Initiative for the Integration of the Regional South American Infrastructure

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

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ABBREVIATIONS

EIDs	Integration and Development Hubs
GP	Group of Projects
IIRSA	Initiative for the Integration of the Regional South American Infrastructure
IPr	Productive Integration
SLVAs	Value Added Logistics Services

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

1. INTRODUCTION

In 2006, within the frame of the Initiative for the Integration of the Regional South American Infrastructure – ***IIRSA***, there were developed methodologies aimed towards identifying projects and actions complementary to infrastructure projects that integrate the project bank of the ***IIRSA***. The methodologies at issue, "Methodology of Evaluation of the Productive Integration Potential of the Development and Integration Hubs of the ***IIRSA*** Initiative" (Pacheco, López, 2006) and the "Methodology for the Promotion of the Development of Value Added Logistics Services (***SLVAs***) in the ***IIRSA*** Hubs" (ALG, Farromeque, 2006), were tested in pilot cases[1].

Projects resulting from the application of said methodologies seek to evaluate the contribution of the ***IIRSA*** Groups of Projects (***GP***) with the productive integration of the influence area of the projects, as well as to ensure the rise of a proper offer of logistics services for the productive sector as user of said infrastructure, respectively. Even when they arise from different approaches, inductive in the case of the productive integration[2], whereas deductive in the one about logistics services[3], the approach of both instruments foresees consultations to the private sector and the consideration of interchange patterns implicit in the productive web of an area.

The development of both methodologies has evidenced the need for approaching the analysis of productive integration and logistics topics in an integrated way, evaluating the strategic and operational perspectives of the productive sector jointly, whenever the case allows it, generating, at the same time, consistent and compatible proposals. Besides, the integration of both methodologies and the complementation of aspects that are relevant for the ***IIRSA*** and that are partially dealt with in the previous instruments would optimize the data collection and the consultations to the different participants, thus, generating a potential for initiating a structured dialogue.

[1] The applications have been made for the groups of projects ***GP*** La Asunción-Paranagua and Valparaíso-Buenos Aires in the case of the productive integration methodology, and for the ***GP*** La Paz-Tacna-Lima in the case of the development of logistics services methodology.

[2] The Productive Integration methodology makes it possible to determine the integrated productive development potentialities in the territorial spaces under the influence area of the IIRSA groups of projects, starting from the ***GP*** as a fixed datum. It seeks to identify the contribution of said infrastructure to the productive development and to identify complementary projects that can stimulate the productive integration. The methodology can be applied in the application phase but it deserves the existence of a minimum productive web for its application.

[3] The methodology for the Development of Logistics Services makes it possible to identify bottlenecks that the private sector faces along the logistics chains or families in order to propose actions and/or incentives that the private sector, the public one, or both in a joint manner, can provide in order to promote the diversification of logistics services and infrastructure. It is a methodology oriented towards the operational phase of the productive process and that seeks to optimize the existing chains, even when it allows the performance of applications to under-structured chains.

This document contains the product of said methodological integration. In such sense, **it is not a simple union but the result of a detailed analysis of the preceding methodologies with the purpose of generating a coherent and complementary approach**. It has been sought the creation of a tool that shall be simple to use and that shall allow different depth levels in its application, according to the needs of the user**.**

The methodology is based on two cornerstones: the confirmation of hypotheses about the relative contribution of the ***IIRSA GPs*** to the development of their influence area, and **the analysis based on the consultations to the private sector**. **Said methodology consists of six (6) steps:** Definition of the Scope of the Application, Description of the Study Area, Selection of the Methodological Approach to be applied, Mapping of the situation, Evaluation and Recommendations, as well as the preparation of the Execution Program (duly described and exemplified within the body of the document), and they have a set of tools for supporting the application.

The document is structured as follows:

- **Volume 1: Methodology**. It constitutes the main body of the document (this document). The different steps and application options are described in detail.
- **Volume 2: Tools for methodological support**. They constitute the methodology annexes. The correspondence of each tool with the methodology is indicated at the end of each one of the steps in Volume 1.
- **Volume 3: Appendixes.** The preceding base documents ("Methodology of Evaluation of the Productive Integration Potential of the Development and Integration Hubs of the IIRSA Initiative", and "Methodology for the Promotion of the Development of Value Added Logistics Services in the IIRSA Hubs") constitute important complements for more detailed applications, which is the reason why they have been included as appendixes in Volume 3 of the present document. Volume 1 as well as Volume 3 indicate the conditions under which it is recommended to use them.

2. PURPOSE OF THE METHODOLOGY

The purpose of the "Methodology of Analysis of the Productive Integration Potential and Development of Value Added Logistics Services of the ***IIRSA*** Projects" consists in **making the structured analysis of the integration infrastructure projects easier as well as that of the conditions existing in the area and in their influence sectors,** with the purpose of: **a)** identifying the contribution of the IIRSA ***GPs*** to the productive integration (***IPr***) in their influence area, through the analysis of the changes generated by them in the structure and/or in the dynamics of the

existing productive networks, **b)** identifying the potential for the development and diversification of logistics services that add value (***SLVAs***) to the IIRSA projects and to the zone production, **c)** formulating and testing hypotheses based on the potential of the ***IPr*** that can generate the IIRSA ***GPs***, **d)** incorporating to the analysis the structured consultation to the private sector, making it possible, at the same time, to generate a mechanism that shall make the structured dialogue in the influence area of the IIRSA ***GPs*** possible, and **e)** providing tools to the user, in case it requires so, that shall make it possible to complement the analysis through the consideration of risk factors and of those that promote the productive and technological specialization.

The following is sought as a complement:

- Integrating strategic and operational visions in the analysis of the regional integration infrastructure projects
- Making it easier to identify solutions and actions design as well as concrete programs
- Making the territorial expression of the problems and of the solutions easier in order to improve the comprehension of their interrelations with the ***GPs.***
- Providing the user with an application that is simple and, at the same time, adapted to the desired depth level.

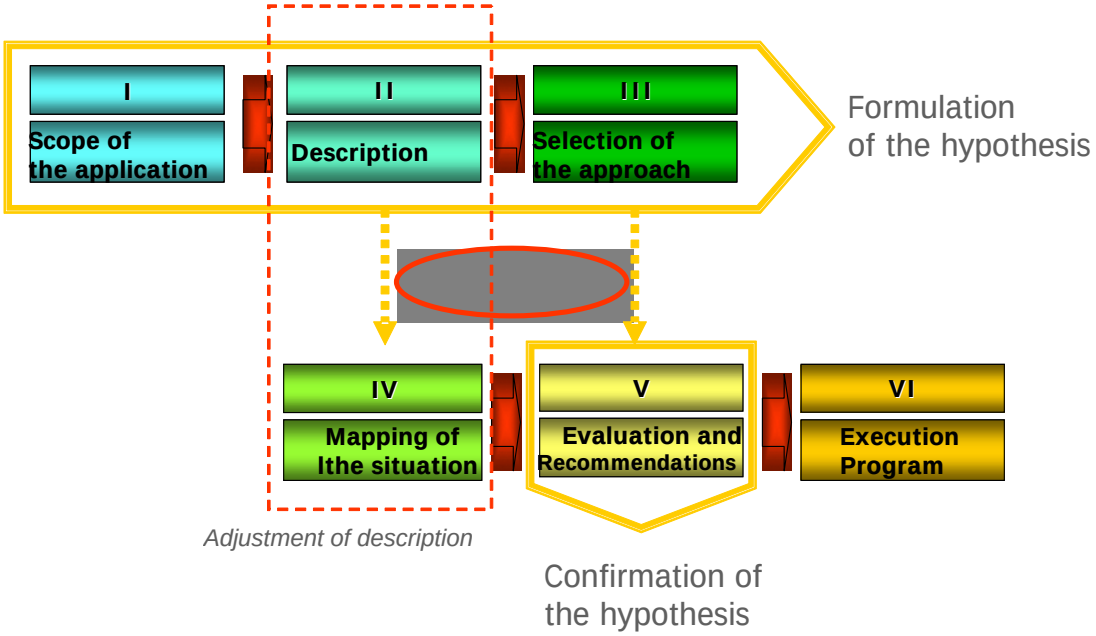
3. GENERAL SUMMARY

The methodology is based upon two cornerstones that clearly mark two stages in the application:

- **Cornerstone 1:** The secondary information survey that shall make it possible to **formulate the hypotheses** regarding the potential that the ***IIRSA GPs*** provide for the following:
    - contributing with the productive integration
    - contributing with the development of value added logistics services

- **Cornerstone 2:** The performance of **consultations to the participants** involved with the purpose of validating/refuting the hypotheses formulated:
-
    - public, private, and mixed entities within the influence area of the IIRSA Groups of Projects (GPs) as well as at national level
    - institutions, trade unions, firms

Based on this scheme, the methodology is developed according to a set of steps which sequence is hereinafter explained:



A summary of the methodology steps is hereinafter performed:

I	II	III	IV	V	VI
Scope of the application	Description	Selection of the approach	Mapping of the situation	Evaluation and Recommendations	Execution program

I Scope of the application

The user must define the scope starting from two application options directed towards the identification of: **A- Productive Integration Potential (*IPR*, in Spanish), and B- Development potential of Value Added Logistics Services (*SLVAs*, in Spanish).**

In **option (A)**, the starting point is the ***GP*** as a datum (inductive approach) and the purpose is to **analyze the relative contribution to the *IPr*** in a wide way. The scope of the application is strategic and of very long term for the development of the productive sector, seeking to deepen the bond between infrastructure and regional development. This option can be applied in all the cases.

In **option (B)**, the user wishes to carry out an approach that is strategic but related to logistics practices of sectors that are operating and with benefit potential, according to the greater specialization and complexity achieved in commercialization, marketing, and logistics patterns of the ***SLVAs***. That is the reason why its orientation is more directed towards the short and medium term. It wishes to **know what complementary projects of logistics nature –*SLVAs*-, could add value to the infrastructure projects identified in the *IIRSA***, starting from the base of the current logistics patterns and the tendencies.

The user can decide to **apply both scopes simultaneously** in order to have an integral vision.

II Description

The description consists of **three consecutive phases**: **II.1 Definition of the influence field, II.2 General description of the area, and II.3 Summary: Analysis of the productive web and segmentation.**

First, the user must make a Definition of the influence field **(II.1).** However, this definition is preliminary; interviews will provide detailed information about the functional bonds existing in the productive sector and it will possibly lead to an adjustment of the area defined in this step. The General description of the area **(II.2)** will make it possible to identify the analysis key topics in order to concentrate the interviews with the participants. Finally, a Segments and productive structure analysis will be carried out **(III.3)**, which will make it possible to have a preliminary comprehension of the productive and/or logistics structure of the area.

III Selection of the methodological approach

The step consists of two phases: **Selection of the Approach to be adopted (III.1)** and **Planning of Interviews (III.2).**

In phase **III.1,** a selection must be done of the conceptual approach to be applied in scope A (***IPr***), B **(*SLVAs*)**, or combinations of both scopes, with the purpose of finishing with the preliminary formulation of hypotheses regarding the contribution of the projects to the ***IPr*** and/or the existing potential for the generation of the ***SLVAs***. In a certain sense, in this stage a realistic re-definition of the scope of application is carried out, as the user will have a much more precise idea of the situation and of the level of information that it has and, therefore, it will be the basis for the design of the consultations to the participants.

Phase **III.2** will make it possible to properly plan the interviews through the definition of: a) typology and number of participants to be interviewed, b) depth level of the interviews, c) form to be applied, d) type of aspects to be inquired into, both generic and specific ones.

This step provides the user with the possibility of carrying out complementary analyses: Identification of risk factors (or Inhibiting Factors) and/or factors promoting the productive and technological specialization. This step will also allow the user to define if it uses appendixes (preceding methodologies) in case its needs deserve a more detailed analysis of quantitative nature.

IV Mapping of the situation

This step constitutes the main body of the diagnosis carried out after the interviews and it also consists of **two phases**: **Structure of the productive web and/or logistics and productive chains** (**IV.1**), as well as **Identification of problems and opportunities, summary and mapping of solutions (IV.2).**

The first phase **(IV.1),** (according to the scope of the application selected by the user), has the purpose of being able to summarize the functional organization of the set of participants that take part in productive and/or logistics web or chains. This phase also allows the user, if the level of depth of the application requires so, to quantitative confirm the hypotheses formulated in the previous step about changes in the dynamics of the productive web.

The second phase **(IV.2)** makes it possible to identify and refine the list of problems, needs, and solutions obtained from the interviews, to represent them in a map or territorial graphic in order to be able to see their relation with the infrastructure projects, as well as to reflect the relative situation of the key aspects for the productive and/or logistics development of the influence area of a ***GP*** in appropriate graphics and tables. This will make it possible for the user to analyze the positioning of the key aspects in the productive and/or logistics development of the zone being studied. The solutions identified in this step do not constitute the definitive proposal, as they will be evaluated and developed in step V.

