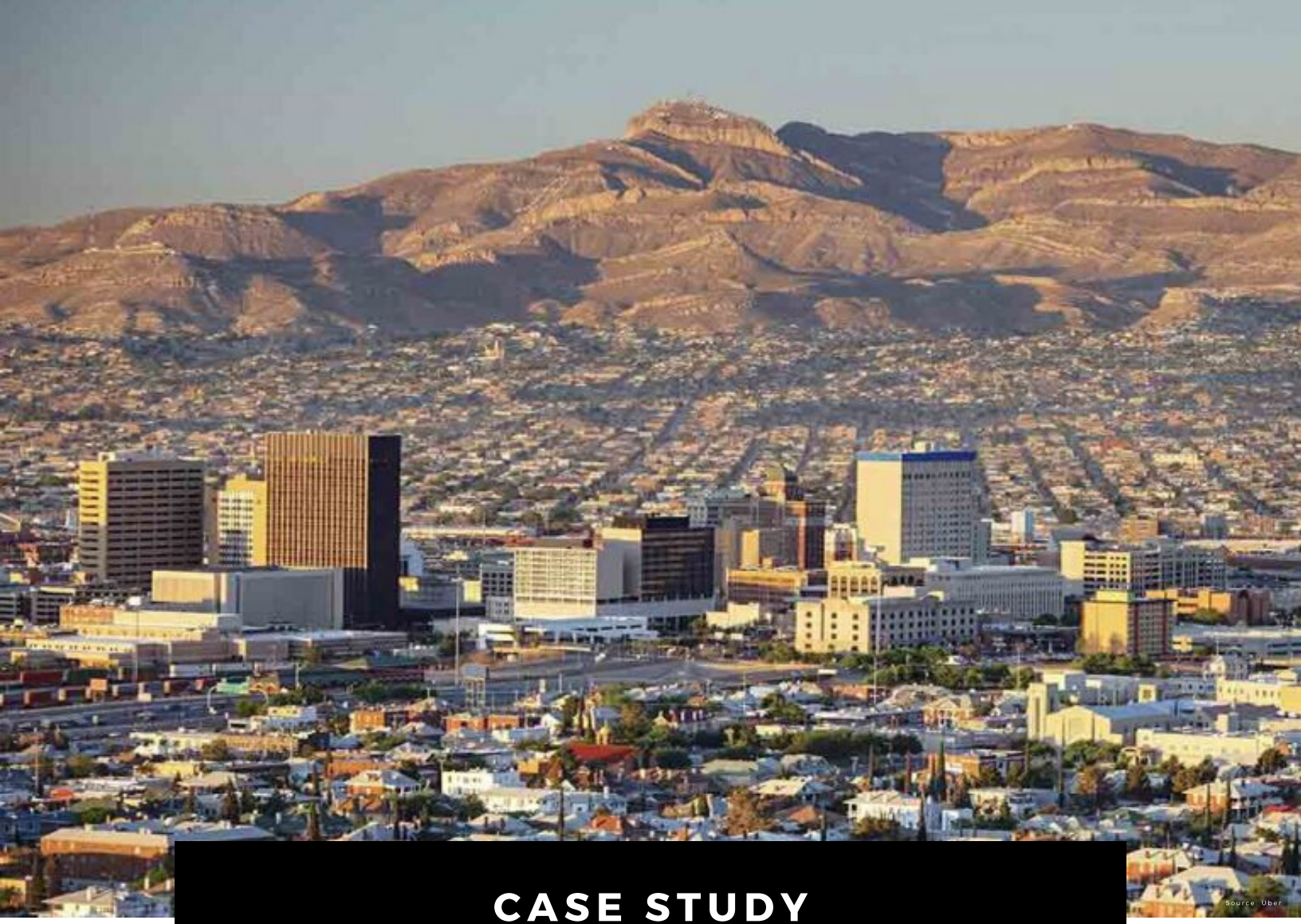


CASE STUDY

MY JOB, MY FUTURE

PREPARING THE MEXICAN BORDER-TOWN OF CIUDAD JUAREZ FOR THE FUTURE OF WORK

JANUARY - NOVEMBER 2019

Chihuahua GOBIERNO DEL ESTADO | SECRETARÍA DE INNOVACIÓN Y DESARROLLO ECONÓMICO | INSTITUTO DE INNOVACIÓN Y COMPETITIVIDAD | C MINDS | swae | in collaboration with CHIHUAHUA innova CONECTANDO OPORTUNIDADES | UNIDOS conVALOR

FOREWORD



Constanza Gómez-Mont, Founder and CEO of C Minds

As impact strategists, the C Minds team is interested in understanding how the adoption of new technologies in different spaces is impacting our communities at different levels. From that understanding, we build strategies that will allow different stakeholders to embrace and lead the changes ahead, while mitigating social, economic and environmental risk factors. Nowadays, the AI Revolution is disrupting our labor markets, putting our very definition of work at stake. How are robots being inserted into the market? What does it mean for human workers and how can we work together? How can governments, the industry and academia prepare themselves and the communities they are implanted in and represent for such an important change? What safeguards should be put into place? These are just some of the tough questions we like to ask ourselves on a daily basis at C Minds, ones we answer through groundbreaking pilot projects like this one.



