *https://dplnews.com/chile-un-tercio-de-las-grandes-empresas-ha-adoptado-la-inteligencia-artificial/*
42 *https://impact.economist.com/perspectives/sites/default/files/seizing-the-opportunity-the-future-of-ai-in-latin-america.pdf*

Public Services and Cultural Institutions

Looking beyond the professional and personal space, how is Generative AI currently impacting the public space in Latin America?

In terms of public services, Uruguay has set the 'gold standard' for the incorporation and use of artificial intelligence. It was amongst the first Latin American countries to publish an AI strategy (in 2019) which it applies to all aspects of public service including policy development, civil servant recruitment and training, as well as service delivery.[43]

Generative AI can play a role in identifying societal needs, targeting resources and also engaging local citizens directly through platforms such as WhatsApp; it can enhance the reach and impact of specific public policies, amplifying their impact and effectiveness amongst targeted recipients.[44]

Having access to Artificial Intelligence capabilities is going to become a strategic issue of national security, even. For this reason, yesterday I respectfully recommended to the President, allocate at least one billion dollars to the development of computing capabilities and study of artificial intelligence for Colombia

Daniel Quintero,
Mayor of Medellín. Colombia [45]

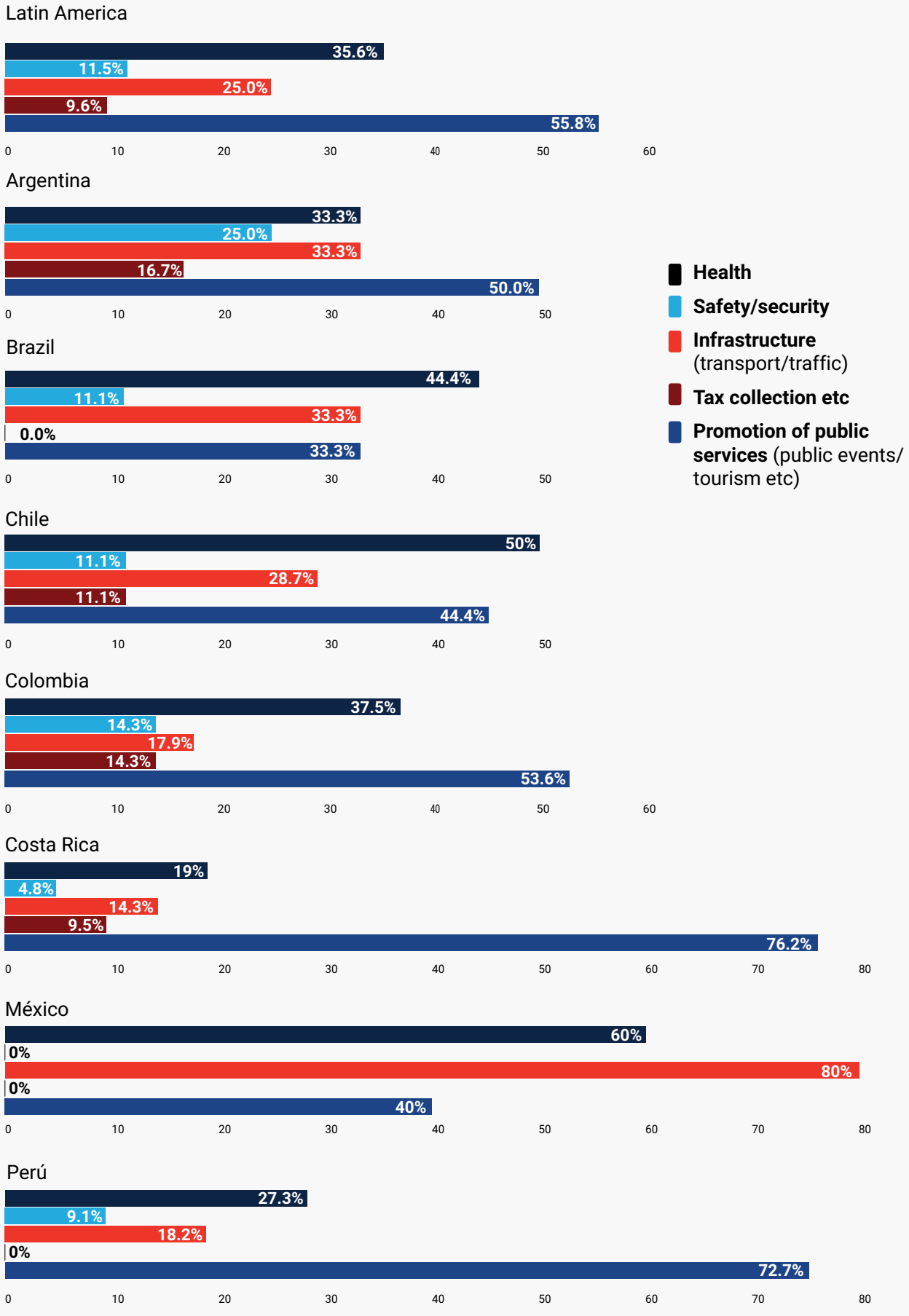
According to our research, the majority of respondents (55.8%) have already experienced Generative AI in the delivery of public services (events, tourism etc), while 35.6% have witnessed the technology first hand when receiving healthcare, and a further 25.0% with respect to public travel/transport infrastructure. Q.5

