

ESADE

RAMON LLULL UNIVERSITY

INSTITUTE FOR
SOCIAL INNOVATION

Antena de Innovación Social

The digital revolution takes on global challenges.

100 digital social innovations
transforming Latin America.

EXECUTIVE
SUMMARY



The digital revolution takes on global challenges.

100 digital social innovations transforming Latin America .

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Antena de Innovación Social

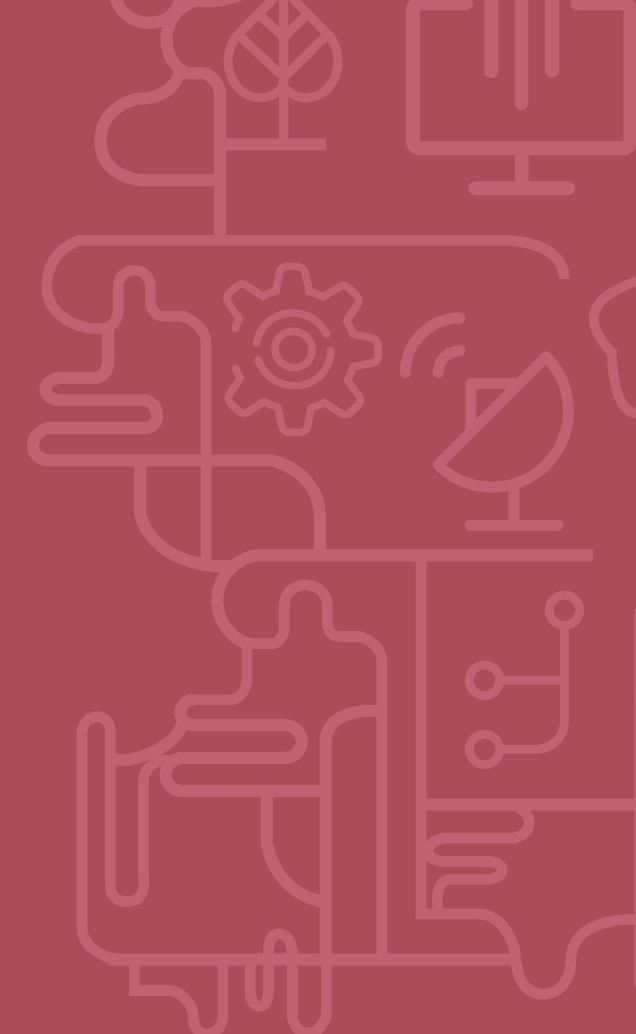
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The exponential growth of information and communication technologies and the diminishing digital divide, coupled with the emerging collaborative economy and the power of collective intelligence generated by online platforms, are key factors for socioeconomic and political development. The immediacy with which information can be circulated and the speed in which data is transformed into intelligence has given rise to new trends and innovative business models across sectors. In this context, digital social innovation has emerged, offering a fertile landscape to generate and scale up the systemic solutions needed to achieve the ambitious sustainable development goals (SDGs).

This report compiles 100 digital social innovations that are already generating a positive impact across Latin America in each of the areas covered by the SDGs. The digital era has enabled many people to access resources and services that were previously out of their reach as well as reduce transaction costs. This has paved the way to reach a far greater number of beneficiaries than those reached by traditional social innovation initiatives. It provides a great opportunity for disruptive and scalable solutions to the most critical challenges the region continues to face in education, health, poverty and inequality.

Index

Part
one
06

**The Latin
American landscape**

Part
two
08

**Mapping
digital social
innovation**

Part
three
12

**Digital solutions
for the SDGs**

Part
four
18

**Key
conclusions**

Part
five
22

**Final
reflections**

Acknowledgements | 26

The authors | 27

Part one

The Latin American landscape



Digital social innovation (DSI) is on the rise in the region and the following maps highlight 100 innovations that illustrate this growth. The following steps were taken to select these initiatives. First and foremost, a series of recommendations were compiled from a group of experts with backgrounds in the collaborative economy, the role of technology in development and social innovation. Secondly, the initiatives were assessed according to their contribution to the SDGs. As a final criteria the five social innovation variables were applied to the selection, whereby the following questions were posed for each initiative:

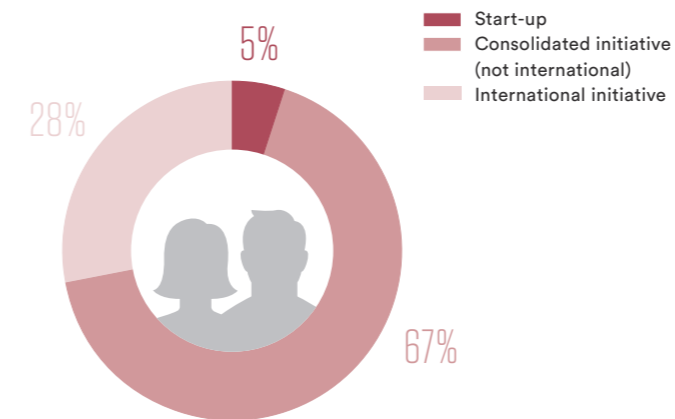
1. Does it generate **social impact**?
2. Does it operate with a **sustainable financial model**, or is this being developed?
3. Is it **innovative** and what kind of innovation has been applied?
4. Does it have the **potential for scale** or to be replicated?
5. Does it involve **cross-sector collaboration**?

As a whole, the sample represents initiatives in different phases of development: the start-up phase for initiatives in their early stages, already proving viable but not yet reaching 5,000 people; the consolidated phase, those with a sustainable economic model and benefitting more than 5,000 people; and the international phase, for those initiatives that operate in more than one country in Latin America, or other regions, and in many cases are already making a difference to the lives of more than a million people.