Soushiant Zanganehpour, Founder of Swae

We live in an exciting time where technology acceleration allows individuals to create high-scale positive impact. However, our 19th and 20th century institution and organizational models haven't caught up. In our world of governance and inside most organizations, most remain inflexible and still exclude their stakeholders from participating meaningfully in important decisions. Several polls, surveys and studies point out that most people don't trust our democratic processes or systems. A report by the Pew Research Centre surveyed people across 27 countries and found that 51% are dissatisfied with how democracy is working. For these reasons, we built Swae. We wanted to demonstrate that decision-making can be redesigned for the era we live in. Swae's platform allows citizens to create impactful proposals, mitigating any social or literacy limitations that would prevent access or inclusion via resourceful tools. It also helps generate coherent, well-structured proposals to help leaders make better policy decisions, leveraging the collective intelligence of their communities.

APPRECIATION NOTE

C Minds and Swae would like to thank the incredible team at the Institute of Innovation and Competitiveness (i2C) including their visionary leader, Lisbeily Domínguez, as well as Ana Gabriela Gutierrez and Roberto Chacón, for their commitment, dedication, collaboration and openness to new disruptive projects that aim to have more responsive governments in light of citizen concerns and proposals. This project could never have achieved such an impact without their dedication to improving the lives of people in Ciudad Juárez. Moreover, we would like to thank the companies and organizations that partnered with us and the 1,630 citizens that participated in this exercise, putting their creativity to the service of the community by investing in solutions for better future employment in their city. We are extremely grateful for everyone's time, meaningful contributions and trust.



The C Minds and i2c team with the author of the winning idea

CONTEXT & CHALLENGE

The world is going through a drastic transition into the Fourth Industrial Revolution, where jobs are changing like never before. While in previous industrial revolutions, affected workers (usually blue collar) were usually able to transition from one low-skilled job to another, this time the situation is different. Automation will affect both blue collar and white collar jobs in an unprecendented manner.

With industries evolving as fast as they are (it is estimated that 65% of children in preschool nowadays will have jobs that do not yet exist (WEF, 2018)), stagnant knowledge will no longer suffice. Education is changing to become something we will need to update throughout our lives, constantly updating and upgrading our knowledge. This is called continuous learning, and it is a necessity in today's work environment

Heading this workforce transition is Artificial Intelligence (AI), a tool capable of certain capabilities we believed could only be performed by humans, such as problem-solving, reasoning, planning and the ability to move and manipulate objects. While AI is not a new technology, years of increasing processing speed and storage capacity, data production and fine-tuning AI have led to a boom in its potential for application - including automation.

In Mexico it is estimated that between 19-52% of jobs could be affected by automation in the coming decades (McKinsey, 2017).

In light of the current and upcoming changes in labor market dynamics, governments across the world are exploring new ways of supporting their citizens during the transition, facilitating access to new opportunities and ensuring safety nets for the most vulnerable ones among them. Although this is a global challenge, the speed, depth and type of action required to prepare the ecosystem efficiently varies greatly depending on the place.

This context offers an opportunity to explore the potential of collective intelligence exercises, where citizens come together to build solutions for an uncertain future. The following use case seeks to understand how citizens from Ciudad Juárez, a Mexican town across the border from El Paso, can help the government better prepare them for the Future of Work. To make this happen, C Minds and Swae worked directly with the Institute for Innovation and Competitiveness (i2C) of the Mexican state of Chihuahua and a large number of people and organizations in the local innovation ecosystem.

CIUDAD JUÁREZ

Ciudad Juárez, a city in the mexican border state of Chihuahua and the fifth largest city in the country (population of 1.4 million), is infamous for the drug-based violence and femicides that occurred during the 1980s and 1990s, an unfortunate narrative the government and the city as a whole have made numerous efforts to outgrow. While violence is still the number one challenge, the city is reinventing itself and seeking to change its reputation by investing in the growth of a local tech innovation ecosystem.

Over time, the city has benefited from significant growth spurts led, chronologically, by the Prohibition Era in the United States, the Second World War and exports from the manufacturing sector. Nowadays, it is a key economic hub, fuelling the state of Chihuahua's economy by contributing 41% of the state's GDP (Plan Estatal, 2016), and generating great wealth for the United States. Indeed, the El Paso border crossing alone accounts for 12% of total U.S. trade with Mexico: $44.59 billion U.S. dollars (WorldCity, Inc., 2019).

The challenge that lies ahead is linked to how the city will harness the Fourth Industrial Revolution (4IR) to promote growth while mitigating its risks and democratizing the benefits to the local ecosystem. With an economy that relies overwhelmingly on the manufacturing sector, it represents 66% of jobs and is highly vulnerable to automation (Desarrollo Económico Juárez, 2019), it is important for all actors to guarantee a smooth transition to the new dynamics of the 4IR, developing and implementing a public agenda of preparatory measures to ensure that no one is left behind.

