

3.11 Case Study of Mexico¹

3.11.1 Profile of a Woman Entrepreneur

Dr. Guillermina Cabral has over 25 years of experience on Information Technology (Design and Implementation of Systems and Databases), Consulting on Best Practices on Software Engineering and Strategic Planning Procedures and Training.

Dr. Cabral is a Partner and Software Director of Intranetslab Mexico (since 1999), a software and IT consultancy firm with main operations in Mexico and the United States. Her main responsibilities in the company are:

- Design of systems for providing IT applications through Internet (Cloud Computing)
- Design of customized IT applications
- Management of the IT development department in the company
- Consulting on process optimization
- Consulting on IT strategic planning

Some of her clients are: Government of Mexico, Koblenz, Middleby.

Prior launching Intranetslab Mexico, she was the President of Guillermina Cabral y Asociados, a consulting firm specialized on IT consulting, process optimization and IT strategic planning (1993-1996). Some of her clients at that time were: InterManagement, KPMG, Met Life, Aeromexico.

Dr. Cabral served as a Research Associate at the Research Centre on Strategic Technology of Andersen Consulting in Chicago (1989-1992). She was responsible for software engineering projects; design, assessment and training on methodologies and software engineering tools; consulting on software development. She worked with the Department of Defense in the United States, IBM, General Motors, among others, during that period.

During her studies in the United States, she was Research Assistant at the Software Engineering Research Centre (SERC), Purdue University, where she mainly provided consulting and training on software engineering.

Guillermina Cabral holds a PhD in Computer Science from Purdue University, SERC (1985-1990). She has a Master's degree in Management Information Systems also from Purdue University (1982-

¹ This case study was conducted by Perla Buenrostro Rodriguez, CEO, Bolder Group, Mexico.

1984). Dr. Cabral was awarded the Fulbright Scholarship from the Government of the United States towards that end. Dr. Cabral obtained a Bachelor's Degree in Industrial Engineer (summa cum laude) from Universidad Católica Madre y Maestra in Dominican Republic (1976-1981).

Dr. Cabral has been awarded the following distinctions:

- Prize to the Best Instructor of the Year (1985): Computer Science Department, Purdue University
- Maurice Halsted Prize: Research on Software Engineering (1989) Software Engineering Research Institute, Purdue University
- One of the 20 Women Entrepreneurs of the Year (2006) Revista Mujer Ejecutiva, Mexico City
- Member of the Executive Board of the Mexican Association of Business Women, Chapter State of Mexico (2005-2010)
- Vice-President of Communications, National Network of Mexican Business Women (2005-Present)

3.11.2 Profile of a Company

Intranetslab was established in 1996 in Holmdel, New Jersey, U.S.A. The company develops software for companies in the United States and Mexico. Intranetslab is a “Cloud Service Provider” that offers the BIOSS ERP software in the cloud. This Enterprise Resource Planning (ERP) software was developed by Intranetslab. Intranetslab offers several solutions for companies wishing access to a tool and consulting services that will help them meet fiscal requirements in Mexico.



Intranetslab, Their Value Proposition and Vision

Intranetslab is a 'Cloud Service Provider' which has been on the market for almost 20 years. Developing ERP solutions has been their core business. They have been successful for a long period of time and have been able to attract a wide diversity of clients, from micro, small or medium companies to big ones, such as Koblenz. They were born to support Koblenz, they are still next to their premises in the State of Mexico, and continue to be a technical branch of this company.



Roberto Serrano, Chief of Operations of Intranetslab, next to their servers.

Their value proposition is based on flexibility and adaptability to Mexican laws and regulations and customization. With a 'key in hand' approach, they promise to provide amicable solutions for companies aiming to plan their resources and navigate Mexican laws and its constant modifications, particularly related to taxation and administrative requirements, as well as to adapt to their clients' needs.

Some of the advantages of Cloud Computing are that it is a safe, less expensive compared to more robust options (such as the ones offered by SAP, Oracle, etc.) and a scalable model. Companies can manage and monitor relevant information, from sales, invoices, human resources to accounting, finance, etc. Their business model is based on only charging rent fees depending on what their clients use, as opposed to a burdensome license system with fixed charges.

Intranetslab has focused on a market niche of small and medium companies as they normally do not have established process or methodologies for managing and planning their business resources.