V Evaluation and recommendations

This step, which purpose is to evaluate the problems and solutions detected in Step IV in an integral way, consists of **two phases**: **V.1. Evaluation of impacts and/or the contribution of the project and solutions to the development of the influence area, and V.2. Detailed proposal: projects and actions.**
The first phase **(V.1)** consists in performing a multi-criteria evaluation of impacts and identified solutions, for which the methodology provides guidelines for defining sections, the weighing, and the specific weights to be granted to each section, among other things. The purpose consists in being able to have a final evaluation that shall allow the user to decide if, based on the current contributions and restrictions, it is worth approaching the project in view of the expected benefits.
Finally, the user will go ahead to make a proposal **(V.2),** which must gather the greatest possible detail of the projects and actions, as well as generating project data sheets.

VI Execution program

This step has the purpose of **ordering, in a coherent way and according to priorities**, the set of actions, programs, and projects selected in the preceding step, as well as defining responsibilities, costs, terms, and sequence of actions for the implementation of the solutions and projects. The methodology provides the elements for generating complete and homogeneous programs among different applications.

In the table that appears below, it is presented the sequential ordering of the different steps and phases that integrate them, indicating the tools that support the application and the products that should be generated in each one of them. Likewise, useful appendixes are indicated for the users that desire to perform an application in a more detailed way.

Structure of the Methodology of Analysis of the *IPr* Potential and Development of the *SLVAs* of the *IIRSA* Projects

<table>
<tr><th>I
Scope of the Application</th><th colspan="3">II
Description (secondary information)</th><th>III
Selection of Approach</th><th colspan="2">IV
Mapping of the Situation (result of interviews)</th><th colspan="2">V
Evaluation and Recommendations</th><th>IV
Acting Program</th></tr>
<tr><td></td><td>II.1</td><td>II.2</td><td>II.3</td><td></td><td>IV.1</td><td>IV.2</td><td>V.1</td><td>V.2</td><td rowspan="3">Priority order: Projects, actions and restrictions to be solved</td></tr>
<tr><td>A: Evaluation of Contribution of projects to the Development</td><td rowspan="2">Definition of the influence field</td><td rowspan="2">General description of the area</td><td rowspan="2">Analysis of the productive web and segmentation. Summary</td><td>A: Structure and Dynamics of the productive web</td><td>Structure and dynamics of the productive web</td><td rowspan="2">Identification of investment opportunities and problems, and summary and mapping solutions</td><td rowspan="2">Evaluation of impacts/ project contribution to the development in the influence area</td><td rowspan="2">Detailed proposal: projects and actions</td></tr>
<tr><td>B: Identification of projects and complem. logistics actions</td><td>B. Logistics Chains</td><td>Structure of the logistics chains</td></tr>
<tr><td>Tools</td><td colspan="3">• II.1 Criteria for the logistics segmentation</td><td>• III.1 Criteria for the Identification of Clusters and Definition of their</td><td>• IV.1 Guide for the confirmation of hypothesis about</td><td>• IV.2 Guide for summary of problems and solutions</td><td>• V.1 Guide for the analysis of the contribut</td><td>• V.2 Guide for the preparation of proposal</td><td>• VI.1 Tentative criteria for Setting Priorities among</td></tr>
</table>

		Development Level III.2 Guide for interview design • III.3 Guide for performance of interviews • III.4 Guide for risk analysis	possible changes in the dynamics of the productive web	(valuation tables and graphics)	ion / impact of problems and solutions (multi-criteria matrix)	s summary • V.3 Guide for the preparation of proposal data sheets	Projects
Expected product of this phase	**Map of the influence area** **Description of the influence area of the *GP*** **Productive setting of sectors** **Productive and/or logistics segmentation**	**Hypothesis about the *IPr*** **Potential and the *SLVAs*** **Adaptation of questionnaires** Complementary analyses: risk and promoting factors	**Structure of the web and/or chain (productive and/or logistic)** **Confirmation of hypotheses**	**Identification of problems and opportunities for productive investment** **Summary of critical factors (graphic)**	**Multi-criteria evaluation**	**Detailed proposals** (summary and data sheets)	**Execution program**

Appendixes		*1. SLVAs analysis methodology* *2. Methodology for analysis of productive chains*					

Common application blocks

Block A: ***IPr***

Block B: ***SLVAs***

4. METHODOLOGY

The methodology of "Analysis of Productive Integration Potential and Development of Value Added Logistics Services" is an instrument that has been developed for the ***IIRSA*** but can be used for the analysis of other projects of economic infrastructure.

Its application is based on two cornerstones: the **formulation of hypotheses** about the potential of the ***IIRSA GPs*** for promoting the Productive Integration (***IPr***) and/or about the potential for the development of Value Added Logistics Services **(*SLVAs),*** on the basis of the analysis of existing secondary information; as well as the confirmation and/or refutation of said hypotheses based on the **consultation to the** public and private **participants** involved. In such sense, it is a hard process that must be carefully planned in order to be able to have results adapted to the expected scope and results of its application. Consequently, the user must determine, in detail, the level of precision required, the resources, and available time.

The depth and precision of the application of the methodology must be coherent with the level of updating and reliability of the available information, as well as with the level of scope of the corresponding ***GP*** projects as regards its Life Cycle (Idea, Profile, Pre-feasibility, Feasibility, Design, Investment, Operation). This definition is important when defining the following:

- The degree of depth in the obtaining and revising secondary information
- The precision in the definition of the influence area
- The planning of the site work as regards number of participants to be consulted, phases of the consultation, level of detail of the information to be requested
- Level of detail in the segmentation and structuring of productive and logistics networks
- Appropriateness or not of the application of quantitative analysis techniques (logistic chains, quantitative confirmation of hypotheses, etc.)
- Degree of detail of the proposals and of the action plan

In general terms, the methodology indicates, for each step, the following:

- Purposes desired to be achieved
- Options that the user has
- Phases contemplated in the application

- Complementary documents (Tools for supporting the application and Appendixes)
- Expected products

Step I: Definition of the Scope of the Application of the Methodology

I	II	III	IV	V	VI
Scope of the application	Description	Selection of the approach	Mapping of the situation	Evaluation and Recommendations	Execution Program

In the conceptual base of the ***IIRSA***, there exist Groups of Project (***GP***) that are registered in Integration and Development Hubs (***EIDs)***, or economic and social spaces, of three categories: **emerging, with potential for development, and consolidated**. These categories, which try to indicate the relative degree of development of the economic and social structure of the area at issue, reflect the decision of the ***IIRSA*** participants of not setting the priority exclusively on regional integration infrastructure that serves economic sectors already consolidated and with possibilities of an active commercial interchange, but also on the one able to contribute to the generation of sustainable development opportunities in areas of poor development but with potential to be benefited from the enlargement of markets and scales.

Conceptual note: The definition of ***EIDs*** answers to the concept of "Open Regionalism", which seeks the commercial opening oriented towards inserting the Latin American economies in the globalization process in a competitive way, and as a defense manner to compensate the costs of economic isolation generated by the formation of blocks in developed countries. The ***RA*** ends with four **factors that limit the growth of Latin America with social equity**: the profile of **exports concentrated on commodities**, the **industrialization restricted to the domestic market**, the **conspicuous consumption** of elites, and the **low dynamism of the industrial sector**, both public and private. In this context, the ***IIRSA EIDs*** are conceived not as mere export brokers but as instruments for progressively making the technical progress endogenous.

Purpose of this step:
The purpose of this step consists in making the user clearly define the scope of the methodological application in order to: a) establish the relative complexity of the analysis of a ***GP*** according to its total or partial location in

an emerging ***EID,*** with development potential or a consolidated one, b) precisely define the instruments to be used in posterior steps, c) identify if the nature of the analysis is strategic or rather operational.

User options:
The ***IIRSA*** user has two options that can be applied in the following way: A or A+B.

- **Option A**: **Analysis of the contribution of the GP with the *IPr* of the region**. To begin with, the analysis of option A (***IPr***) is performed for all of the ***GsP***, as the starting point is that the intention is to analyze the contribution of each one of them to the regional development, fundamental purpose of the ***IIRSA***. As it will be seen hereinafter, this analysis can be quantitative or qualitative according to the phase where the ***GP*** is in its life cycle. In practical terms, the applications with quantitative results, to begin with, should be able to be profitably used for complementing the socio-economic evaluation of the ***GPs*** by means of the quantification of positive externalities.

- **Option B: Analysis of the GP potential for generating the *SLVAs***. This option can be applied to all of the ***GPs*** on the condition that a significant proportion of its components is within the operation phase in its life cycle, as the topics to be consulted with the key participants are related to an operational dynamics.

Option A:

This option is applicable when the intention is to **analyze the relative contribution with the productive development of the region** in a wide way. The starting point is the principle establishing that the ***GP*** is an entry datum (inductive approach) and the purpose is to analyze its contribution to the ***IP***[4].

Particularly, it is sought to: a) analyze the effects of the removal of physical and non-physical barriers (transportation costs, time spent for

[4] The productive integration can be defined as the formation process of a preferential and wider regional market, which benefits from the diversification of intra-block exportations and those for the set of the international economy, from the increase of the scale economies and from a greater specialization, motivated on the reorientation of business strategies (national or foreign) that seek to explore those markets or the new opportunities of international commerce through: a) integration of productive chains, b) increase of the added value, c) strengthening of the productive chains (upstream and downstream), and d) diversification of the productive web or creation of new sectors. In essence, what is sought is to increase the productivity, under the assumption that profits derived from the commerce increase are not concentrated on exporting countries and that they are not mere substitutes of commerce with third-party countries that shall produce with lower costs.

traveling and for fulfilling formalities, quality of the services, among others) for the economic integration in the influence area and its effects on the ***IPr***, the physical integration, and the adding of value; b) analyze the potential of the ***IPr*** generated by the ***GPs*** against a scenario of high levels of development and regional integration; c) identify economic infrastructure complementary projects (energy, transportation, and telecommunications); d) analyze how the ***GP*** impacts on the creation of productive synergies and the densification of chains; e) identify opportunities of new productive investments.

Premises:
It is presumed that the implanting of the ***GPs*** and the suppression of infrastructure bottlenecks would:

- Make the physical and financial integration easier, which would attract private investments, new anchor companies, new chains, nets and cluster, and so on and so forth in the influence area
- Reduce the phenomenon of dispersion of value associated to infrastructure deficiencies
- Promote the transformation of natural comparative advantages into permanent ones
- Generate an enlargement of scales and markets
- Make new investment directed towards improving the quality of the infrastructure services easier
- Generate a clearer organization of the economic and geographical spaces in the influence area of the ***GPs***
- Promote a greater local competitiveness and the generation of agglomeration economies

Conceptual note: The adaptation of the infrastructure, within the context of the ***IP***, integrates the set of key elements for suppressing the barriers of intraregional commerce, together with other actions such as the reduction of tariff barriers, improvements of the institutional framework, macroeconomic compatibility, among others.

Orientation:
The orientation of this option is of strategic and long-term nature.
The purpose is to analyze the bond between economic infrastructure and development in its direct influence area.

Applicability:
This option can be applied to all of the typologies of ***EIDs*** and influence areas of the ***IIRSA GP***.

Option B:

The **second option (B)** is the proper one when the user wishes to **know what complementary projects of logistics nature could add value (*SLVAs*) to the infrastructure projects identified in the *IIRSA,*** starting from the base of the current logistics patterns and observed tendencies.

When selecting this option, the user seeks to: a) analyze, in a structured way, the logistics practices of the current productive sectors within the influence area of a ***GP***; b) identify structural and operational restrictions that do not allow the user to get benefit from the infrastructure in an optimum way; c) identify opportunities of diversification of the ***SLVAs*** that shall promote the efficiency and/or adding of value in the identified target segments, and that shall optimize the use of the new infrastructure proposed in the ***IIRSA***.

Premises:
The analysis derived from the selection of this option assumes that:

- There are dominant productive activities existing and operating. There are possibilities of growing in vertical and horizontal chains in existing sectors.
- Ideally, the activity in the area is not dominated by commodities generated by few participants. The reason for that is that whereas in these cases a logistics optimization must also be sought, these actions depend, in general, upon decisions of few enterprises of great size, in which case, and usually, the feasible solutions have already been identified. However, this condition does not hinder the application of the methodology.
- In the influence area, there exist productive activities with a level of specialization and diversification that would get benefited from the introduction of infrastructure and Value Added Logistics services (logistics centers, virtual stock exchanges, logistics offer by specialized operators, etc.) that would make the creation of competitive advantages possible.

Conceptual note: The logistics concept of this methodology refers to logistics of networks (macro) and integral supply chains (supply-chain). This concept differs from the micro logistics of a firm, which explains the importance given to the components of strategic, functional, and planning nature.

Orientation:
The orientation is **strategic and also operational, more appropriate for the medium term**. Unlike Scope "A", it is sought to identify solutions that shall make it possible to reduce costs and to create competitive advantages, with the introduction of the ***SLVAs***, which shall integrate with the basic offer of producers, thus contributing with the improvement of its competitiveness.