Given this scenario, the government of Chihuahua has been directing more economic and political investment to Ciudad Juárez, seeking to support the state's economic heart during the transition by boosting its transformation into an innovation hub, transforming the narrative from a place of vulnerability to a place of opportunity.



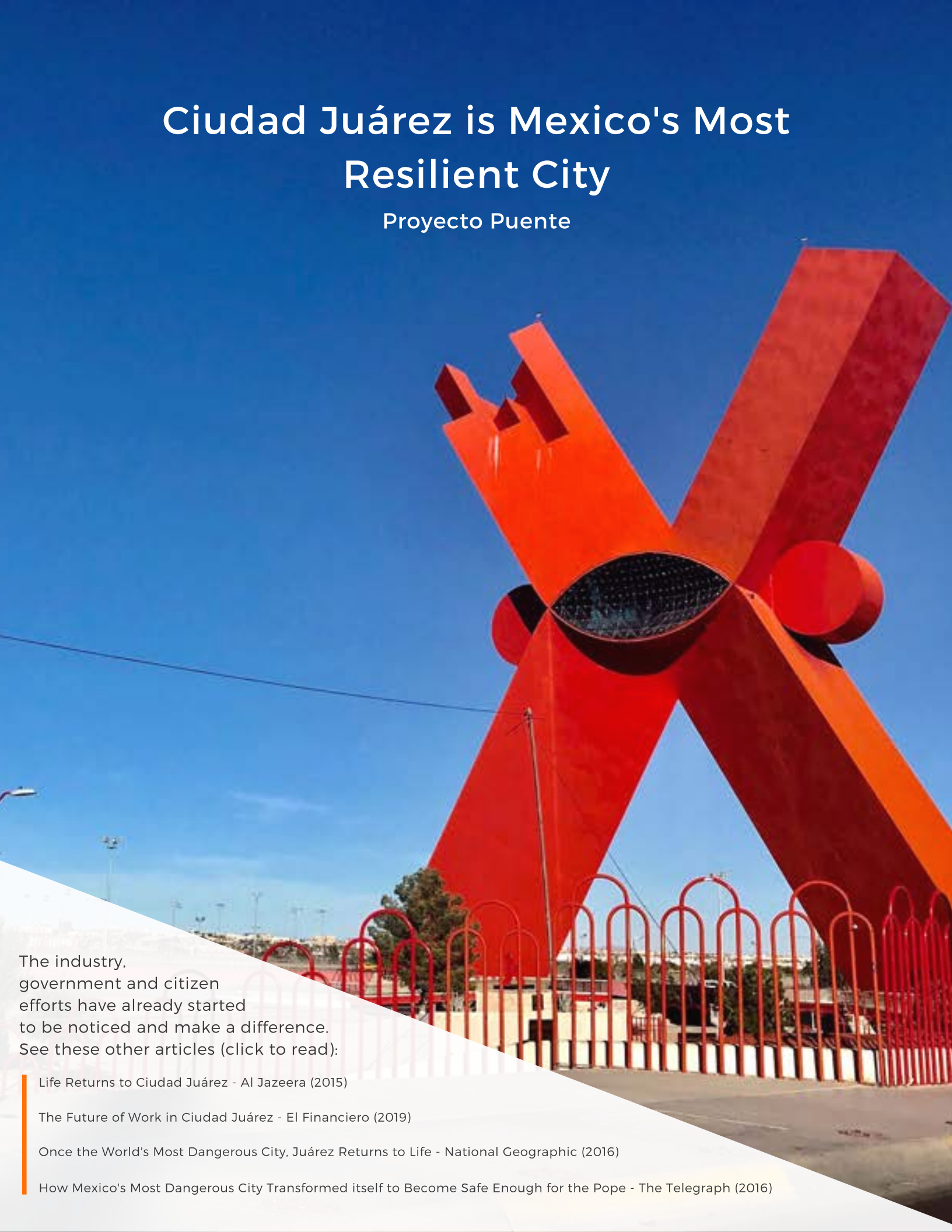
Selection Criteria

Ciudad Juárez was selected to host the initiative based on a number of criteria, including:

- Vulnerability to automation,
- Innovation ecosystem (view Annex 1),
- Rate of internet users,
- Technology foundations,
- Existence of previous innovation-related exercises in order to have a basis on which to build,
- Government openness to innovation.

Ciudad Juárez is Mexico's Most Resilient City

Proyecto Puente



The industry, government and citizen efforts have already started to be noticed and make a difference. See these other articles (click to read):

- Life Returns to Ciudad Juárez - Al Jazeera (2015)
- The Future of Work in Ciudad Juárez - El Financiero (2019)
- Once the World's Most Dangerous City, Juárez Returns to Life - National Geographic (2016)
- How Mexico's Most Dangerous City Transformed itself to Become Safe Enough for the Pope - The Telegraph (2016)

THE DIGITAL TOOL

One of the objectives set by Swae and C Minds for this exercise was to understand how Swae's digital platform could help channel and weave collective intelligence in order to produce bottom-up proposals to address a major social challenge faced in a city. The project partners sought to understand how citizens could leverage the power of digital participatory tools and augmentation processes to take part in the design of government strategies that affect their future. For more information, view Annex 5.