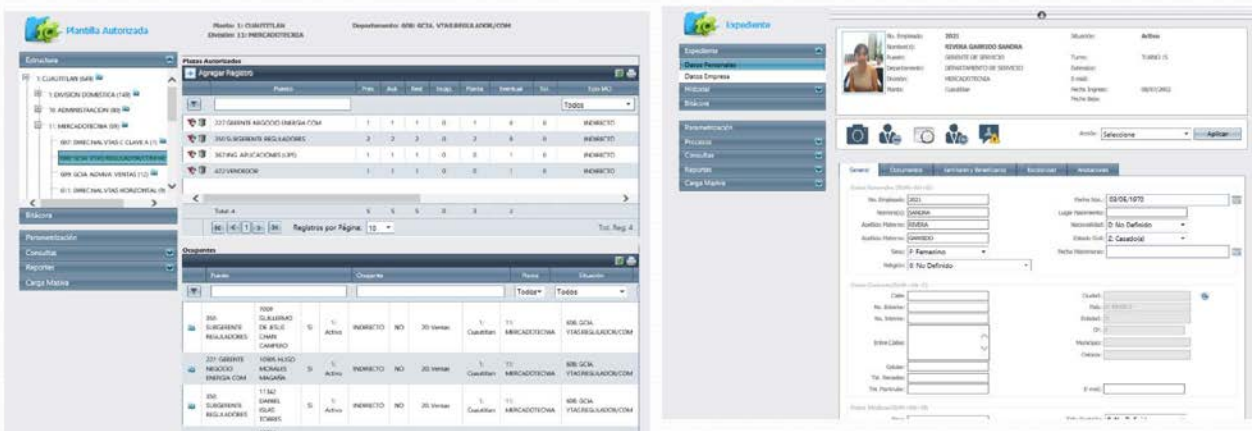
Their clients do not have to invest on infrastructure nor personnel for implementing their IT solutions. Dr. Cabral assures that within 3-months companies can start using their ERP.

Intranetslab offers packages with specific modules depending on their clients' preferences: commercial, production, payroll, services, accounting, help desk, etc. Their clients pay a monthly fee, with 10 as the minimum number of users per subscription, although they adapt to smaller companies. Their portfolio of clients includes manufacturing companies, importing agencies, shops and supermarkets, accounting firms, medical cabinets, transportation agencies, human resources firms, among others.

Intranetslab provides a technical and comprehensive support system for their clients; it works at three levels: Help Desk for general questions; Second Level with support from certified consultants, and Third Level, with help provided by the development team.



Look & Feel of Intranetslab's Solutions.



Solutions Particularly Focused on Talent Management

The company has been innovating and incorporating new modules to respond to their clients' needs. In 2017 they started to offer the payroll module following up Koblenz's requests.

The future seems steady and clear for Intranetslab as they are investing and developing mobile solutions for their services. The trend is to turn the ERP into a lighter solution as well as to offer mobile services that could complement Intranetslab's operations in the cloud. The company is working towards that direction and expects to launch an App this year.

BIOSS-CFDI

The BIOSS-CFDI Service is designed to provide electronic invoicing to the following type of companies:

- Foreign companies that are using a software package that does not support electronic invoicing for Mexico.
- Companies that are not ready to migrate to a full blown ERP.

This software allows you to generate, print and share electronic invoices in a user friendly way and in compliance with Mexican Law.

BIOSS-LITE

The BIOSS-LITE Service is a simplified version of Intranetslab's ERP, which integrates the following modules:

- Electronic Invoicing
- Accounts Receivable
- Accounts Payable and Banks
- Accounting

The electronic invoicing and accounting features are the same as those offered in BIOSS-ERP.

BIOSS-ERP

BIOSS is their web-enabled ERP Solution that resides in the cloud and integrates the following modules:

- Electronic Invoicing
- Sales and Accounts Receivable
- Purchasing, Accounts Payable and Banks
- Customer Service

- Inventory Control
- Production Control
- Accounting

Intranetslab has customers in Mexico, United States and Europe.

IntraNetsLab de México

- Av. Ciencia # 28 Cuautitlán Izcalli, 54730 Estado de México, MEXICO,
- +52-55-5864-0303, info@intranetslab.com

BIOS SOLUTIONS

- P.O. Box 432, Holmdel, NJ 07733 UNITED STATES
- +1-732-571-1900, info@intranetslab.com

3.11.3 Findings

3.11.3.1 Success Factors

Dr. Cabral has achieved a successful career on IT and businesses in the last 20 years thanks to her substantive knowledge and experience on IT consultancy, the support from a good team, including her business partner, as well as a partner in her personal life, her husband, who has encouraged her career and business.

