



# CASES - CYCLE OF REGIONAL EVENTS AND CONCESSIONS APPS

Volume II

## CREDITS

### **CASES - CYCLE OF REGIONAL EVENTS AND CONCESSIONS APPS Volume II**

Brasília-DF, June 2016

#### **Realization**

##### **Brazilian Construction Industry Chamber - CBIC**

José Carlos Martins, Chairman, CBIC

Carlos Eduardo Lima Jorge, Chairman, Public Works Committee, CBIC

#### **Technical Coordination**

Denise Soares, Manager, Infrastructure Projects, CBIC

#### **Collaboration**

Geórgia Grace, Project Coordinator CBIC

Doca de Oliveira, Communication Coordinator CBIC

Ana Rita de Holanda, Communication Advisor CBIC

Sandra Bezerra, Communication Advisor CBIC

#### **Content**

Adnan Demachki, Águeda Muniz, Alex Ribeiro, Alexandre Pereira, André Gomyde, Antônio José, Bruno Baldi, Bruno Barral, Eduardo Leite, Elton dos Anjos, Erico Giovannetti, Euler Moraes, Fabio Mota, Fernando Marcato, Ferruccio Feitosa, Gustavo Guerrante, Halpher Luiggi, Jorge Arraes, José Atilio Cardoso Filardi, José Eduardo Faria de Azevedo, José João de Jesus Fonseca, Jose de Oliveira Junior, José Renato Ponte, João Lúcio L. S. Filho, Luciano Teixeira Cordeiro, Luis Fernando Santos dos Reis, Marcelo Mariani Andrade, Marcelo Spilki, Maria Paula Martins, Milton Stella, Pedro Felype Oliveira, Pedro Leão, Philippe Enaud, Priscila Romano, Ricardo Miranda Filho, Riley Rodrigues de Oliveira, Roberto Cláudio Rodrigues Bezerra, Roberto Tavares, Rodrigo Garcia, Rodrigo Venske, Rogério Princhak, Sandro Stroiek, Valter Martin Schroeder, Vicente Loureiro, Vinicius de Carvalho, Viviane Bezerra, Zaida de Andrade Lopes Godoy

#### **Editorial Coordination**

Conexa Comunicação [www.conexacomunicacao.com.br](http://www.conexacomunicacao.com.br)

#### **Copy**

Christiane Pires Atta MTB 2452/DF

Fabiane Ribas DRT/PR 4006

Waléria Pereira DRT/PR 9080

#### **Translation**

Eduardo Furtado

#### **Graphic Design**

Christiane Pires Atta

Câmara brasileira de Indústria e da construção - CBIC  
SQN - Quadra 01 - Bloco E - Edifício Central Park - 13º Andar  
CEP 70711-903 - Brasília/DF  
Tel.: (61) 3327-1013 - [www.cbic.org.br](http://www.cbic.org.br)  
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We thank everyone involved. We are sure that these discussions on Concessions and Public-Private Partnerships will sow seeds in many Brazilian cities, fostering the generation of new businesses, jobs and income to support the resume of Brazil's economic growth and development.



<b>Introduction.....</b>	<b>6</b>
<b>Hosts.....</b>	<b>8</b>
<b>Situation of Concessions and PPPs in the South Region.....</b>	<b>12</b>
Elton dos Anjos - PPP Coordinator, State of Paraná Planning Secretariat	
Marcelo Spilki - Auditor, State of Rio Grande do Sul Economy Secretariat	
Milton Stella - Coordinator, Rio Grande do Sul PPP Executive Unit	
Ricardo Miranda Filho - CEO, Águas de Camboriú – AEGEA Group	
Valter Martin Schroeder, City Secretary, Foz do Iguaçu Planning and Resource Management Secretariat	
Rodrigo Venske - Partner, Albino Advogados law firm	
<b>Experiences in Concessions and PPPs in the Northeast Region.....</b>	<b>26</b>
Alex Ribeiro - Coordinator, Scientific and Technology Development, State of Rio Grande do Norte Economic Development Secretariat	
Antônio José - Vice-Secretary, State of Ceará Infrastructure Secretariat	
Pedro Felype Oliveira - Assistant, State of Paraíba Planning Secretariat	
Jose de Oliveira Junior - Representative of State of Sergipe in the TMIB Investment Committee	
Roberto Cláudio Rodrigues Bezerra - Mayor, Fortaleza-CE	
Viviane Bezerra – Concession Superintendent, State of Piauí Government Secretariat	
Ferruccio Feitosa - Chairman, ADECE (Ceará Development Office)	
Philippe Enaud - CEO, Vivante	
Alexandre Pereira - Chairman, Fortaleza PPP Managing Council	
Erico Giovannetti - Director, KPMG	
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Pedro Leão - CEO, Odebrecht Ambiental in Pernambuco	
Marcelo Mariani Andrade – CEO, SPE Couto Maia S.A	
Fabio Mota – City Secretary, Salvador Urban Mobility Secretariat	
Rogério Princhak – PPP Executive Secretary, Government of Bahia	
Eduardo Leite - Director, SEMOP (Salvador City Public Security Secretariat)	
Bruno Barral - Director General for Services, SEMOP	
Águeda Muniz – City Secretary, Fortaleza Urbanism and Environment Secretariat	
Priscila Romano - Coordinator of Special Projects in PPP and Concessions, PPP Executive Secretariat, State of Bahia	



# Sumário

## Evolution of Concessions and PPPs in the Southeast Region .....86

Luis Fernando Santos dos Reis - Chairman, AEERJ  
Maria Paula Martins - Sub-Secretary for PPPs, State of Rio de Janeiro  
Gustavo Guerrante - Sub-Secretary of Special Projects SECPAR - City of Rio de Janeiro  
Vicente Loureiro - Executive Director, Rio Metropolitan Government Integration Chamber  
Riley Rodrigues de Oliveira - Senior Expert in Industrial Competitiveness and Investments in FIRJAN System  
José Renato Ponte - CEO, Concessionária Porto Novo  
Sandro Stroiek - CEO, Foz Águas 5  
Fernando Marcato, Partner, GO Associados  
Bruno Baldi, Lawyer, AEGEA  
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Luciano Teixeira Cordeiro - PBH Ativos  
Priscila Romano Pinheiro - Rede PPP Bahia  
João Lúcio L. S. Filho - Sales Director, Sonel Engenharia S/A; Counselor, Concessionária de Saneamento Serra Ambiental

## City and state pipelines of PPPs and Concessions in the Mid-West Region.....134

Euler Moraes – City Secretary for Government and Institutional Integration of the city of Aparecida de Goiânia  
Zaida de Andrade Lopes Godoy – Coordinator, Central PPP Unit, State of Mato Grosso do Sul  
Vinicius de Carvalho – CEO, MT Participações e Projetos  
José João de Jesus Fonseca – Chairman, Águas Guariroba

## Cases de Concessões e PPPs na Região NORTH.....144

Adnan Demachki, Secretary, Economic Development, Mining and Energy Secretariat  
José Atílio Cardoso Filardi, Project Coordinator, State of Bahia Economy Secretariat



**José Carlos Martins**  
Chairman, CBIC

## Time for Concessions and PPPs

After promoting a large international event in Brasilia, in April 2015, to discuss Concessions and Public-Private Partnerships, CBIC, along with members and partners, have decided to organize training for disseminating knowledge and opportunities on this topic in Brazil's five main regions.

The Public Work, Privatization and Concession Committee (COP/CBIC) hosted two cycles of a seminar titled "Concessions and Public-Private Partnerships (PPPs) - Expanding Business Opportunities."

Overall, we had 120 speakers, more than 2,200 attendees, 12 hosting partners and 78 institutional supporters.

We have realized that at every new round, the participation and interest of both companies and the Public Administration would grow, as this is a feasible path for resuming growth in Brazil.

All topics discussed in these seminars were structured and then divided into two publications that will be benchmarks for those interested in expanding their knowledge on Concessions and PPPs. In this book, we present Cases of companies and public officials that have participated in the Regional Seminar Cycle on Concessions and PPPs to talk about their experiences about the topic.

We hope to bring more players from public and private sectors to this business modality, which is strategic to all parties: to the company, as it has expertise and is fast to complete activities; to the Public Administration that can redirect costs on employees to regulation and oversight, and specially for the Brazilian population, who will benefit from more and better services.



**Carlos Eduardo  
Lima Jorge**

Chairman, COP/CBIC

## Benefits from Concessions and PPPs to the Brazilian economy

At the end of the 11 event cycle that comprised the Regional Seminars on Opportunities in Concessions and PPPs, COP/CBIC has one thing clear: Other events covering this topic will remain in the Committee's agenda.

This is because we have found a large area for institutional efforts that can and shall be carried out by the industry associations, aiming to better prepare public and private sectors, identify market niches in different social infrastructure and logistics areas (such as sanitation, solid waste treatment, parking lots, hospitals, public lightning, housing, prisons) and also to identify the main barriers to financing and guarantees, which must be overcome to make access to a larger number of companies possible to projects.

And such efforts have a schedule date: this is the hour. In the first day of his term, president Michel Temer signed the Provisional Measure 727 that creates the Investment Partnership Program (Programa de Parcerias de Investimento, PPI), which is a clear signal to the market that Concessions and PPPs would be used as the main tools for generating jobs and reactivating the economy. Also, his administration created a Secretariat of Infrastructure that, similar to countries like Chile, Peru, and Mexico, will coordinate all efforts in this field, thus accelerating the implementation of Concession and PPP projects.

In line with these measures, CBIC aims to consider how to add more cities to Phase III of events on Opportunities in Concessions and PPPs, to be launched in the second half of 2016, in order to provide these cities with appropriate training to structure partnership projects so that more public and private agents are interested in this business model, which may foster corporate growth, generating job and income, in addition to deliver quality services to the population, thus promoting Brazilian social and economic development.

**Enjoy!**

# Hosts



**José Eugenio Gizzi**  
Chairman, Sinduscon-PR

“This topic is extremely important for companies, especially the smaller ones, that need to be fully aware about this topic to realize new business opportunities, as well as for the Public Administration - which has dramatically lost its investment capacity and now relies on the private sector as a partner to conduct urgent works to promote Brazil’s development.”

“Concessions and PPPs are critical for improving public service, as concessionaires are compensated by performance and user assessment, who are Brazilian citizens, support this process. The ideal is that this business model becomes a State Policy and not a government”



**André Montenegro**  
Chairman, Sinduscon-CE



**Carlos Alberto de Paula Moura Júnior**  
Chairman, Sinduscon-GO

“I expect that we have launched an important seed for all of us, businessmen, investors and public agents can see Concessions and Public-Private Partnerships under a new light and realizing that such projects are feasible. What we need to do now is to move forward, enhance our knowledge and leverage this range of opportunities being opened up.”



“We do not see another path to face Brazil’s infrastructure deficiencies than the Concession and Public-Private Partnership path. For this reason, this CBIC initiative to promote a broad national debate on the topic is quite timely. We believe that this debate is critical for Public Administration representatives and companies in the construction industry have a clearer vision of the challenges and opportunities beneath this topic.”



**Aristóteles Passos  
Costa Neto**

Chairman, Sinduscon-ES



**Luiz Fernando  
Santos Reis**

Chairman, AEERJ

“The State of Rio de Janeiro has become a national benchmark in Public-Private Partnerships, critical to develop the state and the nation’s infrastructure in times of poor economic performance. Here some of the largest and best successful experiences in this model, such as Porto Maravilha, AP-5 (sanitation concession in the West area of the city of Rio de Janeiro), VLT and so many others. We need to ensure that this model remains fruitful and extending the participation of companies.”

# Hosts



**Alex Dias Carvalho**  
Chairman, Sinduscon-PA

“We are absolutely optimistic and convinced that all entities representing the state of Pará and the Amazon societies in relation to the topics or interested in these topics as potentially agents of change have leveraged this opportunity and contributed a great deal while debating over this topic. We hope that these discussions have awakened interest in public agents and companies in our region about this topic and that new business opportunities can happen.”

“We are facing a complex political and economic scenario in Brazil, but in such bad times also rise some opportunities. If the State cannot invest in urgent works and services, especially in infrastructure, health, education, and security, make partnership with the private sector is the feasible solution for not leaving the Brazilian population without such basic services. This way, we are not only executors, constructors, but somehow, we are contributing with ideas and projects that will support Brazil’s social and economic development.”



**Gustavo Miranda**  
Chairman, Sinduscon-PE



**Ricardo Sessegolo**  
Chairman, Sinduscon-RS

“The Concession and especially the PPP topics are a bit weird for us, who basically operate with real estate - it is a work business. I salute CBIC for embrace and promote across Brazil how a PPP works, and mainly by show to small and mid-sized companies that this is a hiring model for all. So I believe that a new market until now unknown to us is being unveiled, and we are willing to learn and invest on it.”

“We from the private sector have to see this business model as a huge opportunity for our companies. For this reason, it is important to have these events CBIC has been promoted all over Brazil, bringing experts on this topic to each city to guide both government officials and businessmen on how to structure these contracts, what is the builder’s role, the investor’s role, and the State’s role. As small and mid-sized companies can ensure the financial structuring of this business and how to provide legal security to awake investors interest as well? Questions like this shall be discussed so that more companies can get ready to work in projects of this nature.”



**Carlos Henrique de Oliveira Passos**  
Chairman, Sinduscon-BA



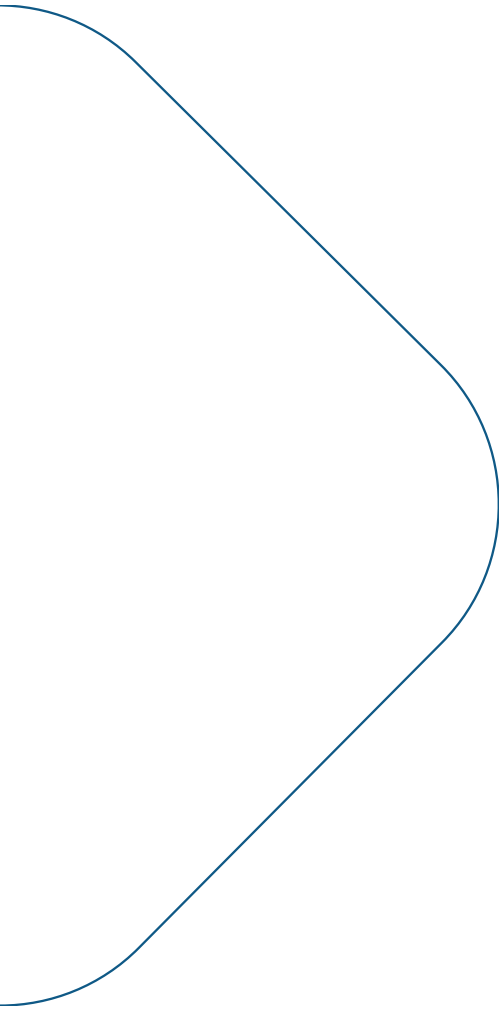
**José Romeu Ferraz Neto**  
Chairman, Sinduscon-SP

“We believe that PPPs and concessions are really the solution for Brazil in the coming years. In 2015, only 1.8% of GDP were invested in infrastructure, while the minimum required would be between 5% and 7%, just to maintain and keep operational all investments already made. This means that we are virtually destroying all we have built over the years. For this reason, we believe in this agenda of change through PPPs and Concessions, progressing in the debate both from the private sector standpoint and the Federal, State and City administration standpoint.

“Our goal is to show that PPPs and concessions can and should have the most varied types, sizes, and can meet various segments, not just the roads, ports and airports. Certainly, this business mode is a great outlet for our industry and for our State and needs to partner up with the private sector to viable urgent works in many areas (infrastructure, education, sanitation, health, etc.) as well as quality services for the population.”



**Ricardo Portella**  
Chairman, Sicepot-RS



# South Region





# Situation of Concessions and PPPs in the South Region



## The Context of PPPs in the State of Paraná



**Elton dos Anjos**

PPP Coordinator, State of Paraná  
Planning Secretariat

By analyzing the Brazilian scenario, it is notable that there are challenges and opportunities in this hiring model (Concessions and PPPs).

From the public official standpoint, there is a budgetary deficit in Brazilian states, especially in Paraná, where public investments in PPPs and in public works were put to halt and austerity measures were adopted to restrain spending and adjust state's accounts.

Some of the main problems causing the low PPP numbers in Paraná are the high mortality of projects still in the PMI phase and the lack of operational capacity of public officials, as legislation on public-private partnerships in Paraná is quite new. To solve these matters, the government is investing and expanding training for human resources not only for its PPP Unit but also for other secretariats and state entities.

From 2012 to 2015, 38 projects were started in the State of Paraná, but only 1 was effectively hired and 2 projects were bid. Such history raised mistrust in the private sector, as companies became fearful of investing in studies for new PMIs due to the uncertainty that these projects will see the light of day. Due to such high project mortality, the Public Administration realized the need for restructure itself on regards to PPPs.

There is also an asymmetry of information between the Public Administration and the private sector as it is a new process. Such asymmetry does not happen much in concessions as the state have signed concessions for a long time and risks

related to asymmetry of information are mitigated. But for PPPs, it is necessary to reduce the asymmetry and determine objective criteria for selecting studies and projects.

There are other issues: Demands for a lot of studies (some of them unnecessary) that add costs to the project, as well as many changes and additions to the process' original scope, also affecting costs, blurring project's original objective and reducing competitiveness, which impacts on the quality of projects.

### Challenges

Now, one of the government challenges is to know how to identify strategic projects to solve the largest inefficiencies on managing public assets, moving away from heavy infrastructure such as highways and short-term projects to focus on long-term planning, smaller projects and in social infrastructure.

There is an extremely expensive resource being spent in the Hospital da Polícia Militar for this asset in comparison with other PPP projects. In this case, the Public-Private Partnership will reduce a great deal of State expenses and consequently enhance quality and efficiency of public service.

Proper care is being given to it before making public the interest for a new Concession, PPP or a PMI, to assess if such project is really into the long- or short-term scope for Paraná and that it has the efficacy and economicity intended.

Another challenge is to structure a cost center for the State of Paraná,

so that the government is able, from a consistent, single methodology, to organize and analyze projects and showing to the private partner that the Public Administration is making institutional improvements and is enhancing project analysis tools.

### Opportunities

The current fiscal adjustment that is restraining traditional public investments open a range of opportunities. Three new concessions for highways and parking lots are about to be signed this year.

Other projects that explore public inefficiency and generate gains of scale for the Public Administration, such as hospitals for police officers, maintenance and delivery of non-educational services (management of educational facilities), state administrative centers and projects that enhance control and oversight, are expected soon.

All these projects have the goal to increase State revenues whether by reducing expenses or by enhancing control and oversight of public budget in the short term.

**“One of the government challenges is to know how to identify strategic projects to solve the largest inefficiencies on managing public assets.”**



# Control and governance from the Economy Secretariat auditor's standpoint



**Marcelo Spilki**

Auditor, State of Rio Grande do Sul  
Economy Secretariat

Public-Private Partnership management and process design need to be highlighted to continue debates on this topic.

The operation of control entities progresses slowly, just like the rest of the Public Administration. The control was initially performed in a classic way, based on accounting and legal aspects and in constitutional principles. Overtime, such processes were upgraded and auditors assessed effort's performance through the 4 Es (Economicity, Efficiency, Efficacy and Effectiveness) and focusing more on the outcomes.

An example is the Government Program Execution Assessment (Avaliação da Execução de Programas de Governo, AEPG), which is today one of the foremost techniques used by internal and external control entities to assess government programs at federal, state and city levels, even Concession and PPP programs where the focus is on performance.

Control can be classified in several ways and control in relation to the time when it is applied was the focus of the auditor's presentation. When the control happens after all administrative acts has been performed, most relevant milestones are checked and in case of irregularities, hardly any cash will be recovered.

But when control takes place previously, all processes are analyzed, creating a sort of "funnel" which slows work down and many times puts the manager to wait on a queue of processes irrespective of their relevance.

The most effective system in use to-

day is the concurrent control supported by information technology and process selection, that analyzes items as per their relevance, such as in Concessions and PPPs).

## Concurrent control

Cases of the Federal Accounting Court and the State of Minas Gerais Accounting Court are highlights. Both external control entities exert control concurrently to follow the process and identify failures before acts are performed, avoiding problems and gaining on terms and cost savings. The FAC controls PPP according to Regulation # 52/2007.

