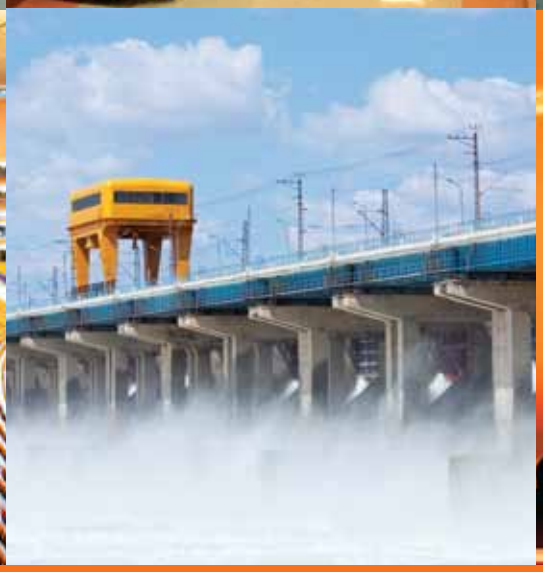
Public Private **Partnerships:**

A Vehicle of Excellence for the Next Wave of Infrastructure Development in the GCC








Markab Advisory

Public Private Partnerships: A Vehicle of Excellence for the Next Wave of Infrastructure Development in the GCC is a research study conducted by Markab Advisory ("**Markab**"), a management consultancy firm headquartered in Dubai. The study has been sponsored by Qatar Financial Centre Authority ("**QFCA**") and Ministry of Business and Trade ("**MoBT**"), State of Qatar. The contents and opinions expressed in this document do not necessarily reflect the views of the QFCA and MoBT. The sponsorship of this document by QFCA and MoBT is with the objective of enhancing the awareness of and promoting debate on Public Private Partnership ("**PPP**"), focusing on its potential contribution to efficiency and excellence in infrastructure development. Markab bears full responsibility for the contents of the study.

In preparation of this study, Markab Advisory drew upon a multitude of information sources including published information, conference papers and Markab's proprietary knowledge capital. Markab held discussions and interviews with a number of senior professionals in organizations involved in infrastructure and PPP projects, regional and international banks and multilateral organizations. QFCA and Markab also conducted interviews with a number of senior government officials in Qatar to gain on the ground knowledge on recent developments in infrastructure projects in Qatar and the potential of PPP in this context.

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Introduction

The past decade has marked the quest of the Gulf Cooperation Council ("**GCC**") countries in laying the foundation for achieving economic diversification away from the oil and gas sectors. The next ten years will test their ability to realize this aspiration by successfully building on this foundation. Economic diversification entails not only developing new physical infrastructure, but also building skills and capacity, as well as creating new clusters and ecosystems. Public Private Partnership ("**PPP**") can play a key role in realizing this goal of policy planners in the GCC region.

The successes of the past ten years are extraordinary. Real estate, tourism, sports, healthcare and education; sectors historically with a narrow focus, were rapidly catapulted onto the center-stage of economic planning in the GCC. A number of remarkable flagship projects were undertaken. Qatar hosted the Asian Games in 2006, Dubai built the world's tallest tower, and Saudi Arabia established the King Abdullah University of Science and Technology ("**KAUST**") as a world class center for scientific research - just to mention a few achievements in sectors unrelated to oil & gas.

Yet, achievements of the past ten years are expected to be dwarfed by the projects planned over the next decade. The infrastructure spend alone is expected to be around $2 trillion.[1] In addition, the GCC countries are creating an enabling environment for development of economic clusters in sectors such as tourism, logistics, healthcare and education.

Qatar will host the FIFA World Cup in 2022. Around the same time, Dubai will have completed the world's largest airport with the capacity to handle 120 million passengers per year,[2] and Saudi Arabia will have built four new mega-cities with investment exceeding $100 billion. These developments point to the emergence of a very different economic ethos in the GCC over the next decade.

A. The New Paradigm of Growth

It will perhaps not be an exaggeration if 2012 is considered a year marking the beginning of a new era in the GCC and the wider Middle East and North Africa ("**MENA**") region. Three key factors will drive economic planning and development over the next few years.

i. Global Economic Rebalancing

The recession of 2008 marked the beginning of what many refer to as the 'new normal'. As the US and Europe seek to get their economies back on a growth path; Asia, led by China, is rapidly emerging as the most powerful engine of economic growth. According to data compiled by the *Economist*, China could overtake the United States by 2018 – it has already surpassed the US in over half of 21 key economic indicators.

Following the recession, globally coordinated economic decision making, once the domain of G-8 nations, has now shifted to the G-20 countries (a forum of 20 countries that controls approximately 85% of the world's GDP). The G-20 includes Saudi Arabia and Turkey, thus giving a greater say to regional countries in global policy decisions.

The Organization of Petroleum Exporting Countries ("**OPEC**") is playing a central role in helping maintain oil prices within a certain range. Energy prices remain a key factor impacting global economic growth. The US economy alone, which consumes 7 billion barrels of oil annually[3] benefits by over $100 billion from a $15 decline in prices. It is expected that the oil producing economies of the Gulf are going to play a greater role in global economic rebalancing going forward.

Of greater direct relevance is the G-20 commitment to stimulating broader global demand. The G-20 agreed that public sector spending and infrastructure would be adopted as a tool to stimulate economic growth. As a result, there has been a substantial commitment to infrastructure spending by the public sector in major G-20 countries. Saudi Arabia, the MENA region's largest economy has been spending heavily on infrastructure.

Global rebalancing is resulting in a greater role for the GCC on the world economic stage. Along with energy price stability, the GCC is being looked upon as a source of stimulus for economic growth. Infrastructure development by the public sector will be a key tool deployed for this purpose.

ii. Sector Rebalancing

While diversification from the energy sector has been a long stated policy objective, the efforts have now started showing tangible results.

Transportation is a big success story. The sector is set to continue on its growth trajectory. The New Doha International Airport ("**NDIA**") is set to open with a passenger capacity of 24 million, which is expected to rise to 50 million by 2015. Dubai's Terminal 3 is soon expected to simultaneously accommodate 23 A-380 super jumbos at the same time.[4] Within a few years, it is expected to surpass Heathrow in passenger traffic.

Between $1.5-2 trillion is planned as GCC infrastructure spend for the next decade.

The next ten years are set to dwarf the infrastructure development of the past decade, which, in itself was quite remarkable.

In the new economic order, the GCC joins China, India and other major emerging economies as an engine of economic growth. It is set to play a bigger role in global economic decision making.

By 2020, the GCC will have a very different economic ethos. Non-oil ecosystems, such as tourism, logistics and sports will be well-established and playing a much bigger role in the GCC economy.

Education and healthcare are other key sectors where initial efforts show a lot of promise. Qatar and Abu Dhabi are now home to leading international educational institutions such as Cornell & Georgetown (in Qatar) and Paris Sorbonne University (in Abu Dhabi). In Saudi Arabia, KAUST will have cutting edge laboratories, the first super computer in the region and world's leading faculty including Nobel laureates. According to research by *Kuwait Finance House*, GCC plans to spend $10 billion in healthcare related projects by 2015.

There are success stories in other sectors too. Al Jazeera, the news channel from Qatar states that it has now expanded its footprint to over 190 million households in over 100 countries. The news network now has 69 bureaus across the world[5].

Tourism, logistics, healthcare, education, sports, and renewable energy are some of the sectors expected to be developed further in the next few years. As they develop, these sectors will make significant contribution to the respective GCC economies and provide a more diversified base for employment and enterprise to their citizens.

The large scale infrastructure spending will help create much needed jobs in the MENA region.

iii. Political Rebalancing

The pace of political change in the region has taken almost everyone by surprise. Economic factors are at the heart of these changes. What started in Tunisia soon spread as a wave of unrest in the region, resulting in rapid regime changes in Tunisia, Egypt, Libya and possibly Yemen. Violence is spreading in Syria and other North African regimes are facing increasing pressure.

As a result, most governments in MENA will seek ways to create more vibrant and employment generating economies. In addition, there will be a greater sense of focus on building public use infrastructure including roads, hospitals, schools etc. in these countries.

B. The Spectrum of Efficiency

Given that massive investments will be made in building assets of long-term nature for public use and benefit, efficient planning and execution will be critical.

To achieve success, the GCC must combine skills and knowledge with its abundant capital.

However, a fundamental issue needs to be addressed. Roads, bridges, schools, hospitals, airports, waste treatment plants etc. have been built in the past in this region and by others successfully too. If capital is not a constraint, why not simply hire contractors and staff? Why seek partnerships with the private sector?

Planning for this extensive diversification drive and massive infrastructure building would require policymakers to consider new models of efficiency. Capital may be abundant but capital alone does not guarantee success. Expertise, knowhow, risk sharing and a long term commitment to success are equally important. Success lies in the ability to bring these factors together in an efficient and transparent model.

The past decade, while marking rapid infrastructure growth, also saw delays in completion of several major projects throughout the GCC region, projects that also had a multiplier effect on the economy. Such delays must be avoided in the future.

The scale of infrastructure development in the GCC is such that efficiency gains in the order of 15-20% by avoiding time and cost overruns alone could be worth billions of dollars. A 10% saving on the planned infrastructure investment of $2 trillion with a two times multiplier effect on the economies alone could result in savings worth $400 billion. The case for efficiency is too strong to be ignored.

The global financial crisis has made banks more selective in deciding what they call bankable projects. In addition to capital, banks are increasingly looking at expertise and operational capabilities as key decision factors. Quality of the asset and its efficient use are at least equally, if not more, important. Poor quality or inefficiently used assets create a cost burden over their entire lifecycles for all the stakeholders.

In other key MENA countries, the scale of infrastructure development may not be as large. However, the political cost of inefficiency may be substantial. Policy makers would need to work hard to ensure that good quality infrastructure is delivered on time and within budgets to build a greater sense of confidence among the citizens. Unlike the GCC, other MENA countries have a need to address capital constraints as well.

C. The Role of PPP

PPP can play a key role in addressing the challenges of efficiency and capacity. If done right, PPP has the potential to achieve billions of dollars in direct cost savings. It can help rapidly accelerate the pace of infrastructure development. Most importantly, PPP can help secure a long term commitment from international and local companies, which is critical for knowledge transfer to the local economy.

The term 'PPP' refers to a conceptual framework rather than single model that can be customized to specific requirements. The purpose of this study is

to explore how PPP can address the efficiency and capacity needs of the GCC and the broader MENA region.

This study starts by looking at the evolution of PPP and its success stories. Every success story is unique and homegrown, and there are lessons that can be drawn from them.

As is the case in other countries that have achieved success with PPP, countries in this region will need to build their own indigenous models based on their requirements. The study reviews how PPP can be 'homegrown' by drawing from the success stories in the region and addressing obstacles and challenges to PPP.

While reviewing the common themes in the GCC, the study takes a closer look at Qatar. It aims to create awareness about PPPs and explores the potential of PPPs in enhancing infrastructure and social sector development in Qatar. There is an opportunity for Qatar to play a key role in the development of PPP in the region. By weaving PPP into its infrastructure and growth plans for the next ten years, Qatar can rapidly emerge as a center of excellence for PPP in the region.

Efficient delivery and operation of infrastructure assets can translate into direct savings and economic benefits worth over $400 billion, equal to about 75% of the annual non-oil GDP of the GCC countries.

Public private partnerships can play a key role in achieving some of these savings. Knowledge and technology transfer would be other key benefits of PPP.

Key Findings and Conclusions

There is a colossal shortage of infrastructure around the world. According to the World Economic Forum, global requirement for infrastructure spending over the next 20 years is at least $40 trillion i.e. $2 trillion per annum. Governments are faced with capacity and financial constraints. Considering the phenomenal size of infrastructure spending required and the limited capacity of the public sector to fund this spend it is quite evident that traditional models of public sector procurement will not be sufficient to address the gap.

Globally, the public sector is increasingly looking at the private sector to bridge this funding gap through public private partnerships ("**PPP**"). PPPs are contractual arrangements between the public and private sectors fordelivering public use infrastructure projects efficiently and in a manner that reduces the costs to the end users.These contracts take various forms and structures.

PPP is a relatively recent phenomenon. Within this short time, PPP has become widely successful tool for efficient delivery of infrastructure projects. Over 1,000 projects worth atleast $1.5 trillion have been completed under PPP basis during the last 25 years. In recent years, annual volume of PPP transactions has averaged around $50 to $60 billion.

Although there will always be a debate on the actual origins of PPP, the contemporary era of PPP can be traced back to the Private Finance Initiative ("**PFI**") introduced by the UK government. Since then, the PPP concept has evolved quite rapidly. The PPP concept has achieved more sophistication in UK, Australia and Canada in terms of policy framework, structures, contracting options, and financing delivery mechanisms. PPP has also become one of the key delivery instruments for infrastructure projects in major developing economies of Asia, Latin America and Africa. At least 50 countries have a PPP unit at the federal government level.

A. PPP's Economic Thesis in Global Context

The economic thesis of PPP rests on two distinct arguments. Firstly, private sector owing to its domain expertise, profit motivation and incentive to maximize economic value of a project, is typically better equipped to perform certain tasks and undertake certain risks. Hence, PPP can result in judicious allocation of risks and responsibilities, thereby resulting in efficiency gains throughout the project's lifecycle. Secondly, PPP provides fiscal space to the public sector as well as mitigates non-financial limitations of the public sector with respect to procurement.

Empirical evidence suggests that PPP provides significant advantages in terms of completion of projects on time and within budget when compared to traditional public procurement. In the context of GCC countries, where economies do not, at present, face significant fiscal challenges; the 'efficiency gains' argument has taken precedence. In addition, PPP brings private sector's technical knowhow and expertise which is often not present within the public sector domain.Therefore, PPP can become an instrument to deliver excellence in infrastructure development.

The rapid evolution of PPP globally demonstrates that PPP is proven to be a beneficial and workable model. A wide variety of projects including roads, airports, hospitals, railroads, power projects, schools, waste management systems, stadiums and even prisons have been successfully built and managed with private sector participation. Success, though, has been widely varied. Countries on the top of the league have developed well-defined PPP policies and laws, established well-functioning dedicated PPP units, demonstrated a track record of several projects in various sectors and acquired access to competitive project financing for infrastructure projects. UK, Canada and Australia belong to this league.

- UK, considered being the pioneer of PPP has exhibited depth and diversity in its program. It has closed the highest number of PPP deals and at one point was closing one project of $100 million every week;
- Australia sees efficient infrastructure development as key to its overall economic performance and long-term competitiveness. The country excels in its transparency, as well as in providing details about its policy and planned infrastructure;

- Canada brought creativity in financing mechanisms and creating efficient procurement frameworks to expedite project implementation and minimize time to market.

Each program in unique and home-grown. There are several lessons to draw from for the GCC countries from these success stories.

B. PPP in Qatar – Historical Perspective and Prospects for the Next Round of Infrastructure Spending

Qatar has demonstrated an impressive record of economic growth in the past decade. During this period, Qatar undertook rapid infrastructure development, as well as expansion of its oil and gas facilities. Economic growth and investment levels have been the hallmarks of Qatar in the last ten years. The country has redeployed dividends from its LNG investments to broaden the country's economic base. It successfully diversified into sectors, such as tourism (built around sporting events). Qatar has focused on development of its social sectors including healthcare and education.

In October 2008, the Government of Qatar issued a document, outlining its vision through to 2030. The Qatar National Vision 2030 ("**QNV 2030**") outlines Qatar's long term objectives of achieving economic stability, developing human capital and ensuring social justice for all of its citizens. In order for Qatar to achieve economic stability, QNV 2030 envisages productive deployment of economic dividends from Qatar's hydrocarbon sector to diversify its economic base.

Qatar's last decade can be termed as the decade of investment in country's hydrocarbons, whereas the next decade is expected to be focused on investment in core and social infrastructure. Infrastructure development is one of the key objectives of QNV 2030 and Qatar's National Development Strategy 2011-2016 ("**QNDS**"). The award of the FIFA World Cup 2022 to Qatar has enabled the policy makers to particularly focus on achieving strategic objectives as outlined in QNDS for the next five years. The pipeline of the next five year projects, if implemented, will be instrumental in delivering the mega event. Announcements have been made for $150 billion of core and social infrastructure projects by 2016. PPP has a place in delivering the QNV 2030 and in implementation of targets of the QNDS.

Qatar was an early adopter and practitioner of the PPP framework in the power sector. Following the footsteps of its regional peers, Qatar introduced IWPP framework in building new generation capacity. The country launched its first independent power and water project Ras Laffan A in 2001 on a PPP basis. Today, Qatar's IWPP program contributes around 2/3rd of the country's installed generation capacity.

Subsequently, Qatar selectively undertook projects in other sectors on a PPP basis albeit selectively. These include water and waste management, transportation and education projects. It is currently working on a pilot PPP project in the healthcare sector. Application of PPP framework in other sectors is at early stages and evolving rapidly.

C. Way Forward for Qatar – Key Opportunities

PPP can have a strategic place in Qatar's on-going and planned infrastructure development. All the building blocks are already present. These include an extensive pipeline of infrastructure projects, resident PPP expertise (from power and hydrocarbon sectors), leadership support and a growth momentum. There is an opportunity to leverage on these building blocks. The challenge will be to leverage Qatar's existing knowledge and track record of PPP and transfer this success to other sectors.

PPPs can fit well within Qatar's infrastructure plans. Key sectors where PPP can be an option include the following:

- **Existing Core Infrastructure Sectors - Power and Water**: : PPP has a firm strategic presence in the power generation and water desalination sectors in Qatar. Previous success can continue to be built on with modifications as needed. Resident expertise is already in place.
- **Other Core Infrastructure Sectors**: Typical PPP projects in railways and roads are structured to pass on the demand risk to the private sector. This may be a challenge for Qatar, given its low population base. Besides, the asset may be considered strategic for Qatar. BTO could potentially be a viable option to consider, whereby the private sector undertakes the design and build risk and transfers the asset to the government on completion.
- **Social Infrastructure**: Education and healthcare offer innovation opportunities in the PPP domain. There are no standardized solutions and this requires developing homegrown solutions. Final shape of the propositions will largely depend upon needs analysis and striking the balance between regulations and quality of operators. Public sector can offer financing to nurture innovations in education and healthcare. Delivering funding through an

incubation fund, especially when the GoQ has the financial capacity to do so, can nurture the innovation culture as well align interests of all the stakeholders.

- **Sports Infrastructure**: Considering the strategic importance of the event, any decision with respect to private sector participation needs to be studied carefully. Although there are global precedents of having PPP as a model for building and managing sporting facilities, Qatar's position in truly unique. Understanding the potential revenue models, during and after the FIFA Cup, would be the key to deciding the appropriate structure.

C. Potential Benefits to Qatar from PPP

- The quantum of planned infrastructure spend indicates that realizing efficiency gains can generate significant savings. Based on international benchmarks, **Qatar could achieve efficiency savings and economic benefits of up to $30 billion, equal to 25% of Qatar's annual GDP. These savings can be redirected to achieving other core objectives of human capital development and diversification of Qatar's economy.**
- PPP could be a valuable vehicle for introducing accountability and transparency for successful implementation of durable infrastructure development in time.

  Qatar has the opportunity to learn from best practices in the PPP domain from countries around the world and from the region. Qatar's willingness to encourage and embrace innovation can be a catalyst for taking regional leadership in developing homegrown PPP programmes in sectors such as education, transport, sports etc.
- Qatar has the potential to become a hub for infrastructure and project finance activities, as well as infrastructure funds. This is an excellent opportunity for Qatar to showcase its status as a mature project and infrastructure finance market.The QFCA can play an important role in this regard by building on its world class legislative framework and promoting the country to attract the best among infrastructure financing companies including infrastructure funds and asset management companies, pension funds, lawyers, advisors, corporate finance and structuring specialists etc.
- There is also an opportunity to develop medium to long term plans about deepening the Qatar Exchange ("**QE**") and creating the role of infrastructure assets as a way to develop this depth. The existing and new infrastructure assets can be listed on the QE at appropriate times in order to broaden the investment universe for Qatari investors and to share the success of these businesses at large.

E. PPP Infrastructure and Capacity Building for Qatar

Capacity building can be critical in taking the Qatar's PPP initiative forward. A review of successful PPP programs in the UK, Canada, Australia, suggests that having such capacity could be a contributor to the success of PPP programs. Qatar's own IWPP experience can be leveraged by drawing upon the human resources and methods involved in developing, delivering and managing the IWPP projects. Qatar's PPP Directorate can be a potential starting point in building this capacity.

Qatar's infrastructure spending plan offers a very wide array of opportunities to structure the PPP program for the next decade. Outstanding success has been achieved in the past ten years. PPP can be integral to Qatar's success as it undertakes next wave of infrastructure development.

F. Place for PPP in the GCC and Key MENA Territories

Contrary to widely held perception, the GCC and some other MENA countries are much further along the PPP experience curve than would appear on the surface. The region has completed over 100 projects on a PPP basis over the last 10 years. Kuwait and Egypt have PPP laws and dedicated and functioning PPP Units. A majority of countries in the MENA region have demonstrated successful track record in the power sector and a cumulative of $48 billion worth of Independent Water and Power Projects were completed on Build Own Operate ("**BOO**") or Build Own Operate and Transfer ("**BOOT**") basis. Saudi Arabia is building a second airport on a Build Transfer and Operate ("**BTO**") basis. Others, such as Jordan are also getting more active in this space. Some territories which did not use PPP before are now experimenting with this model.

There is, however, one caveat to the MENA story. The region, though successful in using PPP extensively in the power sector has not been able to replicate similar success in other infrastructure sectors.

The MENA region stands at a critical stage in its development. A host of forces are shaping the MENA infrastructure investment landscape. Firstly, there is a huge need for infrastructure investment going forward. According to the World Bank, in order to sustain its economic growth and global competitiveness, the MENA region needs to invest $75 billion to $100 billion annually on infrastructure. Moreover, GCC cannot afford to step away from its diversification drive and needs to continue investment in non-oil and gas sectors. Other MENA countries have a critical need to upgrade their infrastructure to address past underinvestment and new demand. Secondly, the ripple effects of the global financial crisis will continue to be felt throughout the region. This has resulted in added constraints on public sector's fiscal capabilities, specifically in the non-oil economies of the MENA region.Thirdly, the Arab Spring has presented a new set of economic challenges. These challenges coupled with business disruption emanating from the unrest have further exacerbated the infrastructure shortfall and made it imperative for the governments to make efficient infrastructure investments for meeting their citizens' requirements and employment generation for the young workforce.

