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Wilton Park



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Research collaboration to drive innovation: UK and Latin American partnerships

Wednesday 16 – Friday 18 November 2016 | WP1486

In association with:



Department for
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Innovate UK



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In the past decade, Latin America has managed to lift more than 70 million people out of poverty, whilst expanding the middle class by more than 50%. However, a continuing decline in economic growth is challenging the Latin American region, with a 'new normal' of stagnant growth rates and narrowing room for manoeuvring out of the situation. A priority for governments is to tackle long-standing structural problems to raise investment and productivity and thus maximise potential growth. Improvements in business environments, infrastructure and education will help to foster more diversified, resilient and prosperous economies in the region. The role of innovation in achieving this is crucial.

Innovation is increasingly recognised as an engine of economic growth. This meeting addressed the potential of research collaboration to drive innovation in Latin America, drawing on case studies of advanced and emerging market economies to highlight opportunities offered by investment in R&D, innovative business strategies and international partnerships.

Participants discussed questions such as which policies best facilitate innovation and how research collaboration both across the region and internationally can propel economic and technological advances in Latin America.

This event provided a forum to:

- Build better mutual understanding of synergies and common areas of interest and priority areas
- Provide opportunities for collaboration
- Identify new initiatives to drive innovation
- Enhance scientific collaboration across the region
- Facilitate new partnerships and deepen existing collaboration ventures

Overview and context

Representatives from Chile, Colombia, Peru, Mexico, Brazil, Panama and Uruguay joined the UK Foreign & Commonwealth Office, the Department for Business, Energy and Industrial Strategy, Innovate UK and Nesta at a Wilton Park conference intended to advance understanding of the potential of research collaboration with the UK to support innovation policy development across Latin America.

The Wilton Park meeting brought together policymakers and researchers in order to visualise the potential of research collaboration, facilitate new partnerships, deepen existing collaboration ventures and build better mutual understanding of synergies and common areas of interest and priority areas. Overarching questions addressed in the course of the event included:

- Which policies best facilitate innovation in state and non-state activities?
- How can research collaboration, both across the region and internationally, boost economic and technological advance in Latin America?

A broad concept arising from the discussions was the idea of innovation as a form of diplomacy or "science without borders" between countries. Viewing innovation as a tool for mutual understanding may unlock some of the policy questions that delivering innovation

surfaces.

It may be beneficial to focus innovation efforts on addressing some of the largest global challenges faced in common by the countries involved, in particular:

- Ageing populations
- Climate change / environmental degradation
- Economic inequalities
- Frugal innovation
- Health
- Human rights
- Infrastructure
- Jobs & skills
- Migration
- Nutrition
- Poverty
- Resource inefficiency
- Urbanisation

Strong political buy-in from governments and leaders is needed to ensure adequate investment in innovation infrastructure and deeper collaboration between regional and international innovation policy partners.

Conceptualising innovation

There is a need to redefine our understanding of innovation in order to clarify the objectives of collaboration between countries. The global focus on meeting the new Sustainable Development Goals re-frames the challenge for innovation centres and highlights the remaining, more intransigent elements of sustainable socioeconomic development under the previous Millennium Development Goals. Megatrends such as protracted migration, inequality, persistent poverty and climate change are directly challenging what were previously considered to be solutions – forcing us to think differently about innovation and its role in delivering economic growth, equality, sustainable development and better livelihoods.

Should innovation now be purely social? How can we measure the value of innovation as opposed to more linear measurements of R&D (input/output) whilst also taking into account the cost/benefit of “creative destruction / destructive creation” and predicting future socioeconomic trends in health or sustainable development? A world in transition also means that innovation has to be done for the future, rather than for the present.

Social innovation can also be understood in terms of pure economic growth; however we have learnt that simple growth always has negative implications – be they environmental, or medical – it can be difficult to control the trajectory of socio-technical systems. It may be best to view social innovation as a flexible set of tools with which to “tweak” solutions to global challenges in a responsible, sustainable manner and takes place across all types of organisation from sheds in back gardens to SMEs and research institutions.

