

GLOBAL ECONOMIC AND SOCIAL IMPACT STUDY OF TECNOLÓGICO DE MONTERREY ALUMNI

EXECUTIVE REPORT





DAVID GARZA SALAZAR

President, Tecnológico de Monterrey

The impact our graduates have had in Mexico and around the world is a pillar of the Tecnológico de Monterrey's legacy. They bring to life the dream of Eugenio Garza Sada and the group of leaders who founded this Institution, motivated by the ideal that "education can achieve anything."

On the occasion of its 80th anniversary, Tec is proud of the community it has built and its success in fulfilling its purpose of transforming lives. David Garza Salazar, Rector and Executive President of Tecnológico de Monterrey, shared that "our more than 350,000 EXATEC members reflect the values and the multiple academic initiatives and innovations we have promoted to provide excellent education. Their contributions to society are the legacy we are building for the future."

The talent and impact of the alumni community, known to us as EXATEC, position Tecnológico de Monterrey as a platform that generates value through science and research, entrepreneurship, and social development. "It makes us proud to know that the education they have received in our classrooms and campuses has enabled these achievements and contributions. The transformation they have made over 80 years commits us to continue promoting academic and teaching innovation, strengthening collaboration between institutions and organizations, and fostering the creation of greater cutting-edge knowledge", stated Alejandro Poiré, Vice President for Outreach and Engagement.

The present Social and Economic Impact Study conducted by Quacquarelli Symonds provides a reference to the contributions of our alumni on a global scale in various fields and industries. The findings regarding their professional journey, their contributions to society, as well as testimonials and success stories, represent part of the importance and the essence of the EXATEC community.



NUNZIO QUACQUARELLI

Founder and President, QS (IFAF)

It is with great pleasure that I introduce the Global Economic and Social Impact Report of Tec de Monterrey Alumni. The QS mission is to enable motivated people anywhere in the world to fulfil their potential through educational achievement, international mobility, and career development. The collection of narratives and data presented in this report underscores the profound alignment between our mission and the extraordinary accomplishments of our alumni.

The insights derived from the 80th Anniversary Alumni survey are grounded in robust data, revealing an impressive tapestry of achievements that Tec de Monterrey alumni have woven. This report brings to light several principal messages that vividly illustrate the impressive contributions of Tec de Monterrey Alumni. It showcases their pivotal role in diverse spheres, including employment generation, the establishment of for-profit and non-profit enterprises, active participation in boardrooms, ground-breaking contributions to research and innovation, direct contributions to Mexico's GDP, and, most importantly, the promotion of human flourishing.

THE IMPACT OF TEC DE MONTERREY ALUMNI OVER 80 YEARS OF SHARED HISTORY

ABOUT THIS REPORT

It is appropriate that this year in 2023, while we celebrate our Institution's 80th anniversary, this report highlights the contributions of Tecnológico de Monterrey alumni across a range of metrics, including entrepreneurship, scientific advancement, and professional achievement in both the commercial and not-for-profit sector.

To measure these contributions, Tec de Monterrey applied a survey of its alumni community during the first quarter of the year. The proceeding data was used to provide an estimation of the economic and social impact their graduates have had on Mexico and around the world, since the Tec's foundation in 1943.

Of the population of 292,159 alumni who received the survey and who have graduated since the 1950's, a total of 25,358 responded, corresponding to a response rate of 9%. To assess the broad economic impact of Tec de Monterrey graduates, an extrapolation of this survey sample was made to estimate the impact of those graduates who did not respond.

ECONOMIC IMPACT



More alumni are starting businesses earlier in their career, this has represented a growth in the rate of entrepreneurship.

FOR PROFIT – BUSINESS

➤ **43%** of Tec de Monterrey alumni have founded a **for-profit company**, which represents:

220,000 for-profit companies created

➤ These businesses are also enduring the test of time, with **134,000 of them still in operation**. This not only reflects ambition, but also entrepreneurial progress which leads to sustained business success.

➤ This trend shows no signs of abating, as **22%** of those who graduated after 2010 started a business within five years of graduation, marking the highest rate among any graduating cohort.

➤ Among the respondents who are founders of companies, **52%** have established a single company, while **38%** have founded between two and three companies, and **10%** have founded more than three.