43 https://www.gub.uy/agencia-gobierno-electronico-sociedad-informacion-conocimiento/comunicacion/publicaciones/ia-strategy-english-version/ia-strategy-english-version/ai-strategy-for

44 https://www.thedialogue.org/analysis/what-can-artificial-intelligence-bring-to-latin-america/

45 https://telemedellin.tv/medellin-recursos-inteligencia-artificial/623568/

In your daily life (professional/personal), have you ever used/experienced Generative AI when accessing public services?



Chile provides a notable case in point where, in collaboration with the University of Chile, the Ministry of Interior is leveraging AI for crime prediction and risk mapping. Similarly, the country's Superintendence of the Environment employs "environmental intelligence" garnered through AI to analyse environmental impact data, establish standardized datasets, implement warning systems, and adopt a proactive approach to environmental protection measures.[46]

Such practices may explain our own findings, which reveal that **27.8%** of respondents in Chile had already experienced or used Generative AI in relation to the use of public infrastructure, while **50.0%** had experienced Generative AI when accessing health care; figures all higher than the regional average. Q.5

One of the challenges, however, many Latin American public organizations will face when building Generative AI into their services are issues of public trust and ethics[47]. According to a 2018 survey of the public who 'trusted AI systems', the proportion in Mexico was 56%, 42% in Argentina and 41% in Brazil, compared to figures of 64% in Saudi Arabia and 70% in China[48]. This data was collated before the emergence of Generative AI, and it remains to be seen what impact the latter has on public sector use of the technology.

While the OECD has recognised Colombia as the region's leader with respect to the use of AI into the public sector, Argentina, Brazil, Chile and Peru are showing promising signs of planning and progress.[49] The same report cites a 'lack of clarity' regarding priorities for AI in Mexico; and it remains to be seen whether this 'hierarchy' will be replicated when it comes to the use of Generative AI within the region's public sectors. [50]

Once again, formal public policy around AI in the public sector in Latin America is limited to traditional – 'classification' – AI; there are currently no published plans or commitments with respect to *Generative* AI in any country in the region.

Cultural institutions – from the football ground to the church – still represent some of the biggest drivers of technology use in Latin America.

Over half the content on the Web is written in English, but Meta's open-source speech AI already recognises over 4,000 other spoken languages. One of Generative AI's biggest impacts in the region, could be to instantly make this knowledge accessible and usable to any Latin American with a smartphone in the language that they feel most comfortable in, whether it be Spanish, Portuguese or. . . Quechua!

