



**Methodology of Analysis of the Productive Integration Potential and  
Development of Value Added Logistics Services of IIRSA Projects**

**Methodology of Analysis of the Productive Integration Potential and  
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**Volume 2 - Tools**



**ANNEXES: SUPPORT TOOLS**

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**ABBREVIATIONS**

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<i><b>EID</b></i>	Integration and Development Hub
<i><b>GPs</b></i>	Group of Projects
<i><b>IIRSA</b></i>	Initiative for the Integration of the Regional South American Infrastructure
<i><b>Ipr</b></i>	Productive Integration
<i><b>RA</b></i>	Open Regionalism
<i><b>SLVAs</b></i>	Value Added Logistics Services

**Note:** In the body of this document, abbreviations are marked in bold and italics as a reference to this list.



**Tools of Step II: Description**

Tool II.1 – Criteria for the Logistics segmentation

The following criteria must be used as a guide to perform the logistics segmentation planned for in Step II and its posterior refinement provided for in Step IV.

Weight ranking	Product lines that are located within the first 10 in the weight ranking of the products commercialized through the logistics corridor.
Tonnage	Product lines which participation within the total annual commercialized weight exceeds 2 %. This group of products will be intensive user of the transportation and logistics services.
Value ranking	Product families that are located within the first 12 in the value ranking of the products commercialized through the logistics corridor.
Value	Product lines which participation within the total annual commercialized value exceeds 1.5 %. This group will be the one generating greatest income for the countries of origin where the production is performed.
Value density	Product lines that are located within the first 30 in the value density ranking (US\$/ton ratio) and at the same time exceed the US\$ 300,000 of annually traded value.
Intensity in the use of the corridor	Segments intensive users of the logistics corridor and transportation services offered therein. Their identification is obtained through the interviews to the main carriers.
Amount of firms and impacts	Product families that group, within their industrial segment, a great amount of producing firms and have capacity for generating and distributing benefits to a greater amount of population and in a greater territorial extension.
Growth	Industrial segments which participation in commerce is in a growth process sustained both in the bilateral and in the world commerce.
Markets	Product families which markets are geographically distributed beyond the limits of the corridor and are users of various IIRSA hubs will have special relevance for the analysis because the complexity of their logistics will allow a greater learning and will generate applicable solutions for the majority of the IIRSA hubs.
Importance perceived	Segments that shall be considered, by the agents, within the most important segments and, at the same time, with great growth potential and employment generation.



**Tools of Step III: Methodological Approach**

**Tool III.1 – Criteria for the identification of clusters and definition of their development level**

The following chart summarizes the requirements that the unit subject to analysis must gather in order to be considered a cluster and offers information that would allow the categorizing of the cluster according to its development level.

Reference:

- Observable condition in mature clusters
- Observable condition in pre-clusters

<b>Requirements</b>	<b>Description</b>	<b>Absent</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>
Vocation	Potential for changing the activity pattern of the region: from traditional products to products of high market value.			●	●
Business Management	Management capacity for favoring cooperative actions and strengthening the market positions.				
Enterprising Nature	Executives' capacity for searching new businesses and initiating a new business activity.			○	●
Value Adding	Capacity for gradually passing from commodity products to differentiated products, going through semi-processed and industrialized products.		○	○	●
Advanced Vertical Arrangement	Existence of a vertically integrated structure led by an anchor company, capable of generating highly diversified products (from supplies, industrialization, distribution, and marketing).		○	●	●
Learning Curve	Firms have knowledge management strategies and mechanisms with participation of assistants from the production units.		○	○	●
Societies	There is record of associations among executives: business associations, society agreements, business consortia, joint exploration of activities, among others.			○	●
Potential for New Associations	Existence of empathy among agents of the region, which leads to a greater synergy.			○	●
Rationing Networks and Suppliers	It is a substantial part of the offer of goods and services located in the area as a network.		○	○	●
Existence of Anchor Companies	Existence of firms that motorize the development of competitiveness in other firms and raise their management pattern.		○	●	●
Presence of Teaching Institutions	Existence of universities, technical schools, and institutes that offer training for the human capital of firms within the unit subject to analysis.		○	●	●
Association for the Promotion of Products	Existence of an organization (formal or informal) for the joint marketing of goods and services, and subsequent attraction of customers to the cluster.		○	○	●



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Research and Development Institutions	Existence of institutions that generate technical knowledge for the region.		○	●	●
Financial Support for the Production	Existence of base investment programs and investment funds. Executives have access to credit in the region.		○	●	●
Support from the Local Government	Existence of governmental incentives (through public policies) or other type of support to the business activity.		○	●	●
Promotion Institutions	Existence of promotion programs for the development of the activity in the region.		○	○	○
Telecommunications Infrastructure Offer	Level to which the existing infrastructure covers the requirements of the productive web.		○	○	●
Energy Infrastructure Offer	Level to which the existing infrastructure covers the requirements of the productive web.		○	○	●
Transportation Infrastructure Offer	Level to which the existing infrastructure covers the requirements of the productive web.		○	○	●
Technical Support Offer	Level to which the existing services offer covers the requirements of the productive web.		○	○	●

*Note: For more detailed information about cluster analysis, the user will have to refer to Appendix 1.*



**Tool III.2 – Guide for the interview design**

This tool contains model questions to be asked during the interview phase, that the user will have to choose according to the specific purposes and characteristics of the application.

The steps to be followed for the design of the definitive form are:

- a) Verifying the purpose of the application selected in an introductory way in Step 1.
- b) Verifying the key aspects of the description in order to define, in a qualitative way:
  - i. Key aspects to be inquired into
  - ii. Key participants to be interviewed
  - iii. Geographical surface to be covered
  - iv. Productive sectors and/or logistics chains considered relevant in the region
  - v. Sectors and/or logistics chains with potential and about which there is few information
  - vi. Functional bonds to be inquired into
- c) Verifying the methodological approach to be applied (A or B) and deciding which application modules will be used:
  - i. Common block (applicable to all the approaches)– Description
  - ii. Block A: Productive Integration
  - iii. Block B: Logistics Chains
- d) Deciding the level of depth that is coherent with the degree of maturity of the project (advance in the preparation according to the Life Cycle) and selecting the pertinent questions:
  - i. Number of questions
  - ii. Complexity
  - iii. Level and precision expected in the answer
- e) Designing the definitive questionnaire

Once the form is designed, the user will have to define the size of the sample and perform the interviews. The interviews must gather general information, as well as **values** (from 1 to 5), as long as possible, about the opinion of the interviewed person as regards the **current situation** and **the importance perceived**. This is particularly important for solution proposals and for the analysis of the contribution with the projects of the **IIRSA GP**.

**COMMON BLOCK (ALL THE APPROACHES)**

The following block of questions is of common use for all the applications of the methodology. The questions seek to obtain precisions that shall make it possible to describe the area in a better way, to identify problems and opportunities.

**a) Productive Structure**

Specific Issues	Suggested Questions <sup>1</sup>
<ul style="list-style-type: none"> <li>• <b>Productive Chains, Nets and Clusters<sup>2</sup></b>, components and bonds among activities</li> </ul>	<ul style="list-style-type: none"> <li>• Which are the industries that integrate the chain(s), net(s), or cluster(s)?</li> <li>• Which are the bonds among these industries?</li> <li>• Density of firms (or industrial concentration level) within the influence area of the group of projects</li> <li>• Which are the observable nets? Which are the observable clusters? Describe briefly.</li> </ul>

**1.....5** Indicates those questions where it is desirable to obtain a valuation by the interviewed participants (1 least relevant, 5 most relevant)

<sup>1</sup> In some of the issues to be investigated, only the secondary investigation is applicable. Said items have been included in the following list with indicative nature in order to make the orientation of the user easier. However, in these cases, a suggested set of questions is not offered, therefore, the user must resort to corresponding secondary information sources.

<sup>2</sup> The user will have to verify if there are minimum conditions for the existence of a cluster following the criteria set shown in Tool 1.



a) Productive Structure (Continuation)

<ul style="list-style-type: none"> <li>• <b>Level of vertical arrangement</b> (supplies-production-distribution-marketing)</li> </ul>	<ul style="list-style-type: none"> <li>• Which are the types of firms that integrate the analysis unit (chains, nets, or clusters)?</li> <li>• How many firms integrate the analysis unit (chains, nets, or clusters)?</li> <li>• Is there one or more anchor companies in the region?</li> <li>• In affirmative case, which is(are) that(those) company(ies)?</li> <li>• Which is the level of relative importance of said company(ies) in the region? <b>1.....5</b></li> <li>• Which are the activities or threads of the productive chain that the anchor company(ies) add? And the horizontal or vertical extensions within the region?</li> <li>• Which firms maintain business relations with the anchor company(ies)? What kind of relations do they maintain?</li> <li>• Is there a tendency towards the strengthening of the region among firms? <b>1.....5</b></li> </ul>
<ul style="list-style-type: none"> <li>• <b>Industry, commerce, and consumption statistics</b> for the analysis unit(s) and its/their components</li> </ul>	<p><i>There are no suggested questions in this section. Please refer to secondary sources for the obtaining of the necessary information.</i></p>
<ul style="list-style-type: none"> <li>• <b>Goods industries:</b> characteristics, competitiveness and level of outsourcing by local firms</li> </ul>	<ul style="list-style-type: none"> <li>• Which is(are) the main supplies industry(ies) in the unit subject to analysis? Which products does(do) it(they) provide?</li> <li>• Which is their concentration level (number of suppliers of the main supplies and relative importance in the industry)?</li> <li>• Which is the level of competitiveness of this(these) industry(ies) at international level? <b>1.....5</b></li> <li>• What percentage do the supplies received represent in the cost structure of the industry?</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Industrial activity</b> of first and second transformation: activities and products, localization of plants and industrial zones, required levels of investment</li> </ul>	<ul style="list-style-type: none"> <li>• In the unit subject to analysis, which is the industrial activity of first transformation? <ul style="list-style-type: none"> <li>• Which are its supplies and products?</li> <li>• Which are the groups that integrate this activity?</li> <li>• How many firms form the groups?</li> <li>• Where are their industrial plants located and which are their corresponding operation capacities?</li> <li>• Which are the estimates of investment and operation costs in these plants?</li> <li>• Which are the effects that a reduction in transportation and infrastructure costs would have on the location of the plants, their technological development, and the required levels of investment and operation?</li> </ul> </li> <li>• In the unit subject to analysis, which is the industrial activity of second transformation? <ul style="list-style-type: none"> <li>• Which are its products? Which is the (estimated) value added?</li> <li>• Which are the groups that integrate this activity?</li> <li>• How many firms form the groups?</li> <li>• Where are their industrial plants located and which are their corresponding operation capacities?</li> <li>• Which are the estimates of investment and operation costs in these plants?</li> <li>• Which are the effects that a reduction in transportation and infrastructure costs would have on the location of the plants, their technological development, and the required levels of investment and operation?</li> </ul> </li> </ul>

**1.....5** Indicates those questions where it is desirable to obtain a valuation by the interviewed participants (1 least relevant, 5 most relevant)