G. Emerging Landscape of PPP in the GCC and Key MENA Territories

PPP is poised for a strategic place in the MENA region. With the establishment of dedicated PPP units in Kuwait and Egypt, drafting of PPP law in these countries, and use of PPP in other core infrastructure sectors (in addition to power); PPP is graduating to the next level of sophistication. However, the focus will need to shift from projects to programs. The GCC and wider MENA region's emerging PPP landscape is expected to have the following components:

- **Key Countries**: Saudi Arabia, Qatar, UAE, Kuwait and Egypt are countries to watch out for in the next few years. Saudi Arabia has the largest infrastructure projects' pipeline in the region. With its successful PPP track record in power generation and airport sectors, the country has built substantial momentum for PPP. It is already working on PPP arrangements in other core infrastructure sectors including water management, whereby management contracts for 16 cities will be awarded soon. Qatar has a $150 billion infrastructure spending plan focused on large scale transportation and sports infrastructure projects, in line with its National Development Strategy and plans for the 2022 FIFA World Cup. Outside the GCC, Egypt is expected to leverage on its extensive projects pipeline and legislative framework for the PPP.

- **Key Sectors**:

✓ **Power**: In the GCC alone, there are 44 new projects being planned in the power sector.The IPP (or IWPP) model is well established in the GCC and key MENA territories. Future projects are expected to follow the already established templates.

✓ **Airports**: GCC is one of the fastest growing regions in the aviation industry. A number of new airports and airport expansions are being planned. With the successful experiences of Hajj terminal expansion in Saudi Arabia and Queen Alia Airport project in Jordan, other countries might be convinced to use PPP for their airport projects;

✓ **Railway and Roads**: This sector is expected to be the centerpiece of core infrastructure development in the GCC region, having an investment requirement of around $100 billion. PPP models for this sector are yet to be configured. A key challenge that needs to be addressed is the mechanism for demand risk sharing between the public and private sector. PPP models in this sector will be devised depending on the proposed role of the private sector, underlying business dynamics and strategic importance of the project;

✓ **Healthcare and Education**: PPPs can have a very central role to play in developing this sector particularly in the areas of higher education and Research & Development. A PPP model (primarily management contracts) for attracting renowned international universities has already been successful. Qatar has taken a lead in following this model and other countries can follow this lead.

In the healthcare sector, governments are increasingly looking at the private sector to share the burden of healthcare costs. With the introduction of mandatory healthcare insurance for employees, the private sector employers in partnership with private health insurance companies will share this burden.

This will potentially create opportunities for the public sector to operate their hospitals more efficiently and in partnership with the private sector. For example, these partnerships can take

the form of joint ventures or long term management contracts for existing or new hospitals.

Overall, healthcare and education sectors are expected to provide space for innovative PPP models going forward.

- ✓ **Social Housing**: This is a new sector where PPP models are being introduced. Saudi Arabia (with a planned spend of $130 billion) and Bahrain (an announced project of $550 million) are primary markets for these projects at the moment. Morocco has historically created a successful PPP model in this sector. Any country in the region planning to develop PPP opportunity in the social housing sector can draw upon experiences of these countries.
- ✓ **Key Models**: A variety of PPP models are expected to be used in regional infrastructure projects going forward. The nature of these models will depend on the sector, nature of the project and proposed role of the private sector.
- ✓ In projects where management expertise is required, typically ports and social infrastructure projects (schools and hospitals); management contracts would be preferred. Tenor of the management contracts will depend on the sector, for example, management contracts for hospitals could be short term whereas for ports these could be long term;
- ✓ BOO, BOOT, and BOT structures would be favored for power and utilities projects, where developers typically also own the assets;
- ✓ Build Transfer and Operate structures are expected to be used for projects where the assets are of significant strategic importance and the public sector wants to retain 100% shareholding, while at the same time private sector participation is required for the design and build, and subsequently operation stages of the project. This will typically be the case with airport projects (similar to the structure for Saudi Arabia's Hajj terminal expansion and New Madinah airport) where private sector is responsible for Design and Build and later on operations of the project.

The potential for efficiency gains, cost savings, addressing capacity constraints and long-term knowledge transfer make a compelling case for PPP in the region. Governments will need to build homegrown models that best fit their economic and social requirements.

Chapter 1
Lessons from Around the World

There is a colossal infrastructure shortage around the world. The World Economic Forum estimates that governments globally need to spend about $2 trillion[6] annually over the next twenty years i.e. at least $40 trillion is needed to fix the old and dilapidated infrastructure, as well as build new infrastructure. In value terms, the bulk of investment is needed in core infrastructure, such as water & sewage, roads & rail, airports & seaports, and power (**Figure I**). Social sector infrastructure, such as hospitals and schools, while lower in terms of overall project value, dominate in volume (i.e. number of projects) and are equally important.

Most developed and emerging countries are possibly spending far more on infrastructure than on any other key sector, such as defence. China spent six times more on its infrastructure development than defence ($80 billion on defence in 2010 while its infrastructure spend in the same year was around $500 billion).[2]

Looking ahead at a possibly $40 trillion infrastructure spend, it is quite evident that the scale is such that traditional models of public sector procurement will not be sufficient to address the gap.

Private sector skills, capital, knowhow and risk appetite will be integral to filling part of the gap. Even if 10% of all infrastructure projects are undertaken in partnership with the private sector, the potential size of PPP worldwide may exceed $200 billion annually. This, obviously, would require robust debt markets, viable projects and an appetite for partnerships between the public and private sectors.

Over $40 trillion would be needed for infrastructure over the next 20 years. Governments would require increasing private sector involvement.

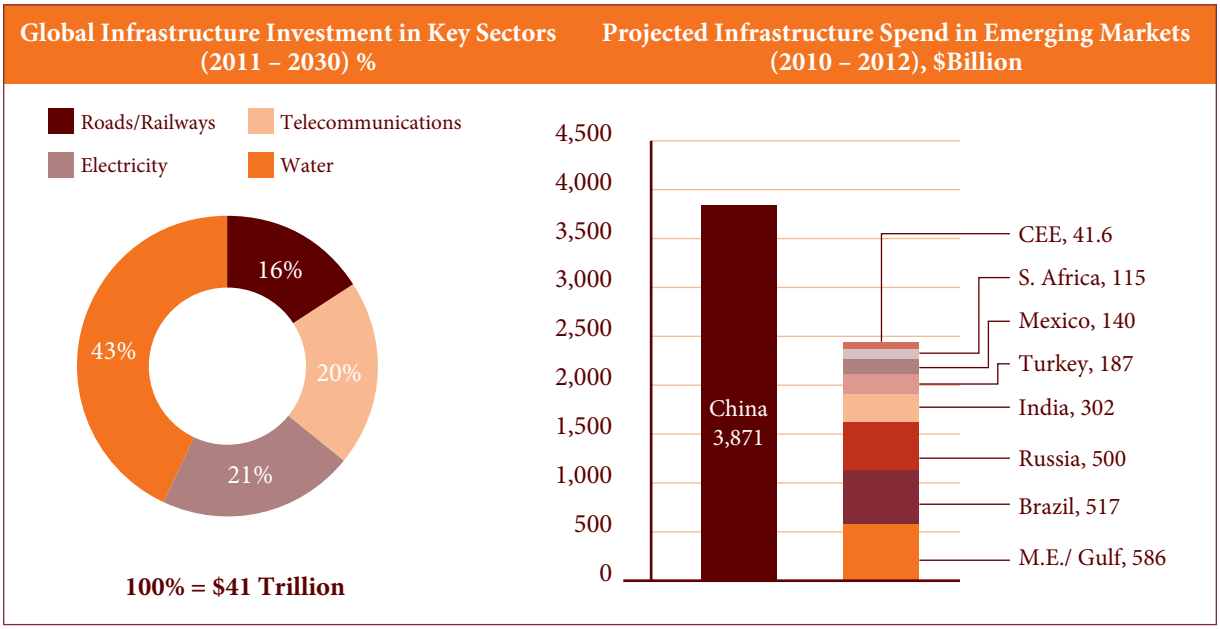
A. Evolution of PPP

While individual infrastructure projects may have been built by governments with private sector help for over the past half a century or so, PPP started to take off as a policy framework in the mid-nineties. This is perhaps no coincidence. It follows the collapse of the central planning model of the former Soviet Bloc as well as the privatization of state assets by the Western governments (British Rail, for example, was privatized in 1993).

Privatization of state owned assets was not a tactical change in economic planning by governments. It represented a philosophical shift – recognition that the private sector could provide many public services and much of infrastructure more efficiently than the governments. However, there was a limit to privatization. All government assets and services could not simply be hived off to the private sector. PPP emerged as a hybrid model for development and operation of public use infrastructure.

Two arguments emerged in support of the case of public private partnerships. One was the argument of fiscal space i.e. governments are constrained in their ability to pursue large scale infrastructure projects, therefore, partnership with the private sector is a viable route to ease those constraints. The second was that the private sector is better equipped to perform certain tasks and undertake certain

Figure I Projected Infrastructure Investment – Global & Emerging Markets



Source: Samsung Economic Research, BofA Merrill Lynch Global Research estimates, Government Sources

PPP projects worldwide could exceed $200 billion annually, quadrupling from the current level if only 10% of infrastructure development is PPP based.

The privatization of state assets in the 90s, marked a fundamental shift in governments' role in providing public infrastructure and service. PPP is an offshoot of this new paradigm.

Lessons from the US Railroad Project (1850s-1880)

The involvement of private sector in providing government services may date well back to the Romans or Greeks but the lessons of the US railroad project of the nineteenth century are relevant even today in policy planning for public private partnerships. In the mid nineteenth century, the US Government started to look at ways to improve infrastructure – particularly infrastructure that would spur economic growth and create jobs. It started granting land to private companies to build a rail road infrastructure – thus began, perhaps, one of largest public private partnerships since the industrial revolution.

The government granted land to about 80 private sector companies, who contributed capital and expertise. The private sector raised substantial capital from public markets by issuing bonds.

The initiative spurred a massive growth in rail road infrastructure – by 1880 railroad mileage in the US was close to 100,000, between 1870 and 1880, railroad mileage had increased from about 53,000 to over 93,000, almost doubling in 10 years[8].

However, the US railroad project also became controversial. The private real estate tycoons made an extraordinary amount of profit. Some were nicknamed the "the robber barons". While the controversy ultimately led to cessation of the land grant for railroad construction, the US was able to connect its farms to its markets with about 100,000 miles of railroad within a very short timeframe.

The railroad project of 1870 highlighted issues which are relevant even today. Key issues are that of transparency and accountability. Public sector programs seek to ensure public welfare, while the private sector's interest is in maximizing profits. While governments are willing to create the space for private sector to profit from the projects (without this, PPP would not take off), they seek to ensure that:

- ✓ there is a broad based public support for the project;
- ✓ profits for the private sector are not extraordinarily high;
- ✓ the selection of the private sector partner is based on a transparent and generally competitive bidding process;
- ✓ the risks are appropriately shared by the private sector; and
- ✓ projects are viable and can be financed at a competitive cost of capital.

Various models of PPP developed over the past many years tend to broadly follow the above principles.

risks. Therefore, partnership with the private sector would result in efficiency gains and cost savings.

Over time, the 'efficiency gains' argument has taken precedence in the developed and fiscally strong, emerging economies (such as China). The 'fiscal constraint' argument now applies pre-dominantly to weaker economies that are unable to build infrastructure or invest in undeveloped assets (such as mines).

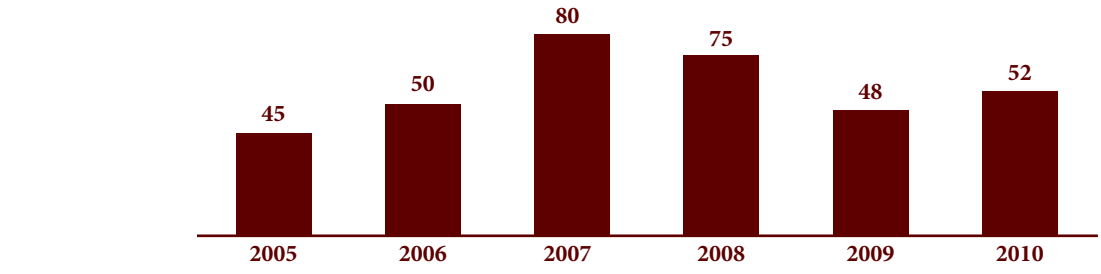
Over the past fifteen years, PPP has continued to grow in significance. Its role and relevance is set to increase in the coming years.

B. The Past Decade

PPP projects are estimated to have exceeded $1.5 trillion[9] over the past 25 years. While initial uptake was limited to a few sectors in select countries, the past ten years have witnessed a rapid growth in PPPs across sectors and territories.

Between 2005 and 2011, PPPs worth a combined $350 billion achieved financial close (in the countries active in the PPP space). The years 2007 and 2008 saw a rapid increase in value and number of PPP transactions; projects worth about $80 billion and $75 billion were closed respectively (**Figure II**)[10].

Figure II PPP Projects Closed Worldwide (2005-2010) $Billion



Average Value of Deals ($Million)	346	335	327	375	284	426

Source: RICS, Infrastructure Journal, Dealogic, Markab Research

Over $1.5 tr was spent in PPP projects over the last 25 years.

The financial crisis of 2008 dried up the project finance market - global project finance declined by over 40% between 2008 and 2009[11]. Fewer PPP projects (involving project finance) were closed due to difficulty in securing long-term project loans on competitive terms.

In 2010 and early 2011, PPP value nudged up slightly from that of 2009, matching the pre-spike level of 2006. The next one to two years may continue to be difficult for project finance, which, in turn, may have a cascading effect on PPP. Some governments have already started taking steps to reduce the impact on PPP projects.

These numbers represent a re-adjustment phase and tell only part of the story. The overall outlook for PPP is very positive. A number of factors are shaping up the sector.

Firstly, the number of countries setting up PPP directorates and undertaking PPP projects has grown rapidly and continues to grow. Secondly, in developed countries, there is increasing pressure on governments to upgrade and better manage public use infrastructure. In the US, for example, there are discussions on setting up an Infrastructure Bank. Thirdly, emerging markets (China and India in particular) are increasingly turning to the private sector for their growing infrastructure needs. Fourthly, governments are developing new models of quasi-sovereign guarantees for public infrastructure projects to ease project finance constraints. And finally, multilateral agencies are playing a more active role in this space.

The next few years will herald a new phase of development and growth for PPP. Success will vary widely, and will depend on the overall sophistication of the PPP model, designing or redesigning of policy frameworks and execution capabilities going forward.

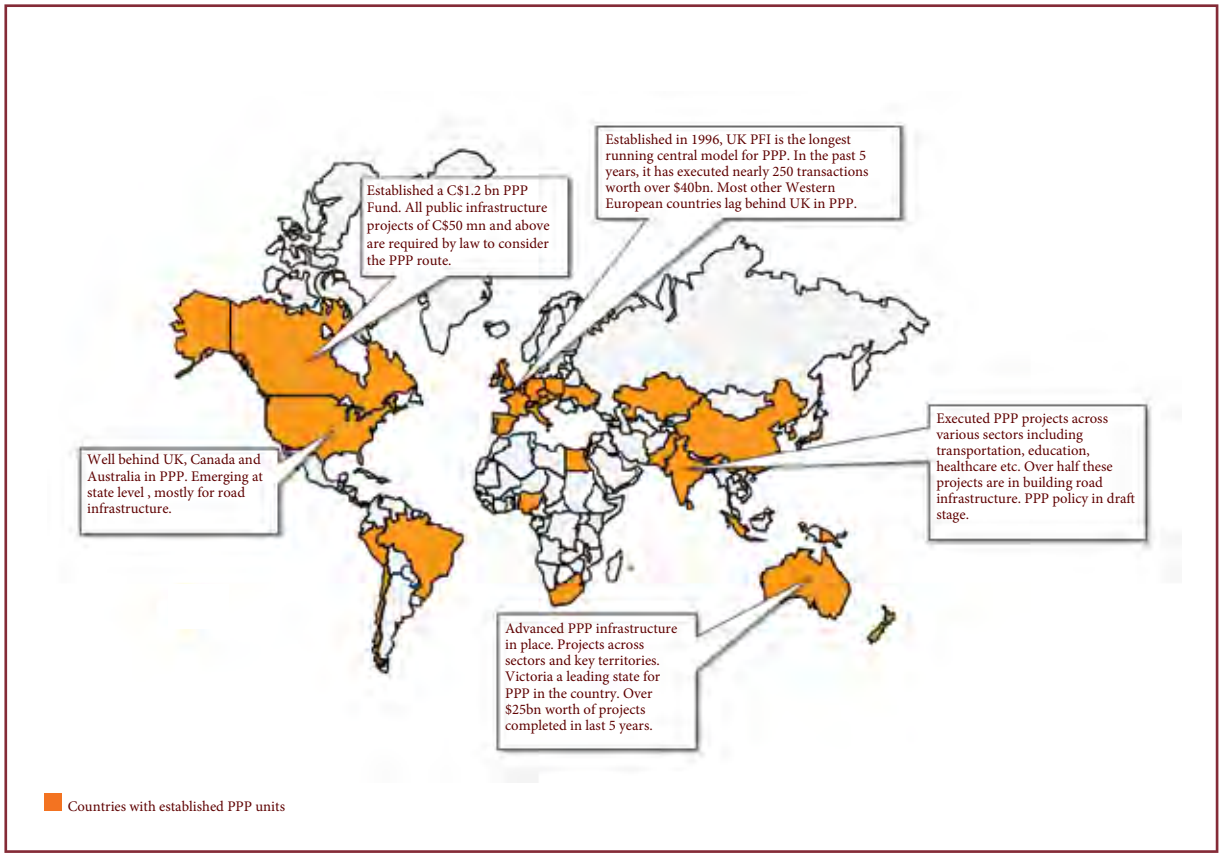
PPP now has an established track record in providing efficiency gains. Upto 30% cost savings achieved in some PPP projects.

C. Tiers of Success

To date, over 50 countries have established a PPP unit at a governmental level (**Figure III**). A number of these units were established in the last five to ten years. Countries range widely in economic and demographic profiles. These include wealthy countries such as Australia, Canada, US, and UK as well as poor countries, such as Mauritius, Papua New Guinea and Malawi. In terms of demography, these include some of the world's most populous countries, such as India, Bangladesh, Nigeria, Pakistan etc. as well as countries with very small populations, such as Singapore and Fiji.

The rapid evolution of PPP globally demonstrates that we are well past the philosophical debate as to whether or not PPP is a beneficial and workable

Figure III Countries with Established PPP Units



Source: Markab Analysis

Over 50 countries have PPP units established at government level.

Australia, Canada and UK are most successful in PPP.

model. Roads, airports, hospitals, railroads, power projects, schools, waste management systems, stadiums and even prisons have been successfully built and managed with private sector participation. Success, though, is widely varied (**Figure IV**).

At the top of the league are countries that have pioneered PPP. Four attributes put them in this league. One, they have well-defined PPP policies or even laws. Two, they have established well-functioning PPP units with clearly defined authority and responsibility. Three, they have a well-established successful track record of many projects in various sectors. Four, they have clear and ongoing access to commercial debt / project finance on attractive terms. UK, Canada and Australia belong to this league.

In the second tier are countries that share these four attributes, but are still evolving in some respects. Like the top league countries, they have already established a successful track record of many PPP projects across various sectors. However, their legislative or policy framework is relatively recent and is being built upon. Similarly, their PPP units, while in place, require additional authority and capacity depth. These countries often need to deal with bureaucratic delays in getting projects underway. The US and India fall in this category.

Then there are countries that have delivered excellent standalone PPP projects or have exhibited strong success in one or two key sectors. However, their roadmap for converting project success into policy framework is still unclear. China, Singapore and the GCC countries are good examples in this segment.

Finally, there are a host of countries that have established PPP units mainly with the objective of attracting multilateral and foreign private capital for their infrastructure projects. Due to constrained fiscal capacity and poor sovereign credit ratings, these countries face difficulties in obtaining private sector participation and securing project finance on their own. By establishing PPP units (or frameworks) they expect to build credibility with foreign donors and other financiers / partners.

Countries in the first three categories offer important lessons for the GCC. The PPP model in the fourth category countries is driven by a set of factors that have limited relevance to the GCC region.

D. Success Stories

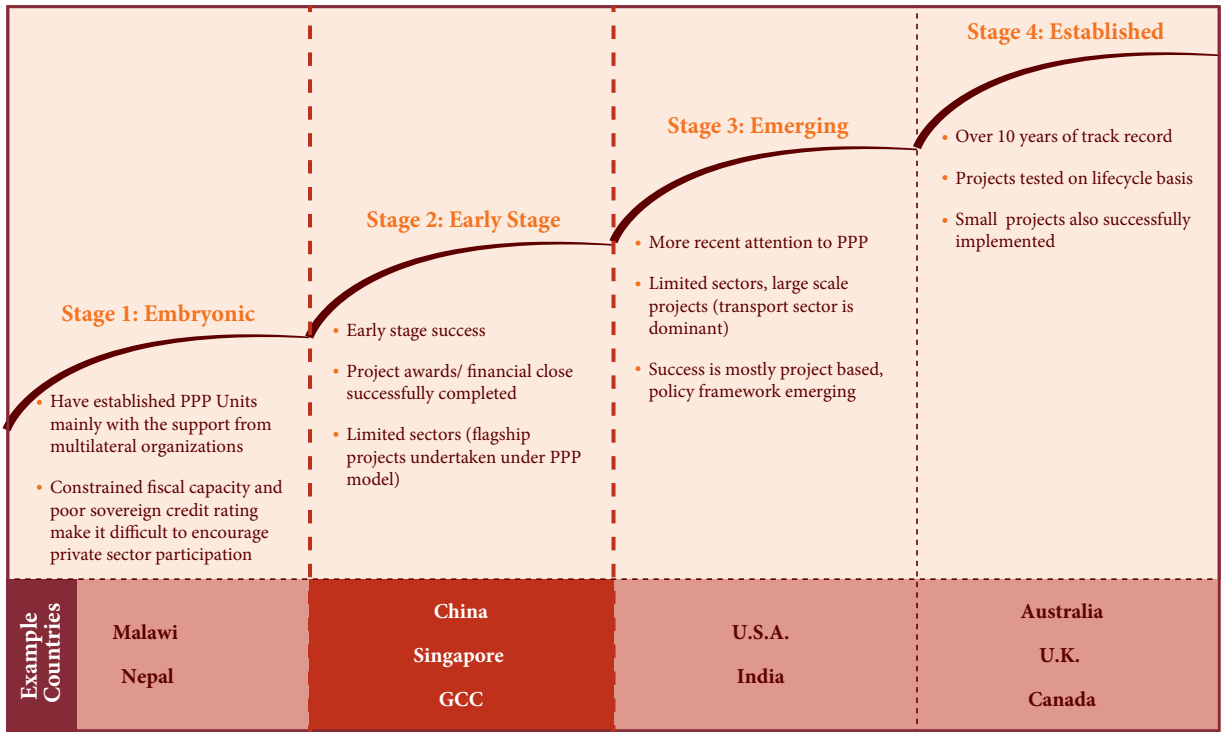
The UK, Canada and Australia stand out as outstanding PPP success stories at a global level. However, each one of them has a unique success story, offering specific lessons for the GCC.

i. The UK PFI Initiative – Depth & Diversity

The UK is widely regarded as the pioneer in public private partnerships. Its PFI model is often seen as the foundation on which PPP models have been built throughout the world. The PFI was established in the 1990s and is considered an outstanding success in terms of the number and diversity of projects delivered. Between 10% and 15% of all

Both physical and social infrastructure, including hospitals and schools are being built and operated on PPP basis.