Susana Garcia-Robles,
Senior Partner, Capria Ventures[51]

Generative AI is already being employed within the region's music industry, for instance, to assess the viability and market interest in niche genres; to then price and distribute them accordingly[52]; and Mexico's 'Eye of Mexico' By OUCHHH is reportedly Latin America's first AI-generated public art installation.[53]

Similar examples of AI in art have been observed in Argentina, where a fresh wave of artists – such as Sofia Crespo and other members of the so-called Generative Art Movement[54] – are sourcing content, finding new forms of collaboration, and harnessing the power of artificial intelligence to create works of art.

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46 https://portal.sma.gob.cl/index.php/2021/10/25/la-nueva-apuesta-de-la-superintendencia-del-medio-ambiente-ciencia-de-datos-e-inteligencia-artificial-al-servicio-del-medio-ambiente-y-la-comunidad/

47 https://www.caf.com/en/currently/news/2021/09/great-opportunities-for-artificial-intelligence-in-the-latin-american-public-sector/

48 https://impact.economist.com/perspectives/sites/default/files/seizing-the-opportunity-the-future-of-ai-in-latin-america.pdf

49 https://www.oecd-ilibrary.org/sites/db4d2773-en/index.html?itemId=/content/component/db4d2773-en

50 https://www.bloomberglinea.com/english/chatgpt-which-latin-american-countries-are-the-biggest-users-of-the-ai-tool/

51 Courtesy of LatAm Intersect PR

52 https://www.x-mol.net/paper/article/1647996670655082496

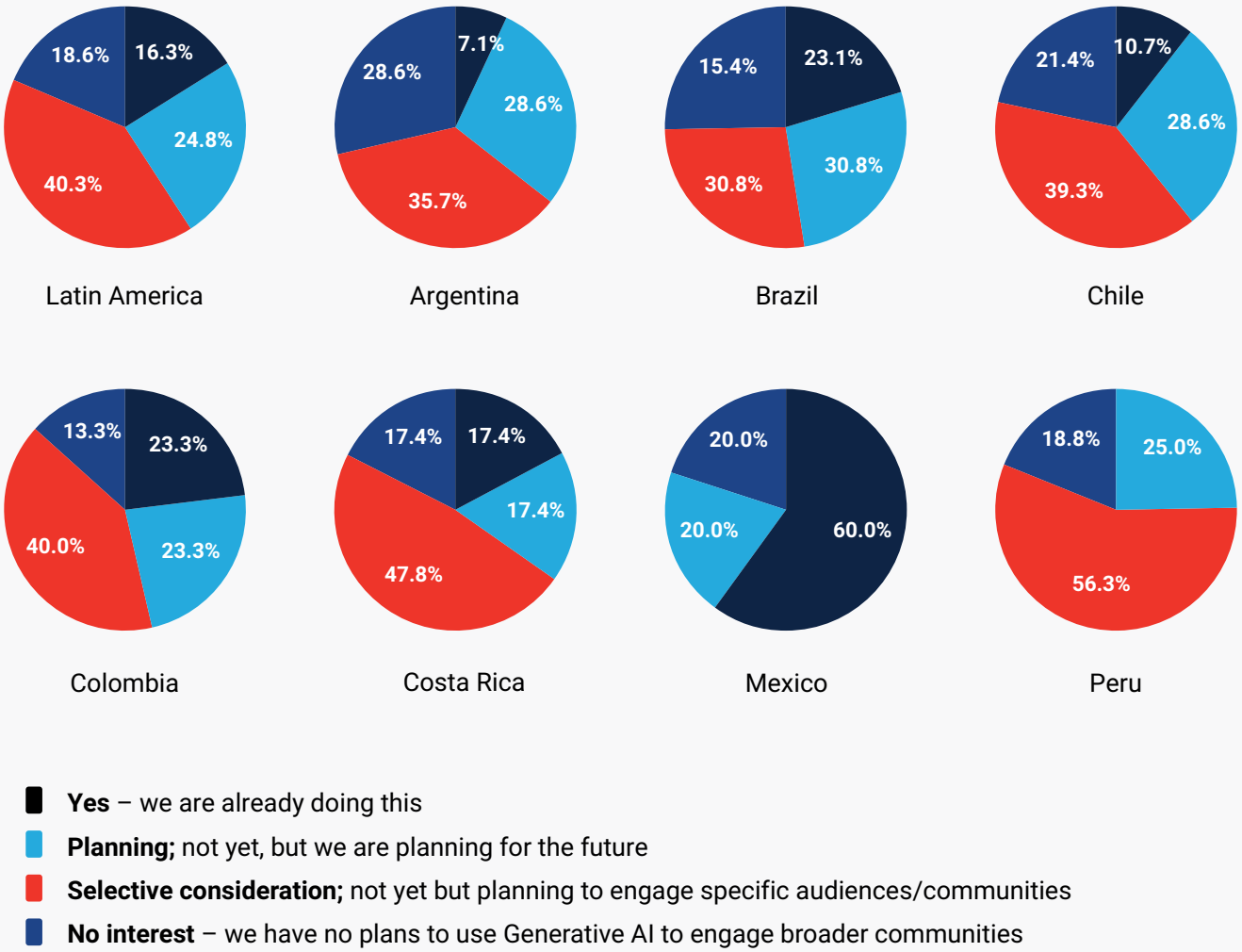
53 https://parametric-architecture.com/ai-generated-public-art-installation-the-eye-of-mexico-by-ouchhh/

