



THE
GOVERNMENT OF THE
TURKS & CAICOS ISLANDS

TCIA

TURKS AND CAICOS ISLANDS
AIRPORTS AUTHORITY

**INTERMEDIATE INFRASTRUCTURE BUSINESS CASE FOR THE
REDEVELOPMENT OF THE HOWARD HAMILTON INTERNATIONAL
AIRPORT**

ANNEX 3: RISK ASSESSMENT



THE
GOVERNMENT OF THE
TURKS & CAICOS ISLANDS

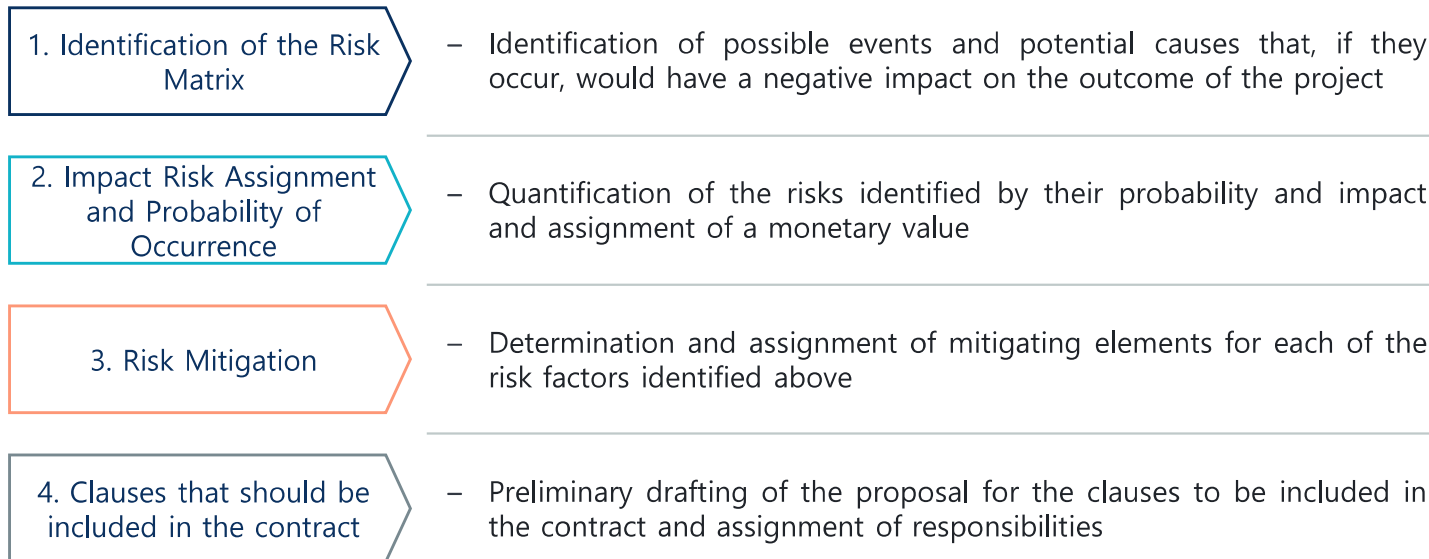
**PROVIDENCIALES INT'L AIRPORT (PLS)
REDEVELOPMENT PROJECT
TECHNICAL, FINANCIAL AND LEGAL CONSULTANT**

Risk Assessment
29th August 2022

The Risk Analysis will allow the economic assessment of each identified risk and will serve as the basis for calculating the Value for Money (VfM)

Introduction to Risk Analysis

- The deviations, both in terms of costs and income, that projects suffer throughout their life cycle are due to the presence of **Risk Factors**, which have some chances of occurring and which, if they occur, will produce a impact for a certain amount
- The objective of **Risk Analysis** for the PPP is the identification and evaluation of potential risks that could affect the normal development of the project, as well as the proposal of mitigation measures and clauses to be included in the contract.
- For this process, the following steps have been carried out:



Definition of the Risk Matrix

- The information obtained from the different stages is translated into a general matrix format
- It incorporates a categorization of the different risk factors and their causes, their probability of occurrence and potential impact, classification (retained, transferred or shared) and pre-identified mitigating elements are indicated.
- This matrix constitutes one of the reference elements for the calculation of Value for Money through the Public Sector Comparator





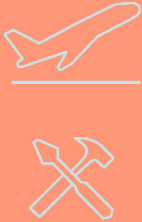



- To carry out the previous steps, a selected group of experts has been used, integrated into the consulting team assembled by ALG
- This team is made up of **investment experts, airport experts worldwide, PPP technical experts and PPP financial experts** with previous experience in airport PPP structuring projects worldwide, in Central America and in the Caribbean.
- In this phase of the project, processes 3 and 4 have been developed in a preliminary manner and will be developed in detail in the future Structuring Phase, based on the inputs received from the Legal Team.

The first step of the analysis consists of identifying, defining and agreeing on the possible risks that may affect the project in each of its phases

Risk Identification

1

- The main risks identified are **categorized according to the phase of the project in which they may appear and their possible consequences**. Eight main categories have been established that encompass over 70 pre-identified risks:

 <p>1. Design</p>	<p>1.1 Design Defects</p> <p>1.2 Delay in the completion of the design</p> <p>1.3 Increase in design costs</p>	 <p>4. Commercial & Income</p>	<p>4.1 Insufficient Tariffs long-term</p> <p>4.2 Changes in demand</p> <p>4.3 Changes in the offer and/or in the quality of the service</p> <p>4.4 Counterpart</p> <p>4.5 Exchange</p>
 <p>2. Construction</p>	<p>2.1 Increase in construction costs</p> <p>2.2. Delays in construction</p> <p>2.3 Non-compliance with the technical specifications of the construction</p> <p>2.4 Risk of non-compliance with the works</p>	 <p>5. Financials</p>	<p>5.1 Failure to obtain financing</p> <p>5.2 Debt: Deterioration in the financial conditions (terms and rates) between the signing of the contract and the financial closing</p>
 <p>3. Operation and Maintenance</p>	<p>3.1 Increase in operating costs</p> <p>3.2 Increase in maintenance cost</p> <p>3.3 Risks of non-compliance with service levels</p> <p>3.4 Risk associated with the condition of the asset</p> <p>3.5 Risks associated with Civil Liability</p>	 <p>6. Force Majeure</p>	<p>6.1 Force Majeure</p>
		 <p>7. Environmental & Social</p>	<p>7.1 Environmental impact studies</p> <p>7.2 Environmental incidents</p> <p>7.3 Environmental / Social Incidents</p> <p>7.4 Environmental costs</p> <p>7.5 Environmental regulatory framework</p>
		 <p>8. Early termination of the contract</p>	<p>8.1 By the Grantor</p> <p>8.2 By the Concessionaire</p>

Source: ALG analysis

The assignment of the Impact Risk represents the consequences that a risk would entail in the event of its manifestation, including its severity...

Impact Risk Assignment and Probability of Occurrence

2

- Once the main risks have been identified, the objective is to **quantify the selected risks** through their Impact Risk and Probability of Occurrence.
- Since a Risk Workshop has not been held, the definition of the Risk Matrix, as well as the quantitative evaluation of Impact Risk and Probability of Occurrence, is **based on the evaluation and criteria of the group of experts**.
- Based on the criteria and experience of the experts, a quantitative evaluation was carried out consisting of the quantification from 1 to 5 of the impact of each one of the risks in the PPP and the probability of occurrence of each one.
- The **assessment** of the group of experts on each one of the risks is based on the information available for the current stage of the project and is based on reference values obtained in its previous experience and benchmark of processes in similar airports in Central America and the Caribbean under the PPP model.
- The criteria used to assign impacts and probabilities are shown below:

Impact Risk	Impact	Criteria	Expert Assessment	Impact
Critical (C)	Greater than or equal to 20%	Any impact that could lead to the cancellation of the project	1	30%
Severe (S)	Less than 20%	Any impact that jeopardizes the objective of the project or that may lead to a significant impact in the long term	2	15%
Moderate (Mo)	Less than 10%	Any impact that would cause a significant change in planning or could lead to a noticeable and unwelcome effect on the project	3	7.5%
Minimum (Mi)	Less than 5%	Any impact that could be dealt with within the project team and would not have any long-term effect	4	5%
Negligible (D)	Less than 1%	Any impact that insignificantly affects or does not produce a significant adverse effect on the life cycle of the project	5	1%

... while the Probability of Occurrence represents the real chances that this risk will manifest itself throughout the life cycle of the project

Impact Risk Assignment and Probability of Occurrence

2

Probability of occurrence	Probability	Description	Expert Assessment	Probability
Very High	100% -91%	The risk is very likely to occur during the project life cycle	1	95%
High	90% - 61%	The risk is likely to occur during the project life cycle	2	75%
Moderate	60%-41%	The risk may or may not occur during the project life cycle	3	50%
Low	40%-11%	The risk is very unlikely to occur during the project life cycle	4	25%
Very Low	10%-0%	The risk is unlikely to occur during the project life cycle	5	5%

- The combination of both parameters (Impact Risk and Probability of Occurrence) in table format, allows visualizing what type of risks can be classified globally as High (H), Medium (M) and Low (L).

Probability of occurrence		Impact Risk				
		Critical (C)	Severe (S)	Moderate (Mo)	Minimum (Mi)	Negligible (D)
		≥ 20%	20% -10%	10% - 5%	5% - 1%	< 1%
Very High	100% -91%	H	H	H	H	M
High	90% - 61%	H	H	M	M	M
Moderate	60%-41%	H	M	M	M	L
Low	40%-11%	H	M	M	L	L
Very Low	10%-0%	M	M	L	L	L

The Risk Matrix presents the Intensity assigned to each of the identified risks and will be used in the Public Sector Comparator

Risk Matrix

- For the final construction of the Matrix, each of the risks is assigned a percentage that represents who assumes it, depending on whether it is the State 100% (Retained), the private entity 100% (Transferred) or is shared 50% by the State and the private operator
- The **Risk Intensity** (its quantification over the reference value) is obtained by multiplying the Impact by the Probability of Occurrence

RISK MATRIX OF CONTRACTS IN THE FRAMEWORK OF PRIVATE INITIATIVE PROMOTION PROCESSES										
Type of register	What is the risk?	How does the risk arise?	Risk Allocation			Impact Risk (1-5)	Probability of Occurrence (1-5)	Impact	Probability of Occurrence	Intensity / Expected Loss
			State	Private	Does not apply					
1. Design	1.1 Design Defects	1.1.1 Flaws in the technical specifications required by the Government	100%			5	5	1.0%	5.0%	0.05%
		1.1.2 Flaws in the design offered by the private		100%		4	4	5.0%	25.0%	1.25%
		1.1.3 Wrong supervision and Project control	50%	50%		4	4	5.0%	25.0%	1.25%
	1.2 Delay in the completion of the design	1.2.1 Modifications to the approved Project	50%	50%		3	3	7.5%	50.0%	3.75%
		1.2.2 Variations in security specifications		100%		4	3	5.0%	50.0%	2.50%
		1.2.3 Delay in the approval of the Project	100%			4	3	5.0%	50.0%	2.50%

Source: ALG analysis

The Risk Matrix presents the Intensity assigned to each of the identified risks and will be used in the Public Sector Comparator

RISK MATRIX OF CONTRACTS IN THE FRAMEWORK OF PRIVATE INITIATIVE PROMOTION PROCESSES										
Type of register	What is the risk?	How does the risk arise?	Risk Allocation			Impact Risk (1-5)	Probability of Occurrence (1-5)	Impact	Probability of Occurrence	Intensity / Expected Loss
			State	Private	Does not apply					
1. Design	1.3 Increase in design costs	1.3.1 Increase in the costs of elaboration of the Project		100%		4	3	5.0%	50.0%	2.50%
2. Construction	2.1 Increase in construction costs	2.1.1 Variation in investment costs due to a greater number of works not foreseen by the Private		100%		4	4	5.0%	25.0%	1.25%
		2.1.2 Increase in investment costs due to higher prices of supplies and equipment		100%		4	3	5.0%	50.0%	2.50%
		2.1.3 Changes in the General Legal Framework that affect the construction process		100%		4	3	5.0%	50.0%	2.50%