Figure IV PPP – Tiers of Success

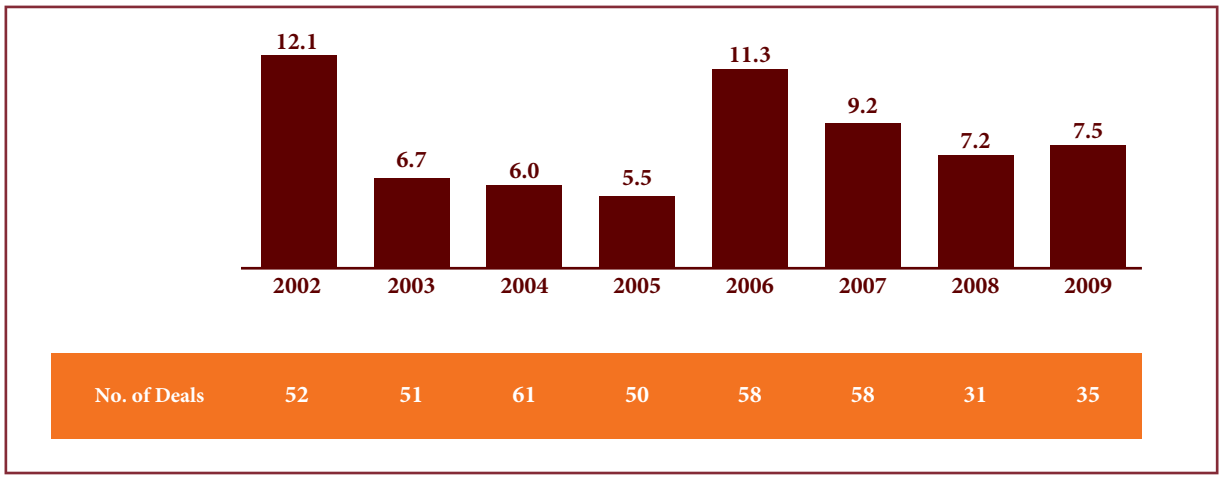


Source: Markab Analysis

infrastructure projects in the UK have been financed under the PFI scheme for the past several years[12].

Between 2002 and 2005, the UK was undertaking PPP projects of between $6 billion to $12 billion every year, topping or nearing $12 billion in 2002 and 2006. (**Figure V**). The years 2008 & 2009 saw a drop mainly due to drying up of project finance, following the financial crisis. The government has sought to address this issue by setting up an Infrastructure Finance Unit to provide greater financial support.

Figure V Value of PPP Deals in UK (2002-2009), $ Billion



Source: HM Treasury Project Database, RICS

PPP/PFI projects have been signed across multiple sectors and territories. Key sectors include healthcare, defense, education and transport. Between 2004 and 2008, the aggregate value of PPP projects in healthcare and education sectors exceeded $22 billion[13].

Between 2002 and 2007, the number of PPP projects achieving financial close has typically ranged between 50-60 every year i.e. one project of over $100 million every 5-6 days

This level of efficiency was achieved because UK was able to develop a well-defined PPP program for various sectors. It provided clarity on the nature of partnership, type of contract and bidding process etc. Private sector contractors had historical reference and a sense of predictability about the process.

ii. Australia – Efficiency Gains & Financial Depth

Australia's fiscal position is among the strongest in the world. Public debt as a percentage of GDP is 26%. Compared to Australia, the US and Japan have debt to GDP ratios of 95% and 205% respectively.[14] As such, Australia is not balance sheet constrained.Yet, PPP is central to its public use infrastructure. Between 2005 and 2009, at least 55 PPP deals worth $28 billion achieved successful financial close[15].

Australia sees efficient infrastructure development as key to its overall economic performance and long-term competitiveness. The country excels in its transparency, as well as in providing details about its policy and planned infrastructure. The sophisticated and efficient models of partnerships have resulted in substantial cost savings and efficiency gains – as high as 30% according to some studies.

Australia operates two PPP models in parallel with different payment scenarios. Under the 'Core Services PPP Model' (primarily for the social sector), the private sector only undertakes ancillary service responsibility, whereas revenue and demand risks are assumed by the government. In the second model, known as 'Economic Privately Funded Project Model' or Economic PPP, demand and revenue risks are transferred to the private sector. This model is typically applied in the case of utilities or toll roads. Although the model is designed to transfer most of the risks to the private sector, the government works in close cooperation with the private sector to structure arrangements that ensure judicious risk allocation.

Another area where Australia is very successful is in its ability to secure debt from banks and capital markets. Australia has been able to secure long-term debt on a regular basis despite the financial crisis. Project finance has consistently exceeded 80% of the project value. For example, in the case of Orange Hospital it was close to 90%.

Similarly, the Victoria Desalination project, a $3 billion project was closed in September 2009 with an 83% debt component.

Successful governments are minimising impact of financial crisis through PPP. The UK government set up Infrastructure Finance Unit to support its PPP projects.

Canada has a PPP fund of C$1.2 billion. The fund operates like a private sector entity and selects PPP projects on economic and social merit.

The Government has undertaken a number of initiatives to address funding gaps. These include accepting partially (instead of fully) underwritten bids, and providing co-lending support on a subordinated basis etc.

Due to these measures, Australia is well positioned to secure long-term debt for its key PPP projects in a fairly unconstrained manner on an ongoing basis.

iii. Canada – An Innovative Funding Model

Among the most celebrated achievements of PPP in Canada is a 12.8 km bridge linking Prince Edward Island with mainland Canada (picture on page 12). In 1807, Prince Edward Island had made access to mainland Canada a condition for joining the confederation. The condition was fulfilled one hundred and ninety years later. The C$1 billion Confederation Bridge was built by the private sector, which it will also operate for 35 years.[16]

In Canada, the PPP program has been built on a *bottom up* basis. PPP programs were first established at a provincial level. The provinces of British Columbia, Ontario, Quebec and Alberta created central procurement agencies and have been expanding the role of PPPs.

The Toronto Pearson Airport T3 PPP project was completed 18 months ahead of schedule.

In 2008, Canada created 'PPP Canada', the first federal level organization to support development of PPP projects throughout the country. In 2009, PPP Canada established a C$1.2 billion PPP Canada Fund, which with leverage targets to contribute C$5 billion towards PPP projects.[17]

Projects are selected on merit. PPP Canada has the following criteria when assessing project submissions: (i) eligibility; (ii) public benefit; (iii) market readiness; (iv) market development; (v) PPP value for money; (vi) procurement strategy and processes; (vii) scope of private sector involvement; and (viii) revenue potential.

PPP Canada has been created as a corporation. Though owned by the Federal Government, it has an independent Board of Directors, which includes private sector members.

Canada's PPP program is also renowned for its procurement efficiency and swift completion of projects. A case in point is a PPP-based construction of Terminal 3 at Toronto Pearson Airport, which was 18 months ahead of schedule.

iv. Singapore & China – Projects that Count

At policy level, PPP programs are much less evolved in China and Singapore. Singapore has executed specific PPP projects in education, sports, information technology, infrastructure etc. Though established in diverse sectors, these projects are generally standalone initiatives.

At a project level, both countries have demonstrated excellent ability to effectively implement the PPP model.

Profile 1 – Singapore Sports Hub

The Singapore Sports Hub PPP project, a fully integrated sports, entertainment and lifestyle hub, is now the world's largest sports infrastructure PPP and a landmark transaction in Singapore's emerging PPP market. The project is valued at $1.5 billion, of which about 86% is project finance. The financial close was achieved in August 2010.

The Sports Hub will include the following:

- A new 55,000 capacity state of the art National Stadium with a retractable roof
- A 3,000 capacity indoor Aquatic Center
- A 3,000 capacity multi-purpose arena
- A Water Sports Center
- Supporting Leisure and Commercial Development

The project is based on a 25 year concession agreement, under which the Singapore Sports Hub Consortium (SSHC) will be responsible for the design, build, finance and operation of the Project. Singapore Sports Council (SSC), the procuring government authority, will make an availability payment through the life of the concession, based on predetermined availability and performance criteria. In addition, third party revenue generated by SSHC will be shared with SSC.

Profile 2 – 2008 Beijing Olympics Stadium "Bird's Nest"

The Beijing Olympic Stadium project was the construction of the National Stadium in Beijing for the 29th Olympics in 2008. It was nick named as the 'Bird's Nest'. It was the first stadium project in China using the PPP structure- the project value was $560 million. Located at the southern part of the Olympic Green in Beijing, the stadium occupied an area of 21 hectares. The total floor space was 258,000 square meters with seating capacity amounting to 91,000, including 11,000 temporary seats. The construction began in December 2003 and ended in June 2008.

In August 2003, a consortium led by China International Trust and Investment Corp. (CITIC) won the bid for the Bird's Nest project. The consortium comprised the state-owned CITIC Group and Beijing Urban Construction Group (BUCG), and the private Golden State Holding Group of the United States and Guoan Elstrong from Hong Kong, an affiliate of the CITIC Group. In September, the consortium and Beijing State-owned Assets Management Corporation (BSAM), a representative of the Beijing municipal government jointly set up the project company National Stadium Co. which was responsible for financing, construction, operation and management of the project. Under the agreement, the public sector owned 58% of the total assets, while the consortium held the rest and a post-Games licensed concession for 30 years.

The Singapore Sports Hub is a $1.5 billion transaction, one of the largest sports facility undertaken on PPP basis.

v. Other Countries

Other countries such as the US and India are building their PPP programs.

- In the US, PPP projects have mainly been focused on the transportation sector (several state level PPP units are housed within the state transport department);[18]
- In India, over 880 PPP projects[19] have been implemented or are under implementation in the last 11 years. A majority of these projects have been awarded in the last 5-7 years. The National PPP Policy 2011 is at a draft stage.[20] Many of these projects are operations and management contracts.

E. Lessons for the GCC and MENA

The scale and diversity of PPP models, as well as the varied pace of its development provide some key lessons for the GCC & MENA territories.

In developing a policy and operational framework for PPP, countries in the region should consider the following lessons from the other success stories:

i. Efficiency Gains & Risk Sharing

PPP is viewed as a model for achieving efficiency gains at various levels, rather than as a source of fiscal space. On-time and on cost project completion is a key source of efficiency gains. Transparent bidding process is another key driver in keeping costs under control. Similarly, expertise and technical knowhow reduce risk of mistakes in planning, building and operating the projects. Passing majority of the project risks to the private sector ensures that it remain committed to the project on a long-term basis (**Figure VI**).

ii. Initiative and Creativity

If a government wants to build a toll road with clearly established demand forecast, it has enough precedents to choose from. But the Government of Quebec took the PPP concept to the next level when it decided to get the private sector to build and operate a concert hall. The L'Adresse Symphonique in Montreal was built and is currently operated by the private sector under a Design, Build, Finance, Maintain and Operate contract. From concert halls to sports stadiums to renewable energy, governments are utilizing partnerships with the private sector extensively.

PPP has now moved well beyond the traditional sectors of water treatment, utilities and horizontal infrastructure.

iii. Funding Strategies

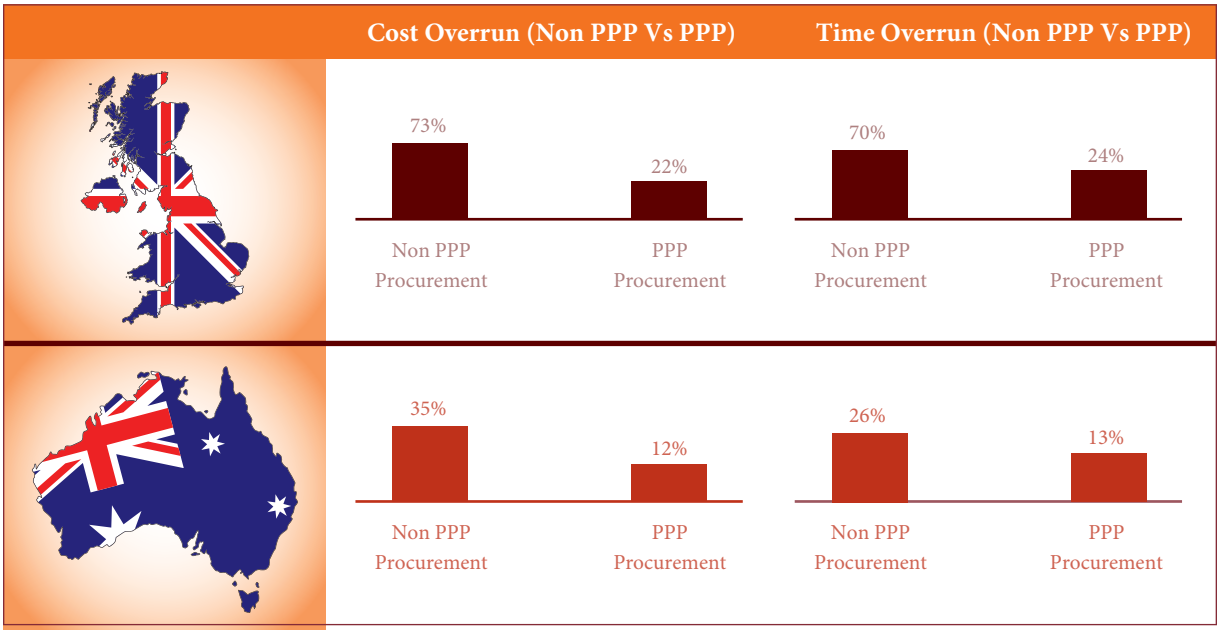
This has become particularly relevant in the current economic environment. PPP projects typically tap long-term project finance from banks. The cost of debt is a fundamental factor to consider in undertaking PPP projects.

Expensive and delayed financing can completely offset efficiency gains. Since the financial crisis, banks are lending more selectively and at a higher cost.

To ensure the availability of long-term bank debt at competitive interest rates, governments are taking various steps. The Infrastructure Fund Unit in the UK, PPP Fund in Canada and the government co-lending model in Australia are examples of the different ways in which governments are addressing funding issues.

In India, over 400 PPP projects were undertaken in the transport sector, completely transforming India's road infrastructure.

Figure VI PPP's Sources of Efficiency – Global Statistics



Source: National Audit Office Report UK, Allen Consulting Group

PPP have shown to achieve both time and cost savings.

The GCC will need to develop a homegrown PPP strategy drawing from the best global examples. Strong initiative, with a clear focus on efficiency gains, would be needed.

The GCC governments do not face funding issues. However, they can draw upon these success stories to support their PPP projects in reducing their cost of borrowing.

iv. Home-grown PPP

Successful PPP structures are all homegrown. Countries have developed PPP models which not only take into account the government's needs but also the social, political and demographic environments, as well as their long-term direction.

India is the second most populous country in the world with underdeveloped physical infrastructure. Its PPP projects are pre-dominantly in the transport and power sectors. In contrast, Singapore, a small country positioning itself as a regional hub, is building a state of the art stadium with private sector participation. Whereas, Europe is focusing more on efficient use of existing infrastructure rather than building new infrastructure, thus shifting its focus from asset-centric PPP projects to service-centric projects.

Success in PPP requires a shift in mindset. Countries that have achieved maturity do not see infrastructure assets and social sector services as cumbersome obligations of the government to the public. Rather, they see these obligations as central drivers of economic value. With this in mind they have built operative models for partnering with the private sector to achieve gains in efficiency and quality.

Chapter 2
PPP in the GCC and Key MENA Countries– Historical Perspective

Governments in the GCC have traditionally built and operated most public use infrastructure and have generally, offered its use and services to the public for free or on a highly subsidized basis. A foreign resident living in a GCC country for many years would fondly recall the days when government hospitals offered almost free treatment and parking the car was not just free of hassle but also free of cost. In an environment of massive state subsidies (made possible from oil exports), partnership with the private sector was a relatively unknown concept.

Even in the recent past, prominent infrastructure projects, such as Dubai Metro and Airport Terminal 3, have been built and operated by the public sector. Until recently, PPP seemed hardly visible as a serious policy option. Only Kuwait has recently established a PPP law.

Yet, the GCC and some other MENA countries are much further along the PPP experience curve than would appear on the surface (**Figure VII**). By 2010, Egypt had issued a PPP law and established a functioning PPP unit. It also developed a robust five year project pipeline, which (subject to a buy-in from the new government) will put Egypt ahead of many countries. Saudi Arabia is building a second airport on a PPP model. Abu Dhabi, which pioneered PPP in the power sector in the region, is undertaking PPP projects in the social sector. Others, such as Jordan are also getting more active in this space.

A. Power – A Quiet Revolution in PPP in the GCC

In the past ten years or so, the GCC has achieved tremendous success with the PPP model in the power sector. The first PPP model can be traced back to 1994 and the signing of the 289MW Al-Manah independent power project in Oman but it was Abu Dhabi's 710 MW Taweelah A-2 project (signed in 1998) that became known as the flagship PPP project in the region.

The implementation of PPP by then newly created Abu Dhabi Water & Electricity Authority ("**ADWEA**") was an outstanding success.

The process was challenging. It included enacting new legislation for separating power generation from transmission, completing a transparent and competitive bidding process, arranging long-term project finance of over half a billion dollars and drawing up a multitude of lengthy and fairly complex agreements. Most of this was being done for the first time. Yet Taweelah A-2 achieved financial close in less than a year from pre-qualification. The UK PFI, considered a pioneer in private sector procurement, has a tendering process that lasts about 34 months on an average.[21]

Contrary to popular belief, the GCC is well ahead of many countries on the PPP experience curve.

Figure VII Comparison of Global and MENA Countries on PPP Maturity

Source: Markab Analysis

In the power sector, the GCC has achieved outstanding success. Projects of over $48 billion were closed, following the PPP model.

Though not replicated at the same level, there are stand-alone success stories in other sectors. The Hajj Terminal expansion and Madina Airport stand out as successful PPP projects.

Profile – Taweelah A-2 Project in Abu Dhabi

Ownership

Emirates CMS Power Company (ECPC) was established to build, own and operate the Taweelah A-2 combined cycle power and desalination plant located in the Emirate of Abu Dhabi at the Taweelah Complex, approximately 80 km north-east of Abu Dhabi City.

The shareholders of ECPC included Emirates Power Company (60%), a wholly owned subsidiary of the Abu Dhabi Water and Electricity Authority (ADWEA), and CMS Generation Taweelah Limited (40%), a wholly owned subsidiary of CMS Generation.

Key Contracts / Financing Agreements

ECPC contracted with the Abu Dhabi Water and Electricity Company (ADWEC) to supply water and power under terms of a 20-year agreement. The Taweelah A-2 plant has total Net Power Generation Capacity of 710MW and Net Water Production Capacity of 50MIGD.

ECPC entered into a $596 million Facility Agreement with a syndicate of international banks, headed by Barclays Capital (UK) Limited as "Lead Arranger" and Barclays Bank PLC as "Facility Agent", to finance the construction and commissioning of the Taweelah A-2 facility.

The Taweelah A-2 Operating Company Limited, a wholly owned subsidiary of CMS Generation, was contracted to provide on-going management, operations and maintenance of the facility under terms of a 20-year agreement.

Source: Markab Research, Emirates CMS Power Company

Since the Taweelah A-2 project, other countries in the GCC have rapidly followed suit. PPP projects worth an estimated $48.7 billion of investments have been undertaken in the IWPP sector (**Figure VIII**).

B. Other Success Stories

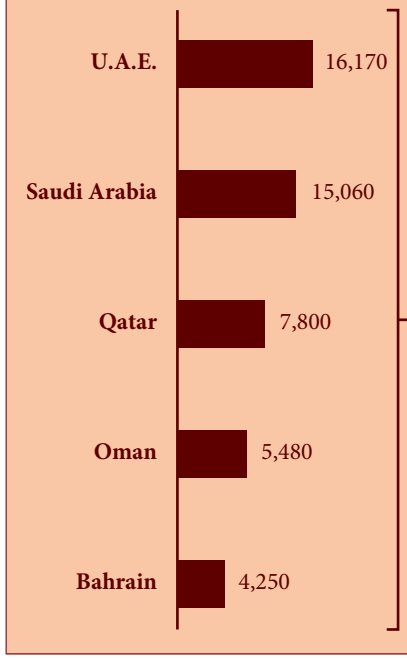
A number of other projects were also undertaken on a PPP basis, in the past few years. Though their total value is much smaller, they represent key learning that can be built upon. Among the other successes, the Hajj Terminal in Jeddah, Saudi Arabia stands out as a landmark project.

In Saudi Arabia, policy decisions relating to Hajj and Umrah are of critical importance. The religious pilgrimage is of sacrosanct importance not just in Saudi Arabia, but for over a billion Muslims worldwide.

It was, therefore, a landmark decision for Saudi Arabia to take the PPP route for the expansion of its Hajj Terminal in Jeddah. This $250 million project was awarded in 2006 under a Build, Transfer and Operate ("**BTO**") contract. The project construction was completed on time.

The successful experience from the Hajj Terminal led Saudi Arabia to commission the $1.4 billion New Madinah Airport on a PPP model. A consortium led by TAV Airports and its Saudi Arabian consortium partners Al Rajhi Holdings and Saudi Oger have been contracted the airport for 25 years on BTO basis.[22]

Figure VIII GCC IWPP/IPP Projects



No. of Projects	Type of Contracts	International Partners
9	BOO	International Power, Marubeni, GDF Suez
10	BOO and BOOT	International Power, Marubeni, Mitsubishi Corp.
4	Primarily BOOT	AES, International Power, Marubeni
9	Primarily BOO	International Power, GDF Suez, Malakoff
3	All BOO Contracts	GDF Suez, International Power

Source: MEED, Markab Research

Ports, education and healthcare are other sectors where PPP is being undertaken, primarily on long-term management contract basis.