54 https://www.batimes.com.ar/news/culture/is-ai-the-future-of-art.phtml

Mexico's Radio Fórmula has even developed its first news presenter developed entirely with AI. 'NAT' still requires the support of journalists to function correctly, reassuring the former of their indispensability – for the time-being at least![55]

Our findings confirm **83.6%** of Latin Americans accept that Generative AI will 'ultimately play a role in the future'; and **41.1%** confirm that their organizations are actually or planning to use the technology to engage wider society through culture and local communities.

Would your organization ever consider using Generative AI to engage the broader society such as cultural or local communities?



- **Yes** – we are already doing this
- **Planning;** not yet, but we are planning for the future
- **Selective consideration;** not yet but planning to engage specific audiences/communities
- **No interest** – we have no plans to use Generative AI to engage broader communities

Intriguingly, over a third (**35.7**%) of respondents have already used Generative AI in their private lives, to research or organize events or social gatherings, with Brazilians proving the most active (**46.2**%). Perhaps this is the clearest indication of the degree to which the technology is taking hold of daily life in Latin America.

55 *https://expansion.mx/tecnologia/2023/03/24/mexico-primera-presentadora-con-inteligencia-artificial*

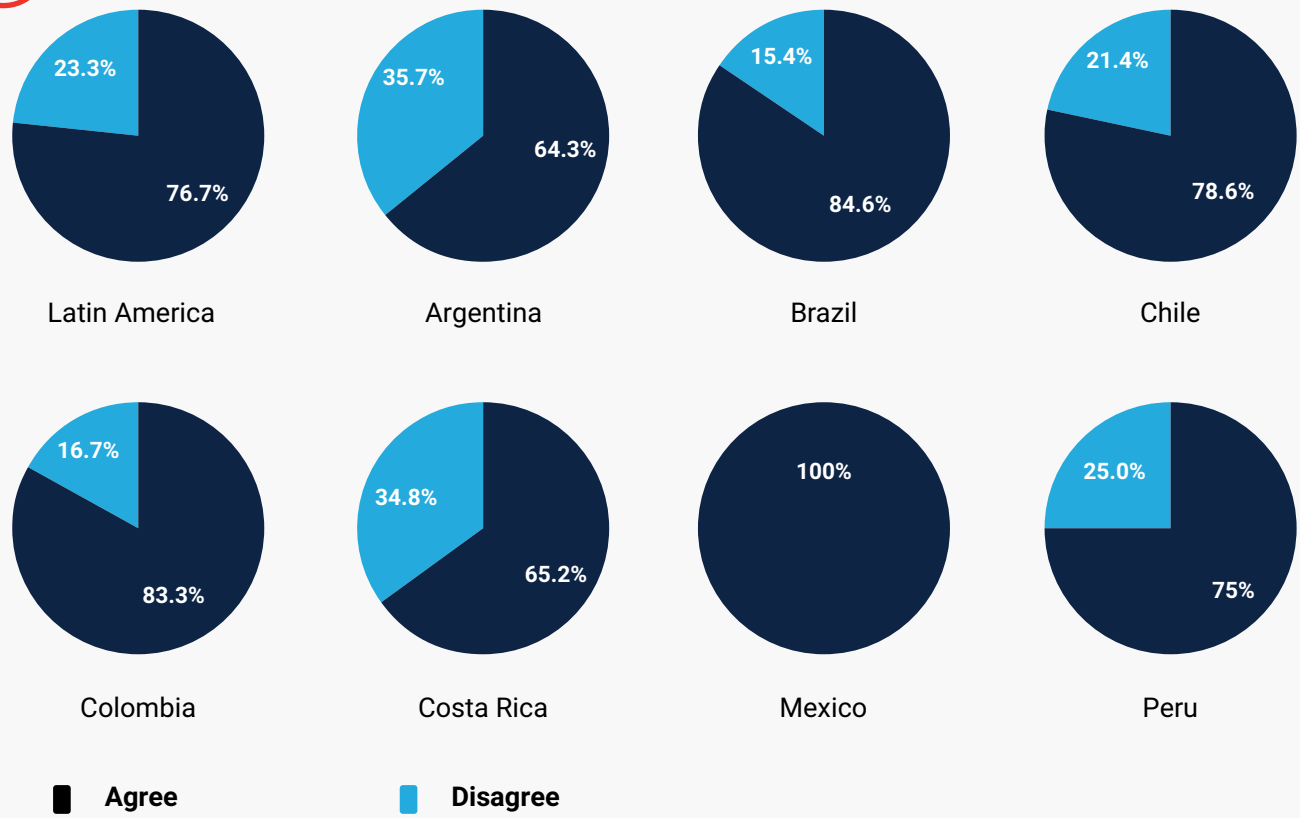
Summary

Our research certainly confirms the dramatic and immediate impact Generative AI is already exerting on all aspects of public and private life in Latin America.

Unlike many other innovation waves, Latin America is unlikely to be 'left behind' by other regions; however – in common with the past – it is likely to follow its own development path; one which will be shared by more than the simple convergence of technology and economics.