Source: ALG analysis

The Risk Matrix presents the Intensity assigned to each of the identified risks and will be used in the Public Sector Comparator

RISK MATRIX OF CONTRACTS IN THE FRAMEWORK OF PRIVATE INITIATIVE PROMOTION PROCESSES										
Type of register	What is the risk?	How does the risk arise?	Risk Allocation			Impact Risk (1-5)	Probability of Occurrence (1-5)	Impact	Probability of Occurrence	Intensity / Expected Loss
			State	Private	Does not apply					
2. Construction	2.1 Increase in construction costs	2.1.4 Specific Government Action Affecting the Concession	100%			2	5	15%	5%	0.75%
		2.1.5 Geological Events (force maj.)	100%			2	5	15%	5%	0.75%
		2.1.6 Errors and defects in construction		100%		2	4	15%	25%	3.75%
		2.1.7 Hidden defects that are generated before delivery		100%		2	4	15%	25%	3.75%
		2.1.8 Damages		100%		2	4	15%	25%	3.75%
		2.1.9 Adverse changes in the exchange rate		100%		2	4	15%	25%	3.75%

The Risk Matrix presents the Intensity assigned to each of the identified risks and will be used in the Public Sector Comparator

RISK MATRIX OF CONTRACTS IN THE FRAMEWORK OF PRIVATE INITIATIVE PROMOTION PROCESSES										
Type of register	What is the risk?	How does the risk arise?	Risk Allocation			Impact Risk (1-5)	Probability of Occurrence (1-5)	Impact	Probability of Occurrence	Intensity / Expected Loss
			State	Private	Does not apply					
2. Construction	2.2.Delays in construction	2.2.1 Lack of licenses, permits and authorizations that delay the start of the work	50%	50%		4	3	5%	50%	2.50%
		2.2.2 Environmental: Lack of licenses, permits and authorizations		100%		4	3	5%	50%	2.50%
		2.2.3 Archaeological remains. Delay in necessary Certifications	100%			3	5	8%	5%	0.38%
		2.2.4 Construction takes longer than anticipated by the Private		100%		3	4	8%	25%	1.88%

The Risk Matrix presents the Intensity assigned to each of the identified risks and will be used in the Public Sector Comparator

RISK MATRIX OF CONTRACTS IN THE FRAMEWORK OF PRIVATE INITIATIVE PROMOTION PROCESSES										
Type of register	What is the risk?	How does the risk arise?	Risk Allocation			Impact Risk (1-5)	Probability of Occurrence (1-5)	Impact	Probability of Occurrence	Intensity / Expected Loss
			State	Private	Does not apply					
2. Construction	2.2.Delays in construction	2.2.5 Deficiency in the supply of materials and equipment		100%		5	4	1%	25%	0.25%
		2.2.6 Work accidents		100%		4	4	5%	25%	1.25%
		2.2.7 Delay in approval of works	50%	50%		3	3	8%	50%	3.75%
		2.2.8 Delay in land expropriations*	100%			4	2	5%	75%	3.75%
		2.2.9 Delay in the constitution of Obstacle Limitation Surfaces	100%			2	4	15%	25%	3.75%

*Pending information to monetize risks associated to land expropriations, not included in the risk assessment matrix and VfM calculation

The Risk Matrix presents the Intensity assigned to each of the identified risks and will be used in the Public Sector Comparator