Applicability:
It is applied to ***GP*** with a level of productive development and logistics patterns of a certain complexity.

Summary of tools and appendixes of the step:
Not applicable

Step II: Description of the Study Area

I	II	III	IV	V	VI
Scope of the application	**Description**	Selection of te approach	Mapping of the situation	Evaluation and Recommendations	Execution Program

Purposes of this step:
The purpose of this step consists in describing the work field of the ***GPs*** as a starting point for understanding the behavior of the zone and its potential, before the performance of interviews and summaries contemplated in steps III, IV and V. **It is the basis for the formulation of hypotheses on the *IPr* potential or development of the *SLVAs***.

It is sought to determine the key aspects to be inquired: current activities, interrelations, changes planned in the field, markets, among others. The definition of the influence field and the comprehension of the productive structure and its functional relations represent the technical base for conceptually building the productive and logistics zone structure, as well as for defining the productive and/or logistics chains and/or nets that will have to be evaluated.

Phases contemplated:

The step consists of **three phases**: **II.1 Definition of the influence field, II.2 General description of the area**, and **II.3 Summary: Analysis of segments and productive structure.** Whereas this step and its phases are applicable to both scopes, the proper emphases for each case will have to be determined.

Phase II.1. Definition of the Influence Field

The user must make a **Definition of the influence field (II.1)**, which will take into account criteria related to extension of the ***GP***, typology, existing industrial web, productive projects, accessibility, topography, among others. However, this definition is a preliminary one; the interviews will provide detailed information about the functional bonds existing in the productive sector and they will possibly lead to an adjustment of the area herein defined.

It is recommended to perfect the definition of the influence area based on the **classical approach of the city networks or systems**, which makes it possible to identify the productive and consumption poles of greater functional weight, from which a network is being progressively formed with load and people flows that configure an interrelated territorial space; **the resulting set from this set of interactions is the influence area**.

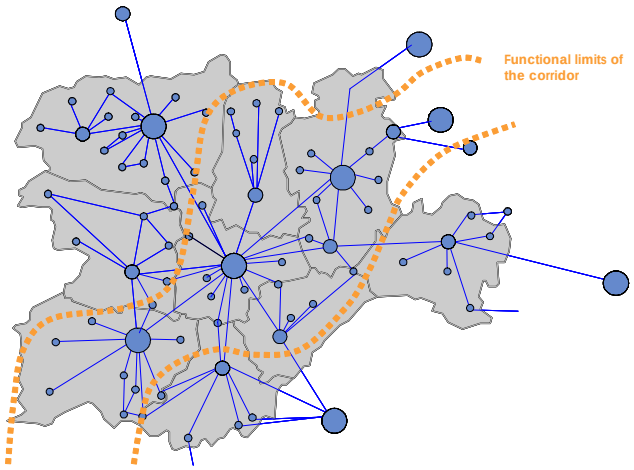
This first approximation to the territory functional organization (cities and production centers system), will be carried out from secondary information, which is the reason why it **is predictable that there will be changes detected when the interviews are afterwards carried out**.

It is recommended to define a radius around the ***GP*** (80-150km, depending on the relative importance of the implicated projects). A priori, in this zone, the specific weight or hierarchy of the different cities or productive zones present will be identified and determined, which in theory are served by the ***GP***. In order to define said hierarchy, there can be used population or space extension data, but preferably, data related to the productive sector such as: industrial production value, number of industries, load volumes, production segments.

The resulting hierarchy of the centers must be complemented with quantitative information of load flows among cities and productive centers, which is usually obtained from very diverse sources. The preparation of graphics showing these flows will make it possible to identify the functional relations among the different cities and/or production centers, therefore, it

is possible to establish the territorial scope of said relations and, consequently, the functional and space expression of the group of projects.

Finally, the user must establish the criteria of "**minimum cohesion**", generally determined by the "minimum volume" that delimits the territorial scope of the integrated network. This criterion can vary according to the particular conditions of each ***GP***, but the most usual measure is to separate those bonds where the volume observed between two centers is lower than 10% of the middle flow observed in the set of relations studied, except for specialized flows of production centers with strong dependence of a specific market or a concrete transportation facility (e.g. export port terminal). The following figure illustrates a classical example of the organization of a system of cities and its territorial expression[5].



Methodological note: For simplified applications of the methodology, the user will be able to use traditional approaches such as limiting the area to the predefined radius of influence, physiographic barriers and of another kind, relative position of the ***GP*** in the network of the enlarged area, etc.

Phase II.2. General description of the area

[5] The obtaining of information for the preparation of the functional-territorial analysis will have to be focused on the cities of greater demographic or institutional weight, carrying out searches in information centers of public or private institutions (commerce, industrial chambers, etc.), and even carrying out brief interviews with those responsible for these entities in order to access the necessary data in the quickest possible way. This preliminary information will allow a first identification of the bodies that will have to be deeply interviewed within the development of the next steps of the Methodology.

The description of the area of influence will comprise, at the beginning (with greater emphasis on the indicated scopes A and B), the aspects listed in the following table.

Type	Data	A	B
Socio-demographic	Population, growth rate, urbanization rate	•	•
Economic	Active population by sector, relevant economic activities, employment by sector, unemployment, GDP by sector, added value, salaries and income	•	•
Life quality	Human development index	•	•
Economic infrastructure and services	Existing infrastructure of transportation, energy, telecommunications, projects, existing logistics infrastructure, distribution centers	•	•
National and foreign market	Markets towards which local production is destined and key markets (local, regional or international ones) that are relevant to the industrial location	•	•
Services firms	Number of firms, characteristics, level of specialization and formality, diversification and service quality	•	•
Productive characteristics	Key productive sectors in the industrial structure of the influence area, leader industries, first and second transformation activities, material suppliers, size of the industrial zone and number of firms in different phases of the chain, markets, relevant productive projects	•	•
Institutions, leader firms, participants	Relevant participants, leader industries, public and private representative institutions and their functions, key participants, coordination and government forms, policies and strategies	•	
Legal, regulatory framework, plans and policy	Regulations and laws with incidence in the productive and services development, specific applicable policies, plans, public bodies implicated	•	•
Technological and HR dynamics, other	Technological dynamics, HR training and specialization, educational institutions, research and development entities,	•	

supporting ones	financial institutions that support production		
Others	Environment, forbidden zones, others that shall be relevant according to the user's opinion		

Note: The information will have to be, as long as possible, specific for the zone. The selection of the relevant topics for the ***GP*** being studied remains to the user's opinion.

With the analysis of this information, a general description of the productive activity of the influence area will be carried out, reflecting in a map the location of the different sectors in order to establish the space bond between productive sectors and the ***GP***.

Phase II.3 Analysis of the productive web and segmentation

The final phase consists in analyzing and understanding the functional dynamics of the productive web based on the secondary information available and, possibly, information obtained from the interviews to local producers chambers and the secondary sources that they have[6]. Understanding said dynamics will make it possible to segment the activities and families of current products.

Conceptual note: It is worth remembering that, within the context of application of this methodology, a ***GP*** is a territorial platform where there are integrated networks of activities of production, marketing, distribution, and goods consumption; generating goods flows that are functionally and organizationally expressed through different product chains or families.

Task 1. Identification of the productive web
The current markets and products must be identified in the corridor and its dynamics**:** localization of productive centers, markets, materials, marketing and distribution patterns, among others. This is the basis for the mapping of the different chains and the comprehension of the current system.

Task 2. Productive and logistics segmentation, as well as sectoring

[6] These groups or associations have enough disaggregated information of the productive sectors that they group and the sub-sectors in which they are divided, and even with statistical data about the production and marketing volumes (internal, imports-exports).

Once the productive web is identified, the following step is segmenting according to common patterns (productive or logistics), a task which seeks to evaluate homogeneous productive and logistics sectors that are capable of being subject to a differentiated analysis, which must be translated into the identification of the product families present in the ***GP***. The initial segmentation can take as a reference the list of associations of producers existing in a region or in the set of the GP, inasmuch as this already constitutes in itself a base productive segmentation.

The segmentation will make it possible to order data about specific topics such as market orientation, products, commercial flow and value, origins and destinations, logistics activities and practices, infrastructure, etc. as well as it will make it easier to select the proper methodological approach and the definition of agents to be interviewed. The final definition of what segments and what sectors integrate it remains to the criterion of the analyst, who will take criteria such as value and volume of the commercial flow, capacity of productive integration, future potential of a segment with little current activity, etc. Considering that the segmentation of logistics families has greater complexity, the Tool II.1 shows the set of criteria for performing this task.

To complement the segmentation, the productive sectoring of the ***GP*** will be carried out, which consists in establishing those productive zones that share similar characteristics as regards the dominant productive segment or product, the orientation of the market, the logistics and interchange needs, etc., which all contribute with the comprehension of the influence area.

Task 3. Summary
Finally, the user will have to make a summary that shall allow it to determine the outstanding aspects of the description and schematization of the productive dynamics of the influence area of the ***GP*** that, according to the application scope, will have a different emphasis:

Scope	Tasks implicit in the analysis of the productive web and the segmentation
Analysis of ***IPr***	• Identification of the preliminary structure • Identification of homogeneous productive segments • Preliminary summary o More dynamic activities, sectors that would potentially integrate after the investment in infrastructure

	o Integration potential of the existing productive base o Possibilities of strengthening the existing economic structure
Logistic chains (***SLVAs***)	• Identification of the preliminary structure (idem to the previous one) • Identification of homogeneous productive segments • Identification of segments that present similar logistics patterns (1): o Relative unitary weight of the goods and practices and type of unitarization o Relative value of the goods o Type of goods: solid or liquid bulk goods, general load (in containers or loose) o Storage density o Current (or potential) use of distribution and storage centers o Delivery times o Trip length o Means of transportation, type of vehicle used and size o Location of the market (national or international) and use or not of international facilities due to functional reasons or for the fulfillment of foreign commerce formalities • Summary

(1) The segmentation will have to adapt itself to the specific production and consumption conditions of each corridor, therefore, it is to be expected a mixture of added chains (e.g. Chemicals or Textile) with others very disaggregated (e.g. Paints or Buttons) in the same space.

Summary of tools and appendixes of the step:

- Tool II.1: Criteria for the Logistics segmentation
- Appendix 1: Criteria for the determination of the logistics potential
- Appendix 2: Methodology for the determination of the market potential

Products of this step

- Map of the Influence area

- General description of the influence area of the ***GP***
- Productive sectoring (graphic or map)
- Productive and/or logistics segmentation

Step III: Selection of the Methodological Approach to be applied

I	II	III	IV	V	VI
Scope of the application	Description	**Selection of the approach**	Mapping of the situation	Evaluation and Recommendations	Execution Program

Purposes of this step:
The step consists of two phases: **Selection of the Approach to be adopted (III.1)** and **Planning of Interviews (III.2).** The scope of the application selected in Step 1 will define if the user applies the methodology corresponding to ***IPr*** **(A) or to logistics chains *SLVAs* (B)**, or combinations of both.

In this step the user seeks to: a) select the methodological approach to be applied, according to the purposes identified, b) define the level of depth (or detail) to be used during the gathering of primary information and the analysis of the situation (Step 4), and c) prepare a detailed plan for the site work that includes a list of agents to be consulted during the gathering of primary information, questionnaires or interview tentative guides, as well as other data gathering instruments.

Finally, the user can decide, in this stage, to carry out complementary analyses: a) Risk analysis, and b) Identification of development promotion factors. At the same time, it will make it possible for the user to define if it will use the appendixes (preceding methodologies) in case its needs shall deserve a more detailed analysis of the quantitative type.

Phase III.1. Selection of the Approach to be adopted

Task 1. Selection of the approach

Options of the user:
The user has two options according to the scopes selected in Step 1 of the general methodology: the **first one, Analysis of Productive Integration (*IPr*)**, applicable when the fundamental scope of the user shall be to analyze

the relative contribution of the ***GP*** with the productive development of the region; the **second one, Analysis of Logistics Chains**, when the purpose is to identify Value Added Logistics projects as a complement of the projects previously identified in the ***IIRSA***.

This phase allows **the preliminary formulation of hypotheses** regarding the contribution of the projects with the ***IPr*** and/or the existing potential for the generation of the ***SLVAs***. In a certain sense, in this stage, a realistic redefinition of the scope of the application is performed, as the user will have a much more precise idea of the situation and of the level of information that it has, and consequently, it will be the base for the design of the consultations to the participants planned in phase III.2.

In this phase, the user can decide the convenience of performing complementary analyses, namely: Identification of risk factors (or Inhibiting Factors) and/or identification of factors that promote the productive and technological specialization.

Option A: Analysis of the Productive Integration

This option is applied when the user wishes to analyze which would be the impact of implanting a ***GP*** to the ***IPr*** of its influence area.