Profile – Hajj Terminal Expansion

Objective

As one of the most important terminals for religious tourism in Saudi Arabia, the Hajj Terminal suffered from poor terminal quality and severe capacity constraints. The General Authority for Civil Aviation ("GACA") took the PPP route for the expansion and rehabilitation of the Hajj Terminal at King Abdullah International Airport under a long-term concession contract. The main objective of the model was to introduce private sector financing and technical knowhow. The transaction was also meant to be a case study for other similar aviation transactions in the country.

Project Description

20-year BTO agreement; Project cost: $250 million.

Under the Build-Transfer-Operate structure, the investor will be responsible for: (i) financing, designing and constructing new airport facilities and rehabilitating existing ones; (ii) operating, maintaining and expanding these facilities in accordance with Minimum Technical Requirements during the contract period.

Evaluation Criteria: 75% Technical + 25% Financial Weighting

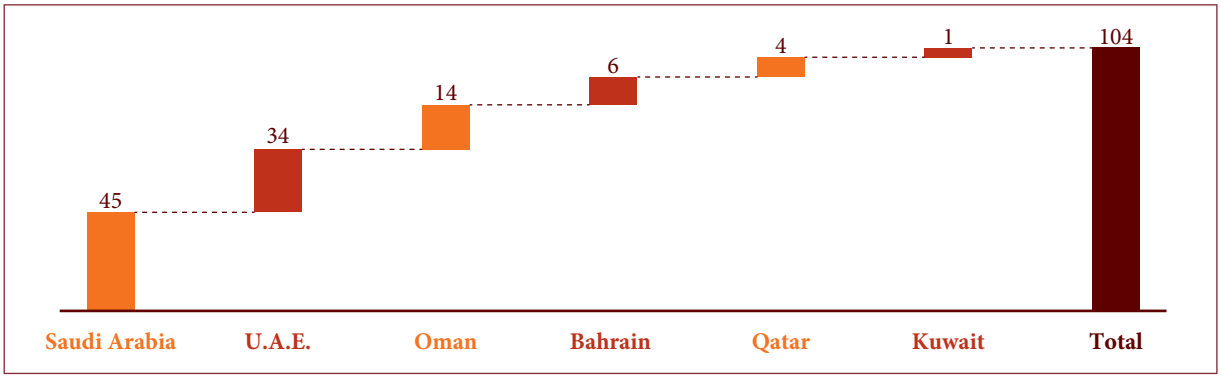
Result and Revenue Model

In December 2006, of five bids submitted for the project, the Saudi Binladin Group, in a joint venture with Aeroports de Paris Management, was selected as the preferred bidder.

According to the agreed upon revenue sharing model, the Saudi Binladin Group led consortium will collect from the GACA a charge for the use of the terminal facilities ("Terminal Building Charge" or TBC). That charge will be proportional to the number of passengers processed through the Hajj Terminal.

Additional sources of revenue include an exclusive right to develop commercial revenues within the Project area.

Figure IX Countrywise Breakdown of PPP Deals in GCC



Source: MEED, Markab Research

Jordan is one of the smaller economies in the MENA region. It was successfully able to undertake a $675 million airport expansion project by partnering with the private sector. The Queen Alia International Airport is a Build Operate and Transfer ("**BOT**") transaction, which involves a 25 year contract for Rehabilitation, Expansion and Operation Agreement ("**REOA" or "Concession" Agreement**). Under the terms of the REOA with the Government, the investor is responsible for the rehabilitation of the existing terminal, and development of a new $675 million terminal. The new extension is planned to be operational by mid-2012 and is expected to increase passenger capacity by 60%.

C. Other Than Power – Remained a Blip

Although PPP has been gaining traction in the region over the years, the power sector success story was not replicated in other sectors. Although over 100 PPP projects have been signed, (**Figure IX**) a vast majority of projects in sectors other than power are management contracts(**Figure X**). These contracts do not entail financial risk on part of the private sector and do not involve raising long term project finance. International companies are managing over 185[23] schools on behalf of Abu Dhabi Education Council. Johns Hopkins and Cleveland Clinic, two of the most renowned hospitals in the world, will be managing hospitals in Abu Dhabi under long-term management contracts.

Though the years between 2002 and 2008 saw the fastest pace of infrastructure growth in the region, with massive infrastructure projects in nearly every GCC country, the private sector's role remained subdued. If power sector is taken out, the past decade was a decade of government-led development. Three factors drove this trend.

- **The Role of Anchors**: Governments believed that to achieve success in their diversification drive, they needed to anchor the initiative, at least in the first phase of its development. Governments in UAE and Qatar rapidly built infrastructure related to tourism, real estate, education, sports and financial services. Saudi Arabia has been rapidly expanding its road and rail infrastructure besides master planning real estate development.

In the 2000s, the public sector took the lead in building new projects. Though a few PPP projects were undertaken, it was a decade of public sector led initiatives.

The GCC governments anchored projects in airports, real estate, education, sports etc.

The financial crisis has created a new set of factors that require governments to revisit their model of public sector led infrastructure development.

- **Ease of Liquidity**: Readily available funding helped governments undertake massive projects without much difficulty. With oil prices reaching record high levels between 2006 and 2008 and availability of easy credit from global banks, governments had a huge funding advantage over the private sector. Global banks were readily lending to government organizations and government led projects without being too concerned about standalone project economics. This allowed governments to rapidly undertake large-scale projects.
- **Emergence of Government Owned Private Corporations**: The decade saw the rapid emergence of 'government owned private corporations'. Governments in the region already have long-established sovereign wealth funds ("**SWF**"), whose primary role is to invest surplus government wealth in a portfolio of global assets and securities. These corporations distinguish themselves from the SWFs by undertaking an active operational role. Owned by governments but run as private organizations, they have become major players in the development of GCC economies. Qatar Foundation built a new world class education infrastructure. Mubadala, through its partnership with related companies, brought automotive parts manufacturing to Abu Dhabi. DP World became one of the world's largest ports management company after acquiring P&O's operations.

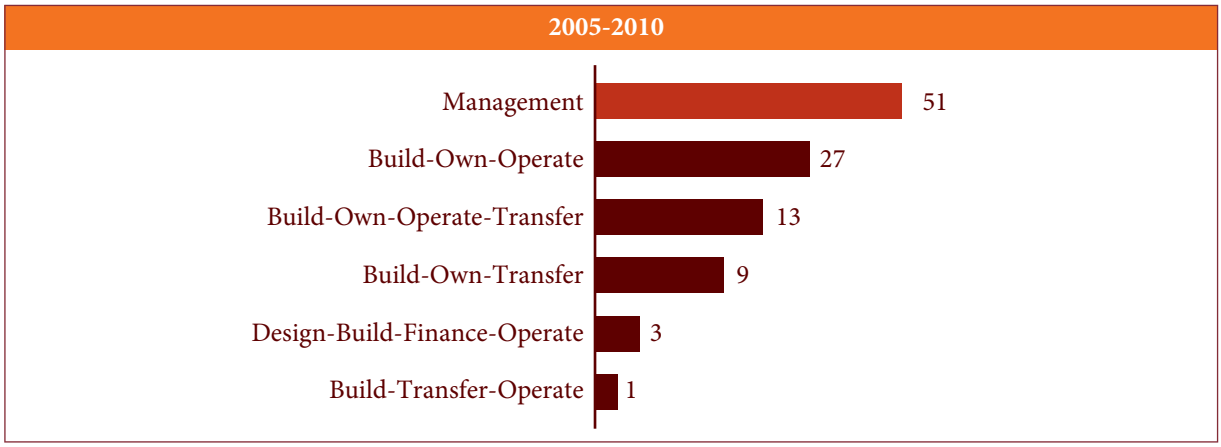
  The emergence of these organizations limited the need for project based contractual partnerships between the government and the private sector.

D. Bigger Play, Stricter Rules

The financial downturn of 2008 has created a new set of dynamics that require governments in GCC to rethink their approach to infrastructure building:

- First, much of what the governments set out to do in the first phase has already been achieved. The NDIA is set to open shortly; Dubai Metro has crossed 100 million passengers mark in the 2 years since its operations began; Saudi Arabia has awarded a $2.4 billion contract for its Hamarain High Speed Rail etc.[24] Governments are now in a strong position to consider alternative models.
- Second, project economics need to be a lot more robust to attract funding. The restructuring of various project loans (notably that of Dubai World), coupled with general global crunch in the project finance space have led banks to closely scrutinize project economics. Pricing, tenor and collateral decisions will depend on the ability of project sponsors to deliver assets on time and within budget, and to operate them efficiently.
- Third, governments, as sponsors of projects, have incurred huge losses in project delays, cost overruns and subsequent bailouts (and scale downs). Such losses could get exacerbated as governments undertake larger scale projects in a subdued economic environment. To avoid this possibility, governments in the region, would need to look for greater efficiency in their projects.

Figure X PPP Models in the GCC - Historical Projects



Source: MEED Projects

The low oil prices of the 90s served as a catalyst for successful PPP in the power sector. The current environment presents another great opportunity to save billions of dollars by using PPP as an effective tool for new infrastructure projects.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Chapter 3
Emerging Landscape of PPP in the GCC & Key MENA Territories

The Middle East and North Africa region requires an estimated $75 to $100 billion annual investment in infrastructure to sustain its economic growth and improve its global competitiveness.

The MENA region stands at a critical stage in its development. Three very powerful set of forces are at work to reshape its future. First, there is a huge need for infrastructure investment. The GCC cannot afford to step away from its diversification drive. Other MENA countries have a critical need to upgrade their infrastructure to address past underinvestment and new demand. Second, the ripple effects of the global financial crisis will continue to be felt throughout the region. Third, the Arab Spring has presented a new set of economic challenges that need to be urgently addressed, if stability is to return quickly to the region.

A. Drivers of Infrastructure Demand

To sustain the MENA region's economic growth, investment in infrastructure development will be crucial. The current level of investments in infrastructure across the whole of MENA region has not kept pace with the rapid economic and population growth of the countries. The key drivers of infrastructure demand are as follows.

- **Shortfall in Infrastructure Capacity**: Excluding the GCC, the existing infrastructure capacity in the MENA region appears to be grossly inadequate to meet both current and future needs of the respective countries. This shortage has arisen due to inadequate infrastructure investment in the past, compounded by the steady growth in population and economic activity over the last few years.
- **Population Growth and Demographics**: Demand for infrastructure-related investments is highly correlated to the population growth of any economy. The region as a whole accounts for approximately 6%[25] of the world's population (**Figure XI**). In 2010, the region's population grew at an average growth rate of 2.3%[26] compared to the world average of 1.6% per annum. Rapidly increasing population in top-tier countries in the region is exerting pressure on basic infrastructure facilities, which have not been developed in line with the population growth. More importantly, the region is characterized by a young, dynamic and increasingly urbanizing population. The most fundamental impact of urbanization is the direct increase in demands for all kinds of infrastructure, including basic infrastructure (e.g. water supply and housing), economic infrastructure (e.g. roads and electricity), and public services (e.g. educational facilities and hospitals).

B. Impact of Global Financial Crisis

The financial crisis of 2008-09 suddenly put brakes on a number of projects that were being undertaken in the region. Since the crisis, governments have scaled back or even shelved some of their plans due to funding constraints. The slowdown of the past two years has further exacerbated the infrastructure shortfall. The region will need to kick-start its projects and infrastructure development programs sooner rather than later to cope with the growing shortfall and make up for the lost time of the past three years.

C. Arab Spring and the Investment Imperative

One of the most striking outcomes of the Arab Spring is a general convergence towards economic reforms in the region.

Elections in Tunisia and Egypt signify the beginning of stability in these countries. Pending smooth transition of power, it is expected that their public sector will focus on putting the economies back on track, which envisages redrawing public investment program and putting money at work in order to foster economic growth and create job opportunities for the young workforce.

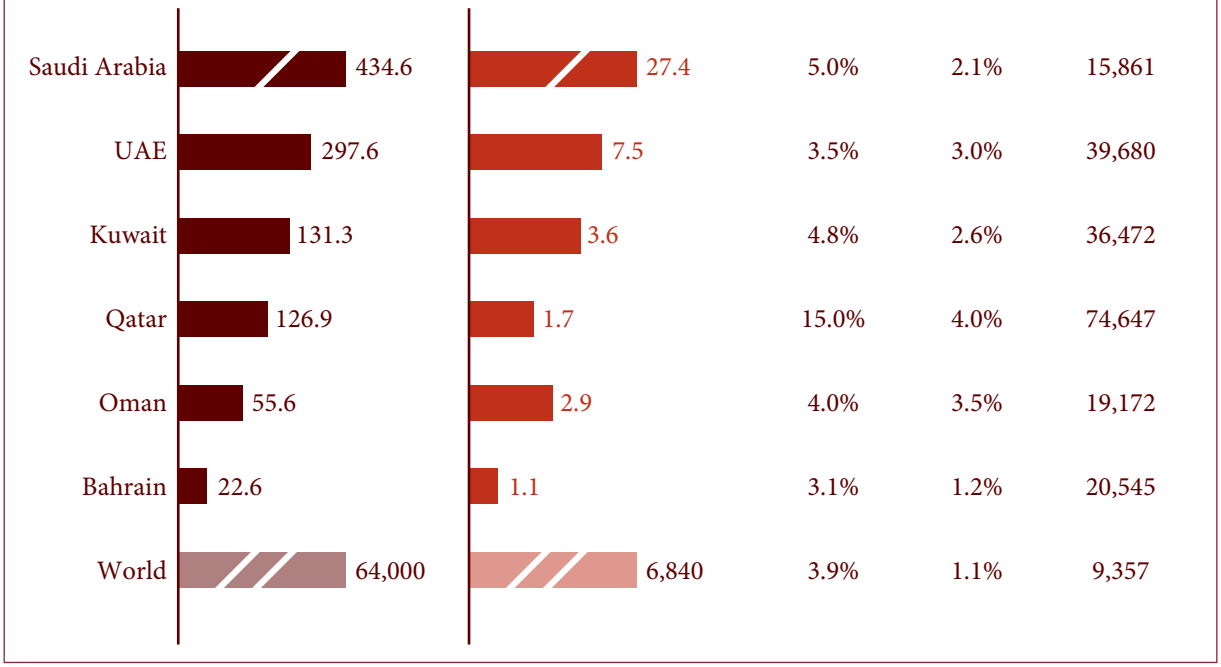
The Arab Spring has created new challenges and opportunities. Since the beginning of the Arab Spring, there has been a business disruption. While this disruption has mostly impacted the countries directly affected such as Egypt, Libya and Tunisia, the overall impact has been felt throughout the region. The IMF has tempered its growth forecasts for most of the region citing Arab Spring as the key reason (**Figure XII**). Similarly the cost of capital for project finance has increased due to perceived high political risk.

Growing need for infrastructure development, ripple effects of the global financial crisis, and economic challenges emanating from the Arab Spring are key forces shaping the MENA region today.

MENA's planned infrastructure spend of $2 trillion over the next decade will create substantial PPP opportunities for the private sector.

One of the most striking outcomes of the Arab Spring is a general convergence towards economic reforms in the region.

Figure XI GCC Economic and Population Growth Rates



Source: IMF, World Bank

There is an immediate need to address this short term challenge. The GCC countries by and large are already on business as usual mode. According to latest report by *Business Monitor*; Oman, Qatar, Saudi Arabia and UAE are among the top four countries in the "Middle East Infrastructure Business Environment Rankings". Other MENA countries need to follow suit.

In the medium to long term, the Arab Spring has provided an excellent opportunity for policy makers to address economic requirements of their citizens, primarily that of employment and better standards of living. Efficient infrastructure investments hold the key to long term economic stability and generation of employment in the region.

Figure XII Economic Growth Forecast – Pre and Post "Arab Spring"

	Forecast in October 2010		Forecast in September 2011		
Economy	2011	2012	2011	2012	Impact of Arab Spring
Algeria	4.0	4.1	2.9	3.3	↓
Bahrain	4.5	4.8	1.5	3.6	↓
Djibouti	5.4	6.1	4.8	5.1	↓
Egypt	5.5	5.7	1.2	1.8	↓
Iraq	11.5	11.0	9.6	12.6	↓
Jordan	4.2	5.0	2.5	2.9	↓
Kuwait	4.4	5.1	5.7	4.5	↓
Lebanon	5.0	4.0	1.5	3.5	↓
Libya	6.2	6.4	N/A	N/A	↓
Mauritania	5.1	5.4	5.1	5.7	↓
Morocco	4.3	5.0	4.6	4.6	↑
Oman	4.7	4.1	4.4	3.6	↓
Qatar	18.6	9.3	18.7	6.0	↑
Saudi Arabia	4.5	4.4	6.5	3.6	↑
Syria	5.5	5.6	-2.0	1.5	↓
Tunisia	4.8	5.0	0.0	3.9	↓
UAE	3.2	3.9	3.3	3.8	=
Yemen	4.1	4.1	-2.5	-0.5	↓

Source: IMF, Arab World Competitiveness Report 2011

With its successful track of record of over 100 completed projects, PPP is now graduating to the next level of sophistication in the region.

D. PPP Outlook in the GCC and MENA Region

As mentioned in the previous section, the region has an established history of PPP and countries in the MENA region are at different stages of PPP maturity. The diversity of the economies has made the PPP landscape more diversified in terms of structures, sectors and nature of involvement of the public and the private sectors.

PPP is poised for a strategic place in the MENA region. While projects in the past were mainly management contracts, projects planned for the next two years are based on greater risk sharing between the public and private sectors (**Figure XIII**). With its successful track record of over a 100[27] completed and ongoing projects to date, PPP is graduating to the next level of sophistication, whereby the focus will need to shift from projects to programs. The region's acceptance of PPP can also be gauged from the fact that Kuwait and Egypt have now established dedicated PPP arms which are actively involved in developing policy framework, drafting the PPP Law, developing a pipeline of projects and protecting private sector's intellectual property rights.

The GCC and Egypt are at par with, or even ahead of many other major emerging countries. The key is to decide how best to leapfrog forward. Understanding the outlook of PPP in the MENA region requires a close assessment of (i) PPP initiatives and infrastructure activity in key countries, (ii) key sectors of focus and (iii) key PPP models at work.

i. Key Countries:

Key countries to watch for include Saudi Arabia, Qatar, UAE, Kuwait and Egypt:

- Saudi Arabia has planned projects across several infrastructure sectors including power and water, airports, ports, railways, education and healthcare. Not surprisingly, Saudi Arabia is expected to be the biggest market for infrastructure projects in the MENA region. A sizable allocation of $130 billion for social housing alone signifies the scale of projects being planned in the country.

  KSA's success in the power sector and airports signify its increasing confidence in the PPP model. For example, GACA, after its successful experience with the expansion of Hajj Terminal and award of Madinah Airport already considers PPP as a cornerstone of its airport development and modernization programs.

  Similarly, the National Water Company ("**NWC**") established through a Royal Decree in 2008 has started undertaking PPP projects on an O&M joint venture basis. NWC has undertaken or planned a water and waste management program for 16 major cities in the Kingdom[28].

- Qatar is embarking on a wide ranging infrastructure investment plan as a part of its National Development Strategy and in conjunction with preparation for the FIFA World Cup 2022. An infrastructure spending plan of $150 billion over the next five years on railway network, roads, wastewater, and sports facilities is underway. Qatar already has a successful track record of PPP in hydrocarbon and water and power sectors. It has also been successful in partnering with best in class globally recognized universities in setting up educational institutions. Other PPP initiatives are underway including the establishment of a PPP Directorate. Details on Qatar's PPP initiatives are discussed in the next chapter.

- Kuwait has made a significant transformation from a purely public procurement model to moving towards PPP. A PPP Law has been drafted (under the umbrella of Partnerships Technical Bureau) and approved by the legislature. A series of infrastructure projects are being designed for partnership with the private sector.

- Egypt already has a PPP Law and a dedicated PPP unit in place. Several projects have been completed successfully and a large number of projects are in the pipeline for 2011-16. There are indications that the program will be continued by the new leadership, albeit with some modifications.

- In the case of UAE, Abu Dhabi can be considered the pioneer of PPP in the region, when Abu Dhabi Water and Electricity Authority initiated the very first IWPPs in the region. Since its first PPP venture Abu Dhabi has successfully completed a number of IWPPs. Since then, there has been limited application of PPPs in education and healthcare sectors (mostly Management Contracts).

  In terms of other infrastructure development, PPP is in earlier stage of development. Eithad Rail has appointed UBS as a financial advisor to the project to explore financing for the project including the use of PPP.[29]

- The neighboring emirate of Dubai is also considering the PPP model for its key projects. The most prominent is $1500 million IWPP project. Unlike Abu Dhabi, Dubai has historically followed the public procurement

Saudi Arabia will remain the biggest market for infrastructure projects in the region, followed by Qatar and the UAE.

With the draft PPP Law under consideration and 1500 MW IWPP up for bidding, Dubai is emerging as a new entrant in the PPP landscape.

Railways is the next sizable core infrastructure sector which requires substantial investment across the GCC region.

model in developing its power projects. Similarly, Dubai's Roads and Transport Authority ("**RTA**") has developed policies and procedures and identified four projects that may be tendered on a PPP basis. A draft PPP law is said to be under consideration.

countries alone, the total value of rail projects is approximately $79 billion, including the GCC railway network with an estimated project cost of $30 billion. Following Dubai Metro's successful implementation (2 out of the planned six lines), a number of countries in the region

Egypt – Effective and Focused PPP Development

Egypt has one of the most comprehensive and centralized PPP Units in the region. The Public Private Partnership Central Unit (PPPCU) is part of the Ministry of Finance and identifies and coordinates PPP programs at a national level.

The role of the PPPCU is to create a standardized and legal framework for the PPP projects at a national level. The New PPP Law that took effect from May 2010 focuses on giving guidelines on general procedures applied within PPP deals, provide a framework for central and satellite PPP units, provide guidelines for procurement and tendering procedures and create a legal framework for dispute resolution.

The success of the PPP unit is reflected by the numerous awards it has won including the "PPP 2009 award" for the best performing government organization in Africa. Its strong reputation has thus helped the entity develop a pipeline of 33 projects with an estimated value of EGP44.3 billion between 2011 and 2015. A majority of these projects are in social infrastructure, utilities and roads.

ii. Key Sectors:

Sectors to watch out for potential PPP activity include Power and Water, Railways, Airports, Healthcare and Education Alternative Energy, Social Housing, and Sports Infrastructure.

- **Power and Water**: The IPP (or IWPP) model is well established in the MENA region. Only in the GCC, 44 planned power and water projects[30] are valued at $31.9 billion, of which the UAE leads with 11 projects worth $10 billion. Following regional examples, Dubai has also initiated its first IWPP project. The demand for power is expected to triple over the next 25 years and water industry will be worth over $70 billion over the next ten years. PPP will continue to play an active part in this sector.