**a) Productive Structure (Continuation)**

Specific Issues	Suggested Questions
<ul style="list-style-type: none"> <li><b>Dynamics of the productive structure:</b> vocation, recent evolution, economic dynamics (and world benchmarking), answer of the net (or cluster) to infrastructure changes, short-term effects as a result of the changes planned, probable dynamics and paths.</li> </ul>	<ul style="list-style-type: none"> <li>What changes have you observed in the productive structure during the last 5 years?               <ul style="list-style-type: none"> <li>How many new firms or businesses have been created? In what areas or industries? How has this affected the development of the sector (favorably or unfavorably)?</li> <li>How has the evolution of the total income of the industry been in the last 5 years?</li> <li>Which factors have caused the changes or evolution observed in the industry?</li> <li>Are there new markets or ways of presenting the product sought?</li> <li>Which is the technological path of the industry within the region?</li> </ul> </li> <li>Do you know about significant changes occurred in the infrastructure? What kind of changes? In what areas (telecommunications, energy, others)?</li> <li>How have those changes affected the productive structure of the region?</li> <li>Which is the probable tendency in the future evolution of the productive structure? What factors will be leading this evolution?</li> <li>Is the current productive structure considered a local tradition?</li> <li>Dare there opportunities for the transformation of the pattern of activities of the region? In other words, is there a potential for the passing (or change) from traditional products to products of high market value? In affirmative case, towards which type of products would the region be migrating?</li> </ul> <p><b>1.....5</b></p>

**1.....5** Indicates those questions where it is desirable to obtain a valuation by the interviewed participants (1 least relevant, 5 most relevant)

**b) Economic Relevance and Strategic Importance**

Specific Issues	Suggested Questions
	<ul style="list-style-type: none"> <li>Which is the strategic importance of the analysis unit and its components for the influence area of the GP and the region? Indicate the more relevant reasons and indicators</li> </ul>
<ul style="list-style-type: none"> <li><b>Economic indicators</b> for the unit(s) subject to analysis (chains, nets or clusters)</li> </ul>	<p><i>There are no suggested questions in this section. Please refer to secondary sources for the obtaining of the following information:</i></p> <ul style="list-style-type: none"> <li>Production value</li> <li>Supplies purchase</li> <li>Value added</li> <li>Generation of GDP</li> <li>Income</li> <li>Employment and salaries</li> </ul>
<ul style="list-style-type: none"> <li><b>Efficiency and competitiveness indicators</b></li> </ul>	<p><i>There are no suggested questions in this section. Please refer to secondary sources for the obtaining of the necessary information.</i></p>

**1.....5** Indicates those questions where it is desirable to obtain a valuation by the interviewed participants (1 least relevant, 5 most relevant)



**d) Economic Infrastructure Offer**

Specific Issues	Suggested Questions
<ul style="list-style-type: none"> <li>• <b>Service provider firms</b> (energy, telecommunications, water, and others)</li> </ul>	<ul style="list-style-type: none"> <li>• Which firms render services to the productive sector?</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Current installed capacity</b> and quality indicators by service</li> </ul>	<ul style="list-style-type: none"> <li>• Which is the current installed capacity in the influence area of the GP (by service)? <b>1.....5</b></li> <li>• Is this installed capacity enough to serve the totality of the productive structure of the region? <b>1.....5</b></li> <li>• Which are the quality indicators by service? <b>1.....5</b></li> <li>• Which are the current levels of these indicators (by service)? <b>1.....5</b></li> <li>• Does this fulfill the operation requirements and needs of the productive structure? <b>1.....5</b></li> </ul>
<ul style="list-style-type: none"> <li>• <b>Impact of implanting the GP</b> on the installed capacity</li> </ul>	<ul style="list-style-type: none"> <li>• How will the implanting of the GP affect the installed capacity? Favorably or unfavorably? Why? <b>1.....5</b></li> </ul>
<ul style="list-style-type: none"> <li>• <b>Expected changes in the current capacity</b> (improvement and expansion projects)</li> </ul>	<ul style="list-style-type: none"> <li>• Do you know of any project for the improvement or expansion of the installed capacity (by service)?</li> <li>• Which are the goals of said projects? Which will the impact be on the installed capacity (Indicator: increase % of the capacity)? <b>1.....5</b></li> <li>• When is the implanting of said projects expected to be finished?</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Limiting factors</b> of the growth of the installed capacity</li> </ul>	<ul style="list-style-type: none"> <li>• Which factors have limited the growth in the past?</li> <li>• Currently, what factors hinder the increase of the installed capacity?</li> <li>• Is it expected that these factors disappear in the short, medium, or long term? Why?</li> </ul>

**1.....5** Indicates those questions where it is desirable to obtain a valuation by the interviewed participants (1 least relevant, 5 most relevant)



**e) Participants**

Specific Issues	Suggested Questions
<ul style="list-style-type: none"> <li><b>Main firms:</b> identification, description, background, and role that they play in the productive web</li> </ul>	<ul style="list-style-type: none"> <li>Which are the key firms in the current productive web?</li> <li>Which is their general profile?</li> <li>Which is their position in the productive structure (supplies-production-distribution-marketing)?</li> <li>Which is the relative importance of these firms in the industry? <b>1.....5</b></li> </ul>
<ul style="list-style-type: none"> <li><b>Key firms or participants for the decision-making processes:</b> strategic maturity, execution and movement capacity, business management (administrative management capacity and capacity for starting new businesses), capacity for adding value</li> </ul>	<ul style="list-style-type: none"> <li>Which is(are) the firm(s) that play a determinant role in the decision-making process about: <b>1.....5</b> <ul style="list-style-type: none"> <li>the primary production</li> <li>the supplies industry</li> <li>the machinery industry</li> <li>material and equipment?</li> </ul> </li> <li>Which is the level of influence of said firm(s) on the market and the products? <b>1.....5</b></li> <li>Which is the origin of its(their) capacity of influence in the productive structure?</li> <li>How is the management structure (familiar vs. professional) of the firm(s)? What proportion of the management and executive positions are filled by professionals?</li> <li>Which are the management practices and instruments (software, technical, etc) that differentiate this(these) firm(s) from the rest of the industry?</li> <li>Which is the technological path of the firm(s)? How does said path determine its(their) capacity for adding value?</li> </ul>

**1.....5** Indicates those questions where it is desirable to obtain a valuation by the interviewed participants (1 least relevant, 5 most relevant)



The following block of questions is highly important for the analysis. It must be applied to all the scopes of application (A and B), as it makes it possible to have a feedback from the user about the IIRSA GP.

**f) Impact of the IIRSA GP on the region**

Specific Issues	Suggested Questions
<ul style="list-style-type: none"> <li>Expected impact in terms of changes in the productive structure and development for the region</li> </ul>	<ul style="list-style-type: none"> <li>How will the infrastructure works included in the GP impact on the economic agents involved in the study area? <b>1.....5</b></li> <li>How will the infrastructure work impact on the development of the cluster? <b>1.....5</b></li> <li>Which are the projects of the GP that would have more impact on the productive integration of the economic activities of the influence area?</li> <li>What business opportunities would open the investments of the GP?</li> <li>Which are the new business projects that would be set up in the region?</li> <li>Which would be the new industrial plants and industrial businesses that would be set up in the region as a result of the implanting of the GP?</li> <li>Which are the most important impacts of the IIRSA projects?</li> <li>Which are the most important impacts of the projects as regards their financial support?</li> <li>How would the productive integration reach new markets within the region from the implementation of the GP?</li> </ul> <p>More specifically:</p> <ul style="list-style-type: none"> <li>Which would be the impacts of a more sophisticated infrastructure network on the economy of the nets and clusters?</li> <li>Which would be the possibility of setting up chains and anchor companies with a high power of generation of income and employment?</li> <li>Which would be the impacts on the scales of the existing firms?</li> <li>Which would be the cost economies fostered by the investment projects?</li> <li>Which would be the benefits and positive externalities that the firms, chains, nets, and clusters would enjoy with the implanting of the GP?</li> <li>Which would be the advantages for the intensive economic activities in the transportation area?</li> <li>Which is the potential of the GP for clusters generation?</li> <li>Which would be the competitive advantages acquired with the projects?</li> </ul>
<ul style="list-style-type: none"> <li>Investments or complementary projects required (not included in the IIRSA proposal) for removing physical barriers, adding value to chains, nets, and clusters, and attracting new business projects</li> </ul>	<ul style="list-style-type: none"> <li>Which projects that are essential for the productive integration were left aside in the IIRSA proposal?</li> <li>Which additional infrastructure investments are required in the region in order to attract new business projects to the region?</li> <li>Which critical factors would generate greater business investments in the region?</li> <li>Which physical barriers must be removed, as regards transportation, energy, and telecommunications infrastructure, in order to achieve a better productive integration? Which of said barriers would be removed by the IIRSA proposal?</li> <li>Which are the risks that the business sector perceives that exist, as regards infrastructure, that hinder greater private investments from taking place in the region?</li> <li>Which factors hinder the investments from being carried out by the private sector?</li> <li>Which are the additional investments in infrastructure that should be carried out?</li> </ul>
<ul style="list-style-type: none"> <li>Possible synergies with business initiatives and other projects of the public sector</li> </ul>	<ul style="list-style-type: none"> <li>Which potential synergies exist between the GP and the business projects (conceived or potential) for the region?</li> <li>Are there synergies between the GP and initiatives from state, provincial, county or national governments?</li> </ul>

**1.....5** Indicates those questions where it is desirable to obtain a valuation by the interviewed participants (1 least relevant, 5 most relevant)



**BLOCK A: PRODUCTIVE INTEGRATION**

The following questions are exclusively applied to the Block A, namely, the methodological application corresponding to the purpose: A, Productive Integration

**a) Block A: Productive Structure**

<b>Specific Issues</b>	<b>Suggested Questions</b>
<ul style="list-style-type: none"> <li>• <b>Leader industries:</b> Identification and characteristics (Porter's Five Forces Analysis: entry barriers, purchasers' power, suppliers' power, substitute products, and rivalry level in the industry)</li> </ul>	<ul style="list-style-type: none"> <li>• Which is(are) the leader industry(ies) within the productive web of the region?</li> <li>• Please answer the following questions in order to describe the leader industry:               <ul style="list-style-type: none"> <li>• Is there any element that must be considered as a barrier to entry the industry? In affirmative case, specify which one(s). As a reference, consult the following list:                   <ul style="list-style-type: none"> <li><b>1.....5</b></li> <li>– Capital requirements</li> <li>– Access to supplies</li> <li>– Access to distribution channels</li> <li>– Required scale economies</li> <li>– Proprietary products and/or technology</li> <li>– Governmental policies and regulation</li> <li>– Potential answer of the competitors (retaliation)</li> <li>– Others</li> </ul> </li> <li>• Which is the level of importance or power that the product buyers of the industry have (downstream)? <b>1.....5</b> <ul style="list-style-type: none"> <li>– Which is their bargaining power? Where does it stand?</li> <li>– Which is the level of concentration of the buyers? (number of buyers, total buys, and average buying volume by buyer)</li> <li>– Which is the level of differentiation of the products?</li> <li>– Is there any incentive for buyers? Which ones?</li> <li>– Which is the level of sensitivity of the buyers to price? (Elasticity, Demand Price)</li> </ul> </li> <li>• Which is the level of importance or power that the industry suppliers have (upstream)? <b>1.....5</b> <ul style="list-style-type: none"> <li>– Which is their level of concentration (number of suppliers of the main supplies and relative importance in the industry)?</li> <li>– Which percentage do the supplies received in the cost structure of the industry represent?</li> <li>– Are there any substitute suppliers?</li> <li>– Which are the costs of changing suppliers?</li> <li>– Is there any potential for vertical integration (downstream)?</li> </ul> </li> <li>• Which is the level of rivalry in the industry? <b>1.....5</b> <ul style="list-style-type: none"> <li>– Which is the level of concentration of the industry? (number of competitors, total sales, and volume of sales of the main competitors)</li> <li>– Is there any exit barrier? Which one?</li> <li>– Which is the evolution or growth tendency of the industry?</li> </ul> </li> </ul> </li> </ul>

