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Study to assess the potential for enhanced private participation in the maritime and air transport sectors in Africa

CONTRACT N° ICA/TSP/001

Executive Summary, Final Report

May 2012

Prepared for:

The Infrastructure Consortium for Africa (ICA) hosted by The African Development Bank
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Tunisia

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ACSA	Airports Company South Africa
AERCO	Special Purpose Vehicle operating three airports in the Republic of Congo
AERIA	Aéroport International d'Abidjan, an SPV operating Abidjan Airport
AFD	Agence française de développement
AfDB	African Development Bank
AICD	Africa Infrastructure Country Diagnostic
ANS	Air Navigation Services
APMT	Global ports and terminal operator, based in the Netherlands
ASECNA	Agency for Aerial Navigation Safety in Africa and Madagascar (L'Agence pour la Sécurité de la Navigation aérienne en Afrique et à Madagascar), covering most of French-speaking West and Central Africa
BAG	Regional Economic Community: Banjul Accord Group
BOT	Build Operate Transfer
CDS	Credit default swap
CEMAC	Regional Economic Community: Central African Economic and Monetary Union
CFM	Mozambique Ports and Railways company
COMESA	Regional Economic Community: Common Market for Eastern and Southern Africa
DBOT	Design Build Operate Transfer
DUBE	Durban Airport (Trade Port)
EASA	European Aviation Safety Agency
EIB	European Investment Bank
FAA	Federal Aviation Administration of the United States of America
FAA IASA	Federal Aviation Administration (USA) International Aviation Safety Assessments
FAAN	Federal Airports Authority of Nigeria
FRAPORT	Frankfurt Airport Services Worldwide
GACL	Ghana Airports Company Limited
GDP	Gross Domestic Product
GNI	Gross National Income

ICA	Infrastructure Consortium for Africa
ICAO	International Civil Aviation Organisation
IFC	International Finance Corporation (private finance arm of the World Bank Group)
IFI	International Finance Institution
IMF	International Monetary Fund
KADCO	Kilimanjaro Airports Development Company
KLM	Royal Dutch Airlines
MIGA	The World Bank's Multilateral Investment Guarantee Agency
MMA2	Lagos Airport Domestic Airport
MOIB	The Mo Ibrahim Index of African Governance
MPDC	Maputo Port Development Company
MPDC	Maputo Port Development Company
mppa	million passengers per annum
NCAA	Nigerian Civil Aviation Authority
OAG	Official Airline Guide
PAP	Priority Action Plan within the PIDA programme
PIDA	Programme for Infrastructure Development in Africa
PPIAF	The World Bank's Public-Private Infrastructure Advisory Facility
PPP	Public Private Partnership
RSA	Republic of South Africa
SBG	Saudi BinLaden Group
SPV	Special Purpose Vehicle
TAV	Turkish Airports Operator
TEU	Twenty foot equivalent unit, a measure of volume for container traffic
WAEMU	Regional Economic Community: West African Economic and Monetary Union

Executive Summary

Introduction

1. The members of the Infrastructure Consortium for Africa (ICA), established in 2005, seek to facilitate sustainable investment in infrastructure development from both public and private sources. This study has been procured to assess the potential for enhanced private participation in the maritime and air transport sectors in Africa. It presents a long list of ports and airports projects which may be suitable for private investment and evaluates them in a way which identifies a short list of the projects most suitable for technical or financial assistance from ICA members.

2. We consider firstly the key lessons to be learned from past port and airport PPPs, before analysing the investment climate in different African countries. This is followed by a brief description of the evaluation methodology, and a summary of the projects shortlisted as suitable for intervention by ICA members.

Ports – key learning points

3. Over the last 20 years there has been a general move, in Africa and elsewhere, from public sector service ports to landlord ports in which the public sector is responsible for the overall planning of the port and the provision of common infrastructure and services, whilst private companies invest in terminals and port services such as stevedoring and towage.

4. This has substantially improved opportunities for private investment, focusing it on the most profitable areas of port operations and allowing terminal concessions to be designed and priced so that they are financially viable. Although the political risks to private investors have often been high, they have been offset by high rewards and relatively low commercial risks.

Market background

5. Most African ports are fairly small by world standards, and are located in the middle of busy cities, with high land values and significant levels of traffic congestion. This has created a need for the development of more modern port facilities at new greenfield sites.

6. High commodity prices have also increased interest in new mining opportunities, many of which are being developed by the private sector as integrated mine/rail/port projects

Past PPP projects

7. The most comprehensive private investment programme has been in Nigeria. Other countries which have hosted multiple private sector investments in ports include Algeria, Egypt, Mozambique and Djibouti.

8. Container terminals form the largest single group of past PPP projects, followed by whole port concessions and dry bulk terminals. Although multi-purpose general cargo berths have attracted local investors in Nigeria, they have not been of great interest to international investors, and remain largely in public ownership.