The proposal starts from the conceptual base offered by the "Methodology of Evaluation of the Productive Integration Potential of the Development and Integration Hubs of the ***IIRSA*** Initiative" (Pacheco, López, 2006)[7], which offers three applications that can be made in a sequential or independent way: the Analysis of Productive Chains[8], the Analysis of Nets, and the Analysis of Clusters[9]. This document offers a simplified version of said work as a basic tool in the initial phases of analyses of the ***IIRSA GPs***[10], and it is focused on the analysis of the Nets and Clusters analysis. Some elements of the Productive Chains methodology, based on the quantitative analysis of the impact of the GP on the performance of a chain, its influence area, and existing productive sectors, have been partially incorporated to the Logistics Chains Analysis (Scope B of the application)[11]. Appendix 1 contains, in an integral way, said

[7] See detailed explanation and concept of Productive Integration in footnote of page 2 (Introduction section).
[8] It is understood as Productive Chain the process of adding value through which raw material and local products are transformed into semi-processed or industrialized products. The purpose of the analysis of productive chains is to offer a clear vision of the different transformation phases with emphasis both in the chaining of corresponding products and services, as in the associated nets and services.
[9] See definitions of nets and clusters hereinafter in this step (Task 1)
[10] See "Methodology of Evaluation of the Productive Integration Potential of the Development and Integration Hubs of the IIRSA Initiative", its components, premises, results, and applications.
[11] For more details, see Option B: Analysis of Logistics Chains.

methodological option in its original version for those users that shall wish to carry out an analysis of this kind for applications directed towards, e.g., the economic evaluation of ***GP*** projects.

With the application, the user will obtain a general perspective of the factors that characterize the environment of the analyzed ***GP***, as well as of the contribution that the implanting of said projects will make to the ***IPr*** of the region[12].

Premises:
The assumptions made within the framework of the "Methodology of Evaluation of the Productive Integration Potential of the Development and Integration Hubs of the ***IIRSA*** Initiative" (Pacheco, López, 2006) remain in force, **especially the ones quoted hereinafter**:

a) The approaches of chains, nets, and clusters analyses make it possible to dimension the capacity of integration among business initiatives, and therefore, to quantitative and/or qualitatively determine the development potential that the investments resulting from the implanting of a ***GP*** could cause. This constitutes the base of the methodology of evaluation of projects herein proposed.

b) The methodologies of productive chains, nets, and clusters analyses are the ones of greatest applicability to the 41 ***GP*** of the ***IIRSA***. Other methodological approaches can be consulted by the user in the original document of the ***IPr*** methodology (see Appendix 2).

c) The central approach of the work is the **evaluation of impacts of the *GP* on the influence area itself**, leaving on a second plane the impacts that would be extra-territorially generated. However, the methodology takes into consideration the need for having a global vision without loosing the local perspective. In spite of the fact that the solutions are of local nature, the effects of the strategic decisions of the firms within the chains, nets, and clusters in the influence area of a ***GP*** could extend beyond the local scope.

Description:

[12] For a specialized and exhaustive analysis of the impact of the GP on the development of specific elements of the productive web, the user will have to resort to the use of the original methodologies of analysis of Productive Chains, Nets, or Clusters, depending on the case, presented by Pacheco & López in 2006.

Based on the characteristics of the productive web observed in Step II, the user will determine the type of analysis to be carried out: Nets or Clusters, or both.

In general, the most important nets and clusters are those that have a strategic nature for the development of the region, which shall have to be measured mainly according to:

- their capacity for generating local income,
- their capacity for generating local added value or for contributing with the local GDP,
- their capacity for generating jobs at a local level, and
- their potential of dependence of the local social infrastructure

Using the quoted criteria, the user will have to identify the level of detail of the analysis to be carried out (nets or clusters) and its geographical scope. The following table indicates the concept of net and of cluster in order for the user to be able to determine which of them is applicable:

Concept of net and cluster

Net	Cluster
Productive net constituted by vertical and horizontal axes that are crossed to form a network. Horizontal axis: Represents the infrastructure and its network supporting services (main and secondary roads, port terminals, energy, telecommunications, logistics, and storage centers). Vertical axis: Productive activities (chains and clusters). The components of the net (infrastructure and productive activities) are interdependent and its intersection zones can promote or compromise the development of the productive activities.	Group geographically close to firms and institutions associated to a particular sector and joined by common purposes. The cluster represents the ideal of regional development, and in the case of an advanced cluster, there exists a high potential of generation of local development.

Note: Definitions taken from the “Methodology of Evaluation of the Productive Integration Potential of the Development and Integration Hubs of the ***IIRSA*** Initiative” (Pacheco, López, 2006)

Option B: Analysis of Potential of Development of Value Added Logistics services

This option makes it possible to determine what projects of logistics nature would have a positive impact in the adding of value to the infrastructure ***GP*** identified in the IIRSA.

The selection of this approach leads to the structured analysis of the logistics practices of the main productive sectors present in a ***GP***, previous segmentation of the respective logistics chains or families (see Step II.3), with the ultimate purpose of identifying opportunities of diversification of logistics services that shall promote the efficiency and/or adding of value for the identified target segments[13].

Premises:
It is applied the macro analysis of networks and not the micro logistics focused in an industry, from that arises the importance given to the components of strategic, functional and planning nature.

The depth and precision in the application of the methodology will vary according to the information available and the level of development of the projects related to the group of projects. It is recommended that the level of precision of the information be coherent with the stage of the Life Cycle where the key projects contemplated in a certain ***GP*** are (See Phase III.2).

Methodological note: If the user would like to perform a deeper analysis of the potential of a ***GP*** for generating the ***SLVAs***, it could decide to use the original methodology, "Methodology for Analysis of the SLVAs Potential in the IIRSA Hubs", included in Appendix 1, Volume 3, of this methodology.

Description:
The functional and space description carried out in Step II constitutes an essential element when deepening the analysis of the logistics chains. First, the user will have to verify the logistics interest of the corridor and

[13] The sequence of activities is supported by the conceptual format of the "Methodology for the Promotion of Development of Value Added Logistics Services in the IIRSA corridors" (ALG, 2006), where there is an evaluation of the particular conditions of market, operations, planning, structure of the chains, agents and territory, that affect the performance of the logistics activities and that determine the improvement opportunities and the associated investment needs.

the appropriateness of using this approach, based on a series of eligibility criteria in relation to the information available in each case. In this regard, it must be taken into account that not every ***GP*** can be rated a priori as a corridor where logistics chains or families with potential for the ***SLVAs*** development operate.

The eligibility criteria that the ***GP*** must gather in order to apply this approach are as follows:

a) That it constitutes a consolidated transportation hub, where there is basic infrastructure, being it desirable that there are top-level nodal elements such as ports, airports, load transference centers, etc.
b) That it presents a high consumption/production capacity, with an important flow of added value goods capable of supporting the costs of investment and operation of advanced logistics activities
c) That it includes a high potential of development of the intra-communitarian commercial component of the ***IIRSA***. However, that does not exclude that the logistics corridors can canalize imports/exports flows for certain logistics families with limited scope to one or various countries
d) That it offers real opportunities for the financing of some infrastructure projects or the strengthening of the concrete logistics activity (***SLVAs***)
e) That it presents a functional complexity level centered in products or product families that fulfill the previous definition of diversified logistics, where the logistics activity constitutes an interest business for specialized operators

Task 2. Formulation of Hypotheses

At the end of this phase, the user will have to formulate hypotheses about: a) **the *IPr* potential** as a consequence of changes in the productive dynamics that results from the implementation of the ***GP,*** and b) **potential for the development of the *SLVAs***.

a. Changes in the IPr dynamics

In the application of the methodology, the user can limit the scope to a qualitative analysis about the changes planned in the web referred to in the previous Task 1. However, the description can provide some clues about potential changes in the dynamics, which would be translated into scenarios different from the tendency ones.

The user can propose 5 hypotheses or different scenarios within the productive dynamics of the zone. Said hypotheses are of evolutionary nature; the user progressively asks itself what is the productive potential in the influence area of a ***GP***, considering the relative complexity in terms of size and productive dynamics of the region.

The hypotheses to be validated are the following ones, and they are afterwards described in more detail:

- **Hypothesis 1: Possibility of scale expansion**. It is assumed that the productive potential of the zone will be increased due to a use of the available capacity of production factors and the revealed vocation of the influence zone
- **Hypothesis 2: Productive intensification**. It is assumed that, besides the scale expansion (Hypothesis 1), the productive integration can be achieved as a greater productivity of the technological and productive platform available is generated
- **Hypothesis 3: Upstream integration**. It is assumed that, besides the greater productivity of the existing technological and productive platform (Hypothesis 2), the productive integration is achieved upstream of the productive chain
- **Hypothesis 4: Downstream integration**. As in Hypothesis 3, it is assumed that there is a greater productive integration derived from a greater specialization along the chain, but this time downstream
- **Hypothesis 5: Upstream and downstream integration**. In this last hypothesis, it is established that a productive integration upstream and downstream of the productive chain is generated

Premises:
The starting point is the premise that the new opportunities that the IIRSA offers for making the regional economy dynamic, by means of the elimination of physical restrictions to the development of the region, do not necessarily follow a tendency path, but they are well able to generate, based on the world context, a new path that is highly superior in terms of dynamics, functional complexity, and scope.

Description:
The user can propose 5 hypotheses or different scenarios within the productive dynamics of the zone. Said hypotheses are of evolutionary nature; the user progressively asks itself what is the productive potential in the influence area of a ***GP***, considering the relative complexity in terms of size and productive dynamics of the region.

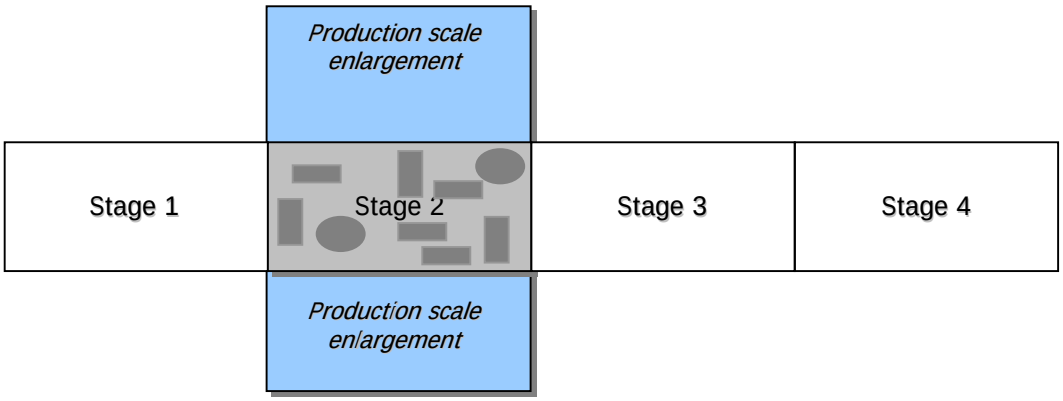
The influence area of the ***GP*** has economic activities already implanted and consolidated, consubstantial with a vocation. This one has been explained during the description performed in Step 2 of the methodology.

This vocation can be represented, in the majority of the cases, as a production stage of a productive chain, as it is shown in the following graphic, in stage 2. In said chain, there coexist firms and sub-regions with different levels of productivity (represented by the figures).

Current situation

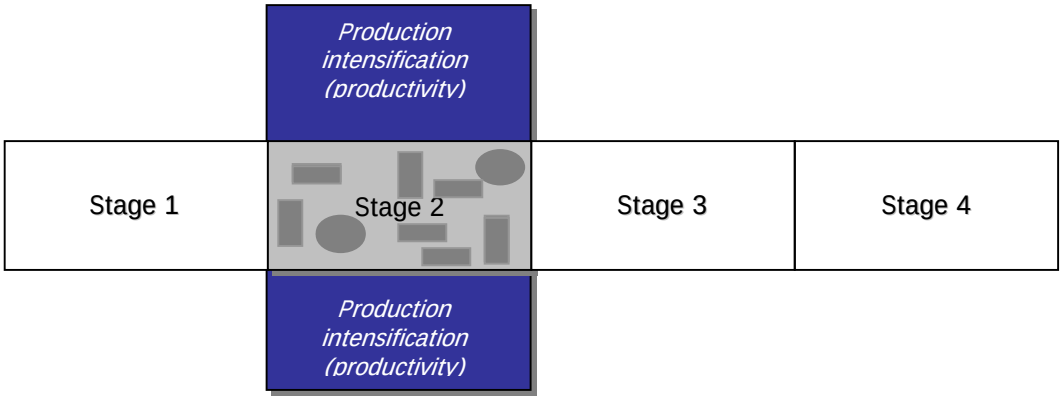
When including an IIRSA ***GP*** in the scenario, the latent potential of said activities is enlarged, being able to be proposed a new hypothesis: It is assumed that the production can now be increased, as there exists a **production capacity still latent, derived from the availability of production factors and the revealed vocation (scale enlargement)**. This is represented in the new area of Stage 2:

Hypothesis 1: Scale expansion



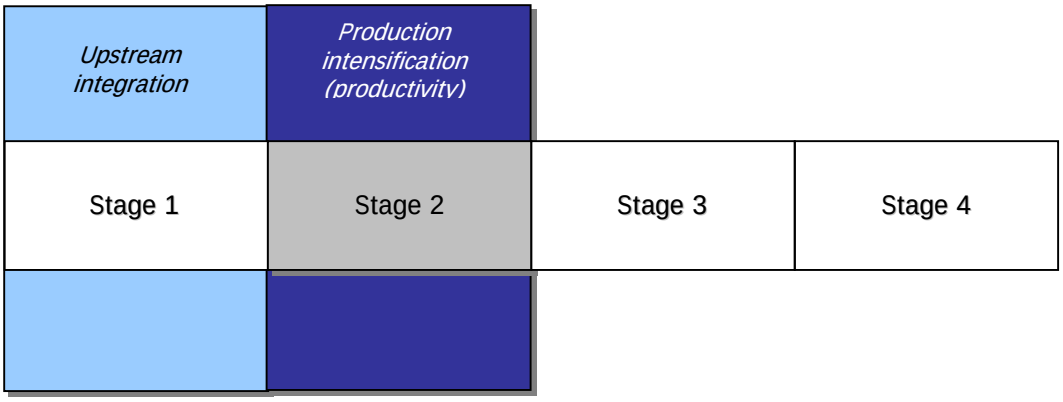
The renewed attractiveness of the influence area for investments and valorization of the existing economic activities, favors a rising in the productive level of the zone, thus accelerating the process of technology outreach and productive developments that, chained, **imply an increase in the productivity and in the generation of value and wealth**. On this basis, a new hypothesis can be proposed: the production potential available in the influence area of the ***GP*** can be increased considering the availability of factors, the vocation revealed, and the **convergence of production functions for technological-productive levels regionally available.** This answer is represented by the generalization of the efficiency patterns as from the isles previously existing.