Substantive Knowledge and Experience on IT Consultancy

The story of Dr. Cabral is one of a very dedicated student and professional. She graduated as Industrial Engineer (*summa cum laude*) from the Universidad Católica Madre Maestra in Dominican Republic (1976-1981) and immediately pursued a Master's degree on Management Information Systems from Purdue University (1982-1984) in the United States.

She was always attracted to computing; "I have always been the nerd", she said. Guillermina was raised by a single mom, as her dad passed away when she was five. "You have to see what you will do with computing as we do not have money to pay for another career", Guillermina recalls her mother's words.

During her Master's degree, Guillermina worked as Research Assistant at the Software Engineering Research Centre (SERC) in Purdue University, where she mainly provided consulting and training on software engineering. She then decided to pursue her Doctoral studies in that same university.

She was awarded the prestigious Fulbright Scholarship from the United States government towards that end.

Guillermina and her husband, a Colombian citizen, decided to move to Chicago in 1989 as he was conducting his doctoral studies in Physics in that city. Dr. Cabral worked as Research Associate at the Research Centre on Strategic Technology of Andersen Consulting (now Accenture) in Chicago (1989-1992). She was responsible of software engineering projects; design, assessment and training on methodologies and software engineering tools; and consulting on software development. That experience was very relevant for her career as she managed big project for clients such as the US Department of Defense, General Motors, among others.

Dr. Cabral, however, was not pleased with her life in United States and therefore decided to move firstly to Dominican Republic, as one of the mandatory requirements of the Fulbright scholarship is that former students get back to their country of origin. She dedicated there to consultancy work for a few years; among her clients there were some important banks.

Finally, the family (they were already 3 members, including a 5 years-old boy) moved to Mexico City in 1998 as Guillermina's husband received a job offer from the National Autonomous University of Mexico. Dr. Cabral then started her entrepreneur journey at her new home country: Mexico.

Support from a Good Team

In 1998-1999, Guillermina and Roberto Kohler, his business partner, launched their business, Intranetslab. "We were a couple of nerds that did not know anything about business; it was difficult for us to become entrepreneurs and start this new endeavor," she recalled.

Towards that end her work experience in Chicago was very significant. Their first important client was Koblenz and their main responsibility was assessing software for that company. They continue outsourcing IT services for Koblenz until now and are located within the premises of this company in the State of Mexico.

"It was the time of the Y2K. The success of the company has been highly determined by the momentum that technology was experiencing. It was a breakthrough moment worldwide and also in Mexico," Guillermina acknowledged.

"Being software consultants has been strategic for the company's growth; we focus very much on adding value to our clients with technological solutions. That is our core business", she added.

“Both partners are very passionate about what we do and we communicate that to our team, clients and stakeholders”.

Dr. Cabral defines herself as a business woman with good eye to see business opportunities.

“I like to take risks. My partner is more cautious. We complement each other very well and that has been extremely relevant for our long term business relationship”.

Guillermina and Roberto had been good friends and colleagues before launching Intranetslab. They knew each other well personally and in work, and this was a definite factor for the success of the company.

Their relationship was based on respect and trust. They admired each other and had a clear vision of where they wanted to take Intranetslab in the years ahead: turn it into a software house.

She confessed that Roberto and herself loved what they did and that had been a key factor for not abandoning the challenging path of entrepreneurship. “I was convinced that we added value to our clients: clients learned from us and we learned from them”, she said. This is precisely one of the competitive advantage of their IT solutions as they somehow co-create the services their clients need and work on implementation accordingly.

Guillermina loves the intellectual challenge, to create employment and contribute to the economic development of Mexico. In this exciting journey, the business partners have dedicated significant time and effort to build a high-level team of experts and engineers, which has also been key to guarantee quality execution in the company.

“It was very important to assure the talent. The rotation is quite low; we focus on results and largely on technical and coding skills”.

The team has grown with Intranetslab and consists of a group of very good professionals. Nowadays they have 22 employees; 7 of them are women. Talent is mostly local, from Central Mexico.

Mentoring and Networking Opportunities

Relying on mentors during her career and entrepreneurship path is another remarkable factor that has contributed to the success of Intranetslab.