Most businesses created by Tec alumni are small, although their sheer volume means that they represent a significant force in terms of job creation and economic output.



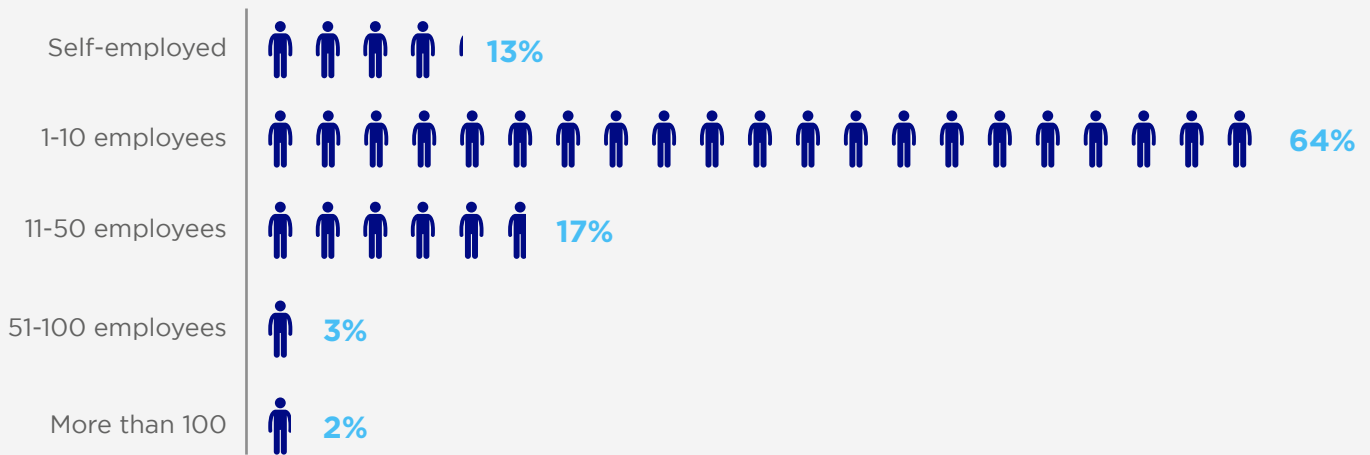
Overall, alumni have contributed to the creation of an estimation of **3.2 million jobs within for-profit companies** over the Institution's history, resulting in

an estimated annual revenue of 260 billion USD



Around **42%** of businesses reported revenues of **500,000 Mexican pesos** or less in their last year of operation, while **24%** reported revenues between **500,000 and 1.5 million pesos**. **7%** reported revenues exceeding **9.5 million Mexican pesos** in their most recent year of operation.

Distribution of the size of companies founded by Tec de Monterrey alumni



RAÚL REVUELTA MUSALEM



CEO of Grupo Aeroportuario del Pacífico (GAP)