Hypothesis 2: Productive intensification



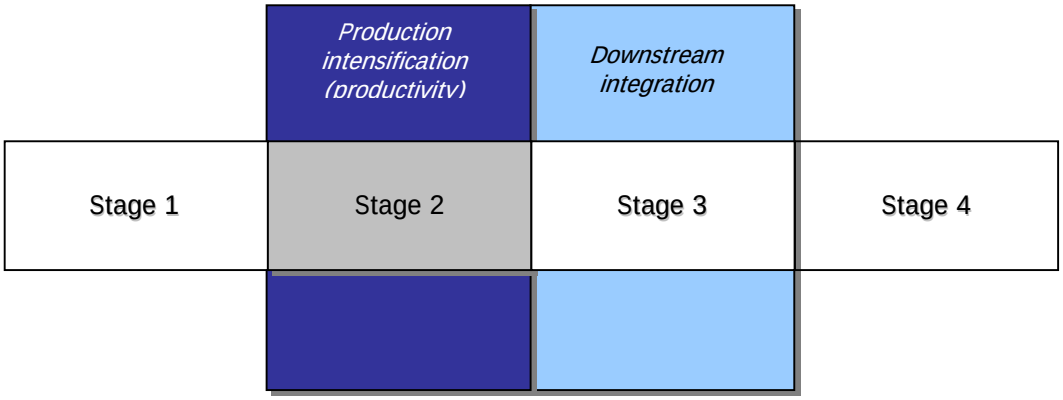
The new production scale and the new productivity levels give rise to a new range of possibilities of productive integration. In this step, they are represented by the upstream integration, chaining a part of the goods. Thus, a new hypothesis is proposed: besides the production increase derived from the availability of factors, the vocation revealed, the convergence of production functions for the technological-productive levels available in the zone (greater productivity), an **upstream productive integration in the productive chain** can be achieved. Besides the enlargement of the area corresponding to stage 2 and the generalization of its production levels (dark color of the graphic that appears below), stage 1 will be equally developed and it is probable that it occurs with productivity levels higher than what would occur if there were no stimulations from the IIRSA and those derived from a greater productivity of stage or step 2 of the chain.

Hypothesis 3: Upstream integration



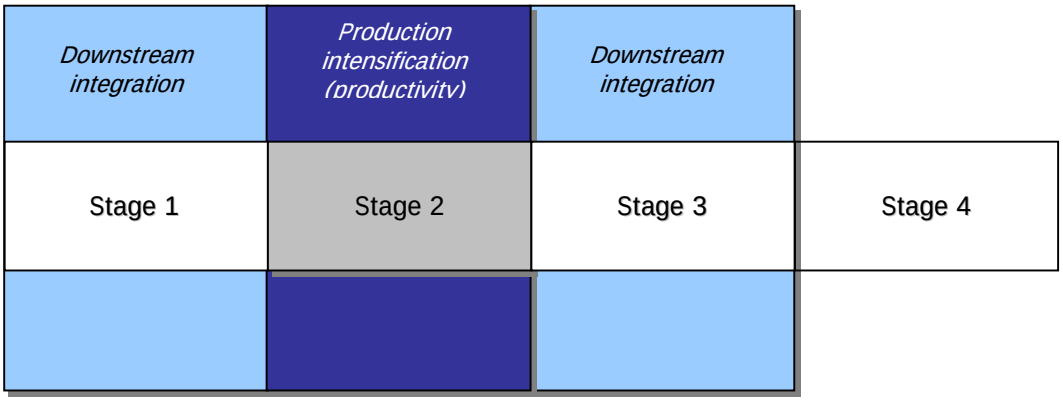
In this step, the integration is considered in a similar way to the previous step, but now downstream. Therefore, a new hypothesis is proposed: besides the production increase derived from the availability of factors, the vocation revealed, the convergence of production functions for the technological-productive levels available in the zone (greater productivity), a **downstream productive integration in the productive chain** can be achieved**.**

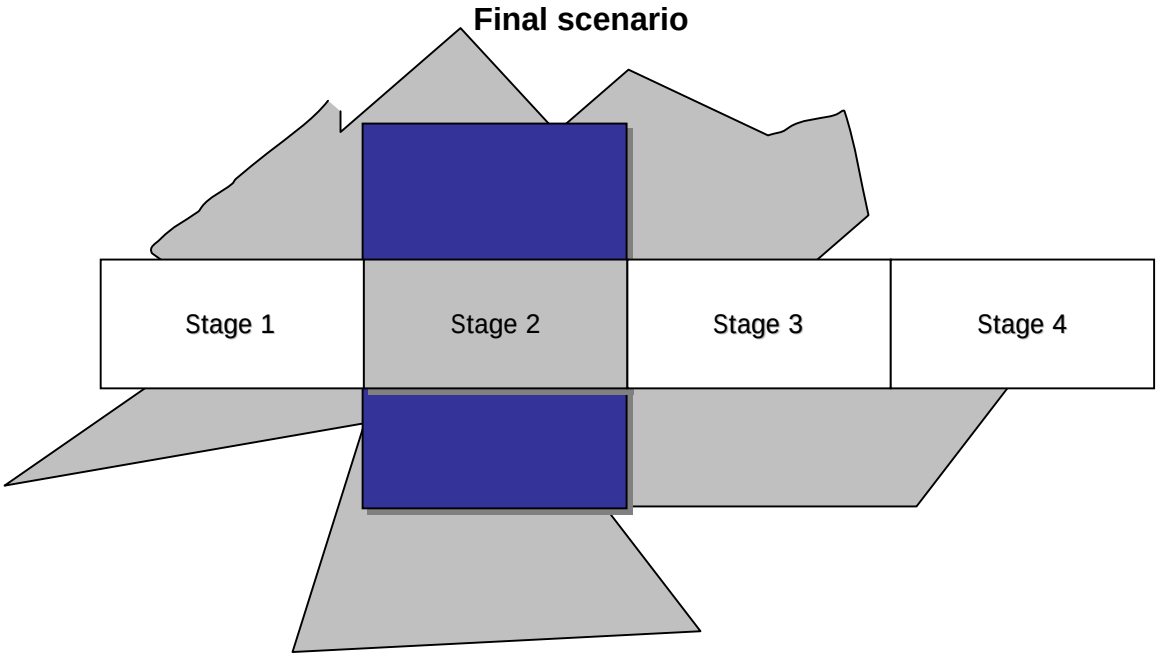
Hypothesis 4: Downstream integration



It is also possible that the productive potential of the influence area of the ***GP***, considering the availability of production factors, the vocation revealed, the convergence of production functions for the technological-productive levels regionally available, will also generate **an integration of the productive chain upstream and downstream.** Now it is possible that the structure and dynamics themselves be redefined, thus creating new areas corresponding to each one of the stages or steps (tier) and, besides, new relations among them. Obviously, it will be difficult to plan or, at least, foresee the configuration outlined in the following figure.

Hypothesis 5: Downstream and upstream integration





a. Potential for the development of the ***SLVAs***

In the case of B application, ***SLVAs***, the user will also have to formulate hypotheses about the potential for generating the **SLVAs**. This formulation has less complexity than the ***IPr*** case, the intention is to identify, based on the description performed in the preceding step, if there exist projects, actions, opportunities, etc., of public, private, or mixed nature, that could help to resolve existing restrictions, reduce costs, or add value along the logistics chains implied. The user will have to focalize on establishing the relative maturity of a ***GP*** for obtaining benefit from Value Added Logistics Services.

Phase III.2. Planning of Interviews

*Task 1. Definition of the level of depth of the application according to the life cycle of the **GP***

In this task, the user will have to define the level of depth and detail of the application that is coherent with the stage of the life cycle where the ***GP*** projects are. This seeks to optimize the effort and avoid whether very exhaustive applications for projects that are still at an idea level, or extremely general applications for the ***GP*** that require more analytical

depth. Likewise, it will make it possible to determine if there will be used analytical tools for quantifying results of the application, especially as regards quantification of impacts of a GP on a productive chain (Appendix 2) or the quantification in view of confirming hypotheses about expected changes in the dynamics of a productive web (Tool IV.1)

Given the extension and coverage of a ***GP***, this will generally show variations in the advance of different projects that integrate it. In these cases, the user can define the level of depth taking into consideration the scenarios that are hereinafter indicated: a) the ***GP*** is constituted by a relatively homogeneous group of projects as regards advance in its life cycle: the user will adopt the level considered average or common to the majority of the projects that integrate the ***GP***; b) one project (the anchor project or any other of the ***GP*)** plays a determinant role in the development of a specific zone of the influence area: the user will have to adapt the analysis to the level of said project. The user will determine, according to its opinion and the characteristics of the case, which is the level that it considers more appropriate.

The recommended guidelines for determining the detail of the application are as follows:

Stage of the life cycle of the *GP**	**Description**	**Level of detail of the application**
Idea	• Projects identified with a very preliminary advance in its preparation. The purpose consists in identifying alternatives. • Data about investment costs and demand generally inexistent.	Participants: Interviews to chambers and public institutions, and possibly to some relevant producer in the cases of productive webs concentrated on few chains. Approach: It is advised not to apply interviews but rather leading open conversations based on key topics.
Profile	• It is sought to identify the appropriateness of a project and the topics to be evaluated in a very superficial way. • The estimates of investment costs, benefits,	Participants: Interviews to chambers and relevant top-level public institutions that are central, regional, and/or local, as well as to relevant firms if the productive web is concentrated on few chains

	and demand are based on secondary information. Precision is not higher than 50%.	Approach: Interviews of qualitative type. Emphasis on the identification of strategic factors that have incidence on the long-term development.
Methodological Note: In the following steps, the user will be able to decide to perform a qualitative analysis more detailed as regards the IPr potential along productive chains and the confirmation of hypotheses about changes in the dynamics of the productive web. In this case, he will use whether Tool IV.1 (Guide for the confirmation of hypotheses about possible changes in the dynamics of the productive web), or Appendix 2 (Methodology for the Analysis of Productive Chains)		
Pre-feasibility	• It is sought to evaluate the alternatives identified and to discard the less viable ones. • The benefits and costs identified in the profile are estimated with a precision of 70-75% (including investment amounts and operation costs, an investment calendar and approximate figures of the income that would generate during their useful life). • It is applicable to projects of a certain complexity.	Participants: Interviews to chambers and to relevant top- and second-level public institutions that are central, regional, and/or local, as well as to relevant firms of the sectors that are key for the regional development. Approach: Interviews of qualitative type (and quantitative, if possible) with emphasis on the identification of strategic, planning, and operational factors that have incidence on the medium- and long-term development.
Feasibility	• Analysis of the viable alternatives. • Costs and benefits are estimated with a precision of 85-90% (financial flows, programming of works).	

Design	• Analysis of the chosen alternative. • Costs are estimated at a 95-98% of reliability (includes final engineering studies, the design of	Participants: The same detail as in feasibility. Approach: In this phase, the methodological approach only has sense as a way of confirming decisions taken,

	construction blueprints, procedure manuals, equipment specifications as well as detailed financial and constructive design, operational solution specifications).	dimensioning and perfecting operational and functional solutions.
Investment	Performance of the investment	Not applicable
Operation	The project has been constructed and is operating	Participants: Interviews to chambers and to relevant top- and second-level public institutions that are central, regional, and/or local, as well as to relevant firms of the sectors that are key for the regional development. Approach: Interviews of qualitative type (and quantitative, if possible) with emphasis on the identification of strategic, planning, and operational factors that have incidence on the medium- and long-term development.