Dr. Cabral participated at a mentoring program offered by Tecnológico de Monterrey back at the beginning of the company. This proved to be an excellent tool as she was starting her business and mentors were keen to provide effective guidance and feedback to women entrepreneurs, including

her. Mentoring was particularly significant for improving her business and commercial skills, which were new for her at that time. “It was a great program, but it was too hard; you had to overcome challenges and solve problems”.

Learning how to effectively network was another skill that Dr. Cabral acquired in a course offered by BNI. This proved to be a strategic ability as sales are based on trust and therefore networking is a must. “This is how we were able to grow and building more relationships; networking is very valuable for effective leaders”, she said.

3.11.3.2 Challenges

Incipient business skills, lack of a support system and access to finance were some of the barriers that this Mexican entrepreneur had to face in her path.

“At the beginning I was lacking relations. This was a barrier. Many businesses are made from connections and I was new in town (Mexico City). This implied building networks, trust and attract clients to our business”.

Struggle for Clients’ Acceptance

Guillermina mentioned that she struggled for clients’ acceptance at the early stages of Intranetslab. She has a direct tone of saying things and is a woman, and some business men, especially elder ones, were not eager to accept these attributes in a new colleague, she referred.

Lack of Supporting System

A care supporting system is key for advancing women business careers. Dr. Cabral also had some difficulties in that front. Neither her husband nor she had family in Mexico and therefore the couple had to work on building a support system. Mexico City is a very hectic and huge city (around 9 million people), and therefore the so called work-life balance was an unattainable goal when they first arrived to the country.

Guillermina had to overcome blame for being a working mom, a very frequent challenge for mothers in the 21st century. However, she did it and is pleased with the results.

She has a true partner in life, and therefore advancing her career and having family has been an attainable goal for her.

Limited Access to Finance

As to access to finance, which is one of the most significant challenges that entrepreneurs face, Guillermina shared that Intranetslab has succeeded thanks to the resources and support of partners and family. However, they have not applied for credit or any other type of finance as interest rates are very high and their knowledge on this subject matter was limited. This has impacted their business as she and Roberto have taken short term decisions as opposed to more aggressive growth, she said.

Intranetslab has never requested government support for their operations. This is due mostly to their reluctance to face burdensome bureaucracy. Still, Guillermina has been following up and supporting the work of the National Institute of Women in Mexico (Inmujeres in Spanish), a public entity which provides technical assistance, develops public policy on gender and empowers women. Her participation has been mostly as speaker, trainer or connector in activities organized by this entity.

Lack of Sales and Marketing Strategies

A particularly important area of opportunity for the company is establishing a proper sales and marketing strategy. Nowadays they have around 23 clients but have not been able to develop a strategy or department properly in charge of sales and/or marketing. This is a recurring mistake that SMEs and particularly those run by women make as they do not ponder the importance of dedicating time and resources to attract more clients and do not precisely see that their growth is very much related to increased sales. The company could also consider the possibility to develop a Human Resources department as well as a strategy to attract and develop their talent; particularly due to the fact that their ERP solutions measure related aspects and given the years they have been on the market.

3.11.3.3 Policy Recommendations

Dr. Cabral reflected on the importance of increasing the presence of women entrepreneurs on ITC and STEM. “It is a fabulous area but there are very few women, although flexibility is quite present. Women should participate and choose more these careers.” In that sense, she acknowledges that educating more on technology, as well as increasing the interest of companies on the role of technology in their businesses and operations are vital for ensuring growth and innovation in the 21st. century.

Extrapolating policy recommendations from Intranetslab’s experience seems a tough and rather complicated task in this research exercise. Still, it would be important to concentrate efforts on:

Active Promotion of Women's Increased Participation in STEM

Actively promote an increased participation of women in Science, Technology, Engineering, and Mathematics (STEM) careers and activities since their early education days. The Mexican Government has actively engaged in an initiative called Código X since 2017. In the context of the National Digital Strategy of the Federal Government, representatives from the industry (CANIETI, AMITI), government, companies (Google, Cisco, Telefónica, AT&T), international organizations, education institutions and startups are making efforts to accelerate the number of girls and women in STEM. Around 44% of Mexican use internet (49,9% are women vs. 50,1% men), but only 14% of women chose careers on engineering, science and construction². In the case of Google, for example, despite their efforts on diversity and inclusion, only 31% of their employees are women and just 19% of developers are women.