The Process



1- Upload the idea

In order to upload an idea, a person was required to answer certain questions, ranging from the impact and benefits of its implementation, to possible drawbacks. Once completed, the person would send the idea for review.

2- Strengthen the idea

C Minds' team studied each idea and made suggestions to strengthen it into something more actionable. Edits included grammatical and orthographical errors as well as suggestions with regards to the narration, argumentation and content.

3- Publish the idea

The idea was then sent back to its author, who was able to approve or reject edits and complement with additional information before publishing the proposal to the platform.



4- Collaboration

Every idea published to the platform was open to comments from the community, allowing commenters to indicate how they felt about the proposal: positive, neutral or negative, helping the author strengthen his or her proposal before moving on to the voting phase.

5- Vote

The voting phase was not opened until two weeks before the end of the exercise, shutting off the possibility to upload new ideas . The community was able to vote for one or more ideas, contributing to one of the selection criteria.

6- Award

The government partner, the i2C, received the proposals with most votes in order to validate the most implementable ones, and ultimately select the winning idea to be implemented by the government in 2020.

AN INCLUSIVE PROCESS

In order to guarantee as inclusive a participation as possible, C Minds designed a far-reaching communication strategy aimed at making the most of actors and tools available to reach a wide variety of communities in Ciudad Juárez. In addition to securing spaces in local press and radio, the following elements were also achieved (more information in Annex 3).

45 media partners

2 events organized

45 meetups organized

3 events participated in

This outreach was also a key strategic element to raise awareness about the challenges related to the Future of Work in Ciudad Juárez, reaching an estimate of over 5,000 people.

Moreover, and in light of the digital gap in Mexico and the challenges faced by some users to use the digital platform, C Minds also coordinated an offline strategy, inviting people to draft their preoccupations and suggestions on sheets of paper. While this information, much more broad than the online proposals, did not compete for the prize it will be part of a public summary aimed at providing insight to the government and local decision-makers about citizen proposals to address the agenda of Future of Work in Ciudad Juárez.

For a timeline of advances, please view Annex 2.

PARTICIPATION

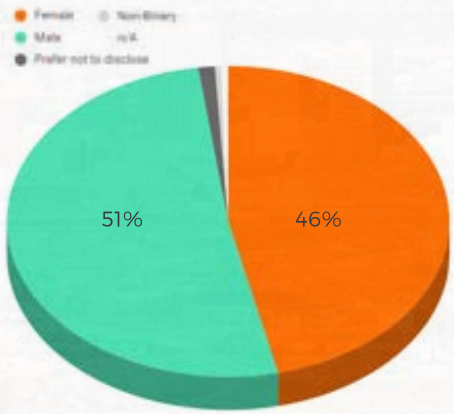
Participants	Proposals	Comments	Votes
1,630	178	365	635

Important notes: 1) Participants include 1,143 online registrations and 487 offline proposals;. 2) Proposals include the 34 proposals that were edited and published and another 144, which did not make it to the final stage because the author did not follow up or because they did not fit the criteria.

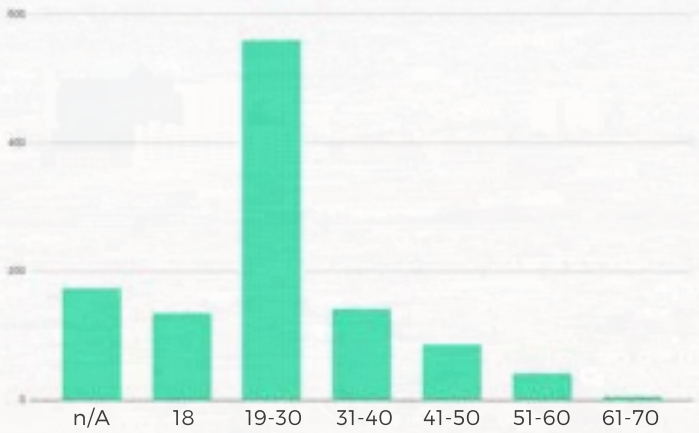
Diversity

Diversity is measured for the 1,143 online registrations.