B.A in Economics, 1999



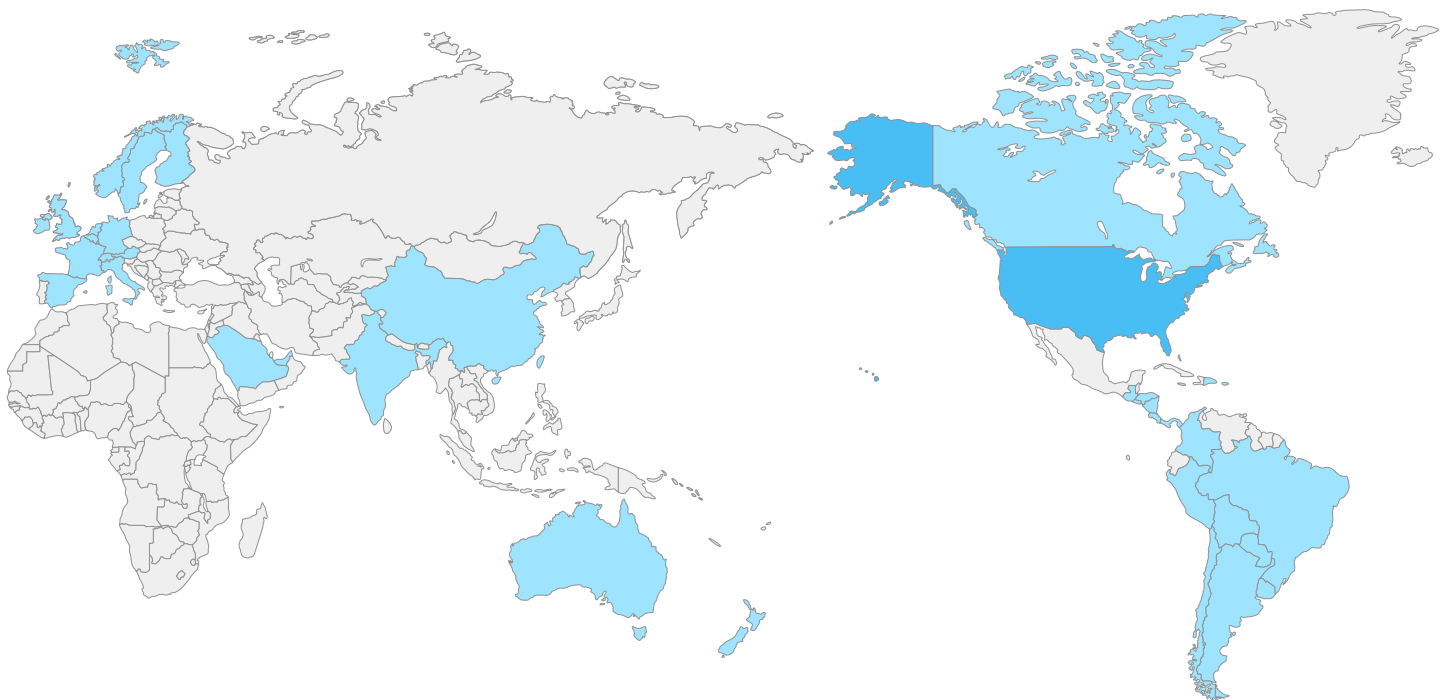
Tec provided me a solid base of the fundamentals for lifelong learning. My Economics degree gave me a strong background in finance and mathematics, which are essential for understanding how business models operate. It eventually allowed me to develop the ability to independently acquire new knowledge and gain new experiences. So I would say the most important skill Tec gives you is openness to curiosity and continued learning.



GEOGRAPHIC AND INDUSTRY IMPACT

The alumni community has a worldwide presence, and the companies they have founded have a similar reach. Beyond Mexico, the highest concentrations of alumni-founded companies are in the **United States, accounting for 43% of all international companies, followed by Colombia with 8%, Canada with 6%, and Ecuador with 5%.**

Geographical distribution of companies founded by Tec de Monterrey alumni



United States

43%

Colombia

8%

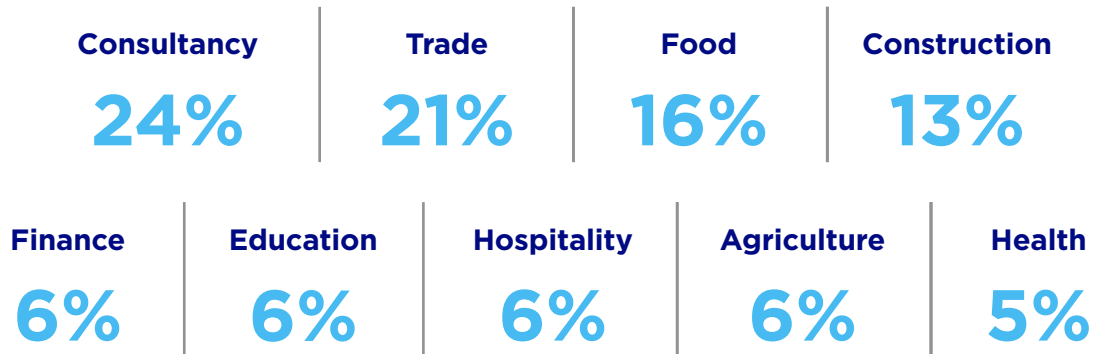
Canada

6%

Ecuador

5%

Tec de Monterrey alumni have ventured into a wide variety of industries, with the largest concentrations of businesses founded in:



Similar to the 75th anniversary report’s findings, a breakdown of industry impact across the Mexican states is also shared in this report. The states of **Nuevo León, Ciudad de México, Estado de México and Jalisco** have the largest concentrations of companies founded by alumni.