**1.....5** Indicates those questions where it is desirable to obtain a valuation by the interviewed participants (1 least relevant, 5 most relevant)



**a) Block A: Productive Structure (Continuation)**

Specific Issues	Suggested Questions
<ul style="list-style-type: none"> <li>• <b>Leader industry(ies)</b> (Contin.)</li> </ul>	<ul style="list-style-type: none"> <li>- Is there leisure capacity in the industry? What proportion of the total installed capacity?</li> <li>- Which is the nature of the products (differentiated or commodities)?</li> <li>- Diversity of the competitors</li> <li>• Are there any substitute products? In affirmative case, do these products represent a threat for the particular firms that participate in the industry? <b>1.....5</b> <ul style="list-style-type: none"> <li>- Which is the tendency level of the buyers for seeking substitute products?</li> <li>- Which are the costs of changing for substitute products?</li> <li>- Which is the performance/price ratio of the substitute products?</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>• <b>Anchor companies:</b> maturity (financial perspective, internal processes, technologies used, strategies for searching and developing markets, exportation strategies, strengths, weaknesses, opportunities and threats)</li> </ul>	<ul style="list-style-type: none"> <li>• Which is(are) the anchor company(ies) with greater power or influence in the area?</li> <li>• Which is the financial and market position of each one of these companies? <ul style="list-style-type: none"> <li>• Which are their annual income and estimated profitability?</li> <li>• Which is the position of the company as regards the industry? (Indicator: Annual income of the company vs. Total income of the industry)</li> </ul> </li> <li>• Which are the main markets of the anchor company(ies)? <ul style="list-style-type: none"> <li>• What percentage of the total income of the company(ies) do those markets represent? <b>1.....5</b></li> </ul> </li> <li>• Which is the degree of sophistication of the products manufactured by the anchor company(ies)? <b>1.....5</b></li> <li>• Which are the expansion plans of the anchor company(ies) for the region? (at local, regional, national, and international level)</li> <li>• Which are the strengths of the anchor company(ies) in terms of resources and/or capacities that can serve as competitive advantages sources? As a reference, consult the following list: <b>1.....5</b> <ul style="list-style-type: none"> <li>• Patents</li> <li>• Well-known brand and of high value</li> <li>• Excellent reputation among the customers</li> <li>• Cost advantages resulting from proprietary know-how</li> <li>• Exclusive access to natural resources</li> <li>• Easy access to distribution networks</li> </ul> </li> <li>• Which are the weaknesses of the anchor company(ies)? As a reference, consult the following list: <b>1.....5</b> <ul style="list-style-type: none"> <li>• Non existence of patents or system for the protection of the intellectual property</li> <li>• Brand weakness (low brand equity)</li> <li>• Low reputation among the customers</li> <li>• High cost structure</li> <li>• Lack of access to natural resources</li> <li>• Lack of access to key distribution networks</li> </ul> </li> </ul>
	<ul style="list-style-type: none"> <li>• Which are the growth and profitability opportunities that the environment offers to the anchor company(ies)? As a reference, consult the following examples: <b>1.....5</b> <ul style="list-style-type: none"> <li>• Existence of a neglected segment or market niche</li> <li>• Arising of new technologies</li> <li>• Deregulation</li> <li>• Elimination of barriers to international commerce</li> </ul> </li> <li>• Which are the environment changes that can become threats for the anchor company(ies)? As a reference, consult the following examples: <b>1.....5</b> <ul style="list-style-type: none"> <li>• Changes in the customer preferences (tendency to the use of competitors)</li> <li>• Appearance of substitute products</li> <li>• New regulations</li> <li>• New commerce barriers</li> </ul> </li> </ul>

**1.....5** Indicates those questions where it is desirable to obtain a valuation by the interviewed participants (1 least relevant, 5 most relevant)



**b) Block A: National and Foreign Production and Commerce**

<b>Specific Issues</b>	<b>Suggested Questions</b>
<ul style="list-style-type: none"> <li>• <b>Destination markets</b> of the regional production (foreign and regional)</li> </ul>	<ul style="list-style-type: none"> <li>• Which are the markets to which the products of the unit subject to analysis are destined (chain, net, or cluster)?</li> <li>• Which is the importance of each market within the annual income of the industry? In other words, which is the distribution of the annual income of the industry by market? <b>1.....5</b></li> <li>• Which are the corresponding volumes of product? <b>1.....5</b></li> </ul>
<ul style="list-style-type: none"> <li>• Markets for industrial localization and organization</li> </ul>	<ul style="list-style-type: none"> <li>• Which are the key markets for the setting up of industrial plants?</li> <li>• Which are the benefits associated to these locations?</li> </ul>
<ul style="list-style-type: none"> <li>• Generation of currencies</li> </ul>	<p><i>There are no suggested questions in this section. Please refer to secondary sources for the obtaining of the necessary information.</i></p>

**c) Block A: Institutions**

<b>Specific Issues</b>	<b>Suggested Questions</b>
<ul style="list-style-type: none"> <li>• <b>Associations and chambers:</b> importance and functions</li> </ul>	<ul style="list-style-type: none"> <li>• Are there any business associations in the region with influence on the evolution of the productive structure? In affirmative case, specify which and briefly describe the functions of each one. As a reference, consult the following list:               <ul style="list-style-type: none"> <li>• Sectoral associations</li> <li>• Commerce chambers</li> <li>• Industrial associations</li> <li>• Promotion associations</li> <li>• Professional associations and unions</li> </ul> </li> <li>• What role have the aforementioned organizations played in the evolution of the productive structure of the region?</li> <li>• What impact have they had on the development of their associates and of the region?</li> <li>• What role have they played in the attraction and holding of investments in the region?</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Public bodies and private institutions:</b> importance (according to their level of influence in the decision-making process)</li> </ul>	<ul style="list-style-type: none"> <li>• Which are the public bodies or institutions with influence on the evolution of the productive structure of the region? Which are the functions of the aforementioned bodies?</li> <li>• Which are the public bodies or institutions with influence on the evolution of the infrastructure of the region? Which are the functions of the aforementioned bodies?</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Association forms,</b> networks for setting relations and coordination mechanisms</li> </ul>	<ul style="list-style-type: none"> <li>• Do you know about coordination mechanisms between/among:               <ul style="list-style-type: none"> <li>• the bodies of the public sector and those of the private sector</li> <li>• the business associations?</li> </ul> </li> <li>• Which are those mechanisms? Describe briefly.</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Potential for new associations</b> (synergies)</li> </ul>	<ul style="list-style-type: none"> <li>• In your opinion, is there any potential for the appearance of new associations or association forms? Why?</li> <li>• What firms or entities would they group?</li> <li>• What benefits would the new associations bring for their associates and for the region?</li> </ul>

**1.....5** Indicates those questions where it is desirable to obtain a valuation by the interviewed participants (1 least relevant, 5 most relevant)



**d) Block A: Legislation and Regulation**

Specific Issues	Suggested Questions
<ul style="list-style-type: none"> <li><b>Current regulation</b> that rules the operation of the productive activities that integrate the unit(s) subject to analysis</li> </ul>	<ul style="list-style-type: none"> <li>What rules govern the productive activities in the unit subject to analysis?</li> <li>Which is the field and scope of said rules? In other words, what industries or productive activities do they rule?</li> <li>Which are the aspects of the productive activities that are subject to regulation?</li> <li>How do said rules benefit the development of the productive structure of the region? How do they limit it?</li> <li>Which is the impact of said rules in terms of competitiveness? <b>1.....5</b></li> </ul>
<ul style="list-style-type: none"> <li><b>Changes expected</b> (or required) in the regulation as a result of the implanting of the GP and its impact on the strategic importance and the competitiveness of the productive activities affected</li> </ul>	<ul style="list-style-type: none"> <li>Do you anticipate any changes in the regulation as a result of the implanting of the IIRSA GP?</li> <li>Based on what rule or legislation?</li> <li>What kind of change is it expected?</li> <li>How would said change benefit or restrict the development of the productive activities of the region?</li> <li>How would it have an impact on its strategic importance and level of competitiveness?</li> </ul>
<ul style="list-style-type: none"> <li><b>Public bodies with regulatory and policy creation functions:</b> identification and specific functions, current situation and expected changes</li> </ul>	<ul style="list-style-type: none"> <li>Which public bodies fulfill regulatory functions in the influence area of the IIRSA GP?</li> <li>Which are their specific functions?</li> <li>Which is the field or scope of said rules?</li> <li>Which public bodies fulfill policy creation functions in the influence area of the IIRSA GP?</li> <li>Which are their specific functions?</li> <li>Which is the field or scope of said rules?</li> </ul>

**1.....5** Indicates those questions where it is desirable to obtain a valuation by the interviewed participants (1 least relevant, 5 most relevant)



**e) Block A: Support Resources**

Specific Issues	Suggested Questions
<ul style="list-style-type: none"> <li><b>Educational institutions:</b> universities, technical schools, as well as institutions that provide training in fields and disciplines required by the productive structure</li> </ul>	<ul style="list-style-type: none"> <li>Are there any teaching and training institutions in the unit subject to analysis?</li> <li>Do these institutions have technological development programs and human capital that shall satisfy the requirements of the productive structure in the region (in quality and quantity)? <b>1.....5</b></li> <li>Have the regional firms included qualified personnel and labor force trained in said institutions at local level? <b>1.....5</b></li> </ul>
<ul style="list-style-type: none"> <li><b>Research and development institutions:</b> services that provide level of adaptation to the needs of the region</li> </ul>	<ul style="list-style-type: none"> <li>Are there any research and development institutions in the region? <b>1.....5</b></li> <li>What services do they offer?</li> <li>Have the regional firms included developed technology in these research centers? <b>1.....5</b></li> </ul>
<ul style="list-style-type: none"> <li><b>Financial institutions:</b> services rendered and level of adaptation to the needs of the productive structure</li> </ul>	<ul style="list-style-type: none"> <li>Are there any institutions in the region that offer credit and financial support programs to firms of the regional productive structure? <b>1.....5</b></li> <li>Do said programs adjust to the requirements of the productive sector? <b>1.....5</b></li> <li>Which are the financing sources mostly used by the firms of the productive structure subject to analysis?</li> </ul>
<ul style="list-style-type: none"> <li><b>Support from the local government to the productive activity:</b> governmental incentives</li> </ul>	<ul style="list-style-type: none"> <li>Does the government offer fiscal advantages to the firms of the productive structure? <b>1.....5</b></li> <li>Does the government offer any other kind of advantage to these firms? <b>1.....5</b></li> <li>Is there any kind of local program for the development of the productive structure?</li> </ul>