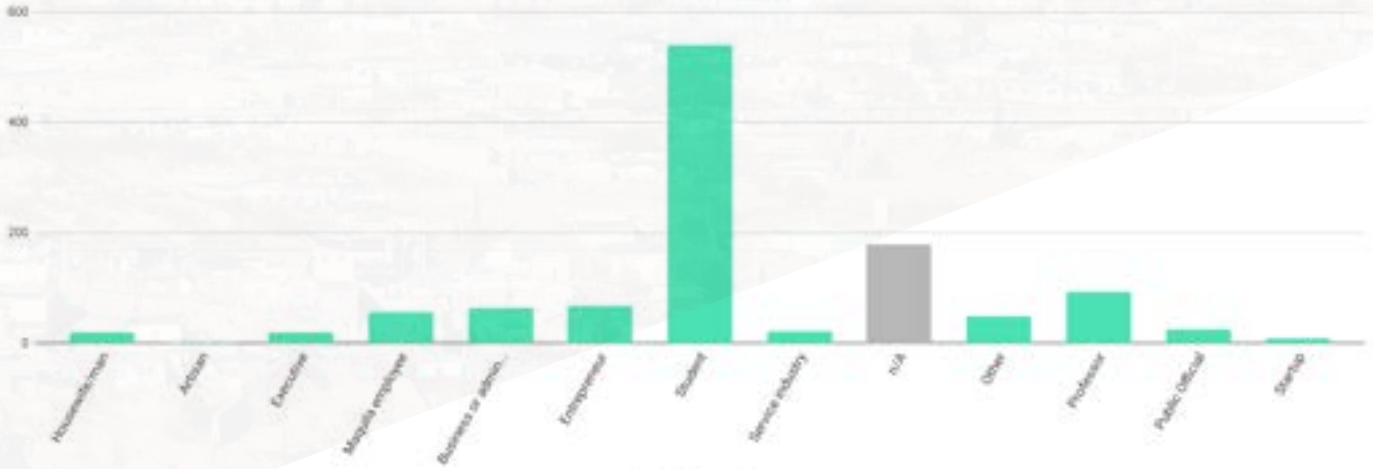
Gender



Age



Occupation



RESULTS

Winning Idea



Dra. Lisbeilly Dominguez, Head of the i2C, Claudia Del Pozo, Head of Operations of C Minds and Tomás Francisco Limones

"Promote the participation of students from public education institutions in the development of technological projects linked to the productive sector," by Tomás Francisco Limones

The proposal involves creating a platform that allows students and researchers to upload their technological projects for the industry to see.

Tomás announced he would be donating the prize money to the benefit of juarense students via the student chapters of the Ciudad Juárez Technological Institute (ITCJ).

Runner-Up

AprendeTech, by Adrián Ávila

The proposal put forth platform that offers online courses on digital marketing and other topics.

Selecting the Best Idea

The winning idea was selected by the i2C based on a number of criteria:

- **Need:** it resolves a need for the Future of Work.
- **Impact**: its implementation must have a positive impact.
- **Scope:** it must fall within the functions of the i2C, in charge of promoting local innovation and competitiveness.
- **Popularity:** number of votes received on the platform.

Following careful deliberation, the i2C selected the one with most votes on the platform, commenting that it presented an interesting, innovative and inclusive solution for challenges impacting a wide portion of the community, namely, its youth, and its lack of connection to the industry.

Seeing the quality of proposals shared by citizens, the i2C selected another popular idea as the runner-up, which it will also be implementing.

Most proposals were focused on education, upskilling or reskilling, stakeholder articulation, connecting students with the industry and improving working opportunities for different sectors. These were the most popular ideas, following the winning one: 2) Job placement program specializing in university graduates; 3) AI education cycles; 4) Linking graphic designers with the maquiladora industry; 5) Job placement program specializing in university graduates.

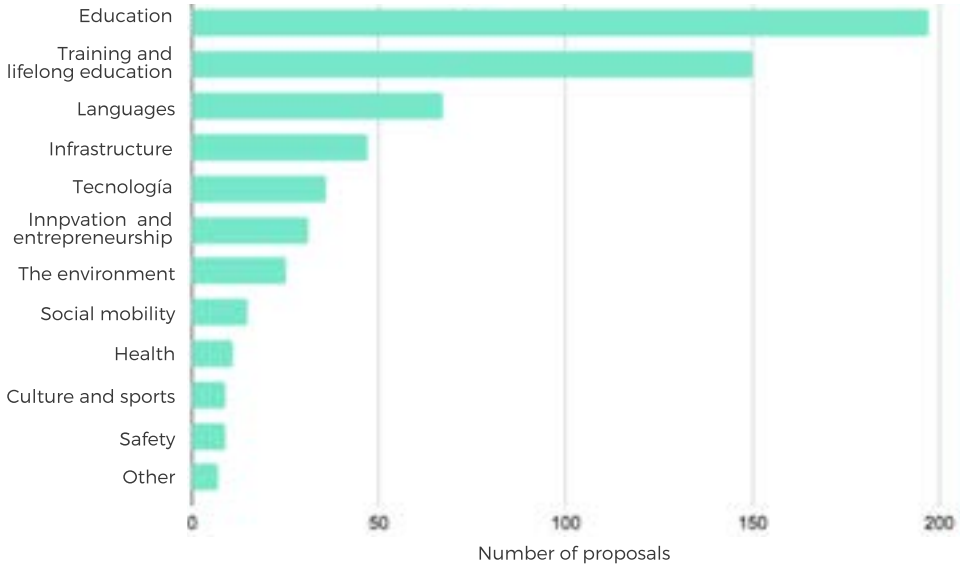
For more information on idea recognition, please view Annex 4.

PROPUESTAS OFFLINE

As part of the exercise we asked the citizens in Ciudad Juárez to write their priorities and worries on sheets of paper before inviting them to participate in the online exercise. The following graph presents the main findings from the 487 handwritten proposals:

General topics

Most proposals focused on education and training, in particular with regards to languages, mainly English.