TABLE 1 PRIVATE PORT PROJECTS BY TYPE

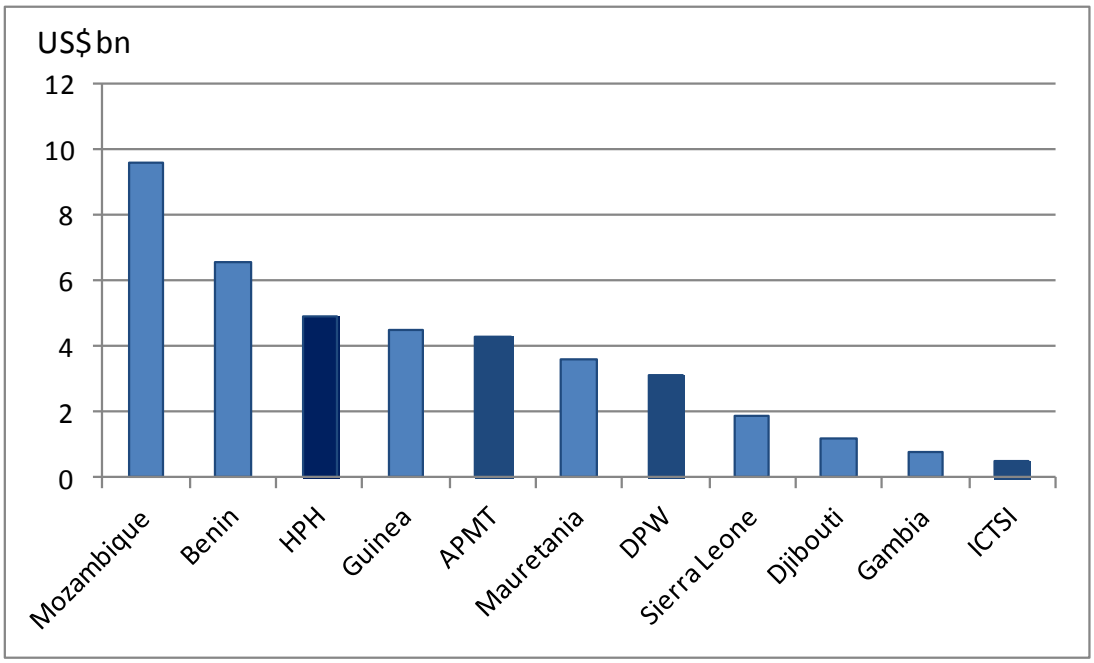
Type of concession	Nigeria	Other Africa	Total
Whole port	1	9	10
Container	3	24	27
Dry bulk	3	3	6
Liquid bulk	-	1	1
RoRo	1	-	1
Multipurpose/general cargo	6	-	6
Offshore supply	9	-	9
Total	**23**	**37**	**60**

Source: PPIAF database amended by reference to the Nigerian Ports Authority website

Characteristics of private investors

9. International container terminal operators are large and extremely profitable, and their worldwide turnovers can be larger than the GDP of host countries. Figure **1** shows the turnovers of HPH, APMT, DPW and ICTSI to be broadly comparable with the GDPs of countries in the Gambia-Guinea size range.

FIGURE 1 TERMINAL OPERATORS TURNOVER IN 2010 COMPARED WITH SELECTED COUNTRIES GDP (US$BN)



Source: Terminal operators' accounts (turnover) and World Bank database (GDP)

10. Local investors in ports are still fairly scarce in Africa, and vary considerably in their origins and approaches to investment. The continent lacks "national champions" – companies which have been successful in other sectors of the economy to whom governments are willing to entrust port development – even though these have been important participants in port PPPs in countries such as Brazil, Malaysia and South Korea.

Lessons learned from past PPP Projects

11. The lessons learned from past port PPP projects relate to:

- Project specification;
- Form of contract;
- Characteristics of private investor(s);
- Project preparation and tendering;
- The concession agreement itself;
- Post-transaction monitoring and regulation.

12. Whilst it is generally desirable for the project to be specified by the port authority of other public sector bodies, to ensure that it is successfully integrated with other aspects of economic development, lack of planning capacity within the relevant institutions means that some of the projects put before private investors are poorly or incorrectly specified, with the need for private investment identified only after port congestion has reached unacceptable levels.

13. Although competitively-tendered common user terminals represent the most efficient use of scarce resources, there are circumstances in which other approaches may be appropriate, for example the authorisation of captive user terminals linked to the investor's other business interests, or the qualified acceptance of unsolicited bids. Although these may provide additional port facilities in countries which badly need them, at no cost to the public purse, they can also open up opportunities for land speculation, corruption and the development of monopolies. Where possible they should be avoided in favour of public sector specification and procurement. Moreover, when they go ahead they should be subject to strict requirements for transparency and public scrutiny.

14. The Tanger-Med experience shows that Middle East-type "big bang" port developments on greenfield sites are possible in Africa, but only under certain circumstances. Location is a critical success factor, and the quality and dynamism of the public sector team planning the development is also very important, together with the strength of the Government's political commitment to the project and its ability to provide funding.

15. Most of the past PPP projects have involved private **concessions awarded within the framework of a public landlord port authority**, usually by competitive tendering. This has generally worked well. There are three other types of PPP arrangement which have been tried less successfully: the **management contract**, the **master concession** (in which a private company becomes the landlord port authority) and the **joint venture**.

16. Choice of the "*right*" private investor(s) is an important **success factor in PPPs**. **Five main issues** were highlighted by the case studies, relating to:

- The treatment of **captive users** in the award of terminal concessions, which needs to strike a balance between fairness and efficiency;
- The structure of **consortia**, which are relatively rare in the ports sector compared with other modes of transport. Whilst some consortia, for example at Richards Bay coal terminal, have been successful, others have failed because of differences in the interests of member firms and lack of strong leadership;

- The advantages of large investors over **small investors**. Whilst large investors have clear advantages in expensive and technically complex port operations like container terminals, there are still opportunities for small investors in facilities with lower requirements for capital and technology, such as multi-purpose berths;
- Ways of **increasing local participation**. Past arrangements have not led to significant transfers of technology or operating experience, suggesting that it may be necessary to bring in larger local companies from outside of the ports sector;
- The importance of foreign investors having experience of, or **willingness to adapt to the local culture**.

17. Small and fairly simple private sector investments can often be made in ports without the need for PPP or port reform legislation, but good project preparation is essential. This is an area where donor-funded technical assistance can add great value, ensuring that the private investor makes an acceptable financial return and the public sector an acceptable economic return from jointly-funded projects.

18. A large amount of experience has been gained in the drafting of container terminal concessions, which are now fairly standardised, but concession agreements for other types of terminal are still generally "custom-built". Four issues have proved controversial in a wide range of projects:

- Agreement of a commercially viable private investment programme;
- Selection of an appropriate concession period;
- Exclusivity arrangements;
- Tariff regulation. Here the main problems are the existence of local monopolies, the risk of "regulatory capture" and start-up tariffs which are unreasonable to begin with. As a result, port users in Africa have not benefitted greatly from reductions in charges.