Nuevo León, the region where Tecnológico de Monterrey was founded, remains the primary choice for alumni to either work or establish their businesses, with **27%** of them being based in this state. It is followed closely by **Ciudad de México with 26%**.

NON-PROFIT ORGANISATIONS

8% of alumni have founded at least one non-profit organisation.

460,000 jobs have been created in the non-profit organisations.



JOSÉ EMILIANO ITURRIAGA TOVAR

CEO Rutopía

B.S in Sustainable Development Engineering, 2018



Tec provided me with the most incredibly useful tools to do what I wanted to do: which was to work on environmental conservation and sustainable development. I always thought I would do it from an engineering perspective or through an NGO, but I believe Tec taught me that through a business model, you can also bring a positive social change to the world.



ALUMNI PROFILE



Tec de Monterrey alumni continue to fill boardrooms and executive positions both in Mexico and around the world.



Tec de Monterrey alumni are concentrated in positions of leadership:

32% are managers, business owners or CEO's.

A. The most common job positions for the alumni community are:

Manager	Coordinator / Supervisor	Business Owner	Department Director	CEO or Managing Director
17%	10%	10%	10%	5%

B. Tec de Monterrey alumni currently serving as CEOs tend to have lengthy tenures:

56% have held their roles for at least **5 years**

35% have served for at least **10 years**

The longer alumni are in their careers, the more likely they are to attain high-level executive positions:

A. Right after graduation

34% analysts, coordinators or supervisors

6% business owners or CEOs / managing directors

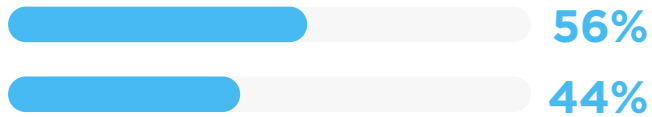
B. Between 30 to 40 years after graduation

3% analysts, coordinators or supervisors

36% business owners or CEOs / managing directors

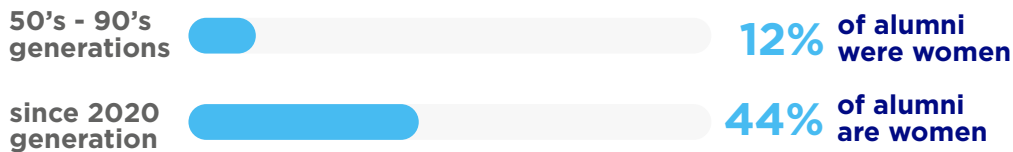
The gender distribution among older alumni cohorts, particularly those in senior positions, stabilizes around:

Starting in the 2000's



Many alumni actively participate in governance, with **15%, representing around 40,000 people**, reporting having served on **at least one board or advisory council**. Of those with board experience, **44% have served on a single board**, which means that half of them have served on multiple boards.

Tec has increased female alumni over the years.



DIANA FLORES



Captain of the Mexican Flag Football team, Borrego de Oro, appointed by the NFL and the International Federation of American Football (IFAF) as Global Ambassador for flag football, and first Gold Medalist in flag football in the history of the World Games.

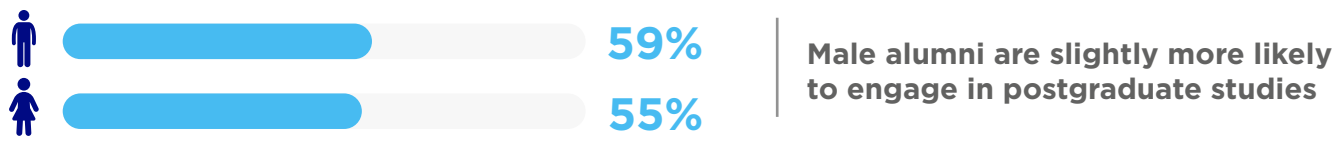
Bachelor in Communication and Marketing, 2022