The Regulation 4th article determines that oversight of bid and hiring processes for PPPs will take place concurrently and in five steps, by the analyses of documents below:

- Technical/economic-financial feasibility and EEF parameters.
- Bid's notice and contract minutes (public consultation and debate).
- Homologation (legal, fiscal, technical, and economic-financial).
- Judgment of bid and cash flow consistency.
- Project grant, signed contract and economic-financial proposal in electronic media.

Article 8th determines that during contract execution, oversight will focus on the fulfillment of all relevant regulations and contract clauses and supplements signed by the SPE, in addition to evaluate behaviors from the Federal entity that



granted the concession or by the respective regulating entity.

What one sees in practice is that FAC is applying control during the execution of the contract over the regulating entities that manage and oversee the contract. The Minas Gerais Accounting Court has a more recent regulation that was updated in 2014, and Article 3rd determines that planning, bid, contract and its changes and the contract execution are the steps where oversight will focus on.

### PPPs and Concessions in the State of Rio Grande do Sul

By observing PPPs in the State of Rio Grande do Sul, it is worth mentioning that highways granted in 1998, with duration of 15 years, and the seven centers with cross-subsidy, highlighting existing problems - segments with high Average Daily Volume (ADV) of vehicles were financing segments with lower ADV, which was heavily criticized by public opinion and control entities as it ends up in unfair fees. Also, even in highways with smaller traffic, the Public Administration shall forecast all services related to ambulances, tow-vehicles, bathrooms, childcare - which result in higher costs.

As the economy was faltering at the time of concession, interest rates were quite high as well as capital costs, preventing investments in duplication.

Government changed in 1999.

Highway concessions were a hot topic during the gubernatorial campaign and the elected governor had declared himself against tolls. The same government that hired the concessions did not fulfill the contracts by not applying agreed adjustments to fees. Next, the new administration exempted the payment of tolls while city mayors created bypass roads to help drivers avoid paying fees, reducing concessionaire revenues and making things even worse.

An addition to the contract was signed in 2001, reducing quality and increasing fees. There were several controversies and attempts from concessionaires to rebalance contracts on economic and financial terms, but governments never admitted the debts. Controlling entities found that concessionaires did not invest as expected in order to offset loss of revenue - the so-called self-regulation. Contracts were terminated, resulting in legal disputes where concessionaires demand compensation for losses from the government.

In 2010, the State Government launched two PPP notices. The first one was for ERS/010 highway, as a sponsored concession, and the second PPP was for a prison, as an administrative concession, but both were cancelled by government in its last year and having lost the election.

The lack of involvement from controlling entities and the regulation entity from the onset of the process

were factors that contributed for both projects failure. Add to this the questioning of some contract items by the State Accounting Court and the State Public Attorney. As the governor had lost elections, her administration cancelled the projects and the PPPs were not hired.

### Governance in Concessions and PPPs

The administration that started in January 2015 reactivated the PPP unit, in charge of a new governance process through which the Public Administration is no longer a provider but becomes a regulator and the player encouraging competition.

To improve such process, investments are being made in training not only for the PPP unit staff, but for all managers of related entities and departments, regulating entity, and internal and external control entities.

It is critical to increase competitiveness in the bid and provide more transparency to processes, making all relevant information available.

Control entity's oversight shall be performed throughout the process - in studies, bid, contract execution and when changes and supplements are made to the contract. Some may think that bringing control entities to the fore may cause problems, but it is just the opposite as control entities can help during the process by showing where adjustments are required and preventing future issues.

## State of Rio Grande do Sul administration believes in Concessions and PPPs



**Milton Stella**

Coordinator, Rio Grande do Sul PPP  
Executive Unit

The State of Rio Grande do Sul faced many issues in the past, which halted the progress of Concession and PPP projects.

Current administration has a new vision as the new governor is open to Public-Private Partnerships from the onset of his campaign. Despite a critical fiscal situation being tackled by this government, the goal is to work in new projects and prioritize concessions.

To start works, the whole unit was restructured to better manage PPP and Concession processes. Some projects are ready or in progress while others are being thought of or in discussion with the State entities for feasibility, interest and relevance for the short-term.

### Operation fronts

Currently, the State is focusing on highways. The previous administration conducted a study that analyzed the whole Rio Grande do Sul's transportation and logistics infrastructure. The main highways to move the State's production, both domestically through the State of Santa Catarina or internationally by the Port of Rio Grande, were identified.

The idea is to find the segments on Federal highways with potential to be granted, thus expanding the scope of Federal concessions. Such is the case of BR 290 and BR 116 (from Camaquã to Santa Catarina) highways. It makes no sense to have a duplicated highway until Santa Catarina and then continue on a single lane in poor conditions to move goods to the port.

There are also studies to expand BR 287, BR 158, BR 392 and BR 386 highways. All these highways cover almost 92 percent of the State's GDP, where production is intense and better channels of transportation are required. Currently, the State is working on the concession of RS 324 highway, soon to be launched, which has a high ADV from the city of Passo Fundo, passing through the cities of Marau, Casca and Nova Prata, with 100 km. It will be a 30-year concession.

### Zoo Park

The State of Rio Grande do Sul is also working on the Zoo Park's PMI, located in the city of Sapucaia do Sul, Porto Alegre's metro area, as a concession for 30 years. Maintenance will be the responsibility of the company that wins the bid, who will also have to build a Wild Animal Selection Center, currently located in this area of the Zoo Park but will have to be transferred to another area under State's administration.

The PMI's notice for this project is being reviewed by the Environment Secretariat and then documents are forwarded to the State Public Attorney's office to be published.

### Public-Private Partnership

In the previous administration a PMI was launched for sanitation, and some studies were delivered but got stuck in the Public Administration. The topic was resumed in 2015 when the Public Administration hired a consulting firm that is studying sanitation projects with the goal to launch a bid still

this year. It will be a concession of sewage collection and treatment to serve mid-sized cities.

### Future projects

There has been a lot of discussions in the state about PPP projects as an instrument that uses available budget resources to increase efficiency and quality of services delivered.

In this regard, Public Management is already experienced in the area of expanding, building or maintaining schools or managing educational units. An example of efficiency gains achieved by PPP is the city of Belo Horizonte, which has been able to build and deliver schools in eight months. In the beginning,

people involved in the project were not quite optimistic but currently they fight for working in these units due to the quality, equipment and educational management of these units.

There are also studies on construction of prisons as the state lacks this facility, and feasibility studies for the concession of waterways as the state has potential for this transportation mode.

The possibility of launching a PPP for highways with low ADV is being considered, thinking of resources available for maintaining highways, but moving on to a more efficiency model that better addresses the state demands.

**“To start works,  
the whole unit was  
restructured to better  
manage PPP and  
Concession processes.”**



## New instruments to accelerate the structuring of infrastructure projects



**Ricardo Miranda**

CEO, Águas de Camboriú – AEGEA Group

The Procedure to Express Interest (PMI) is a feasible and required option for developing infrastructure projects in Brazil.

Through this instrument, the Public Administration receives from external consultants or companies interested in compete for future contracts, projects, surveys, research or studies to inform the Public Administration on the structuring of works for concession or permission of public services as a public-private partnership, asset leasing or concession of real use rights.

The Public Administration can benefit from the knowledge and expertise of the private sector that is able to find effective and economically feasible solutions for the many infrastructure challenges in Brazil.

This is a resource employed by governments to enhance dialogue with the private sector and leverage investments, especially in this economic downturn and political crisis.

In the other hand, such instrument, once effective and structured, needs to be seen by companies as a means for new businesses, preventing thus the long wait for bid's notices that not always meet conditions and criteria companies want.

There is not an option from Heaven. For this reason, a proactive attitude is required, as well as respecting the law.

In this regard, he mentions the case of State of Santa Catarina, through the Decree 962/2012 that created the PMI and guided the participation of the private sector in Public-Private Partnerships under Ord-

nary, Sponsored or Administrative Concessions and Permissions with the state's direct and indirect Public Administration.

The main benefit from the procedure is to fill in the shoes of a qualified technical staff for the Public Administration, especially for small and mid-sized cities, and to ensure economic attractiveness for the private sector.

In this context, the main challenge to elaborate studies like this is to know which objective set of criteria Public Administration will apply to assess whether Project A is better than Project B, as basically everyone is looking for the same outcome at the end of the day. In the case of sanitation, such outcome is providing this service to everyone.

According to him, planning and elaborating studies are hard, complex tasks but nonetheless worthwhile for the private sector as their deliveries, once accepted and authorized, open several opportunities for companies having technical, financial capacity and willingness to submit solutions that meet public interest.

### AEGEA Saneamento Success Case

That was the case of the AEGEA Saneamento concession contract, company chaired by him and currently responsible for collecting, treating, storing and supplying water for the city of São Francisco do Sul, in the north of Santa Catarina, which has started upon the submission of a MIP to the city.

The company belongs to the AEGEA



Saneamento Group, one of the largest holdings in sanitation in Brazil with concessions in more than 30 cities and serving 3.6 million users in six Brazilian states.

The city lacked projects related to water supply and sewage treatment even receiving many investments and growing fast.

Located in a port area, São Francisco do Sul was selected for the new CMO shipyard and is located within the influence area of the BMW plant located in the nearby city of Araquari.

The city administration wanted to change this situation and knew how, but lacked human resources and budget to get where it wanted.

To ensure legal criteria in this process, the city mirrored the State of Santa Catarina legislation that defines in general terms:

- Object description, relevance, social and economic benefits brought by the solution;
- Estimation of investments, ensuring rights to reimbursement;
- Definition of general characteristics of a business model, i.e., structuring not only the technical but also the economic-financial and legal ones;

- Estimation in absolute numbers of investments required;

- Finally, it is necessary to know if the project depends on investments from the Public Administration whether for design of the project or for contract execution.

It was also based on this invitation model, made to other companies, that the signature of a concession contract was made possible, i.e., it started as legitimate dialogue and study that were able to correctly structure the solution of problems for the city.

The whole process had active participation from both Public Administration and the private sector, meeting several times to understand and discuss required elements to structure the project, including institutional arrangements that many times the Public Administration itself is not aware of, such as the role of the Federal Accounting Court that many times can challenge the object execution and contract's approval.

### Business Opportunities

It is believed that the PMI is the most suited instrument from the institutional, legal, security and feasibility standpoints for developing projects with the Public Administration.

The state of Santa Catarina is progressing not only in sanitation but also in issues related to urban mobility, tourism, logistics and transportation.

This is the best model to develop a project. There is no alternative to solve infrastructure problems, mainly for small and mid-sized cities, if a closer dialogue does not take place between Public Administration and the private sector, especially in economic downturns.

### Innovations brought by Decree # 8.428

Decree 8.428 dated April 2 this year that governs procedures to express interest brought innovations in relation to the previous legislation, and it is worth mentioning the coverage of studies that may be submitted by the private sector to the Public Administration.

While the previous legislation regulated expression of interest only for public-private partnerships, the new piece extends the use of this procedure for the submission of studies both for PPPs and concession or permission of public services, leasing of assets and concession of real rights of use.

This is a model that the company should develop for a transparent, well designed, legal business to provide the expected returns.

## Concessions and PPPs in Foz do Iguaçu



**Valter Martin Schroeder**

City Secretary, Foz do Iguaçu Planning and Resource Management Secretariat

The city of Foz do Iguaçu has 300,000 inhabitants and is located in an area where some 1 million people pass by. Tourism is the main economic activity, followed by logistics.

Concessions and public-private partnerships are new topics to the city. When the current administration was inaugurated in 2013, a Supplemental Act # 207/2013 (governing bid and hiring of Public-Private Partnerships) was passed to allow for working with these hiring methods.

Foz do Iguaçu has a success case in Concessions: The Iguaçu National Park, the first national park in Brazil to be granted under this model. This is a success so big that the same company also operates in Fernando de Noronha, Rio de Janeiro, and Pantanal.

The city also made a new concession recently for another touristic area, the former Space of Americas, where the Iguaçu River meets the Paraná River. The company managing the national park won this concession and will invest some BRL 30 million to build a touristic complex with restaurants and theme parks.

### PPPs

Currently, the city priority is to launch PPPs in Healthcare. The previous administration built a hospital and now the Public Administration is considering which is the best model to manage this healthcare unit.

A Procedure to Express Interest was also opened, with the scope to deliver Technical Studies for the proposal to restructure the city's Healthcare management for A&E.

The idea is that the city remains responsible only for basic healthcare.

The city also has a demand to build a Convention Center that might be turned into a PPP; a City Theater, the revitalization of deactivated quarries, the construction of a Civic Center (which has a plot of land and a preliminary draft) and the Beira-Foz Project, a road on the banks of Paraná and Iguaçu rivers.

Still through PPPs, the city aims to grant to the winning company the construction and management of Basic Education City Centers (Centro Municipal de Educação Infantil, CMEIs).

People management is a huge concern for Public Administrations. In the city administration, for instance, there was a department with 58 employees but only 19 were working - the others were in maternity leave, medical leave or absent for other reasons. This makes the Public Administration very heavy. When the job is transferred to the private sector, service delivery improves, the community gets faster answers and depending on the area, the private partner gets a good profit.

For sports, the city is in talks to build a sport/tourism complex at the banks of the Itaipu lake even with foreign groups. The project is designed and the financial feasibility study is being prepared. It will be a racetrack with a touristic complex including a marina with access to Itaipu lake, which would allow for the development of a broad range of water activities.

The future partner or concessionaire might build other sport and hotel complexes in addition to the structure for the racetrack.

# The dialogue between government and companies must be extended

In December 2014, Public-Private Partnerships completed 10 years with more than 80 contracts signed.

In the North and Northeast regions, it is possible to find innovation on projects being executed but in the South, progress has been slow and there are many opportunities.

However, to promote partnerships between the Public Administration and the private sector, it is necessary to expand debates on this topic with all players to highlight benefits and advantages from this hiring method to everyone, namely the society.

In order to make a project a reality, it is required to enhance the dialogue between the Public Administration and the private sector so that at the very moment a project is conceived by the government, companies can assess its economic and financial feasibility, which must be

well structured.

The invitation for a PPP project is critical to allow companies to bring ideas and assess how the project should be managed and hiring consulting firms in this area can help a project succeed.

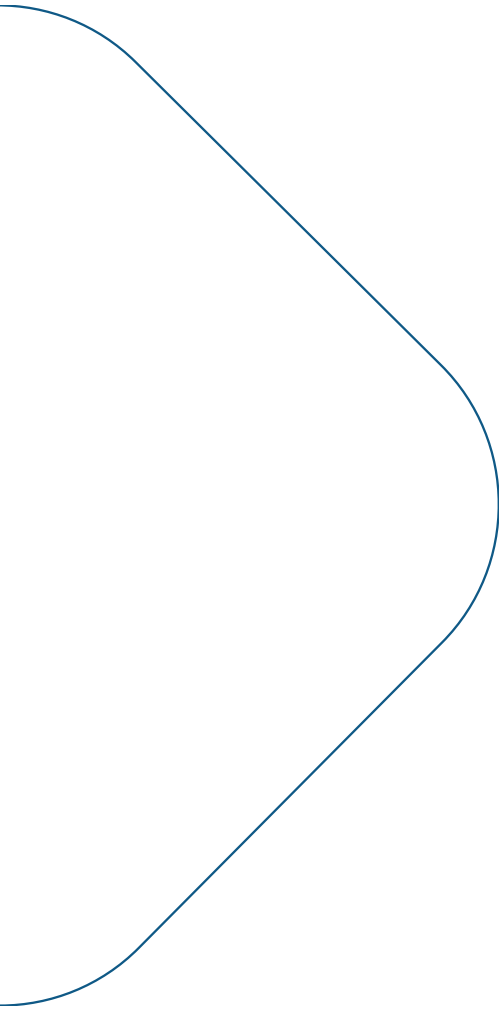
The integrated parking lot in Paraná is an example. When the Public Administration started to think about this project, a consulting firm was hired to analyze legal issues and then design the project.

It is an interesting, attractive project with a large number of potential candidates, which will reflect positively in the quality of services delivered. With market competition and a fee that eventually may be reduced, public resources can be optimized. Quality levels are critical for compensating the private sector.



**Rodrigo Venske**

Partner, Albino Advogados law firm



# Northeast Region



# Experiences in Concessions and PPPs in the Northeast Region



## Rio Grande do Norte PPP Program speeds processes in the state



### Alex Ribeiro

Coordinator, Scientific and Technology Development, State of Rio Grande do Norte Economic Development Secretariat

The State of Rio Grande do Norte is ahead on Concessions and PPPs, especially on Healthcare, Transportation, Water Resources, IT and Tourism. In order to develop more projects in these areas, a State Program was launched in 2005 with specific rules to support the bid and hiring of Public-Private Partnerships in the state.

The State PPP Program's Regulatory Framework was instituted in December 2004 to regulate bids and hiring of Public-Private Partnerships. The next year a supplemental bill added specific rules for bidding and hiring this business model for the State of Rio Grande do Norte, comprising thus the State PPP Program.

The decree regulates how PMIs shall be submitted, how industry groups assess projects and how these projects are approved by the Secretariat.

The Program is different from other programs in the speed of processes that are analyzed by a Managing Council that is comprised of the Head of Staff's General Secretary, the general counselor, the general coordinator, and the Economic Development, Planning, Infrastructure and Tax, and the Economy secretariats.

The Managing Council is in charge of receiving proposals and to forward them to the assessment of technical areas. For this, a multidisciplinary project team was created in the Head of Staff office to work primarily with structuring partnerships and special projects, some of them in partnership with the World Bank and the Inter-Amer-

ican Development Bank. Foreign investors and companies, from Israel, Germany, Russia, Spain and Japan, have already developed studies through MIPs.

### How a PPP project is processed in Rio Grande do Norte

There are two types of PMI that can be submitted: Solicited PMIs, when the government sees a demand and has to access the market to find interested parties; and the Unsolicited PMI, when companies express interest to assess a project.

For Solicited PMI, a company expresses interest to invest in a given opportunity to the Managing Council through a formal proposal, as determined by the State Program's decree. Next, the Council forwards the proposal to industry groups, which will assess the proposal and government's real interest based on demands. If approved, the proposal is returned to the Council. During the analysis and approval processes, other companies are invited to join.

The maximum term for analyzing a project is 15 days and from the date of publication, the company is authorized to proceed with all studies required by the process. Then, 60 to 90 days are required, depending on the project complexity, for the Council to analyze, approve and bid.

### PPPs in the state

A project that is considered as a model in PPPs for the state is the Arena das Dunas stadium, built for FIFA 2014 World Cup. The sched-



ule was one of the largest adventures in the process and has become a good point to demonstrate that Public-Private Partnerships can also be fast. The project was approved in 2010 and it was already hired by April 2011. This is a 20-year concession that also requires the stadium management.

The State, however, has priority areas that will get investments in the next years, such as mining, transportation, logistics and management. Also known as development hubs, these areas have growing de-

mand and Rio Grande do Norte has cities that are able to do business in these areas.

The government will also support large cities to create consortia that will make Public-Private Partnerships feasible, developing their local economies.

Other projects being analyzed are in the areas of energy efficiency, water transportation, prison management, highways, tourism, loss prevention for the water company, building and managing a hospital and projects in computing.

**“There are two types of PMI that can be submitted: Solicited PMIs, when the government sees a demand and has to access the market to find interested parties; and the Unsolicited PMI, when companies express interest to assess a project.”**



# Creation of an investment program is the hope of Ceará government to attract private capital



**Antônio José Câmara**

Vice-Secretary, State of Ceará Infrastructure Secretariat

The State of Ceará is developing the vision for partnerships between government and the private sector. The current administration is working towards the development of Concessions and PPPs.

The first step was to analyze demanding areas and where partnerships with the private sector could be carried out. It was then that the idea of creating an Investment Program came up - a task force comprising five secretariats: Planning, Infrastructure, Economy, Social and Economic Development, and Tourism.

The program focuses on social and economic infrastructure, aiming to attract private capital. The plan is currently being assessed to identify what is possible to do, which projects can be deployed under this model and what existing demands there are.

This initiative aims to increase availability of public services linked to the granted infrastructure, to improve the quality of services delivered, remove financial burden from the state (and to generate additional revenue when possible) through a more efficient exploration of assets and to ensure a fee threshold that is in line with good services delivered to users.

## Areas for investments were divided into two categories:

- **Social structures:** Those that must be hired through Law 8666 with public capital, administrative contract and risk taken by the Public Administration. These are works economic focus.

- **Economic infrastructure:** Those where the service can be hired by means of a partnership as it is an economic activity.

Highways are one of the main focus to reduce costs and increase revenues for the state. The goal is to make Public-Private Partnerships to build highways and try to replicate the United States model, where the company builds the highway, toll booths and sites to deliver services and generate ancillary revenue all over the highway, such as gas stations, restaurants, car repair shops and so on.