Objectives and scope of collaboration

Some consider that actors belonging to companies, government, investors and researchers differ among them in terms of profiles and goals. This situation makes difficult to collaborate, but also provide different perspectives for solving problems.

The short distance between some of the countries is a positive factor for promoting collaboration, as it is the case between Brazil and Argentina. However, in other cases this collaboration has not been possible: In the case of the research of the Zika virus, the collaboration began with European and African countries rather than with the Latin

American ones.

The opportunity of collaboration between neighbouring countries in LAC bring a set of interesting questions:

- Is it possible to promote and build collaboration for innovation between LAC?
- What would be the scope of collaboration for innovation?
- What actors are involved in innovation?
- What would be the aim of innovation promoted by LAC?

Several participants consider that the answer to the first question is yes. Collaboration within Latin American countries is feasible and desirable. The challenges faced by LAC are a starting point to foster collaboration, which would be aimed to promote innovation –based welfare.

One of the key questions to promote collaboration is who is involved in the innovation process. Some related questions such as who innovates or who leads innovation, however, could be misleading because they give the idea that innovation depends `only` of some specific actors, when innovation happens in a whole and changing system, where a diversity of actors are involved and a set of institutions, formal and informal, have roles to play. For this reason, a more comprehensive question – looking at potential collaborations – is which actors (companies, universities, governmental agencies, and civil society organisations) are involved in the process and which are not.

In LAC, in some sectors, production is spread among producers with different capabilities. The challenge is how to promote inclusion and think of innovation policy not only for growth, but also for inclusivity. In this field emerged concepts such as inclusive growth, democratic growth and social innovation.

Some questions for policy makers arise: how producers are involved in the market and in innovation processes? How knowledge and innovation diffusion reach small producers? What are the roles of intermediaries?

Collaboration in LAC has been successful throughout a set of mechanisms such as creation of societies, scientific collaboration, creation of demand for knowledge and innovation, etc.

Collaborations and networks have costs, risks and benefits. Benefits come from shared resources, and involve the disclosure of certain capabilities and the value to share. Partners have to engage in sharing costs and risks of collaboration.

Collaboration in the context of the Pacific Alliance involve, at first stage, agreements between public funding agencies to define common and complementary agendas for promoting collaboration between firms and research units, within and across countries. Moreover, those agendas should include actions for strengthening collaboration initiatives outside LAC.

There are interesting opportunities for LAC in the global economy, for example big markets to be exploited, such China and its capacity of consumption. These opportunities also bring challenges in terms of innovation and collaboration. Challenges as that of how to add value to natural resources to be more competitive, as happened with Australia and Canada.

Finally, the question on what to innovate for imposes the challenge of having a vision and clear objectives to promote collaboration towards innovation.

Collaboration requires different assets than cooperation. Collaboration implies to have similar capabilities among organizations, while cooperation implies a more light involvement in a project, and it can be the case that some countries can participate, but with lower levels of benefits. Data is an asset that requires to be processed and who and how it is processed matter in terms of collaboration.

However, collaboration is painful to the extent that has high costs and it is uncertain. It

implies to build trust in issues as obvious as being on time. Governance collaboration involves maintaining all participants with the same information. It needs commitment and sometimes it is difficult to maintain such commitment. Also, political cycles affect the stability of participants, so it is difficult to follow up the initiatives since actors change frequently.

Collaboration frameworks

Collaboration should be promoted at different levels and for all actors of the systems of innovation. Collaboration between public agencies is essential to learn from mistakes and success. Sharing failures and good experiences would be useful for making decisions in LAC and for policy- making design and implementation.

One step ahead in collaboration within LAC would be to implement co-funding mechanisms or programs between LAC to promote innovation throughout collaboration between firms and other actors.

Collaboration depends on three aspects: innovation policy framework (developed countries experiences are difficult to implement in LAC), innovation problems (focus on collaborative initiatives) and assets (what is going to be shared by each partner)

Collaboration for innovation needs policy coherence. LAC face several economic and social problems and have several competing policies (innovation, health, education, etc.) which create space for a complex policy mix.