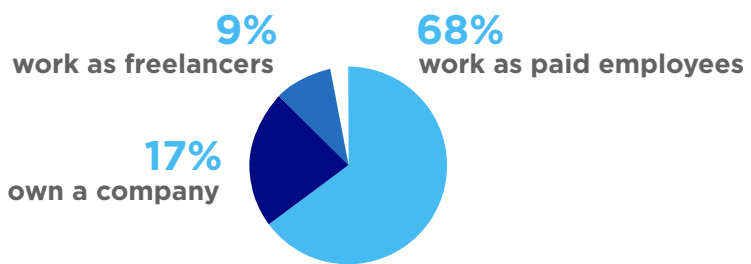
I am absolutely certain that how you handle yourself on the field is the way you handle yourself in life; beyond your athletic performance, it's about your dedication, determination, focus, heart, perseverance, and resilience. For me, everything is about doing it day by day. It's something that Tec de Monterrey taught me, along with values and skills to face different life situations.




- Alumni increasingly pursue international careers:
 - 47%** have worked abroad after graduation
 - This includes: **22%** as their first job and **34%** as their current job
- 34%** stated that their current job is based outside of Mexico
- 57%** of the surveyed alumni have completed or are currently pursuing **postgraduate studies**.



Among the surveyed alumni, **68% work as paid employees**, maintaining full-time roles of between 36 and 50 hours per week. **17%** of alumni report **owning a company**, either individually or in partnership, while fewer report working as **freelancers (9%)**.



JAVIER A. REYES 
Chancellor of the University of Massachusetts Amherst
B.A. in Economics, 1998

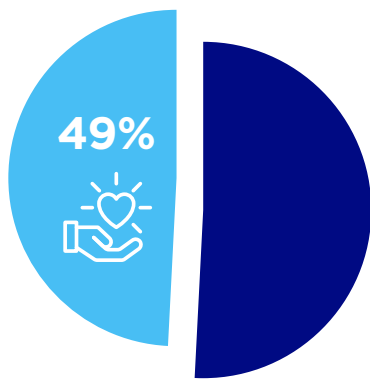
“ Tec has been an organization that has shaped the way in which we provide a flexible and high-quality education with a real impact outside the classroom. It really allowed me to develop an ideology of professionalism, an idea that I have carried with me because the Tec has allowed me to do so.

”

SOCIAL IMPACT



Tec de Monterrey alumni embody the spirit of generosity, as is evident in their active engagement in volunteering and charitable activities.



49% of alumni report making regular charitable donations to social organisations.



Among those, the typical contribution is between **\$1,000 and \$5,000 Mexican pesos** per month (41%).



Tec de Monterrey alumni dedicate approximately



1.3 million hours
to volunteer work per month



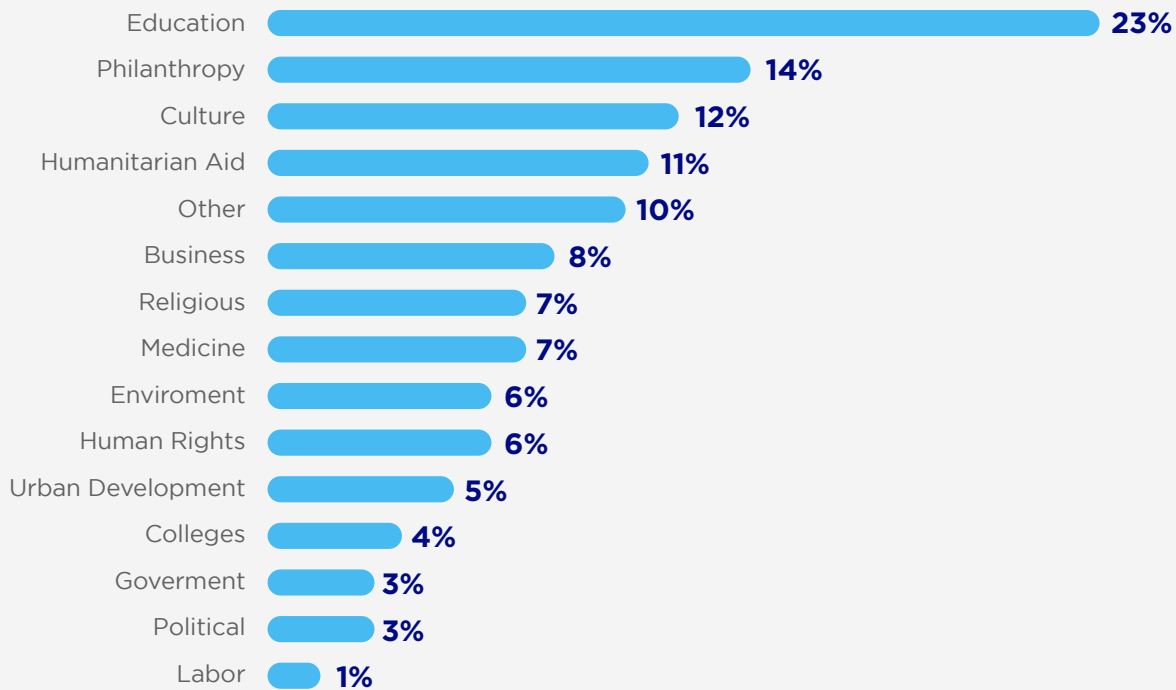
8% of Tec de Monterrey alumni have founded non-profit organisations. When extrapolating the number of organisations, this represents