Annex 6 presents some of the different proposals that were submitted in handwritten form.

While it is key to have clarity with regards to the priorities of Ciudad Juárez' citizens, it must be understood that these arise from current reality and do not necessarily contemplate potential future scenarios. In addition to attending the above-mentionned needs, it will be important for the government to work hand in hand with the academia, industry and civil society to anticipate future risks, particularly in light of the Fourth Industrial Revolution, which will require deep changes in education and workforce preparation. Morevoer, the creation of new job opportunities and of sufficient capacity to absorb these opportunities locally will be crucial to ensure that Ciudad Juárez continues transforming itself into the innovation hub it hopes to become while maintaining a human-centered focus.



Source: Minube

EXPECTED IMPACT OF IDEAS

With the implementation of the winning and runner-up ideas, juarenses will benefit from new channels of support from the i2C. Over 1,630 juarenses participated in the exercise, contributing ideas, collaborating with their peers and selecting the proposal they believed would most improve local innovation and competitiveness. The digital tool enabled collaboration between people who might never have exchanged ideas in the real world, leading to innovative and inclusive proposals.

Winning Idea

The winning proposal that has the aim to "Promote the participation of students from public education institutions in the development of technological projects linked to the productive sector" will allow students to upload their technological projects to an i2C-owned digital platform that offers them visibility within the industry, increasing the opportunity for collaborations between the industry and academia (and, as such, applied research projects that solve specific challenges) and facilitating students' insertion into the job world.

While Ciudad Juárez has many independent initiatives going, the city lacks more cross-sector collaboration, which is why the i2C believes this proposal promises significant impact as much for the student population and the industry, as for Ciudad Juárez as a whole.

This proposal guarantees increased innovation and competitiveness by enabling and promoting more:

- **Cross-sector collaboration**
- **Applied research**
- **Opportunities for students and researchers**
- **Local talent**
- **Technological project visibility**
- **Local industry growth**



Source: Minube

EXPECTED IMPACT CONT'D

Runner-Up

The runner-up idea, "AprendeTech", in turn, addresses the challenge of continuous learning, providing mechanisms directly from the government. Once implemented, this idea will provide juarenses with an online learning platform initially focused on online marketing, ensuring local business owners are able to expand their growth into the digital sphere and take advantage of new markets, Juarenses, in turn, will have access to continuous learning opportunities, free education and a wider variety of topics than offered in the local physical institutions, providing them with a new and flexible way to gain the skills required to continue being successful as the industry evolves, boosting their resilience to upcoming changes.

As a whole, this proposal guarantees increased innovation and competitiveness by enabling and promoting:

- **Local business growth**
- **Digitization of the economy**
- **Continuous learning opportunities**
- **Increased local resilience**
- **Local talent**
- **Free online education with a broad range of topics**

WIDER IMPACT

Beyond gathering proposals for an inclusive future of work, the exercise and its partners achieved significant impact for Ciudad Juárez.

Future of Work


Source: Pexels

Awareness: part of the population is now aware of the challenges of the Future of Work and the importance of preparing adequately.

Priorities: with the publication of the summary of proposals, the government and decision-makers across Ciudad Juárez will have a clearer perception of the communities' concerns and priorities regarding employment and proposals on how to address this agenda moving forward.

Inclusive transformation: raising awareness on the importance of Future of Work and the impact of AI on the workforce is a first step to prepare for an inclusive transformation towards the Fourth Industrial Revolution.

Ciudad Juárez

Positioning: like the many initiatives promoted by the local ecosystem, this exercise is contributing to positioning Ciudad Juárez as one of Mexico's main innovation hubs.

Local industry: by building talent and cross-sector collaboration, the i2C is setting the scene for boosting the local industry, so far, outweighed by the maquiladora industry.

Innovation: My Job, My Future helps advance the ongoing strategy of the institutions to transform Ciudad Juarez into a land of opportunity and innovation.

Governance: with a government trust rate of 34% (Edelman Trust Barometer, 2019), it can be difficult for a government institution to gain the trust of citizens in Mexico. This exercise demonstrated the openness of the i2C and SIDE and their willingness to collaborate with their constituents.


Source: Orange Smile

Community



Source: USA Today

Community engagement: this exercise offered a platform for juarenses to work together to create solutions for a better tomorrow, showing that people can make a difference.

Collaboration: the exercise strengthened the collaboration mechanisms between the government and citizens by harnessing the power of new technologies as a tool to democratize the process among the digital community.

Inclusion: the online and offline aspect of the platform, the possibility to anonymize proposals and the widespread communication exercise enabled diverse participation.

A MESSAGE FROM THE I2C

INSTITUTO
DE INNOVACIÓN
Y COMPETITIVIDAD

"The 'My Job, My Future' challenge helped the Institute for Innovation and Competitiveness (I2C) to get to know firsthand the ideas of Ciudad Juárez' population regarding work and its evolution in the future. It provided an overview of activities and actions through which the I2C can address these topics from different perspectives, contributing practical and efficient measures to improve job opportunities and generate a positive impact on the community."



