**The Venezuelan Innovation Agenda: The Social Capital and Intellectual Capital alliance**

Authors: Rafael Fuentes Niño, Rafael Rengifo, Isabelle Sánchez and Cánovas Martínez

(Science and Technology Ministry of Venezuela)

**Introduction**

There are two ideas that synthesize the changes that we live as humanity and as a country, as organizations and as individuals. The first one talks about the "knowledge society" as a way of referring to a new civilizational phase in which "the most important raw material is the grey material"; The first one talks about the "knowledge society" as a way of referring to a new civilizational phase in which "the most important raw material is the grey material"; in another way, the "knowledge society" is a way of making society or, as Carlota Pérez says, a way of building a State, a School and a Company, which has its driving force in intellectual capital, knowledge and technology. The other idea talks about social capital, also called relational capital, as the ability to create alliances and partnerships to cooperate, and that is also presented as an inevitable mechanism in the formation of new social scenario. We believe that, especially in countries like ours, the formation and development of intellectual capital requires the stimulation and promotion of social capital and, vice versa, the best way to boost our cooperation capacities is through the democratization of knowledge and technologies that make the innovation a social value. This means that we urgently need socio-institutional innovations that allow us to achieve that virtuous synergy between both types of capital.

In this document we introduce an institutional innovation of the Venezuelan State that is the product of a collective creation process: the MCT-CONICIT Agenda. At the beginning it was only a program, but today the Agendas are the way of knowledge social management by which the institutions are trying to connect the knowledge, the investigation and the technologies with the diverse demands and opportunities of the Venezuelan society. In other terms, the Agendas are an institutional device that makes it possible that social capital and intellectual capital be combined and boosted to make effective transformations in people's life quality and companies' quality and productivity.

The Agenda method means the definition of an interactive and participatory space in which the different social agents involved in a specific problem area establish a set of commitments around the creation, use, dissemination and application of knowledge and technologies to deal with these problematic areas within different projects. Then, this space works as the origin of a network for the co-financing, monitoring and transference of the different projects' results to the users-beneficiaries.

The design and implementation process of the Agenda is a collective effort of thought, learning and communication that is innovative by itself, with a view to the traditional characteristics of the Venezuelan State and its relationship with the different social actors. In fact, the Venezuelan State's operational methods, among other negative characteristics, have signs of institutional fragmentation, sectorization, supported by mechanisms that generate mistrust and turn the relationship between the State and the rest of society into a "game among card players", where everyone cheats. This distrust operates as a cognitive and behavioral background that blocks the necessary processes of participation and agreement that are essential to the current public policy. In this way, the Agendas operate as a trust production spaces that are based on respect to the legitimacy of the diverse interests shown in them, as well as an integrating mechanism for public policy through positive negotiation strategies.

The innovative nature of the Agendas also comes up in relation to two other fundamental areas. On one hand, the organizational environment is about flexible working styles, teamwork, task integration and strong communication, consensus and learning components. On the other hand, the Agendas integrate a conception of knowledge, of its generation and management, which crosses the classical, disciplinary and academic perspectives for a more social and transdisciplinary vision that pretends to promote democratization processes and social appropriation of knowledge and technologies. When we consider a virtuous combination between intellectual capital and social capital as a strategic goal in science, technology and innovation, this last point is crucial.

The Context of the Innovation Agenda

In the area of public policy, what we used to call “the science and technology sector" is now impacted by a diverse and complex range of transformations. Among them, it is important to emphasize three which show the magnitude and meaning of designing and building policies in this area, these reflect the context in which the Innovation Agendas are developed:

* Transformaciones en el papel del Estado y de las Políticas Públicas

In a synthetic way, we can say that the transformations required in the state structure to respond to the new conditions are, more than of size or functions, of the logic that animates its action. The complexity and uncertainty demand that this logic moves from the capacity to order, intervene, prescribe, and sanction to another, supported by the capacity to organize, promote, guide, and conciliate interests. This changes the character and meaning of public policies, especially around science, technology, and innovation, insofar as we no longer operate with the "sectoral logic" typical of traditional public policy, developed for homogeneous, relatively stable contexts and under the criterion of representativeness.