19. Many of the problems relating to private investment occur ***after*** rather than ***before*** signature of the contract. They fall into four main groups:

- Non-compliance: the inability of one party to force the other to meet its obligations;
- The role of regulatory bodies: which can add to rather than reduce the uncertainty of project outturns;
- The difficulty of restructuring concession agreements when future conditions turn out to be different from expected; and
- The contribution of other statutory authorities (Customs, Immigration, etc) to the success or otherwise of the private investment.

Success factors and obstacles to future investment

20. Similar success factors are found in many projects. The most common are:

- Strong traffic growth, which generates a perception of success even if it has very little to do with the private investment itself;

- Large and fairly immediate benefits to port users, often through the introduction of new technology which the port authority does not have the knowledge or funding to introduce on its own;
- Sensitive treatment of labour, sometimes involving generously-funded retrenchment schemes;
- Lack of political interference, before and after signing of the contract.

21. Several obstacles to private investment in ports were identified in the case studies and stakeholder interviews. These include:

- Political opposition to the concept of private investment.
- Political interference.
- The absence of a process which will lead to financial closure within a reasonable time period.
- Insufficiently clear policy frameworks.
- Overbidding.
- Barriers to market entry.
- Lack of funding.

22. With their authority, resources and multi-country experience, ICA members are well positioned to assist in overcoming many of these obstacles.

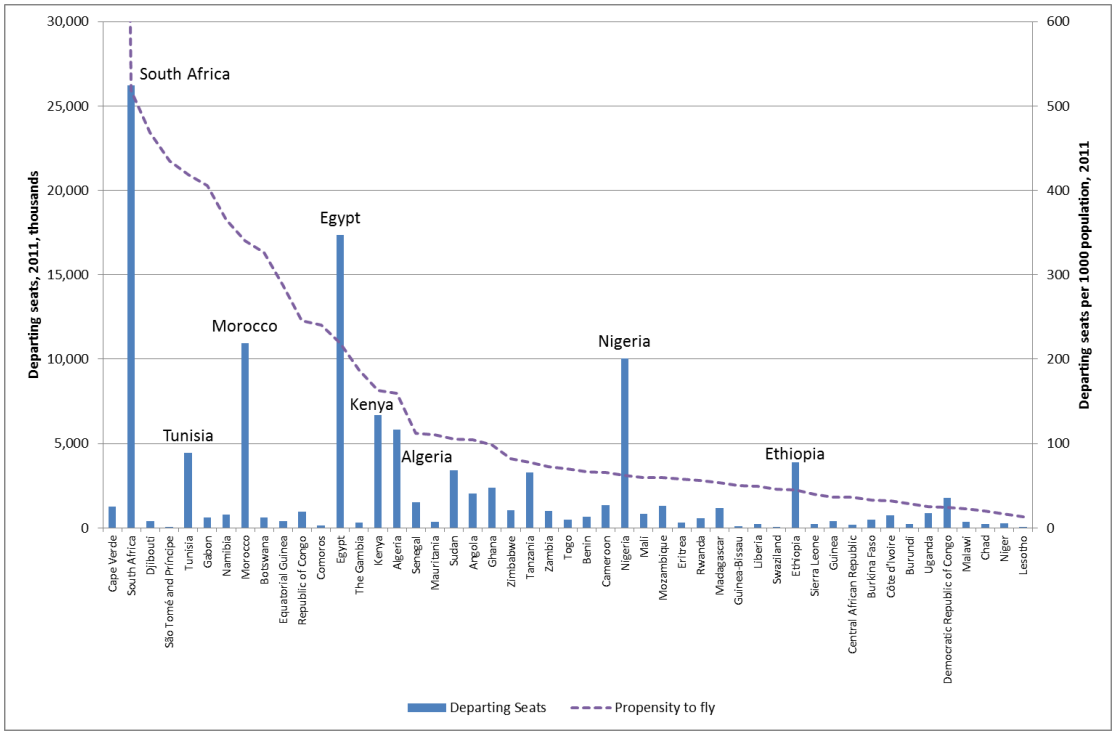
Air Transport Infrastructure – key learning points

Market background

23. The context for understanding the history of private sector participation in air transport infrastructure across Africa starts with understanding the size and characteristics of the aviation markets across the continent.

24. Aviation in Africa is currently growing strongly, but from a generally low base, with the number of seats flown rising at a cumulative annual growth rate (CAGR) of 7% p.a. in the five years to 2011 (Official Airline Guide (OAG) data). Apart from in South Africa and the North African countries, the propensity to fly (i.e. the number of air passenger journeys in relation to the total population) is generally very low, and only a few countries have airports with a passenger throughput greater than 1 million per annum. Figure 2 shows market size defined as departing seats operated in 2011 by country, as well as propensity to fly, defined as departing seats per 1,000 inhabitants, ranked by descending propensity to fly. Departing seats is used as a proxy for air passengers flown for convenience of data availability.

FIGURE 2 MARKET SIZE AND PROPENSITY TO FLY BY COUNTRY



Source: OAG, IMF, Steer Davies Gleave analysis

25. Figure 2, in which the top eight markets by seats flown are highlighted, shows that African countries can be divided into a number of categories from an aviation perspective:

- South Africa, the largest market in absolute terms and with the highest propensity to fly of any non-island state in Africa;
- The North African countries, which have relatively high propensities to fly and which also mostly represent large markets in absolute terms;
- The three large markets in sub-Saharan Africa: Nigeria, Kenya and Ethiopia;
- Smaller markets with moderate propensity to fly (over 100 departing seats per 1,000 inhabitants) – these include Namibia and Botswana in southern Africa, significant tourism destination countries such as Senegal and the Gambia, and central African countries such as Gabon, Angola and Congo (Republic);
- The remainder, with relatively low absolute size and low propensity to fly.