* Dominant stage of all the ***GP***, from the anchor project or the projects with greater impact on the development of a specific zone of the influence area.

Task 2. Planning of the site work and preparation of interview guides or questionnaires

The planning seeks to ensure that in the subsequent phases of the methodology there is enough information for performing the analysis. The user will have to summarize the key aspects of the Description to be validated/confirmed during the interviews.

The following table contains a more detailed list of the data to be gathered during the site work. As it was previously mentioned, the user will have to

select the information to be gathered according to the methodological approach chosen.

Data to be gathered during the site work

Aspects	Specific Issues
a) Productive Structure	• Existing **Productive Chains, Nets and Clusters**[14], their components and bonds among activities • **Level of vertical arrangement** (goods-production-distribution-marketing) • **Industry, commerce, and consumption statistics** for the analysis unit(s) and its/their components • **Industrial activity** of first and second transformation: activities and products, location of plants and industrial zones, required levels of investment • **Leader industries**: Identification and characteristics (Porter's Five Forces Analysis: entry barriers, purchasers power, suppliers power, substitute products, and rivalry level in the industry), • **Goods industries**: characteristics, competitiveness, and level of outsourcing by local firms • **Anchor companies**: maturity (financial perspective, internal processes, technologies used, searching strategies and market development, exportation strategies, strengths, weaknesses, opportunities, and threats) • **Service provider firms**: main exporters and logistics operators, transnational marketing firms, as well as internal and regional marketing channels • **Logistics and storage infrastructure**: total storage capacity, relation production/storage, interaction warehouses-transportation, multimodal analysis • **Productive structure dynamics**: recent evolution, economic dynamics (and world benchmarking), answer of the net (or cluster) to infrastructure changes, short-term effects as a result of planned changes, dynamics, and probable paths.

[14] The user will have to verify the existence of minimum conditions for the existence of a cluster following the group of criteria shown in Tool 1.

b) Economic Relevance and Strategic Importance	• **Economic indicators** for the unit(s) subject to analysis (chains, nets, or clusters): production value, purchase of goods, added value, generation of GDP, income, employment, and salaries • **Efficiency and competitiveness indicators** • **Vocation**: Transformation potential of the activity of the region (change from traditional products to high market value ones)
c) National and Foreign Production and Commerce	• **Destination markets** of the regional production (foreign and regional) • Markets for the industrial localization and organization • Generation of currencies
d) Economic Infrastructure Offer	• **Service provider firms** (energy, telecommunications, water, and others) • **Current installed capacity** and quality indicators by service • **Impact of implanting the *GP*** on the installed capacity • **Expected changes in the current capacity** (improvement and expansion projects) • **Limiting factors** of the growth of the installed capacity
e) Logistics Offer	• **Infrastructure situation and supporting services:** specialized logistics platforms, information systems shared among agents, warehouses and deposits, functionality of transportation means, presence of customs facilities • **Degree of functional integration of the chain:** strategic vision of the chain, planning of operations, degree of unitarization, associability along the chain, proper level of development • **Level of efficiency of the operations:** flexibility in operation conditions, practices in the inventory Management, return logistics, internationalization capacity (FOB, CIF), service quality (response time) • **Adaptation of the logistics agents:** degree of outsourcing (reliability), shared risks and benefits, medium- and long-term contracts existence,

	specialization by segment, specialization by service • **Valuation of the logistics costs:** margin for logistics cost reduction, % transportation cost / total logistics cost, penalties for delays, valuation logistics cost / product value, cost / quality ratio
f) Participants	• **Main firms**: identification, description, background (history), and role that they play within the productive web • **Firms or participants that are key for the decision-making processes** (primary production, goods industry, machinery industry, material and equipment): strategic profile and maturity, execution and movement capacity, business management (administrative management capacity and capacity for starting new businesses), capacity for adding value
g) Institutions	• **Associations and chambers**: importance and functions • **Public bodies and private institutions**: importance (according to their level of influence in the decision-making process and operation of the unit(s) subject to analysis) • **Association manners**, networks for setting relations, coordination mechanisms, and mechanisms for the management of knowledge • **Map of the institutional network** with inherence, responsibility, and functions in the unit(s) subject to analysis • **Government structure** of the net (internal regulation, influence in the attraction of private investments) • **Potential for new associations** (synergies)
h) Legislation and Regulation	• **Current regulation** that rules the operation of the productive activities that integrate the unit(s) subject to analysis • **Changes expected** (or required) in the regulation as a result of the implanting of the ***GP*** and its impact in the strategic importance and the competitiveness of the productive activities affected • **Public bodies with regulatory and policy**

	instrumentation functions: identification and specific functions, current situation, and expected changes
i) Support Resources	• **Educative institutions**: universities, technical schools, as well as institutions that provide training in fields and disciplines required by the productive structure • **Research and development institutions**: services that provide level of adaptation to the needs of the region • **Financial institutions**: services rendered and level of adaptation to the needs of the productive structure • **Support of the local government to the productive activity**: governmental incentives
j) Impact of the ***IIRSA GP***	• **Impact expected** in terms of changes in the productive structure and development for the region • **Investments or complementary projects required** (not included in the ***IIRSA*** proposal) for removing physical barriers, adding value to the chains, nets and clusters and attracting new business projects • Possible **synergies** with business initiatives and other projects of the public sector in the region
k) Recommendations about policy changes	• Recommendations • Proposals about relative changes in prices • Others

Methodological note: The purpose of this phase is not only to have information that shall make it possible to offer a panoramic view of the current situation, but also to obtain data about the changes expected as a result of implanting the ***GP***. Therefore, the user will have to make sure that it obtains opinions and related information.

The user will have to design the interviews to be carried out and the development of the corresponding instruments (questionnaires) according to the type of contact to be made (open, structured, or deep interview).

The final questionnaire must have a set of questions directed towards knowing the activities of a particular productive chain, as well as the issues characterizing it and that have been previously designed, and those related to the problem associated to the ***GP***. In Tool III.2, the user will be able to guide itself by the list of standard questions suggested in order to generate its own form[15]. Said bank of questions consists of **four modules**: the first one, common to all the scopes, and two by each scope (A and B).

The resulting questionnaire must tentatively have three sections:

- First: information about the interviewed agent and the institution that he/she represents, his/her duties, organization, and role in the productive structure
- Second: issues selected from the bank of projects
- Third: final impressions of the interviewed person about the ***IIRSA GP*** and its impact in the region.

Task 3. Identification of primary information sources
The user will have to define the primary information sources. The gathering of data will be fundamentally carried out by means of interviews to experts and appropriate economic agents. This process is iterative with the definition of the questionnaire as according to the agents and to the level of information, there will have to be prepared questionnaires more or less detailed, operative, or strategic.

The interviews must be performed to experts, representative participants, and researchers of well-known expertise in the field of regional economy, as well as to qualified economic agents. Hereinafter it is offered, as a reference, a **non-exhaustive list of the types of participants**, entities or bodies to be consulted:

[15] Said bank results from the consolidation of the instruments suggested by the authors of the original methodology of Evaluation of Productive Integration Potential, as well as from the incorporation of those elements that have been considered necessary for a complete analysis of the evaluation of impact of the ***GP***, to be carried out afterwards.

- Related to the productive sector, private
  - Industrial
    - Industrial chambers
    - Sectoral associations
  - Commercial
    - Chambers of Commerce
    - Exporting associations, commodities exchanges
  - Transportation and logistics
    - Federations of land transporters
    - Private railway operators
    - Associations of logistics operators
    - Firms that render logistics, transportation, and other services
    - Tax free zones
  - Energy, telecommunications and other services
    - Firms that render energy, telecommunications, and other services
  - Others
    - Anchor companies or of strategic importance for the regional development
- Related to the governments
  - Ministry or Secretariat of Industry
  - Ministry or Secretariat of Domestic and Foreign Commerce
  - Ministry or Secretariat of Agriculture
  - Ministry or Secretariat of Transportation
  - State railway firms
  - Embassies and commercial representations abroad
  - Sectoral Committee for the MERCOSUR, CAN
  - Customs Departments, Ministry of Foreign Affairs
- Others
  - ***IIRSA*** Representatives of the countries

The user will generate a list adjusted to the institutions and individuals to be contacted, including the topics to be dealt with in each case. Said list will be progressively refined in the initial contacts with the public bodies, associations, and chambers responsible for the industry and commerce branches as the interviews advance.

Task 4. Application of questionnaires
Once the planning is finished, the site work will be carried out. Tool III.3 contains a guide for the performance of interviews which consultation is recommended.

As a general rule, it is suggested that the first group of interviews is performed to the union representatives of the different product families present in the territory, usually located in the main cities, and sequentially, to other associated unions until the relevant firms to be consulted can be defined, both in the productive sector and among the transportation operators and the different agents of the logistics chain (consignees, freight forwarders, customs agent, etc.).

Complementary Analyses: Risks and promoting factors

In this step, the user can decide to perform a couple of complementary analyses, in a separate or joint way. Tool III.4 presents detailed instructions of how to perform the risk analysis. As regards the promoting factors analysis, the considerations are theoretical; it remains to the user's opinion the definition of the elements that it will take into account for the definition of this new development scenario.

a. Risk analysis

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 way (not exhaustive), those areas of intervention and formulation of public policies different from infrastructure that, from the point of view of demand, condition not only the development of the productive entities in the region, but also the attraction and holding of new private investments. 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 setting where the productive activities develop is more mature.

b. Promoting factors

The analysis starts from the principle that the South American region, and the IIRSA as moving initiative of its development, is undergoing an exceptionally favorable moment of the international economic situation, as never before in the history of the world economic system there has been such a consistent demand pressure over natural resources. The world economic growth, combined with the demand from USA and from China, has created a situation that is extremely favorable for the countries that have productive factors and capacity for valuing them. The IIRSA can contribute with making this singular moment of the evolution of the international economic system viable.

In order to illustrate the situation, it is emphasized that this is the first time that a country of great dimensions as Brazil, with high dependence on imports and particularly with a development platform relatively underdeveloped, strongly dependent on the creation of new production capacities and new infrastructure, with important deficit and demand as regards its consumption pattern, achieves an economic growth during a long period.

This growth process has given rise to two effects over the raw material and the natural resources market: growth of the amounts and of the prices. At the same time, the offer of manufactured products of great volume from China has brought about the progressive lowering of their prices. In theoretical and historical terms, this represents a reverse movement of the tendencies planned by Cepal that for so long have undermined the possibilities of development of the peripheral countries and of Latin America, as well as it implies the opportunity of anchoring the economic development of the continent with the resources generated in this phase of great prosperity and, with them, the achievement of an integration of productive chains, thus consolidating the integration hubs and extending the benefits in their structure and dynamics.

A development regional strategy, based on the integration projects, should recognize the particular opportunity that the Region is

experiencing and take advantage of it in order to take a leap in terms of productive integration, technological capacity, multiplying effects, incorporation of regions and population. The impulses that the world economy is transmitting to the region can and must be profited for the constitution of new endogenous dynamisms, capable of becoming autonomous as the international bonanza and the Chinese economic growth loose impulse.

List of documents complementary to the step:

- Tool III.1 Criteria for the Identification of Clusters and Definition of their Level of Development
- Tool III.2 Guide for the design of interviews: Common section, and applications A, B and C
- Tool III.3 Guide for the performance of interviews
- Tool III.4 Guide for Risk Analysis and development promoting factors
- Appendix 1: Methodology for analysis of potential of the ***SLVAs***
- Appendix 2: Methodology for the analysis of productive chains

Products of this step

- Hypothesis about the potential of the ***IPr*** and the development of the ***SLVAs***
- Adaptation of questionnaires to the case

Step IV: Mapping of the situation

I	II	III	IV	V	VI
Scope of the application	Description	Selection of the approach	Mapping of the situation	Evaluation and Recommendations	Execution Program

Purposes of this step:
The purpose of this step consists in complementing the diagnosis of the situation based on the results of the interviews and analyzing the positioning of key aspects in the productive and/or logistics development of the zone being studied. Whereas in this step the solutions obtained from the interviews are summarized, they do not constitute the definitive proposal, as they will be evaluated and developed in step V.

Contemplated phases:
Two phases are contemplated. The first one, **Structure of the productive net and/or the logistics chains (IV.1)**, and confirmation of changes in the productive web dynamics, has the purpose of being able to summarize, as a result of the interviews, the functional organization of the set of participants that take part in the productive and/or logistics nets or chains. In some cases, this phase leads to a redefinition of the influence area.

The second stage, **Identification of problems and opportunities, summary and mapping of solutions (IV.2)**, makes it possible to identify and refine the list of problems, needs, and preliminary solutions according to the result of the interviews, representing them in a map or territorial graphic in order to relate them with the projects of the ***GP***.