Funding collaboration sometimes is embedded in a divided model of investment, where fund for science and technology are allocated separately from funds for innovation. In a comprehensive approach, LAC should think of a more integrated model of funding collaboration.

Building and implementing collaboration

Communication and engagement are important factors for successful collaboration because they allow partners to have a mutual understanding of their needs and expectations. Intermediaries can play an essential role in identifying characteristics, levels of engagement, needs and expectations of all the involved actors as well as building bridges between them.

Collaboration and networks are about people. They are built based on personal relationships and trust. It is a challenge in countries where the turnover of staff in institutions and firms is high, affecting communication with partners and other decision makers (superiors and politicians)

Because collaborative projects need time to work and success, trust and faith become the core parts of collaboration. Sometimes people loose motivation because of delays in getting results, but they keep working because they know that collaboration is a building process. Their main focus in not money or funding, but value and benefits.

There are two key complementary mechanisms for improving the implementation of collaborative initiatives: to anticipate possible problems and solutions and to promote constant dialogue between partners.

In the implementation part of a collaborative initiative, the presence of third party would be fundamental because partners need an impartial, fresh and critical view about the progress of the relationship, its failures and success.

Funding innovation partnerships

The aim of funding collaborative initiatives for promoting innovation is the creation of mutual value between partners. UK has several mechanisms for promoting collaboration with LAC, but funding is not the only asset UK can offer. It also have institutions highly experienced in linking actors and building partnerships between firms, companies, public agencies,

financial sectors, and other relevant partners. Another way to discuss the value is to involve actors with different interests and marginal benefits, such as the large investment in a satellite that could be use by farmers at a very low cost to make decisions.

The second aim of promoting collaboration is the creation of conscious engagement in collaborative projects, which means the awareness of sharing risk and benefits. Collaboration means threads and incentives, which are determined by the environment, rules, labour market, flexibility, etc.

Third, funding collaboration implies the building of relationships based on trust and previous experience. This approach means investing without knowing the results or outcomes of the project in advance.

A fourth aim of funding collaboration initiatives, when universities are involved, is funding research with potential impact on society and the economy. Asking for results of research and development is important because public concern on how effective is the investment on these activities is rising progressively.

Mechanisms used to achieve this last objective is to connect universities with industry and other relevant actors, while the target population is formed by groups of researchers of different universities or research institutions and firms.

One of the challenges for collaboration with LAC is the synchronization of strategies of diverse government partners, in order to make opportunities of funding more feasible. For achieving this objective more coordination is needed.

Some of the institutions that finance R&D activities prefer to have only single countries rather than several countries.

When considering assets for collaboration, partners should bear in mind that LAC have built their strengths in some field of research and economic sectors (for instance, biodiversity, natural resources, etc.). One question in this context is whether some fields are more suitable for collaboration and innovation than others.

Allocation of funding is based on a set of criteria, highlighting research productivity, degree of engagement, potential success, etc. Moreover, some mechanisms of following up are executed in order to build solid partnerships.

Innovation in emerging markets

Several factors have to be taken into account when trying to set collaboration in emerging markets, as well as when designing and implementing schemes to promote collaboration and innovation. These factors can be gathered in three main trends:

Cultural context, which include among other aspects:

- Language structure and modes of communication
- Levels of sophistication, intellectual property regulations and institutional framework
- Proper power balance between partners in collaborative relationships

Connection in different levels and with several partners:

- Connection inside the company, to create synergies between departments and staff.
- Connection outside firms and market, which means an open innovation strategy. This approach have a broad reach of possible partners, including suppliers, financial market/investors, universities, and users (co-creation and co-learning). It also includes international connections with other firms, research institutions, intermediaries, etc.

Conditions of countries and the whole region. Stability plays a fundamental role in this

respect because it impacts on the quality of collaboration projects and the probability of achieving the expected outcomes.