26. Based simply on the absolute sizes of the aviation in each country, it follows from the size of African markets that runway capacity is not generally a limiting factor in Africa. A single runway can easily accommodate a passenger throughput of 5 to 10 million passengers annually depending on supporting infrastructure such as parallel taxiways, and some single runway airports accommodate over 30 million passengers. However only two airports in the whole continent (Johannesburg and Cairo) currently have more than 10 million passengers (both of these already have two runways), and, outside South Africa and Egypt, only three airports have over 5 million passengers (Casablanca, Lagos and Nairobi). The infrastructure capacity challenge for African aviation therefore principally lies in the area of passenger terminal capacity, as well as quality, rather than runway capacity.

27. Historically the African aviation market was characterised by intercontinental routes to and from the continent generally dominated by non-African carriers and intra-African flights operated by the state-owned airlines based in most African countries. However, most state-owned airlines proved to be unprofitable and many failed, often reducing levels of connectivity within the continent and reducing competition to European carriers on inter-continental routes. Recognising the potential benefits of greater liberalisation, African governments issued the Yamoussoukro Declaration in 1988, formalised in 1999 as the Yamoussoukro Decision, which has legal force under the Abuja Treaty of 1991 in 44 of 54 African countries, important exceptions being South Africa and Morocco (Schlumberger, 2010[1]).

28. It should be noted that full implementation of the Yamoussoukro Decision forms one element of the Priority Action Plan (PAP) for transport within the PIDA strategic plan. In practice, however, implementation of the Decision has only been partial, and the various supra-national oversight bodies envisaged have not been established.

29. Africa has a poor aviation safety record, with a higher accident rate than other world regions and a rate of hull loss over 10 times higher than in Europe[2]. Of those African countries rated by the FAA IASA programme allowing direct flights to the US, only four (Egypt, Ethiopia, Nigeria and South Africa) are currently certified as reaching the required standard. The European Union bans airlines which it considers to be unsafe including, in the case of 15 African states[3], all airlines certified in that country. Therefore, improving aviation safety in Africa is of paramount importance and is listed as the first priority in the AICD report. In this context it should be noted that creation of a common framework for air navigation across the continent (the Single African Sky) forms an element of the PIDA PAP.

Past PPP Projects

30. Most air transport infrastructure in Africa remains in public ownership, but there have been a significant number of successful attempts to involve the private sector. Three generic types of infrastructure can be considered: airports, airlines and air navigation services.

31. For airport assets, PPP projects divide into a number of categories:

- Greenfield airport development;
- Existing airport airfield enhancements or refurbishments;
- Existing airport terminal expansion or refurbishment;
- Cargo facilities; and
- Management contract for operation of an existing facility.

32. The scale of investment in each of these categories varies, but in general will be highest for a greenfield airport and lowest for a management contract, which may

[1] Charles E. Schlumberger, Open Skies for Africa: Implementing the Yamoussoukro Decision, World Bank, 2010

[2] 2006 Safety Report, IATA

[3] Angola, Benin, Congo (Rep), Congo (DR), Djibouti, Equatorial Guinea, Liberia, Gabon, Mauritania, Mozambique, Sao Tome & Principe, Sierra Leone, Sudan, Swaziland and Zambia – source EU.

involve no capital investment from the private sector. It is of course possible for a project's contractual structure to involve more than one category at once.

33. There have not been any historical PPPs in Africa relating to Air Navigation Services, although in principle these services do generate revenues and could be operated as PPPs. ASECNA, which covers most of French-speaking West and Central Africa could be a candidate, but currently works successfully in the public sector (and has received funding from European Investment Bank (EIB)).

34. There are several examples of private sector involvement in African airlines, and indeed there are a growing number of fully private airlines. Where state-owned airlines have brought in the private sector, this has generally been in two ways:

- Involvement of a foreign airline as shareholder and operational partner; and
- Support for funding for the purchase or financial lease of aircraft.

35. The most important example of foreign airlines investing in an African airline was KLM's investment in Kenya Airways in 1995, receiving a 26% share for $26m. Kenya Airways has developed into one of the most successful airlines in Africa consistently profitable at the operating level and growing at an annual rate of 8% p.a. in passenger numbers between 2001/02 and 2010/11[4].

36. IFIs or similar organisations have also supported airlines through providing funding for aircraft purchase / leases. Two examples are the acquisition of Boeing 777 aircraft for Kenya Airways, supported by IFC, and for Ethiopian Airlines by AfDB and the Emerging Africa Infrastructure.

37. There have been a small number of greenfield airport developments across the continent. These include Enfidha Airport in Tunisia, Durban Airport (DUBE) in South Africa and the new Dakar Airport in Senegal, currently under construction.

38. A concession was established at Abidjan Airport, Côte d'Ivoire in 1996 for a period of 15 years, following a process started in 1994; the concession was renewed for a further 20 years in 2010.

39. Lagos Airport Domestic Airport (MMA2) was let as a concession in 2007 to Nigerian construction company Bi-Courtney, following destruction of the original terminal in a fire.

40. The cargo facilities at Nairobi airport have been developed by the private sector. The original concession was let in 1998, but subsequently additional concessions providing more capacity were also let to other operators. In each case the private operator developed the transit shed facilities in return for a concession fee.

41. Several airports in Egypt are operated as Management Contracts where the airport is managed on behalf of the owner for a fee, without a requirement for significant capital investment from the operator. This includes both Cairo and Luxor airports.