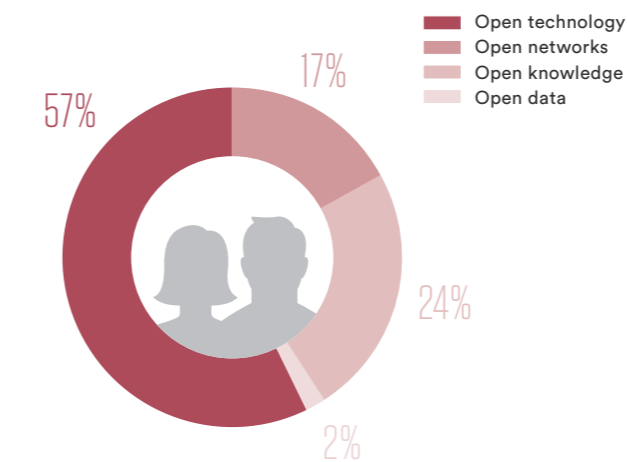
According to the data provided by the organisations, a total of 64 million people have benefitted from these 100 initiatives, which is the equivalent to 11% of Latin America's population. There are several different ways the organisations calculate the number of beneficiaries, namely the following three. Firstly, many organisations measure their impact by the number of users or members registered with their platforms, applications or other web based systems. For the purposes of this report the number of social media followers has not been considered a way of measuring impact, moreover the number of subscribers for a specific service has been taken into account. In second place, there are several initiatives that monitor the number of people who have taken part in a particular programme, for example the number of patients who have received free treatments thanks to a new digital health service or the number of students who have taken part in a particular education activity. In third place, some organisations measure their impact according to the number of workers who have benefitted from receiving alternative means of finance, (largely, small and medium enterprises), or the number of people who have participated in a labour reintegration platform.

The following graphics show the different characteristics of the initiatives in terms of their financial models, stages of development and the type of digital social innovation adopted.

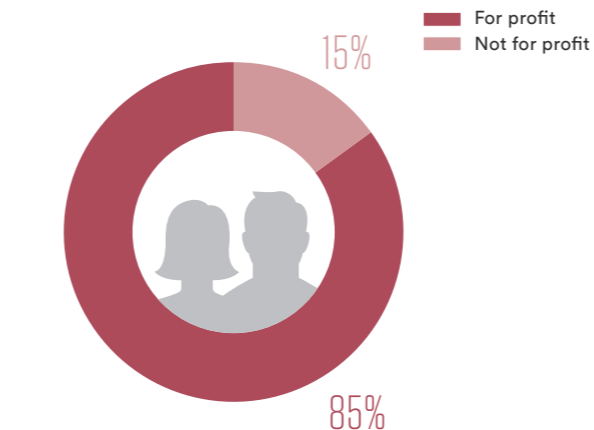
Graphic 1: Proportion of beneficiaries in relation to the initiative's development phase.



Graphic 2: Proportion of beneficiaries in relation to the initiative's innovation type.



Graphic 3: Proportion of beneficiaries in relation to the initiative's financial model.



IMPACT

START-UP

- 5,000
people
in the same country

CONSOLIDATED INITIATIVE

+ 5,000
people
in the same country

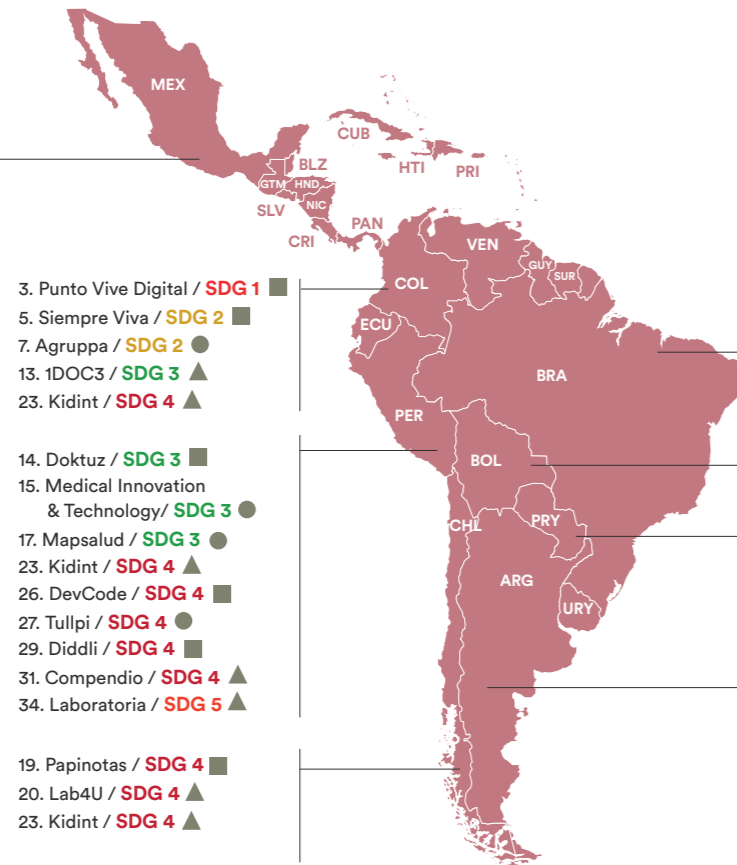
INTERNATIONAL INITIATIVE

+ 5,000
people
in more than one country

Part two

Mapping digital social innovation

- 4. Extensio / **SDG 2** ▲
- 8. Frogtek / **SDG 2** ■
- 9. Blooders / **SDG 3** ■
- 10. Salud Fácil / **SDG 3** ■
- 11. Sohín / **SDG 3** ▲
- 12. Previta / **SDG 3** ▲
- 18. Unima / **SDG 3** ●
- 28. Yogome* / **SDG 4** ▲
- 30. ENOVA / **SDG 4** ■
- 32. School Control / **SDG 4** ■
- 33. MGOV** / **SDG 4** ▲
- 34. Laboratoria / **SDG 5** ▲
- 35. Epic Queen / **SDG 5** ▲
- 36. Mujer Digital / **SDG 5** ▲



- 1. Risü / **SDG 1** ■
- 6. Saladorama / **SDG 2** ●
- 16. Portal Telemedicina / **SDG 3** ■
- 21. Recode / **SDG 4** ▲
- 22. Patio Digital / **SDG 4** ■
- 23. Kidint / **SDG 4** ▲
- 24. Árvore de Livros / **SDG 4** ■
- 25. Geekie / **SDG 4** ▲
- 33. MGOV** / **SDG 4** ▲
- 31. Compendio / **SDG 4** ▲
- 2. Semáforo de pobreza / **SDG 1** ■
- 23. Kidint / **SDG 4** ▲

- 39. DOCSAS / **SDG 6** ▲
- 43. Arbusta / **SDG 8** ▲
- 57. Mejor en Bici / **SDG 9** ■
- 58. Tapssi / **SDG 9** ■
- 59. Campo digital Amazonas / **SDG 9** ●

- 37. Waposat / **SDG 6** ●
- 42. Powermundo / **SDG 7** ■
- 50. Innovafunding / **SDG 8** ●
- 39. DOCSAS / **SDG 6** ▲