**f) Block A: Recommendations about policy changes**

Specific Issues	Suggested Questions
<ul style="list-style-type: none"> <li>Recommendations</li> </ul>	<ul style="list-style-type: none"> <li>What policy changes would it be necessary to perform in order to promote the development of the productive structure?</li> </ul>

**1.....5** Indicates those questions where it is desirable to obtain a valuation by the interviewed participants (1 least relevant, 5 most relevant)



**BLOCK B: LOGISTICS CHAINS**

The following questions are exclusively applied to Block B, namely, the methodological application corresponding to the purpose: B, Logistics Chains

<p><b>Basic topics</b></p>	<ul style="list-style-type: none"> <li>• Which is the size of your membership?, Is it voluntary?</li> <li>• Which are the different activity sectors or segments where your association or organization has competence?</li> <li>• Do you have committees or specialized work groups?, In what fields?</li> <li>• What other institutions or unions depend on your organization?</li> <li>• With what public and private entities do you keep contact more frequently?</li> <li>• In which coordination forums do you participate and/or in what directories is your organization formally represented?, National or international?</li> </ul>
<p><b>Sectoral topics</b></p>	<ul style="list-style-type: none"> <li>• Is there any proper service offer along the corridor under analysis?, Where is the greatest deficiency?, What type of service is the best quality one?</li> <li>• Which are the main storage places?</li> <li>• Which are the main transportation means?, Main carriers?, Average size of the deliveries?</li> <li>• What do you think about the transit times between origins and destinations in the corridor?</li> <li>• In your opinion, which are the main bottlenecks or inefficiencies?</li> <li>• What do you think of the formalities and documents required in each stage or phase?</li> <li>• Do you think that logistics is key for commerce competitiveness?</li> <li>• Which is the logistics cost as a % of the sale price?</li> <li>• Are electronic formats used?, In which phase?, Internet use?</li> <li>• Are there any systems for tracking and monitoring the load that moves along the corridor?</li> </ul>
<p><b>Structural topics</b></p>	<ul style="list-style-type: none"> <li>• Which are the value adding phases or stages of the logistics segment?, Where do the greatest value adding phases or stages take place?, Where are the phases located?</li> <li>• What chains of this segment are intensive users of the IIRSA logistics corridor being studied?, Where do they come from and which is their destination?</li> <li>• Which firm is the dominant firm in each logistics chain?, Is it national or transnational?, Which firms are its affiliates or allies?</li> <li>• Which is the degree of influence of the dominant firm?, Leadership?, Seniority?, Knowledge of the market?, Technical and financial strength?</li> <li>• What firms render transportation, storage, packing, information, safety, administration, communications, personnel, and other services?</li> <li>• In the production phase, how many producer firms are there?, How many are national and how many transnational?, Are they associated to unions?</li> <li>• How many of these producers are involved in the analyzed logistics corridor?, In which logistics chain do they have participation?, Who are their main customers?</li> <li>• What products do they sell to their customers?, Which is the annual amount that each one produces?</li> <li>• Which cities are the final destinations of their products and what % of their sales do they represent?</li> <li>• Do they use intermediaries?, Who are these intermediaries and what is their work?</li> <li>• Which are their biggest customers and what % of their sales do they represent?</li> <li>• Which are their annual sales (totals, in the corridor and in the logistics chain)?</li> <li>• 13. What firms render transportation, storage, packing, information, safety, administration, communications, personnel, and other services?</li> </ul>
<p><b>Strategic topics</b></p>	<ul style="list-style-type: none"> <li>• Is the development of the analyzed logistics segment included as a priority in the national or sectoral plans?</li> <li>• Are the selected logistics chains considered a priority in the national, sectoral, regional, or local plans?</li> <li>• Which is the growth in the demand in the last years?</li> <li>• Are the products prices stable?, Have they changed in the recent years?</li> <li>• Do the customers make big purchases and arrange periodic deliveries?</li> <li>• Which factors are key for winning in the destination market: cost, time, quality, customer service, reliability, flexibility, others?</li> </ul>



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	<ul style="list-style-type: none"> <li>• Are there any long-term strategic alliances between suppliers and producers?, Between producers and distributors?, Between producers/distributors and final customers?</li> <li>• Is there any measurement system of the logistics performance?, Which are the key indicators used?</li> <li>• Are there any possibilities for sharing resources among the members of the chain?</li> <li>• Is there any potential for the centralization of activities in polyvalent logistics platforms?</li> <li>• Is there any potential for the usage of the same carriers?</li> <li>• Are there any possibilities for the open interchange of logistics information?</li> <li>• Is there any joint planning for operations among the members of the chain?</li> </ul>
<p><b>Functional topics</b></p>	<ul style="list-style-type: none"> <li>• What routes are there used from the supply to the final delivery in the consumption market?, Which are the distances in each route?</li> <li>• What transportation means are used and which volumes are moved by each of them?</li> <li>• Which are the traveling times in each route and by each manner?</li> <li>• Which is the freight value paid?, Which are the average sizes of the deliveries?</li> <li>• Which incoterms are used (EXW, FAS, FOB, CIF, DDP)?</li> <li>• Which activities are assigned to third-party firms and how are said firms selected?</li> <li>• Which are the third-party firms that render services and what kind of contract do they have?</li> <li>• What infrastructure is it used between origin and destination?, Ports?, Airports?, Roadways?, Railways?, Waterways?, Logistics platforms?</li> <li>• Which are the processed volumes in each stage of the chain?, What average inventory levels are kept in each phase?</li> <li>• Which is the average value of the goods in each stage of the logistics chain?</li> <li>• Which is the value density (US\$/ton) of the final product?, And in each stage?</li> </ul>
<p><b>Performance analysis</b></p>	<ul style="list-style-type: none"> <li>• Do you observe possibilities for the centralization of activities in polyvalent logistics platforms?, Do you know any plan or study related to this topic?</li> <li>• Are there any possibilities for the open interchange of logistics information with other organizations?, With which other members of the chain?</li> <li>• What do you think of the information connectivity of the network or chain?, Are there any shared Information systems?, Available logistics information banks?, Electronic data transfer?</li> <li>• With which storage facilities and warehouses does your firm work?, How many of them are of your own and how many are of third-party firms?, Do they use automated management systems?</li> <li>• What do you think of the physical connectivity of the network or chain?, Does it have interruptions?, Is the connectivity among transportation means efficient?, Which are the bottlenecks?</li> <li>• Which is the situation of the border crossings?, Controls and procedures?, Main problems and suggestions?</li> <li>• How is your relation with the customs?, Procedures and restrictions?, Problems and suggestions?</li> <li>• How complex is the preparation of documents?, Their formalities?</li> </ul> <p><b>Degree of functional integration of the chain:</b></p> <ul style="list-style-type: none"> <li>• Which is your strategic vision of the logistics chain to which you belong?</li> <li>• Which are your logistics success referents at local, regional, and world level?</li> <li>• Is there any competitiveness among logistics chains of the same segment?, Is there any competitiveness with chains of other logistics corridors?</li> <li>• Is there competitiveness in the interior of the chains among their participant members?</li> <li>• Is there any joint planning for operations among the members of the chain?</li> <li>• Is the development of your logistics segment included as a priority in the national or sectoral plans?</li> <li>• Are the logistics chains in which you participate considered a priority in the national, sectoral, regional, or local plans?</li> <li>• What loading unit and type of packing are used for the goods in each phase of the chain (degree of unitarization)?</li> <li>• Which firm is the dominant firm in the logistics chain?, Is it national or transnational?, Which firms are its affiliates or allies?</li> <li>• Does it have cooperation relationships with international firms?, In what areas?</li> <li>• What main authorities rule your activity?</li> <li>• Which certification gives you access to the market?</li> </ul>



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	<ul style="list-style-type: none"><li>• With which financial entities do you work?, Which is your capital?</li><li>• Which insurance company covers you?, What risks and amounts does it cover?</li></ul> <p><b>Level of efficiency of the operations:</b></p> <ul style="list-style-type: none"><li>• How do you consider the performance of your firm as regards your local and regional competitors?</li><li>• Which are the differential aspects of your operation and management that make you a strategic member of logistics chain?, Which is the most important one?</li><li>• Are your work processes stable or do they change according to the circumstances of the market?, Which was the most recent operational change?, Did it cause troubles?</li><li>• Which are the logistics practices considered as the best ones within the chain?, Who performs them?</li><li>• Have new logistics practices been recently introduced?, Which ones?</li><li>• What do you think of the operation efficiency of the logistics chain?, Can it improve?, How?, Are there any multi-party committees or discussion forums for the operational improvement?</li><li>• What main problems do you perceive in the logistics chain?, Which solutions could work and who must be the ones that must carry out those actions?</li></ul> <p><b>Adaptation of the logistics agents:</b></p> <ul style="list-style-type: none"><li>• Is there any incentive or barrier that encourages or discourages the assignation to third-party firms (outsourcing) of integral logistics services, multimodal transportation, storage, packing, and labeling, etc.?</li><li>• Which activities are assigned to third-party firms and how are said firms selected?</li><li>• Which are the third-party firms that render services and what kind of contract do they have?</li><li>• Which risks and benefits do you perceive in your relation with the rest of the members of the chain?, Specifically with any supplier of goods or services?</li><li>• Are there any long-term strategic alliances between suppliers and producers?, Between producers and distributors?, Between producers/distributors and final customers?</li><li>• Are there any agreements among the members of the chain that encourage the good performance of the chain as a whole rather than the individual performance?</li><li>• Are there any possibilities for sharing resources among the members of the chain?</li><li>• Is there any potential for using only one transporter along the whole chain?</li><li>• Do you know any logistics operators specialized in rendering services to your industry?, Are their services competitive and reasonable regarding cost?, What do they lack?</li><li>• Do other members of the chain use specialized logistics services?, In which phase of the chain?</li></ul> <p><b>Valuation of the logistics costs:</b></p> <ul style="list-style-type: none"><li>• Does your firm use a cost-determination system based on activities?</li><li>• Which is your average capital cost?, Which is your average work capital?</li><li>• Do you know the logistics cost associated with each of your customers?</li><li>• Which is the total logistics cost of your firm and of your partial components?, Inventory cost?, Storage cost?, Transportation cost?, Administrative cost?, Ratios?</li><li>• Which is the total logistics cost of the chain as a whole and of its partial components?, Inventory cost (fixed and in transit)?, Storage cost?, Transportation cost?, Administrative cost?</li><li>• Which is the relationship between logistics cost and final value of the product (%)?</li><li>• Are the products prices stable?, Have they changed in the recent years?</li><li>• Do you identify some areas where a cost reduction could be applied?, How would it be carried out?, To which amount would it rise?</li><li>• Do you consider that there is transparency in the transaction costs within the segment?</li><li>• Are there any non-desired costs related to operational delays?, Which ones?</li><li>• Are there any non-desired costs related to bureaucratic delays?, Which ones?</li></ul>
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1.....5 Indicates those questions where it is desirable to obtain a valuation by the interviewed participants (1 least relevant, 5 most relevant)