[4] http://www.kenya-airways.com/uploadedFiles/Global/About_Kenya_Airways/Investor_Information/Financial_Reports/2010-2011%20Full%20Year%20Investors%20presentation.pdf

Lessons learned from past PPP projects

42. One of the clear features of the African air transport market is its relatively small size, outside a few key markets (South Africa, Egypt, Nigeria, Morocco, Kenya, Algeria, Tunisia and Ethiopia), in contrast to the situation in other parts of the world such as Europe, where the airports involved tend to larger. The appropriate size for private sector participation depends on the nature of the project. For a greenfield airport, with costs of the order of $500m, an annual throughput of at least 3 mppa is likely to be required to allow the private sector to fully finance the project. However, as already noted, Africa does not in general suffer from a lack of absolute airport capacity (which might require new airports to be built), but rather from poor quality infrastructure and often undersized terminal facilities. Projects that involve refurbishment of the airfield and/or terminal expansion are likely to require investments of the order of $50m to $200m which can be economic in a much smaller airport. The range of economic size need to support this investment may vary between 0.5 and 1 mppa, which brings a much larger number of airports into the frame.

43. Despite these opportunities, it is clear that there have been many difficulties in achieving the level of private sector participation that many consider desirable. While the issues of the necessary minimum scale for economic efficiency is important, many stakeholders have identified that the biggest problem actually lies on the public sector side.

44. In the first place, it is impossible for a PPP arrangement to be established for important national infrastructure such as airports without the enthusiastic support of the government of the country concerned. However, in many cases, governments are either opposed or only partially supportive of PPPs, fearing a loss of control over an important national asset or simply the loss of the relatively secure revenue streams provided by airports. Even where governments do support the PPP concept, it is often the case that they have highly unrealistic expectations of the balance of risk and reward that the private sector will accept, making it hard to deliver the project.

45. In addition to governments' approach to PPPs in general, certain issues specific to aviation can make it harder for successful private sector involvement to be achieved. In particular, while there is broad support for liberalisation of market access through the Yamoussoukro Decision, in practice, as noted by a number of stakeholders, "open skies is not a reality" with full implementation not achieved, or only partially achieved, across the continent. Furthermore, many governments are keen to promote and protect a national airline, often a reason for restricting market access to other carriers. For these reasons, the market for aviation is restricted below its natural level, as evidenced by the relatively high level of fares across the continent. In contrast, it is reasonable to suppose that improved implementation of the Yamoussoukro Decision would be likely to lead to lower costs for customers through reduced air fares brought about by increasing airline competition.

46. Going beyond the aviation-specific factors, there are a number of "institutional" factors that need to be in place to ensure that a successful PPP can be established. These include:

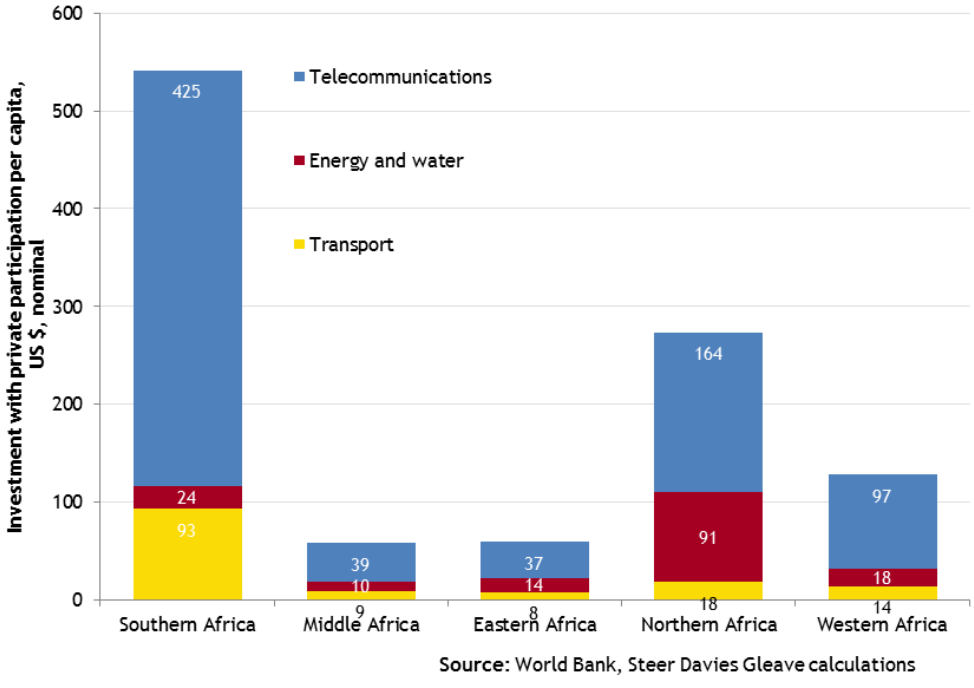
- A suitable legal framework such as explicit PPP-enabling legislation;
- Appropriate and credible regulatory institutions covering issues such as safety and airport charges; and
- A transparent procurement process (the involvement of IFIs in the process often adds credibility to this).

47. It follows from this analysis that the interventions which IFIs can make to enhance private sector participation are not limited to the provision of financial support: Technical assistance, particularly in the form of capacity building for the public sector, can be equally, if not more, important. Stakeholders emphasised the need for a "package" of supporting interventions, from the early stages of a project through to financial close and post-implementation monitoring. The combination of "softer" approaches including capacity building with "harder" approaches including financial assistance, was most likely to lead to success, both in terms of encouraging private sector participation and of improving air connectivity, thereby benefiting the wider economy.

Investment climate in Africa

48. Over the last two decades, more than $150bn of investment involving private participation has been undertaken on the African continent, of which around $17bn has been in transport infrastructure. Approximately one third of transport investment has taken place in southern Africa, even though it accounts for only 5% of the continent's population, with Western and Northern Africa accounting for the bulk of the remainder. Figure 3 displays total investment with private participation per head from 1990 to 2009 across the regions.

FIGURE 3 CUMULATIVE INVESTMENT WITH PRIVATE PARTICIPATION PER CAPITA, 1990-2009



Source: World Bank, Steer Davies Gleave calculations

49. On a Purchasing Power Parity basis, Gross National Income (GNI)[5] per capita in Africa was around $3,000 in 2010, roughly a quarter of the world average. This conceals significant income variations within the continent. In 2010 for example, Southern Africa (using United Nations definitions) had GNI per capita more than eight times that of Eastern Africa. Economic growth has been strong however, with every region except Southern Africa outpacing world growth between 2000 and 2010 in percentage terms. Several countries including Sierra Leone, Ethiopia, Mozambique, Angola and Equatorial Guinea have shown very rapid economic growth, with GNI more than doubling between 2000 and 2010 (although this is in the context of very low base levels of wealth).