## Potential partnerships

The pipeline of potential projects involves energy generation, regional airports and the area around the Port of Pecém, and even tourism.

One of the State's project is the Arco Metropolitano highway, some 80 km from Fortaleza, connecting the BR 116 highway to the Port of Pecém. The project's goal is to prevent that heavy vehicles enter the city's urban area. Also, this segment is longer, implying in more time. This highway is a clear example of an economic structure. It generates resources, savings and is quite attractive for a Concession or PPP.

Potential projects are being studied in order to be submitted until the end of the year in a portfolio comprising all projects the State understands are the best in terms of partnership opportunities. The State is conducting a preliminary study to find projects with potential for a successful partnership.

The government aims to increase the participation of the private sector in investments required by the State, sharing risks and success, as well designed, planned and carried out operations reduce and share risks.

Potential Public-Private Partnership projects are in logistics, such as ports, airports and highways, and

urban mobility, water and sanitation, tourism and social and economic development. All these projects are due to submission by the end of 2015 to the market as opportunities for partnerships with the private sector.

The State of Ceará is really intent to promote this partnership model for a range of opportunities.

**“Highways are one of the main focus to reduce costs and increase revenues for the state.”**



## Government of Paraíba plans to proceed with Concessions and PPPs



**Pedro Filype Pessoa**

Assistant, State of Paraíba Planning Secretariat

The progress of Concessions and PPPs in the State of Paraíba is slow. There is one project in progress and other three that the government is willing to develop to ensure better conditions of traffic and public management for the city.

The State has a short portfolio for Concessions and Public-Private Partnerships. Although the State's legislation leads the way, the government is unable to make projects see the light of day.

The studies for the Administrative Center is the most developed one. The first Administrative Center was built in 1975 and has capacity for 9 secretariats and some 4,000 employees, out of the existing 22 secretariats.

Due to growing demand, the parking lot exceed capacity. As it is 40 years old, the building is deteriorating, requiring repairs and replacement of electric, hydraulic installations, elevators and so. It is a dire situation and BRL 62 million are necessary just to keep the way it is.

### The new Administrative Center

There are many expectations with the creation of the new Administrative Center. One of them is to expand capacity to 7,500 from 4,000 employees, bringing together all secretariats in rented offices by the state. As a consequence, public expenditure can be reduced. Some of the benefits are: Better work conditions to employees, increase of productivity, more efficiency of administrative office, and more comfort and better service to

the population.

Another benefit is the sustainable model that determines the usage of sun energy, reutilization of water and the treatment of solid waste. The location is also strategic as it will be built in the south coast sector, an area that has the potential to become a hotel hub.

This is a 35-year Administrative Concession and the first phase, already being built, shall be delivered within 30 months and the second phase in 42 months, with BRL 400 million invested. The possibility for obtaining extra resources was allowed in this PPP, so the private partner can explore shops, shopping centers and so on.

### Projects that may come true

In 2011, Paraíba ranked 19th out of 26 states on quality of Federal and State highways. Last year, the state was ranked 9th. This was an alert to the State improve and develop this area. These are some of the projects that might come to life in the next years.

There is the interest to grant Concessions and PPPs for the operation and maintenance of highways. The project about to be triggered is Caminhos do Paraíba, which recovered and paved in its first step some 2,300 kilometers of highways. The goal is to deploy 1,300 kilometers in the second phase.

The project model's overall goal is to define and contextualize elemental planning, assessment, control and basic input mechanisms that may guide and support the conception of a project for the implemen-

tation of the State Highway Operation and Maintenance System.

Another Paraíba's government goal is to build a bridge to connect the city of Cabedelo to Lucena. This project has been talked about for a while but needs to see the light of the day now.

The idea is to have a bridge connecting the PB 11 highway to BR 101 highway, granting access to Natal and Recife. The main benefit is that the traffic of cargo will

not pass through João Pessoa, it is going to be the solution to alleviate traffic in the capital city.

If there are no fruits, the beauty of flowers will be worth it. If there are no flowers, the shadow of leaves will be worth it. If there are no leaves, the seed's intention will be worth it. This seed is the PPP, it has been sowed and will generate fruits, flowers and everything else we are entitled to. It is a great solution.

**“The State has a short portfolio for Concessions and Public-Private Partnerships. Although the State’s legislation leads the way, the government is unable to make projects see the light of day.”**



# It is time of small companies get opportunities in Public-Private Partnerships



**José de Oliveira Junior**

Representative of State of Sergipe in the TMIB Investment Committee

One thing is for sure: There are good opportunities in PPPs for small and mid-sized companies and there is a myth that PPP projects must be very large, in the area of millions or billions of dollars.

But there are companies with yearly revenues of BRL 20 million that have participated in complex PPP projects with significant investments. It must be considered that it requires a long-term vision of twenty, thirty years as the average term of a concession.

The challenge is to create conditions for simpler operations more aligned with the realities of small and mid-sized companies may be executed, mainly in smaller states like Sergipe.

Much has been talked in this seminar, even in other regions, about the lack of qualification from the Public Administration to enter into partnerships, as the lack of expertise of public officials to manage innovative projects. Concessions and PPPs can help to close this gap in the State, so that the Public Administration can obtain from the private sector management technologies and the entrepreneur mindset, as the Public Administration is withered and plunged in slow and time-consuming processes.

For this reason, partnerships with the private sector are important.

## Change of direction

The State of Sergipe passed legislation in PPPs in 2004 but it was completely overhauled in 2007, with the creation of the Public-Private Partnership State Program

Managing Council (Conselho Gestor do Programa Estadual de Parcerias Público-Privadas, PROPPPSE), an entity in charge of the governance of PPP project pipeline and drafting a PPP Yearly Plan.

The Government Plan for 2015-2018, was released in 2015 by governor Jackson Barreto, consisting of a set of commitments that include efforts that may be executed as a PPP. In addition to the 3-year plan, the State Secretariat for Budget, Planning and Management (Secretaria de Estado do Orçamento, Planejamento e Gestão, SEPLAG) also has a yearly plan for public-private partnerships and concessions.

There is capacity to invest up to BRL 300 million per year, respecting thresholds determined by the Fiscal Responsibility Act and considering PPP project counter payments. We understand that this is a satisfactory investment level for our needs and we don't see large works as priority, just a pipeline with mid-sized projects.

## PPPs in Sergipe - Studies in execution

The first project was called DESO Sustentável. The Sanitation Company currently operates with thin margins and its main issue is the loss of water in distribution and billing. This PPP would minimize water losses and deliver additional services to manage billing and energy savings. Privatization of any critical sanitation service and of the process control is out of bounds and if the PPP is executed it would be placed under the responsibility of the state-owned company.



Sergipe is also considering Supply Centers and three projects are in discussion (the Committee is drafting a PPP Plan, so these references are of materials being elaborated and does not imply that these will be approved or even completed):

- Implementation of a Supply Center for the capital city, Aracaju, in a new access to the city, and the private sector would be in charge of building and managing this facility.
- The second Supply Center would be installed in the city of Itabaiana, which is focused on growing produce and trade in general. The city is a traditional producer of essential products and a provider of land transportation services. It is quite feasible that a trading facility could achieve excellent outcomes with private management, and in this case a PPP would be quite similar to a traditional concession.
- Finally, a third Supply Center could help to recover the current Aracaju's CEASA, a facility still in use despite its poor conditions. There is still the possibility of optimizing the facility's management by renovating and upgrading trading lines developed there.

### Three projects are in study:

Management of prison also has potential for public-private partnerships all over Brazil. It is not different in Sergipe, and one of the possibilities is the transformation of the Santa Maria Prison Complex and the Areia Branca State Prison. The government is willing to consider proposals for granting prisons to the private sector and upgrading and expanding capacity.

Another source of opportunities is the creation of an Industrial Park near the Inácio Barbosa Sea Terminal. The Terminal, currently used for cargo in general but predominantly for solid bulk is operated by a consortium formed between Petrobras and Valor Logística Integrada, VLI, a Vale subsidiary. There is a significant amount of state-owned land around the terminal, where an industrial park can be built and operated by the private sector.

In the so-called industrial-port complex, Sergipe has a large amount of projects as the area has a wealth of mineral resources and logistics facilities.

One of the priorities would be the oil and gas industry, among other sectors, as the recent discoveries of excellent oil and gas in ultra-deep waters in the geological basin of Sergipe-Alagoas is quite near the area.

There is also the production of fertilizers, with the only potassium chloride mining in activity in Brazil along a Petrobras hydrogen-based fertilizer plant producing urea and ammonium chloride, critical for the sugar cane plantations in the Northeast. There is also an abundance of limestone in the region and investments are expected for cement plants, as well as for a mega project for energy generation from natural gas using a Floating Storage and Regasification Unit that is able to generate near 2.5 MW of electric energy if installed in full.

It would be the best fit for the fertilizer industry as the area is close to the only potassium reserve in Brazil.

**“The challenge is to create conditions for simpler operations more aligned with the realities of small and mid-sized companies may be executed, mainly in smaller states like Sergipe.”**



**“ The government is willing to consider proposals for granting prisons to the private sector and upgrading and expanding capacity. ”**

All these projects showcase the area's potential and a PPP would make easier all public investment required.

There are business opportunities in Sergipe for mixers and construction industries due to the large reserves of limestone in this area. Also, Sergipe is the only Brazilian state with reserves for the three main ingredients for fertilizers, the so-called LPK, and also produces autonomously two of the most expensive and difficult to produce: potassium chloride and ammonium, both manufactured by Petrobras.

Sergipe is also the largest cement producer in the Northeast, so the production of limestone and cement opens significant opportunities in this region and a thermal-electric plant is also being built in the area, which must be one of the Brazil's largest plants for the generation of electricity from natural gas.

The recovery of the Hospital da

Polícia Militar is also being examined, which would a PPP in Health-care. It is operational but does not serve the population nor the SUS and could be converted into a universal hospital such as other Brazilian hospitals under a PPP.

The pipeline of projects in Sergipe shows the existence of many opportunities that may be leveraged by small or mid-sized companies, once they have the excellence in their core activities and are able to join consortia with structuring companies that add the required supplemental expertise for operating under a public-private partnership.

The PPP seminar held in Fortaleza was timely to demonstrate the existence of new opportunities for the private sector and to show companies that the public-private partnerships shall be elucidated to become another option for a safe, transparent hiring by the Public Administration.

# The scenario of Concessions and PPPs in Fortaleza

The Mayor of Fortaleza, Roberto Cláudio Rodrigues Bezerra, had an active role in the seminar on Concessions and PPPs and highlighted that since the inauguration of his term, in 2013, he was led by businessmen and political allies to give proper attention to this topic as it is strategic to the development of cities.

To start works, a PPP Managing Council was founded to identify the most urgent and strategic areas for this hiring model, and what type of projects could be performed under such type of partnership. The first step was to explore urban operations in consortium, that are urban planning tools for the implementation of urban development policies.

Just like a PPP, such operations also demand a well-defined legal structure and attention to calculate public and private investment feasibility.

A good example is the Operação Consorciada Sítio Tunga, launched in October 2015 to create an urban public park in parallel with the grant of part of the area belonging to Sítio Tunga with a plot of land in Passaré, where social housing will be built.

A pilot project in Healthcare - the Hospital Management PPP - is in

feasibility studies. There are also studies for a concession of parking lots in the city, as the “Zona Azul” service in Fortaleza is not working properly due to the lack of oversight.

Some changes were deployed to Fortaleza's public transportation system, that lacked until then time-based integration - having only integration achieved by terminals. A card that allows citizens to take as many buses it is necessary within two hours was introduced for the cost of a single journey fee.

The user is free to take or leave a bus at any bus stop, without having to go to a bus terminal. This will shorten bus trips as integration can be achieved in any of some 5,000 bus stops in the city.

However, terminal management is absolutely poor. Parts of the roof that fall down is slowly rebuilt, the sink breaks, there is no appropriate security or cleaning, because there is no public expertise to manage a bus terminal. This is not a public business and has never been. For this reason, the city is considering a partnership with the private sector to improve efficiency and quality of services delivered to the population without adding costs to the public budget.



**Roberto Cláudio Rodrigues Bezerra**  
Mayor, Fortaleza-CE

## Piauí: A wealth of opportunities for the private sector



**Viviane Bezzerá**

Concession Superintendent, State of Piauí Government Secretariat

Piauí is backed by the legislation and projects are thoroughly assessed to determine a city priority. This seminar is an opportunity for the government to show their efforts on this topic.

On what concerns to legislation, Piauí is constantly pursuing improvement. The State regulatory environment is well-defined with a 2005 state law that pushed for changes in the Managing Council, chaired by the Piauí governor.

Another important step was a 2012 state law that created all criteria and guarantee mechanisms; a 2015 state decree instituting the PMI; and a Resolution specifying how projects will be selected as priority.

The Superintendence of Partnerships and Concessions was created this year, directly reporting to the Government's Head of Staff and working along with the Managing Council, the governor, and has as members' secretaries of Administration, Planning, Economy and the State Public Attorney office.

Every project approved by the Managing Council arise from a request whether by the private sector or by the government.

Each project studied by the superintendence has a committee from several sectors that is in charge of the project's development. And there is the Development Office that takes care of guarantee mechanisms and the guarantee fund.

### How PPPs are processed in Piauí

Such as in other states, Piauí part-

nerships aim to improve infrastructure, increase efficiency, plan projects, optimize and allocate resources properly, reinforce public management, cut costs and control outcomes.

In order to be approved, a PPP needs to go through a thorough assessment process. The superintendence receives requests for studies from the private sector but all requests, even from the government itself, are assessed and must pass submission criteria. These are: Basic legal and institutional environment, technical, economic and financial aspects, comparative governance mechanism assessment, governance costs.

The variables considered as gains of efficiency, stable technologic support offered, fiscal commitments - considering the state's budget and the public interest. Then the project goes to the Managing Council. This means that not a single project gets to the Council without being assessed by the superintendence.

### PPPs progress

Piauí's project pipeline is quite diversified with 10 possibilities ranging from supply, transportation and logistics, highways, tourism, among others.

There is a study that is in advanced levels for the creation of Citizenship Space, a request from the private sector. The Supply Center is close to completion. Another study is to implement a new Administrative Center, also a request from the private sector.

Highways are also a priority there.

The Trancerrados project is a relevant highway for the state economy as it passes through an important production area. The concession aims to implement, renovate, operate and maintain the Trancerrados highway with 331.80 kilometers. The goal is to move produce and improve access and vehicle traffic. Investments are estimated at BRL 1 billion and estimated counter payment of BRL 3 million. Delivery will be in three installments, the first of them to be completed in December 2015.

The Multimode Logistics Platform aims to build a Platform Maintenance Hub that is comprised of many equipment. The idea is to meet demands related to logistics, the distribution of goods and assets both locally and internationally. The platform would benefit from Teresina's strategic location. Some assumptions taken into consideration for this project to be approved

by the Managing Council, such as Teresina strategic location in an influence area for several states, it is a macro region with an expressive population potential. This is a project that the Federal Government is interested to add to the Logistics Investment Program (Programa de Investimento em Logística, PIL). Investments could total some BRL 1.4 billion.

Teresina is also pursuing the structure of a Touristic Complex, consisting of renovation, expansion and upgrading of facilities, building an Aquatic Park and an auditorium. It is a 20,000 square meter area to be renovated and located near the state coast, a very well located area. This space was used only by public officials and now is in very poor conditions. A preliminary study conducted by the superintendence suggests investments near BRL 100 million and a 30-year grant.

**“Such as in other states, Piauí partnerships aim to improve infrastructure, increase efficiency, plan projects, optimize and allocate resources properly, reinforce public management, cut costs and control outcomes. ”**

## How State of Ceará's first PPP was made



**Ferruccio Feitosa**

Chairman, ADECE (Ceará Development Office)

State of Ceará's first Public-Private Partnership was the renovation, expansion, suitability, maintenance and preservation of Arena Castelão stadium. For this project, an Administrative Concession with shared revenues was signed. A PPP Managing Council was created, comprising of the Planning and Management Secretariat, as well as Economy, Head of Staff and Infrastructure secretariats, the State Public Attorney and the technical teams of these secretariats.

A Value for Money study was conducted to assess the project's feasibility and it guided Public Administration's decision-making. Next, the public bid model was selected, based on state and federal laws, considering technique and cost as criteria for selecting the best technical proposal and smaller counter payment value due to the private sector.

The bid was launched in October 2010, generation fierce competition between four consortia - totaling 11 companies involved. Estimated amount for this project was of BRL 617 million and the amount hired totaled BRL 518 million, which means that almost BRL 100 million were saved for the State only at the bid.

The contract was signed on November 26, 2010 and the works started in December of the same year. Execution last 24 months and the Castelão was the first stadium ready for FIFA 2014 World Cup in Brazil.

The parties involved in the PPP were the Ceará State government, the Specific Purpose Entity found-

ed by the consortium that won the bid and the concessionaire's shareholders.

### Summary of the concession contract

Concession term: 96 months

Contract Total Value: (BRL) 518,606,000.00

Estimated Yearly Total Counter Payment: (BRL) 4,884,000.00

Monthly Total Counter Payment: (BRL) 407,000.00

Investment - CAPEX: (BRL) 486,940,599.15

Operation - OPEX: (BRL) 31,665,400.85

### Compensation Mechanism

The Administrative Concession contract opted for dividing the Concessionaire's compensation into two models: Fixed compensation (exclusively tied to the development of works) and Monthly Counter Payment (related to the service delivered).

The fixed compensation was further divided into four steps, which were paid upon the conclusion of works, in the figures below:

Step 1 - BRL 102,000,000.00

Step 2 - BRL 140,000,000.00

Step 3 - BRL 90,000,000.00

Step 4 - BRL 154,940,599.15

Costs related to infrastructure maintenance and operation were borne through the monthly counter payment. The initial amount was



defined as per the bidder's financial proposal at BRL 407,000.00 a month.

Such amount can be reduced in case of Concessionaire's poor performance, as per criteria and mechanisms determined in the Administrative Concession contract. This amount can also be reduced due as revenues are shared with the private sector, by a pro-rated discount of net revenues obtained.

#### Savings for the State:

Fiscal Year 2013 - BRL  
1,577,755.14

Fiscal Year 2014 - BRL  
1,616,475.00

TOTAL: BRL 3,194,230.14

The Arena Castelão project under a PPP brought successful results both in terms of savings for the State as in terms of time. The work was completed in 24 months with milestones defined with the private partner, who provided technology to execute the work in the smaller amount of time as possible to be paid as soon as possible.

The Arena Castelão project was the first public work in Brazil to obtain the international environmental certification LEED (Leadership in Energy and Environmental Design)

The Ceará's stadium was the only one that was completed within budget. We started the project with an expected budget of BRL 486 million and it was completed at that same amount.

**"The Arena Castelão project under a PPP brought successful results both in terms of savings for the State as in terms of time."**



## Vivante presents 1st hospital built under a PPP in Brazil



**Philippe Enaud**  
CEO, Vivante

The Hospital do Subúrbio da Bahia is the first public hospital in Brazil built under a Public-Private Partnership (PPP) and started operations in September 2010.

The unit is evidence that it is possible to improve public healthcare in Brazil without spending a fortune. It is a public hospital providing free A&E with the quality of a nice private hospital.

The excellence of services delivered has been recognized locally and internationally. In this year, after winning UN's Public Service award in the "Improvement in public service delivery" category, the hospital was awarded with the Prêmio Luiz Plínio Moraes de Toledo - Innovating Practices 2015 during the 7th International Quality in Healthcare Forum IQG, by the Instituto Qualisa de Gestão(IQG) accredited by the Accreditation National Organization (Organização Nacional de Acreditação, ONA) and a local reference in certification and implementation of quality management programs in healthcare.

### The hospital

Built by the State of Bahia government, the Hospital do Subúrbio is administered, operated and equipped by the private sector, as Vivante is one of the shareholders from its inauguration in September 2010.

It offers 373 beds and 6 surgery facilities where some 1,300 healthcare professionals from several fields work.

One of the main benefits from this model is that the public hospital

has a transparent management. There is a website ([www.prodalsaude.com.br](http://www.prodalsaude.com.br)) where qualitative and quantitative production indicators posted by the company that won the bid can be tracked. If the goals for these indicators are not met, as established in contract, the company is fined. These goals encourage the bid winner to pursue excellence in the delivery of service.

As the population was being served by the hospital, the unit achieved 120% of occupation in less than 10 days and the occupation rate has been kept at that level, due to the demand.