**COMPLEMENTARY ANALYSIS: DEVELOPMENT INHIBITING FACTORS**

The following questions are exclusively applied to the methodological application corresponding to the complementary analysis of Development Inhibiting Factors

<b>Specific Issues</b>	<b>Suggested Questions</b>
<ul style="list-style-type: none"> <li><b>Economic Risk</b></li> </ul>	<ul style="list-style-type: none"> <li>Which is your perspective about the economic development of the region in the next 5 years?</li> <li>How will the GDP evolve?</li> <li>How will the interest rate evolve?</li> <li>How will this affect: the private investment in the region, in general; and the productive structure subject to analysis? Positively or negatively? In which magnitude order?</li> </ul>
<ul style="list-style-type: none"> <li><b>Operations Risk</b></li> </ul>	<ul style="list-style-type: none"> <li>In your opinion, does the region offer the labor force as per the quantity and quality required by the current and future productive structure?</li> <li>Is there any labor policy or regulation in the region that seriously makes the operations difficult? In affirmative case, please name and briefly describe how it affects the productive structure of the region.</li> <li>Are there any commerce barriers? In affirmative case, please name and briefly describe how it affects the productive structure of the region.</li> <li>In your opinion, which is the attitude of the government towards the foreign investment? Describe briefly.</li> </ul>
<ul style="list-style-type: none"> <li><b>Financial Risk</b></li> </ul>	<ul style="list-style-type: none"> <li>How does the current exchange system affect the operations of the productive structure of the region?</li> <li>Are there any expectations of change of this system during the next 5 years?</li> <li>Are there any restrictions to the dividend and capital repatriation? In affirmative case, explain and describe briefly how does it affect the regional productive structure.</li> <li>Is there any limitation to the access to foreign currency for the imports of components, equipment, and goods?</li> <li>Are there any credit instruments (short and long term ones) available for regional investors (current and potential ones)?</li> </ul>
<ul style="list-style-type: none"> <li><b>Legal and Political Risk</b></li> </ul>	<ul style="list-style-type: none"> <li>Which are the formalities required for the setting up of new businesses?</li> <li>Which is your perspective about the application and respect of the regional rules?</li> <li>In your opinion, are governmental institutions efficient in the fulfillment of their duties? Explain briefly.</li> <li>Which is your perspective about regional governmental corruption? How does that affect regional business (new or existing ones)?</li> <li>Which is your perspective about the regional crime rate? Describe briefly how this affects the regional productive structure.</li> </ul>



Tool III.3 – Guide for the preparation and performance of interviews<sup>3</sup>

**1. Level of depth of the interviews**

The **factors** to be considered in order to determine the **level of depth of the interviews** are as follows:

- Available information and the **level of development or “life cycle” stage** where the contemplated projects of the **GP** are (see Step III of the main body of this methodology).
- The **intensity of the productive and logistics activities**, namely, the relative density and level of complexity of the productive net, the presence of a greater or lower number of firms that render transportation, storage, and integral logistics services, added to an infrastructure offer of roads, ports, and airports, through which important volumes of load are moved, is an indicator that reveals the maturity of the projects included in the grouping. This is particularly important for the purpose: B of the application.
- The **availability of time** for the gathering of information, interviews to key participants, site visits, analysis of the productive processes of each industry and the dynamics of the different chains.
- The **available resources** in the budget for gathering information, performing interviews, carrying out site visits, obtaining quantitative data, and increasing the level of detail of the results.
- The **quality of the results expected** in terms of quantity and clarity of results.

The following table shows an indicative guide for establishing the proper complexity of the interviews to be performed according to their relationship with the advance in the preparation of the project:

ANALYSIS FACTOR	CORRESPONDENCE BETWEEN THE FACTORS TO BE ANALYZED AND THE LIFE CYCLE OF THE IIRSA GP			
	Idea	Profile	Pre-feasibility	Feasibility
Information available and sources	LOW	INTERMEDIATE	HIGH	VERY HIGH
Intensity of productive activities	LOW	INTERMEDIATE	MEDIUM HIGH	VERY HIGH
Intensity of logistics activities	LOW	LOW	MEDIUM HIGH	HIGH VERY HIGH
Time availability	LOW	LOW INTERMEDIATE	MEDIUM HIGH	VERY HIGH
Amount of available resources	LOW	LOW INTERMEDIATE	MEDIUM HIGH	VERY HIGH
Quality of the results expected	LOW	LOW INTERMEDIATE	MEDIUM HIGH	VERY HIGH

**2. Sequence of the interviews and relevant aspects in each case**

The interviews must be first carried out to the general agents (chambers, ministries, etc.) and then to the specific agents (representative firms, key participants, etc.) and must make it possible to obtain information about the following:

<sup>3</sup> Adapted from the report of the consultant: R.Farromeque “Aplicación práctica de la Metodología para la promoción de servicios logísticos de valor agregado en los Ejes IIRSA”. Inter-American Development Bank, December 2006.



<b>General agents</b>	<ul style="list-style-type: none"> <li>• The structure of the interviewed organization, the amount of trade unions that depend upon it, the relationships among them, and its territorial scope.</li> <li>• The main production segments present, volumes and flows, productive centers, economy, tendencies, problems, etc.</li> <li>• Relative importance of each firm/segment, specific topics about operation and performance in the set.</li> <li>• The territorial extension of the influence area, as this will allow its confirmation, the appreciation of the length of the chains, the evaluation of the transit times, the understanding of the operation along them.</li> </ul>
<b>Specific agents</b>	<ul style="list-style-type: none"> <li>• They must be identified with the help of the general agents. They must be correctly identified and, as long as possible, it will be inquired into their credibility, location, importance, and strategic role within a certain sector.</li> <li>• Strategic role that they play, their credibility, leadership, seniority, knowledge of the logistics segment, financial, technical, political, social specific weight, etc.</li> <li>• Details of the corporative field.</li> </ul>

### 3. Preparation and performance of the interviews

The prior preparation is essential for the performance of productive interviews. It is important to have a previous **program of interviews** and the **list and profile of agents to be consulted**, ordered by typology. **Likewise, there must be a diagram of the structure of the productive chains or nets and logistics chains, according to the case.**

<b>TIME</b>	It is not exact. Some interviews may be short and others may last more than necessary. It is recommended to previously select <b>a set of key questions</b> to be asked to a certain agent and, thus, optimize the result.
<b>UNEXPECTED QUESTIONS</b>	They may generate a discussion about <b>a topic that was not planned but results useful for the analysis</b> ; following the new line of discussion will make it possible to enrich the questionnaires and the interview guides.
<b>REPETITION OF TOPICS</b>	The repetition of some key questions in the interviews makes it possible to verify if there are significant discrepancies about a certain issue.
<b>SEQUENCE</b>	It is better to start with agents from the private sector rather than from the public sector. The perception of the users about the efficiency of the processes administered by some authority (e.g. customs or the ministry of transportation) will be useful for developing a good interview with its representative.
<b>DIALOGUE STYLE</b>	Open, it will be attempted the use of a language that shall be easy and familiar for the one interviewed. The atmosphere must be informal and with a climate of trust.
<b>ANTICIPATION</b>	The question must be fully asked, no matter if the answer is known, in order to allow the agent interviewed to express his/her point of view without restrictions.
<b>ORDER OF QUESTIONS</b>	<b>It is advisable that the direct questions about sensitive issues are left for the end, when a climate of trust has already been established.</b>
<b>PROPOSALS</b>	Must be seen as <b>a possible action to be performed within the IIRSA execution program</b> ; they must be inquired as regards its scope, benefits, rationality, impact, term, resources, among others.



Tool III.4 – Guide for Risk Analysis

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This analysis is complementary to the application of any of the scopes selected by the user and it seeks to identify the **Development Inhibiting Factors (FI, in Spanish)**. It allows the user to identify, in a general (not exhaustive) way, those areas of intervention and formulation of public policies different from infrastructure that, from the demand perspective, condition not only the development of the regional productive entities, but also the attraction and holding of new private investment. This analysis is of indicative nature and it does not intend to substitute the conventional tools and others *ad-hoc*, which application is required for having a complete vision of the situation.

It is sought to **identify, in a concrete way, aspects that can inhibit the development in spite of the start-up of the infrastructure projects**, and specifically: a) to identify if there exist aspects that would inhibit the development in spite of the start-up of the infrastructure projects; b) to determine the degree in which said aspects could restrict the development and the term implicated in the solution; c) to identify the actions to be taken, their relative complexity, and the participants involved; and d) to offer criteria that shall make the decision-making process easier as regards the convenience of carrying out the project or postponing it until the restrictions are solved or the environment where the productive activities are developed is more mature.

Premises:

The analysis starts from the following premises:

- There exist productive sectors, especially in emerging hubs, which development is limited by restrictions that go beyond the development of infrastructure, as they can be the structure of the land property, existing marketing schemes, legal structure and of access to the producers' credit, capacity of limited innovation, among others.
- The environments that show multiple restrictions reflect, in general, situations where the solutions to problems of productive development depend upon a wide amount of participants and institutions of all levels, and diverse and concurrent competencies, with weak coordination mechanisms.
- As in scope A, contribution with the IPr, this approach takes into consideration the need for having an integral vision without losing the perspective of the project. The risk factors to be identified will be important, as they will affect the level of competitiveness of the influence area of the IIRSA GP within the regional and global markets.
- For external investment (to the area or a foreign one), there is a direct connection between business and the political, social, and economic field where it develops; they are not separate entities but interdependent ones. The non-recognition of said bond would lead to a partial and incomplete analysis of the attraction level of an investment, both for the investor as for the zone receiving the investment.
- From the investor perspective, the identification of risk factors will lead the decision-makers from the private sector to establish measures for minimizing or managing risks such as relocation (or change of location), investment in complementary actions for covering existing shortages, negotiation of agreements with the government, development of strategic alliances, or acquisition of political risk insurances (in the case of foreign investors) among others.
- From the governmental perspective, the identification of the risk factors will lead the policy-makers to re-orient the policies in order to reduce the risk, and thus, to increase the direct foreign investment.

Description:

This analysis is applied when the user wishes to deepen on the aspects that can inhibit the development **in spite of the start-up of the infrastructure projects and its potential contribution with the development**.