In this regard, our data speaks for itself: **76.8%** respondents believe that 'Generative AI will redefine the way we live and work in Latin America within the next 3 years", while **62.8%** claim to have already made use of the technology at work and **35.2%** within the home. All this, within 7 months of the technology's public 'launch' in November last year.

To what degree to you agree with the following statement? In the next 3 years, Generative AI will redefine the way we live and work in Latin America.



Productivity enhancements represent the region's biggest challenge, and opportunity for Generative IA, with sales and marketing and customer experience teams likely to see the most immediate impact.

On a broader, societal level, more than one-in-four (**26.6%)** Latin Americans consider Generative AI a genuine 'public good' which should be made available to future generations, while the languages available on ChatGPT (and other Generative AI platforms) will certainly boost local development and engagement; potentially, even beyond Spanish and Portuguese languages.

In terms of barriers, the absence of skills and specific knowledge around Generative AI also represents a significant barrier to businesses in the region; 'lack of technical knowledge' ranks number one as an impediment; a particular challenge given the history of the region's most innovative minds migrating other parts of the world – particularly North America – to fulfill their ambitions.[56]

In addition, opacity regarding the legal status of the technology (and those who use it) has prevented more than a third (**37.5%**) of Latin American businesses applying it – even on a trial basis – to date.

UNESCO's forthcoming AI governance summit in Santiago[57] – scheduled for October this year – could prove to be a milestone in establishing and standardizing legal protocols around Generative AI across the region. Given the current reticence – within businesses, at least – such clarity really could trigger a wave of corporate innovation around Generative AI in Latin America.