- 41. Belmont Electronics / **SDG 7** ■
- 44. Destácame / **SDG 8** ▲
- 53. Cumpló / **SDG 8** ■
- 38. AQUASTAT / **SDG 6** ▲ Global
- 52. Fundación Capital / **SDG 8** ▲ 27 países
- 54. HipGive / **SDG 8** ▲ América Latina, EUA

- 44. Destácame / **SDG 8** ▲
- 47. Fondify / **SDG 8** ■
- 48. Kubo Financiero / **SDG 8** ■
- 49. Akiba* / **SDG 8** ●
- 55. Kueski / **SDG 8** ■
- 56. Rhizomática / **SDG 9** ●
- 61. Inclúyeme / **SDG 10** ▲
- 63. Kernaia / **SDG 10** ■
- 65. Dilo en Señas / **SDG 10** ■

- 40. Pague Verde / **SDG 7** ●
- 45. Brootta / **SDG 8** ■
- 46. Smart Mei / **SDG 8** ■
- 51. Nubank / **SDG 8** ■
- 60. One dollar board / **SDG 9** ●
- 64. Handtalk me / **SDG 10** ■
- 39. DOCSAS / **SDG 6** ▲
- 43. Arbusta / **SDG 8** ▲
- 61. Inclúyeme / **SDG 10** ▲
- 62. Fundación equidad / **SDG 10** ■

SDG 1 No poverty
SDG 2 Zero hunger
SDG 3 Good health and wellbeing

SDG 4 Quality education
SDG 5 Gender equality

● Start-up
 ■ Consolidated initiative
 ▲ International initiative

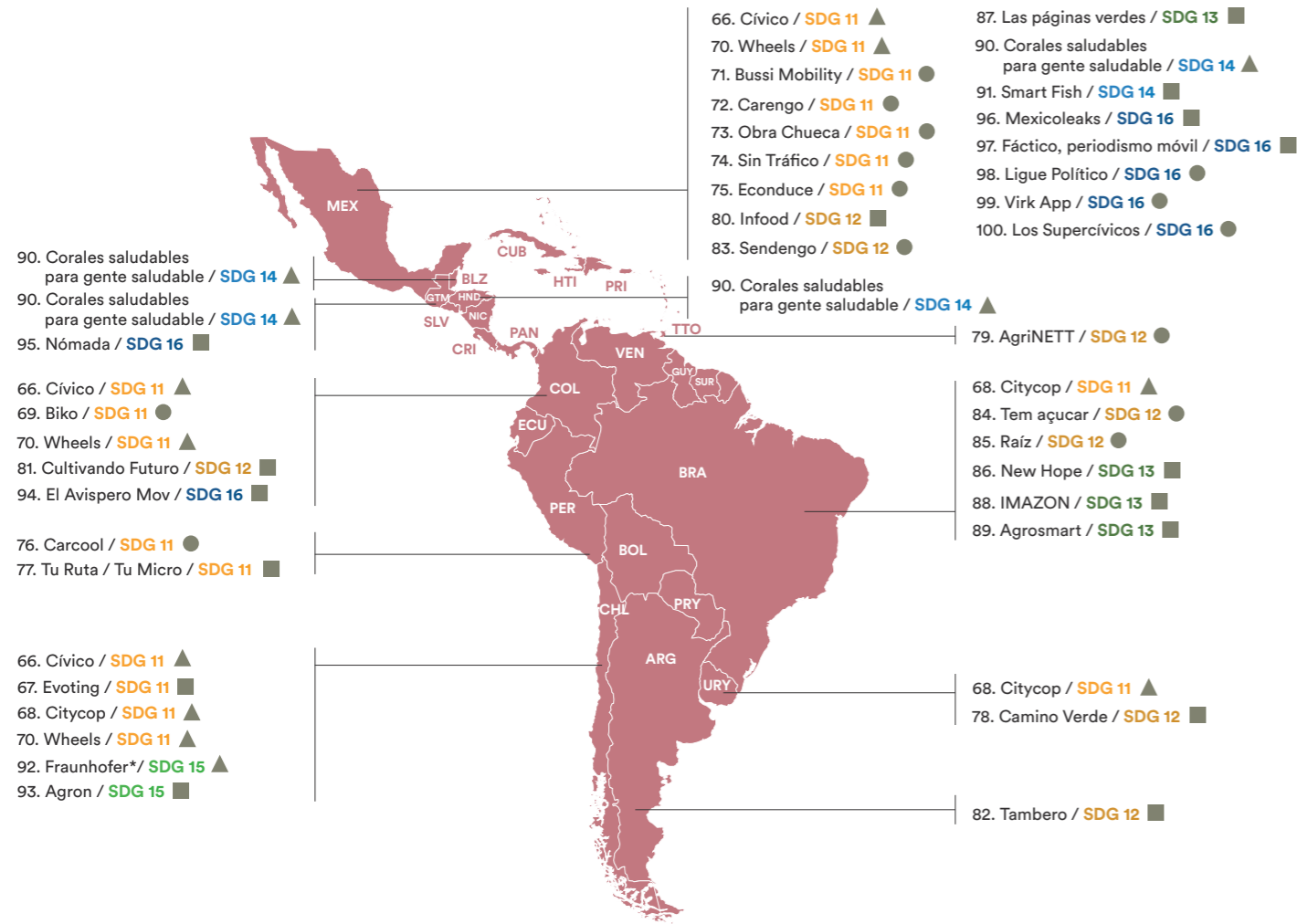
* USA
 ** USA, Germany and starting in West Africa

SDG 6 Clean water and sanitation
SDG 7 Affordable and clean energy
SDG 8 Decent work and economic growth

SDG 9 Industry, innovation and infrastructure
SDG 10 Reduced inequalities

● Start-up
 ■ Consolidated initiative
 ▲ International initiative

* Switzerland



SDG 11 Sustainable cities and communities
SDG 12 Responsible consumption and production
SDG 13 Climate action
SDG 14 Life below water
SDG 15 Life on land
SDG 16 Peace, justice and strong institutions
 ● Start-up
 ■ Consolidated initiative
 ▲ International initiative
 * Germany



Part three

Digital solutions for the SDGs



The following pages illustrate how digital social innovation is already contributing to each of the SDGs across Latin America.

1. NO POVERTY



There are diverse approaches to combatting poverty through DSI: providing access to technology to vulnerable populations with initiatives such as **Punto Vive Digital**, geo-location services to pinpoint the specific basic needs of poor communities like **El Semáforo de Pobreza**, or donation based e-commerce platforms, such as **Risü**.