The approach results from the consideration of aspects that are inherent to the analysis of **business strategy and competitiveness** and from a combination of **risk analysis methodologies** (mainly political risk<sup>4</sup> and

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<sup>4</sup> We understand as political risk "those political conditions or social or political events of a country that could negatively affect the business environment and climate causing losses to the investors in the profitability and expected investment." Howell L., "The Handbook of Country and Political Risk Analysis".



country risk<sup>5</sup>) already existing and of wide use among international analysts and foreign investors. The resulting approach seeks to offer the user a simplified version of different tools in use<sup>6</sup>. In general, it is started from two points of view, namely:

- The one of the individual investor that has identified a concrete investment project.
- The one of the planner that wishes to resolve the existing restrictions in order to promote the productive development of a zone according to its potential.

The methodology does not seek to adopt one position or the other (the one of the investor or the one of the planner) but rather to show the spectrum of the elements that participate in the development of a project.

As regards the risk analysis, it is worth highlighting that rather than measuring the political risk or the country risk of the area subject to analysis, the methodology seeks to offer the user the possibility of identifying those factors that, from the perspective of the private investor, could risk his/her/its investment in the influence area of the *IIRSA GP*. That would be useful for the public policy-makers in order to implement corrective measures and, thus, to attract and hold investment, understanding this one as internal, national (but coming from outside the influence area of the project), and foreign.

Thus, the user will have to collect information (secondary, and if necessary, primary) about the aspects listed as follows<sup>7</sup>:

- a) **Economic Risk.** Economic conditions that could negatively affect the financial performance of the private investment within the influence area of the *GP*, particularly in terms of volatility, uncertainty, and macro-economic environment.
- b) **Operations Risk.** Elements of the environment that would affect the operations of the productive structure within the region subject to analysis: labor force and other production factors, labor policies, tariff barriers, local and governmental culture towards foreign investment, structural restrictions that affect the competitive position of the firm in the markets.
- c) **Financial Risk.** Stability of the exchange rate (appreciation or depreciation before the US dollar), exchange system and change expectations, access to credit, restrictions to the dividend and capital repatriation, and limitations to the access to foreign currency for the imports of components, equipment, and goods.
- d) **Legal and Political Risk.** Conditions that would affect the level of trust of the firms within the legal and political system in the region, such as: easiness for the creation of new businesses, application and respect of the existing regulation, and political effectiveness (institutional efficiency, bureaucracy, transparency, governmental corruption, and crime rate).

The factors are shown, organized by areas, in the following table:

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<sup>5</sup> "Besides, the country risk has a wider scale than the political risk, as it also takes into consideration economic and financial conditions of the system that would make it possible to evaluate the total level of risk to which the investors would be subject to within a specific country or region." Howell L., "The Handbook of Country and Political Risk Analysis".

<sup>6</sup> Among the methodologies we can find "International Country Risk Guide" (ICRG), developed by the PRS Group, "Business Environment Risk Intelligence" (BERI S.A.), and "Economist Intelligence Unit".

<sup>7</sup> Other relevant aspects can affect investment, such as political and governmental stability, sensitivity about social aspects, and the user will have to determine their applicability to the specific situation of the GP as well as to evaluate their inclusion in the analysis.



**Risks and factors that affect investment and development**

<b>Factors of the Environment</b>			
<b>Political/Legal</b>	<b>Environment and Culture</b>	<b>Institutional</b>	<b>Economic Commercial Financial</b>
<ul style="list-style-type: none"> <li>• Land tenancy</li> <li>• Legal safety</li> </ul> <p><b>In Purpose A:</b></p> <ul style="list-style-type: none"> <li>• Tax policy</li> <li>• Regulations to foreign trade</li> <li>• Monopolistic, labor legislation and policy</li> </ul>	<ul style="list-style-type: none"> <li>• Sensitive environmental aspects</li> <li>• Energy requirements</li> </ul> <p><b>In Purpose A:</b></p> <ul style="list-style-type: none"> <li>• Attitudes before the foreign investment</li> </ul>	<ul style="list-style-type: none"> <li>• Institutional efficiency</li> <li>• Bureaucracy</li> <li>• Transparency</li> <li>• Incentives/restrictions for the creation of firms</li> </ul>	<ul style="list-style-type: none"> <li>• Exchange system and of repatriation of capitals</li> <li>• Macro-economic context</li> </ul> <p><b>In Purpose A:</b></p> <ul style="list-style-type: none"> <li>• Inflation</li> <li>• Interest rates</li> <li>• Access to credit</li> <li>• Tariff barriers</li> <li>• Technical barriers</li> </ul>
<b>Production Factors</b>			
<b>Supplies</b>	<b>Labor Force (M.O, in Spanish)</b>	<b>Markets</b>	<b>Innovation and Technology</b>
<p><b>In Purpose A:</b></p> <ul style="list-style-type: none"> <li>• Availability</li> <li>• Cost</li> <li>• Quality</li> </ul>	<p><b>In Purpose A:</b></p> <ul style="list-style-type: none"> <li>• Availability</li> <li>• Capacity of the M.O</li> <li>• Cost of the M.O</li> </ul>	<ul style="list-style-type: none"> <li>• Competitive resources in the goal markets</li> </ul>	<ul style="list-style-type: none"> <li>• Quality and certification</li> <li>• Obsolescence levels</li> </ul> <p><b>In Purpose A:</b></p> <ul style="list-style-type: none"> <li>• Innovation and Level of development of the research</li> </ul>

In order to complete the listed aspects, **the user will have to resort mainly to secondary information sources**, and use primary sources when it is considered necessary. **The interviews will seek to explore the relative importance of the factors that can presumably restrict the development.**



## Tools of Step IV: Analysis of the situation

### Tool IV.1 – Guide for the confirmation of hypotheses about possible changes in the dynamics of the productive web

#### **Hypothesis 1: Possibility of scale expansion**

The starting point is the premise that the influence area of a *GP* already has a revealed vocation. It can be modified, whether by increasing changes, or it can be transformed in a more pronounced way; but this first exercise supposes continuity in its development. **The hypothesis supposes that there is an expansion of this vocation, and that it gets to occupy, progressively, a wider range of natural resources and of activities already existing and developed in the influence zone.**

The methodology makes it possible to evaluate what is the potential of development of the influence area from the already constituted vocation, how far can the  $n$  activities (better developed) of the zone go. The number  $n$  will depend upon the degree of detail that the exercise intends to adopt, but there must be at least 3 activities selected according to their importance and possibility of irradiating stimuli within the economic system as a whole.

Steps: The verification of this hypothesis is carried out in 6 steps:

- a. Identification of the main economic activities of the influence area of the *GP*;
- b. Quantification of the production of said economic activities;
- c. Description of the main elements of their production functions;
- d. Quantification of the main elements related to them;
- e. Quantification of the availability of factors for its expansion;
- f. Quantification of its expansion potential;
- g. Quantification of the demand associated to its expansion.



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**Potential of production of the main economic activities of the influence area of the *GP*,  
considering the availability of factors – Horizon: 10 years**

	Current production	Growth rate – last 5 years	Growth projection – next 10 years	Production projection– 10 years	Availability of factors for promoting expansion	Associated demand
Activity 1						
Activity 2						
Activity 3						
Activity 4						
Activity <i>n</i>						
Total of the <i>n</i> activities	Total, in volume and value	Average	Average	Total, in volume and value	Basic resources (land, natural resource, labor force)	Consolidated by type of supply



### Hypothesis 2: Productive intensification

The second possible hypothesis consists in that, as a consequence of the IIRSA projects: the increase of the productive potential of the influence area of the **GP** is due to not only the availability of production factors and the revealed vocation, but also to the **convergence of the production functions for the technological-productive platform regionally available?**

The starting point is the principle that the influence area of a **GP** already has a revealed vocation and, as from the hypothesis of the previous criterion, an expansion potential by means of the use of the resources that it has. This second hypothesis quantifies the expansion of this vocation, using the natural resources and the economic activities already developed in the region, but now considering also a rising of the technological and productive platform of these activities towards higher levels.

By means of the methodological exercise, the user analyzes which is the potential of development of the influence area of a **GP** based on the existing vocation, using the available resources and **elevating the productivity towards the possible levels with the existing productive technology.**

Steps: This hypothesis is analyzed in 4 steps:

- a. For each economic activity identified, describe the intermediate, maximum, and minimum productivity levels;
- b. Quantify the production of each of said activities, under the assumption that in 5 years all the producers will reach the intermediate level of productivity and that in 10 years they will reach the maximum level;
- c. Quantify the production of the total of activities;
- d. Quantify the demand associated to the expansion of said activities.



**Potential of production of the main economic activities of the influence area of the *GP*, considering the availability of factors and the convergence for the highest levels of productivity – Horizon: 10 years**

	Growth projection – next 10 years	Projected production – 10 years	Projected production, including the productivity levels in 5 years	Projected production, including the productivity levels in 10 years	Associated demand
Activity 1					
Activity 2					
Activity 3					
Activity 4					
Activity <i>n</i>					
Total of the <i>n</i> activities	Average	Total, in volume and value	Total, in volume and value	Total, in volume and value	Consolidated by type of good

**Hypothesis 3: Upstream Integration**

The user states the hypothesis that, as a consequence of the IIRSA projects: the increase of the productive potential of the influence area of the *GP* is due not only to the availability of production factors, the revealed vocation, the convergence of production functions for the technological-productive levels regionally available, but also to **the upstream integration of the productive chain?**

Additionally to the previous hypotheses, this exercise seeks to dimension the regional potential as from the progressive incorporation of underlying stages to the productive chain, integrating to the chain its supplies and equipment. The integrated chain favors new opportunities and, in some cases, the new dimension achieved by the stimuli derived from the new infrastructures promotes proper and competitive production scales.

Steps: The verification of this hypothesis is carried out in 2 steps:

- a. From the projected production, including the productivity levels in 10 years, quantifying the demand associated to the main economic activities of the influence area;
- b. Identifying and quantifying the investment potential related to the production of the main supplies associated to the selected activities.



**Potential of upstream integration of the main economic activities of the influence area of the *GP*,  
considering the availability of factors and the convergence towards higher productivity levels –  
Horizon: 10 years**

	Projected production, including the productivity levels in 10 years	Associated demand	Production scale of the main associated supplies	Investment potential
Activity 1				
Activity 2				
Activity 3				
Activity 4				
...				
Activity <i>n</i>				
Total of the <i>n</i> activities	Total, in volume and value	Consolidated by type of supply		Consolidation of the potential investment

**Hypothesis 4: Downstream Integration**

In this hypothesis, the user seeks to confirm that the increase of the productive potential of the influence area of the *GP* is due not only to the availability of production factors, the revealed vocation, the convergence of production functions for the technological-productive levels regionally available, but also to **the downstream integration of the productive chain**.

Additionally to the first two hypotheses, the exercise seeks to dimension the regional potential as from the progressive incorporation of the subsequent stages in the productive chain, assuming the integration of at least one new transformation hub (e.g. cotton-spinning; soy – flour/oil).

Steps: The verification of this hypothesis is carried out in 2 steps:

- a. From the projected production, including the productivity levels in 10 years, identifying and quantifying the downstream productive integration possibilities, starting from each of the main activities;
- b. Identifying and quantifying the investment potential related to the production of the main goods associated to the activities that can be generated downstream.