50. Credit agency ratings of sovereign debt provide a general indication of the perceptions of financial and economic risk in a country. A review of the ratings from the three major rating agencies; Moody's, Fitch and Standard and Poor, reveals that only 22 of the possible 53 countries have ratings, with most of these ranked B to BBB. The most secure is Botswana with an A- ranking. Most countries have a "stable" outlook, with the exception of Egypt, Senegal and Tunisia, which each have a negative outlook meaning their rating could be downgraded in future.

Key influences on the availability of finance in African countries

51. During the study, we interviewed a number of stakeholders about the key influences and constraints on the availability of finance and its influence on implementing Public Private Partnerships in African Countries. This section describes the key points that were made during these conversations and goes on to outline some suggestions for addressing or mitigating these issues:

- Short length of Credit default SWAP and Forward Foreign Exchange markets (typically 4-5 years).
- Weakness of the local banking industry (except in South Africa, Nigeria, and Egypt).
- Sovereign investment, especially by China, at non-commercial rates.
- Level of equity return required due to high risk up to 30% p.a.).
- Not a market for the generalist due to complexities of risk.

52. Options to address some of these issues include:

- Stapled finance, arranged or supported by ICA members;
- Establish track record in transport sector development programmes with ICA members' support.
- IFIs involved in the early stage of the bid preparation.
- Specialist investors in Africa.
- Government involvement to reduce private sector risk.
- Up-front financing to reduce early-stage risk of projects (as provided, for example, by PIDG Fund InfraCo Africa).

[5] We use GNI for this comparison as it is a reflection of the values of products and services based on citizenship of owners rather than the territory of the activity. It does not reflect on the profits of foreign organisations investing in a country. It is a reflection of the wealth produced by its citizens rather than foreign investors.

53. These potential options for mitigating the constraints facing private investment in African infrastructure can be used to influence the type of intervention by ICA members appropriate for each of the key projects examined later in the report.

54. A number of factors influence the investment climate in each African country. These include:

- Political stability and the absence of corruptions (indicators from World Governance Indicators);
- Governance (based on the Ibrahim Index of African Governance);
- The presence of a PPP Unit in the country; and
- The country's track record (as demonstrated, for example, by the number of World Bank PPI projects in the transport sector).

55. An assessment of these factors have been incorporated into the project evaluation methodology, described below, in relation to the country-specific risk, sector-specific institutional capability and PPP track record factors

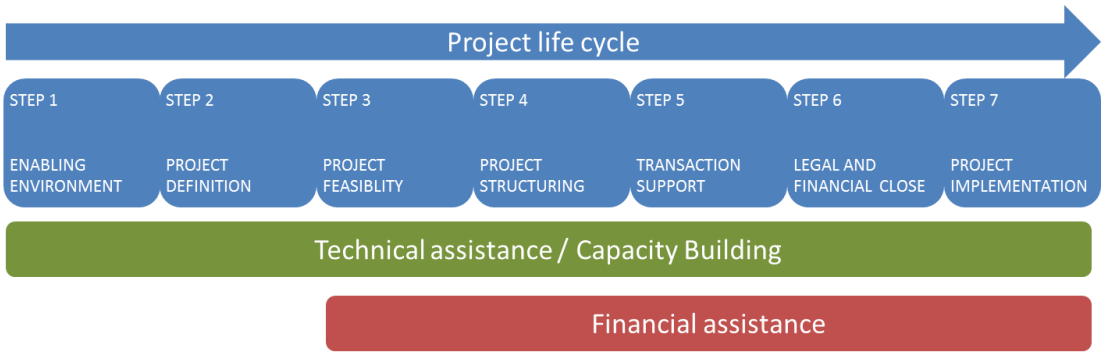
Evaluation Framework

56. We have developed an objective, independent project evaluation framework for our long list of projects, with both ports and airports projects assessed using the same framework. During our review of the literature and discussions with stakeholders we identified a broad range of projects which cover all stages of the project life cycle from concept through feasibility to implementation. Whilst some projects are ready for intervention through provision of project finance in a 1 to 3 year time horizon, others were still in pre-feasibility stages and a number of good opportunities still in a concept phase were identified.

57. To assist in defining the assessment, we reviewed the range of instruments that the ICA members have available to assist projects throughout their life cycle:

- In the formation stages, the assistance provided would most likely be technical assistance in areas such as institutional reform, safety and security support, and advice to facilitate private sector participation. Technical support may also extend throughout the project as transaction support.
- Financial support is most appropriate for projects entering into the middle stages of their life cycle (i.e. from feasibility stage onwards). Financial support could be in the form of grants, debt, equity, interest rate subsidies, and insurance guarantees, and could be provided to either private or public sector entities, or both.

FIGURE 4 ICA MEMBERS' ASSISTANCE OPTIONS THROUGHOUT THE PROJECT LIFE CYCLE



58. The evaluation framework has been developed with these features in mind, namely that:

- Projects will be at different stages in their life cycle; and
- The assistance that the ICA members provide could be of either a technical or financial nature (or both).

Assessment criteria and scoring mechanism

59. Our methodology for project assessment scores projects against four categories:

- Desirability of the project;
- Scope for (an IFI-assisted) PPP;
- Project status;
- Institutional capacity.

60. Each of these categories is broken down into more specific criteria (e.g. project status includes, *inter alia*, readiness for assistance and the existence of a viable financial structure).