- EXAMPLES**
1. Risü: Consolidated, Brazil
 2. Semáforo de la Pobreza: Consolidated, Paraguay
 3. Punto Vive Digital: Consolidated, Colombia

OBSERVATIONS

- The digital divide represents a major challenge to combat poverty.
- There are several different business models and DSI can be more effective when applied by organisations with a long track record and deep understanding of their audiences.

2. ZERO HUNGER



DSI opportunities exist across the whole value chain for the food industry: from platforms like **Extensio** which facilitates information to farmers on prices, climate change and sustainable farming practices via SMS, to **Agruppa**, a mobile service which conglomerates supply orders from small local shops. Several initiatives connect producers with consumers, such as the online shop **Siembra Viva** or **Saladorama**, which provides healthy food to marginalized communities.

- EXAMPLES**
4. Extensio: Start-up, Mexico
 5. Siembra Viva: Consolidated, Colombia
 6. Saladorama: Start-up, Brazil
 7. Agruppa: Start-up, Colombia
 8. Frogtek: Consolidated, Mexico

OBSERVATIONS

- The rural areas are most affected by the digital divide and small producers suffer the consequences.
- Platforms can help bring producers and consumers closer together.
- The food sector is a fertile landscape for DSI and there are many opportunities for replicating existing initiatives.

3. HEALTH AND WELLBEING



Most of the innovations bring down the cost of health services, some facilitate better connectivity between health professionals and their patients and others connect remote communities, such as **Portal Telemedicina**. Higher quality services can be offered to patients via mobile through initiatives like **Sohin**, access to finance for health services is provided by initiatives such as **Salud Fácil**, or improved efficiency of blood donations as with **Blooders**.

- EXAMPLES**
9. Blooders (9): Consolidated, Mexico
 10. Salud Fácil (10): Consolidated, Mexico
 11. Sohin (11): International, Mexico
 12. Previta (12): International, Mexico
 13. 1DOC3 (13): International, Colombia
 14. Doktuz (14): Consolidated, Peru
 15. Medical Innovation & Technology (15): Start-up, Peru
 16. Portal Telemedicina (16): Consolidated, Brazil
 17. Mapsalud (17): Start-up, Peru
 18. Unima (18): Start-up, Mexico

OBSERVATIONS

- Health is one of the most active areas for DSI in the region with numerous initiatives that work across different aspects of the sector.
- Mexico is one of the most developed countries in this field.
- Telemedicine can help reduce costs, increase the quality of services and reduce patient waiting times.

4. QUALITY EDUCATION



DSI enables greater access to education and higher quality services and there are a plethora of initiatives in this field. SMS based programmes that provide interaction between families and schools, such as **Papinotas** and **Eduqmais** from MGOV are already resulting in improvements in educational performance. **Lab4U** uses smartphones to integrate science into the classroom without the cost of installing a science lab, **Recode** and **Patio Digital** promote digital inclusion and participation in education and there is a wide selection of free or low cost learning materials from platforms such as **Geekie**, **Dev Code** and **Enova**. The edutainment sector, with examples such as **Kidint** and **Árvore de Livros**, is also growing.

- EXAMPLES**
19. Papinotas: Consolidated, Chile
 20. Lab4U: International, Chile
 21. Recode: International, Brazil
 22. Patio Digital: Consolidated, Brazil
 23. Kidint: International, Chile, Brazil, Peru, Colombia, Argentina
 24. Árvore de Livros: Consolidated, Brazil
 25. Geekie: International, Brazil
 26. DevCode: Consolidated, Peru
 27. Tullpi: Start-up, Peru
 28. Yogome: International, Mexico, USA
 29. Diddli: Consolidated, Peru
 30. ENOVA: Consolidated, Mexico
 31. Compendio: International, Bolivia, Peru
 32. School Control: International, Mexico
 33. MGOV: International, Brazil, Mexico, USA, Germany and starting in West Africa.

OBSERVATIONS

- DSI applied to educational models is one of the most developed areas in the region, particularly in Brazil.
- Several initiatives are already expanding and have robust business models.
- The most developed areas are online courses and interactive children's books.
- Both public and private institutions have increased the use of digital tools to improve access and the quality of their services.



5. GENDER EQUALITY



The DSI initiatives that promote gender equality are generally focussed on STEM programmes. Initiatives exist for women of all ages, such as **Epic Queen**, which has already trained 50,000 girls in digital competencies or **Mujer Digital** whose mission is to increase the participation of older women in the digital sector.

- EXAMPLES**
- 34. Laboratoria: International, Peru, Chile, Mexico
 - 35. Epic Queen: International, Mexico
 - 36. Mujer Digital: International, Mexico

- OBSERVATIONS**
- Although gender equality is an issue of growing concern in the region, there are still not very many digital initiatives focussed on this challenge.
 - DSI models in the region tend to provide a mix of face to face activity and open networks.
 - There is a growing trend towards initiatives that focus on girls and young women.

6. CLEAN WATER AND SANITATION



ISD offers several means of tackling clean water and sanitation challenges: through the use of open technology, as is the case of **Akvo**, a system that collects data on water quality, or databases on global water resources such as **Aquastat**, and finally open software systems, like **Docsas** which monitors water conditions.

- EXAMPLES**
- 37. Waposat (37): Start-up, Peru
 - 38. Aquastat (38): International, Global
 - 39. Docsas (39): International, Bolivia, Guatemala, Panama, Costa Rica, Paraguay, Colombia

- OBSERVATIONS**
- Access to clean water and sanitation is a critical issue for the region, however there are very few DSI initiatives that focus on this area.
 - There is a growing trend of initiatives that map water resources and share good practice.
 - Selling data to public institutions is proving to be a viable business model.

7. AFFORDABLE AND CLEAN ENERGY

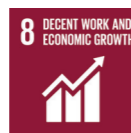


Several initiatives promote more responsible energy consumption through smart applications such as **Pague Verde**, which provides real time energy consumption data, and **Belmont Electronics**, a hardware and software solution which enables energy savings. Another approach is the emerging Pay As You Go model, such as **Powermundo**, making renewable energy more accessible to off-grid communities.

- EXAMPLES**
- 40. Pague Verde: Start-up, Brazil
 - 41. Belmont Electronics: Consolidated, Chile
 - 42. Powermundo: Consolidated, Peru

- OBSERVATIONS**
- Pay As You Go technologies, which facilitate access to renewable energies, are still in their infancy.
 - The most developed initiatives in this area are those that focus on responsible energy consumption.