- **Airports**: New airports and airport expansions are being planned across the region. The MENA region, in particular the GCC, is one of the fastest growing aviation sectors in the world with passenger demand growth of over 20% over the past few years, following the implemented economic reforms which have fuelled growth in the business and tourism sectors leading to a large inflow of visitors. As a response to the expected increase in passenger traffic, the MENA region is currently home to numerous airport expansion projects.

  Success of PPP in Saudi Arabia and Jordan indicates that the region will continue to follow the PPP route in this sector. Saudi Arabia which plans the largest number of airports in the region has already integrated PPP in its airport development plans.

- **Roads and Railway Networks**: In the GCC

On developing PPP policy frameworks and legal structures, Kuwait and Egypt are edging ahead of other countries in the region.

are planning railway and metro networks. Abu Dhabi and Doha are the two prominent cities planning a city rail network.

The value of ongoing roads and highways projects is in the range of $18-20 billion. Despite this massive development, the PPP models for this sector are yet to be configured. A key challenge that needs to be addressed is the mechanism for demand risk sharing between the public and private sector. PPPs in this sector have been successful in many countries and have been most widely used. There is a large number of global examples for the region to draw from and adapt to its local needs.

- **Education and Healthcare**:In the recent years, higher quality of eduation has taken a central priority. Saudi Arabia has established KAUST as a center of excellence and with an endowment fund of $20 billion. QF's Education City has attracted international universities like Carnegie Mellon, Johns Hopkins etc.

  PPPs have a very central role to play in developing this sector particularly in the areas of higher education and R&D. A PPP model for attracting renowned international universities has already been successful. Qatar has taken a lead in following this model and other countries can follow this lead. In the area of research and development, new models of PPP can be developed.

  Public sector healthcare has come under tremendous pressure over the past few years. Governments are increasingly looking at encouraging the private sector participation and reducing their costs of healthcare subsidies. It

is estimated that healthcare costs will increase fivefold by 2025 to $60 billion from its current level of $12 billion, equivalent to a CAGR of nearly 9%.

Governments in the GCC are introducing mandatory health insurance whereby the employers will be required to bear the health insurance costs.

This will create opportunities for the public sector to operate their hospitals more efficiently in partnership with the private sector. For example, these partnerships can take the form of joint ventures or long term management contracts for existing or new hospitals.

The primary driver of future growth in healthcare is the underlying population growth of each country in the region. With a burgeoning population, and increased awareness of healthcare patients, healthcare related expenditures, in particular in the GCC region, are expected to increase significantly in the coming years.

- **Social Housing**: This is a new sector emerging where some of the GCC countries are committing significant capital to build affordable housing for their citizens. Bahrain and Saudi Arabia are the leading players. KSA has committed a total of $130 billion to social housing projects, whereas Bahrain has recently launched a Social Housing PPP project along with a private developer (Naseej) for a total project size of $550 million. These projects can serve as PPP templates for other countries in the MENA region.

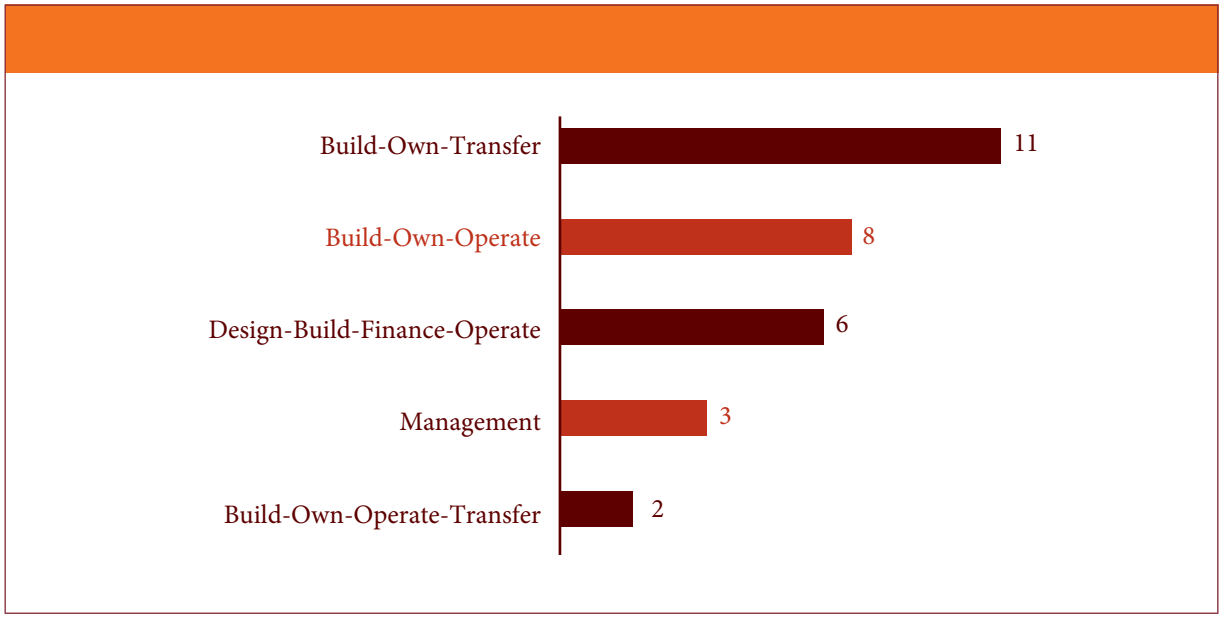
iii. PPP Models:

There is a wide range of PPP models being used in the region depending on the nature of the sector, project requirements and the role of the private sector. Going forward, following patterns may emerge with respect to application of PPP models:

- **Management Contracts**: These will largely be used in management of social infrastructure projects e.g. schools and hospitals. It is highly likely that physical facilities for such projects will be provided by the public sector and the private sector brings its management expertise. Other sectors where these contracts can be used include ports and airports where private sector is engaged to manage whole or part of the facilities;
- **BOO/BOOT/BOT**: All of these models are expected to be primarily used in the power sector, or in instances where private sector is also expected to invest or arrange financing for the projects. As mentioned earlier, the MENA region has an established track record and experience of utilizing these structures for IWPPs. For other core infrastructure sectors including transportation (like airports), these structures may be used on a selective basis;
- **BTO**: This structure has been used in building two large airports in Saudi Arabia. It is likely that in the region, BTO will be the primary model for participation of private sector in projects of strategic importance and where the government retains ownership of the asset.

Going forward, BOO and BOOT models will remain favored in the region for infrastructure projects.

Figure XIII PPP Models in the GCC – Planned Projects (2010-2012)



Source: MEED

The healthcare and education sectors offer opportunities for introducing innovative PPP templates.

For railways and roads projects, judicious transfer of risk to the private sector will be necessary for viability of PPP.

Figure XIV Active Countries for PPP projects within the MENA region

Qatar
- Country is embarking on some extremely large infrastructure projects in diverse sectors
- PPP actively used in the power sector however new sectors are being explored

Saudi Arabia
- Largest market for infrastructure projects in the region
- Multiple PPP programs have been set up for each sector of the economy e.g. airports, power, healthcare etc.

UAE
- Abu Dhabi considered the pioneer of PPP projects within the power sector
- Since then, has undertaken mostly management contracts primarily within education and healthcare

Egypt
- PPP Law and Unit in place
- Several projects have been completed and several projects in the pipeline
- Program likely to be continued under the new government

Jordan
- Have applied the PPP model to a few project
- The Queen Alia International Airport is the most ambitious project using the PPP model

Kuwait
- Established PPP arm which is actively involved in developing policy framework
- PPP Law in draft stage and projects involving PPP are in the pipeline

Source: Markab Analysis, MEED Projects

E. Key Challenges

The region faces some key challenges in the evolution of PPP. These challenges include:

- **Post Crisis Fiscal Squeeze**: Each country in the MENA region has its own set of dynamics and reaction to the global financial crisis. Even the wealthy countries in the region have been affected and they had to address some of the liquidity issues related to the financial crisis. Generally, the response has been to consolidate and prioritizing of projects rather than fundamental change in the economic and fiscal management;
- **Pressure on Project Financing**: Due to liquidity crisis in the global markets, international and regional banks have suffered squeeze on their ability to liberally provide project finance at competitive rates. Banks are also looking for more secure projects. Some of the leading global banks (which are typically active in project finance deals in the region) are themselves undergoing restructuring and pruning down their portfolios. For example, the Eurozone crisis has deeply affected some of the European banks which were very active in taking principal interest and being lead arrangers for project finance deals in the region;
- **Geopolitical Factors**: The geopolitical situation in the region is still evolving. Most policy makers recognize that there is a cost of business disruption that feeds into political and social

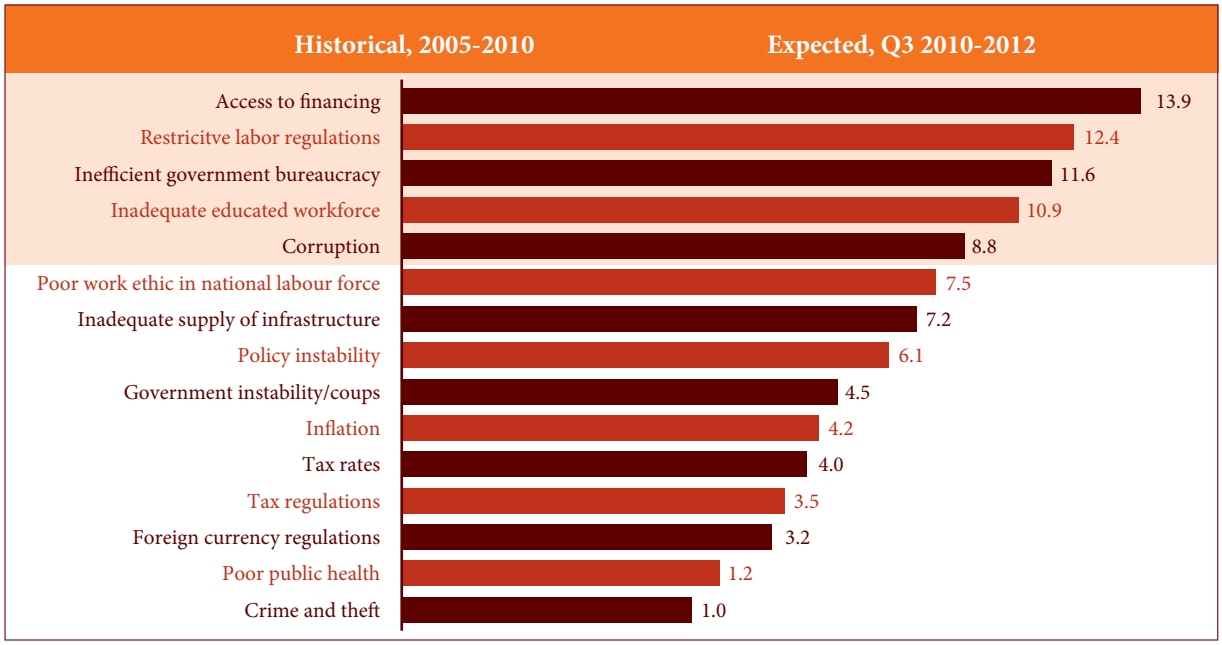
Figure XV Key Problems in Doing Business in the Arab World

PPP Framework	Key Sector	Example Project	Rationale
Management Contracts	• Education • Healthcare	• Beaconhouse school	• Sectors where the government is purely seeking private sector expertise; • Usually considered the first step towards PPP.
BOT, BOO, BOOT	• Power & Water • Waste Treatment	• Taweelah A2 • Jubail IWPP	• These are partnerships wherein the private developer/operator is also involved in financial risk by providing equity
BTO	• Strategic Assets	• Hajj Terminal	• The government wants to ensure ownership of the asset once completed. E.g. Hajj Terminal is a very strategic asset for the government of KSA
DBFO	• Concessions related industries	• Kuwait Metro • NYU Abu Dhabi	• Typically as a result of fiscal constraints that the government provides the private sector with the tools and privileges to develop and operate the entire project; • In many respects, DBFO contracts are similar to concessions.

Source: Markab Analysis, MEED Projects

Transparency and accountability, economic viability of projects and evolving geopolitical situation are among the key challenges faced in furthering the PPP initiative in the region;

Figure XVI Key Challenges in Doing Business in the Arab World



Source: World Economic Forum Executive Opinion Survey 2011

unrest. This may discourage the private sector and banks to participate in infrastructure development. The governments may need to consider additional interim measures to mitigate, what businesses perceive as political risks related with the unrest.

- **Transparency and Accountability**: The region is often perceived as opaque where there is a high degree of information asymmetry. Lack of transparency and accountability is also considered to be source of leakage and overspending on public sector projects. This challenge needs to be addressed and PPP can be a positive contributor in addressing this issue.
- **Availability of Labor Force**: Diversity in the MENA economies makes it very difficult to generalize labor force challenges. Countries such as the UAE that have streamlined their labor policies and procedures have the highest degree of flexibility in configuring their labor force and attracting global talent.
- **Public Sector Bureaucratic Hurdles**: Government bureaucracies often perceive PPP as a threat to their day to day authority and control since it involves ceding of certain responsibilities to the private sector. In countries such as India this is a major hurdle in implementation of PPP laws. This can be addressed by taking gradual steps, for example, creating a 'champion' who can take ownership of streamlining a PPP framework and working in coordination with various government functions and departments.
- **Underdeveloped Capital Markets**: Large scale PPP projects often require private sector consortiums between local and international companies. Lack of depth in regional capital markets often constrains participation of local partners with limited financial capital. It also restricts the participation of international investors, financial investors, infrastructure funds etc. since such lack of depth places makes their exit more difficult. In India and Singapore, depth in capital markets has provided opportunities to large local groups and investors to participate in PPP opportunities.

F. Tapping Infrastructure Funds as Investors in PPP Projects

In the more developed PPP regimes, infrastructure funds have played a very significant role in delivery of capital, particularly equity financing. Presence of dedicated infrastructure funds is a sign of maturity of the PPP regime.

These infrastructure funds leverage on the inherent characteristics of infrastructure assets as a distinct asset class. Some of the key characteristics of infrastructure assets include:

- Long term and better matching for the risk profile of institutional investors like pension funds and insurance companies;
- Cashflows are predictable;
- Stable returns and inflation hedged;
- High capital expenditures and specialist technologies create high and strong entry barriers;
- Usually offtakers are government utilities thus reducing overall risk profile.

Infrastructure is getting recognition as a separate asset class. A number of infrastructure funds emerged during the last decade.

Infrastructure funds can be a valuable source of financing for PPP projects in the region.

In the UK, Australia and Canada, a number of large infrastructure funds are operating and serving as catalyst to infrastructure development.

Macquarie, an Australian asset management company can be considered a pioneer in the field of infrastructure asset management industry. Starting off as an infrastructure bank, it now covers a whole range of wholesale banking activities focused exclusively on infrastructure. Macquarie today has over $300 billion of assets under management, covering Asia, Europe and North America.

Similarly, in Canada, Borealis is a leading manager of infrastructure funds. It is the investment arm of OMERS, a leading pension fund in Canada which has over C$50 billion of funds under management. Borealis has invested C$7 billion of OMERS' funds in 20+ infrastructure investments, each with an enterprise value of C$1 billion or more. Borealis specializes in investments in infrastructure assets, specifically large projects. Pension funds like OMERS have a preference for infrastructure assets as the risk and return profile of these assets is consistent with their investment objectives and their liquidity requirements. For example, infrastructure investments are typically inflation hedged and often generate regular cash dividends. Pension funds have annuity like payments which are mostly inflation-linked. OMERS' over 10% allocation to infrastructure investments signify its strong preference for such assets.

In the United Kingdom, a number of private equity and infrastructure asset managers are exclusively focusing on infrastructure sectors. 3i, one of the leading private equity firms in the UK, has a dedicated business arm for infrastructure investments. It has launched a closed-end listed fund which has market capitalization of over £1 billion.

In the MENA region, there are a few dedicated infrastructure funds in operation. Emerging Markets Partnership ("**EMP**"), a leading global infrastructure private equity firm established its presence in the Middle East back in 2001, when private equity was not even existent in the region. EMP is a leader in the field of infrastructure financing in emerging markets. It was established as an asset management company in the early 1990s with the objective of providing equity financing to infrastructure projects in emerging markets. It established funds in Europe, Latin America and Asia. Setting up its regional offices in Bahrain, EMP raised $730 million for IDB Infrastructure Fund. The fund was lead sponsored by Islamic Development Bank and other sponsors included Public Pension Agency of Saudi Arabia, Government of Bahrain, and Government of Brunei. Islamic Development Bank, a multilateral agency, played a critical role in raising the required commitments for the fund. Amongst its other objectives, IDB promotes infrastructure development in the Islamic countries and IDB Infrastructure Fund became one of the vehicles to achieve this objective.

The IDB Fund made several investments in infrastructure assets in sectors including power, transportation, telecommunication, airports, toll road and other infrastructure related sectors. Its biggest investment was acquisition of AES Power's regional portfolio, when the fund invested $150 million in acquiring three distinct IPPs.

For IDB and other co-sponsors, the experience of this fund was very encouraging and they are now contemplating launch of a successor fund.

Abraaj Capital followed the infrastructure financing trend of the 2006-2008 era and set up a $2 billion Infrastructure and Growth Fund. A number of other funds emerged focusing exclusively on infrastructure assets. Macquarie entered into a joint venture with Abu Dhabi Commercial Bank to establish a $1 billion ADCB Macquarie Infrastructure Fund.

Infrastructure funds can be a valuable source of financing for PPP projects in the region. Historically, these funds have faced tremendous challenges in finding high quality transactions. They occasionally wavered from their sector focus and at times included non-infrastructure assets that have a riskier profile. Growth in PPP activity and consequent generation of projects will result in a larger universe of potential investment opportunities for these funds.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Chapter 4
Qatar and PPP – Past and Evolution of Future Opportunities

Over the last 10 years, Qatar has redeployed dividends from its LNG investments to broaden the country's economic base.

Qatar has demonstrated an impressive record of economic growth in the past decade. During this period, Qatar undertook rapid infrastructure development, as well as expansion of its oil and gas facilities. The country hosted mega events, such as the Asian Games and topped its achievements by winning the right to host the 2022 FIFA World Cup. This growth has been achieved through dividends on Qatar's investment in its hydrocarbon reserves. During the late 1990s, Qatar was merely an oil exporter with a capacity of less than 500,000 barrels per day ("**bpd**") (which today has almost doubled to 900,000 bpd approaching the million bpd mark). Today, it is the largest exporter of Liquefied Natural Gas ("**LNG**") in the world.

Qatar has redeployed dividends from its LNG investments to broaden the country's economic base. It successfully diversified into sectors, such as tourism (built around sporting events). Qatar has focused on development of its social sectors including healthcare and education. Though these sectors appear small at this stage (in terms of their contribution to the national GDP), they are, over time, expected to contribute significantly to the country's GDP and growth, as well as to the development of its national workforce.

In October 2008, the Government of Qatar (**GoQ**) issued a document, outlining its vision through to 2030. The Qatar National Vision 2030 ("**QNV 2030**") outlines Qatar's long term objectives of achieving economic stability, developing human capital and ensuring social justice for all of its citizens. In order for Qatar to achieve economic stability, QNV 2030 envisages productive deployment of economic dividends from Qatar's hydrocarbon sector to diversify its economic base. The diversification will help reduce the risk of volatility in the state's revenues due to oscillations in the global oil prices. It also promotes inclusion of the private sector in developing the Qatar's infrastructure and achieving economic diversification. The Qatar National Development Strategy ("**QNDS**") outlines specific steps planned by the GoQ during the years 2011-16, in line with the objectives outlined in QNV 2030.

A. Strong Fundamentals and Robust Investment Levels

Qatar has the highest GDP per capita in the world. Topping $100,000, Qatar is twice as wealthy as the US (on a per capita basis).[31] Its economy is the fastest growing in the region and one of the fastest growing in the world. High levels of sustained economic growth have been the hallmark of Qatar in the last decade (**Figure XVII**). According to the *IMF*, despite the global financial crisis (and its impact on the region), Qatar is still expected to continue with a 6% growth rate over the next 2 to 3 years. Only a handful of countries worldwide claim to match or exceed this growth rate in the current economic environment. This resilience and quantum of growth gives Qatar sizable fiscal capacity to meet its future infrastructure requirements, including the massive infrastructure

Key Objectives of Qatar's National Vision 2030

1. **Human Development**

   Development of all its people to enable them to sustain a prosperous society.

2. **Social Development**

   Development of a just and caring society based on high moral standards, and capable of playing a significant role in the global partnership for development.

3. **Economic Development**

   Development of a competitive and diversified economy capable of meeting the needs of, and securing a high standard of living for, all its people for the present and for the future.

4. **Environmental Development**

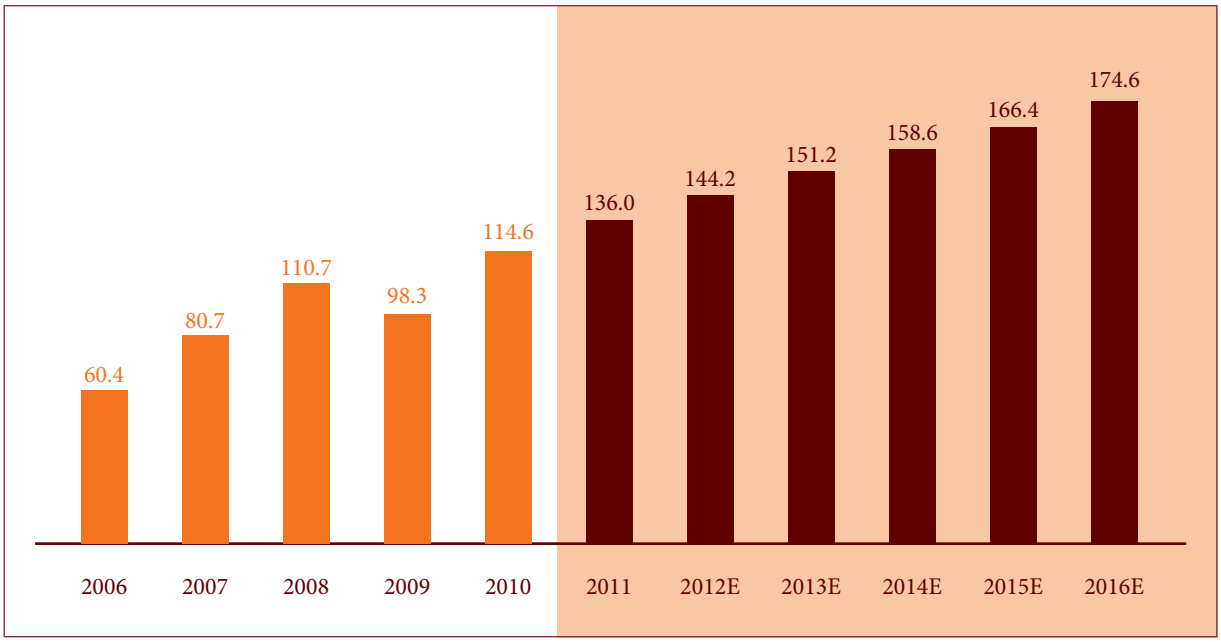
   Management of the environment such that there is harmony between economic growth, social development and environmental protection.