The workplan for increasing the number of girls and women in STEM requires ambitious goals and objectives and consistent assessment and follow-up, which is not yet very clear. Monitoring now and in the years ahead will be key towards progress.

Support for Somewhat Mature Companies

Government needs to provide basic guidance regarding professional services for companies with experience, as the one funded by Dr. Cabral. There is an explosion of services and funds for entrepreneurs, but there is room for improvement for improving government support towards more mature companies. They rely very much on traditional business model as opposed to more innovative efforts implemented by startups, for example.

The Mexican government, and the Ministry of Economy, has not specific programs for women SMEs as such, meaning experienced companies. Indirectly they provide funds for incubators or accelerators, some of which particularly work with women (ie. Victoria 147). Still, according to the National Development Plan 2012-2018, mainstreaming gender is a transversal approach among public policies under the current Administration.

Regarding women exporters, there is no program particularly oriented to that audience. ProMexico, a government agency oriented to Mexican exports, part of the Ministry of Economy, may follow the path of Promperú, its mirror agency in Peru, which offers a program called Ella Exporta since August 2017 for empowering and building capacity among women exporters (including mentoring).

² See more on the initiative Código X: <https://www.gob.mx/codigox>

Incentives for Companies Buying from Women-owned Companies

Government needs to develop incentives for companies buying from women-owned companies (a potential tax reduction of 3%) provided that they are competitive providers that comply with internal requirements and create value for them. This is necessarily requires implementing a strategy with measurable targets regarding women empowerment in value chains and buying from women entrepreneurs. There could be a benchmark (35%, for example) regarding the number of women business owners as providers of either big, multinational or even medium size companies, which may escalate in the years ahead.

3.11.3.4 Advice for Women Entrepreneurs

Dr. Cabral gave advice to women entrepreneurs the following for thriving in business and life as follows.

Continuous Training

An entrepreneur has to keep up the pace on trends and technology, particularly nowadays. She also advices to get solid finance training in order to take better informed decisions in business.

Women Empowerment

There are many barriers that women still need to defeat; many of those are internal and have inherited and come from gender biases. Women empowerment is very relevant to break any glass ceilings and advance women in all sort of industries, including ITC.

Mentoring

She is a strong advocate for reaching out to all kind of mentors and learn from others' experience, either from their success or failure stories.

3.11.3.5 Summary and Discussion

In the last decade entrepreneurship in Mexico has gained significant momentum in terms of business development, number of entrepreneurs, government support, investors and venture capital, incubators and accelerators, and more importantly, success stories (Clip, Yogome).

Mexico City, Guadalajara and Monterrey, the most important cities of the country, but also Merida in Southern Mexico, have experienced an important boom in entrepreneurship, including social entrepreneurship. In Latin America, Mexico has evolved as a key reference for innovation, talent and entrepreneurship based on or highly related to technology development (startups).

One out of four entrepreneurs in Mexico is a woman, according to the Global Entrepreneurship Monitor. Women are increasingly participating in entrepreneurship and a growing number of organizations are supporting them in capacity building (Inadem, Endeavor, Mass Challenge), public and entrepreneurship policy, business opportunities and connection to global and regional value chains, depending on the stage they are with their companies.

Still, women continue to face relevant challenges in terms of business development and professionalization, growth, access to finance and capital, mentors and quality business opportunities, among others.

On top of that, business women owners and SMEs require to really adapt, innovate and create value for their clients provided the digital revolution. Traditional business models and companies will not thrive and grow in the 21st century as entrepreneurs and innovative and disruptive solutions are changing the dynamics of the market very quickly and adding more value to their clients (Air B&B, Uber, Instagram).

As their participation in global or regional value chains, not even 1% of companies led by women are selling to international companies³.

As to access to finance, women still recur to banks and finance on very rare occasions. They either start their businesses or achieve growth thanks personal or family resources, personal credit or supplier or client credit. However, they avoid applying for credit and have limited financial skills⁴.

A recent report produced by Value for Women and the Cherie Blair Foundation in 2018 found out that Mexican entrepreneurs need: 1. more tailored business development services, professional networks, mentoring & coaching support; 2. information and access to financial products and providers suited to their needs; 3. leadership training, including content on overcoming sexist attitudes in business relations⁵.