TABLE 2 PROJECT ASSESSMENT CRITERIA

Assessment category	Assessment criteria
A. Desirability	A1. Size of the relevant market
	A2. Urgency of need
	A3. Additional capacity provided by project
	A4. Improved service quality provided by project
	A5. Social/ developmental benefits
	A6. Regional benefits
	A7. Competition/ regulatory benefits or constraints
B. Scope for an IFI-assisted PPP	B1. Operational benefits from private sector involvement
	B2. Financial benefits from private sector involvement
	B3. Government commitment to PPPs

Assessment category	Assessment criteria
	B4. Need/ scope for IFI technical assistance
	B5. Need/ scope for IFI financial assistance
C. Project status	C1. Readiness for technical or financial assistance
	C2. Viable financial structure in place
	C3. Technical soundness
	C4. Complementary projects in place
D. Institutional capacity	D1. Country specific risk
	D2. Relevant authorities' capability
	D3. Procurement procedures
	D4. PPP track record

61. The project evaluation phase allows for a general assessment of projects against each of the categories, to ensure that projects with good potential for ICA members' intervention are moved forward into the shortlist. The evaluation is designed to produce a mix of projects at different stages of their life cycle, and with different investment needs, on the project short list. Two balancing criteria have been borne in mind when deciding upon the recommended list of projects for ICA members' intervention, namely:

- Regional spread; and
- A spread of different types of intervention ranging from Technical Assistance to financial lending or equity provision to the project.

62. For each of the detailed criteria within the four categories we have used a scoring mechanism, with scores of between 1 (low) and 5 (high) assessed against a standard requirement, which are then combined to give an overall score for each of the four categories. Given the level of information available it is not possible to derive a purely mechanical and "objective" project assessment methodology. However, for each criterion we have developed a set of decision rules which have been applied consistently across the set of projects to give a reasonable spread of scores. We present our analysis with each scoring category equally weighted at 25% of the total. To allow different stakeholders and readers to apply their own weightings to the categories, the weightings for each of the categories can be adjusted.

Ports Project Evaluation

63. We developed the shortlist of ports projects in two stages. Firstly, a "long list" of 43 projects was identified. Of the 43 projects evaluated, 6 are multi-berth modernisations/expansions of existing ports, 16 involve the construction of entirely new ports, 10 are container terminals, 8 are berths for the export of coal, iron ore or other minerals, 1 is a tanker berth, and 2 are industrial berths linked to

new manufacturing plants (methanol/urea and cement). The long list of ports projects is provided in Table 3.

TABLE 3 PORTS PROJECTS LONG LIST

Project no.	Project name	Country
P1A	Algiers - Ténès, new port	Algeria
P1B	Cap Djinet new port	Algeria
P2	Oran container terminal	Algeria
P3	Barra do Dande new port	Angola
P4	Lobito modernisation & expansion	Angola
P5	Namibe, iron ore + container berth	Angola
P6	Caio, new port	Angola
P7	Seme-Kpodji new port	Benin
P8A	Kribi, new port	Cameroon
P8B	Kribi, iron ore jetty	Cameroon
P9	Banana, new port	DR Congo
P10	Ile de Boulay new port	Cote d'Ivoire
P11A	San Pedro container terminal	Cote d'Ivoire
P11B	San Pedro ore terminal	Cote d'Ivoire
P11C	San Pedro mineral jetty	Cote d'Ivoire
P12	Mayumba, new port	Gabon
P13	Tema container terminal	Ghana
P14A	Takoradi mineral berths	Ghana
P14B	Takoradi container terminal	Ghana
P15	Matakang Is. iron ore jetty	Guinea
P16	Bissau port rehabilitation	Guinea-Bissau
P17	Buba bauxite terminal	Guinea-Bissau
P18	Mombasa container terminal (Phases 2&3)	Kenya
P19	Lamu new port	Kenya
P20	Noukchott container terminal	Mauritania
P21	Casablanca container terminal 3	Morocco
P22	Mohammedia container terminal	Morocco
P23	Maputo port modernisation/ expansion	Mozambique
P24A	Nacala container terminal	Mozambique
P24B	Nacala coal terminal	Mozambique
P25	Beira and/or Chinde coal terminal(s)	Mozambique
P26	Beira rehabilitation & expansion	Mozambique
P27	Walvis Bay tanker berth	Namibia
P28A	Lekki, new port + FTZ	Nigeria
P28B	Badagry, new port	Nigeria
P28C	Olokola, new port + FTZ	Nigeria

Project no.	Project name	Country
P29	Koko, new port + FTZ	Nigeria
P30	Mwambani Bay new port	Tanzania
P31A	Dar es Salaam 2nd container terminal	Tanzania
P31B	Dar es Salaam modernisation	Tanzania
P32A	Mtwara methanol/ urea berth(s)	Tanzania
P32B	Mtwara cement berth	Tanzania
P33	Enfidha new port	Tunisia

64. Each project was evaluated against the criteria in the evaluation framework as well as other criteria such as the need for geographical balance, project diversity, a mixture of "ready to go" and longer-term projects, and opportunities for technical as well as financial assistance has led to the short-listing of the following seven projects:

- **Maputo port modernisation (Mozambique)**. This involves the reconstruction of an existing multi-purpose quay to create a series of specialist terminals for ferro-chrome, sugar, other dry bulks (granite, grain, sulphur, fertilizer, clinker, iron ore and copper concentrates), cars and general cargo. The quay would also be deepened to accept larger ships.
- **Mtwara methanol/urea berths (Tanzania)**. The proposal is to develop petrochemical and fertilizer export industries close to local gas supplies, to be followed by corridor development from the port to inland coal and iron ore resources which would also improve access to Malawi. This project is dependent on Tanzanian government decisions on the use of existing gas supplies and the outcome of further gas exploration drilling.
- **Noukchott container terminal (Mauritania)**. This project is required because the existing container berth has limited capacity and is very inefficient, with the stacking area located 1.5km from the berth. Container traffic is still small (84,000 TEU in 2010) but growing quickly.
- **Dar es Salaam container terminal (Tanzania)**. The existing container terminal – one of Africa's first port PPPs – is severely congested and the port authority is seeking Chinese funding for the construction of new terminal infrastructure, with the private operator – to be selected by competitive tendering - required to fund the superstructure and equipment.
- **Mozambique coal terminals**. Mozambique looks set to become a world-class coal producer, accounting for perhaps 5-10% of future world exports. However it lacks suitable port facilities, and the associated rail (or barge) capacity needed to bring the coal to the ports. Several world-class mining companies have put forward integrated main/rail/port projects, but these need to be carefully coordinated. Legal changes are also needed to protect private investors and maximise local benefits from their investments. The government lacks the capacity to do this, resulting in the need for a technical assistance programme which could then be rolled out to a several countries in West Africa which face very similar problems.
- **New industrial port in Algeria**. In 2008 the Algerian conglomerate Cevital proposed the construction of a new port and industrial zone at Cap Djinet, 60km