The hospital managed to increase tenfold the number of surgery interventions without increasing the number of facilities, indicating management efficiency in the healthcare unit.

### Project's strengths

- Integration of medical to non-medical services.
- Synergy between Promedica (medical service provider) and Vivante (non-medical service provider).
- Operational excellence evidenced by the several awards received.
- Operational transparency: Indicators publicly available in Internet, HS application.
- Ordinary payments without delays.
- Guarantee of payment.
- Independent verifier.
- Committees are operational.

## Weaknesses

- Facility built by the State and PPP was launched after the work was completed, resulting in technical-structural issues.
- Huge difference between design and what was built (modification of demand is a risk for the State).
- Permanent adjustment and time-consuming resolution - the best would have an automatic mechanism for adjusting according to demand.
- Political and administrative deadlines - changes in political power slows administrative processes down.
- A new model is in negotiations for three years.
- Non-medical services lack indicators.
- Utilities (water, gas, energy) cost is not part of the contract's scope.

## Opportunities

- Consolidation of the hospital's current profile: closed doors hospital vs. open doors hospital (a campaign explaining that the unit focuses on A&E was conducted along the population).
- Maturing of administrations.
- Interest of several administrations led to the integration between construction + medical service + non-medical service.
- Political need to complete some projects (election years).
- Financial players or investment funds are attracted to this market.

### Main threats

- Delays on remodeling the hospital may cause its collapse.
- Pressure to cut costs may frustrate the population.
- Development time for this type of project is long.
- Economic crisis and increase of profitability rates may bring proj-

ects to a halt.

- Guarantees frequently without real liquidity.
- Difficulty to structure financing.
- The number of potential participants is getting smaller.

Delay is the main threat. A new model for the hospital's structure has been in negotiations for three years. Why does it take so long? Because these changes depend on negotiations between the SPE, the unit's management and the political power, who also changes staff (such as in elections) so time passes and make works progress very slowly.

Guarantees and payments made in time in these contracts are extremely important. There are many investors currently interested in this project model, but liquid guarantees are required to make them feel safe in this type of business. Public partner must meet its obligations in order to the private partner do so as well. Credibility is critical.

## City's Managing Council presents PMIs for Fortaleza



**Alexandre Pereira**

Chairman, Fortaleza PPP  
Managing Council

The seminar's second panel facilitator, Alexandre Pereira, also the chairman of the Fortaleza PPP Managing Council, followed the city mayor by presenting what the city has been doing in Concessions and PPPs in detail.

Projects conducted in partnership with a company or consortium are complex, requiring a broad dialogue among the parties, as projects must be attractive to all parties. A lot of transparency is required for the Public Administration to do business with the private sector: Companies must protect their activity; the government must explain to the population that the public budget is not being spent on the partnership; and clients, that are citizens themselves, must be absolutely happy with the results or services delivered.

### History of PMIs in Fortaleza

**New Administrative Center** - A BRL 300 million project to build a facility to house 31 city secretari-

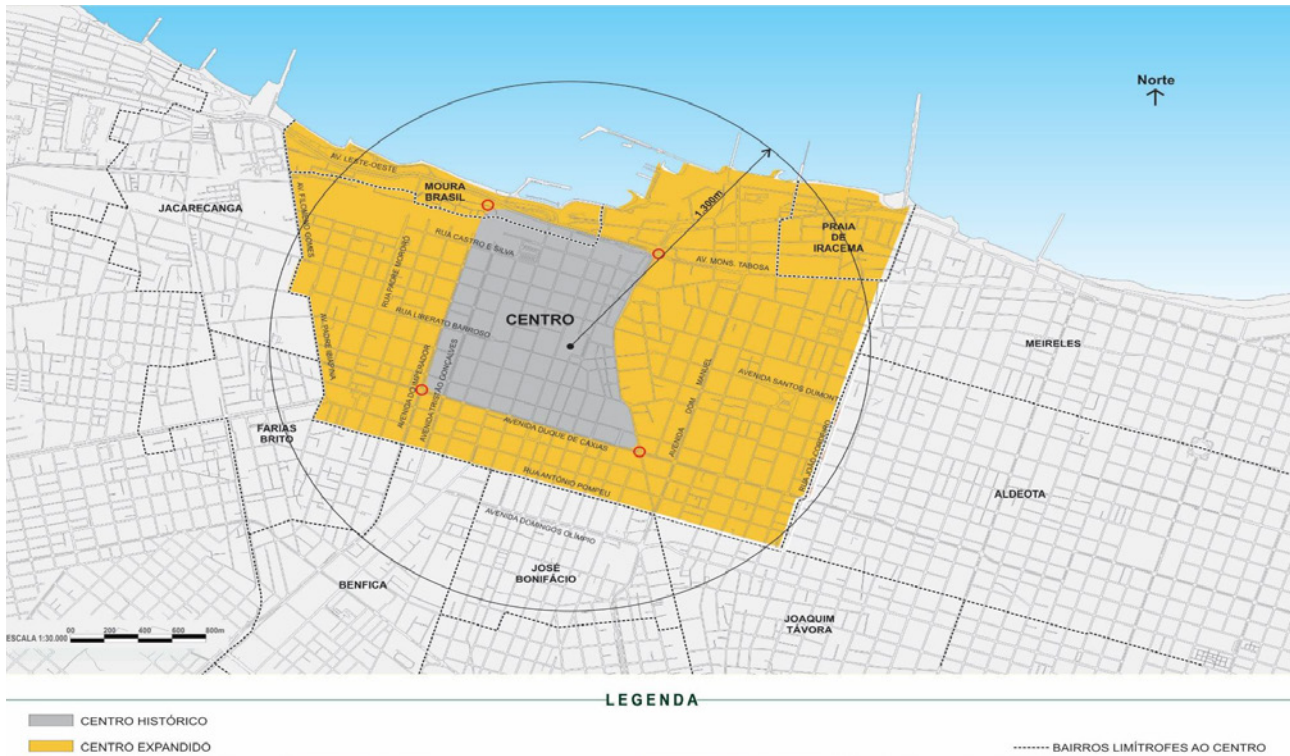
ats and entities, with capacity for 6,000 public officials, and facility management. The goal is to reduce time to serve citizens, share common services, improve quality of information flow and trim operational costs.

**Zona Azul Parking Lots** - The goal is to integrate city's transportation modes, to regularize and deploy parking lots in priority areas and deploy a new management system for Zona Azul parking areas. Fortaleza fleet of vehicles increased by 104.43% from 2003 to 2013, causing a huge demand for parking in public and private areas.

**Technologic Park** - Creation of a Data Center in Fortaleza due to the city's strategic location, connecting Brazil to Europe, Africa and the United States through submarine fiber optics. To support these projects, Law 9.585/2009, was passed to grant tax and material benefits for creative and technologic parks.



# Requalificação do Centro de Fortaleza



**Área do Centro Expandido: 500 Ha**  
**Número Estimado de Habitantes: 27.000**

**Número estimado de Transeuntes: 1.000.000/dia**

**Downtown renovation** - Joint urban operation to renovate the center of the city. The operation focuses on downtown streets, where intense popular activity takes place and have architectural benchmarks and public areas of relevance for history and tourism. Currently, the urban design in this region is full of mobility issues, poor use of the existing infrastructure and lack of physical and visual connectivity.

**Arena Paulo Sarasate** - This is Ceará's largest sheltered gymnasium, staging several sport events, shows and religious events but it is a loss-making structure, according to the PPP coordinator. The city is negotiating with investors to share the space's management with the private sector.

A successful case is Belo Horizonte, where 20 schools are managed under a PPP. The cost of a student in the public school system is the same of a student in a private school, but levels are higher. So why not provide the student in the city school system the same level of education of a private school? That is what the city of Belo Horizonte did.

By means of a PPP, the private sector builds the school, runs security and cleaning, provides school meals and all other operational tasks whereas the Public Administration deals with the educational aspects through teachers. The Public Administration makes a mistake by placing the best teacher as the school's dean. A good teacher



By means of a PPP, the private sector builds the school, runs security and cleaning, provides school meals and all other operational tasks whereas the Public Administration deals with the educational aspects through teachers. ”



## Áreas de Interesse em Novos Projetos de PPP

Novo Hospital Municipal



does not translate into an efficient administrator.

**New City Hospital** – The mayor of Fortaleza visited London recently to talk with an investment fund focused on hospitals in more than 50 countries.

They want to finance the city at an interest rate of 0.75% p.a. and a 2-year grace period. The city administration has credit and can hire new debts, but cannot take these resources for legislative issues and the investment for building the hospital must come from a private

partner. The problem: For investing in a private company, interest rates skyrocket to 4% p.a. They can't understand how Brazilians pay more for financing due to our legislation.

The advantage these investors bring to the table is the expertise in healthcare management. They have a shared database with all diseases, which support a more efficient management. This is the “gray coat” and “white coat” concept, where they are responsible for the hospital management and the city takes care of healthcare.



# Case Study - COMPESA

## Independent Verifier

KPMG member firms are some of the main service providers in Audit, Tax, and Advisory, relying on 162,000 employees in 155 countries. There are some 4,000 employees working in 31 states and the Federal District, totaling 22 cities.

The company won contract to verify Compesa's performance.

There is a specific group within KPMG that accepts Government projects in infrastructure, of which I am a member, and we act as an independent verifier to provide advisory and audit services for large works.

We rely on the knowledge of a multidisciplinary team comprised by engineers in audit and advisory and other professionals in several areas with a deep knowledge of the business.

There is a growing demand for independent verifiers when the Conceding Power transfer the obligation of performing public services on its behalf to a concessionaire.

In this relationship, the independent verifier has the mission to be limited to the contract's terms. So the verifier's main task is to keep compliance with contract irrespective of interests of any party.

To fulfill this mission, it must face controversies by creating opportunities to solve divergences and the need to mature topics, such as performance indicators, according to the contract.

### Some of the reports produced by the Independent Verifier are:

1. Weekly status to validate items found in the field;

2. Monthly Report with the calculation of the performance level and counter payment amount;

3. Monthly Report of activities performed by the independent verifier;

4. Monthly Report on the collection system and performance indicators feed;

5. Monthly analysis over performance reports and concessionaire's decisions;

6. Mid-year analyses of QID performance indicators.

### The role of the Independent Verifier Governance's life cycle of an investment project goes from:

- Project's concept and feasibility
- Preliminary draft
- Environmental permits
- Investment structure
- Hiring providers and setting up the worksite
- Elaboration of executive project and deployment of project's commercial operation. Including environmental permits, contracts, measurements, schedules, reports, payments, demands from lenders and agreements.

### The process might have three initial steps:

- Analysis on deliverables of the project that are specific to each phase in the life cycle.
- Implementation of best practices, compliance tests with legislation, technical standards and assess-



**Erico Giovannetti**  
Director, KPMG

“ The independent verifier does not follow-up work’s execution but work’s delivery terms and compliance with the contract. Independent Verifier’s.”

## Modelo de apuração de desempenho



Relatórios produzidos pelo Verificador Independente

1. Status semanal para validação dos aspectos apurados em campo;
2. Relatório Mensal de apuração da nota de desempenho e cálculo da contraprestação;
3. Relatório Mensal das atividades realizadas pelo VI;
4. Relatório Mensal sobre o sistema de coleta e alimentação dos indicadores de desempenho;
5. Análise mensal sobre os relatórios de desempenho e ações da concessionária;
6. Análise semestral dos indicadores de desempenho.

ment of risks for implementing the project.

- Regular monitoring reporting.

### Independent Verifier role

There are some instances where the independent verifier becomes a certifier - a new nomenclature that appeared in subway works or in some other infrastructure works, especially in PPP contracts as engineering and operation issues appear in this project type.

So there is a large operation in progress and there is also a significant work component and the role of the verifier is to determine multidisciplinary topics related according to performance indicators.

The independent verifier does not follow-up work’s execution but work’s delivery terms and compliance with the contract.

### Independent Verifier’s Objective:

Gauge performance indicators of a public service concessionaire (PPP, concessions and others).

- Zeal and promote improvements to the quality of services delivered by the private sector in comparison with the Public Administration.

- Mediate conflicts between concessionaire and Conceding Power based on evidences and keeping an unbiased, independent approach.

### Critical success factors

Do not replace Conceding Power obligations at the contract’s oversight.

- Conceding Power and the concessionaire shall support the Independent Verifier strategically and operationally.
- Divergences between the parties shall have a specific method for resolution and shall be treated immediately, quickly and action plans shall be deployed as soon as possible;
- Terms longer than 1 year;
- Independent Verifier’s multidisciplinary knowledge.

Some indicators are systemic, i.e., the independent verifier has a knowledge and brings in technology in data analysis recorded in systems such as Compesa’s, that interfaces with users.

So it is important to get to know and understand the calculation basis to make sure it is available to all parties - the independent verifier, the concessionaire and the conceding power.

This is one of our concerns and success for the independent verifier means to be sure that this calculation basis is uniform.

There is another set of indicators, such as quality of service, where work in the field is required, so our independent verifier team works with a sample to visit points of touch where repair works are effectively delivered.

It is from this base that reports are produced by the independent verifier on a weekly basis.

For Compesa, there are 21 performance indicators on a monthly basis, and five more will be added.

It is necessary to meet weekly with EPIPs involved in the process. So the independent verifier does the fieldwork to check what was accomplished and submits a report to Compesa and the conceding power and to the concessionaire, so we need to identify and agree on everything that is being verified on a weekly basis - what is being denied, what is being argued about and what is being accepted.

Another big delivery is the performance grade monthly report, which is exactly the concept here, all indicators calculated every week shall converge to a final performance grade.

And if the performance grade is below the level determined by the contract then a penalty is applied at the counter payment for the concession service.

This is the outcome, it has a quite demanding presentation and formatting dynamics as it is calculated

monthly and requires approvals from oversight, independent verifier and the agreement from teams to correctly measure performance.

There is also a report of all activities performed by the independent verifier in all units and another monthly report covering the collection system, that is the calculation of all information so we analyze the set of systemic information to suggest improvements and Compesa works to ensure that the data are always updated.

There is also a monthly analysis on the concessionaire's performance reports and efforts. The concessionaire issues for each region a report of all activities completed.

Communitarian, environmental and social efforts are also included on monthly reports issued by the concessionaire and checked by the independent verifier.

And, finally, there is an analysis of performance indicators every six months. This is a large summary with two programs for each fiscal year.

### Transparency

There are more independent verification tasks, arising concerns on transparency, data publication and performance indicators.

There is a trend for new project models to be transformed into a large database available to access.

Therefore, these indicators are reflected in regular reports bringing recommendations, action plans and especially risks arising from the failure to meet these indicators.

## The Cidade Saneada Case



**Roberto Tavares**  
CEO, COMPESA

The Cidade Saneada Program is a public-private partnership between Compensa and Odebrecht Ambiental to extend sanitation services to the whole Recife Metropolitan Region (15 cities plus the city of Goiana), expanding sewage coverage to 90% and treating 100%, impacting 4 million people.

It is operational for 2.5 years and has invested BRL 330 million in works and services out of BRL 4.5 billion to be invested (Private partner: BRL 3.5 billion / Public Administration: BRL 3.5 billion.)

This is the former governor Eduardo Campos dream for water supply and sanitation that became true in agreements, contracts and investments.

The PPP model has a 35-year contract that started in July 2013, with 41 sewage systems and the private partner responsible for recovering existing systems; SES operation and maintenance; elaboration of all projects and expansion and implementation of systems.

### Investments

Recently, Compesa ranked fourth in investments in Brazil, despite being the ninth largest company in the industry.

In 2015, the goal was to invest BRL 800 million but investments reached BRL 489 million due to the economic downturn. For 2016, expectations to invest BRL 800 million may also be frustrated due to expense contingency.

However, we benefit from having multiple financing sources, such as World Bank, IADB and Compe-

sa's own loans. We are on the third round of issuing bonds - the two previous rounds were conducted by BNDES, virtually an operation with the government, but this third round is a market operation conducted by Santander, worth BRL 100 million. We also issued FDIC, purchased by Banco do Brasil.

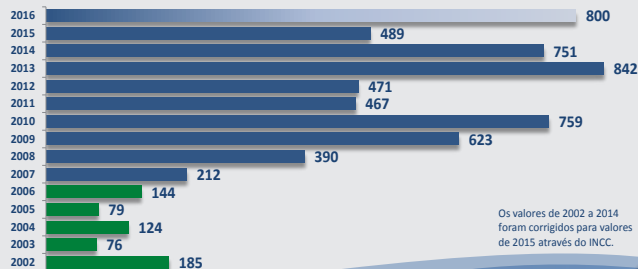
### Award for Management

Despite the degrading of Brazilian investment grade by Standard & Poor's, we hold an A rating. This shows that a strong management with financial results recognized by the market and awarded by magazines such as Isto É Negócios, that ranked us as the best company in economic and financial terms for the sanitation industry, with a pipeline of investments around BRL 11 billion - BRL 4 billion for water and BRL 6.7 billion for sanitation between 2015 and 2022.

The recognition for this work contrasts with the failure of Brazil's sanitation policy of the last 50 years, as only three Brazilian states have sanitation in more than 70% of their territories. Most states have sewage coverage under 40%.

And even after Federal Law 11.445/2007, that determined guidelines for delivering urban cleaning services and solid waste handling (planning, oversight, delivery of services under standards, the demand for contracts preceded by technical and financial feasibility studies, definition of regulation by law, definition of regulating entity and ensured social control, including the delivery of services to every citizen and interaction with other areas, such as water resource-

## Evolução dos Investimentos



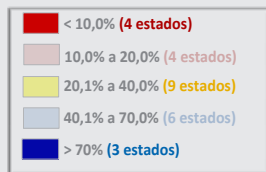
Obs.: A partir de 2015, o valor do investimento considera o Programa Cidade Saneada



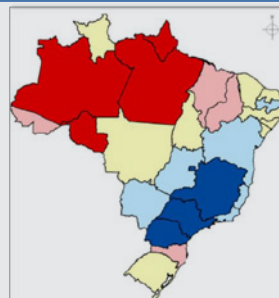
“We need legal security. We still don’t know today who owns the concession and how to share duties between state and city especially for integrated systems that go beyond boundaries.”

## Contextualização

### Panorama nacional do esgotamento sanitário



Índice médio de atendimento urbano por rede coletora de esgotos dos municípios cujos prestadores de serviços são participantes do SNIS em 2014



es, healthcare, environment and urban development) as an industry’s benchmark, we are still lagging behind in relation to telecommunications or power generation.

We need legal security. We still don’t know today who owns the concession and how to share duties between state and city especially for integrated systems that go beyond boundaries.

Another issue is the legal insecurity for environmental matters that affect institutional and corporate contexts and the manager as an individual.

For this reason, we need that standards are urgently incorporated by

control entities, especially the State Attorney that needs to develop a clear understanding of the law and respect the article stating that the environmental entity has to establish progressive goals to leave the current reality and move on to the reality wanted.

We know of some systems that are not compliant with the environmental legislation, but these goals must be progressive and accepted to provide legal security, irrespective of the operator and the investor.

Our current coverage in the Recife Metropolitan Region is 30% and our goal is to reach 90% in 12 years. Recife was founded 479 years ago and when it is considered

**We have created a basin-based investment sharing system to avoid investing all our revenues and the state save resources for 41 sanitation systems.”**

works for the last 100 years since Saturnino de Brito, in 1918, coverage is only 30% in the metropolitan area and our challenge is to build 60% and recover the existing 30%.

This is a very daring goal that may be compromised with the economic crisis, as complexity levels rise due to an existing system and a new one that must be developed - differently from a highway, where new lanes are build, toll booths are deployed and it starts generating revenues.

### Investment sharing

For this reason, we have created a basin-based investment sharing system to avoid investing all our revenues and the state save resources for 41 sanitation systems. The public administration shall invest in 16 basins and the private partner in 25.

But all basins are operated by the private partner. So it is not like as I am investing additionally, the growth investment, that he will not be operating it. So the private partner's obligation is to recover, operate and maintain all systems, elaborate preliminary drafts for systems to be built and expand and implement them.

### The special occupation problem

Our operation is based on Ministry of Cities' Integrated Sanitation Program, so areas with special occupation are incorporated whenever possible to our project so that we can meet their future sanitation needs after urbanization.