Nowadays we deal with heterogeneous actors and interests, with high instability and complexity where the participation and cooperation of the different agents is a pragmatic necessity. In our case, it is about moving from the formulation of a policy for the science, technology and innovation made by a group of experts to the formation of that policy. Policy formation refers to an institutional and interactive learning process aimed at bringing new approaches and modalities of action into play. Therefore, and in the same sense, the policy designed in this way cannot be " implemented ", as if it were something pre-existing and finished, but rather it is built in the proper evolution of the interactions between the agents and institutions involved in cooperative contexts. Additionally, this interactive or concerted public policy requires adequate institutional platforms, with more open, flat, and flexible organizational styles, as well as more integrated technical-administrative processes, based on teamwork and intensive communication and agreement skills.

The Innovation Agendas were born as a mechanism for the formation and construction of policies for knowledge and technologies supported by an intensive use of social capital, this is due to partnership and cooperation capacities of those involved. In addition, they work as learning spaces for mediation and negotiation as tools for the co-design of objectives and strategies with a shared vision.

* Transformations in the field of Knowledge and Technologies

The practices and institutional ways in which science and technology are generated, disseminated, and used are also being transformed. Today we speak not only of emerging paradigms of the scientific knowledge, but we are also witnessing the emergence of what has been called Mode II of the social production of knowledge, in contrast to Mode I which has been the dominant until now. The preeminence of intellectual capital, its leading role in contemporary society has changed the way of organizing, managing, and disseminating knowledge. The following table summarizes the differences and contrasts between these two ways of knowledge development in our societies.

Differences between both modes of knowledge social production

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| --- | --- |
| **Mode 1** | **Mode 2** |
| The problems are presented and solved in a context governed by the interests of a particular community (mainly academic) and this community generates legitimacy | The knowledge is produced in or strongly associated with its application context and is socially legitimated |
| Knowledge is guided by the different disciplines | Transdisciplinary and socially oriented knowledge |
| Characterized by the homogeneity of actors, institutions, and interests | Characterized by the heterogeneity of actors, institutions, and interests |
| At the organizational level it is vertically hierarchical and uses standardized forms of work and communication | Organizationally, it looks for a flatter hierarchy that uses transitory and open organizational structures |
| Responsabilidad según conciencia individual | Greater social responsibility associated with accountability |
| The type of quality control used lies exclusively in the scientific method (peer review) | The quality of knowledge is based on collegial evaluation, but includes a broad system of social, intellectual, ethical, economic and political criteria |

Source: I. Sánchez and R. Rengifo (MCT), from Gibbons (1994)

The Innovation Agendas pursue to generate processes that make possible this transition towards more inclusive and socially distributed modes of knowledge production, through the development of highly participatory spaces for social knowledge management. The Agendas function as management devices to manage heterogeneity, the institutional ubiquity of knowledge, the connection between supply and demand, and the implementation of new criteria for the validation and legitimization of science, technology and innovation

* Transformations in the Venezuelan Society.

The transformations listed are of a universal nature and they intersect with the changes that are taking place in the various fields of Venezuelan society. These changes are based on a vision that has been winning over most of the population around the objectives of equity, participatory democracy, productive competitiveness, and self-sustainability. In this context, the action of the Government is oriented to the achievement of five major balances whose construction allows the achievement of these objectives: Social, Economic, Political, Territorial and International Balance. If "knowledge society" is one of the fundamental ways in which we allude to the new social scenarios, then such balances demand a strong presence of knowledge and technologies as tools of social transformation. Therefore, it is so important to have public policies in this area that are consistent with these changing times.

The Innovation Agendas play that role in so far as they connect social, economic and political objectives with the tools of knowledge and innovation. The deeply participative nature of this institutional device generates the conditions not only for the use of our current scientific, technological and innovation capacities, but also, in a very special way, allows us to advance and deepen the processes of democratization and social appropriation of knowledge.