Phase IV.1. Structure of the productive net and/or the logistics chains

Task 1. Summary of interviews
Once the interviews are performed, the data gathered will have to be systematized and processed in an ordered way, generating a results data sheet by contacted agent. Said data sheet will summarize the main findings presented by item (or question made). This will be the base for generating a report that consolidates the interviews.

Considering that the interviews will fundamentally provide qualitative information, the user will have to proceed towards the consolidation of the results taking into consideration the following:

- Representative answers: the most common answers must be compiled in order to build a representative chart of the paradigms, interests, and expectations of the main agents within the influence area of the ***GP***.
- Schematization: The graphical representation and the mapping of the identified nets and clusters, as a complement of the mapping of logistics chains, will also be useful for making the understanding of the regional productive dynamics easier. It is very probable that the original segmentation is modified and even that the territorial and functional field of the studied GP can be changed.

The resulting information will have to be reported for each chain (productive or logistics), net or cluster studied. In order to make the communication to the readers easier, the results of the interviews will have to be presented in a summarized way and organized by item.

Task 2. Structure of the chains and nets

The structuring seeks to understand and relate the basic structural elements that characterize each of the segments identified in Step II (II.2 Description), as well as differentiate within each segment, the productive and/or logistics chains used by the ***GP*** being studied. This step allows a strategic appreciation of the answer capacity of a logistics network to the requirements of the market that it serves.

The basic tools for the structuring are the interviews based on the tools presented in Step 2 (III.2 Model for interviews design: Common section, as well as applications A and B; and III.3 Guide for the performance of interviews).

Based on the data obtained from the interviews, it begins to be perfected the territorial space, the productive segment and the products that constitute the productive and/or logistics chain or net to be analyzed. Afterwards, the chain or net is built in three levels:

(a) identification of the main, autonomous, and supporting participating members
(b) structural dimensions that describe the amount of phases and firms within the network

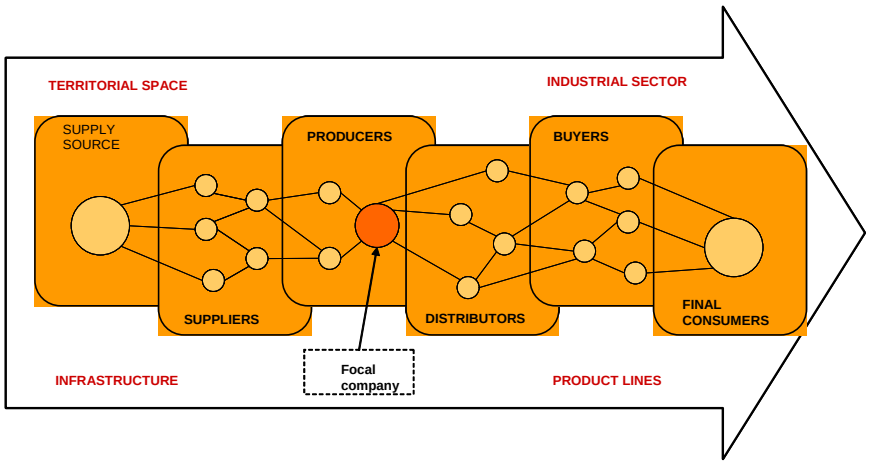
(c) types of bond of the processes that require management or monitoring

Task 3. Identification of the members of the network
Firstly, it is necessary to identify the main member or focal firm, which is dominating, and then the members that are critical for the success of the operations directly or indirectly led by the main member: autonomous members and supporting members.

Conceptual note: The focal firm is the one that strategically dominates and powerfully influences the actions of the rest of the members. The autonomous members are those that carry out operations and manage activities that are translated into added value for the final customer, whereas the supporting members just provide resources, knowledge, assets or services for the autonomous members.

The following figure illustrates the structure of the logistics network where the focal firm stands out.

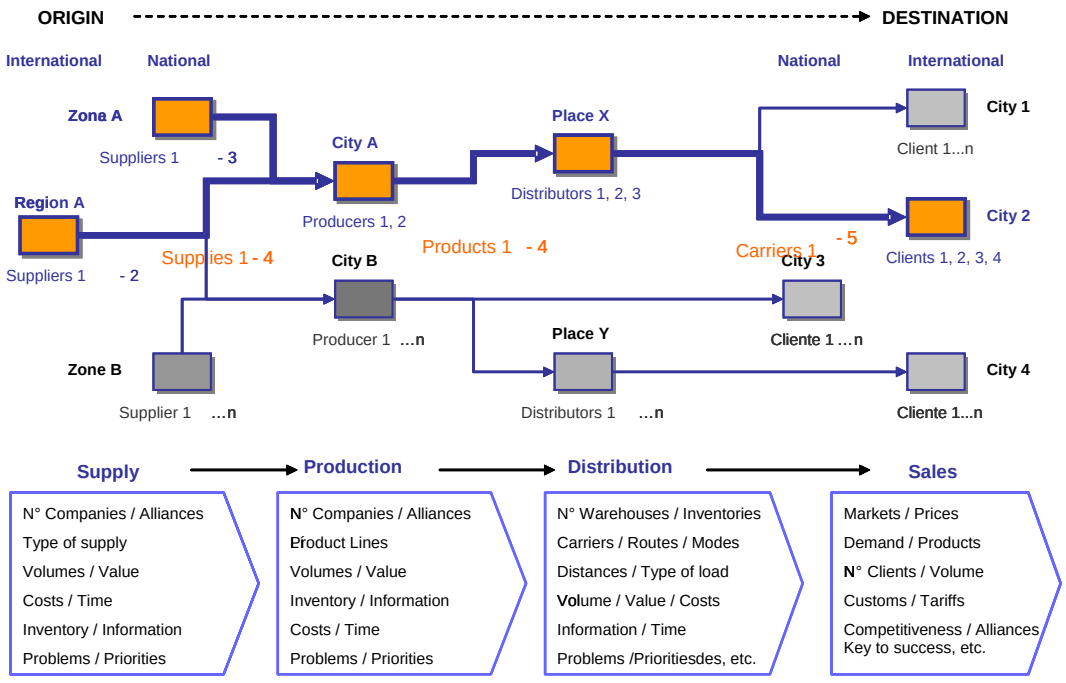
General structure of a productive/logistics chain or network



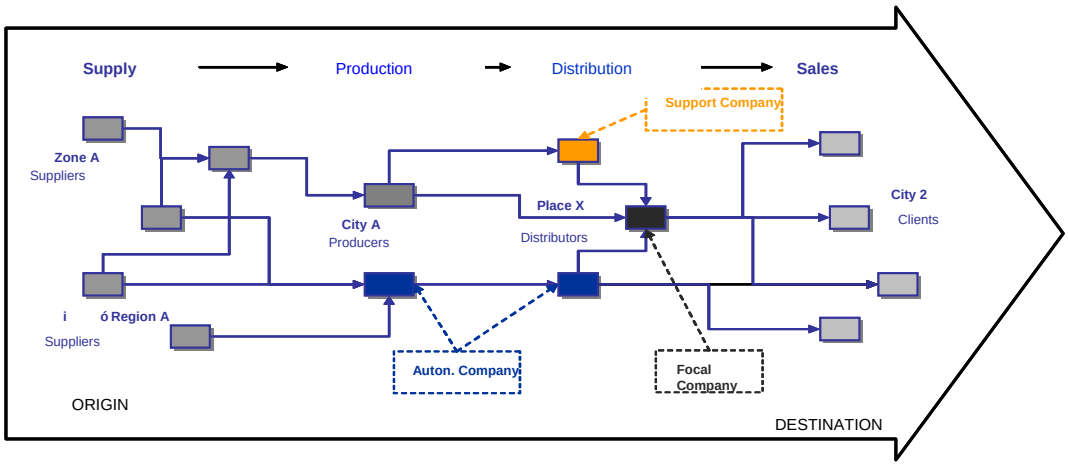
Task 4. Identification of the structural dimensions of the network
The **horizontal structure** refers to the number of levels that exist along the chain, from its origin to the final consumption market, i.e. all the phases with members that perform similar activities: suppliers, producers, distributors, purchasers, consumers. Said structure can be long or short.
The **vertical structure** refers to the number of members in each phase or

level; i.e. the number of suppliers or the number of purchasers. Consequently, the chains can result with typologies and configurations very different, some of them with a very complex structure of multiple stages and agents, and others much simpler.

Finally, **the last structural dimension is the position of the focal firm along the chain:** production, distribution, wholesale, etc. For the analysis of logistics chains, it is **important to identify the structure points where the productive process is fractioned or decentralized into various agents**, or where there exists potential for that. An example is the case of the cooperatives of agro-industrial products, where each agent packages but the labeling and packing is performed by a third agent that serves various producers. This will make it possible to identify concrete projects or incentives to be promoted and with potential for the ***SLVAs***.



The structured chain would be as follows:

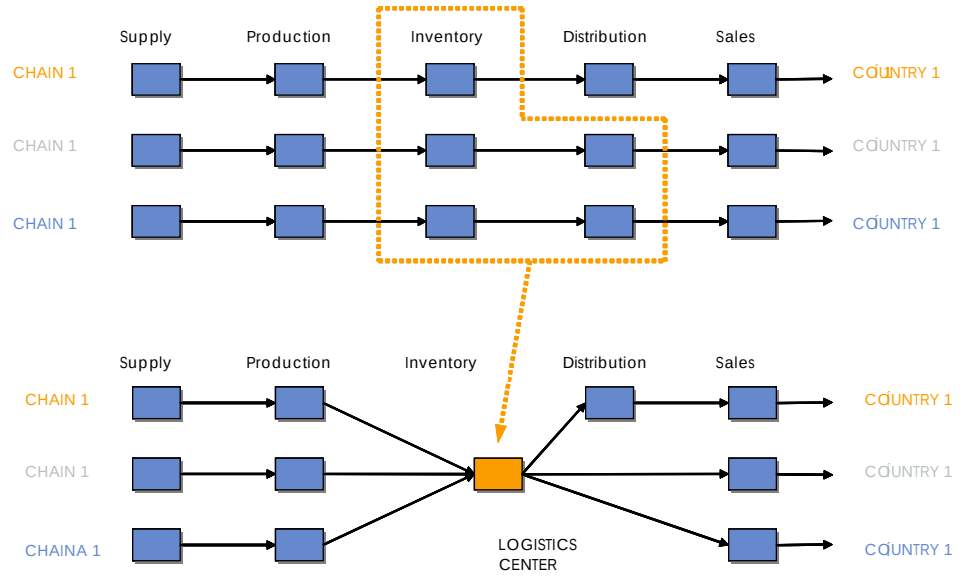


Task 5. Identification of the process bonds (emphasis on Application B, Logistics Chains)

Three different process bonds are considered along the logistics chain: a) the bonds **under direct management of the focal firm**, b) the bonds under **monitoring of the focal firm,** and c) the bonds **non-managed by the focal firm**. In each of them, the relationships among the members are subject to different formats.

It is possible that many of the identified chains have **characteristics, activities, and processes relatively complementary** (same market of regional destination, similar product lines, same means of transportation, geographical proximity among their members, analogy of services hired, similar consumed resources, equality of formalities and documents, affinity of information used, etc), **which determines the potential for sharing resources, centralizing activities, sharing information, and synchronizing operations.** This can be achieved by creating polyvalent logistics centers and of shared use, as it is illustrated in the following figure:

Logistics complementary nature and possible centralization



In the analysis, there can be found **differences in the market requirements that are not so evident**: size of the deliveries, service times, unique products or with differentiated formats, quality, price sensitivity. This can cause disarrangements between a chain strategy and its market, which deserves an **adaptation of the logistics chain**.

Methodological note: The analysis of the characteristics that show the bonds is more appropriate for B scope due to its eminently operational approach. However, if the interviews would evidence related elements of importance along a productive chain and that could seriously affect its ***IPr*** potential, it would be recommended to apply the approach to scope A.

*Task 6. Confirmation of hypotheses about the productive web dynamics (**IPr**)*

This task only applies in the case of the ***IPr*** and for those users that wish to obtain quantitative results from the hypotheses formulated regarding changes in the productive dynamics. As it was previously indicated, the productive integration can take place as a consequence of an increase in

the production scale (Hypothesis 1), an increase is the scale plus a productivity increase (Hypothesis 2), a greater scale and productivity but, besides, an upstream integration (Hypothesis 3), downstream integration (Hypothesis 4) or both (Hypothesis 5).

If the user, apart from the qualitative confirmation that shall derive from the interviews, wishes to quantify the results will have to refer to Tool IV.1, “Guide for the confirmation of hypotheses about possible changes in the dynamics of the productive web”.

Phase IV.2. Identification of problems and opportunities, summary and mapping of solutions

Once the proposals and solutions taken from the interviews have been summarized, and the structure of the chain or net is known, in this phase, the purpose is to refine the results in order to concentrate the posterior steps on topics and proposals that are relevant for the totality of participants.