32,000 non-profit organisations
created by alumni 'social founders'



The most common type of non-profit organisations created by Tec de Monterrey alumni are focused on **Education (23%)**. This is consistent across all graduate cohorts, with education being the predominant sector among social founders in each cohort.

Non-profits founded by sector



LORENA GUILLÉ-LARIS



Executive Director of FEMSA Foundation

Master in Public Administration and Public Policy, 2008
B.S in Industrial Engineering with minor in Systems Engineering, 2002

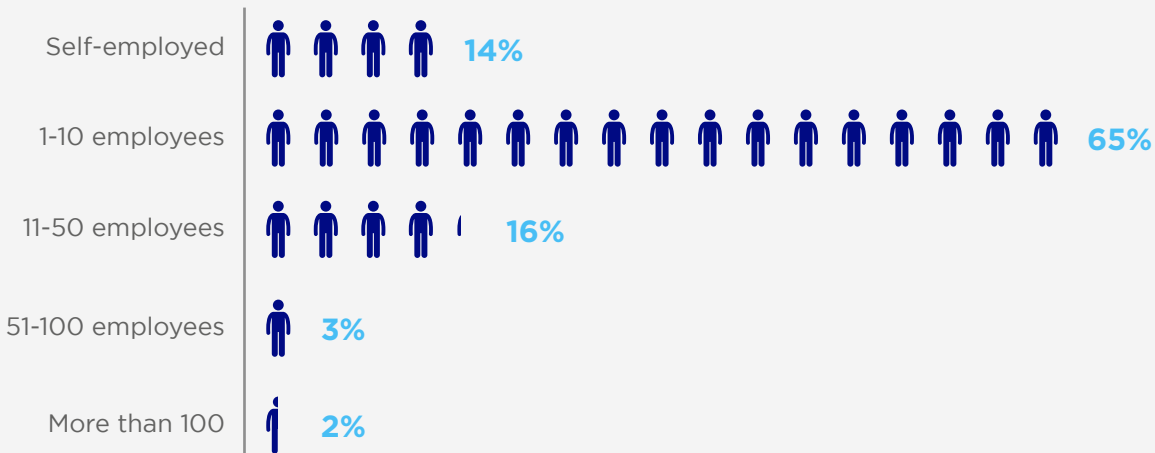


I was fortunate to study at Tec, it opened my eyes to the world. I got involved in student groups and met people from other countries fighting for different causes. I believe that humans are born with the capacity to share, but at some point in life, it's like a switch that we turn off and that can always be turned on again. My dream is to feel joy because I have been useful to the world, to set an example for my children that this world is better with them in it, and to encourage them to contribute to making the world better for others.



Despite the relatively small size of most non-profits, the large volume of companies created has resulted in the creation of an estimated **460,000 jobs**.

Size of non-profits created by alumni



34% of Tec de Monterrey alumni report having performed volunteer work for a social organisation within the past year.



Most alumni (53%) dedicate between 4 and 10 hours per month to their volunteer efforts, while around one-third report volunteering for 11 hours or more each month.