**The Innovation Agenda Process**

The mechanism of the Innovation Agendas consists, in a synthetic description, in the definition of a problem area (e.g. agri-food, biodiversity, border health, oil industry) which can come from a decision of the State or from the initiative of various social groups and institutions, around which a space is defined for the convening of the social and institutional agents associated with it (e.g. producers, researchers, entrepreneurs, national or local authorities, experts, organized communities). From the structured interaction of the social actors, a list of issues to be addressed using knowledge and technologies is generated through some of the modalities of knowledge creation and management indicated below. The result is a public demand for local capacities in the form of projects that are evaluated on the basis of criteria of professional quality, techno-economic feasibility, socio-economic relevance and also the potential for partnership, i.e. the articulation of socio-technical networks, which generate such projects.

The modalities of knowledge creation and management, on the other hand, are a response to the new modes of knowledge production highlighted above. In fact, traditionally, when speaking of the capacities to respond to the demands made on knowledge, technology and innovation, we have mainly appealed to the capacities for research and training of fourth level human resources. Today, on one side we not only know that research is a ubiquitous and more socially distributed process, as well as recognising that the human capital we need also includes technical and professional levels, but on the other side we also know that innovation results from a socio-technical network that includes a complex set of activities that interact virtuously. In this sense, the Agendas attempt to express this complexity by identifying different modalities in which various types of skills can be identified. These are presented below using the example of one of the Agendas already developed, the Cocoa Agenda:

* Research: Knowledge generation and experimental development projects (e.g. research in cocoa genetics and soil science, marketing studies on cocoa, socio-organisational conditions of farmers)
* Training: Projects to create or strengthen human, professional or technical capacities, continuing education and training associated with specific projects (e.g. training of cocoa researchers, training of agricultural experts in cocoa, internships to learn about successful experiences)
* Modernisation: Technological development projects, support for organisational modernisation and strengthening of technological capacities (e.g. development of equipment and machinery for cocoa, strengthening of producer organisations, technical advisory centres)
* Computerization: Projects for access to information and communication technologies and information systems associated with productive or social developments (e.g. creation of cocoa information systems for the exchange of knowledge and experience, access to international databases)
* Promotion: Projects to disseminate knowledge and technology and to generate a culture of innovation (e.g. design of cocoa education strategies, integration of cocoa communities)
* Articulation of Networks: Projects that articulate networks, as well as local, national or international cooperation around knowledge and technologies, (e.g.: creation of a Cocoa Network, international cooperation and exchange agreements)

**Intellectual Capital-Social Capital Synergy: Some Lessons from Designing Innovation Agendas**

At the World Conference on Science in Budapest in 1999, it became clear how urgent it was for both policy makers and scientific researchers themselves to establish a new "social contract" that would lay a new foundation for the relationship between science, technology and society. It is a question of responding to the new conditions for the production and management of knowledge and technology and this raises new questions: how to reconcile freedom of research with public responsibility, access to the results and benefits produced by science with the legitimate private interests of those who promote it, dissemination with ownership, economic growth with environmental balance, the market with so-called "unsatisfied demands", the long term with the short term, the collective interest with the private interest. How to do, then, so that these things and many others, related to this contract, are understood as a public matter, not of a sector of experts, only, and, consequently, the conditions are created so that they can be examined from the collective point of view in its different aspects, the ethical, the political, the economic and the social.

These questions behind this new "social contract" take on very particular tones and meanings in contexts such as Venezuela, especially since the point is that, given our conditions and history, the creation and promotion of intellectual capital involves the constitution and dissemination of social capital. In other words, in Venezuela the possibility of developing local capacities in science, technology and innovation linked to national demands and opportunities, requires the development of national capacities to cooperate, to establish agreements and commitments around common objectives within the framework of respect for the legitimacy of the social agents and interests involved, starting with the state at all levels and including the complex and heterogeneous world of civil society. This means designing institutional innovations and new types of public policies that aim to overcome the two most solid obstacles to synergy between these two types of capital: the sectoral vision and mistrust.

The Agendas, by virtue of their participatory and integrative approach, are intended to be a step forward in this sense, and therefore some lessons from their design and implementation are useful to understand the vicissitudes of socio-institutional innovation among us. It should be noted that this process of constructing the Agendas has been one of trial and error, of continuous learning, which is further complicated by the high idiosyncrasies of each Agenda experience, aspects that have required a good dose of reflection and dialogue.