The better partners manage these factors, the higher the probability of success in establishing collaboration and the more sustainable a partnership becomes. Cultural context, types and levels of connections as well as conditions of the country matter.

Taking into consideration such factors, the following essential questions are: what do LAC look for when engaging in collaboration within and outside Latin America? What do potential partners of LAC should be aware of? Even though there is no a magic response, some ideas emerge:

- First at all, actors in Latin American national systems of innovation are not interested in passive roles in collaboration initiatives. Partners are not expected to teach LAC actors how to do things or what the “right” way is. The approach for collaboration is one of a process of learning, and better to say, a process of co-learning between partners.
- Given the risks and uncertainty present in innovation projects and collaborations in this field, partners should search for collaborative initiatives that imply capacity building processes rather than only innovation specific outcomes.

To this point, measures of successful collaborations become a key factor for evaluating progress and building sustainable partnerships.

- Partners should consider that innovation outcomes from collaboration are not always feasible in the short term. Building trust and engagement needs time.

The main projects or ideas for collaboration between UK and LAC, with support from the Foreign & Commonwealth Office, The Newton Fund, the British Council, Innovation UK, Nesta, and Governments from LAC, are:

- Development of an International Innovation Node for building capacities.
- Creation of a platform of Soft Landing Signposts
- Development of an Anchor Chain Competition for fostering competitive sectors.
- Promoting transpacific technology transfer and collaborative R&D program.
- A programme of sharing lessons from the experience of Mexico in promoting technology transfer and building capacity for technology management with collaboration of the University of California Davis.
- Development of a Transpacific Challenge, based in a common sector for the Pacific Alliance countries (food sector, for instance).

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Wilton Park reports are brief summaries of the main points and conclusions of a conference. The reports reflect rapporteurs’ personal interpretations of the proceedings – as such they do not constitute any institutional policy of Wilton Park nor do they necessarily represent the views of the rapporteur.

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Appendix 1: The Innovation Group within the Pacific Alliance

The Pacific Alliance is a four country agreement (Chile, Colombia, Peru and Mexico) established in 2011, with the purpose of increasing those countries' competitiveness by the design and promotion of collaborative programmes. There are 19 thematic interest subgroups, one of which is the Innovation Group, which was formed in 2014.

During 2014 and 2015, the Innovation Group worked on a review of member states' levels of innovation. It showed that a weakness was a lack of collaboration among innovation ecosystems. Resulting from the review was the challenge to shape a unique regional innovation ecosystem, learning from Pacific Alliance countries' successes and failures in other areas of developing and implementing public policy. One of the mechanisms put in place was to collaborate with developed countries such as the United Kingdom, through the innovation foundation, Nesta.

The mandates of the Innovation Group are: (i) to implement a public-private innovation agenda for the period 2016-2018, which is supported by the International Development Bank (IDB) and the Private Council of the Pacific Alliance; (ii) to evaluate the development of a Business Accelerator; (iii) to promote the implementation of a network of Angel Investors; and (iv) to support the Digital Subgroup Agenda.

Brazil has the largest and best performing structure of science and technology in Latin America; however, it was felt that there could be more clarity of communication around Brazilian capability to innovate and more information on the level of national expenditure on R&D as percentage of GDP as well as on the intended and actual impact of innovation.

External assessments of Brazilian institutions concluded that Brazil has adequate capacity to create knowledge and formulate public policy, but that policy rarely promotes innovation. Brazil has six decades of public funding for research and knowledge around socioeconomic development: EMBRAPA, the Brazilian Agency for Industrial Research and Innovation was created to bridge the gap between knowledge creation and innovation. EMBRAPA follows the examples of other institutions that have been created to boost innovation and are funded with own resources (40%), by private firms (33%) and by universities and research centres (25%). At present, there are 110 private companies working with EMBRAPA on a range of innovation projects.

Other countries such as Panama have experience of collaboration with the United States and with other national partners in Central America. Current areas of research collaboration include tropical diseases and biodiversity studies.