For that purpose, the problems and solutions will be filtered and represented in tabular and graphic tools (a map or territorial graphic, as well as valuation graphics), in order to make it easier to perceive their importance, their relation with the projects of the ***GP*** and with the structure of the chain or net. The diversity of answers obtained will deserve an ordering and possibly a regrouping of the problems and proposals, for which the following is proposed:

Graphics and tables to be prepared for the summary of problems and solutions

Type	Description	Reference
Territorial localization of problems and solutions	Map to be prepared with a convenient scale map or territorial graphic. The reference to the GP must be included The map will have to be ideally complemented with an illustrative graphic of the structure of the chain or the net prepared by Phase IV.1	Not applicable. The user will define it as per its convenience.

Summary table of problems and solutions	Problems: Summary table of problems found and their valuation (1 to 5 according to the scale proposed in the interviews guide) Proposals: Summary table of proposals made by those interviewed, and their valuation (1 to 5 according to the scale proposed in the interviews guide). In the case of the application of "Logistics Chains", it must be included the perceived importance and the current maturity, as it constitutes the base for the determination of the execution areas. **Note:** Those problems and proposals that in average have obtained a value equal to or lower than 2 will be discarded.	See Tool IV.2 for detailed instructions
Problem and solution valuation graphic	The tabular results are better analyzed when they are graphically represented. Tool IV.2 presents different methods	

List of documents complementary to the step:

Tool IV.1 Guide for the confirmation of hypotheses about possible changes in the productive web dynamics
Tool IV.2 Guide for summarizing problems and solutions (valuation tables and graphics)

Products of this step

- Structure of the net and/or chain (productive and/or logistics)
- Confirmation of hypothesis about changes in the productive dynamics
- Identification of problems and opportunities for productive investment (maps, tables, graphics)
- Summary of critical factors (graphic)

Step V: Evaluation and Recommendations

I	II	III	IV	V	VI
Scope of the application	Description	Selection of the approach	Mapping of the situation	Evaluation and Recommendations	Execution program

Purposes of this step:
In this step, the purpose is to perform an integral evaluation of problems and solutions, as well as developing the recommendations and measures that will make it possible to promote the development of the influence area of the ***GP***.

Phases contemplated:
The development of the proposal constitutes the main product of the application of the methodology. It consists of **two phases**, namely: **V.1. Evaluation of impacts and/or contribution of the project and solutions to the development of the influence area**, and **V.2 Detailed proposal: projects and actions.**

This step of the methodology is common for both scopes A and B (***IPr***, ***SLVAs***)

Phase V.1. Evaluation of impacts and/or contribution of the project and solutions to the development of the influence area

This phase seeks to evaluate, according to each of the scopes of the evaluation:

- Scope A – Contribution of the project to the ***IPr***, the benefits and impacts of a project of the ***GP*** with the development of the productive area, as well as the relative importance of other factors
- Scope B – Identification of the complementary ***SLVAs***, the relative contribution of an action or project with the adding of value to a logistics chain

The products obtained in each of the scopes and that are susceptible to evaluation are variable, namely:

Aspects susceptible to evaluation

Scopes	Aspects to be evaluated
A- Identification of potential of contribution to the ***IPr***	• Factors that limit the productive development • Potential of the ***GP*** for contributing to the ***IPr*** of the influence area • Actions complementary to the ***GPs*** to be carried out for optimizing the results
B- Identification of potential of contribution to the development of the ***SLVAs***	• Factors that limit the logistics performance • Relative contribution of the ***GP*** with the solution of logistics problems found • Projects and actions of logistics nature and complementary to the ***GPs*** within the influence area for optimizing the logistics performance in the medium and long term

Given the complexity of the topics evaluated, the methodology is flexible as regards the evaluation method. It is estimated that the most comprehensive method constitutes the multi-criteria evaluation, as it allows the performance of an integral qualitative evaluation that shall consider several dimensions of the problem and/or solutions.

Tool V.1 contains a conceptual guide for the preparation of the multi-criteria evaluation matrix. It remains to the user opinion the determination of the factors susceptible to integrate the multi-criteria method. In general, the weights of the evaluation will be extracted in a direct or indirect way from the interviews performed.

Phase V.2. Detailed proposal: projects and actions

In this phase, the user must develop the proposal with a detail consistent with the application precision level. In general, the proposals to be generated during the application of the methodology are of two types: a) actions and projects directed towards stimulating the arising of a new services or infrastructure offer, and b) actions and/or projects directed towards mitigating impacts or resolving structural problems that inhibit the productive or logistics development.

Task 1. Identification and complementation of applicable proposals

The user will have to complement the proposals identified during the interviews and possibly complement them.

In this regard, it is worth emphasizing that the **proposals** planned to be developed within the framework of the methodology are **those where the public sector has some inherence**: a) because of being traditional public investment, b) because of participating as investor in a public-private association, c) because of being public actions related to governmental competencies that must be solved in order to free restrictions, d) because of requiring the public intervention in order to generate creative solutions for structural restrictions that the private sector confronts.

Based on the aforementioned, the proposals could be the ones hereinafter indicated:

Type	Description	Complexity	Nature	Scope
Infrastructure	• Aspects to be incorporated to projects of the group	Variable (low to high)	P/Pr	N, R, L
	• New components of the ***GP***	Variable (low to high)	P/Pr	N, R, L
	• Multi-functional logistics platforms and those of support to ports, airports, border crossings	High	Mixed	N, R
	• CEBAF and integrated control in border crossings	High	P	N, R
Logistics services	• Regulatory actions that shall promote the development of logistics services (3PL, 4PL), Support	Intermediate	P	N
	• Load control	Intermediate	P	N
	• Promotion of load Bags	High	P/Pr	N, R
Technology	• Information systems along the supply-chain	High	Pr/P	N, R

	• Support programs to research and development, innovation	Intermediate	P/Pr	N, R
	• Regulation of incentive for the development of NTICV (New information and vehicular communication technologies)	Intermediate	P/Pr	N

Type	Description	Complexity	Nature	Scope
Making commerce and transportation easier	• Simplification of formalities	Intermediate	P	N, R
	• Actions for eliminating technical and commercial barriers	High	P	N
	• Unique window, CCS	High	P	N, R
	• Regulatory and procedural harmonization in border crossings, ports, airports	High	P	N, R
	• Adaptation of the multi-modality regulation	Intermediate	P	N
	• Inter-modality incentive actions	Intermediate	P	N
	• Adaptation to international safety standards (SAFE, CSI, CT-PAT, 24h rule, PBIP, others)	Intermediate/High	P	N
Financing	• Access to credit for small producers	High	P	N, R
	• Access to credit for small service operators	High	P/Pr	N, R

	• Actions for freeing restrictions to the repatriation of capitals	Very High	P	N
Labor force	• Development of HR training programs of S, M and L term	Intermediate	P, Pr	N, R, L
	• Adaptation of labor regulation	Very High	P, Pr	N, R
	• Incentives for the recruitment of qualif. HR	High	P	N
Marketing and productive development	• Quality certification	Intermediate	P	N
	• Adaptation of policies and regulations	Very High	P, Pr	N
	• Fiscal incentives	Very High	P	N
	• Pymes marketing mechanisms	Intermediate	P, Pr	N, R, L
	• Regularization of land possession	High	P	R, L

Nature: P- Public Pr- Private **Scope**: N- National R- Regional L- Local

The user of the methodology will have to determine, according to the institutional organization of its corresponding country, what actions and proposals can be directly implemented by the body that performs the evaluation, and which will remain as recommendations subject to monitoring by the promoting body of the infrastructure ***GPs***.

Task 2. Summary and proposals data sheets
The user will have to prepare a summary of the proposals according to the format presented in Tool V.1, and it will generate project data sheets (see format in Tool V.2)

List of documents complementary to the step:

- Tool V.1 Guide for the analysis of the contribution/impact of problems and solutions
- Tool V.2 Guide for the preparation of proposal summaries
- Tool V.3 Guide for the preparation of proposal data sheets

Products of this step

- Multi-criteria evaluation of problems and solutions
- Detailed proposals (summaries and data sheets)

Step VI: Preparation of the Execution Program

I	II	III	IV	V	VI
Scope of the application	Description	Selection of the approach	Mapping of the situation	Evaluation and Recommendations	**Execution program**

Purposes of this step:
Here it is sought to order in a coherent way and according to priorities, the set of actions and projects selected in the previous step, as well as to define responsibilities, costs, terms, and chaining of actions for their implementation, and to generate an execution program.

Contemplated activities:

Task 1. Definition of Criteria for Setting Priorities among Projects
From the information resulting from Steps 2, 3, 4 and 5 (Description, Methodological Approach and Site work, Analysis of Situation, and Proposals), the user will have to establish the set of criteria that will have to be used for setting priorities among projects and actions identified in Step 5. Said criteria will have to allow the setting of a strategic schedule for investment and development within the influence area of the GP.

To begin with, it is suggested that, as long as possible, the user uses a Cost/Benefit approach (general) as basic criterion for the designation of priorities to the projects:

- *Total Cost of the Project*, measured in terms of the current value of the investment, operation, and maintenance costs of the project estimated in the previous phase.
- *Benefit*, measured in terms of impacts (direct or indirect ones) that are expected the project will have in the development of the productive structure, the economic growth (GDP), the employment and/or commercial interchange within the region in the short, medium and long term, or otherwise, qualitative indicators taken from the analysis performed in steps IV and V.

Methodological note: The proposed approach does not intend to substitute a detailed Cost/Benefit analysis of the projects whenever it is required. The user will judge the convenience of deepening the analysis according to the *life cycle of the project* at issue and the costs, and therefore, the level of risk, implicated in its investment and operation.

For a more complete analysis, **the user will be able to select additional criteria** (see Tool VI.1). Some of the criteria could be the following:

- Phase of the life cycle that the project is undergoing
- Estimated time of performance of the project
- Estimated time for the obtaining of the expected benefits
- Level of project compliance with the development strategies in the region
- Dependence relations or bonds among projects
- Existence of projects or substitute solutions (short, medium, or long term)
- Probability of success of the project, measured in terms of:
    - Level of certainty of the assumptions about market, economic growth, and commercial development formulated during the proposal preparation phase
    - Probable competitive answer of other markets (at regional, national, or global level)
- Technical or organizational risk or feasibility, measured in terms of:
    - Complexity of the project
    - Availability of the required resources, such as technological, organizational (human resources), and infrastructure base.

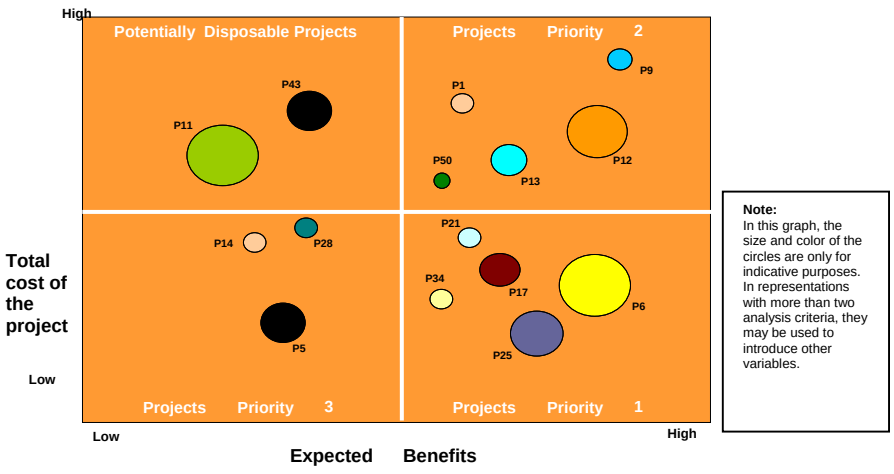
Task 2. Definition of relative importance of criteria and setting of priorities among projects

In this step, the user will have to decide the weighing or importance to be assigned to the criteria for setting priorities among projects. Once this is done, the user will also have to review the project portfolio and determine the priorities for its execution.

In those cases where only basic criteria are chosen (expected Cost and Benefit), it is suggested to assign equal importance to each of them and make graphics with the information of each project in a Cost/Benefit matrix (see graphic). This will make it possible to have a general perspective of the solutions and to set the following priorities:

- Priority 1: Projects with high impact and relatively low cost of investment and operation
- Priority 2: Projects with high impact and intermediate to high investment and operation cost
- Priority 3: Projects with low cost and low to intermediate impact

Graphic ----. Analysis of the Project Portfolio



In case of incorporating additional criteria to the setting of priorities, a Multi-criteria Matrix must be used (see Tool V.1) in order to generate a prioritized list of actions.

Task 3. Preparation of execution program
Once the priorities for the project execution are defined, a work schedule will have to be created that shall establish: terms for the proposed solutions, people responsible for the project, as well as monitoring and impact indicators.

List of documents complementary to the step:

Tool VI.1 Tentative criteria for Setting Priorities among Projects

Products of this step

- Execution Program