* **The role of language**. The Agendas show the enormous importance of language in the construction of social spaces; they are, in the end, nothing more than a conversation structured from diverse codes around shared objectives. The call for an Agenda is a declaration that opens a space for conversation that generates other conversations that shape processes and actions; the form of this declaration and the subsequent conversations delimit, close or open possibilities, for these processes and actions. Hence the importance of language, of 'conversational modes', for institutional design, for socio-institutional innovations. Social capital itself is the result of the systematic accumulation of cooperation-oriented conversations, in which the link between knowledge and technology (intellectual capital) and structured demands of the population are coordinated in the case of Agendas. This is ultimately a process of "translation" between different languages.
* **The Role of Emotions**. The importance of language is fully limited by observing the role played by attitudes or the emotional fabric that accompanies the design of socio-institutional innovations, an area usually left aside or in the hands of a "motivational workshop" rhetoric. In the case of the Agendas, it can be said that just as they represent a cognitive break with the usual ways of understanding both knowledge and the public policy that promotes it, it can also be argued that this break is emotional, attitudinal. In fact, what sustains sectorial behaviour and distrust is not so much or exclusively an approach, concepts or a vision, but rather the emotional sphere from which such behaviour is thought about and carried out plays a determining role. In this sense, the synergy of intellectual and social capital is also a challenge, requiring a disposition to work in cooperation based on differences, to learn from processes, and to open up possibilities for sharing risks and benefits. In this way, this emotional space can become an object of institutional design.
* **The Legitimacy of Knowledge and Interest**. The concrete expression of the role of language and emotions in the Agendas is the generation of legitimacy for the participants, based precisely on their differences in knowledge and interests. The conversations generated by the Agendas create a legitimizing space in which, on the one hand, there are different types and levels of knowledge that are validated and valued around shared objectives, laying the foundations for effective democratization and social appropriation of knowledge and technologies. On the other hand, the Agenda brings together a variety of interests that have traditionally been treated as opposing or unconnected, and which here create a terrain for negotiation and agreement. It is in this complex and difficult aspect that the Agendas become a space for the construction of citizenship and, in passing, it is not insignificant that it is in the field of intellectual capital that the conditions for promoting social capital exist.
* **The Skills for Arranging and Articulating Networks.** The above points highlight the importance of consensus building as a central axis of public policy, highlighting as urgent the training and development of skills to agree, mediate and negotiate. These skills are not usually and naturally associated with the performance of civil servants, who are more oriented to prescriptive or planning functions and the exercise of sectoral representation. But, in addition, the spaces for consensus must be articulated with commitments, on the one hand, and with other spaces and activities, on the other, in such a way that it is possible to transcend the traditional fragmentation of public action based on the formation of networks, in our case, of socio-technical networks that constitute the basis of a country's innovative capacity . In this sense, the Agendas have also functioned as a mechanism for learning and for the creation of new civil servant profiles.
* **The Flexibility and Transparency of the Processes**. The unfolding of the previous points, the very development of a mode of operation such as that of the Agendas, requires a vision and an organisation of the processes that breaks with the traditional pattern of public policy. On the one hand, in order to design both institutional platforms and more flexible organizational processes, with greater autonomy, intensive in communication and where the process is more important and not so much the function that structures the organization. On the other hand, the Agendas have an ethical component, with values associated with transparency and accountability as inherent aspects of their own operation. Therefore, the design and implementation of the synergy between intellectual and social capital that the Agendas entail should not only be an outward task but should also be accompanied by a parallel effort within the institutions and organisations involved.

**Some initial conclusions**

In the case of the Agendas and, in general, when it comes to socio-institutional innovations, J.L. Borges' admonition is very relevant: the notion of a definitive text belongs to religion or to fatigue. As already said, the Agendas are an open process, they are under construction, every day we learn from their successes and setbacks, so these are just some initial conclusions that want to highlight effective learning and achievements.