Source: Qatar National Vision 2030

QNV 2030 aims to instill economic stability through economic diversification and deployment of hydrocarbon income into development of human, social, economic and environment development of the country.

Qatar has emerged as the most competitive economy in the whole of MENA region.

Figure XVII Qatar Historical and Projected Nominal GDP ($ billion)



Source: IMF, World Bank

required for hosting the FIFA World Cup in 2022. The country's economic growth is also becoming a magnet for world class operators to participate in the mega-sized opportunities in this Gulf state.

Though very wealthy, Qatar is still a small country. Its population is only 1.7 million people. Its small size can cause operational and capacity challenges in managing this phenomenal growth. It is in this context that the political and economic leadership contemplated Qatar's long term vision and outlined specific steps for the next five years, such that benefits of this economic growth can be deployed efficiently and equitably.

Though explicitly stated more recently in the QNV 2030, Qatar has been making concerted efforts to diversify its economy for at least ten years. Using the cashflows from its massive oil & gas economy, Qatar has been rapidly developing new sectors and initiatives in the areas of tourism, education, financial services, healthcare, science and technology etc. Moreover, Qatar's foreign investments to supplement the economy's sources of income are another source of diversification. The country continues to build a diversified sovereign investment portfolio.

Qatar's massive infrastructure spending plan will reinforce country's preparations for its infrastructure development for the FIFA 2022 World Cup.

Qatar's economic growth has also given an impetus to its investment levels and general investment activity. After UAE and Saudi Arabia, Qatar is the biggest spender on infrastructure in the GCC region. Qatar invested over $45 billion[32] on its infrastructure during 2004-2009, which included investments in power, ports and airports, water, waste management, education, healthcare and other infrastructure sectors.

Qatar has a massive infrastructure spending plan for the next 10 years leading up to the hosting of the FIFA World Cup in 2022 According to the Economy & Finance Minister, Qatar will spend in the next 5 years, between $120 billion to $140 billion in the non-oil & gas sectors. The 5-year investment plan of $65 billion, as stated in the NDS, has possibly been enhanced following the award of the FIFA World Cup. For example, a much larger road and rail network would need to be built for this event.

Qatar's pace of rapid economic growth and its ability to generate a regular stream of income from its LNG exports give the country the ability to make financing available for this infrastructure investment, irrespective of the adverse effects of the global financial crisis on availability of financing elsewhere. Qatar has plans to continue investments in its LNG infrastructure, thus increasing its potential cashflows for investment in other sectors.

The award of FIFA World Cup to Qatar is a key impetus for the development of infrastructure in the state. Having a date has almost ensured that the infrastructure projects planned will definitely be implemented within a specified timeframe. It is imperative to build these projects as per the international standards and to achieve excellence in building and managing these assets. The World Cup is also a key distinguishing mark for the country since the event has come to the Middle East for the first time.

B. Public and Private Sector Interactions

Qatar's public sector has traditionally been dominant in the economic spheres with all the major services provided by the public sector enterprises including airlines, telecommunications, utilities, and healthcare. Qatar also has a vibrant private sector, which has grown on the back of the economic boom of the last decade.

Qatar was an early adopter and practitioner of the PPP framework in the power sector. Following the footsteps of its regional peers (specifically ADWEA in Abu Dhabi with the Taweelah A2 project), Qatar introduced IWPP framework in building new generation capacity. The country launched its first independent power and water project RasLaffan A in 2001 on a PPP basis.

Subsequently, Qatar selectively undertook projects in other sectors on a PPP basis albeit selectively. These include water and waste management, transportation and education projects. It is currently working on a pilot PPP project in the healthcare sector. Application of PPP framework in other sectors is at early stages and evolving rapidly.

C. Qatar's IWPP Story – Ras Laffan Onward

Qatar's PPP story in the power sector began when in 2001 when RasLaffan A became the first Independent Water and Power Project ("**IWPP**") in Qatar (**Figure XIX**). AES Corporation from US was selected as the developer and operator of the plant. AES also became a 55% shareholder in the project, along with Qatar Electricity and Water Company ("**QEWC**"), Qatar Petroleum ("**QP**") and GIC as remaining shareholders.

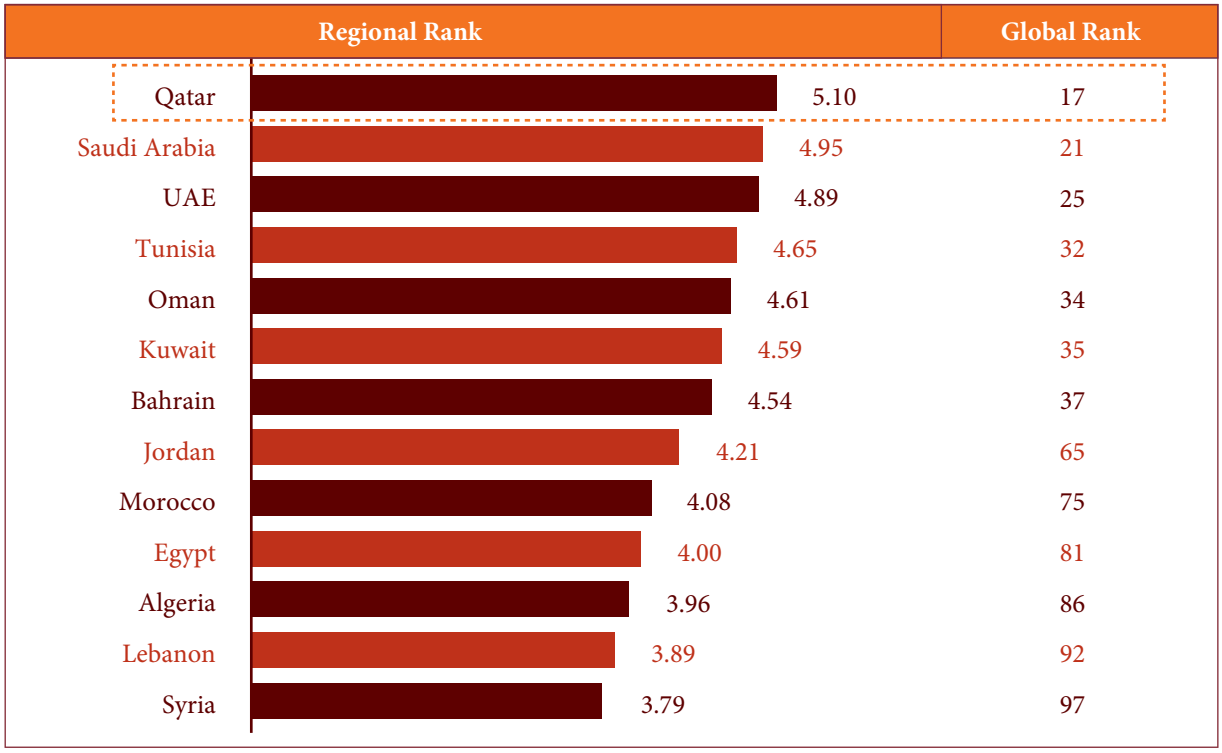
Since the award of Ras Laffan A project, three more projects were completed as IPP/IWPP. The next project was Ras Laffan B in which International Power of the United Kingdom and Chubu Electric were collectively 45% shareholders, while the remaining 55% shareholding was owned by QEWC. It was followed by Messaieed A in which Marubeni and Chubu Electric owned an aggregate of 40%, whereas the remaining shareholding was owned by QEWC and QP. Subsequently, Ras Laffan C IWPP (2,730 MW of electricity) was completed with 20% shareholding of Suez Energy, Mitsui 10%, Chubu Electric 5% and remaining 60% shareholding shared between QEWC and Qatar Petroleum.

In aggregate, over 6,500 MW of electricity generation capacity was built through PPP arrangements, which is over 70% of the total installed capacity in the country.

All of the above projects except Ras Laffan A were implemented on a BOOT basis.All projects followed the typical take or pay contracts whereby QEWC became the single purchaser (onward selling to Kahraama, the distributor) of electricity from these plants on a 25-year contract. The respective project companies became the owners of the facility and were responsible for construction and management of the plant.

Qatar has a successful track record in implementation of PPP in the power sector. The generation capacity built under PPP contributes over 2/3rd of installed capacity in the country.

Figure XVIII Qatar's Global Competitiveness Index Ranking



Source: Arab World Competitiveness Report 2011

Establishment of the PPP Directorate could be the starting point for policy making and implementation of PPP initiative in Qatar.

Figure XIX PPP in Qatar's Power Generation Sector

PPP in Qatar's generation sector								
Project	**Estimated Cost ($m)**	**Power Capacity (MW)**	**Desalination capacity (million g/d)**	**Date of award**	**Date of operation**	**Duration of PWPA/PPA (years)**	**Type of Contract**	**Shareholders (%)**
Ras Laffan A IWPP	700	750	40	Q4 2001	Q2 2004	25	BOT	AES (55), QEWC (25), GP (10), GIC (10)
Ras Laffan B IWPP	900	1,025	60	Q1 2005	Q1 2008	25	BOOT	International Power (40), QEWC (55), Chubu (5)
Mesaieed IPP	2,300	2,000	0	Q2 2007	Q2 2010	25	BOOT	Marubani (40), QWEC (40), QP (20)
Ras Laffan C IWPP	3,900	2,700	63	Q1 2008	Q1 2011	25	BOOT	QEWC (45), GDF Suez (20), QO (15), Mitsui (10), Chubu (5), Shikoku Electric (5)

Source: MEED

In addition to the above defining projects, the country also undertook several other PPP arrangements in other sectors. Examples include the following:

- Asghal, the public works company of the Government of Qatar has awarded a $1.2 billion Design, Build and Operate ("**DBO**") project for the new Doha solid waste management facility;
- Another DBO project is underway for a sewage transfer and treatment plant for the Pearl and Lusail residential projects;
- QF has a number of projects that may be considered similar to PPP, whereby QF has provided the required infrastructure to attract leading international private universities to set up their campuses in Qatar. The objective of bringing in these universities is to impart world class education and to make Qatar "a leader in innovative education and research."[33] It has formed partnerships with leading universities who are offering graduate and post-graduate programs in various fields. These include established names such as Cornell Medical School, Carnegie Mellon, Northwestern University and Georgetown University.

In summary, Qatar has a tangible and demonstrable track record in the Public Private Partnership arena. It has achieved excellence in one specific sector (power and water) and has shown progress in a few other critical sectors, including education. According to the recent *Business Monitor* Rankings for Infrastructure Business Environment, Qatar ranks second after Oman (**Figure XXI**).

The Ministry of Business and Trade has set up a PPP Directorate to delineate the way forward for PPP in Qatar's infrastructure projects. The Directorate is working with multilateral agencies and other governmental departments in developing the business case and policy framework for PPP in the country. It is also expected to work on a PPP Law, once the policy framework is in place and the business case is established. The establishment of the Directorate and its efforts could be a starting point for setting up a Central PPP Unit in the future which could then become a focal point for planning and implementation of the PPP initiative and related projects in the country.

D. PPP's Potential Benefits for Qatar

i. Overall Efficiency Gains

Like other countries, Qatar can significantly benefit from efficiency gains and cost savings achieved through PPP. The country has an aggregate infrastructure budget of around $150 billion in the next five years. If Qatar is able to achieve an average procurement and project life cycle savings of 10% on projects with a potential economic multiplier impact of 2x, the possible overall savings would be around $30 billion (**Figure XX**), equal to almost a quarter of the country's annual GDP.

- Support capacity building including investment in human capital;
- Support diversification by focusing on creating new businesses and sectors and promoting scientific research and innovation.

ii. Transparency and Accountability

Transparency and accountability will be the most important added benefits of PPP. The next stage of infrastructure spending will require world class private sector expertise and timely implementation of projects.

PPP programs and structures will facilitate transparency and accountability. Transparency will have three levels of cascading benefits. Firstly, there will be transparency with respect to the project itself i.e. roles of the public and private sector being clearly defined. Secondly, remuneration of the private sector developer and operator will be openly negotiated and agreed upon, thereby reducing potential ambiguities relating to payments to be made by the public sector through the entire lifecycle of the project. Thirdly, the money is more likely to be spent in an equitable and efficient manner.

On the accountability front, the private sector will be held responsible throughout project cycle and payments will be linked to specific delivery standards. The private sector's involvement through life cycle of the project will also ensure that operators remain accountable for delivery and sustainable quality of the projects.

iii. Opportunity to Develop a "Home-grown" PPP Program

Qatar has the opportunity to learn from best practices in the PPP domain from countries around the world and from the region. Qatar's forthcoming infrastructure projects, its existing track record in the power sector, specific projects in other sectors and experimentation with joint ventures and partnerships in the education sector can be potential ingredients for a more concerted PPP program for Qatar. As discussed in more detail in the next chapter, Qatar's willingness to encourage and embrace innovation can be catalyst in creating a "home-grown" PPP program.

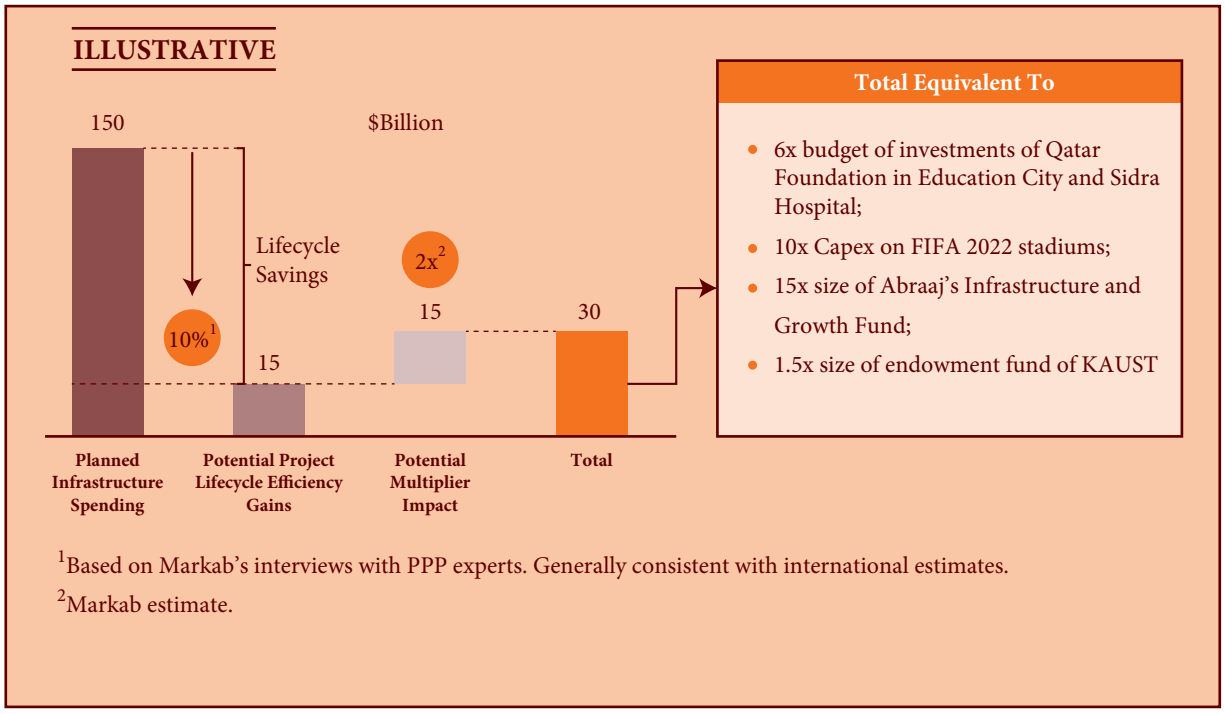
iv. Becoming a Regional Centre for Infrastructure & Project Finance.

Qatar has the potential to become a hub for project finance activities, as well as infrastructure funds. This is an excellent opportunity for Qatar to consolidate its status as a mature project and infrastructure finance market.

Qatar has already established a financial center with world class regulations. In addition, it has an active project finance market. By creating a robust pipeline of PPP projects, covering various sectors, Qatar can bring together all the components needed to create a vibrant hub for infrastructure and project finance.

In addition to economic gains, transparency and accountability can be added benefits of the PPP program.

Figure XX Potential PPP Efficiency Gains – An Illustration



[1]Based on Markab's interviews with PPP experts. Generally consistent with international estimates.

[2]Markab estimate.

PPP can help Qatar achieve efficiency savings and economic benefits of upto $30 bn.

Qatar's willingness to encourage and embrace innovation can be catalyst in creating a home grown PPP program.

Qatar's robust pipeline of PPP projects in diverse sectors, supported by its world class regulatory infrastructure can provide the opportunity for banks, infrastructure funds, pension funds, lawyers, advisors, corporate finance & structuring specialists, asset managers and others to come together and create the region's first Infrastructure financing center.

The Qatar Financial Centre can play an important role in this regard by devising policies and promoting the country to attract the best among infrastructure financing companies including infrastructure funds and asset management companies.

This is also an opportunity to develop medium to long term plans about deepening the Qatar Exchange ("**QE**") and creating the role of infrastructure assets as a way to develop this depth. The existing and new infrastructure assets can be listed on the QE at appropriate times in order to broaden the investment universe for Qatari investors and to share the success of these businesses at large.

PPP can serve as a key driver in making Qatar a regional hub for infrastructure finance.

Chapter 5
Going Forward with PPP – Key Areas of Focus for Qatar

The next wave of infrastructure spending in Qatar (a majority of which is planned in the next four years) offers the country an excellent opportunity to use PPP as a tool to achieve excellence in the delivery of infrastructure services. PPP outcomes could include efficiency through on time and within cost delivery, long term commitment of the private sector in maintaining infrastructure assets and providing knowhow, transparency in the procurement process, additional avenues for developing the skills of the Qatari workforce and building depth in capital markets.

The unprecedented size of projects and the diversity of sectors, supported by funding capacity, provide the Government of Qatar a wide variety of options to partner with the private sector. Success of PPP in the power sector also offers opportunity to leverage the resident experience and knowledge capital in building infrastructure in other sectors in partnership with the private sector.

This document does intend to provides specific policy recommendations or implementation roadmap; rather it seeks to discuss PPP options and models in the context of specific developments planned in Qatar and in addressing key challenges.

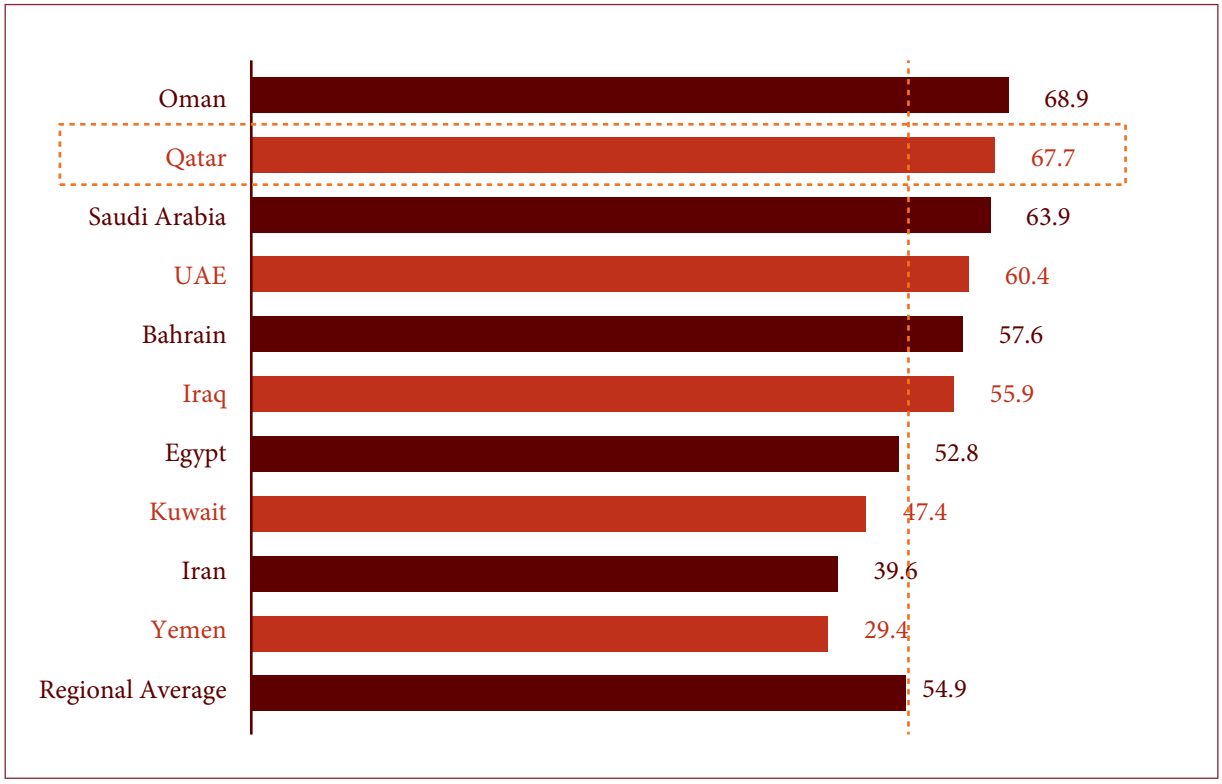
Building blocks for a long term PPP program are in place for Qatar. It has a reservoir of infrastructure projects which can be configured for PPP.

A. Building Blocks in Place for Growing Qatar's PPP Initiative

Qatar has an opportunity to leverage its track record in the power sector in order to develop PPP opportunities in other infrastructure sectors. These other sectors are core to Qatar achieving its objectives outlined in QNV 2030 and NDS. Meeting these objectives will also help translate into timely and cost effective delivery of high-quality infrastructure for the FIFA 2022 World Cup.

Qatar is not too far behind from other GCC countries. Power sector is the big PPP success story across the GCC including Qatar. In the other sectors, GCC countries are undertaking PPP based on their specific requirements. Since Qatar's infrastructure plans are among the largest and most diverse, it can play a leadership role in the region in developing PPP in sectors such as sports, transport and railways, healthcare, education etc.