RISK MATRIX OF CONTRACTS IN THE FRAMEWORK OF PRIVATE INITIATIVE PROMOTION PROCESSES										
Type of register	What is the risk?	How does the risk arise?	Risk Allocation			Impact Risk (1-5)	Probability of Occurrence (1-5)	Impact	Probability of Occurrence	Intensity / Expected Loss
			State	Private	Does not apply					
2. Construction	2.3 Non-compliance with the technical specifications of the construction	2.3.1 Errors in the supervision and control of works	100%			4	3	5%	50%	2.50%
		2.3.2 Defects in the execution of the work		100%		4	4	5%	25%	1.25%
		2.3.3 Modifications to the design requested by the Government	100%			3	4	8%	25%	1.88%
		2.3.4 Modifications to the design requested by the Private		100%		4	3	5%	50%	2.50%
		2.3.5 Request for additional works by the Government	100%			3	4	8%	25%	1.88%
		2.3.6 Request for additional works by the Private		100%		4	3	5%	50%	2.50%

Source: ALG analysis

The Risk Matrix presents the Intensity assigned to each of the identified risks and will be used in the Public Sector Comparator

RISK MATRIX OF CONTRACTS IN THE FRAMEWORK OF PRIVATE INITIATIVE PROMOTION PROCESSES										
Type of register	What is the risk?	How does the risk arise?	Risk Allocation			Impact Risk (1-5)	Probability of Occurrence (1-5)	Impact	Probability of Occurrence	Intensity / Expected Loss
			State	Private	Does not apply					
2. Construction	2.4 Risk of non-compliance with the works	2.4.1 Concessionaire abandons the project		100%		1	5	30%	5%	1.50%
		2.4.2 Dealer falls into insolvency		100%		1	5	30%	5%	1.50%
		2.4.3 Infrastructure does not meet the requirements to start the operation		100%		2	5	15%	5%	0.75%
		2.4.4 For reasons attributable to the Concessionaire		100%		4	4	5%	25%	1.25%
		2.4.5 For reasons attributable to the Grantor	100%			4	4	5%	25%	1.25%

The Risk Matrix presents the Intensity assigned to each of the identified risks and will be used in the Public Sector Comparator

RISK MATRIX OF CONTRACTS IN THE FRAMEWORK OF PRIVATE INITIATIVE PROMOTION PROCESSES										
Type of register	What is the risk?	How does the risk arise?	Risk Allocation			Impact Risk (1-5)	Probability of Occurrence (1-5)	Impact	Probability of Occurrence	Intensity / Expected Loss
			State	Private	Does not apply					
3. Operation & Maintenance	3.1 Increase in operating costs	3.1.1 Changes caused by initiative of the Private		100%		4	4	5%	25%	1.25%
		3.1.2 Inefficiencies in operation caused by design		100%		3	4	8%	25%	1.88%
		3.1.3 Increase in the prices of supplies and equipment		100%		3	3	8%	50%	3.75%
		3.1.4 Increase in insurance premiums		100%		3	3	8%	50%	3.75%
		3.1.5 Increased costs due to operating problems		100%		3	3	8%	50%	3.75%
		3.1.6 Costs rise due to changes in applicable laws	50%	50%		3	4	8%	25%	1.88%

The Risk Matrix presents the Intensity assigned to each of the identified risks and will be used in the Public Sector Comparator

RISK MATRIX OF CONTRACTS IN THE FRAMEWORK OF PRIVATE INITIATIVE PROMOTION PROCESSES										
Type of register	What is the risk?	How does the risk arise?	Risk Allocation			Impact Risk (1-5)	Probability of Occurrence (1-5)	Impact	Probability of Occurrence	Intensity / Expected Loss
			State	Private	Does not apply					
3. Operation & Maintenance	3.2 Increase in maintenance cost	3.2.1 Maintenance over the life of the asset costs more than budgeted		100%		3	4	8%	25%	1.88%
	3.3 Risks of non-compliance with service levels	3.3.1 Failures in the availability of the public service attributable to the Concessionaire		100%		4	4	5%	25%	1.25%
		3.3.2 Failures in the availability of the public service attributable to the Grantor	100%			4	4	5%	25%	1.25%
		3.3.3 Grantor changes service levels	100%			4	4	5%	25%	1.25%
		3.3.4 Changes in service level requirements	100%			4	4	5%	25%	1.25%