Appendix 2: Regional reports on collaboration in and across Latin American countries (LAC)

Collaboration experience and perspectives

There is not conclusive evidence about collaboration between Latin American Countries, LAC. Despite positive experiences of collaboration between Latin American Countries and between them and other countries and regions, one of the most challenging factors is the perception that Latin America is a homogeneous group. There exist several differences between countries, in fields such as culture, economic structure, degree of development and political systems. Those are some of the reasons that make difficult to have large collaborative programs that cover all the countries.

Even though those differences cannot be denied, the presence of commonalities cannot be neglected neither. Latin American Countries (LAC) face similar challenges for achieving better economic performance and social development, while economic and social problems compete among them for attention in a context of budget restriction and complex policy processes. The awareness of such commonalities is essential for collaboration and the building of strategic partnerships.

Every country has a particular context and problematic. For example, Colombia is considering increasing private investment in science and technology. The public investment

in science and technology is based on royalties. Some consider that Colombia is concerned in the low prices of raw materials (which are not possible to govern by a single country), rather than in transformative innovation. Despite the interest for increasing productivity, Colombia recognizes that it is necessary to balance productivity and social problems. There are gaps in productivity between large and small and medium enterprises, which need to be considered. The public Government budget focuses in social problems and defence, rather than in topics of innovation. Colombia has biodiversity.

Latin American countries have experience in collaboration with developed countries such as South Korea, Singapore, the United States and countries in Europe. Some consider that the collaboration with developed countries is easier than with other countries of the region to the extent that there is confidence in the experience that developed countries have in the innovation policy making. However, some are sceptical about the real chances to apply what is learnt from developed countries given the differences in terms of context, (it is not possible to replicate what is learnt from a country like the UK) and that the experience has been quite limited because the expectations have been larger than the outputs and it create a feeling of disappointment. A solution to such situation is to engage in collaborative programs in which it is not expected to give a recipe to solve a problem, but to learn together, both the UK and countries in Latin America. However other participants recognize that countries in Latin America should make more efforts to increase the links between Latin American countries and learn from their experiences. Collaboration for innovation not always is linked to economic payoffs because partners have several motivations to engage in collaboration, such as co-learning and co-creation.

Some countries (from Asia for instance) have experienced a rapid process of catching-up, however, factors that surrounded those phenomena, such as labour resources, political systems and culture, played a determinant role in that process. It is important to see those experiences, while being aware that conditions in those countries are not and probably will not present in LAC.

International collaboration is not a requirement for making policy, but some consider that it helps to achieve some goals and to improve the social perception. Also, in the case of researchers who have the experience of working outside the country when they go back to their countries tend to be more effective.

Collaboration between countries is seen as positive in two ways. First, everybody has a different perspective to solve problems, and it is expected that others would provide feedback to one's perspective in order to improve such perspective. Thus, the political preposition in science and technology protocols is that more robust perspectives can be achieved in the long term. Second, a very pragmatic perspective is that products done in a collaborative way have a larger impact than those products that have been developed individually. One example of this is the number of citations in articles written under collaborative projects, which it is said that have large number of citations than those articles written for a single actor or institution.

It is not clear how to interpret the Brexit in terms of collaboration of the United Kingdom, UK, with other countries. Some consider that it is a positive situation to the extent that the UK decided to make distance from Europe, which imply that the UK needs to find other partners for collaboration in Latin America. This means that the UK can benefit from the initiative of the Pacific Alliance. Other consider that Brexit is a political message for not allowing sharing money with other countries and, instead, to spend the money inside the country.

Language is a difficult issue because it should not be necessarily English. Some consider that England has failed to encourage other languages to be spoken and used.

Patents and other forms of excluding the use of knowledge are considered barriers to collaboration. While some countries would prefer to have such forms, other countries do not. Also, the experience and perspectives that countries have restrict the interest of having collaborative projects that include such forms.

Some Latin American countries consider that they are doing very good to the extent that

they have maintained institutions for several decades, have learnt by mistakes from the past, now are ready to do things well and to disseminate their experience and knowledge.