* The Agendas are based on, and at the same time, feed and disseminate a new paradigm in terms of knowledge, modes of action of the State and participation in the generation of social capital. This is their strength and, also, their fragility insofar as, on the one hand, they are riding the wave of transformations and pointing in the direction of the changes indicated by the techno-economic revolution that we are living through and, on the other hand, they come up against institutional and personal inertia, the weight of traditional common sense and the very uncertainty of what is new. Furthermore, the hypothesis could be put forward that we are facing a new paradigm in which, in the new conditions, the social capital-intellectual capital dynamic would replace or, in any case, complement the capital (in the traditional sense) - labour dynamic.
* The Agendas are action-oriented and forward-looking, i.e. they are not only aimed at solving practical problems but are also an expression of a creative and participatory entropy that transcends immediacy and contains the wishes and expectations of the participants. In this sense, they are a space for the construction of citizenship that is based on a network of conversations with a common purpose but with a heterogeneity of interests and social spheres, introducing, in passing, the prospective dimension in its most democratic version, insofar as the design of future scenarios is based on dreams and aspirations discussed in a collective space.
* Finally, the Agendas have an internal logic that tends to learning and continuous improvement from its conception as an open process, permanently perfectible and that demands the development of varied skills among the participants. In this sense, it is an institutional design that incorporates the reflection-action dynamic as a virtuous circle that feeds the design itself, its implementation and the impacts it generates.

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BIOGRAPHICAL NOTE

**Rafael Fuentes Niño**

Mechanical Engineer with a Master’s degree in Technology and Public Policy Planning from Massachusetts Institute of Technology, Cambridge. He has been the Deputy Minister for Research and Innovation in the Venezuelan Ministry of Science and Technology since July 2000. As General Manager of Innovation Programmes at CONICIT, an Institute currently attached to the MCT, he was responsible for the design and development of the public policy methodology: The Agendas. An instrument for the participation of the actors involved in the definition of problems and possible solutions in a concerted and committed manner between the public and private sectors and organised civil society. It has also provided advice in strategic planning, as well as in the area of engineering.

Coordinates: Deputy Minister for Research and Innovation, Maploca I Building, Principal Avenue Los Cortijos de Lourdes. telephone. +58 0212 239 31 45. [rfuentes@mct.gov.ve](mailto:rfuentes@mct.gov.ve)

**Rafael Rengifo**

He studied Anthropology. He is a professor-researcher at the Centre for Development Studies (CENDES) of the Central University of Venezuela. He has a wide experience as a consultant in the area of science and technology and was one of the conceptual builders of the Innovation Agendas programme. Since June 2000 he has been an advisor to the Office of the Vice Minister of Research and Innovation.

Coordinates: Advisor to the Office of the Deputy Minister for Research and Innovation, Maploca I Building, Principal Avenue of Los Cortijos de Lourdes. telephone. +58 0212 239 31 45. [rengifo@mct.gov.ve](mailto:rengifo@mct.gov.ve);

**Isabelle Sanchez**

Anthropologist with specialization studies in Geography, Urbanism and Territorial Planning at the Institute of High Studies of Latin America (France), Master in Policy and Management of Technological Innovation at the Centre for Development Studies in Caracas. She has carried out several studies on Innovation Agendas and is developing research on the subject as part of her thesis work. She currently works as Coordinator of the Office of the Deputy Minister for Research and Innovation.

Coordinators: Coordinator of the Office of the Deputy Minister for Research and Innovation, Maploca I Building, Principal Avenue of Los Cortijos de Lourdes. telephone. +58 022 239 31 45. [isabelle@mct.gov.ve](mailto:isabelle@mct.gov.ve)

**Cánovas Martínez**

Sociologist graduated from the Central University of Venezuela. He was the Coordinator of the Innovation Agendas in the social area and later was responsible for systematizing the process to elaborate the procedure manual of the Agendas. He was also responsible for designing the Luis Zambrano Programme of the Ministry of Science and Technology, aimed at generating mechanisms to support innovators who do not have institutional backing. He is currently the Coordinator of the General Directorate for Technological and Scientific Transfer and Innovation of the Ministry of Science and Technology.

Coordinates: Directorate General for Technological and Scientific Transfer and Innovation, Maploca I Building, Principal Avenue of Los Cortijos de Lourdes. telephone. +58 0212 239 31 45. [canovas@mct.gov.ve](mailto:canovas@mct.gov.ve)