**Potential of downstream integration of the main economic activities of the influence area of the GP, considering the availability of factors and the convergence towards higher productivity levels – Horizon: 10 years**

	Projected production, including the productivity levels in 10 years	Downstream activities	Production scale of the main downstream products associated to each of the main economic activities	Investment potential
Activity 1				
Activity 2				
Activity 3				
Activity 4				
...				
Activity <i>n</i>				
Total of the <i>n</i> activities	Total, in volume and value	Consolidated, in volume and value		Consolidation of the potential investment

**Hypothesis 5: Upstream and Downstream Integration**

In this hypothesis, the user seeks to confirm that the increase of the productive potential of the influence area of the *GP* is due not only to the availability of production factors, the revealed vocation, the convergence of production functions for the technological-productive levels regionally available, but also to **the upstream and downstream integration of the productive chain**.

This hypothesis consolidates the two previous criteria, promoting the upstream and downstream integration. Obviously, various effects are added and the consolidated result (from the point of view of accountancy) will be able to be highly exceeded by the dynamic effects of the chaining of these diverse effects.

Steps: This hypothesis is confirmed through the consolidation of the analysis of the 4 previous hypotheses:

- a. Production growth, from the availability of factors and the existing vocation;
- b. Production growth, from the availability of factors, vocation, and the convergence of productivity levels for the higher levels;
- c. Possibility of upstream productive integration;
- d. Possibility of downstream productive integration.



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**Potential of upstream and downstream integration of the main economic activities of the influence area of the *GP*, considering the availability of factors and the convergence towards higher productivity levels – Horizon: 10 years**

	Projected production, including the productivity levels in 10 years	Associated demand	Investment potential – upstream	Downstream activities	Investment potential – downstream	Investment potential – upstream and downstream
Activity 1						
Activity 2						
Activity 3						
Activity 4						
...						
Activity <i>n</i>						
Total of the <i>n</i> activities	Total, in volume and value	Consolidated by type of supply	Consolidation of the potential investment	Consolidated, in volume and value	Consolidation of the potential investment	Consolidation of the potential investment



Tool IV.2 – Guide for summary of problems and solutions (valuation tables and graphs)

**1. Information obtained**

As a result of the interviews, the user will have variable information that, in general, can be categorized as follows:

- Specific information that makes it possible to widen the knowledge of the situation around the influence area of the *GP*
- Open opinions about different topics
- Valued opinions (from 1 to 5, according to the instructions contained in the Guide for the interview design, Tool III.2)

This information will be available for the sections corresponding to the common Block and to Blocks A and B of the interviews (according to the corresponding scope). Especially, it is emphasized the analysis that must be performed about the set of questions related to **the participants perception about the impact/contribution of the projects of the IIRSA GP to the regional development**, which is applicable to **all the purposes of methodological application**.

**2. Information Charts**

The information obtained will have to be graphed to be evaluated, as the majority of the results are of qualitative type with a relative value indication. For the analysis purpose, it is suggested to divide the graphing as follows:

- a) Summary of the situation: value obtained vs. importance of the problem perceived by the interviewed person.
- b) Summary of impacts/contribution expected from the implementation of the *IIRSA GP*.
- c) Summary of proposals: value obtained vs. importance of the problem perceived by the interviewed person.

**a) Situation and problems identified**

Aspect	Value obtained	Importance perceived	Relative weight	Brief summary of the situation
<b>Common Block</b>				
<b>Productive Structure</b>				
International competitiveness				
Dynamics of the productive structure				
<b>Economic infrastructure offer</b>				
Installed capacity: quality, diversity				
Incidences of the GP in the capacity				
Incidence of other projects				
<b>Focal or anchor companies</b>				
Importance of focal firm (market share)				
Influence level of focal firm				



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Aspect	Value obtained	Importance perceived	Relative weight	Brief summary of the situation
<b>Block A – IPr</b>				
<b>Productive Structure</b>				
A- Entry barriers				
A- Buyers' power				
A- Suppliers' power				
A- Competitors' power				
A- Substitutes threat				
<b>Focal or anchor companies</b>				
A- Key competencies of focal firm				
A- Markets concentration				
A- Other competitive advantages				
A- Weaknesses of focal or anchor companies				
A- Growth opportunities				
A- Growth threats				
<b>Foreign commerce</b>				
A- Importance of the foreign commerce in total income				
A- Product volumes				
<b>Regulation</b>				
A- Impact of rules on competitiveness				
<b>Support resources vs. productive sector needs</b>				
A- Adaptation of the training				
A- Availability of labor force				
A- Adaptation of the research and development				
A- Adaptation of the financing				
A- Fiscal advantages				
<b>Policy</b>				
A- Adaptation of the policy to the development of the sector				



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Aspect	Value obtained	Importance perceived	Relative weight	Brief summary of the situation
<b>Block B – SLVAs</b>				
<b>Infrastructure and support services</b>				
B- Performance of specialized logistics platforms				
B- SSII shared among agents				
B- Storage facilities and warehouses				
B- Functionality of the transportation means				
<b>Making commerce and transportation easier</b>				
B- Customs formalities				
B- Coordination of foreign trade control agency				
B- Adaptation to international safety requirements				
<b>Functional integration of the chain</b>				
B- Strategic vision of the chain				
B- Planning of operations				
B- Associative nature in the whole chain				
B- Degree of unitarization				
B- Proper level of development				
<b>Efficiency in the operations</b>				
B- Flexibility in operation conditions				
B- Practices in the inventory Management				
B- Return logistics				
B- Internationalization capacity (FOB, CIF)				
B- Service quality (response time)				
<b>Adaptation of logistics agents</b>				
4.1. Degree of outsourcing				
B- Existence of MT and LT contracts				
B- Specialization by segment				
B- Specialization by service				
<b>Valuation of logistics costs</b>				
B- Margin for reduction of logistics costs				
B- Transportation cost / total logistics cost %				
B- Penalties due to delays				
B- Valuation logistics cost / product value				
B- Cost / quality ratio				



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Aspect	Value obtained	Importance perceived	Relative weight	Brief summary of the situation
<b>Complementary Analysis – Inhibiting Factors</b>				
<b>Productive Structure</b>				
C- Economic Risk				
C- Operations Risk Labor Force Labor regulation Commerce barriers Governmental attitude				
C- Financial Risk Exchange Repatriation of dividends Credit instruments				
C- Legal and political Risk Required formalities Legal safety Institutional efficiency Corruption Crime rate				

**b) Summary of expected impacts/contribution of the implementation of the GP**

Type	Value obtained	Importance perceived	Relative weight	Brief summary of the situation
<b>Impact of the IIRSA GP</b>				
Impact on the development of the cluster				
Impact on the agents				
Contribution to the key problems in infrastructure matters				
Contribution to the reduction of costs				
<i>Others identified by the interviewed people</i>				

**b) Summary of proposals**

Aspect	Value obtained	Importance perceived	Relative weight	Brief summary of the situation
<b>Complementary projects</b>				
Proposal 1				
Proposal 2				
... Proposal <i>n</i>				

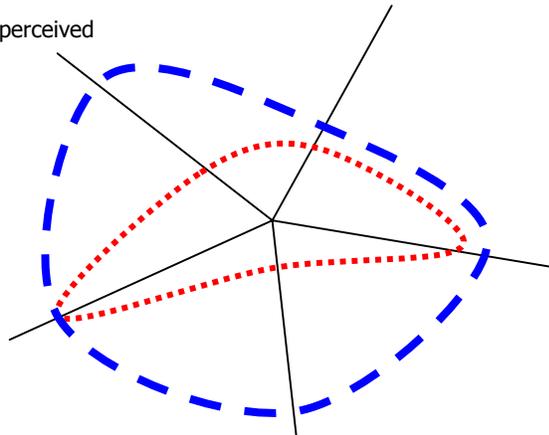
As a result of this valuation, the user will select those problems, impacts, and projects that have obtained a valuation of at least 3 points.

**3. Graphic representation of the information**

It is recommended to represent the results obtained in graphs, for which purpose the user will have to choose the method that best reflects the results. Some of the options particularly suitable are the following ones:

Diamond graph: Main axes are defined, starting from a central point, with a valuation along each of them. Each axis corresponds to a factor (i.e. destination markets, technological development, etc.) and the value obtained (current and its perceived importance) is placed in the axis.

- ..... Current situation
- Importance perceived

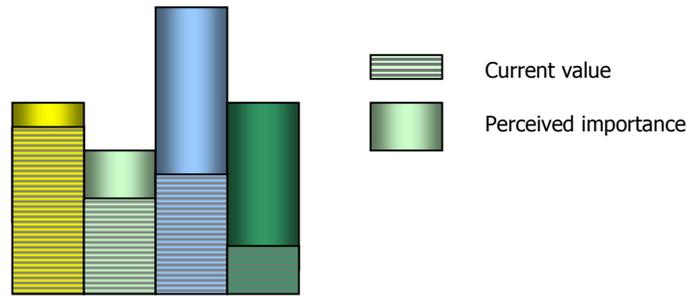


Bar graph: The factors corresponding to each axis are established and, in the vertical axis, it is reflected the value obtained (current and its perceived importance).



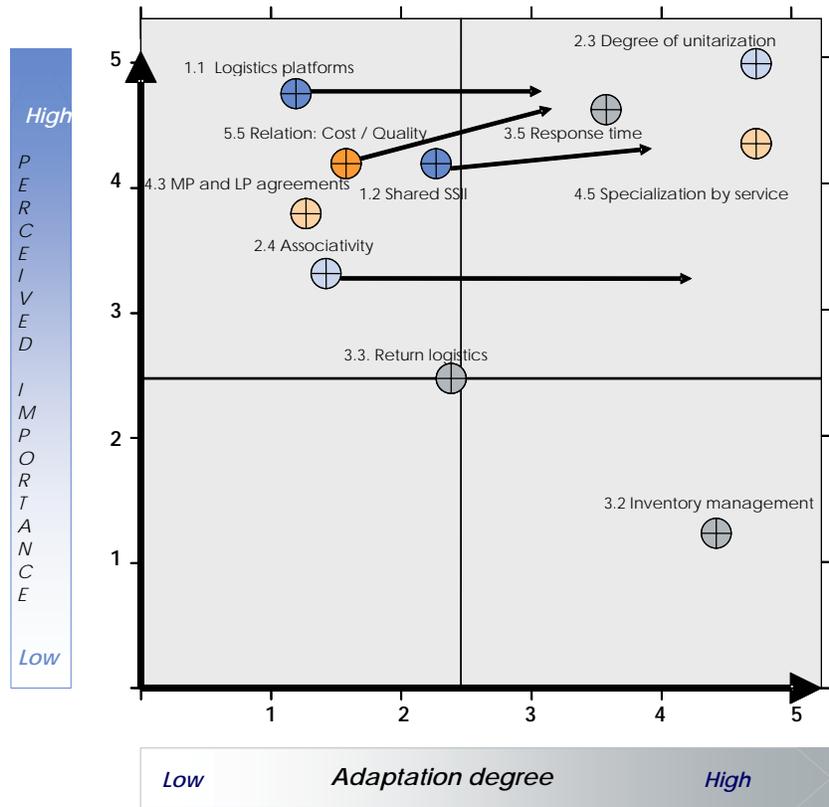
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Graph for the relative position of solutions: It allows visualizing the situation, i.e., of complementary projects, the current situation and the perceived importance, which makes it possible to have an integral vision of the situation of the chain involved.