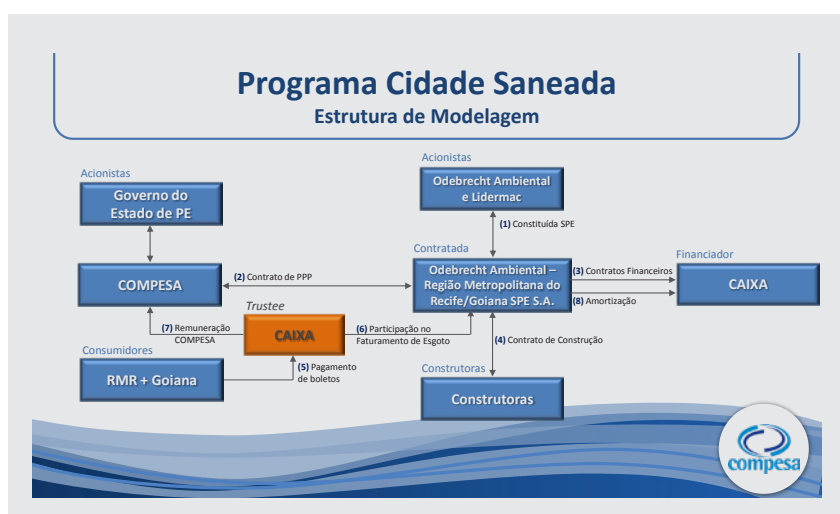
### Modelling Structure

In addition to Caixa's participation in Compesa's ownership structure, the bank also finances the PPP, which ensures a higher leverage power - Caixa is currently the largest lender for sanitation in Brazil.

### Risk Matrix

Responsibilities are shared and the risk of default is borne by the Public Administration.

The system's existing risks are taken over by Compesa, but risks from new systems are borne by the private partner. There is the obligation of investing in the public Capex. And there is also the private partner's Capex, as works are under their responsibility. Opex operation and maintenance risks are fully borne by the private partner and environmental risks are shared, according how these risks were originated.





## How is the private partner paid?

The consumption relationship still takes place between the user and the sanitation provider, which will oversee the goals for the partner consortium.

A ramp up was created for compensation, as Compesa already had revenue from sanitation on 30% of the coverage area and losing the revenue would hurt our cash flow. (see chart)

So Odebrecht Ambiental created a ramp up of 50% for the first year, 70% for the second year and 86.5% for the third year.

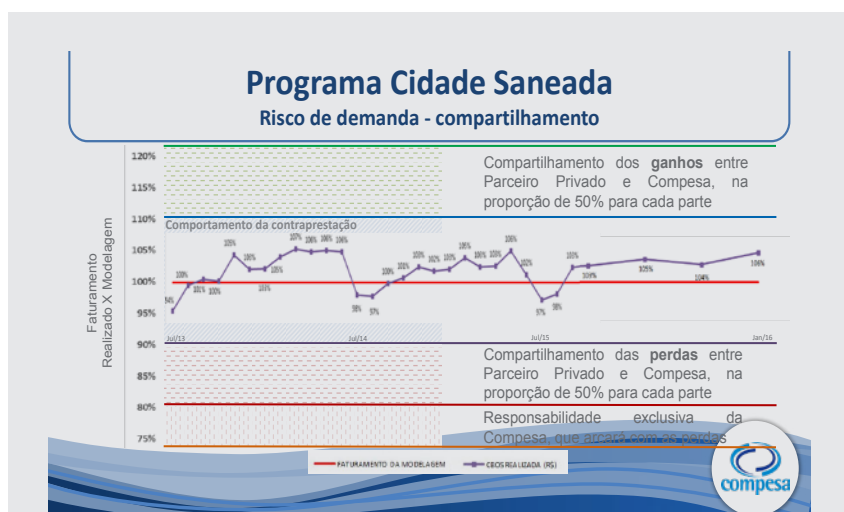
Our ceiling in the bid is to pay up to 90% of our revenues from sanitation, we measure several indicators determined by the bid on a monthly basis and then a performance level is generated by control entities.

The chart shows that the risk of demand is shared. We have a billing curve (see chart) for 35 years based on expected revenue. If the curve moves 10 points up or down, nothing changes. If the movement is more than 10% we share the gains with Compesa and Odebrecht Ambiental (the su-

per-profit clause). Losses below 90% are split in a half.

## PPP Benchmarks

- Starting from 2013, there were two years to recover existing systems and five years to adjust all systems to the current legislation.
- The 12-year term is completed in 2025, when all services will have 90% coverage and 100% treatment.
- The contract expires in 2047, when all assets are returned to Compesa, who may decide for a new partnership or take control.
- Some commitments with the client, as the social fee, remain unchanged as they are ensured by cross subsidies and sanitation is free for low income users. Up to 8% of clients in this bracket does not impact the PPP economic-financial model.
- Fee policy unchanged.
- The client contacts Compesa directly by phone, mobile and physical points of touch.
- Independent verifier (KPMG Auditores Independentes).



## The sanitation challenge in Brazil



**Pedro Leão**

CEO, Odebrecht Ambiental in Pernambuco

To present the CidadeSaneada project in progress is an opportunity to launch a wide debate on one of the largest challenges Brazil currently faces: To eliminate or reduce the large gap in sanitation.

First, there is the issue of cultural shift. We are talking about something completely different, not only a work. The work is a detail on the business of delivering sanitation services to the citizen.

There is one extremely important thing that we take into consideration while investing in sanitation, that is the efficacy of the investment.

It is not enough to see the balance of Growth Acceleration Program 2 that shows the volume of resources paid or hired from the Federal Budget or companies investing billions if we do not have the certainty that all houses in a given area are connected to a network, making sure that the investment had an effective and efficient use.

Another issue is to ensure attractiveness of these PPP models, enabling companies to invest with guarantees of return of investments in large terms of up to 35 years.

In a country where we don't have the culture of investing in infrastructure for the long run, we don't have structure of financing to do so - we lack investors used to take long-term risk.

In my view, this is a challenge that Pernambuco is close to solve and that can be an example to Brazil.

For this reason, OdebrechtAmbiental aims to become a leader in en-

vironmental solutions in Brazil and rank among the world's 10 largest companies in this industry until 2020, using sustainable technologies to improve the human condition and to preserve the environment.

We operate in three large areas:

**WATER AND SANITATION - PUBLIC CONCESSIONS (Client: Conceding Power and Service Users)**

**UTILITIES - UTILITY CENTRAL OUTSOURCING (Client: Oil, Petrochemicals, Steelmaking and Pulp and Paper industries)**

**RESIDUES - RESIDUE FINAL DISPOSAL AND REMEDIATION OF CONTAMINATED AREAS (Client: Oil and Petrochemical industries) 26 assets in different contract models**

OdebrechtAmbiental owns 26 assets under different contract models in operation - 24 in Brazil and 2 abroad.

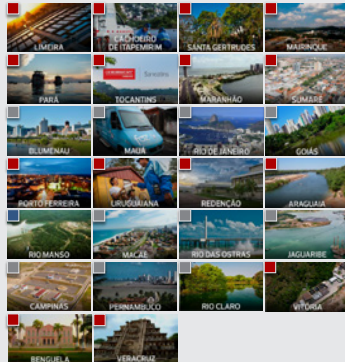
These are sub delegation, sponsored and administrative concession and PPP models with cities, states - we have a broad range of experience covering the whole country.

For Pernambuco, we created a Specific Purpose Entity (SPE) with Lindermac, a local construction company focused on earthwork and paving, which is an extremely important expertise in a PPP for sanitation.

Some of the lenders are Caixa Econômica, transferring resources from the FGTS, FDNE and Compesa, in addition to the State of Pernambuco.

## Odebrecht Ambiental

### Presença Geográfica



■ Água e Esgoto ■ Água ■ Esgoto



PROJETO DE ESGOTAMENTO SANITÁRIO  
DA REGIÃO METROPOLITANA DO RECIFE E  
MUNICÍPIO DE GOIANA

### 26 Ativos em diferentes modelos contratuais

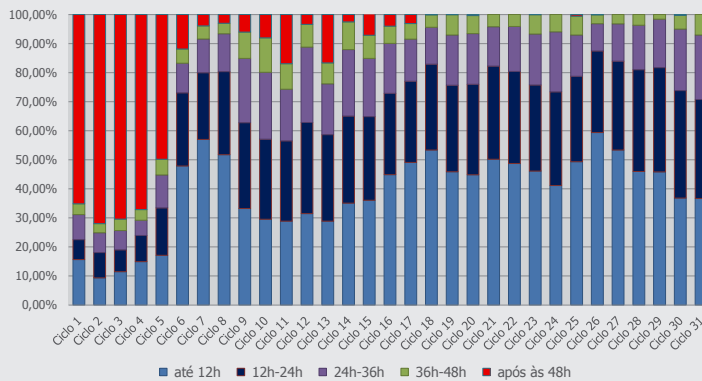


“Investments were focused on recovering 1,200 kilometers of piping in 2 years (from a simple jam to the



## Tempo de Atendimento

### Ordem de Serviços



Ciclo 1 - 23.07 a 22.08.2013 | Ciclo 31 - 23.01 a 22.02.2016



PROJETO DE ESGOTAMENTO SANITÁRIO  
DA REGIÃO METROPOLITANA DO RECIFE E  
MUNICÍPIO DE GOIANA



OdebrechtAmbiental took loans at a total of BRL 651 million.

Caixa is the manager for resources from FGTS and FDNE through Sudene. CidadeSaneada Program

## Benchmarks

Investments were focused on recovering 1,200 kilometers of piping in 2 years (from a simple jam to the full replacement of piping to allow for residues to leave houses and reach a sewage treatment plant).

Verifications in 1,240 commercial

properties to check fat collection boxes. A strong campaign in hotels and restaurants for awareness and cleaning. More than 600 establishments were notified.

More than 1,400 people working in the program. 950 of them are OdebrechtAmbiental employees.

More than 130,000 hours of training since July 2013.

100% of service orders are fulfilled in up to 48 hours. This is a gain that the citizen, i.e., the user, is already realizing (see chart).

Along with this, when we talk about changing the sanitation culture, we highlight the work done with operators, society and users in general to really appreciate the value of the sewage collection service."

## Melhoria na prestação de serviço



In terms of sewage treatment, the example of Dancing Days is a regional and national benchmark on efficacy, with a jump to 1,299 liters from 541 liters per second of sewage collection.

## Social and Cultural Efforts

Along with this, when we talk about changing the sanitation culture, we highlight the work done with operators, society and users in general to really appreciate the value of the sewage collection service.

The work is directly done on a regular basis with 20,000 people, spreading information, meetings and visits under several projects in private and public schools, nurturing environmental awareness in partnership with healthcare professionals, including campaigns against Dengue mosquito and Zika virus, highlighting:

**MissãoAmbiental Program** - Aims to develop informative activities with students and teachers with playful activities and environmental topics.

**AgenteCidadão**- Aims to support Healthcare Professionals on training support for communities with

multiplication of information on water-borne disease prevention.

**Plummer workshop** - Aims to share information, encouraging reflections on the sanitation culture and providing theoretical guidance on constructing and maintenance sewage connections.

**Interacting with the Community** - Aims to lead the discussion on environmental and social responsibility topics, encouraging proper practices of SES use and preservation.

**Open Doors** - Aims to raise awareness on several sectors of society on the SES importance and the user's responsibility by visits to the ETE and EEE.

**Environmental Citizen** - This activity aims to raise awareness for environmental topics and sanitation culture, as well as the importance of their role as a professional and citizen.

Social work does not bring immediate results but ten years from now, a child of 7 or 8 years old will place greater value on sanitation services than our generation has put across this decade.

### Innovation

#### **New Network Register with cutting edge technology**

A technical database of existing sewage collection networks in the coverage area of this project was completed and is under ongoing updating, so that service operators can identify by the use of a smart-phone which piping and network specification there is in the 15 cities of the Metropolitan Area and regions outside. This map and register will be quite useful in the future, with a margin of error of 8 centimeters. Recycling Truck

Another important point is the equipment that is able to unlock sewage networks through the reuse of effluents without the need for displacement. Some 80,000 liters of water are saved daily, speeding up procedures dramatically. Reused Water

Treated effluents that would be released in a body of water is now

used to feed trucks that clean sewage networks.

#### **Biological treatment**

- Biological treatment method of residual waters, characterized by:

- Increased energy savings (up to 30%);
- No emission of odors;
- Higher efficiency degree and cut of operational costs
- Demand for areas 4 times smaller than a conventional ETE. Laboratory
- ETE quality control - More than 430 tests/day show compliance to legislation;
- Cutting edge equipment;
- Qualified technical team;
- Mobile Lab | efforts to raise awareness in communities;
- Partnership with Bioagri.



## Case Study 01: Hospital Couto Maia (State)



**Marcelo Mariani Andrade**  
Presidente da SPE Couto Maia S.A

Expert in full management of mid- and high-complexity hospitals in clinical and non-clinical areas, the Grupo Sm is responsible for a case in the State of Bahia, the Hospital Couto Maia, a unit that treats patients with infectious and contagious diseases. With 20 years of experience and five contracts in operation, the group was recognized as the first operation to obtain ISO 9000 in all processes.

The Brazilian healthcare market is relevant to the GDP as elsewhere in the world. In 2014, BRL 195 billion were invested in healthcare and this amount grows above inflation, which is true all over the world. This way, healthcare always gets investment or increase investments above inflation. Investments in healthcare are shared between the Public Administration and the private sector. From the total invested, 46% comes from cities, states and the Federal governments, while the rest is divided into private investments from companies and from cooperatives and healthcare insurers.

Brazil invests basically the same amount that other developing countries do. Brazil invests USD 971 per capita, roughly the same amount invested by Argentina, Chile and Mexico. However, developed countries invest more and better. Portugal, for instance, invests twice more than Brazil and the United States, the benchmark country, invests ten times more. This means that the Brazilian healthcare infrastructure has a lot of room to grow and do. There is a huge, billionaire market to be made in terms of infrastructure, especially in the North and Northeast of the country. Here enter PPPs.

### The role of PPP in the management of hospitals

There is a high repressed demand in healthcare and the Public Administration has a credit limit near to be exceeded. Yearly research show and repeat that public healthcare is the population's main concern.

PPPs allow to speed up implementation of this structure as their goal is to put the project from the full operation of a unit or a network of healthcare units. Thus, the Public Administration has a faster instrument to develop and expand healthcare infrastructure.

There is a model based on the support from the private sector, without the realization of profits but lacking operational capacity to meet the existing repressed demand. Another possibility is that the private sector provide expert teams with the culture of quality and control takes over. So, one can see how the market is wide for developing PPPs in this area.

### Reasons to Implement PPPs in Healthcare:

- High repressed demand for new services.
- Public Administration's credit limits are compromised.
- Huge popular appeal: Research shows that public healthcare is the main concern among Brazilians (Source: Ibope/2014).
- PPPs can deploy new services faster.
- A non-profitable business model



is not enough to meet all repressed demand, especially for complex projects.

- The private sector can bring quality and low unit costs.

### The Couto Maia Institute

There are two healthcare units in Bahia that deal with infectious and contagious diseases: Dom Rodrigues Menezes and Couto Maia (1853). Dom Rodrigues Menezes is specifically focused on leprosy whereas Couto Maia deals with all infectious and contagious diseases in the state with mid to high complexity. As it is a century old unit, Couto Maia has outdated equipment and can't be expanded. However, both units have excellent clinical and medical teams that even develop research and education.

The impossibility of upgrading and expansion forced the Health Secretariat to conceive the Couto Maia Project, an administrative concession to build, provide equipment, operate non-clinical services and maintenance services. The pre-operational term is 16 months that include licenses and demolitions as there is the construction of the Couto Maia Institute, in the previous lo-

cation of Dom Rodrigues Menezes.

### New Couto Maia's X-Ray

- Pre-operational (licenses + projects + works + commissioning): 16 months
- Operation: 20 years.
- Initial Investment: BRL 95 million.
- Maximum Yearly Counter Payment: BRL 42 million/year.
- Unit profile: Hospital focused in infectious and contagious diseases with 155 beds for hospitalization.

Law requires that the project is conducted by a Specific Purpose Entity (SPE). In this case, such SPE is the Couto Maia S/A and shareholders are SM and Metro Engenharia, which was founded in a different method. It was possible to sign a DPC contract and an operation contract. The SPE will build, operate and each shareholder will transfer technology.

### Building location

The technical sheet indicates a plot of land with 111,000 square meters in Cajazeiras, near Águas Claras, an area full of trees. The

**“PPPs allow to speed up implementation of this structure as their goal is to put the project from the full operation of a unit or a network of healthcare units. Thus, the Public Administration has a faster instrument to develop and expand healthcare infrastructure.”**

## Unidades de Serviços Clínicos

### Unidade de Atendimento Ambulatorial

Ambulatório  
CRIE (Centro de Referência de Imunobiológicos Especiais)  
Farmácia Ambulatorial  
Urgência de Baixa e Média Complexidade

### Unidade de Internação (155 leitos)

Adultos (85)  
Pediatria (35)  
Semi-Intensiva Adultos (10)  
Intensiva Adultos (10)  
Intensiva Pediatria (10)  
Hospital Dia (5)

### Unidade de Apoio ao Diagnóstico e Terapia

Patologia Clínica (NB2)  
Imagenologia (Ressonância Magnética, Tomografia, Raio X, Ultrassom, Endoscopia)  
Métodos Gráficos  
Agência Transfusional  
Reabilitação  
Centro Cirúrgico

There is also an outpatient unit with individual access for each service, A&E is separated with independent entries, as shown in the floor plan."

## Unidades de Serviços Não Clínicos

### Unidade de Apoio Técnico

SND (Serviço de Nutrição e Dietética)  
Farmácia  
Central de Material Esterilizado  
Maqueros  
Necrotério

### Unidade de Ensino e Pesquisa

Treinamento de Pessoal

### Unidade de Apoio Administrativo

Serviços Administrativos, Clínicos, de Enfermagem e Técnico  
Documentação e Informação (TI)  
Recepção

### Unidade de Apoio Logístico

Processamento de Roupa

### Unidade de Apoio Logístico

Almoxarifado  
Manutenção (Eng. clínica)  
Conforto e Higiene  
Limpeza e Zeladoria  
Segurança e Vigilância  
Infra-Estrutura Predial  
Administração da Concessionária  
Transporte  
Telefonia  
Mensageria  
Bombeiro Civil  
Jardinagem

► 17



company planned and the State Government accepted the creation of a green belt around the hospital. It will have an operational site with buildings, parking lots, heliport, always respecting the green belt and the profile of patients that will remain an average time in the units due to the treatment type. This brings more attention to the human aspect of a hospital.

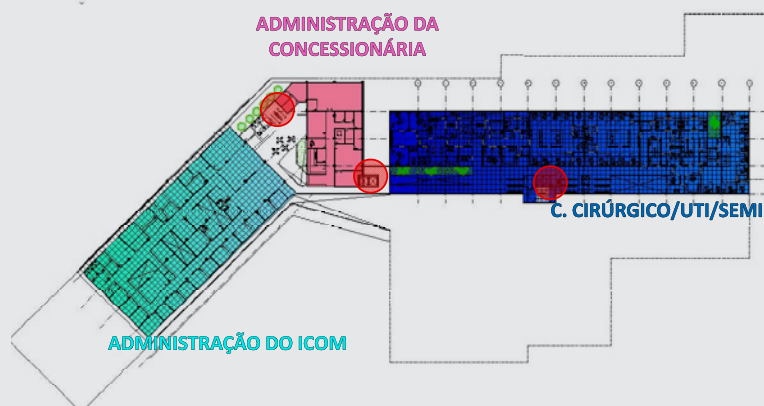
### Structure's Checklist

- 23,000 square meters of useful area
- Parking lots

- 14,000 square meters of roads
- Outpatient
- Biologic center
- Pharmacy
- 155 beds for adults and children, 30 out of which for intensive care and semi-intensive care and 5 beds for day care.

Earthwork was optimized for parking lots. The West wing was specialized for hospitalization. Biologic risks were mitigated through the conception of operational flows.

## Primeiro Andar



There is also an outpatient unit with individual access for each service, A&E is separated with independent entries, as shown in the floor plan.

### Bid process and public guarantee

The bid process was lower price with offer and bid by voice in the stock market. The public guarantee was separating resources from the State Participation Fund, as usually happens with other State contracts. Transfers are made by Banco do Brasil, which is also the manager. The bank pays the concessionaire and the rest is returned to the State. An independent verifier assesses performance on a quarterly basis. There is no fee for the counter payment and it is fully paid by the Conceding Power, but 30% is tied to performance. Payments are on a monthly basis.