8. DECENT WORK AND ECONOMIC GROWTH



Digital technologies are transforming the economy, both for companies and individuals. Financial services is an area with a great deal of DSI activity, particularly peer to peer lending platforms, such as **Cumplo**, crowdfunding sites like **Broota**, and others that offer financial services to SMEs to help their growth, such as **SmartMEI**. Another active field is financial inclusion for unbanked populations, with initiatives such as **Fundación Capital**, and the growing movement of online banking, with examples such as **Nubank**, which reduces transaction costs for individuals.

- EXAMPLES**
- 43. Arbusta: International, Colombia, Argentina
 - 44. Destácame: International, Mexico, Chile
 - 45. Broota: Consolidated, Brazil
 - 46. SmartMEI: Consolidated, Brazil
 - 47. Fondify: Consolidated, Mexico
 - 48. Kubo Financiero: Consolidated, Mexico
 - 49. Akiba: Start-up, Switzerland, Mexico
 - 50. Innovafunding: Start-up, Peru
 - 51. Nubank: Consolidated, Brazil
 - 52. Fundación Capital: International, Colombia + 13 countries in Latin America and 3 in Africa
 - 53. Cumplo: Consolidated, Chile
 - 54. HIPGive: International, Latin America, USA
 - 55. Kueski: Consolidated, Mexico

- OBSERVATIONS**
- The fintech sector is growing exponentially with a diverse range of models that break traditional financial moulds.
 - There are many innovations that help to provide SMEs with access to credit and other services.
 - Financial inclusion is still a key challenge for the poorest populations and DSI provides huge potential to overcome this.

9. INDUSTRY, INNOVATION AND INFRASTRUCTURE



Digital inclusion requires considerable investment in infrastructure and there are some initiatives that achieve this in a self-managed way. This is the case for **Rizomática**, a community broadband network and **Campo Digital Amazonas**, which provides digital access to extremely remote areas. Other areas of development are open technologies, such as **One Dollar Board**, which gives students an introduction to the internet, automation and programming for just one dollar. The sustainable mobility sector increasingly uses digital innovation, with examples like **Mejor en Bici**, a bicycle renting and monitoring software and there has been an explosion of taxi and shared car services such as **Tappsi**.

- EXAMPLES**
- 56. Rhizomática: Start-up, Mexico
 - 57. Mejor en Bici: Consolidated, Colombia
 - 58. Tappsi: Consolidated, Colombia
 - 59. Campo Digital Amazonas: Start-up, Colombia
 - 60. One dollar board: Start-up, Brazil

- OBSERVATIONS**
- The digital divide still requires considerable public investment to be able to connect rural, isolated communities.
 - The few initiatives that exist are still in their infancy and have shown slow market penetration.
 - DSI is increasingly being applied to the sustainable mobility sector.

10. REDUCED INEQUALITIES



Technology can promote the democratization of knowledge, as shown by **Fundación Equidad**, which facilitates digital inclusion by providing recycled computers to educational centres. Other initiatives focus on specific target groups, such as **Inclúyeme**, an online recruitment portal for people with disabilities, or **Kernaia**, which promotes the integration of indigenous communities, or **Handtalk**, a programme for deaf people.

- EXAMPLES**
- 61. Inclúyeme: International, Argentina, Mexico
 - 62. Fundación Equidad: Consolidated, Argentina
 - 63. Kernaia: Consolidated, Mexico
 - 64. HandTalk me: Consolidated, Brazil
 - 65. Dilo en Señas: Consolidated, Mexico

- OBSERVATIONS**
- Several applications are emerging to support groups with a particular special need.
 - Despite the region's high level of inequality ISD has not made significant progress in this field.
 - Business models tend to be the more traditional non-for profit organisations and freemium models.

11. SUSTAINABLE CITIES



Promoting public participation with technology is becoming more and more commonplace. Examples of this are the electronic voting system **EVoting**, the collective intelligence platform **Urbem** and **CityCop**, which enables people to report crimes in their cities. Finally, **Biko**, **Wheels**, **Econduce** and **Carcool** are just some of the multiple urban sustainable mobility initiatives.

- EXAMPLES**
- 66. Cívico: International, Colombia, Chile, Mexico
 - 67. EVoting: Consolidated, Chile
 - 68. CityCop: International, Chile, Brazil Uruguay
 - 69. Biko: Start-up, Colombia
 - 70. Wheels: International, Colombia, Mexico, Chile
 - 71. Bussi Mobility: Start-up, Mexico
 - 72. Carengo: Start-up, Mexico
 - 73. Obra Chueca: Start-up, Mexico
 - 74. Sin Tráfico: Start-up, Mexico
 - 75. Econduce: Start-up, Mexico
 - 76. Carcool: Start-up, Peru
 - 77. TuRuta-TuMicro: Consolidated, Peru

- OBSERVATIONS**
- The number of applications designed for public participation is on the rise, addressing multiple themes from personal safety to public spaces.
 - There are several initiatives that aim to improve urban mobility.
 - Most development has been in the fields of open knowledge and open data.



12. RESPONSIBLE CONSUMPTION AND PRODUCTION



A diverse range of digital technologies have been created to promote more sustainable production and consumption. On the one hand, there are digital services that support farmers, such as **AgriNeTT**, and on the other, platforms that connect consumers with producers and cut out the need for intermediaries, such as **Cultivando Futuro** and **Infood**. Swopping is another area of development with examples such as **Truekeo**, which promotes a reduction in consumption.

- EXAMPLES**
- 78. Camino Verde: Consolidated, Uruguay
 - 79. AgriNeTT: Start-up, Trinidad y Tobago
 - 80. Infood: Consolidated, Mexico
 - 81. Cultivando Futuro: Consolidated, Colombia
 - 82. Tambero: Consolidated, Argentina
 - 83. Sendengo: Start-up, Mexico
 - 84. Tem açúcar?: Start-up, Brazil
 - 85. Raíz: Start-up, Brazil

OBSERVATIONS

- This area is highly developed in the region, particularly through platforms specialised in sustainable goods.
- Several platforms promote greater interaction between producers and consumers, and in some cases, regulators.

13. CLIMATE ACTION



There are two key ways DSI can facilitate the reduction of CO₂ emissions. Firstly, with the aid of satellite technology to monitor land use in real time as in the case of **Imazon** and **Agrosmart**. Secondly, initiatives like **Las Páginas Verdes**, which promote emissions reductions by disseminating options for more responsible consumption. Finally, **New Hope** is an initiative that facilitates more sustainable industrial practices.