JOSÉ LUIS GONZÁLEZ ÍÑIGO

Board Chairman and Founder of the Sesajal Group

B.S in Chemical Engineering Administration, 1967



We have a Food Bank -which is my baby- where we provide 63,000 food baskets every month to 31,000 low-income families. We have just moved to a new location, where we will have the capacity to produce much more, and will gradually complement with a clothing and household goods bank, as well as a medicine bank. Eventually, we want to create a Medical Specialties Center.



RESEARCH AND INNOVATION



Tec de Monterrey alumni have a strong history of knowledge creation through academic research, publishing, and industrial innovation.



Alumni are prodigious authors, with around **one-in-five** publishing an opinion article or essay, and the same proportion delivering a presentation at a research conference or developing a non-IP innovation.

- A.** **42%** of Tec de Monterrey alumni have authored at least one research or innovation artifact, including articles, research papers, conference papers, patent, books, among others.



42%



- B.** Over **one-in-ten** alumni have contributed an article to a scientific journal.



C. Overall, **8%** of the surveyed alumni have invented patented processes.



8%



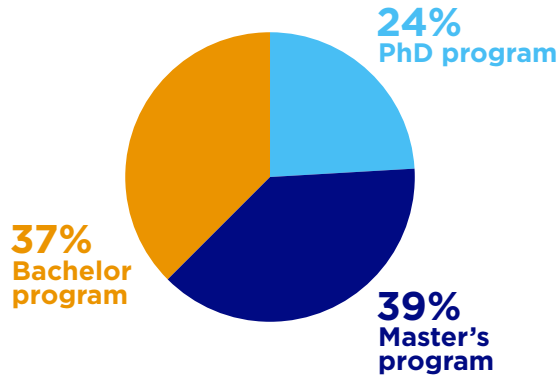
D. **18%** have innovated a product or process, specifically, an innovation without intellectual or industrial property.



18%



A sample of **1,824 alumni** was identified with publications in the bibliometric database Scopus:



A. **24%** of them graduated from a **PhD program**, **39%** from a **master's program**, and **37%** from a **bachelor program**.



MYRNA FLORES



Executive Director, Centre for Digital Transformation
Imperial College London

M.Sc in Manufacturing Systems, 1999
B.S. in Mechanical Engineering, 1996



The most important tool was learning how to learn, knowing that innovation is a cyclical process that seeks to propose solutions to impact society. That is, by applying research methodologies, the scientific method, and ethnographic techniques to empathize with users experiencing a problem, and through collaboration with multidisciplinary experts, you can solve any challenge with 'out-of-the-box' proposals.



- B.** The countries with the highest concentration of alumni doing research are the **United States, Spain, Colombia, United Kingdom and Canada.**
- C.** We accounted for **8,588 papers**, including articles, books, chapters and conference proceedings, that have received **139,390 citations** until now, that is, **16.2 citations per document.**
- D.** **13%** of these publications are in the top 10% most cited papers worldwide, whereas **25%** were published in the top 10% of journals.

Location of Tec alumni conducting research



GERARDO HERRERA CORRAL >>

Researcher at the Center for Research and Advanced Studies of the National Polytechnic Institute, and associate researcher at CERN Switzerland

B.S in Engineering Physics, 1984



I am indeed a physicist-engineer in every sense because I have been dedicated to engineering oriented towards technology development. The knowledge I acquired at Tecnológico de Monterrey moved in that direction. This international notion that Tec instills in its students, this openness that, in my opinion, is acquired through the study programs, was very useful.



HUMAN FLOURISHING AND SUSTAINABILITY



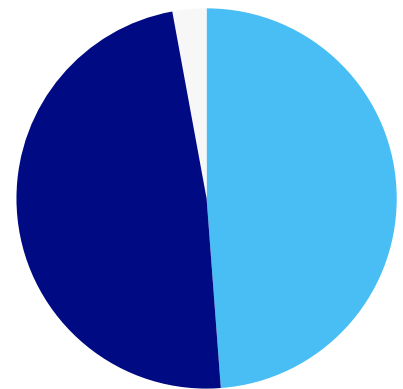
Sustainability, climate change and social responsibility represent critical issues for most alumni, who feel that their time at Tec de Monterrey has given them the skills needed to address these challenges.



Many alumni are focused on creating a more socially and environmentally sustainable future, attributing their 'sustainability mindset' to their education.