Of 1,000 surveyed women owners for that study, 54% declared seeking finance from US\$ 125,000 to US\$ 3 million. In that sense, the study recommends to provide tailored business development services paired with financial services as well as to develop tools to improve gender intelligence in bank operations and credit approval processes.

³ Fries, Rebecca with González, M. & Rivera Pesquera, M. (2014). Creando Oportunidades: Fortaleciendo el ecosistema para emprendedoras en México. Value for Women & others: Mexico City.

⁴ Idem.

⁵ Value for Women & Cherie Blair Foundation (2018). Entendiendo como apoyar el potencial de las mujeres emprendedoras en México – Un Diagnóstico acerca de las Pequeñas Empresas en Crecimiento lideradas por Mujeres. Pending publication.

In March 2016, Nacional Financiera with the technical support of Inmujeres provided a credit guarantee to banks in Mexico so they can offer low-cost loan and better conditions to women entrepreneurs. They have now access to annual preferential interest rates of 12%-13% for amounts of up to 5 million Mexican Pesos (US\$ 260000) and an exemption of mortgage guarantee for loans of up to US\$ 133000.

It is still early to have conclusions on the effectiveness of this Program called Mujer Pyme, but there are good indications that it can be a step forward for helping women grow their businesses. Besides, there is room for improvement in terms of interest rates (Mexico is an expensive country for loans), bureaucracy and burdensome procedures seen in traditional financial institutions.

Guillermina Cabral, a Success Story

Guillermina Cabral is an example of a success story. She has had mentors throughout her career; she even applied for a formal mentoring program at the early stages of her company. That proved to be a very useful tool to improve her skills and widen her social capital and networks.

Having an effective but more importantly a trustworthy business partner has also been essential for Intranetslab's operations and permanence in the market. The fact that they have built a relationship based on trust and respect is very significant for personal and business purposes.

Choosing a true partner for life has also been a key factor for her success and balanced life. She is a family woman, and therefore having a partner that supports her career and shares responsibilities at home are part of the foundations of her daily life of work and personal growth. Sheryl Sandberg advocates with a lot of passion in *Lean In* about the importance of getting a real partner for life, and she is right.

A situation that has not improved a lot since Guillermina launched Intranetslab is access to finance and to business opportunities. As she mentioned the interviews, she has not applied to loans and has relied on personal and family resources to grow.

One common mistake that women entrepreneurs make is dedicating low or minimum budget to sales and marketing strategies. This is the case of Intranetslab. They could take advantage of a precise plan towards this purpose for improving their sales and growth in the years ahead. As the Value for Women and the Cherie Blair Foundation study remarks, business women, particularly those with more experience in the market, require tailored made solutions for their businesses. This may be the situation of Guillermina's company.

Intranetslab also needs to invest in its branding and look and feel (website, offices) as part of the customers' and stakeholders experience. The company needs to communicate a fresh, innovative and 21st century image in order to succeed and attract more clients in the following years, besides focusing mostly on the IT solutions they sale.

The company is currently working on its mobile solutions, which will represent an innovative step forward for its development and operations. However, neither Dr. Cabral nor its Chief of Operations are oriented towards intensive growth; they seem comfortable with the size of their business, team and impact. A more in-depth work would be needed to assess what prevents their expansion; if its related to gender bias and stereotypes (during the first interview Dr. Cabral mentioned that she did not want a big company so the conversation would need to continue), to the mission and vision of the company's leaders or to external factors.

According to Google and its initiative Womenwill, small and medium business run by women in Mexico generate 44% less sales than those run by men. Google has also found out that 45% of women entrepreneurs that are online are not making the most of digital tools to grow their business and therefore are offering training and sensibilization about the importance to digitally empower business women owners worldwide and in Mexico.

Dr. Guillermina Cabral is one of the very few women in ITC in Mexico. In 2017 Google named Maria Teresa Arnal the first woman CEO for the country, making a step forward on diversity and talent inclusion. But there is still a lot to accomplish in that front. The Mexican chapter of Women in Cable Telecommunications (WCIT), an international organization based in Washington, D.C., initiated operations this year and aims to empower women in that industry with networking, workshops and best practices and specific targets that advance women in top positions.

If as the World Economic Forum has pointed out, ITC and digital innovation would provide the highest returns now and in the years ahead, women have to definitely take advantage of those opportunities. Otherwise, the Fourth Industrial Revolution will fail for not including all, women too.