Lisbeily Domínguez Ruvalcaba,
General Director of the Institute for Innovation and Competitiveness of the Chihuahua State Government

MEDIA PARTNERS

The organizations behind My Job, My Future thank the organizations and people who believed in the project and contributed to making it as inclusive as possible.



FINAL WORDS

The Future of Work is one of the most urgent topics of our time. A poor transition could marginalize groups from the benefits it brings along. The time for cities to start thinking about how they want support workers in gaining new skills and offer safety nets is now.

My Job, My Future is a pioneering exercise in Mexico and, to a certain extent, across the world, as it brings together citizens to design their own employment future. While the fact that part of the city's population has been educated about the topic is to be celebrated, it is important to recognize this is only the first step on a long road that leads to more opportunities.

The second immediate step will be the idea implementation and further steps include the creation of a Future of Work strategy for Ciudad Juárez. The impactful results that came from this exercise are only a sample of what can be achieved in an optimistic community when harnessing the power of collective intelligence.

Under the outstanding leadership of the i2C, combined with juarenses' exceptional resilience, we have no doubt Ciudad Juárez will continue evolving from a land of vulnerability to one of implacable opportunity.

For regular updates about the project's results and impact, follow C Minds' social media accounts:

twitter.com/cminds_co

www.facebook.com/CMindsImpact

Contact
Direct questions to info@cminds.co



Source: Expedia

ANNEXES

ANNEX 1 Ciudad Juarez' Innovation Ecosystem

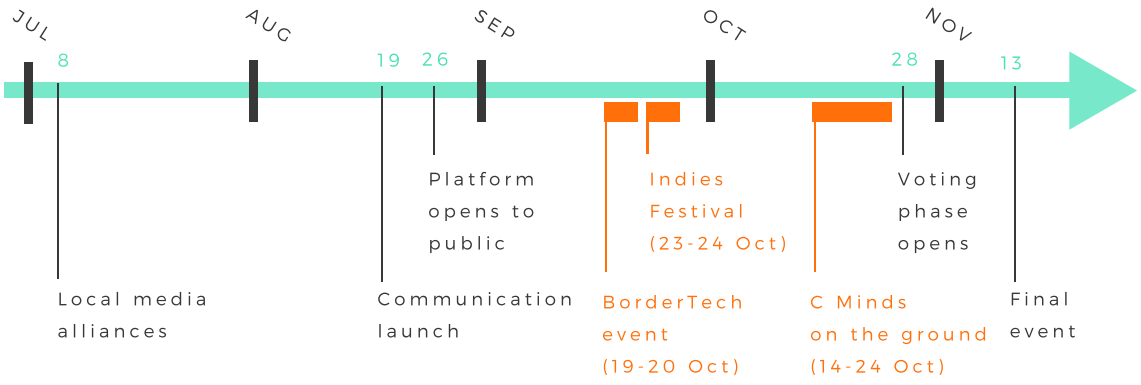
During our work on the ground, C Minds found a very welcoming, friendly and dynamic ecosystem, filled with optimism despite the challenges that affect the city.

Local youth is being oriented towards the innovation ecosystem via different means. The Municipal Institute of Juárez focuses on supporting the young population of Ciudad Juárez through social programs. Young juarenses (citizens of Ciudad Juárez) can take part in one of the many community centers, developing robotics and tech-related skills at the Mech Robotix Academy, or being part of the local entrepreneurial scene by joining the Young Entrepreneurs Commission (Comisión de Empresarios Jóvenes Coparmex Cd. Juárez).

Other laudable initiatives involve the Red Juárez Emprende and the Technology Hub. The latter seeks to boost innovation and information sharing by giving entrepreneurs and innovators a dedicated space. Recently, Microsoft recognized their efforts and awarded them a $1.5 million USD grant to continue strengthening and building capabilities within the community.

The government has also been boosting innovation in the city, starting by addressing the lack of trust that stems from juarenses towards their government. A recent move of their Ministry of Innovation and Economic Development (Secretaría de Innovación y Desarrollo Económico, or SIDE) from Chihuahua, the state capital, to Ciudad Juárez was much appreciated by locals who had felt left aside from growth efforts at the state level, despite being the state's economic motor. Furthermore, the Institute for Innovation and Competitiveness (Instituto de Innovación y Competitividad, i2C, part of SIDE), has launched a number of programs aimed at encouraging, promoting and funding entrepreneurship across the state, via Chihuahua Innova and the State Trust for the Promotion of Productive Activities in the State of Chihuahua (Fideicomiso Estatal para el Fomento de las Actividades Productivas en el Estado de Chihuahua, FIDEAPECH) that offers grants that range between $5,000 - 1 million pesos (approximately equivalent to equivalent to $260 - $51,000 USD).

ANNEX 2 Timeline (2019)



ANNEXES CONT'D

ANNEX 3 Inclusivity

On behalf of the entire team, we would like to thank the following organizations, institutions and people for their support throughout the project. They are presented in alphabetical order:

Academia
Autonomous University of Ciudad Juárez (UACJ), Technological University of Ciudad Juárez (UTCJ), Study Center of Innovators (CEIAC), Technological Institute of Ciudad Juárez (ITCJ), Institute for the Promotion of Education (IPE).