To conclude on another positive note, unequivocal confirmation of Latin America's prominence in all things related or connected to Generative AI. In the first quarter of this year, 303 million visits to ChatGPT emanated from Latin America, representing – according to Bloomberg[58] – 10% of the total visits. A deeper look reveals which countries are the most interested in Generative AI: Brazil 2.2% (of the global total), Colombia 1.9%, México 1.7%, Chile 0.72%, Argentina 0.71%, Peru 0.71%, Ecuador 0.7% and Dominican Republic 0.4%.

From a business perspective, the impact Generative AI could be even more profound than in other regions. First, it will completely negate the Anglo-centric'/English-language 'default' that has traditionally defined business and technology; Generative AI establishes ideas and value as the 'lingua-franca', so a Spanish or Portuguese-speaking entrepreneur will no longer be starting from a position of disadvantage.

Secondly, the region's time-zones (shared with those of the US and Canada) also represent a strategic asset for accessing the World's most dynamic markets.

Thirdly, Generative AI also has the potential to remove incumbent advantages of dominant players that have traditionally characterized Latin America's business scene. Now, any start up can access an accumulation of the World's knowledge, to compete directly with even the most established players.

Finally, Generative AI's intuitive nature suggests that Latin Americans will integrate it quickly and – in many cases – informally into their business and daily lives. The region's rapid adoption of crypto currencies represents a case in point where – if a technology can reduce costs or aide convenience – Latin Americans aren't going to wait for traditional businesses or even formal legislation to catch up. They are simply going to start using it.

56 https://impact.economist.com/perspectives/sites/default/files/seizing-the-opportunity-the-future-of-ai-in-latin-america.pdf

57 https://medium.com/berkman-klein-center/generative-ai-what-should-governments-in-latin-america-do-9ca8a1f73051

58 https://www.bloomberglinea.com/english/chatgpt-which-latin-american-countries-are-the-biggest-users-of-the-ai-tool/

Noventiq's position towards Generative AI

We have commissioned this report to demonstrate our commitment to Latin America as one of the fastest-growing technology markets. Our motto, "global expertise, local outcomes," underscores our dedication to leveraging our global AI expertise for superior results in the local context. In pursuit of this goal, we have focused on developing Classification AI solutions and made significant investments in generative AI well before the boom began.

Our strategic vision recognized that generic content generation alone falls short in true enterprise environments. For instance, deploying a tool that generates fictitious bank account statements is simply not viable for banks. That is why our investment has been directed towards smart assistants and generative AI engines that seamlessly integrate with enterprise information systems. By learning from enterprise data, these systems not only produce eloquent interactions but also ensure full compliance with legal requirements and consistency with the enterprise's brand.

We are now ready to introduce these cutting-edge technologies to the Latin American market. As highlighted in this report, Latin America stands to gain disproportionately from the benefits of Generative AI. Therefore, why not expedite the realisation of these benefits by deploying the solutions that are already available?

Survey methodology

Primary data for this report was collected between June and July ’23 through a series of online questionnaires completed by 140 named directors and senior managers – subsequently anonymized – covering various sectors and job titles in Argentina, Brazil, Chile, Colombia, Costa Rica, Mexico and Peru. Fieldwork and analysis were completed by LatAm Intersect PR.

www.lataminterSectpr.com

About Noventiq

Noventiq is a leading global solutions and services provider in digital transformation and cybersecurity, headquartered in London. Noventiq enables, facilitates and accelerates the digital transformation of its customers' businesses, connecting over 80,000 organizations from all industries with hundreds of best-in-class IT vendors, and delivering its own services and solutions.

Noventiq delivered a turnover of approximately $1.6B for the 12 Months to 31 March 2023. Noventiq's 6,400 employees work in almost 60 countries throughout Asia, Latin America, Europe, The Middle East and Africa – with a focus on markets with significant growth potential.

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