The Risk Matrix presents the Intensity assigned to each of the identified risks and will be used in the Public Sector Comparator

RISK MATRIX OF CONTRACTS IN THE FRAMEWORK OF PRIVATE INITIATIVE PROMOTION PROCESSES										
Type of register	What is the risk?	How does the risk arise?	Risk Allocation			Impact Risk (1-5)	Probability of Occurrence (1-5)	Impact	Probability of Occurrence	Intensity / Expected Loss
			State	Private	Does not apply					
3. Operation & Maintenance	3.4 Risk associated with the condition of the asset	3.4.1 Asset Status		100%		4	4	5%	25%	1.25%
	3.5 Risks associated with Civil Liability	3.5.1 Direct, indirect and other economic damages		100%		4	4	5%	25%	1.25%

The Risk Matrix presents the Intensity assigned to each of the identified risks and will be used in the Public Sector Comparator

RISK MATRIX OF CONTRACTS IN THE FRAMEWORK OF PRIVATE INITIATIVE PROMOTION PROCESSES										
Type of register	What is the risk?	How does the risk arise?	Risk Allocation			Impact Risk (1-5)	Probability of Occurrence (1-5)	Impact	Probability of Occurrence	Intensity / Expected Loss
			State	Private	Does not apply					
4. Commercial / Income	4.1 Insufficient Tariffs long-term	4.1.1 Non-aeronautical revenues		100%		2	4	15%	25%	3.75%
		4.1.2 Aeronautical revenues	100%			2	4	15%	25%	3.75%
		4.1.3 Collection risk: Payment evasion by users		100%		2	4	15%	25%	3.75%
		4.1.4 Refusal to collect fees		100%		2	4	15%	25%	3.75%

The Risk Matrix presents the Intensity assigned to each of the identified risks and will be used in the Public Sector Comparator

RISK MATRIX OF CONTRACTS IN THE FRAMEWORK OF PRIVATE INITIATIVE PROMOTION PROCESSES											
Type of register	What is the risk?	How does the risk arise?	Risk Allocation			Impact Risk (1-5)	Probability of Occurrence (1-5)	Impact	Probability of Occurrence	Intensity / Expected Loss	
			State	Private	Does not apply						
4. Commercial / Income	4.2 Changes in demand	4.2.1 Reduction in quantity demanded		100%		2	4	15%	25%	3.75%	
		4.2.2 Reduction in the quantity demanded due to competition generated by another state initiative	100%			1	5	30%	5%	1.50%	
	4.3 Changes in the offer and/or in the quality of the service	4.3.1 Breach of service levels by the Private			100%		4	4	5%	25%	1.25%
		4.3.2 Reduction in interested concessionaires			100%		4	2	5%	75%	3.75%
		4.3.3 Outdated or poor technology			100%		3	4	8%	25%	1.88%

The Risk Matrix presents the Intensity assigned to each of the identified risks and will be used in the Public Sector Comparator

RISK MATRIX OF CONTRACTS IN THE FRAMEWORK OF PRIVATE INITIATIVE PROMOTION PROCESSES										
Type of register	What is the risk?	How does the risk arise?	Risk Allocation			Impact Risk (1-5)	Probability of Occurrence (1-5)	Impact	Probability of Occurrence	Intensity / Expected Loss
			State	Private	Does not apply					
4. Commercial / Income	4.4 Counterpart	4.4.1 Grantor is not authorized to sign a contract or exceeds its powers of decision			X					-
		4.4.2 New government representative tries to annul contract	100%			1	4	30%	25%	7.50%
		4.4.3 Concessionaire is found guilty of corrupt practices		100%		1	5	30%	5%	1.50%
		4.4.4 Impairment of shareholder credit exposure		100%		4	3	5%	50%	2.50%
	4.5 Exchange	4.5.1 Currency devaluation, currency fluctuations		100%		3	3	8%	50%	3.75%
		4.5.2 Restrictions on convertibility or transfer	50%	50%		4	3	5%	50%	2.50%