49% of alumni believe that they are currently contributing directly to environment protection or climate change mitigation in their daily lives.

47% agreed that their time at Tec de Monterrey contributed to their awareness of the environment and climate change issues.



97% of Tec de Monterrey alumni believe that the university has made a positive contribution to their life.



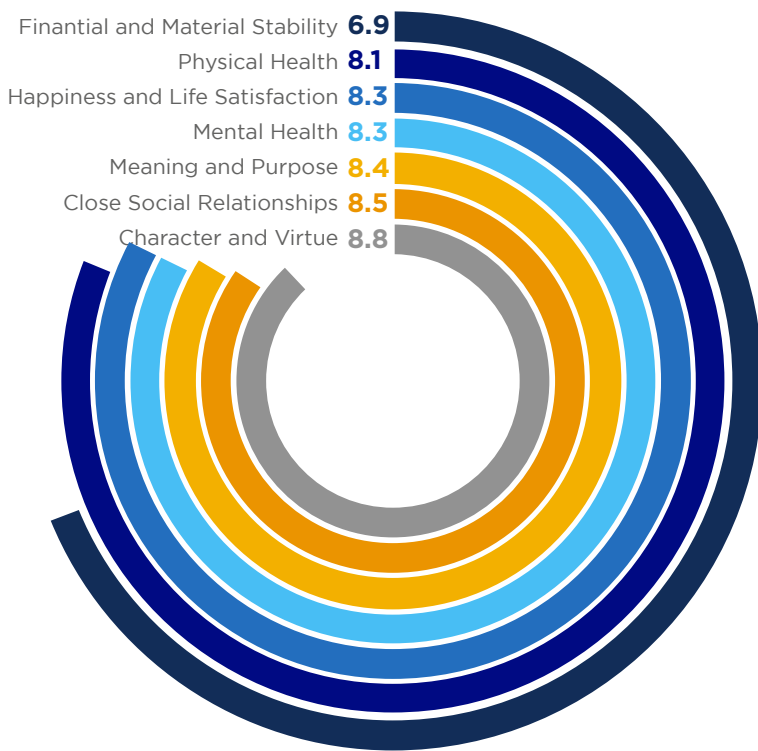
97%



Tec de Monterrey alumni are flourishing in their everyday lives, recording high average scores on the 'Human Flourishing Index'.

Overall, alumni achieved an average score of between 8 and 9 (out of 10) across the following domains in Human Flourishing:

- > Happiness and Life Satisfaction
- > Physical Health
- > Mental Health
- > Meaning and Purpose
- > Character and Virtue
- > Close Social Relationships



This reaffirms that Tec de Monterrey produces not just academically accomplished graduates, but rounded individuals who are equipped to thrive in all aspects of the human experience.

MARGOT MOLINA ELÍAS >>>

Member of Tecnológico de Monterrey Board of Trustees, in Tec de Monterrey Campus Sonora Norte

B.A in Computer Systems and Management, 1987



I feel that Tec encourages that entrepreneurial spirit in us, seeking these opportunities to improve the quality of life for both the entrepreneur and the people who will use this innovation.



According to alumni, Tec de Monterrey embraces the future through its ability to adapt to the challenges of the future, particularly in the areas of digital transformation, artificial intelligence and climate change.

➤ Alumni are typically positive in their appraisal of the skill development they experienced during their time at Tec de Monterrey. **79%** agree that their studies equipped them for the workforce compared to graduates of other universities.

➤ Despite the successes of the past, alumni understand that change will be necessary to adapt to the future challenges, commonly highlighting the importance of **digital transformation** and the rise of **artificial intelligence** specifically as a paradigm-shifting emergence. Alumni call for adaptations in teaching, learning and research practices to stay relevant and up to date.

JORGE FONT RAMÍREZ ➤➤

Consultant and Speaker

B. A. in Business Administration, 1993



“

Tec gave me the opportunity to fall in love with studying. I've always liked studying, but at Tec, I found the excuse to do it. I believe that another very important thing Tec taught me was that looking at things from different perspectives is also a tool. It gave me the confidence to know that I could rebuild the most complicated company, which is the reconstruction of the personal company, and go out into the world to help other people build and rebuild.

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Tecnológico
de Monterrey



QUACQUARELLI
SYMONDS