- EXAMPLES**
- 86. New Hope: Consolidated, Brazil
 - 87. Las Páginas Verdes: Consolidated, Mexico
 - 88. Imazon: Consolidated, Brazil
 - 89. Agrosmart: Consolidated, Brazil

OBSERVATIONS

- The development of DSI for climate action is limited, and there is still a great deal to do in this field.
- The most ambitious initiatives so far are the platforms that are able to monitor land use and any substantial changes, such as deforestation.
- DSI has not yet been integrated into public environmental policies, and climate change commitments in the region still lack a digital component.

14. LIFE BELOW WATER



Satellite monitoring and the collection of data on species can significantly contribute to marine ecosystems conservation. Marine life protection is promoted through initiatives such as **Healthy reefs for healthy people** and **SmartFish**, which promotes responsible fishing without harming other species. There are also several international initiatives that have been replicated in the region, such as the **Fishackathon**.

- EXAMPLES**
- 90. Healthy reefs for healthy people: International, Guatemala, Honduras, Mexico, Belize
 - 91. SmartFish: Consolidated, Mexico

OBSERVATIONS

- DSI development is limited in this area.
- There is an urgent need to implement technologies that protect marine ecosystems in the region.
- Industrial practices and ineffective public policies to control pollution are both serious threats to marine ecosystems.

15. LIFE ON LAND



Tree-tag technologies and other monitoring techniques can empower communities to protect their own natural resources, as is the case of **Earth Observation Systems**, which facilitates the identification and protection of forests using mobile phones, or **Fraunhofer Chile**, which provides a service to monitor beehives. **Argon** offers a different approach. It has developed an open technology with sensors that can detect water and soil quality using a mobile phone.

- EXAMPLES**
- 92. Fraunhofer Chile: International, Chile, Germany
 - 93. Agron: Consolidated, Chile

OBSERVATIONS

- The emerging trend in this area is towards a combination of mobile based measurements with data analysis.
- There is still a great deal of work to be done in this area which on the whole is very underdeveloped in the region.
- The absence of public support to monitor forests and other ecosystems is a critical issue.

16. PEACE, JUSTICE AND STRONG INSTITUTIONS



Social platforms that enable collective action and other types of public participation are on the rise. The methods used vary considerably, from platforms designed to create collective campaigns to independent journalism sites and innovations inspired by other countries such as **Mexicoleaks**.

- EXAMPLES**
- 94. El Avispero Mov: Consolidated, Colombia
 - 95. Nómada: Consolidated, Guatemala
 - 96. Mexicoleaks: Consolidated, Mexico
 - 97. Fático, periodismo móvil: Consolidated, Mexico
 - 98. Ligue Político: Start-up, Mexico
 - 99. Virk App: Start-up, Mexico
 - 100. Los Supercívicos: Start-up, Mexico

OBSERVATIONS

- Activity is increasing in this area with ever more involvement from the public.
- There is a growing tendency to develop applications to report injustice and promote positive action.



Part four

Key conclusions



The following section considers the 100 examples of DSI from the perspective of the five variables of social innovation.

SOCIAL IMPACT

Digital social innovation in Latin America is starting to generate significant social impact and the three areas that have shown most progress are education, health and financial inclusion. Firstly there are initiatives that provide basic educational services to excluded individuals and communities or those who only have access to a very poor service. In this context there is a great deal of interest in innovative models to disseminate educational material, particularly in Brazil. There are also several streaming and loan on demand models across the region, mostly focussing on children's education. In this sector, impact is generally measured by improvements in school retention rates, performance and the personal development of targeted youth.

In second place, applications with a focus on improved health services represent a rapid growth area in the region. Both patients and health professionals can benefit from the diverse tools on offer that enable real time diagnosis and patient follow up, even in remote rural areas, at a lower cost than traditional mechanisms. Several private health initiatives are able to offer services at a lower cost, closing the gap between the poor quality public health services and the expensive private services that are unaffordable for the majority.

The third major area of growth in the region is financial inclusion and fintech. Programmes for the unbanked are now reaching millions, and helping them participate in the formal banking sector. At the same time, transaction costs are dropping and given the increasing flexibility of financial models on offer, financial services in general are reaching more people. There is also a growing sector of digital financial solutions, which help to resolve financial needs for SMEs. Another area with high levels of engagement is that of social platforms that mobilise populations towards a particular cause. These increasingly using digital media to disseminate social and environmental issues as well as themes related to justice, transparency and peace building.

The digital era enables an ever more precise measurement of impact, not just because of the capacity to measure the number of users of a particular service, but also the ability to analyse the degree of usage through related technologies such as interactive voice calls and SMS. Evaluation methodologies are increasingly more robust, such as the application of random controlled trials to digital media. Finally, the analysis of big data can allow for a far quicker understanding of user behaviour, and therefore interventions can be designed that improve individuals' wellbeing far more effectively.

ECONOMIC SUSTAINABILITY

85% of the initiatives presented here are for profit and they operate under a diverse set of business models. One model is to charge a commission for services, often used by initiatives providing financial services or those that connect producers with consumers. Another model is to sell the data generated by platform users to public organisations, private companies and other institutions. The third most frequently used model is the freemium model, whereby companies initially reach large audiences with a basic free service, and subsequently capture paying customers. Other models include subscription-based services, with the more traditional forms of charging for a membership or monthly fees to access a particular platform.

As for the initiatives created by non-for profit organisations there is a tendency to shift away from donations towards contracts that are linked to specific social or environmental results. In this sense, social impact bonds are increasingly gaining momentum. Traditional foundations are also becoming more demanding in terms of their requirements for reporting on concrete outcomes and impact. Both models rely on the potential for scale offered by the digital economy. Operating at larger scale enables organisations to work with lower marginal costs and reduced transaction fees. This means that many initiatives can, for the first time, reach new target groups by offering more accessible fees for their services.

INNOVATION TYPE

The emerging landscape of digital social innovation provides both open innovation models, such as free software, open-source and public participation platforms, as well as closed innovation solutions, which require paid subscriptions for access. There are also many examples of product innovation, demonstrated by the plethora of new edutainment programmes to reach vulnerable target groups and drone based solutions to manage and analyse data at lower costs.

The organisational models of digital social innovation are also undergoing constant disruption, given that many of the initiatives require a large degree of cross-sector collaboration. Innovations that provide the exchange of goods and services between peers in the context of the collaborative economy are increasingly more common and the distinctions between customers and suppliers are

increasingly more diffuse. Another area experiencing high levels of innovation are the efforts to reach communities without access to the internet, via SMS, interactive voice messages and other systems such as circulating digital devices amongst households.