Source: ALG analysis

The Risk Matrix presents the Intensity assigned to each of the identified risks and will be used in the Public Sector Comparator

RISK MATRIX OF CONTRACTS IN THE FRAMEWORK OF PRIVATE INITIATIVE PROMOTION PROCESSES										
Type of register	What is the risk?	How does the risk arise?	Risk Allocation			Impact Risk (1-5)	Probability of Occurrence (1-5)	Impact	Probability of Occurrence	Intensity / Expected Loss
			State	Private	Does not apply					
5. Financial	5.1 Failure to obtain financing	5.1.1 Difficulty of the Private to meet the requirements requested by the financier		100%		2	4	15%	25%	3.75%
	5.2 Debt: Deterioration in the financial conditions (terms and rates) between the signing of the contract and the financial closing	5.2.1 Difficulty of the Private to meet the requirements requested by the financier		100%		2	4	15%	25%	3.75%
		5.2.2 Exchange rate variation			100%		3	2	8%	75%
6. Force Majeure	6.1 Force Majeure	6.1.1 Natural: earthquake, floods, frost, etc...	100%			3	4	8%	25%	1.88%
		6.1.2 Labor disputes, strikes, unions		100%		3	4	8%	25%	1.88%
		6.1.3 Social conflicts that directly affect the project		100%		4	4	5%	25%	1.25%

Source: ALG analysis



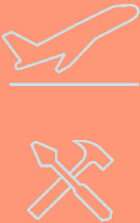
The Risk Matrix presents the Intensity assigned to each of the identified risks and will be used in the Public Sector Comparator






RISK MATRIX OF CONTRACTS IN THE FRAMEWORK OF PRIVATE INITIATIVE PROMOTION PROCESSES										
Type of register	What is the risk?	How does the risk arise?	Risk Allocation			Impact Risk (1-5)	Probability of Occurrence (1-5)	Impact	Probability of Occurrence	Intensity / Expected Loss
			State	Private	Does not apply					
7. Social / Environmental	7.1 Environmental impact studies	7.1.1 Failure to deliver technical studies		100%		4	4	5%	25%	1.25%
		7.1.2 Deficiency in the content of technical studies		100%		4	4	5%	25%	1.25%
		7.1.3 Budget increase for mitigation activities		100%		4	4	5%	25%	1.25%
	7.2 Environmental incidents	7.2.1 Pre-existing environmental liability	100%			4	4	5%	25%	1.25%
		7.2.2 Operation failure		100%		4	4	5%	25%	1.25%
		7.2.3 Find unforeseen archaeological remains	100%			4	5	5%	5%	0.25%

The Risk Matrix presents the Intensity assigned to each of the identified risks and will be used in the Public Sector Comparator

RISK MATRIX OF CONTRACTS IN THE FRAMEWORK OF PRIVATE INITIATIVE PROMOTION PROCESSES										
Type of register	What is the risk?	How does the risk arise?	Risk Allocation			Impact Risk (1-5)	Probability of Occurrence (1-5)	Impact	Probability of Occurrence	Intensity / Expected Loss
			State	Private	Does not apply					
7. Social / Environmental	7.3 Environmental / Social Incidents	7.3.1 Non-acceptance of the population of the project location			X					-
	7.4 Environmental costs	7.4.1 Major mitigation activities	50%	50%		3	4	8%	25%	1.88%
	7.5 Environmental regulatory framework	7.5.1 Non-compliance with environmental standards and the provisions of the EIA		100%		3	4	8%	25%	1.88%
8. Early termination of the contract	8.1 By the Grantor	8.1.1 The Grantor terminates the contract early	100%			1	5	30%	5%	1.50%
	8.2 By the Concessionaire	8.2.1 The Private terminates the contract early		100%		1	5	30%	5%	1.50%

The risks with greater intensity are those related to the increase in costs and delays in construction (22.8% and 20.0%, respectively)