### PPP Risks

A core principle for PPP is the maintenance of the economic and financial balance of the contract, providing security for the private sector to invest. The contract determines the risk that each party will bear through a risk matrix. Here, the responsibility of the parties is defined. The Public Administration is in charge of demand variations, i.e., any excess from the contract, such as an outbreak, will be require adjustment to the contract by the State. Any changes in tax legislation also trigger contract adjustment by the State.

The concessionaire, by its turn, is

in charge of upgrading equipment, which requires ongoing investments to keep the hospital's operation and status. The technologic upgrade risk, however, is borne by the State. All other risks are borne by the private sector, such as environmental risks, engineering, operation, price variation, exchange rate, inflation and labor legal proceedings, for instance. Controversies are solved by arbitrage panel. The company appoints a member, the State appoints another member and a third member is appointed by both.

### Difficulties to implement PPP contracts

Despite the popular appeal, there are some barriers to implement PPP in healthcare. The first one is guarantees, especially at the investment phase. The contract works well in the compensation regime. However, during the investment phase, the private sector lacks a public guarantee for obtaining resources. Negotiations with lenders are necessary to develop guarantees during this phase.

The other barrier happens when the contract is unbalanced. In these cases, there is a period between the request and the concession, when it is possible to request an adjustment while the private sector finances the loss caused by the unbalance. The company is compensated after an administrative process. Thus, the company must be prepared to finance this unbalance for long periods. There is also

a confusion from entities between concession and privatization.

### Concession is not privatization

Concession has nothing to do with privatization. The equipment and the service are public, and the Public Administration can get the equipment back by bearing costs. This way, there is a political risk in the long-term contract.

In Brazil, few lenders can structure long-term projects and companies have no options. There are also few teams specialized in structure public health projects and healthcare has higher operational costs when compared against other projects. The conceding power has a limitation of 5% to use its revenues.

Public healthcare is a service with high social impact and the PPP is a legal instrument that may support its universalization. Qualitative and quantitative research indicate that efforts in healthcare have a huge return, generate high social and economic impacts.

Thus, PPPs came to stay, despite difficulties. See the examples of Portugal and Spain, that have healthcare systems similar to the Brazilian system, based on religious hospitals and universal healthcare. It is different from the English model, where clinical services are under the State responsibility but it is the country with the largest number of concessions. PPP is a very important tool and there is no coming back.

## Case Study 02 Lapa Station (Salvador)



**Fabio Mota**

City Secretary, Salvador Urban  
Mobility Secretariat

Urban mobility is a key concern of the city of Salvador, as it is suffering from the increase on the flow of people and also by local degradation. Salvador's Lapa Station case is about a place with a very high flow of people and required an extreme makeover.

Using PPPs for mobility was started by the city's previous administration. At that time, it was thought of a public transportation concession. Then the Lapa Station concession entered the debate.

The Station was built according to an innovative project from the architect João Filgueira Lima, the famous Lelé, and opened in 1982. Considered as a touristic spot for many years, the station was in poor conditions and featuring structural issues. Retorted iron was at plain sight. The main issue is that all these problems were plaguing the main station in the city of Salvador, where approximately 450,000 people pass every day.

The station was planned to be rebuilt by the Public Transportation Secretariat of Salvador.

The project established a bus concession charging an encumbrance of BRL 180 million and demanding that the bid winner would have an average fleet of 3.5 years. Due to the concession, 200 new buses starting driving around under a color code to distinguish the areas of the city. Another demand was the installation of satellite navigation in all vehicles, allowing for a better control of the fleet and establishing an example for other cities as this is the only fleet in Brazil with 24-hour monitoring in every bus of the city.

Leveraging the technology, the Citamobi application was deployed and has now more than 600,000 users. The app brings benefits for users and managers alike. It allows the user to know beforehand the time of buses and the city to fully control bus stops, mechanical issues, speed and other elements.

### Mobility bottlenecks

The capital of Bahia had several mobility bottlenecks in the three main vectors of public transportation. In Cajazeiras, for instance, a connection between Cajazeira 5 to Cajazeira 10 was made allowing that people move from buses to the Lapa Station and saving 30 minutes, enhancing quality of living for people to commute.

Another bottleneck is the Suburbana Avenue, the second most important vector to Lapa Station. For this segment, a qualification work was considered specially in the Luso region, ensuring arrivals to the station in only 45 minutes.

### The new Lapa Station

After restructuring vectors feeding Lapa Station, it was time to improve the station to match the status of the city, the third largest capital in Brazil. The main goal was to aggregate the upgrade of the new public transportation system and improve mobility.

The Lapa Station concession had an encumbrance of BRL 13,623,000 and 10% of the amount of the actual value of use. The contract would have 35 years and would total BRL 139 million. The bid winner should renovate and take Station's main-

tenance on cleaning, lightning and security - services poorly provided by the State and heavily criticized by users.

The concessionaire spent approximately BRL 21 million to rebuild Lapa station. The important thing in this model is not only rebuilding Lapa station, as the city could do the same work but would not have conditions to maintain it.

The Lapa consortium started operations in January 13, 2015 and maintenance also started at that date. Works would last for 12 months but delivered before that - on March 29, 2016.

### Station's Mall

The second part of the project is a mall. Lapa is near the convent, an area comprising 34,000 square meters. This is the object, a concession of public services for management, operation and administration of the station, concession of use of existing facilities for renovation, maintenance, restoration and the concession of land next to the station for deploying the mall.

The work was performed in the Cleriston Andrade building, with floor and basement, in front of the platforms and its construction will last 24 months for a mall with more than 200 stores.

The concessionaire, in addition to renovation work and maintenance, is also responsible for administration, operation, maintenance, cleaning, security and zoning. Zoning for the informal trading areas around the station. The circulation of people totals 450,000 on a daily

basis. Today it is a bus and subway station, although the subway line has only 10 km currently.

The selection of the hiring model, public service concession, is a modern, transparent and efficient tool for the public management as it makes possible a temporary transfer of public services for a company or consortium, that demonstrates capacity to win the object. This is an instrument without paperwork. If the Lapa Station was bid in traditional mode, bid, hiring and oversight would take at least one year.

The private sector is way faster than the Public Administration to make a work. Thus, the Lapa station is not a public work but a concession made within this model.

### Project challenges and opportunities:

- The need for a specific Law to authorize the concession. These are the basic requirements to make a concession: To elaborate a feasible, attractive concession involving costs - BRL 140 million approximately in this case.
- Possibility of exploring commercial areas within concession limits. Lapa has today 64 stores and the future mall will have 240 stores. So the concessionaire will have 304 stores.
- Possibility of charging a fee for parking lots.
- Possibility of exploring ancillary revenues from advertising and other activities within the station and the future mall.

**“Another bottleneck is the Suburbana Avenue, the second most important vector to Lapa Station. For this segment, a qualification work was considered specially in the Luso region, ensuring arrivals to the station in only 45 minutes.**





“The private sector is way faster than the Public Administration to make a work. Thus, the Lapa station is not a public work but a concession made within this model.”

- Work Group structured with several technicians from the city office to analyze the elemental principles involved. Such Work Group structure was already formed, actually is a 35-year Assessment Committee, always rotating members.

The expectation for future concessions under the SPE model provides a great deal of comfort and transparency to the Public Administration and to citizens. A SPE fits into the stock corporation legislation, which requires the publication of balance sheets so there is another element for oversight both of the Public Administration, enhancing its control as every quarter a new balance sheet is published and even to support an eventual adjustment request, and of the concessionaire itself, that can assess the business on a daily basis.

### Lapa Station differentials

Access is one of the project's highlights. An assessment made before the new project showed that it was the least accessible station in Brazil. So 11 escalators were replaced - one of them the largest in Latin America. Two kilometers of pathway for the visually impaired were deployed, improving accessibility.

Adding to accessibility efforts, two elevators were added, one exclusively for mobility impaired people and another for goods. Another benefits to the public in general were the installation of a fire detection system, firefighting system, climate control in bathrooms with exhausting system and granite floor.

Focusing on the security for the whole population, a CCTV system with 90 cameras was deployed. In other words, the Lapa Station is ful-

ly monitored and there are security agents all over the place.

### QUESTIONS

**Carlos Henrique de Oliveira Passos – SINDUSCON-BA:** Marcelo, I realized from your presentation that your SPE is in charge of the non-clinical service, so I suppose the State will provide clinical services. Do you see any risk or issue from this management combination, or what impact does a poor public service delivery have to your performance in the non-clinical service?

**Marcelo Andrade – SPE Couto Maia:** We have discussed this with the Conceding Power and I have discussing this with the independent verifier at the time of assessment of indicators, as some of them are opinion research. So if you have a patient that believes was poorly served by the medical team, this can impact his/her opinion about other services. This risk exists and must be controlled. First, the way you make the questions must be considered. Second, it is about control groups, having assumptions tested, making the same questions about clinical services for those who liked it and those did not like it to see if the opinion on the service is relevant or different from those who did not liked clinical services and if affects judgment about my non-clinical services. So we are going to cover this statically by creating a focus group, the control group and this was a topic in the discussions with the independent verifier, we need to have a statistic treatment to mitigate this. But this has been our concern from the onset, we made questions even before the bid.



**Carlos Henrique de Oliveira Passos – SINDUSCON-BA:** What are the performance indicators for Lapa Station and will new investments be required due to the increase of passengers caused by improvements in the bus system or by the growth of the waterway system? Is this something you expect?

**Fábio Mota – City of Salvador:** There are two concessions, two different models and for the public transportation system, it is clear that the most important indexes and parameters are those related to the improvement of Salvador public transportation system. In the contract itself we created the oversight and compensation mechanisms and the fee is related to the satisfaction levels of all these vectors. As I mentioned, technology, which is our main allied in Salvador today, sends us 108 reports every day as we have satellite navigation in each bus geo-referencing each bus stop in the city. When the bus passes by such geo-referencing stop, all information related to it is extracted and sent to our Operational Control Center, such as trips scheduled for Fazenda Grande - Pituba were made, if the intervals are within the scheduled range, if the itinerary defined by the city is being met and so on. So the parameter is connected to this satisfaction levels from the Public Administration and also from the quarterly surveys conducted in selected spots.

**Letícia Queiróz – Queiróz Maluf Advogados:** I have two questions, one for each speaker. Marcelo, the first one is for you, about the arbitration clause - has it been utilized? Is there a separation of matters where some go the court and others to an arbitration panel?

**Marcelo Andrade – SPE Couto Maia:** Thanks God, it has never been triggered.

**Letícia Queiróz – Queiróz Maluf Advogados:** Is there any friendly resolution mechanism? They work very well in these contracts, don't they?

**Marcelo Andrade – SPE Couto Maia:** Yes. There is an Administrative Committee formed by three technicians - one appointed by the concessionaire, another by the Conceding Power and the third is appointed by both, and if this committee fails to find a solution then the matter goes to arbitration. Absolutely, any controversy is solved at arbitration and the Brazil-Canada Chamber of Commerce.

**Letícia Queiróz – Queiróz Maluf Advogados:** And the Chamber follows the whole contract or is it only triggered in case of controversy?

**Marcelo Andrade – SPE Couto Maia:** Only in case of controversy. Now, the contract is overseen by the Conceding Power through ad-hoc and permanent committees and the independent verifier. Ad-hoc committees exist because some milestones arise only for a single phase. The assessment of projects has an ad-hoc committee only for the project, the assessment of real estate encumbrance list has an ad-hoc committee only for this list and when this is accomplished, the committee is dissolved. And there are a permanent committee by the Conceding Power and an independent verifier that last for the whole contract.

**Letícia Queiróz – Queiróz Maluf Advogados:** Now a question to the secretary. I would like to know, es-

**“Focusing on the security for the whole population, a CCTV system with 90 cameras was deployed. In other words, the Lapa Station is fully monitored and there are security agents all over the place.”**



pecially for the Lapa station project, how ancillary revenues were covered by the contract, as they seem relevant to me and if they are shared or not, and how they were projected in relation to the revenues from fees.

**Fábio Mota – City of Salvador:**  
There are two models. Let me get back a little. For public transportation concessions, 50% of ancillary revenues goes to the city and 50% stays with the concessionaire. For example, revenues from advertising

in buses are split 50/50 between the concessionaire and the city. The same model is applied to Lapa station, where ancillary revenue is obtained from advertising. This is a model unique for the city, which has created an office to oversight the contract. In addition to independent verifiers and committees, we also have a city office that oversees and defines on any incorrect when they happen or fix imperfections in the contract. There is an internal management.

# PPPs: Opportunities for investors

The PPP model is advantageous for the Public Administration as it opens a wide range of opportunities for the private sector on what concerns to investments.

For this reason, it is important to highlight three points:

- Of course, the first one is the quality and structure of projects, so in this regard the State of Bahia Guarantee Structure will be explained as well as some of the projects already in progress in the state and others in development or study.
- Second, and quite important, is the State of Bahia Guarantee Structure, bankability and financiability of projects, once any Concession and PPP project must have equity inputs or financing from private partners, that get loans from banks such as BNDES, Banco do Nordeste and others. This is the so-called Project Finance.
- And finally, third but not least important, is the long-term hiring and how to mitigate political instability risks, requiring a guarantee structured for the private partner for the public counter payment even under government changes and different institutional and governmental scenarios.

## Project Finance

- This is defined as a financing model which assessment process, structuring and loan is based primarily in the project's financial capacity; loans are granted to a separated stock corporation, the SPE;
- Project cash flow based financing starts with large ventures recorded

in the world's history;

- In 1299, the English royalty obtained a loan from Frescobaldi, then one of the largest Italian banks, to develop silver mines in Davon with a financial structure based in assets. Another example of asset-based financing took place centuries later when Iberian countries financed their great discoveries
- Due to a lack of resources in global markets at the second half of the 20th century, new finance engineering arises with the goal to create new financing alternatives specially for infrastructure;
- Dissemination of project finance in the US started with the passing of the Public Utility Regulatory Policy Act6 (Purpa). This piece of legislation was a critical step towards the structuring of asset-based financing by establishing contract long-term obligations and became quite used in the USD and Britain.

## Project Finance characteristics

It takes place as a separated economic investment, preferably as a Specific Purpose Entity (SPE); High investments demanding high leverage from shareholders if financing was achieved by corporate financing;

Reasonable forecast level upon cash flow and return rate, as in a natural monopoly, thus reducing market related risks for the service of product.

- Segregation and risk allocation between multiple participants with reduction of joint liability between partners.



**Rogério Princhak**

PPP Executive Secretary,  
Government of Bahia

**"This is defined as a financing model which assessment process, structuring and loan is based primarily in the project's financial capacity; loans are granted to a separated stock corporation, the SPE."**

Possibility of creditors/interested parties to take effective measures to take over contract's execution.

### Situation in Brazil

This is brand new mechanism in Brazil as the assets of companies in the business to be hired are segregated as guarantee through a SPE. So the asset itself is the guarantee, which is the business itself, that will be responsible for payment. This is a critical matter that requires attention and quality to the model for the process. And this is crucial. Project finance started in Brazil around 1990, when the privatization process is launched. So this is an important concept for companies requiring financing: Leverage equity, i.e., part of its own capital having the project itself as guarantee.

This discussion starts in Brazil and needs to mature among banks and long-term borrowers so existing alternatives for long-term financing can be deployed as fast as possible, along with other loan options, such as infrastructure bonds and other creative loan methods from the private sector.

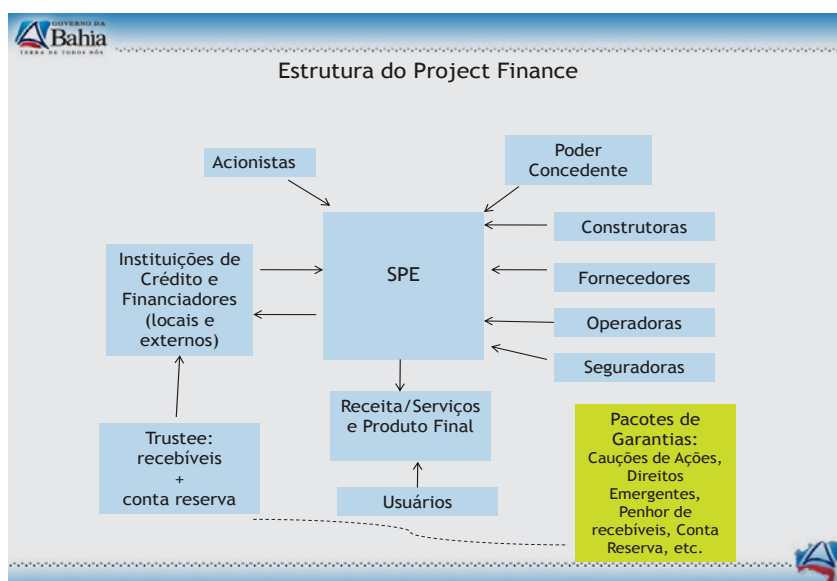
### Resistance

But this model faces resistance from BNDES and Banco do Nordeste, both demanding additional guarantees from the private partner during the project's implementation and execution phases.

Hence the first conflict arises, when the model is designed and the private sector will require such additional guarantees, raising financial costs. However, control entities, such as Federal and State Accounting Courts, argue against this model specially about the famous bridge loans that make feasible launching the business.

This is the first problem that also can be understood as a cultural issue, in the sense to raise awareness and show to banks that the project is feasible. And a good project is expensive. So a good mid-sized to large model does not cost less than BRL 3 million or BRL 4 million as these are long-term projects with 15, 20 or 30 years.

Due to this business aspect, we have in Brazil an evolution on hiring methods and nature, that is deeply



connected to how revenues will be achieved. Public works governed by Law 8666 receive resources as the service is being executed.

### Revenue Generation Capacity: Concession vs. PPPs

For this reason, there is the Concession Act, as it determines that subsidies can be granted during the construction phase once there is a specific authorization, and then the evolution to a sponsored PPP contract to an administrative contract PPP, where initially the payment to the private partner would only start from the onset of operations but there is a change allowing that part of resources are invested during the construction phase.

This provide fiscal benefits as Tax Income is not applicable as there is no revenue and PIS and COFINS are deferred and diluted to the next moment, which is limited by the maximum depreciation term, amortization, to contract term.

So this is actually the mechanism that governs and sets the PPP contract apart from the Concession contract unless when there are subsidies, since there is an autho-

rization to provide subsidies before the bid. This is the big difference: The possibility of reimbursing investments.

### Legal Aspects

Limitations of Law 8666/97: It forbids the inclusion to the object of an administrative contract for service of a forecast to obtain financial resources to finance installments and restricts the combination of two objects (service delivery + works, for instance)

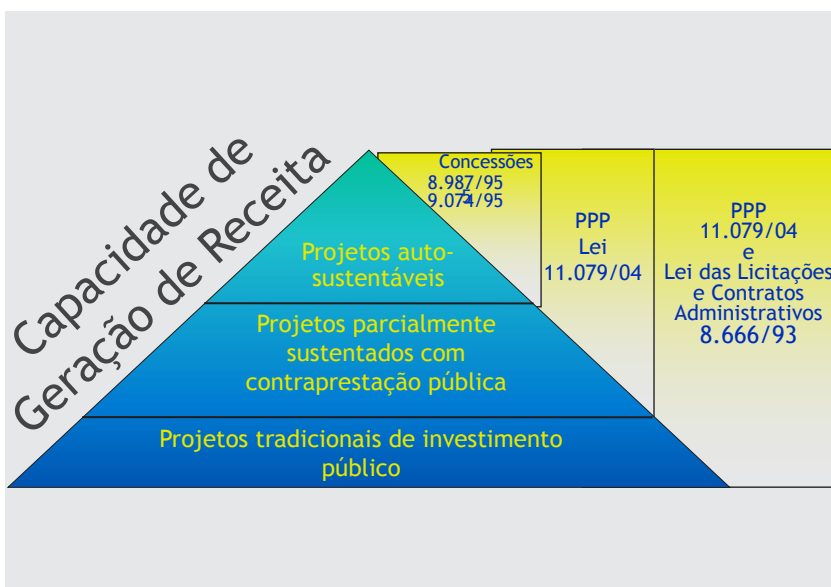
Law 8.987/95: It allows the private partner to provide infrastructure and to be reimbursed with the rights to explore it economically.

### Payment mechanisms for PPP contracts

There is also a cultural issue placing barriers on control entities, Caixa Econômica Federal, and the Federal Government on how resources will be released.

The Law guiding PPPs have operational milestones that usually bring some issues. For instance, a subway contract with a provision of State inputs, forecast that resources will be transferred from the federal budget and interest rates from

**“In Brazil around 1990, when the privatization process is launched. So this is an important concept for companies requiring financing.”**



” **Law 8.987/95: It allows the private partner to provide infrastructure and to be reimbursed with the rights to explore it economically.** ”

loans made by the State from Caixa to finance and reduce project costs during its implementation period.