Figure XXI Middle East Infrastructure Business Environment Ratings



Source: Business Monitor

Qatar is among the top countries for favourable business environment for infrastructure projects.

Qatar already has resident expertise and knowledge capital that could be leveraged to promote PPP in other infrastructure and social projects.

The building blocks for Qatar to continue developing its PPP initiatives in other sectors are already in place. These include:

- **Potential Projects Pipeline**: There is a reservoir of infrastructure projects in various infrastructure sectors. The PPP structures for each sector or project can be set depending on Qatar's requirements for partnership in each sector. Keeping in view the objectives of achieving excellence and efficiency (both in terms of time and cost) in building and managing the infrastructure projects, specific risks related to these projects can be carved out for sharing with the private sector;
- **Delivery of Projects on Critical Path**: With the linkage between delivery of transportation infrastructure and the hosting of the World Cup, the metro and roads projects are on a critical delivery path. This linkage is expected to provide impetus to timely delivery of the projects and as per world class standards. The GoQ has already established a World Cup Steering Committee to oversee planning and implementation of these critical projects.

  The projects are at planning stages. At this point on time, a combination of the need for quality implementation of these critical projects in time, and a high-powered oversight for development and implementation of the projects; provides an opportunity to explore as to how private sector expertise from within and beyond Qatar can be leveraged to achieve quality, efficiency and timely delivery;
- **Strong Financial Position**: Qatar is fully capable of providing financial capital for the projects and meeting the requirements for $150 billion budget. Hence it has more flexibility in terms of determining the optimal mix of private sector's role and expertise to achieve on time and cost efficient delivery of the projects;
- **Resident PPP Expertise**: Qatar has resident PPP procurement expertise of the IWPP sector which can be leveraged by drawing upon procurement methods deployed in the four IWPP projects. Overlapping expertise in areas such as project finance and joint ventures also resides with companies in the energy sector (such as Qatar Petroleum). A cross-governmental interaction will be extremely helpful in gaining insights into these methods and sharing the knowledge capital and expertise;
- **Growth Momentum**: Qatar has a growth momentum due to its above average economic growth, announcement of landmark projects (and progress thereof) and the financial capacity to attract best available talent;
- **Leadership Support**: PPPs are being looked at as a potential delivery mechanism in several key ministries and projects.

  As a case in point, Supreme Commission of Health is currently working on a PPP pilot project on its own initiative. This can be a sign of evolution of PPP in the healthcare sector.

  Successful completion and management of such projects can be expedited with centralized support in policy making, technical assistance and political authority. A policy framework can especially assist in determining clear objectives and PPP structures for such pilot projects. In summary, a more concerted effort led by the public sector can give the PPP initiative a clear direction and may lead to developing a strong pipeline of similar projects.
- **Knowledge Support**: Technical assistance is at hand from multilateral agencies, who are already sharing their knowledge capital with Qatar. While technical support can provide an overall sense of direction and insights on other success stories, Qatar will need to develop its own "homegrown" PPP initiative, consistent with its requirements, culture and business dynamics.

B. Key Focus Sectors and Our Perspectives on PPP Potential

As discussed in this document at the outset, PPP does not represent a single model, rather it is a conceptual framework that encompasses a range of contractual possibilities between the public and the private sector.

Qatar will need to pick different contractual models (or PPP frameworks) based on the nature of the infrastructure and its level of strategic importance, Qatar's previous experience and success, ground realities specific to Qatar (such as social and demographic factors etc.) and readiness to go forward with PPP.

Qatar's infrastructure landscape can be divided into five broad categories. These are:

i. Existing Infrastructure Sectors – Power and Water

Qatar already has an established PPP precedent in this sector. The four IPPs/IWPPs were structured as per standard BOO and BOOT models. The projects

Qatar's focus on healthcare and education sectors and QF's track record can nurture PPP in social infrastructure sectors.

have been successful and have workable structures and templates. In case any new projects are envisaged (and there is no immediate requirement for new power projects in the private sector), there should be no obstacle in adopting the same route.

***Role of PPP**: PPP has a firm strategic presence in the power generation and water desalination sectors in Qatar. Previous success can continue to be built on with modifications as needed. Resident expertise is already in place.*

ii. Other Core Infrastructure Sectors

Building of railway networks will be the most prominent infrastructure development project for Qatar in the current 5-year plan. This sizable infrastructure project has gained more significance considering the logistical requirements for the World Cup.

The Dubai Metro has set the precedent for a metro project in the region. This, and other international projects, can be a good starting point, which Qatar can modify according to its own needs. Qatar's railroad project is planned at a much more sizeable level.

Though at early stage of procurement, Qatar Rail Development Company("**QRDC**") has already been established. QRDC is a joint venture between Qatari Diar and Deutsche Bahn, who are working closely on development of the project.

This is Qatar's single largest infrastructure project and any cost and time efficiencies gained here could be quite substantial.

***Role of PPPs**: Typical PPP projects in railways are structured to pass on the demand risk to the private sector. This may be a challenge for Qatar, given its low population base. Besides, the asset may be considered strategic for Qatar. BTO could potentially be a viable option to consider, whereby the private sector undertakes the design and build risk and transfers the asset to the government on completion. The operating contract may need to be modified to address low demand risk (e.g. a minimum payment model).*

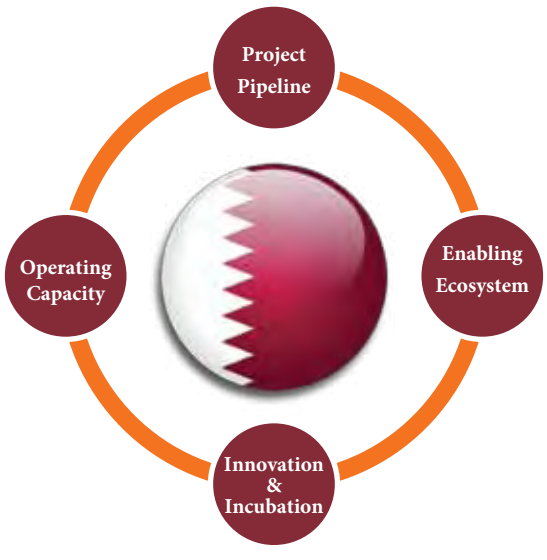
iii. Social Infrastructure and Innovation-Driven Sectors

Social infrastructure projects are typically smaller in size compared to core infrastructure projects. PPP in the social infrastructure sectors, such as education and healthcare are also signs of greater maturity in the PPP regimes. The region has limited track record of establishing full- fledged PPP in these sectors. Management contracts are primary vehicles for PPP in these sectors.

More recently, there have been several initiatives in the region where public and private sectors have partnered in providing healthcare and education services. Both these sectors are sensitive and necessitate strong regulations for provision of health and education is a political responsibility of the government.

Healthcare sector in Qatar is very much dominated by the public sector where it is responsible for provision of medical services, and therefore, a true PPP model has not emerged yet. The Supreme Commission of Health is mandated to develop pilot projects on PPP basis. Success of these projects could be critical for furthering chances of having a substantive PPP initiative in Qatar's healthcare sector.

Figure XXI Catalysts in PPP Growth in Qatar



Project Pipeline	• Robust project pipeline and choosing projects from different sectors; • Pilot project to establish success and replicate success into other projects.
Enabling Ecosystem	• Leverage on world class financial center to create an enabling ecosystem • Build Qatar as an infrastructure and project finance hub for infrastructure funds, asset mangement companies, law firms etc.
Operating Capacity	• Capacity building through PPP unit; • Assist in policy framework, best practices , monitoring progress etc.
Innovation & Incubation	• Incubate small scale social sector PPP projects for long term economic payoff. E.g. education, healthcare.

Source: Markab Analysis

Despite being a late starter, Qatar has the potential to become a key centre of PPP activity in the region.

Qatar current mosaic of PPP activities in power, education, healthcare and transportation sectors expected to evolve into a home grown PPP program.

Establishment of centralized PPP unit can streamline PPP activities, provide a clear direction, develop a deal pipeline and facilitate enforcement of political support.

Education is one of the core areas of focus for Qatar Foundation. It has set up a dedicated zone, the Education City where various higher education initiatives have been domiciled. QF has developed reputation for knowledge and innovation and has garnered strong political support for its initiatives. QF's ventures with leading international universities including Georgetown, Cornell-Weill, Northwestern etc. testifies to their ability to attract leading international private universities to Qatar. QF has also set up joint ventures where the underlying objective is to promote and nurture innovation. QF is also active in healthcare, science and technology. Its success in working with the private sector is a testament to the impact of strong leadership support and concerted decision making in developing such initiatives.

***Role of PPP**: Education and healthcare offer innovation opportunities in the PPP domain. There are no standardized solutions and this requires developing homegrown solutions. Final shape of the propositions will largely depend upon needs analysis and striking the balance between regulations and quality of operators. Innovation will be the underlying theme and it needs to be nurtured.*

Public sector can offer financing to nurture innovations in education and healthcare. Delivering funding through an incubation fund, especially when the GoQ has the financial capacity to do so, can nurture the innovation culture as well align interests of all the stakeholders. Canada's PPP fund, a fund established by the government but managed like a private sector fund, could be a good case study for Qatar' s prospective incubation fund.

iv. Sports Infrastructure

Qatar is building several stadiums for the FIFA World Cup 2022. The initial budgetary requirement for building new stadiums and renovating the existing ones is in the range of $3-4 billion. The Qatar 2022 Supreme Committee is considering PPP as an option to build and operate the stadiums. The planning is in its initial stages and no decisions have been taken yet about potential use of PPP frameworks in this regard. The study has mentioned cases of Bird's Nest (2008 Beijing Olympics stadium) and Singapore Sports Hub being built and managed on a PPP basis.

***Role of PPP**: Considering the strategic importance of the event, any decision with respect to private sector participation needs to be studied carefully. Although there are global precedents of having PPP as a model for building and managing sporting facilities, Qatar's position in truly unique. Understanding the potential revenue mode, during and after the FIFA Cup, would be the key to deciding the appropriate model.*

v. Enabling Infrastructure

Economic zones are an interesting and less talked about area for PPP. Qatar has plans to set up a number of economic and development zones in the country. In order for any economic zone to be successful, there has to be a tangible proposition which attracts private investors and entrepreneurs.

***Role of PPPs**: PPP can play a role in management of economic zones provided zones are not treated as merely real estate propositions. Jebel Ali Port Zone is successful due to the port infrastructure and logistics facilities. Similarly, Jurong Island in Singapore offers a combination of ease of business, logistics and proximity to depth markets of China and South East Asia. There is a need to develop such a unique proposition prior to launching an economic zone.*

C. Building Capacity for Success

To rapidly build momentum and achieve success, Qatar would need to address four key areas:

i. Development of PPP Capacity and Infrastructure

Qatar can consider several options to develop its PPP infrastructure, with each option having its merits. Whatever model it chooses, three key attributes may be considered. These could include:

- ✓ A centralized and authoritative PPP Unit;
- ✓ Assistance from multilateral agencies; and
- ✓ A fully home grown PPP Model.

PPP units have been a regular feature in countries where PPP initiative is perceived to gain traction. In all, there are 51 countries with a dedicated PPP unit or agency working on various aspects of the PPP initiative. An authoritative PPP unit covering a wide range of PPP and related activities has served as a key enabler for the success of the PPP initiative itself.

Drawing from the examples of other countries, a successful PPP Unit needs to have authority, capacity and depth in order to succeed. (**Figure XXII**). Success in Australia, Canada, UK, and South Korea and to some extent Philippines has been attributed to strong and well managed PPP units. Research findings indicate that these units are the owners of the PPP initiative and have wide ranging coverage of the entire value chain starting from policy making up to monitoring progress of PPP projects.

Although empirical evidence suggests that there is a significant link between establishment of a dedicated PPP unit and success of the PPP program, there are certain examples of countries which did not have PPP units at the early stages i.e. establishment of PPP units came subsequent to success of PPP projects in various sectors. Even in a developed PPP market like Canada, dedicated units at a federal level emerged after success of PPP projects in various states.

Establishment of a central PPP unit can help accelerate PPP in Qatar by focusing on the following areas:

- Streamlining various initiatives such that projects are developed in an economically viable manner and are in line with the demand-supply dynamics of the particular sector;
- Ensuring that projects are in line with QNV 2030 and strategic choices made by the government;
- Providing adequate domain knowledge if there are any gaps at the ministry levels;
- Assisting in arranging required financing through collaboration with the public sector entities, project financiers, domestic and international investors, government sponsored infrastructure funds or incubation centers;
- Leveraging on the knowledge capital from success of pilot projects such that a deal pipeline can be easily built for similar projects; and
- Coordination between various ministries to facilitate progress on specific projects.

Assistance from multilateral agencies may be considered on an 'as needed' basis. Organizations such as UNECE, IFC and the World Bank have wealth of information and experience of working on developing PPP programs in emerging economies. This knowledge can serve as a useful foundation on which Qatar can build its own homegrown PPP program.

ii. Pilot Projects and PPP Incubation

Developing a track record of success via pilot projects, followed by a healthy pipeline of projects, can be an effective way of growing the PPP initiative. In such pilot projects, the public sector can be a financier at the initial stages. Currently in the UK, the public sector is actively allocating seed capital for projects which do not have a ready market as yet (called IBIS or Incubate, Build, Intermediate and Sell). These projects are subsequently destined to be structured as PPPs. This is an interesting example for Qatar where innovation can be financed at early stages.

A dedicated vehicle for such innovation led projects in social infrastructure sectors could act as a catalyst in driving the innovation process and building viable business structures.

Ongoing and future projects in the social infrastructure sectors provide incubation opportunities for projects needing upfront financial support from the public sector.

Figure XXII PPP Units – Select Cases of Success and Failures

	Country Date	Name of PPP Unit	Functions of PPP Unit				Objectives and Comments
			Technical Assistance	Quality Control	Policy Formulation	Promotion & Marketing	
High Success	United Kingdom (1996)	United Kingdom partnerships and Treasury Task Force	✓	✓	✓	✓	Objective is to shift focus from financing infrastructure to value for money and risk allocation
	Australia (1999)	Victoria Australia Partnerships	✓	✓	✓	✓	Wants to focus on ensuring that PPPs provide optimal risk transfer, maximize efficiency and minimize lifetime costs
	South Korea (2005)	Public and Private Investment Management Center	✓	✓	✓	✓	Focused on promoting infrastructure projects and educating private sector about PPPs
Moderate Success	South Africa (2000)	South Africa Treasury PPP	✓	✓	✓	X	Filter out fiscally irresponsible PPP projects and create a structure of PPP projects that would succeed
	Philippines (1993)	Philippines Build Operate and Transfer Center	✓	X	X	X	Monitor and promote PPPs within the country and provide technical assistance when required
Little/No Success	Bangladesh (1999)	Infrastructure Investment Facility Center	✓	✓	X	X	Advise line ministries and government agencies in identifying, evaluating, awarding, negotiating and implementing PPP projects
	Jamaica (1988)	National Investment Bank of Jamaica	✓	X	X	X	Reduce fiscal drain and broaden ownership. Secure better access to global markets, technology and capital

Source: PPIAF, World Bank

QFCA can play a central role in delivering maturity in financing mechanisms via promoting infrastructure funds, encouraging PPP capacity building within banks, and developing a 'PPP ecosystem'.

Innovative private sector companies may have great promise, but limited funding. For example, a company with cutting edge educational software may require capital and infrastructure support. Given QF's focus on encouraging innovation, such an incubation fund could help effectively bridge the gap.

iii. Finding out What Can and Cannot Work?

Some public sector projects can simply not be undertaken on a PPP basis. PPPs are carved out from a country's overall policy framework and needs. It is imperative for the PPP program to assess available models and improvise on these to produce Qatar specific solutions which are consistent with the state's cultural values, business dynamics and capability requirements.

iv. Strengthening Financing Delivery Mechanisms and Developing a PPP Financing Ecosystem

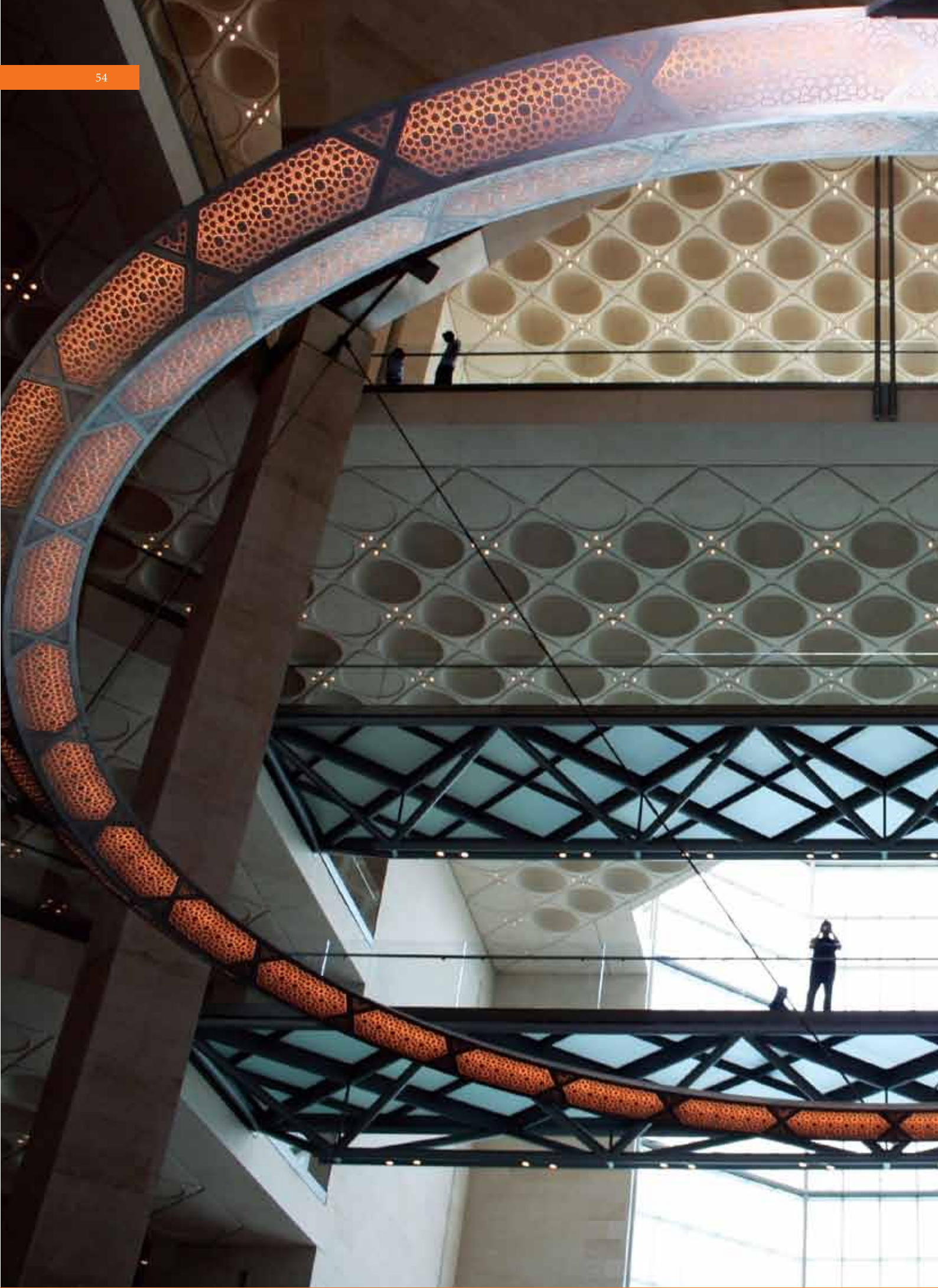
Most of the large infrastructure projects in Qatar are still in very early stages; hence, their financing structures need to be developed.

Establishing a dedicated PPP Infrastructure Fund which is established by the Government, but managed by the private sector could be an effective vehicle for funding support. A variant of this model is been practiced successfully in Canada.

Any capacity building requirements within banks for evaluation of PPP projects may need to be identified and addressed.

In addition to the above, QFCA can play a leading role in developing an ecosystem for PPP. The QFCA already have a world-class infrastructure and legislative framework in place. It can be a center for bringing together various stakeholders and service providers, including financial institutions, infrastructure funds, asset management companies, law firms, corporate finance advisors, consultants, technical experts etc.

Qatar's infrastructure spending plan offers a very wide array of opportunities to structure the PPP program for the next decade. Outstanding success has been achieved in the past ten years. PPP can be integral to Qatar's success as it undertakes next wave of infrastructure development.



Appendix A: Public Private Partnerships – Philosophy and Operating Frameworks

The rapid evolution of PPP worldwide demonstrates that the r*aison'd etre* for partnership between the public and the private sector is well-established. Of greater relevance is the operative model for establishing public private partnerships in the region.

By definition, PPP is a "**partnership**" option where dependency on private sector's delivery and risk taking capabilities is tested on a very wide spectrum. PPP as a concept typically gets a buy-in at the policy level. However, it is the operative term of "**partnership**" which must be coupled with respective willingness and capabilities of the public and the private sectors. It is in its implementation where the concept is tested via economic and fiscal structures, public sector dominance, degree of transparency and accountability, political will of the government, and strength of the underlying business.