CROSS SECTOR COLLABORATION

Interaction between public agents, the private sector, civil society organisations and other stakeholders strengthens the digital social innovation ecosystem and can facilitate replication processes and the capacity for initiatives to scale. For the majority of cases, the added value for the initiatives is to connect certain stakeholders with other groups who they would not normally engage with. This is the case for the platforms that connect producers with consumers, those that connect SMES seeking credit with private investors seeking a good financial return and others that facilitate interaction between parents and their children's teachers.

In terms of the broader ecosystem, the intermediaries who support social innovation in general, and as a consequence, digital social innovation are also key players. These include the entrepreneurship and innovation communities, incubation and acceleration programmes, the impact investment sector, specialised media organisations and organisers of events, competitions and prizes that give visibility to the sector. Individual citizens are also key players as they register the growth of digital social innovation initiatives through the actual use and dissemination of the solutions developed. Finally it is worth mentioning the government as another important figure. When there is public support to integrate digital social innovation into public policy the probability of achieving high impact and reaching scale is far greater. The financial inclusion initiatives highlighted in this study demonstrate the potential of integrating public policy with digital social innovation.

SCALABILITY AND REPLICABILITY

There is still a long way to go before the most promising digital social innovation initiatives in Latin America are able to reach the scale and levels of disruption necessary to meet the social challenges of the region. Many of the projects are still in the start-up phase and, for several reasons, not yet able to prosper and scale. The lack of finance and an overdependence on philanthropic sources (which are becoming increasingly demanding) are two common challenges faced. This situation is particularly critical for the technologies specialised in renewable energies, clean water and environmental protection. The lack of public support and the difficulties of integrating new models of innovation into the public realm is also a key challenge for scalability. So far, children's education and alternative finance are the two sectors that have had most success in scaling up. In addition, platforms that support social movements have also become increasingly popular and several have been replicated in the last few years.

Certain countries have shown more progress than others in terms of scaling up digital social innovation. Chile for example has a very well established entrepreneurship and innovation ecosystem that has enabled a greater number of initiatives to grow and scale compared to other countries in the region. Brazil, Mexico and Colombia also have very dynamic ecosystems with a wealth of intermediaries to support training, the creation and acceleration of social innovation. Thanks to the number of certified B Corps, Argentina also looks set to become a dynamic hub for digital social innovation. Central America and the Andean countries however do not show the same level of progress.

Finally there are some cases that have been developed in Africa and replicated in Latin America. This type of replication represents a great opportunity, particularly for those initiatives related to mobile technologies and Pay As You Go technologies, two areas that are more developed in Africa than Latin America.



Part five

Final reflections



Latin America is experiencing a moment of unprecedented economic recovery, innovation and growth. Despite being one of the regions with the highest levels of inequality, and with a significant digital divide, (40% of the population don't have access to the internet), considerable progress is being made in the fields of financial inclusion, health and education. The following pages reflect on an analysis of the 100 digital social innovations.

Information and communication technologies offer great potential to help achieve the SDGs: by helping social development projects reach scale in unprecedented ways, by significantly reducing transaction costs, and, above all, generating new opportunities for innovation, public participation and efficiency. When the technological advances are complemented by education and training in digital competencies as well as public policies to reduce the digital divide, the ideal conditions can be set for the rapid deployment of solutions to today's social challenges.

The 100 digital social initiatives analysed in this report are testimony to the potential of this emerging sector, offering greater transparency, democracy, opportunity for innovation and financial sustainability than the more traditional social innovation.

Several trends for Latin America can be observed from an analysis of the 100 digital social initiatives. Firstly, the initiatives that operate under a profit-generating model create the greatest impact. 85% of the total number of beneficiaries from all 100 initiatives have participated in this type of model. In second place, and according to NESTA's definition of the different types of digital social innovation, open technology is the category of digital social innovation that has benefitted the greatest number of people. 57% of beneficiaries from all 100 initiatives analysed have taken part in this type of innovation, 24% have benefitted from open knowledge platforms, and 17% from open networks. Lastly, although there is a lot of potential for growth in the future, the open data initiatives have only benefitted 2% of the total number of beneficiaries.

COUNTRIES SPEARHEADING SOCIAL INNOVATION

It is clear that there are some countries that are ahead of the game in terms of digital social innovation and these, unsurprisingly, are the most economically developed countries: Brazil, Chile, Colombia and Mexico. Brazil takes the lead in terms of innovations in the education sector, with 7,6 million beneficiaries from the projects highlighted in this study alone. In Mexico, a great deal of progress has been made in digital health services and by 2015, 85% of the population had access to improved health services (CAF, 2017). Colombia hosts a great deal of activity in the fields of sustainable mobility and urban civic participation with initiatives like **Tappsi**, a taxi app used by 7 million people and **Cívico**, a platform with 2,5 million users per month. Chile, a country that has a very favourable ecosystem for innovation in general is home to several different success stories, such as **Cumplo**, the largest marketplace-lending platform in the region, or educational initiatives such as **Lab4U** and **Papinotas**, which have already been replicated in other countries.

TOP 5 SDGS

According to an analysis of the 100 initiatives, digital social innovation has had the greatest impact on the following five SDGs.

No poverty (SDG 1). Amongst the different approaches taken, the participatory models stand out for being most effective, such as **Semáforo de Pobreza** that has benefitted 14,000 families in Paraguay and is now being replicated in China and the United States.

Digital solutions for marginalised populations have also started to make a difference, as is the case of Fundación Capital, which has benefitted over 5 million people in 17 countries. We consider the most effective way of addressing this SDG would be to strengthen public policies and increase investment in the infrastructure required to reduce the digital divide.

Health and wellbeing (SDG 3). The 10 digital health initiatives highlighted in this study have reached a total of 1,4 million people through various types of telemedicine initiatives which help to reduce the cost of healthcare, as well as provide more personalised services and reduce waiting time for patients. Highlights include **UNIMA** in Mexico, a programme that is able to conduct a diagnosis in 15 minutes at the cost of one dollar or **Portal Medicina** another example, which can carry out 1,000 check ups per day. The mobility of the services provided and the capacity of managing information for patients in real time also contribute to improving access to health services, particularly for patients in remote areas.