For instance, when we did the BA-092 highway, an overhead walkway was defined as an operational milestone, but when the curve radius was projected it was found that there was a transmission line and the risk of these interferences would be borne by the state.

After that, an underground walkway was built. Caixa Econômica Federal did not release the resources for the walkway, which was not even 1% of the total, simply because it was an underground walkway and not an overhead walkway.

We have this expertise, we cannot be so generic and not that specific either. We had to change the contract to forecast this operational benchmark by going to the Ministry of Cities and Caixa Econômica Federal, which were informed about the incident. These barriers persist in Brazilian legislation.

### State of Bahia Guarantee Structure Model

The government shall offer to the private sector robust guarantees as

this is about long-term contracts, requiring proper guarantees to provide comfort to the private sector and to the lender, as the PPP Bill determines step-in rights.

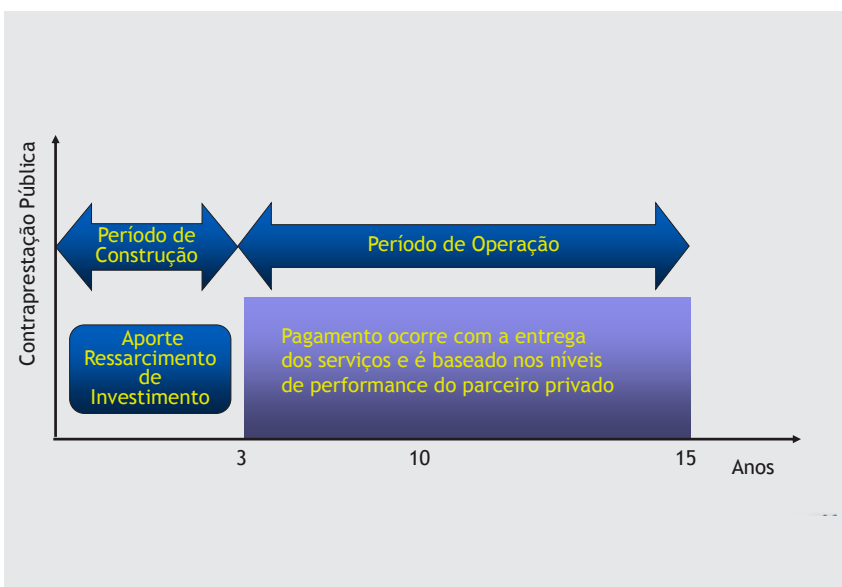
This is the right for the lender to take over the business in case of default, including part of counter payments.

Object: The segregation of 12% of the amount received by State of Bahia from the State Participation Fund.

Goal: To have a simple mechanism that ensures public counter payment flows irrespective of public budget, resistant to political interference and compromising only the required resources.

Guarantee: 18% of FPE is transferred as per State Law 11.477/2009 to Desenhahia and automatically to the concessionaire, for the fulfillment of State of Bahia obligations with PPP contracts.

Method: Umbrella Contract determines the opening of a current account separated from other accounts held by Desenhahia and payments performed by the Payment Agent from a power of attorney granted by Desenhahia.





## Surplus: Returned to a single account

### Revenue obtained by the State of Bahia

Under the PPP payment mechanism with resources from the State Participation Fund (law 11.477/2009), there is a legal controversy to clarify if resources from the SPF is tax or not.

This is because the Constitution prohibits tax linkage. However, it was determined that resources from the SPF are not tax as they are originated from taxes charged by the Federal Administration, such as IPI and Tax Income.

### Main devices on the State law

Article 1: It is expressly authorized: The financial agent to transfer to Desenhahia 18% of FPE to pay obligations from State of Bahia for PPP contracts; ii. Desenhahia to authorize the financial agent to transfer resources directly to the concessionaire.

Article 2: It allows that payment procedures (resource flow and movement) by the Payment Agent

is regulated by contract attached to PPP contracts, allowing for the opening of a specific account.

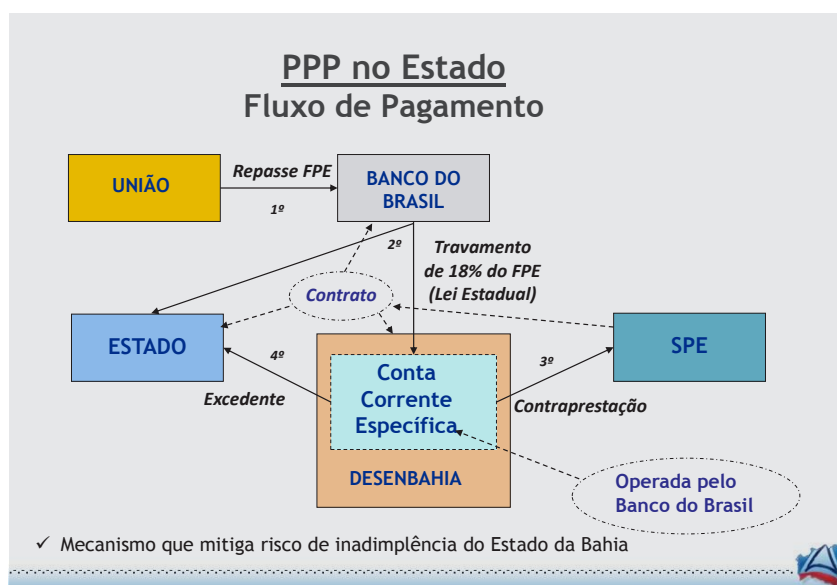
Article 3: It determines that balance in excess from FPE resources are returned to the State of Bahia Treasury when all counter payments are done.

### State of Bahia has a tested guarantee structure

To make large infrastructure works feasible, Bahia created a partnership guarantee fund that allows for capital pay-in of up to BRL 750 million. For the moment, the fund has BRL 250 million to guarantee the partnership for the subway, a contract signed in 2013. Financing was granted by BNDES.

The resources are maintained for 24 months. Then the guarantee is reduced to BRL 200 million, maintained in the fund for another 24 months. At the end of 48 months, BRL 67 million (or the equivalent to 6 counter payments as determined by the contract) will remain in the fund.

At this point, the subway will be operational and this amount will be retained to ensure resources if



**Underwater sewage pipeline**  
**- One of the first PPP in**  
**sanitation in Brazil at a cost**  
**of BRL 259 million. The**  
**land portion of the work was**  
**excavated using pipe jacking**  
**technology.”**

fees can't be raised, which would increase the value of counter payments from the State.

The biggest challenge for large infrastructure works, such as subway, demanding high investments and long terms, is a guarantee system that is able to reduce risk and the cost of business.

Without any guarantees in this type of project, the State needs to raise counter payments or the fee is above population's capacity to pay. This renders the project as not feasible.

To meet the need for counter payments, Bahia also puts aside 18% of resources from the FPE (State Participation Fund, State Law 11.477/2009).

At the first moment, this resource does not even arrive at the State Treasury as it is segregated and then used to pay counter payments. Only the remaining balance is returned to the State coffers.

### Payment agent

Banco do Brasil S.A., bank appointed by Law to operate and move FPE resources.

- **Responsibility:** It answers only for the default on meeting contract obligations under limits determined by the contract.
- **Compensation:** Fees to be negotiated and included in the contract.
- **Waiver/Termination:** The Payment Agent may waive by a previous notice or be terminated if it does not fulfill its contract obligations.
- **Terms/Custody:** In the case of waiver or termination, a term of 90 days is granted to replace the Payment Agent; Custody obligations remain in force.

### Desenbahia and State Obligations and Rights

**Legitimacy:** Desenbahia and the State of Bahia will grant an irrevocable and unchangeable mandate to the Payment Agent to perform custody, movement and management operations in order to pay State of Bahia contract obligations to Concessionaires that have signed PPP Contracts.

### Main obligations:

- To place in custody, movement and manage resources destined to Accounts;
- Directly transfer to the private partner the resources for the public counter payment;
- To control the flow of resources in the Account.

Desenbahia: (i) To keep in effect powers granted to the Payment Agent to operate the Revenue Account; (ii) Report on the existence of administrative or legal proceedings that may affect the Accounts;

State of Bahia: (i) To set FPE resources apart for guarantees (beyond contract); (ii) Report monthly to Desenbahia the amount for public counter payment, and then Desenbahia will report to the Payment Agent;

- Desenbahia will receive a fee for operationalizing the guarantee as negotiated with the Economy Secretariat.

### Private Partner Obligations and Rights

- To receive amounts owed by State of Bahia directly from the transfer of resources from a Specific Account.
- Provide any of its emerging rights from the contract as a guarantee for financing.
- The private partner is not allowed to make direct use of resources deposited to the Specific Account;

such use is solely made by the Payment Agent as per Contract's terms and conditions.

- Unconditional, full adherence to the contract.

## Adherence of New Concessionaires

- The Guarantee Mechanism for the payment flow as created by State Law and the contract is used in PPP projects of the State of Bahia through unconditional, full adherence of concessionaires to the contract's terms and conditions.
- The addition of a new concessionaire will be formalized by the signing of a Contract Addition Term.
- As a new concessionaire is added, FPE resources will be transferred to its current account according to an order of preference by time for contracts entered into by the State.

## Guarantee - Payment Flow

Imagine the PPP revenue structure for a subway, constituted by a capital input during the investment phase, counter payment and compensation fee, which is the fee paid by the user and the State captures the public fee which is the user fee.

So think about it, I have a fee-based revenue with a growth curve as forecast in the contract that is 70% of inflation plus 30% of energy variation change, as indicated by the Getúlio Vargas Foundation, and the public fee, which is a political fee.

So, at any given time in this curve the public fee may not cover the compensation fee in full and the integration transfer fee that the system is paid for from buses.

A guarantee fund can close this gap. With this, potentially from a legal standpoint, there is plenty of room for hiring new operations, which greatest amounts will surface from 2018 to 2020 when I am going to compromise 2%, that is when the subway starts operation and Couto Maia also will be operational. So we still have a margin of 3% to hire new PPP projects.

## Need for Changing Legislation

Law 12.610 dated December 27, 2012 - Authorizes the Executive Branch to create the Bahia Partnership Guarantee Fund (Fundo Garantidor Baiano de Parcerias, FGBP);

**“The payment to the private partner would only start from the onset of operations but there is a change allowing that part of resources are invested during the construction phase.”**



## Informações Financeiras

	2015	2016
RCL	27,2 bilhões	28,1 bilhões
Limite de 5%	1,3 bilhões	1,4 bilhões
Contratos Ente Federado	328 milhões	450 milhões
Contrato Estatal não dependente	64 milhões	71 milhões
Total contratado	393 milhões	521 milhões
Limite comprometido	1,2%	1,6%

**The addition of a new concessionaire will be formalized by the signing of a Contract Addition Term. ”**

## Initial input of B RL 250 million

- Adjustments to be made: – Fund’s feedback; – Receivables from FUN-DESE; – Royalties.

## As for constitutionality of revenue linkage

**- This is not a tax-originated income for the State so it is not subjected to article 167, item IV and paragraph 4 of the Federal Constitution;**

- It is not an actual guarantee (it can be subjected to pledge)
- Budgetary guarantee that is ties a revenue stream to public counter payments for PPP contracts;
- Thus it ensures the payable-receivable flow;
- It allows pledging credit rights for the SPE in the next phase.

## PPP projects implemented in Bahia

**Underwater sewage pipeline - One of the first PPP in sanitation in Brazil at a cost of BRL 259 million. The land portion of the work was excavated using pipe jacking technology.**

- Object: Administrative Concession for building and operating Jaguaribe Ocean Disposal System.
- Investment: BRL 179 million.
- Concession Term: 18 years; 2 years for executing the works. Start of works: June 2008 and Start of Operations: May 2011.
- Monthly Counter Payment: R\$ 5,907,955.07 for 183 months.
- Guarantee: Embasa receivables, a non-dependent state-owned company.

## Arena Fonte Nova Stadium

- Object: Administrative conces-

sion to rebuild and operate the Fonte Nova Stadium.

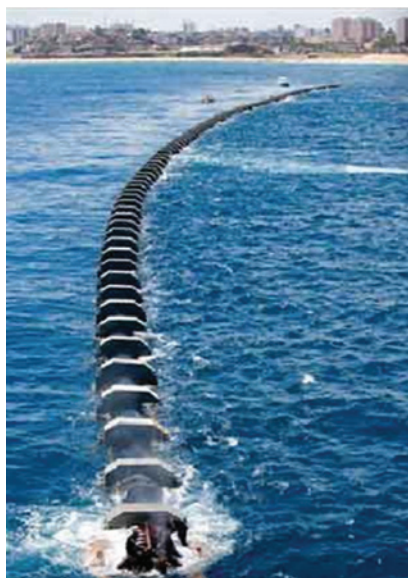
- Concession Term: 35 years; 3 years for executing the works
- Monthly Counter Payment: BRL 12,231,949.98 for a 15-year term.
- Investment: BRL 591 million.
- Guarantee: Payment flow from resources segregated from the FPE.

## Hospital do Subúrbio

- Object: Administrative concession for hospital management and operation.
- Concession Term: 10 years.
- Concessionaire’s investment: BRL 36 million in equipment.
- Monthly Counter Payment: BRL 15,809,397.61.
- The unit is well regarded by users in general terms, fulfilling quantitative and qualitative performance levels.
- Guarantee: Payment flow from resources segregated from the FPE.

**Instituto Couto Maia - Innovative project with international awards in the Health area, with investments in equipment and medical service delivery, with compensation systems and mechanisms for quality control, transparency that are extremely interesting.**

- Object: Administrative concession for building and delivering non-medical services.
- Concession Term: 21.4 years; 1.4 year for executing investments.
- Investment: BRL 96 million
- Monthly Counter Payment: BRL 3,515,027.17
- Situation: Earthwork.



- Guarantee: Payment flow from resources segregated from the FPE

### Salvador and Lauro de Freitas Subway

- Object: Sponsored concession for Salvador and Lauro de Freitas subway (34 km).
- Concession Term: 30 years • Investment: BRL 3.6 billion • Monthly Counter Payment: Full operation: BRL 14,742,848.28 • Current situation: Partial operation. • Public guarantees: Payment flow through resources segregated from the Bahia State Guarantee Fund (FPE Fundo Garantidor Baiano de PPP) with BRL 250 million.

### Image-based Diagnosis Service Network

- Object: Administrative concession for management and operation of services to support diagnosis through medical imaging in an Imaging Center and 12 hospitals.
- Concession Term: 11,5 years, with 1,5 years for works and transition activities.
- Monthly Counter Payment: Full operation: BRL 8,208,819.86.

- Current situation: In transition.
- Initial Investment: BRL 80 million.
- Guarantee: Payment flow from resources segregated from the FPE.

### Projects being assessed/ studied

#### VLT – Comércio/São Luiz

- Object: VLT Salvador implementation, operation and maintenance to replace the current train system.
- Sponsored PPP.
- Investment: BRL 1.1 billion.
- Segment: 20 Km
- Stations – 23.
- Operation: Phased and completed in 36 months.
- Yearly counter payment: Calculated at BRL 112 million.

#### BA-052 Highway System

- It is the renovation and maintenance of a highway system comprised of BA052, BA148, BA432 and BA160 highways totaling almost 685 km, and the construction of a bridge between the cities of Xique-Xique and Barra.
- Where it stands now: model being defined in partnership with BNDES/IFC.
- Schedule.



- Public consultation: July 2016.
- Bid: October 2016.
- Hiring: February 2017.

### West Road System

- Object: Building and operating a highway between the cities of Salvador and Itaparica (12 km), a road between the bridge and the BA001 highway until BR 242 highway (150 km) to develop the Baixo Sul region.
- Modeling: Mckinsey & Company, hired by Seplan.
- Services hired: Probing, Sea Hydrology, Preliminary Draft, Environmental Impact Studies, Cultural Impact, Intangible Assets, Review of Urban Planning of the cities of Itaparica and Vera Cruz.
- Amount: to be defined, but it will be comprised of: charge of fees at the highway/bridge, resources from Bahia and Federal Administration, trying to minimize the need for counter payments to a maximum.
- Estimated value of investment according to PMI is of BRL 7.3 billion.



# PMI for Public Parking Lots in Salvador

The Procedure to Express Interest in public parking lots in Salvador is similar to a reality we live here in Brazil.

The PMI aims to drive participation of interested parties to elaborate technical studies covering technology, engineering, architecture, technical, environmental, economic-financial, legal feasibility, in addition to traffic and supply and demand studies as detailed as to subsidize the future hiring of a concession to explore a parking lot, horizontal and vertical signal services, existing parking lots and so on, comprising works, implementation, maintenance, operation and management of service according to the Benchmark Term.

## In general, parking lot services:

- Are poorly delivered;
- Provide low security and convenience to users and service vendors;
- Use old technology (printed cards) that makes hard to follow-up payment and proper use of parking slots;
- Benefit informal service providers.

## New opportunities

The future concession of parking services will bring new opportunities based on the Procedure to Express Interest, some of them are:

- Exploration of parking lots in Salvador.
- Construction of buildings for parking lots or underground parking lots.

## Context

A survey on the current situation of parking lots in Salvador found that the private sector would provide this service much better than the city itself, and then a preliminary draft for feasibility was conducted.

What do these studies look for? Subsidies to elaborate the future concession for public parking lots in Salvador.

## Opportunities

Both for exploring the service itself as for the construction of facilities as expected in the Salvador PMI structure, new opportunities for business are plenty.

Models that upgraded Brazilian cities on managing their parking lots are supporting the conclusion of the procedure, especially Rio de Janeiro's, but technologies are being adopted in several Brazilian cities, such as:

Recife/PE; Rio de Janeiro/RJ; Porto Alegre/RS; Florianópolis/SC; Rio Branco/AC; Fortaleza/CE; Guarulhos/SP; Caraguatatuba/SP, ABC Paulista/SP; Lavras/MG; São José dos Campos/SP; Araucária/PR; Pelotas/RS; Caruaru/PE; Petrolina/PE.

The PMI's notice was published in May 20, 2015, giving 20 days for the private sector to manifest interest whether by individuals or companies, alone or in consortia.

Two companies approached the city: Shopping Boulevard 161 and Hora Park Sistema de Estacionamento Rotativos Ltda.



**Eduardo Leite**

Director, SEMOP (Salvador City Public Security Secretariat)

Both for exploring the service itself as for the construction of facilities as expected in the Salvador PMI structure, new opportunities for business are plenty.”

The Evaluation Committee voided Shopping Boulevard 161 proposal as it would manage parking lots near their own mall. The company Hora Park met PMI requirements and then was granted authorization to perform the studies.

### Market

Authorization granted to Hora Park does not prevent that any other interested part joins the bid for concession to be defined by the Administration. It also grants no advantages in a future bid.

Costs to perform the authorized studies are not reimbursed by the City but by the future bid winner, only if these studies are fully used.

In other words, the risk of investing in performing studies is fully borne by the company, as article 21 of Federal Law 8.987/95 (Concessions Law). In Salvador, it is regulated by City Decree 23.396/13.

For this specific PMI, studies would be reimbursed up to BRL 2 million. It is worth remembering that the city is not paying for that - the future concessionaire will. So the studies will be reimbursed after the bid, by the winning consortium.

If the concession is not granted, which may happen according to the PMI's notice, the company is not reimbursed. So all parties are aware that this is a high-risk negotiation. Well, it is regulated by Decree 23.393 in Salvador.

### Benefits that must be included in a PMI

- Expansion of parking slots to 15,000 from 7,400
- Charge fair value for the period used
- Construction of buildings for parking lots operated by robots or underground parking lots

- Increase rotation on parking slots usage, allowing for more people to use them

- Increase traffic speed by reducing time spent on the search for parking slots

- Encourage the use of public transportation

- Ease to pay. Example: cash, bank cards, smart cards, electronic tickets, internet or mobile.

- Increase of security to users and service providers

- Improve working conditions for current service providers

- Discourage clandestine work.

### Mobility

It is worth mentioning that incentives to parking lots are connected to the Urban Mobility Policy as the topic is related to the Parking Lot Policy, governed by Law 2587, the Urban Mobility Law, guiding the elaboration of the procedure to express interest.

Also we were concerned about speeding traffic as parking lots can be deployed or removed according to the situation and in line with the planning of an integrated transportation network.

Planning considers future subway lines and the Bus Rapid Transportation that will be operated by the city.

So there is the concern of integrating not only the public transportation but the system in itself with the urban mobility at the center, as it is one of the current concerns.