The Operative Framework will have three key components:

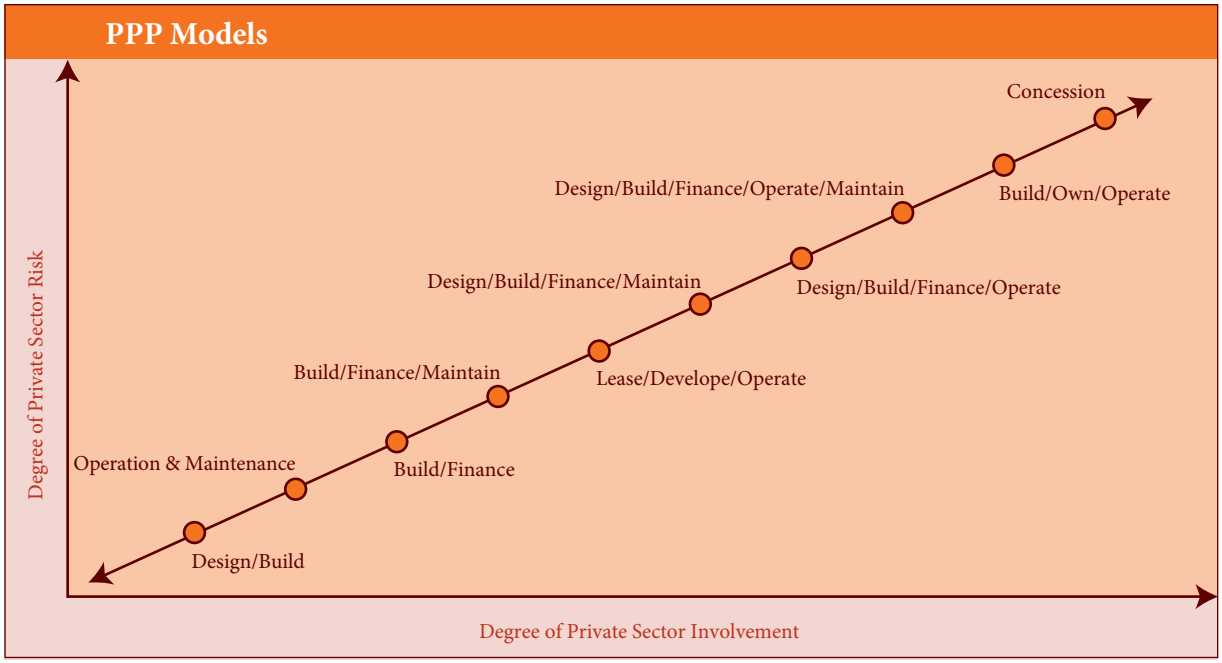
- Defining the roles of the Public and the Private sectors(**Figure XXIII**);
- Outlining the tenets of the PPP Model; and
- Choosing the appropriate operating model for each project.

A. Public Sector's Role in PPPs

Public sector has a leading role in developing and implementing the PPP initiative. It has the ultimate political responsibility and stake in the process. Infrastructure projects are largely considered to be state responsibility and despite private sector's involvement, the government has to assume overall supervisory and regulatory role. As a stakeholder, the public sector may have the following objectives (it is pertinent to highlight that the public sector might be seeking only a selection of the objectives mentioned below):

- **Policy Framework and Law to Create an Enabling Environment**: Successful PPP initiatives in the UK, Australia and Canada indicate that significant background work needs to be conducted by the public sector prior to implementing a broad-based PPP initiative. Despite available global and regional knowledge capital and success stories, it is important to bring on board cultural, economic and administrative considerations in developing country specific PPP regimes. Dedicated agency for the PPP initiative can be instrumental in working these early yet critical phases of development of the PPP regime.

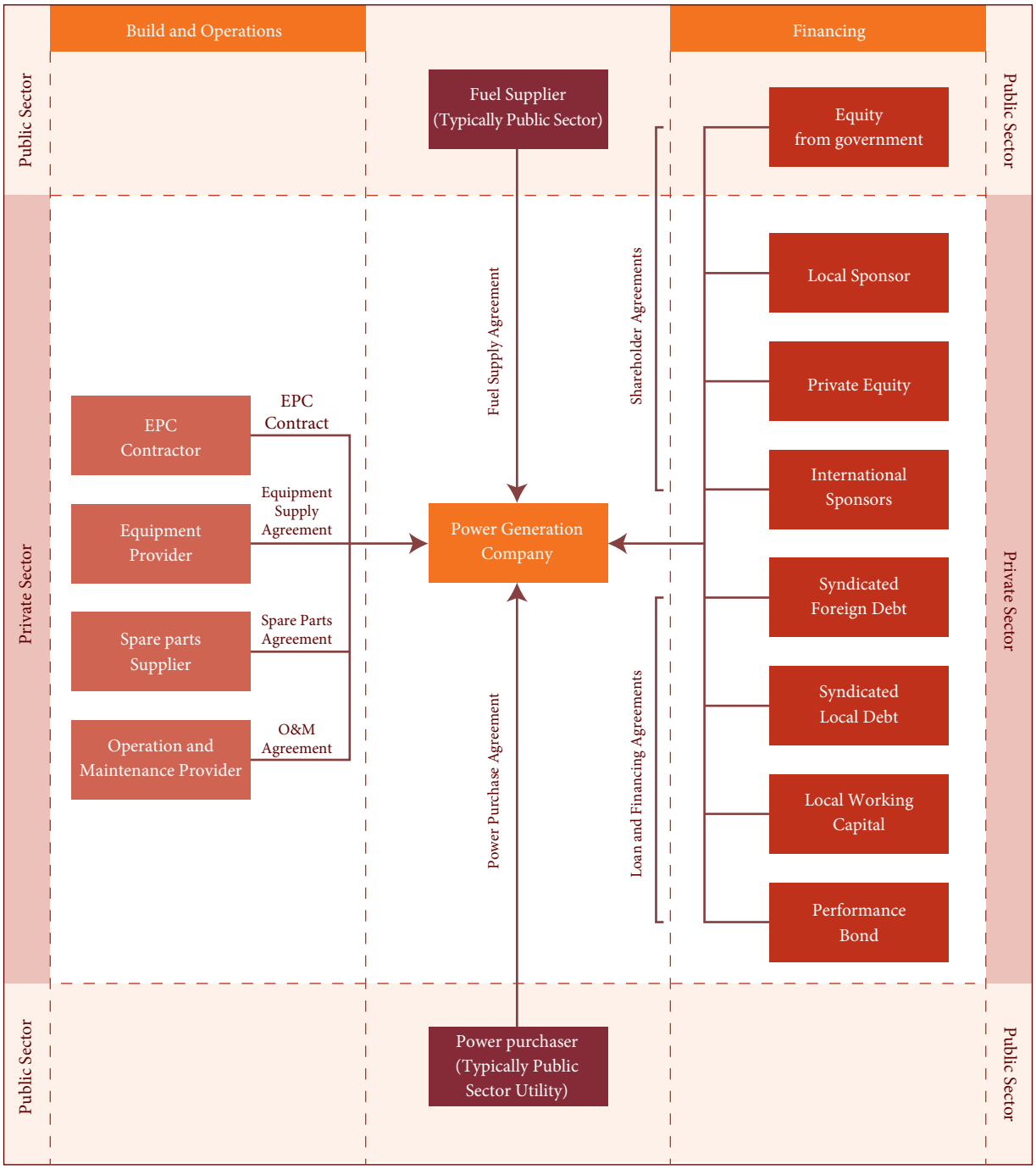
Figure XXIII PPP Models and Varying Role and Risk Transfer to Private Sector



Source: E&Y, Markab Analysis

- **Transparency and Accountability**: Public sector PPP regimes are typically designed to create transparency and accountability, particularly in the procurement phase. Competitive bidding, open tendering and selection of the most appropriate operator through detailed screening bring great deal of transparency in the process. In addition, delineation of obligations, timelines and contractual arrangements bring accountability in the arrangement. Both transparency and accountability are obvious collateral benefits of a PPP regime.
- **Attracting "Best in Class" Expertise**: The private sector needs to have the required expertise and track record of delivering similar projects. At the same time, the public sector needs to provide adequate regulatory and legal protection to attract best in class operators. Legal protection of investors is considered to be the topmost deal breaker in emerging countries.
- **Developing Project Pipeline and Pilot Projects**: The public sector needs to identify critical sectors where PPP projects can be viable. It is important to identify 'early wins' sectors where success of PPP structures can be established relatively easily such that PPP as a model can gain traction and viability.

Figure XXIV Typical Structure of Independent Power Project - An Illustration of PPP



- **Building PPP Infrastructure and Capacity**: The models vary here in terms of the nature of the infrastructure and capacity building for developing and implementing the PPP initiative. Dedicated agencies are typically regarded as the most common and effective solution.
- **Development of the Private Sector**: Developing the private sector, specifically indigenous private sector becomes a collateral responsibility of the government. Enabling environment attracts best in class international operators. Indigenous private sector may participate in parcels and achieve the benefits of transfer of knowledge, thereby increasing the probability of direct participation in future PPP projects. In case of certain countries in the GCC and MENA region, large corporates typically become pseudo public and may crowd out local medium sized private sector in large scale projects. It is upto respective governments to promote programs such that medium and small sized private sector can have space to conduct their business on a level playing field.
- **Ensuring Quality of Delivery of Infrastructure Projects**: This is the net result of all of the above objectives. The basis for partnership between the public and private sector is to deliver an efficient and high quality delivery of infrastructure services.

B. Private Sector's Role in PPPs

- **Development of New Markets and Sectors**: PPP has the potential to bring private sector operators in sectors and markets where the public sector has limitations or does not have the capacity to deliver. In the context of GCC countries, this can contribute to the objective of economic diversification. Management of economic zones, healthcare and education, and alternative energy are some of the sectors where GCC countries can work on innovative PPP models to attract private sector investment.
- **Expertise and Innovation**: The private sector is expected to bring new ideas and innovations in order to (i) deliver high quality projects at competitive costs (end consumers pay full price in power projects whereas water and highways attract significant subsidies from the public sector hence making cost reduction a key innovation play in the PPP projects), (ii) create viable PPP plays (in healthcare and education), and (iii) develop new sectors (alternative energy, waste management, science and technology etc.).
- **Knowledge Transfer**: Development of capacity of the indigenous private sector could be the core objective of the public sector, however, private sector aims to develop joint venture and alliance opportunities with on-ground partners such that the operator can bring forth a bundled offering in subsequent PPP opportunities. Knowledge transfer is a collateral benefit in such cases, whereby the local partner graduates to next level of domain knowledge and might be able to play an enhanced role in future projects.
- **Focus on Functionality and Attention to Details**: Owing to private sector's profit objective and clearly delineated delivery targets, the private sector focuses on functionality of the infrastructure project. Any gold plating of the public sector procurement can be avoided.
- **Financing**: Private sector can attract capital both in terms of its own equity as well as its ability to secure project finance. Banks typically assess the creditworthiness of the partners. It may be argued that the public sector is able to achieve economies on debt financing (due to its sovereign status as obligor), however, cost of debt is not the only component of the cost of capital. The cost of capital shall include cost of equity which factors in procurement efficiency, operational effectiveness and project's life cycle costs (in terms of quality of operations and sustainability of the business profitability). Private sector leveraging on its track record and being a stakeholder can play an important role in reducing the overall cost of capital for the project.
- **Adequate Return to Investors**: This objective is consistent with the private sector's aim to generate returns commensurate with the risks assumed. Infrastructure assets now attract a multitude of investors ranging from sovereign wealth funds to dedicated private equity funds for infrastructure assets. Each investor has its own minimum return expectation. Infrastructure has emerged as a separate asset class and this is where dedicated infrastructure funds and fund managers including Macquarie, Borealis, Palladium, Emerging Markets Partnership and some of the regional funds including Abraaj Capital have created a niche equity play for investors who are looking for that typical risk-return profile.

C. Tenets of the PPP Structures

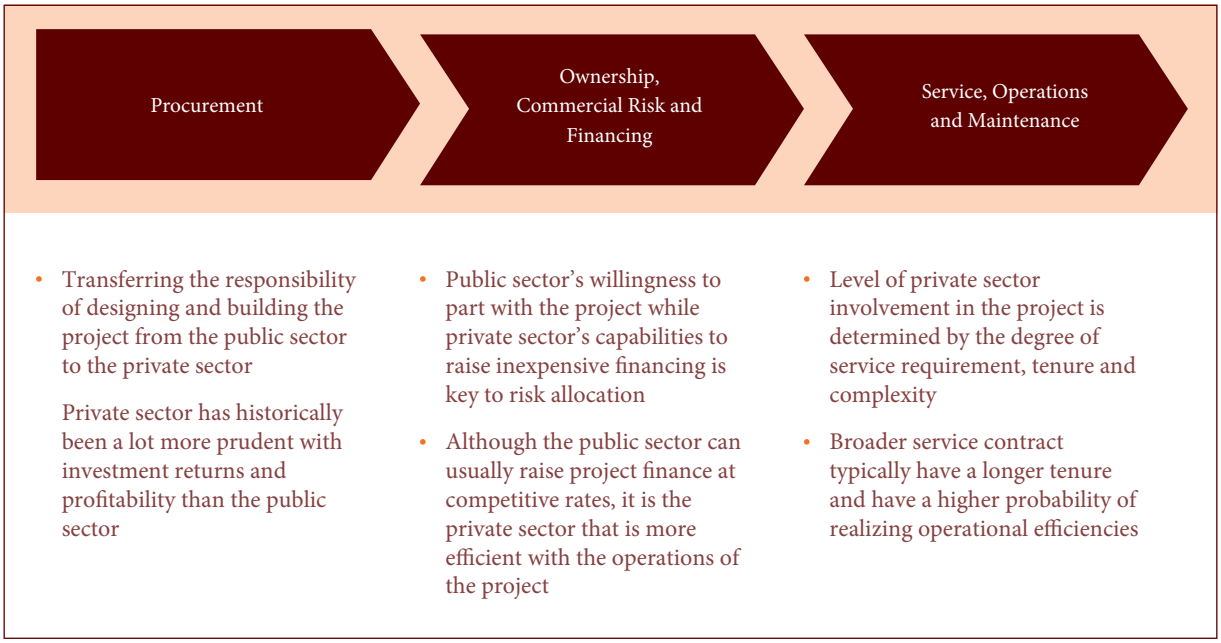
If the basics of PPP structures are distilled, following strands can be found(**Figure XXV**):

- **Procurement Efficiency and Savings:** This envisages transferring the obligation of designing and building the project from the public sector to the private sector. Statistics relating to realization of procurement efficiencies by the private sector vis-à-vis the public sector indicate tangible utility of this transfer. Public sector's tendency to gold plate the projects at times and losing focus on the functionality of the infrastructure projects typically results in overinvestment and inefficient utilization of public funds, which would have been otherwise utilized in more productive uses. Conversely, private sector's profit objectives drive the quantum of investment requirements and functionality focus.
- **Service, Operations and Maintenance**: Private sector's involvement varies greatly depending on the service level requirements and tenor of the arrangements. Suffice it to say that, the broader the service level requirement and longer the contract, the higher the likelihood of realizing operational efficiencies. This is where the project life cycle concept in building the partnership can be truly implemented. Public sector's capability and motivation to maintain the service level standards can be debated, however, PPP arrangements and private investor's expected returns can be compelling reasons for the private operator to deliver better O&M vis-à-vis the public sector.
- **Ownership, Commercial Risk and Financing**: This particular strand really tests the strength of the underlying business and quality of partnership between the public and the private sector. Public sector's willingness to share the ownership (fully or partially) coupled with private sector's willingness to take commercial risk can result in true allocation of risks. It may be argued that public sector on its own can raise project finance at a more competitive rate (by virtue of being sovereign). However, it is the holistic concept of cost of capital (rather than cost of debt alone), which will drive the NPV of the project. Specifically in BOOT contracts, having ownership creates further incentives for the private sector to (i) maximize procurement efficiency, reduce overall cost on a project life cycle basis and (ii) improve delivery standards (thereby improving Value for Money), to improve NPV of the project and create a win-win situation for both the public and the private sector.

D. PPP Structures

For PPP being focused on delivery of services (i.e. the outputs) rather than on inputs, various PPP's structures picked up functional nomenclature. There is a whole spectrum of PPP structures which vary in terms of private sector's role and risk allocation. The following text box describes various PPP structures, which are primarily functional descriptions of the role of the private sector in a particular "greenfield" infrastructure project.

Figure XXV Tenets of the PPP Structures



Source: E&Y, Markab Analysis

Choosing the Appropriate Model for Each Project

Several models have been used in PPP project around the globe. While each contract is unique, the framework could be based on historical precedent. Some of the widely used successful models include the following:

- **Design-Build (DB)**: Under this model, the government contracts with a private partner to design and build a facility in accordance with the requirements set by the government. After completing the facility, the government assumes responsibility for operating and maintaining the facility. This method of procurement is also referred to as Build-Transfer (BT).
- **Design-Build-Maintain (DBM)**: This model is similar to Design-Build except that the private sector also maintains the facility. The public sector retains responsibility for operations.
- **Design-Build-Operate (DBO)**: Under this model, the private sector designs and builds a facility. Once the facility is completed, the title for the new facility is transferred to the public sector, while the private sector operates the facility for a specified period. This procurement model is also referred to as Build-Transfer-Operate (BTO).
- **Design-Build-Operate-Maintain (DBOM)**: This model combines the responsibilities of design-build procurements with the operations and maintenance of a facility for a specified period by a private sector partner. At the end of that period, the operation of the facility is transferred back to the public sector. This method of procurement is also referred to as Build-Operate-Transfer (BOT).
- **Build-Own-Operate-Transfer (BOOT)**: The government grants a franchise to a private partner to finance, design, build and operate a facility for a specific period of time. Ownership of the facility is transferred back to the public sector at the end of that period.
- **Build-Own-Operate (BOO)**: The government grants the right to finance, design, build, operate and maintain a project to a private entity, which retains ownership of the project. The private entity is not required to transfer the facility back to the government.
- **Design-Build-Finance-Operate/Maintain (DBFO, DBFM or DBFO/M)**: Under this model, the private sector designs, builds, finances, operates and/or maintains a new facility under a long-term lease. At the end of the lease term, the facility is transferred to the public sector. In some countries, DBFO/M covers both BOO and BOOT.

PPPs can also be used for existing services and facilities in addition to new ones. Some of these models are described below.

- **Service Contract**: The government contracts with a private entity to provide services the government previously performed.
- **Management Contract**: A management contract differs from a service contract in that the private entity is responsible for all aspects of operations and maintenance of the facility under contract.
- **Lease**: The government grants a private entity a leasehold interest in an asset. The private partner operates and maintains the asset in accordance with the terms of the lease.
- **Concession**: The government grants private entity exclusive rights to provide operate and maintain an asset over a long period of time in accordance with performance requirements set forth by the government. The public sector retains ownership of the original asset, while the private operator retains ownership over any improvements made during the concession period.
- **Divestiture**: The government transfers an asset, either in part or in full, to the private sector. Generally the government will include certain conditions with the sale of the asset to ensure that improvements are made and citizens continue to be served.

Source: Deloitte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End Notes

[1] Pictet Asset Management, "Time to Revisit MENA", October 2010. Some other sources indicate expected infrastructure spending in the GCC over the next 10 years to range between $1.5 to 2 trillion.

[2] Dubai World Central

[3] CIA Factbook

[4] Dnata, Dubai Civil Aviation Authority

[5] Al Jazeera website

[6] World Economic Forum

[7] China spends 2.4% of its GDP in Defence and 9% of its GDP in infrastructure development. Economist , World Economic forum and CIBC Research

[8] http://www.landandfreedom.org/ushistory/us3.htm

[9] World Bank, RICS Report The Future of PFI, infrastructure Journal Online, Other articles

[10] Dealogic, Infrastructure Journal Online collate database for PPP transactions. These databases reflect transactions active in the project finance space in key countries. There may be additional PPP transactions (such as Management and Service Contracts and Operations and Maintenance arrangements) that did not require project finance and were not included in these databases.

[11] Dealogic Report

[12] RICS, Siemens Global survey on PPP

[13] International Financial Services London (IFSL)

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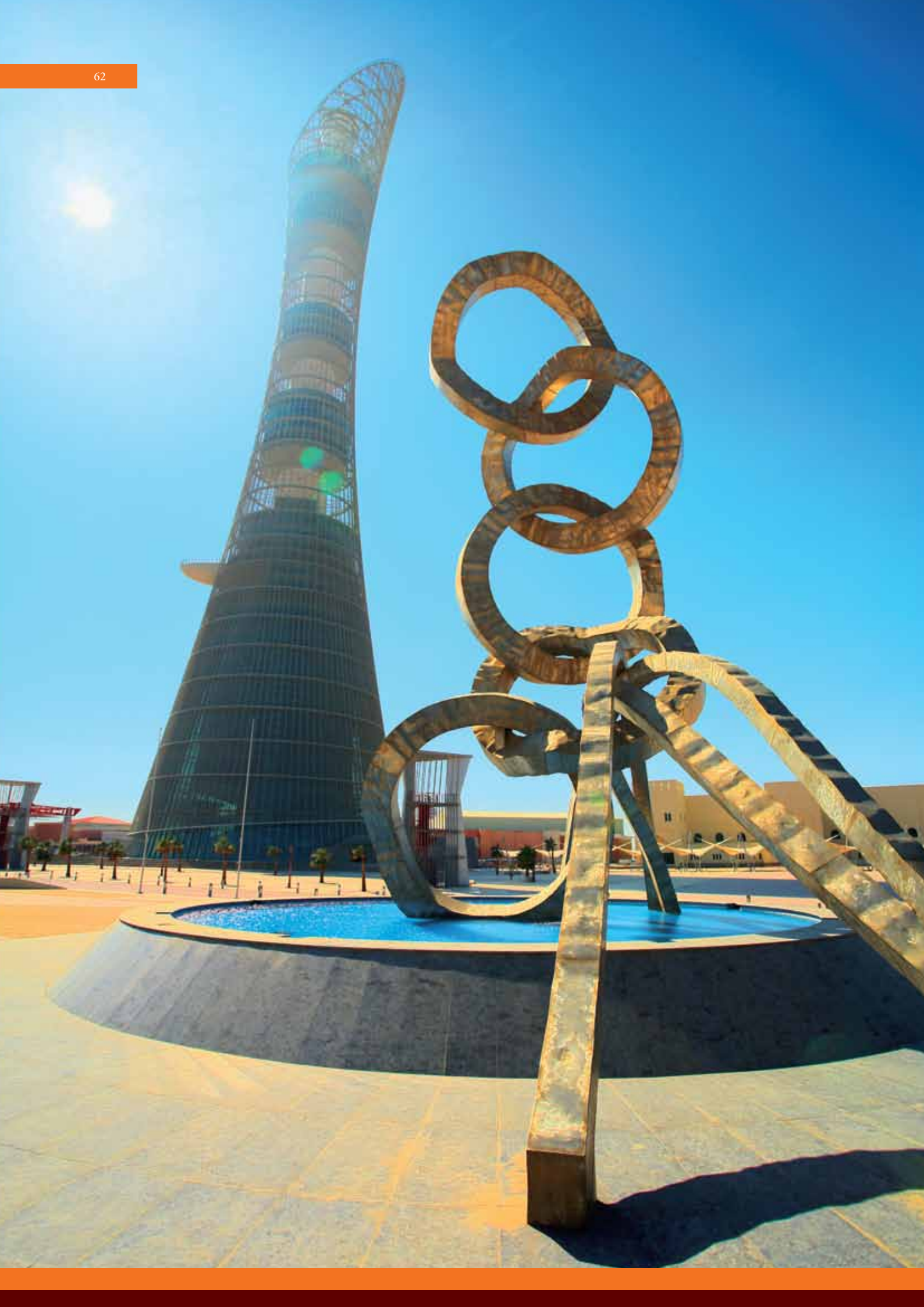
[33] Qatar Foundation.

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