Education (SDG 4). This is the area that has seen most progress. 9,37 million people have benefitted from the 14 education initiatives highlighted in this study. Several of these have already expanded internationally, and have developed sustainable business models. **Yogome**, for example, is a platform for interactive games that was developed in Mexico and has one million users in 150 countries. A number of different business models have been applied in this sector; such as the freemium model, used by initiatives like **Geekie**, a personalised learning service with five million subscribers. The commercialisation of tailored learning services is another type of model used, and the platforms included in this study with this approach have reached 1,5 million students. Other models include the provision of services to broaden access to information, the facilitation of interaction between schools, families and students, and the democratization of education by providing free access to content.

Decent work and economic growth (SDG 8). Fintech is one of the areas that has experienced most economic growth, and this is increasing exponentially in the region, particularly in providing services for SMEs. Brazil is the country that has the greatest number of enterprises, with 230 companies specialised in this field, followed by Mexico with 180. Colombia comes in at third place, with 84 companies, Argentina has 72 and Chile 65. Almost 90% of all fintech activity in Latin America is concentrated in these five countries, (BID, 2017). However, it is worth noting that many of these solutions are only accessible for middle and upper income groups, and the benefits are out of reach of the poorer communities.

Cities and sustainable communities (SDG 11). In many countries there has been a surge in applications that promote public participation for urban populations covering different issues such as safety, urban space and mobility. For example there is currently a boom in sustainable mobility solutions with several initiatives worth mentioning such as **Wheels**, a car sharing system with 60,000 users in Mexico, Chile and Colombia and **Biko**, an application to promote cycling, which has 9,000 daily users in Colombia. Public participation platforms and digital democracy solutions are also on the rise.

BOTTOM FIVE SDGS

The SDGs where the potential of digital social innovation has yet to prove its potential are the following.

Gender equality (SDG 5). With the exception of a few outstanding initiatives, such as **Laboratoria** in Peru, which has reached 50,000 women and **Epic Queen**, which has reached 16,500 there is still a lot to be done to reach gender equality in the technology sector. In addition, there are no examples of sustainable business models in this field and the three initiatives analysed rely on donations to survive.

Clean water and sanitation (SDG 6). In spite of the technological advances and significant infrastructure installations in this sector there is limited evidence of interactive, digital participatory models and only three initiatives have been included in this study. These include **Waposat** and **Aquastat** the largest water quality control systems in the region. Large institutions manage both. **Docsas**, by contrast, has a more collaborative model with 300 communities in 6 countries using this mobile application to monitor water resources.

Life below water (SDG 14). Latin America is home to some of the largest marine ecosystems in the world, however, digital social innovation has not yet made a significant contribution in this field. Only two initiatives have been included in the study: **Smart Fish** in Mexico, a system to monitor responsible fishing and **Healthy Reefs**, a mapping programme which has registered a 3% rise in areas of protected reefs since 2015. Again, there is still a lot of work to do to stimulate public participation in this field.



Life on land (SDG 15). Geolocation technologies offer great potential to improve both the surveillance and sovereignty of ecosystems and natural resources. This field is also still in its infancy with only three initiatives selected for this study, including **Earth Observation Systems**, which shows great potential for scale. Currently all of the highlighted initiatives operate under philanthropic models and so far they are only active in Guatemala and Chile. Public and private support is needed to facilitate the process of replication and scale required for this SDG.

Climate action (SDG 13). Climate change is a global challenge that cuts across almost all of the SDGs, however, it is not a priority for the digital social innovation initiatives that have been selected. Three of the four initiatives identified for this area are still in start-up phase and the most progress made to date has been by **Páginas Verdes** in Mexico. This is a platform to promote sustainable consumption and seven editions have been created so far with 50,000 participating companies.

PENDING CHALLENGES

There are still some considerable barriers for the successful development of digital social innovation in Latin America (Sachs et al., 2016; Sharma et al., 2016; Katz, 2017).

Infrastructure: With 50% of the population excluded from broadband and the majority of communities still without stable access to the Internet, many of the digital social innovation solutions still have a limited reach. In addition, nearly 95% of the installed Internet infrastructure for data operates at a low velocity, which is another limitation. The most effective, economic and rapid way to overcome these infrastructure challenges is to broaden mobile communication networks and ensure that the most remote regions have access to affordable devices and connection. For this reason, the development of information and communication technologies should be a priority in the public agenda.

Investment: The region has witnessed a series of complex political situations, corruption, conflict and natural disasters in the last few years. For this reason direct foreign investment has diminished and as a consequence finance available for the development of digital infrastructure has also been reduced. Greater involvement from the private sector to stimulate innovation and technological development targeted at achieving the SDGs, in particular supporting entrepreneur networks, could help catalyse the development of the digital sector.

Training: There is a general need for more training and skills development not only to further develop digital social innovation but also to apply it more broadly beyond the realms of entrepreneurship and social innovation. In order to achieve this, work needs to be done to encourage greater gender equality in STEM education as well as integrate research and development into the curriculum in a more inclusive way. There are also several specific skills gaps to be addressed, for example engineers graduating from Mexico tend to have a poor level of English.



Accessibility: Lack of infrastructure, high investment costs required for networks, equipment or data services, and the associated taxes means that a large proportion of the population does not have access to the Internet. This situation threatens accessibility for the end users and means that information and communication technologies have become a luxury for many people.

Appropriate regulation: Public policies and fiscal regimes that facilitate the creation and growth of social innovation, and thereby *digital* social innovation are needed in the region. Most countries do not have a legal framework for social businesses, and, in many countries, corruption is still a significant challenge, particularly for entrepreneurs. In this context, the application of fiscal policy, subsidies and the reduction in tariffs for digital services could help increase levels of accessibility.

Support for technology development: In spite of the investment from public and private organisations to support research and development the ecosystem does not yet facilitate high impact technology. There are some examples of initiatives in the fields of clean tech such as renewable energy and water treatment however most are still in very early stages of development, and few prosper or reach consolidation.

Appropriate content and ease of use: There is very little content either locally produced or edited in local languages, and the majority of digital content in the region is entertainment oriented. At the same time, consumer behaviour and use of digital media has changed faster than the rate of local production. This means that there is a high level of consumption of foreign innovation and local innovation is slow to develop. In addition easy-to-use applications are needed, with friendly interfaces that don't put off new users through their complexity.

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FULL REPORT

This document contains only a summary of an exhaustive study carried out by ESADE's Institute for Social Innovation using qualitative and quantitative methods. To gain a better understanding of the various subject areas and their rationale, we recommend that you download the full document (in Spanish) using the following code.



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