Intensity / Expected Loss	
 1. Design	1.1 Design Defects 2.6%
	1.2 Delay in the completion of the design 8.8%
	1.3 Increase in design costs 2.5%
 2. Construction	2.1 Increase in construction costs 22.8%
	2.2. Delays in construction* 20.0%
	2.3 Non-compliance with the technical specifications of the construction 12.5%
	2.4 Risk of non-compliance with the works 6.3%
 3. Operation and Maintenance	3.1 Increase in operating costs 16.3%
	3.2 Increase in maintenance cost 1.9%
	3.3 Risks of non-compliance with service levels 5.0%
	3.4 Risk associated with the condition of the asset 1.3%
	3.5 Risks associated with Civil Liability 1.3%

Intensity / Expected Loss	
 4. Commercial & Aeronautical Revenues	4.1 Insufficient Tariffs long-term 15.0%
	4.2 Changes in demand 5.3%
	4.3 Changes in the offer and/or in the quality of the service 6.9%
	4.4 Counterpart 11.5%
	4.5 Exchange 6.3%
 5. Financials	5.1 Failure to obtain financing 3.8%
	5.2 Debt: Deterioration in the financial conditions (terms and rates) between the signing of the contract and the financial closing 9.4%
 6. Force Majeure	6.1 Force Majeure 5.0%
 7. Environmental & Social	7.1 Environmental impact studies 3.8%
	7.2 Environmental incidents 2.8%
	7.3 Environmental / Social Incidents 0.0%
	7.4 Environmental costs 1.9%
	7.5 Environmental regulatory framework 1.9%
 8. Early termination of the contract	8.1 By the Grantor 1.5%
	8.2 By the Concessionaire 1.5%

































*Pending information to monetize risks associated to land expropriations, not included in the risk assessment matrix and VfM calculation

The Risk Analysis will allow the economic assessment of each identified risk and will serve as the basis for calculating the Value for Money (VfM)

Risk Matrix – Government risks (1/2)

 Shared Risk

 Retained Risk

Type of Risk	Risks assigned to the State		Assignment
 Design	Design Defects	Flaws in the technical specifications	 
		Wrong supervision and Project control	 
	Delay in the completion of the design	Modifications to the approved Project	 
		Delay in the approval of the Project	 
 Construction	Increase in construction costs	Specific Government Action	 
		Geological Events	 
	Delays in construction	Lack of licenses, permits and authorizations	 
		Archaeological remains	 
		Delay in approval of works	 
		Delay in land expropriations	 
		Delay in the constitution of OLS	 
	Non-compliance with the technical specs	Errors in the supervision and control of works	 
		Modifications to the design requested by the Government	 
	Non-compliance with the works	Request for additional works by the Government	 
For reasons attributable to the Grantor		 	
































Source: ALG analysis

Of the identified risks, some have been assigned to the public entity (State) and others are shared between the State and the private operator

Risk Matrix – Government risks (2/2)

 Shared Risk

 Retained Risk

Type of Risk	Risks assigned to the State		Assignment
 Operation & Maintenance	Increase in operating costs	Costs rise due to changes in applicable laws	 
		Failures in the availability of the public service attributable to the Grantor	 
	Non-compliance with service levels	Grantor changes service levels	 
		Changes in service level requirements	 
 Aeronautical & non-Aeronautical Revenues	Insufficient Tariffs long-term	Aeronautical revenues	 
	Changes in demand	Reduction in the quantity demanded due to competition generated by another state initiative	 
	Counterpart	New government representative tries to annul contract	 
	Exchange	Restrictions on convertibility or transfer	 
 Force Majeure	Force Majeure	Natural: earthquake, floods, frost, etc...	 
 Environmental & Social	Environmental incidents	Pre-existing environmental liability	 
		Find unforeseen archaeological remains	 
	Environmental costs	Major mitigation activities	 
 Early termination of the contract	By the Grantor	The Grantor terminates the contract early	 

ALG

Transport & Infrastructure

Joan Rojas

jrojas@alg-global.com

www.alg-global.com

BARCELONA

Roc Boronat, 133, 9º
08018 Barcelona. Spain
T +34 934 632 312
F +34 934 632 318