east of Algiers to serve its car import business and other industrial opportunities linked to the availability of low cost gas. The project did not proceed, but a similar project for a new port to the west of Algiers is currently under investigation.

- **New deepwater port near Lagos (Nigeria)**. This project is intended to relieve serious port congestion in Lagos, provide more modern facilities with deeper water, and attract new industrial investment to the associated Free Trade Zone. Three private sector projects have been put forward, of which Lekki and Olokola look the most promising.

65. The shortlisted ports projects, along with the shortlisted airports projects, are mapped in Figure 5 below.

Air Transport Projects Evaluation

We developed the shortlist of ports projects in two stages. Firstly, a "long list" of 23 projects was identified. These include greenfield airport developments airport terminal and airfield enhancements, air navigations services enhancements and cargo facilities across the continent. The long list of airports projects is provided in Table 4.

TABLE 4 AIRPORTS PROJECTS LONG LIST

Project no.	Project name	Country
A1	Ouagadougou	Burkina Faso
A2	Yaoundé	Cameroon
A3	Douala	Cameroon
A4	Bangui	Central African Republic
A5	Kinshasa	Democratic Republic of the Congo
A6	Addis Ababa	Ethiopia
A7	Libreville	Gabon
A8	Accra	Ghana
A9	Kumasi	Ghana
A10	Nairobi	Kenya
A11	Bamako	Mali
A12	Fez	Morocco
A13	Lagos International (LOS)	Nigeria
A14	Abuja	Nigeria
A15	Lekki-Epe (Lagos)	Nigeria
A16	Bugesera, Kigali	Rwanda
A17	Dakar	Senegal
A18	Dar Es Salaam	Tanzania
A19	Kilimanjaro	Tanzania
A20	Zanzibar	Tanzania
A21	Lomé	Togo
A22	Entebbe / Kampala	Uganda
A23	Lusaka	Zambia

66. The long list of air transport projects were then assessed using the evaluation framework. Taking account of the scores from the evaluation, as well as other broader criteria, has led to a short-list of eight projects, as follows:

- **Lagos International (LOS), Nigeria.** Lagos airport is the largest airport in West Africa by a significant margin, with over six million passengers in 2010, and serves the largest and most economically important city in the region. There is a clear and urgent need to improve the quality of the operation at the international terminal to help support the Nigerian economy. The airport would form a natural hub if well organised and with good facilities which it currently lacks.
- **Lekki-Epe (Lagos), Nigeria.** The Lagos State government is promoting a greenfield airport at Lekki, on the peninsula to the east of Lagos Island, the commercial centre of Lagos. The proposed airport would be easier to reach than the current airport being located relatively conveniently for the business district. As a greenfield airport it would provide high quality facilities. The procurement process is already underway with expressions of interest received and the pre-qualification stage begun.
- **Accra, Ghana.** Ghana's principal airport, Kotoka International Airport in Accra, served 1.3m passengers in 2008 and is one of the key airports in West Africa. The airport terminals are generally of poor quality and the airport operator wishes to improve and expand the facilities, highlighting the increasing demand. Although unable to rival Lagos in size, Accra is well located to provide a function as a secondary hub in the region.
- **Fez, Morocco.** This project would deliver a new two-storey terminal building, allowing airport expansion by increasing capacity at the airport from 0.5 to 3 million passengers per year. The project, with an estimated cost of $71m, represents a relatively low risk PPP, and already has IFI involvement (AfDB).
- **Dar es Salaam, Tanzania**. The Tanzanian authorities are seeking funding to support a third terminal at Dar es Salaam airport to increase capacity from the current level of 1.5 million to 8 million passengers. The airport is important in the region, and though unlikely to be able to rival neighbouring Nairobi in size, has the potential to provide regional competition.
- **Entebbe / Kampala, Uganda**. Entebbe is a medium sized airport in the East African region and is currently suffering from congestion issues. There are plans to expand the passenger terminal, increase the size of the apron area and allow the construction of modern cargo facilities.
- **Bugesera, Kigali, Rwanda.** The Rwandan government is promoting a new airport at Bugesera, 25km to the south of Kigali, to replace the existing airport. In order to have the ability to increase the capacity for and range of services the government has sponsored the new airport project, which would provide for an unconstrained runway and modern facilities. It is anticipated that IFI support may be needed.
- **Lusaka, Zambia**. The Zambian government is considering a PPP to help deliver the construction of a new international terminal and refurbish the existing terminal, at a cost of $200m. The airport, which served over 800,000

passengers in 2008 is well-located to act as a secondary hub and is of a sufficient size to facilitate private sector participation, although both technical and financial support are likely to be necessary.

Shortlisted ports and airports projects

67. The shortlisted ports and airports projects are mapped in Figure 5.

FIGURE 5 SHORTLISTED PORTS AND AIRPORTS PROJECTS

CONTROL SHEET

Project/Proposal Name	Study to assess the potential for enhanced private participation in the maritime and air transport sectors in Africa
Document Title	Contract N° ICA/TSP/001
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