Collaboration in the Pacific Alliance

Exports of the four countries are highly dependent on natural resources (i.e. oil, coal, copper) and the expectation is to change such situation. Despite the four countries have a quite similar export profile and other cultural commonalities (i.e. primary dependence of natural resources and Spanish-speaking countries); Mexico has what is considered better performance in manufacturing and services. Investment in R&D as a percentage of GDP has been constant between 0.08% and 0.54%, which for some is considered very low. Mexico has the highest percentage, then Chile, Colombia and Peru. Commonalities and differences need to be considered when programmes are proposed.

Areas of interest

A discussion was proposed about what the scope of the collaboration should be. Food (agriculture) and energy are important issues that share the four countries and require collaborative projects. In those areas in which there is not enough experience, the decision is to look for experts and funding opportunities.

There is not an R&D group in the Pacific Alliance. This could mean that it is necessary to create a new group or that the Innovation group includes R&D issues. The logic behind is that while the R&D extend the knowledge, the entrepreneurship is the way to transform the knowledge into innovation. Entrepreneurs need contacts to achieve their goals.

Despite countries have multiple priorities, the Innovation group challenges are (i) to have the commitment of the members for working together, (ii) to find the value of working on innovation and (iii) to find the way in which each country can contribute to the agenda. The contribution occurs at the level of projects and institutions.

Report by country about proposals

This group does not have budget, so its activities are based on the capabilities of people and their institutions. The activities implementation has a person in charge in institutions such as PromPerú (Perú), Ministerio de Comercio, Industria y Turismo (Colombia), Secretaría de Economía (México) and Ministerio de Economía, Fomento y Turismo (Chile).

The mandate of the innovation group of the Pacific Alliance includes preparing proposals in topics related to innovation in which the countries are interested.

Currently countries of the Pacific Alliance have been working in collaborative projects with partners from UK, co-funded by PA and UK governments. Those projects are:

- Mexico. The proposal includes: (i) to elaborate an ethnographic analysis of what people think about innovation and the goal is to have a history about what people think rather than to prepare a report; and (ii) to identify actors of a network around health sector (medical devices), in order to create links with a virtual platform.
- Chile. It is to gain recognition or reputation for the technical students. The idea is to create innovation projects with those students and to recognize their developments. The awards are to accelerate the project to improve the soft skills for innovation. Mexico offers evaluators from venture capital, or other companies with experience in this topic. Conacyt has a thematic network between research institutions and academia, which could provide such support.
- Peru. The proposal is a technology transfer method to improve the linkage between universities and the private sector. The methodology proposed is a focus group and methodology to improve collaboration between both parties. Chile proposes to Peru the experience of Conacyt and Corfo.
- Colombia. The proposal is to foster the technology transfer offices. The idea is to learn from Chile and Peru which could have a large experience about it. The idea

is to have a pilot around white protein (pork and chicken). The technology transfer offices have received training and perhaps are necessary to focus in particular technologies. In Colombia it is not clear what is necessary, so a survey will be done

Mexico offers the experience in technology transfer that is supported by the National Science Foundation and that will happen in April 2017, and the country only needs to cover the costs of transport since Mexico is supporting with the rest of the costs. The topic is in manufacturing and not in white protein. Mexico has a large experience on technology transfer with University of California – Davis, from the United States. Mexico proposes to transfer the learning with other countries of the Pacific Alliance.

Chile has done very well in the innovation indicators of the World Economic Forum among the groups of the Pacific Alliance. One of the aspects in which Chile highlights have improved is in sophistication and they explain such improvement by the role of the Government. They suggest that collaborative projects among Latin America countries could increase the critical mass to obtain a large sophisticated product. Example. Airbus.

One of the interests of collaboration is the funding arrangements between government and Universities. Some consider that the long term planning should be the role of the government, but it implies a new arrangement in the funding arrangements. The University has difficulties to reach the goals proposed in the long term based on the figure of projects because the time for submitting proposals and developing the products is restricted to few years. Funding arrangements restrict the chances for achieving goals in the long term, and solving a problem (three years versus what should be more suitable 10 years). The funding arrangements have derived in tension between universities and government.