Governmental organizations
Ciudad Juárez Municipality, Technological Development Support Institute (INADET).

Companies
BIO El Paso, Indboo, JW Legal Innovations, PRAXMA, Repinel, Technology Hub, Startups Fab Lab, HADOX Human Networks.

Citizen Initiatives and NGOs
Border Network, Kybernus Chihuahua Capital, Study Centre for the Blind Civil Association.

Networks
CANACINTRA (National Chamber of the Transformation Industry), CANACO (National Chamber of Commerce), COPARMEX (Employers Confederation of the Mexican Republic), Chihuahua Innova, Clúster de Manufactura Avanzada de Chihuahua, Comisión de Empresarios Jóvenes Coparmex Cd. Juárez (Young Entrepreneurs Commission), Red Chihuahuense para el Servicio Público, Red Emprende Juárez.

Individuals
Adolfo Pedro Guzmán Ramírez (professor), Brenda Janeth Torres Gómez (student), Christian, Alberto Ruvalcaba (student), Eduardo Flores Barraza (engineer), Fátima Yoselin Reynoso Nataren (student), Gilberto Medina Palacios (student), Iris Ailyn (student), Itzel Laurel Hernández (researcher), Javier Solís (student), Judith Virginia Ríos Arana (professor), Lucía Vázquez Bon (researcher), Luis Carlos Rubio Dalli (student), Miriam Zulema Jacobo Gómez (engineer), Norma Alejandra Sotelo Ríos (student), Verónica Licón Huerta (student), Victor M.Herrera Correa Galaviz (student)

ANNEXES CONT'D

ANNEX 4 Idea Recognition



Courtesy of Salvador Valdovinos

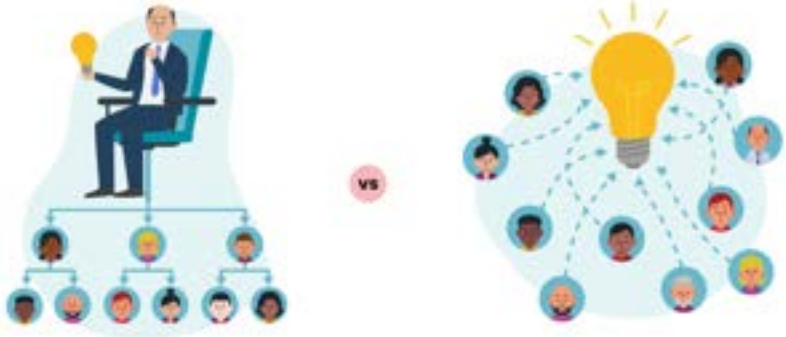
Each idea author received a hand-signed certificate from the government, recognizing and thanking them for their meaningful participation in the definition of a better future for Ciudad Juárez.

Pictured left: Salvador Baldovino, author of the fourth most popular proposal: "Linking graphic designers with the maquiladora industry"

ANNEX 5 Swae's Tool for Inclusive Decision-Making

Using AI and decision-science, Swae enables organizations and governments to democratize idea generation and development, increase transparency in the decision-making process, include more voices in order to raise the quality, intelligence, and legitimacy of decisions.

The Status Quo VS Swae's System



The Status Quo:
Top-Down Deicision-Making

Swae's idea Meritocracy
System

ANNEXES CONT'D

ANNEX 6 Offline Proposals

The proposals are divided among the three main categories:

Education

- Give leadership classes, helping us become young entrepreneurs and the leaders of tomorrow.
- I suggest we have an app to help us learn extra subjects or strengthen our skills in the ones we are already taking but that it function as extra classes. That way, we would learn more and better.
- Implement robotics programs like First Lego League in middle and high schools to teach basic programming and design concepts.
- Classes focused on updating students on the most recent tech developments and how to manage them.

Training, Lifelong learning and languages

- More conferences on leadership, motivation and discipline.
- Teach us more about communication technologies and informatics (especially excel).
- Some kind of internship or job simulation for middle and high school students (not only for university students).
- Encourage self-education among students and help them manage their own projects.
- Have more government support directed towards community centers so we can learn languages and understand technology.
- Virtual reality for training sessions that are always different so we can move forward and have a better understanding and visualization of the field in which we'd like to develop.

Infrastructure

- One of my proposals would be to have Internet in all public schools so that they have better access to information.
- An app or communications tool that lets you notify a lack of light or public lighting around the city.
- I suggest renting ecological bicycles in areas like malls and create special roads for bicycles in order to avoid accidents.
- An application that lets you know of available parking spots in malls and other premises.

MI TRABAJO, MI FUTURO

Actors involved in the development of this project:

Instituto de Innovación y Competitividad (i2C)
Lisbeily Domínguez, Ana Gabriela Gutiérrez and Roberto Chacón

C Minds
Constanza Gómez-Mont, Claudia Del Pozo, Clara Martínez and Itzel Laurel

Swae
Soushiant Zanganehpour and Sakiko Toriya

Panel on the future of work in Ciudad Juárez as part of the Awards Ceremony, which took place in the Chihuahua Innova event