## Tools of Step V: Proposal

### Tool V.1 – Guide for the analysis of the contribution/impact of problems and solutions (multi-criteria matrix)

#### 1. Conceptual aspects

One of the greatest problems at the time of evaluating impacts and/or execution alternatives is choosing the proper parameters for said evaluation. There are infinity possible parameters that reflect some aspect of the goodness or level of impact of the alternative at issue, but it is easy to get lost in defined multiple variables that are afterwards difficult to know what they represent. Therefore, it has been considered more suitable to define three criteria of evaluation, each of which comprises different sub-criteria, which in turn are valued according to a series of parameters selected in each case.

In this sense, the three evaluation criteria defined are as follows:

- *Operative evaluation*, which comprises the sub-criteria of legibility, accessibility, efficiency, and interferences among modes.
- *Socio-economic evaluation*, considering the costs related to both users and operators, as well as the global costs of the system.
- *Evaluation of the implanting viability*, which includes the sub-criteria of complexity of the implanting, acceptability by users and carriers, as well as complexity of management by the municipal government.

In order to evaluate impacts in an integral manner, at the same time as comparing various possible alternatives, it is proposed the performance of a multi-criteria evaluation. A multi-criteria evaluation procedure is a tool that helps in the decision-making process that, unlike other quantitative methods, allows the consideration of the intervention of decision factors of qualitative type, of difficult or impossible quantification. The units of the decision factors neither have to be monetary; in fact, some valuations can be reduced to a catalogue classification of the type *good, regular, or bad*.

The main problem of the multi-criteria evaluation methods usually consist in **determining the relative importance (weights) of the decision criteria**. There are **two approaches** that indirectly obviate this problem:

- The quantitative value of the weights is determined from qualitative comparisons.
- The best alternative is selected for each possible combination of weights.

Within this second group of methods, when there are three evaluation criteria, **it is useful to represent the map of preferences by means of an equilateral triangle**. Each vertex indicates a maximum score of the evaluation criterion at issue, whereas the barycenter of the triangle would indicate a uniform weighing of the three criteria. **This is the method proposed for this case.**

In order to evaluate each alternative with each combination of weights, there is an intrinsic function purpose to the multi-criteria method used. In this case, it is used the method of the *weighted means with normalized scale* that is hereinafter described.

This method presents, with regard to other possible ones, the following essential advantages:

- Transparency of the deduction theoretical process
- Easiness of application of the method and interpretation of the results
- Obtaining of good results, even with information of limited nature

With this multi-criteria analysis, the planner is given a tool for evaluating, in a simple and efficient way, the different alternatives proposed according to the purposes established.



**2. Application Guide**

The application of this method is initiated with the constitution of a partial evaluation matrix  $\{E_{ij}\}$ , of  $n$  alternatives against  $m$  criteria, as it is hereinafter indicated:

**Partial evaluation matrix**

	Criterion 1 (Weight $w_1$ )	Criterion $j$ (Weight $w_j$ )	Criterion $m$ (Weight $w_m$ )
Alternative 1	$E_{11}$	.. $E_{1j}$ ..	$E_{1m}$
Alternative 2	$E_{21}$	.. $E_{2j}$ ..	$E_{2m}$
..	..	..	..
Alternative $i$	$E_{i1}$	.. $E_{ij}$ ..	$E_{im}$
..	..	..	..
Alternative $n$	$E_{n1}$	.. $E_{nj}$ ..	$E_{nm}$

From this matrix, it is defined a new one  $\{E'_{ij}\}$ , also from  $n \times m$  coefficients, all of them dimensionless and defined within the interval  $[0,1]$ . A possible transformation between both matrixes is the following one:

$$E'_{ij} = \frac{E_{ij} - \min_i (E_{ij})}{\max_i (E_{ij}) - \min_i (E_{ij})}$$

In the case that the units of the alternatives  $\{1,2, \dots, n\}$  are qualitative for some criterion  $j$ , the partial evaluation will have to be translated into numerical terms, which can be arbitrary, but always applied in a solid manner. Namely, each evaluation criterion can have a different numerical scale, which must be homogeneous, in such a way that a higher value of the coefficient ( $E_{ij} > E_{kj}$ ) always implies that the alternative  $i$  is better than the alternative  $k$ , as regards criterion  $j$ .

The valuation of a criterion can be such that the lower the value of the evaluation parameter, the more suitable the valued alternative. In these cases, before the obtaining of the dimensionless normalized matrix, a homogenization process is carried out, which consists of considering the values that are inverse to the parameter taken into account. Thus, the specified homogeneity condition is guaranteed.

Lastly, if each criterion  $j$  is assigned a normalized weight  $w_j$ , so that  $\sum_j w_j = 1$ , then the priority order  $P_i$  of each alternative  $i$  is simply as follows:

$$P_i = \sum_j E'_{ij} w_j$$



**Methodology of Analysis of the Productive Integration Potential and  
Development of Value Added Logistics Services of IIRSA Projects**

**Volume 2 - Tools**

**Tool V.2 – Guide for the preparation of proposals summary**

The following model chart will make it possible to carry out a summary of the proposals and actions to be carried out within the context of the methodological application. The footnotes contain the instructions for filling it out. A fictitious example has been included for illustration purposes.

Project		Description (1)	Benef. (2)	Type (3)	Responsibilities and competencies (4)			Cost (6)		Current situation (7)	Term (8)	Nature (9)
Cod	Name				GP Promoter	Responsible and related organizations	Functional bonds (5)	Cost	Financ.			
01	Multi-functional logistics platform	Logistics infrastructure for supporting the Guayaquil port. <i>GP</i> XXX. Andean hub	Agro-industrial	Logistics Infrastr.	Regional Governm.	Municipality Ministry of Transportation	Competitiveness National Council	4 billion US dollars	BID, CAF Private sector		Pre-inv.: 2 years Investm. Phase I: 3 years Phase II: 5 years	Mixed

- (1) Briefly describe the project, indicating location and related *GP*
- (2) Indicate the productive chain(s), net(s), cluster(s), or sector(s) benefited
- (3) Indicate if it is a project of productive or logistics infrastructure, action (regulatory, political, technical)
- (4) Body responsible for implementing the project or action, if it is different from the *GP* promoter, and others that are related to the action
- (5) Indicate if there are competency bonds (concurring, complementary), if there are functional coordination instances where both of them participate (committees, forums, councils, etc.)
- (6) Cost of implementation of the proposal and financing (indicate sources)
- (7) Current situation in the implementation of the proposal: indicate if it is a new proposal
- (8) Total estimated term for its implementation
- (9) Nature of the project or action: public, private, or mixed



**Volume 2 - Tools**

**Tool V.3 – Guide for the preparation of proposal data sheets**

The following data sheet is a model that must be filled in/adapted to the specific needs of the project and the advance in its preparation.

**Date last updating:**  
Performed by:

**1. BASIC DATA**

**Name of the project:** \_\_\_\_\_ **Code:** \_\_\_\_\_  
**Sector:** \_\_\_\_\_ **Sub-sector:** \_\_\_\_\_  
**Location**  
 Specific \_\_\_\_\_  
 Country and Group of project/EID involved, influence area \_\_\_\_\_  
**Modality of execution**  
 Public \_\_\_\_\_ Private \_\_\_\_\_ Mixed \_\_\_\_\_  
**Institutions and participants related to the project (current and expected ones)**  
 Executor: \_\_\_\_\_  
 Promoter: \_\_\_\_\_  
 Other involved participants (governmental or from the private sector): \_\_\_\_\_

**2. DESCRIPTION OF THE PROJECT**

**Summary**  
**Purposes and Description**  
**Components**  
**Beneficiaries**  
**Results and impacts**  
 Summary of the evaluation. Justification and background \_\_\_\_\_  
 Expected/desired results and goals \_\_\_\_\_  
 Risks of the project \_\_\_\_\_

**3. BUDGET AND FINANCING SOURCES OF THE PROJECT**

**Total Cost:**

**Cost by category:**  
 Investment (Infrastructure, Equipment, Others) \_\_\_\_\_  
 Operation and maintenance \_\_\_\_\_

**Financial programming** (attach financial flow, if applicable)

**Financing**

Name	Type (1)	Description	Amount US dollars

(1) Private, public, multilateral body, bilateral loan, other

**4. PROJECT SCHEDULE**

**Beginning:** \_\_\_\_\_ **Ending:** \_\_\_\_\_  
**Progress status in the preparation:** \_\_\_\_\_

**5. CONTACTS**

Executor \_\_\_\_\_  
 Coordinator of the project \_\_\_\_\_  
 IIRSA \_\_\_\_\_  
 Others \_\_\_\_\_



**Tools of the Step VI: Execution Program**

Tool VI.1 Tentative criteria for the Setting of Priorities among Projects

Criteria	Value	Description
<b>Strategic Alignment</b>		
Congruence with (or contribution to the achievement of) the strategies of development for the region	1	The project is not aligned or in agreement with the strategies of development.
	2	The project is not aligned with the strategies but contributes to the operational efficiency of the regional productive structure.
	3	The project is aligned with the strategies but does not have direct impact on the purposes and goals of development for the region.
	4	The project is aligned with the strategies. It has indirect impact on a portion of the purposes and goals of development for the region.
	5	The project is aligned with the strategies. It directly contributes to the achievement of one or several of the purposes and goals of development for the region.
<b>Probability of Success of the Project</b>		
Level of uncertainty regarding the occurrence of the assumptions of market, economic growth, and business development for the region, stated within the framework of the project	1	Very high level of uncertainty
	2	High level of uncertainty
	3	Intermediate level of uncertainty
	4	Low level of uncertainty
	5	Very low level of uncertainty
Competitive answer of other markets (regional, national, or global ones)	1	The project can be postponed without generating a negative effect on the competitive position of the region as a market.
	3	The project can be postponed up to one year generating minimum effects on the competitive position of the region.
	5	The extension of the project may result in a significant loss of the competitive position of the region as a market.
<b>Technical and Organizational Feasibility (Risk)</b>		
Complexity of the Project	1	Low complexity
	3	Intermediate complexity
	5	High complexity
Organizational resources (Availability of infrastructure and human resources with the qualifications and skills required for the execution and operation of the project)	1	Resources not immediately available in the region. High risk in the acquisition and/or assignment of resources for the project
	3	Available resources. Intermediate level of risk in the acquisition and/or assignment of resources for the project
	5	Resources immediately available in the region. No risk in the acquisition and/or assignment of resources for the project
Technical risk	1	High level of risk; high level of uncertainty; low potential for reduction of risks and contingencies
	3	Intermediate level of risk; intermediate to low level of uncertainty; potential for reduction of risks and contingencies
	5	Low level of risk; possibility for implanting risk reduction measures