A new programme in Colombia is to enhance the collaboration between universities and companies. Three public agencies are working in this programme, called *Scientific Colombia*. One of the compounds is to improve quality of high education, at the level of Master, and PhD. The second compound is the scientific ecosystem that allows the linkages between international universities and local universities. It is an experiment. It is expected to work with a loan from the World Bank.

Collaborative proposals in LACs: building networks of exchange

In LAC building networks and collaborations has been a big challenge for agencies, universities, firms and other participants of systems of innovation. Some causes can be mentioned:

- Scientific collaboration has been fragmented, with narrow approaches and high concentration of research excellence in large universities.
- Science is deemed as a public good, with a high participation of public universities, disperse efforts and concentration in some specific fields (interdisciplinary research neglected).
- Universities are not often engaged in collaborative projects with firms. Universities have not good mechanisms for protecting their research results, while academics prefer to collaborate between them rather than with firms.
- Collaboration between academics is easier than collaboration between firms because the latter have different incentives and timeframes than the former. When firms are involved in innovative activities they usually collaborate with their providers and users instead of universities.
- Collaboration has been seen as a painful, high risky, time consuming, and uncertain activity. There is neither common understanding of needs nor alignment of expectations.
- Firms are perceived as expecting short-term results from collaboration.

However, LAC is also a continent with common problems and opportunities, with high

quality science and open to collaborate with other regions. Many countries have experienced some decades of continue growing and policies of open market after a period of protectionist policies. This new context has created a culture of competition and openness for businesses as well as a space for collaboration, within the region and between Latin America and other countries and regions.

People in LAC are eager to communicate with each other and become engaged in collaborative initiatives. An important characteristic in Latin America is actors' awareness of the necessity of collaborating with their neighbours and with other countries.

Addressing these drawbacks and opportunities, there is a need for a new model of promoting innovation and building networks. The main characteristics of and aspect for this new model are:

- To have a wider approach about the range of actors involved in innovation processes. It means to have a systemic approach, considering companies, universities, research institutions, investors, the third sector (NGOs), agencies and their interactions.
- To rethink the missions of higher education systems (universities, but not exclusively) to promote a comprehensive approach, in which universities collaborate with international universities in forming human resources and implementing postgraduates programs. An approach to have universities collaborating with firms and other actors to solve local, national, and regional problems. Universities exercising their third mission of entrepreneurship, commercialization and technology transfer.
- Mechanisms for bridging demand for knowledge and technology with the offer side, by investing in physical and virtual infrastructure (public financial support) and investing in activities of processing information and diffusion of knowledge (international courses for student of different countries for instance).
- Promotion of collaboration beyond commercial outcomes, by promoting and funding mobility of talents inside LAC and with international partners, as well as programs for building capabilities for innovation. Sometimes international collaboration can help improve performance of small or poor quality universities, especially in weak systems of innovation.
- The scale of promoting schemes matters. LAC needs “bigger and faster boats” for collaboration and innovation. In the same sense, faster movements need new and more accurate measures.
- International collaboration between LAC and with other countries should rest on common challenges, such as reaching bigger markets, increasing budget for innovative activities, getting gains in productivity, and increasing the quality of research in universities and public laboratories.
- Networks should be built at different levels and promoted in both directions top-down and bottom-up:
 - Personal links and trust between people are the essence of networks and collaboration
 - Institutional links for innovation, for getting commitment at different levels inside them.

Focus on promoting collaboration between firms and networks for innovation, inside and outside LAC, for pre-competitive projects and open innovation initiatives. Instruments and initiatives in this field should be addressed to create a propitious environment for innovation throughout:

- Public-private collaboration
- Networks of business accelerators

- Networks of angel investors
- Support to digital agenda

Ethical concerns should be borne in mind when promoting collaborations inside LAC and international initiatives. Mechanisms for sharing knowledge, flexible rules on intellectual property and other means for disseminating benefits should be implemented.