Furthermore, there are convenient payment methods for the user, such as apps, electronic cards or physical mechanisms as the meter, providing security and convenience to the user.

Also it is important to highlight

the situation of Sindiguarda unionized workers that sell parking lot cards under Transalvador oversight - Transalvador issues and sells the cards to Sindiguarda which transfer the cards to the workers; they get the money and transfer it to Transalvador.

This is not an effective operation based on a consistent legal and formal relationship.

The procedure shall find options to end with the large scale clandestine work, non-unionized street workers but still perform their work without any legal support.

Even the card selling system by Transalvador is faulty and will be replaced by a more efficient system.

### PMI

PMI's technical studies shall comprise technology, engineering, architecture, technical, environmental, economic-financial, legal feasibility, in addition to traffic and supply and demand studies as detailed as to subsidize the future

hiring of a concession to explore a parking lot, horizontal and vertical signal services, existing parking lots and so on, comprising works, implementation, maintenance, operation and management of service according to the Benchmark Term.

### Study Submission

Report 1, comprising basic studies, and report 2, that would be economic-financial feasibility studies, define the PMI.

The first report was submitted and forecast the division of meters; one meter for each 20 vehicles; payment means (as electronic card, a mobile app, the meter itself, there is the possibility of reload, issues related to service channels, an ombudsman related to service delivery and so on).

Economic and financial feasibility studies will arrive by the end of April 2016, as well as legal analysis and the presentation itself that will be used as the future model for the reference term.

## PPP for Public Lightning



**Bruno Barral**

Director General for Services, SEMOP

The Public Lightning Office of the Public Order City Secretariat is responsible for the public lightning system in Salvador and provide several services such as pole maintenance and lamp replacement, expansion of the lightning network and lightning for events.

The city's public lightning is managed by a fund called FUNCIP, with resources from payment of bills from houses and companies. The city has a surplus as it is able to collect exactly what has been spending with public lightning.

It all started at September 9, 2010, when the National Energy Office (Agência Nacional de Energia Elétrica, Aneel) issued Regulation #414, determining new general conditions for power supply. In other words, the city is responsible for public lightning, i.e., they must deliver operation (a toll-free line for the population) and the replacement of lamps, lighting fixtures and all equipment required for the proper service delivery.

The question is that some cities, namely smaller ones, are fighting this resolution in court. They claim that there are no financial resources to bear the costs brought by the new resolution.

As many cities lack know how to manage these services, there was a stampede to launch PPPs for this sector using the FUNCIP.

For small cities with less than 8,000 lightning points, for instance, it was thought to form a consortium of cities. For this, the challenge is to overcome difficulties and political differences.

In Salvador, the Public Administration decided in 2015 to study this as it received an invitation from a company to do so. A public invitation was made, then an assessment committee was created to work on proposals from eight consortia to perform studies to improve or increase efficiency of the city's lightning network.

The Public Administration's reference terms requested three simple studies for BRL 1 million each, a financial-economic study, legal framework and the operational-technical model.

These studies will enable a bid's notice for the future concession. The first invitation was attended by seven companies, but only three of them met all requirements. Then they had 60 days to submit a diagnosis.

This is where we stand. One of the studies, for instance, intends to replace 100% of the network in 36 months under a 30-year concession. This is not feasible, the Public Administration wants the private partner to work on something smaller, like 70% of the network in 4 years. The bid will be created upon the analyses of all proposals.

Salvador paid some BRL 3.5 million for the lightning service, which caused a savings program to reduce the lightning bill to BRL 3 million. If the Public Administration managed to obtain such savings, I wonder what the private sector can do once they have better technology as powerful lamps that use less energy in all poles in the city beaches?

The city of Salvador will get these studies ready this year so the PPP is launched in 2017.

# Fortaleza opens its doors for Concessions and PPPs

The city of Fortaleza has potential for new investments in Concessions and PPPs. The city has expressed interest and is open to partners in small, mid-sized and large projects on several types and methods through which a PPP can be structured: According to Law 11.079 and also Public-Private Partnership Law.

The city is mostly interested in urbanism and environment. The Urbanism Secretariat is currently working on five projects: Three are completed, one is in progress and the last one is about to be launched, while other two are

pending approval from City Councilors and shall be developed soon. This is a means to improve the city's infrastructure. The Public Administration can't meet all demands alone; the private sector must be brought in to help.

The private sector is able to improve Public Administration procedures by reducing paperwork, one of Brazil's main bottlenecks.

A Public-Private Partnership to be launched in urbanism and environment is a joint operation in Fortaleza downtown similar to a Public-Private Partnership, which is a huge opportunity for companies.



**Águeda Muniz**

City Secretary, Fortaleza Urbanism and Environment Secretariat



## State of Bahia creates RedePPP to share information



**Priscila Romano**

Coordinator of Special Projects in PPP and Concessions, PPP Executive Secretariat, State of Bahia

RedePPP was created one year ago by the State to promote required actions to elaborate policies and determine guidelines and align procedures and standards, as well as to encourage mutual collaboration among PPP Units in Brazil.

This is the most important and innovative articulation, knowledge management and training in Concessions and PPP initiative in Brazil. Although many states and cities have progressed far in this subject, the majority of Brazilian cities do not even have legislation on this area.

The idea is to share knowledge and help in a collaborative environment, to exchange experiences, leverage successful experiences and projects and increase sharing. Currently the organization has more than 30 members between states, cities, state-owned companies, development banks and state-owned banks.

### What can be expected from Rede PPP?

RedePPP signed in September 2015 an agreement with the United Nations Office for Project Services (UNOPS), the UN's operational arm that supports humanitarian and development projects all over the world. The goal is to promote Public-Private Partnerships in Brazil through the Rede, as it has 30 members between states, cities, federal entities and development entities.

The partnership with UNOPS will allow the execution of priority projects, such as database to support federal, state and city governments to develop new PPPs. Resources

will be primarily invested on the development of systems and training.

RedePPP also signed a cooperation agreement with the LSE (London School of Economics), FESP-SP (São Paulo School of Sociology and Politics Foundation) and the British Embassy in Brazil to develop a MBA in Concessions and PPPs next year, which currently have 200 interested students.

### The scenario for Concessions and PPPs in Bahia

The State of Bahia has modelled seven PPPs, out of which six are already hired and five are operational. One of the main aspects in this business model is to have experience not only in structuring PPPs but also in contract management, which is where errors are usually found.

In Hospital do Subúrbio (second PPP created in Bahia), for instance, a mistake was the lack of a demand restriction mechanism as the unit is always opened to full absorption capacity. It is necessary to make clear in these contracts the mechanisms to shut the door in critical situations.

The lack of efficient mechanisms in appropriating exceeding costs always force an adjustment process, where costs are calculating and demanding time, energy and it is really tiresome. The stability of the State's institutional environment is a positive factor as there are consistent laws, decrees and rules to regulate operation in this business front.

Furthermore, the State of Bahia has been strictly respecting contracts,



and there has not been delays on counter payments until now, improving the Public Administration's reputation.

#### How does the State encourage Concessions and PPPs?

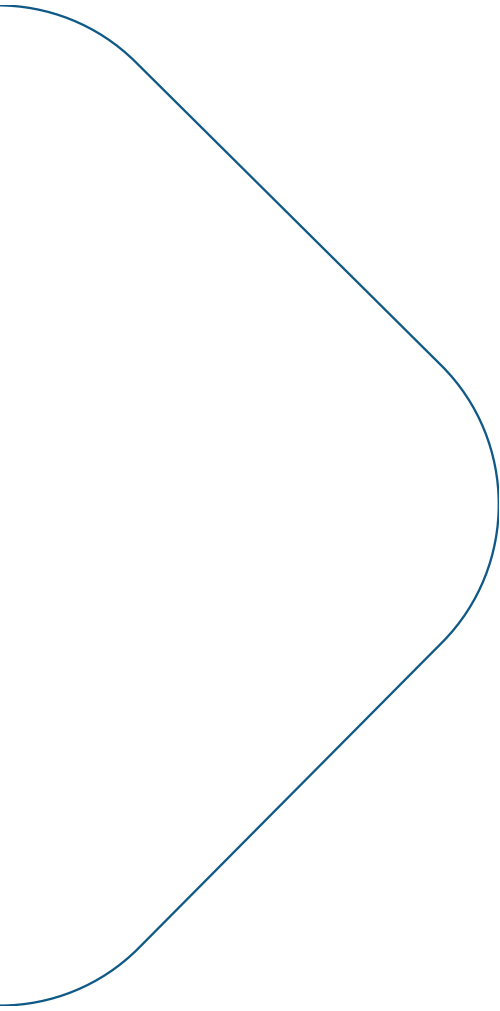
- The government has adopted resources from the State Participation Fund for meeting counter payments, and allowing for revenue binding with bank account blocking. This is an efficient mechanism that prevents delays of even one day to pay partners.
- The Bahia Partnership Guarantee Fund was created similar to the federal guarantee fund.
- We expect to pass in 2015 the new PMI Decree to allow for the execution of a MIP (Private Interest Statement) so that companies can submit their projects straight to the government.
- The State government is working on a bill to create a new state-owned company to encourage investments in infrastructure. The goal is to raise assets, structure operations to get resources from capital markets and consequently to encourage investments in infrastructure.
- The State is also developing a supporting line to liquidity similar to BNDES lines, with the goal to guarantee infrastructure bonds issued by the private partner.

#### 4 main projects structured in Bahia

- Construction and operation of the Sistema Viário do Oeste, also known as Salvador-Itaparica bridge. The bridge has 12 km and there is a road with 150 km connecting the bridge and the BA001 highway to the BR242 highway, to development the Low South area. McKinsey & Company is the partner in this model to deliver studies in Probing, Sea Hidrology, Preliminary Draft, Environmental Impact Studies, Cultural Impact, Intangible Assets, Review of Urban Planning of the cities of Itaparica and Vera Cruz. Estimated value of investment according to PMI is of BRL 7.3 billion.
- Renovation and maintenance of BA-052 highway, also comprising BA-148, BA-432 and BA-160 highways, totaling 685 km and the construction of a bridge between Xique-Xique and Barra. This project has BNDES/IFC as partners and shall be bid in October 2016.
- The government is also working in another two projects - the construction and operation of a new Convention Center in the State of Bahia and the other being a PMI (already in execution) for urban solid waste comprising filter, transportation, solid waste treatment and final disposal, covering some 62% of residue generation in the state.

**“One of the main aspects in this business model is to have experience not only in structuring PPPs but also in contract management, which is where errors are usually found.”**





# Southeast Region



# Evolution of Concessions and PPPs in the Southeast Region



## AEERJ highlights the role of Rio de Janeiro in PPPs and Concessions



**Luis Fernando Santos dos Reis**  
Chairman, AEERJ

Luiz Fernando Santos Reis, AEERJ chairman, highlighted the importance of the State of Rio de Janeiro for PPPs and Concessions as the state is becoming a national benchmark due to success cases as the Porto Maravilha Urban Operation, covering a 5 million square meter area and AP-5 and other projects in progress.

It is necessary to ensure that this model remains strong, expanding the participation of companies, namely small and mid-sized ones.

In addition to the expansion of PPP and Concession projects in the Southeast, the rest of the country also offers positive perspectives for more long-term contracts between the Public Administration and the private sector in the next months.

This is the time for the private sector to leverage real opportunities in infrastructure projects, reinforcing AEERJ's position on the current economic scenario. The sector is much worse shape than many people think it is. And it is impossible to believe that the Public Administration will recover by 2017. The sector was heavily affected by the financial crisis and the worst symptom is the lack of trust in the marketplace.

The private sector is afraid to trust in the government, so for this reason it is hard to discuss PPPs now and not raising doubts. However, it is necessary to understand that this is the only solution to minimize deficiencies in Brazilian infrastructure.

The State of Rio de Janeiro is far ahead on works being execut-

ed and in other programs being planned with the participation of companies from all sizes.

PPPs are not just for big corporations. It is a shoe that fits all feet. For this reason, Governments must be wise to set up programs that fit several sizes of companies, especially in the state of Rio de Janeiro, which lacks large contractors with DNA. The state is only at the early stages of forming a core of companies that can tackle that.

In the other hand, irrespective of the company's size, this business model creates a huge amount of jobs, works and hiring, even if not directly involving companies from a given region as the main employee.

Rio's companies have a huge operation. When observing some works, it is possible to see many AEERJ members working for concessionaires, reinforcing the importance of working together for developing this model and generating new opportunities all over Brazil.

### Social Responsibility

The possibility that the private sector supports the development of studies for new concessions and PPPs through procedures for express of interest is undoubtedly a valuable tool at this point, especially when the chances of losing jobs are enormous in this industry.

It is estimated that 150,000 to 170,000 employees in the state are laid off by the end of the Olympic Games, many of them only in the city of Rio.

For this reason, companies must fulfill their social responsibilities, trying to run projects with the strong participation of entities that can support this efforts, such as FIRJAN or the AEERJ itself, as it is not a house for engineers but for Engineering, willing to find the best solutions for developing Brazil economically and socially.

**“The State of Rio de Janeiro is far ahead on works being executed and in other programs being planned with the participation of companies from all sizes. ”**

# Rio de Janeiro launches the largest PPP in sanitation in Brazil



**Maria Paula Martins**

Sub-Secretary for PPPs, State of Rio de Janeiro

One of the projects that shall become success cases for Brazil was presented by Maria Paula Martins, PPP Sub-Secretary for Rio de Janeiro: The PPP in sanitation, the largest in the country, serving 5 million people in a single PPP.

How does the state of Rio de Janeiro see PPP and why has it decided to make this investment? The state, in other hand, lacks conditions to meet all demands and here is where the private sector steps in, investing and obtaining a proper return to perform public services.

One of the alternatives that may speed up Concessions and PPPs in the future is about the differentiated regime for public hiring, which was primarily created for FIFA 2014 World Cup and Olympic Games works but it is considered for expansion by the Federal Government.

## A PPP project requires four critical pillars:

- Definition of a business model
- Good model
- Governance
- Performance Indicators.

## Project Management

PPPs are managed in Rio de Janeiro by a Public-Private Partnership Program Managing Council, comprised by several secretaries: State Attorney, Works, Economy, Planning, Environment and Development. Also, in topics involving the metropolitan area, the Metropolitan Chamber has a say. Finally, there is the participation of the secretariat

to which the project is related to, such as transportation, health and so on.

The council meets to list priorities and then, during the PPP's development, assesses and decides upon what has been achieved.

## Hiring of PPPs

PPPs can be hired by two ways:

- Independent studies
- Studies conducted by parties interested in PPPs, the so-called MIPs.

In the case of independent studies, it is expected that the project designs a PPP in line with interests of the State government. A symmetry of information is then achieved, resulting in higher success rate in bids.

The State of Rio de Janeiro has adopted as a basic assumption to have independent studies to model all PPPs. The state is open to MIPs but for large PPPs, it is preferable that the studies are independent so the State has larger control to define how things are going to be made.

## Solutions in guarantees

Guarantees, the cornerstone for PPPs, are not an issue for Rio de Janeiro. There is a list of possibilities that originate guarantees and are decided according to the case:

- Receivables
- Real Estate
- CIDE



- Federal Bonds
- Shares and dividends from state-owned companies
- Constitutional funds (Constitutional Deposits)
- FPE
- Export taxes.

### Projects in development

The state of Rio de Janeiro is working in 11 projects: 8 are traditional PPPs (2 sanitation projects, 1 for subway, 1 for prison, 1 for information technology, 1 for DEGASE - resocialization of minors, 1 for education and 1 for image-based diagnosis) and 3 structured operations (Police upgrading, extension of Subway's Line 2 in downtown and a water transposition tunnel connecting Lages hydropower plant in Piraí to Guandu water reservoir).

### Sanitation

The PPP sanitation is the largest PPP in this sector being deployed in Brazil. The impact is that 5 million people will be served in a single Partnership.

The governor has prioritized sanitation of the Baixada Fluminense area, that comprises the metropolitan area and the West area.

The goal is to have water supply to everyone in 5 years and sewage

collection in 10 years. This means 80% of all sewage collection and treatment in 10 years. There is also plans to build a containment system to prevent that water from the rain combines with sewage and flow to the Guanabara Bay.

In addition to be the biggest, it is also the most advanced one in the area. EBP was the winner between three companies that submitted proposals to execute the project. The company's proposal was best suited to the reference terms and was authorized by the State's Public-Private Partnership Program's Managing Council to conduct the study - which lasted almost six months.

Despite being a large project, smaller companies can join this project. The size of it does not shy Rio's small companies away as they can be hired to perform services. Now, even local large companies have credit issues. But an international road show will be made to attract foreign companies to partner with Brazilian companies of all sizes.

### Other projects

The subway project aims to improve mobility with the creation of a system to connect Araribóia, Niterói, to São Gonçalo, Alcântara. It is a 22-kilometer-long line 3, with 13 stations. The governor is negotiating resources and a Guarantee Fund with the Federal Administration. This is under study and defi-

nitions shall emerge during 2016.

The PPP for digital technology is one for which the governor has a preference and the idea is to take digital technology to all cities in the state and connect all public entities: police stations, schools, hospitals and so on. This is in design phase.

In healthcare, the PPP for image-based diagnosis is one of the priorities and will be deployed in Niterói and to all state public hospitals so that all units have the same equipment and have a single hub for image-based diagnosis.

### The state also considers the following PPPs:

- Prison: replacement of existing prisons and improvement of conditions;
- Resocialization units: Replacement of existing units and delivery of effective resocialization for children and teenagers in conflict with the law;
- Education: Construction of new schools (the goal is 80);
- Subway: Expansion of existing lines and construction of new ones;
- Water transposition tunnel: Improvement on Rio's water supply system;
- Upgrade of Military Police barracks.

# Rio de Janeiro's Public-Private Partnerships



**Gustavo Guerrante**

Sub-Secretary of Special Projects SECPAR - City of Rio de Janeiro

In lieu of Jorge Arraes, Special Secretary of Concessions and Public-Private Partnerships for Rio de Janeiro, Gustavo Guerrante, sub-secretary of project structures for SECPAR, made a brief explanation of how the legal framework for encouraging Public-Private Partnerships in the city of Rio de Janeiro was built since 2009.

A Sub-Secretariat was created within the Head of Staff office that was later promoted to a Secretariat as the pipeline of projects increased and the need for a qualified staff emerged not only for structuring projects, but also regulating projects already being bid - this is the structure:

- City law for PPPs and Concessions
- Assembly of the team
- Creation of a Managing Council for PPPs and Concessions in the Sub-Secretariat

- Partnership with World Bank, for enhancement
- Creation of CDURP and Port Legislation
- Hiring of qualified team to study possible concession and PPP projects.

SUBPPP expanded its scope in 2013, with the creation of the Special Secretariat for Concessions and PPP (SECPAR), being structured as:

- Asset Superintendence
- Existing concessions
- New projects
- Concentration of several entities to establish new partnerships

Through incentives to private investment, it has been possible to deliver faster to society by means of an ordinary concession, PPP and Sponsored or Administrative Concession, or hiring public works

**Parque Olímpico**

**Valor do Contrato**  
• R\$ 1,6 bilhão

**Cronograma:**  
• Obras de Jul/12 a Jan/16

- Construção de equipamentos olímpicos e manutenção das áreas verdes, vias e redes de infraestrutura
- Pós Olimpíadas: áreas utilizadas pelos equipamentos Olímpicos provisórios serão destinados para construção de empreendimentos residenciais e comerciais
- Garantia: o próprio terreno

to structure projects divided into:

- Private with government as interested party
- Self-sustainable financially
- Do not financial input from tax revenues
- Traditional, public

### City of Rio de Janeiro Olympic Campus

With 90% of works completed, the Public-Private Partnership for Rio Olympic Campus is an administrative concession to deliver services and execute works required for the city's Olympic Campus for the 2016 Olympic and Paralympic Games.

The contract determines the construction and maintenance of Olympic equipment (basketball courts with 16,000 seats, judo courts with 10,000 seats and fight courts with 10,000 seats), implementation of infrastructure for the area, the future Autódromo area and the Olympic and Paralympic housing areas, as well as maintenance and operation services for the area. Investments totaled BRL 1.45 billion.

Served by two rapid bus lines, Transolímpica and Transcarioca, the Olympic Campus will house the majority of facilities for 2016 Olympic Games. An audience of 120,000 people is expected every day in the campus during the games.

In an area of 1.18 million square meters, 16 Olympic disciplines will take place. It is a legacy for the city as provisory facilities will be transformed in schools and areas for leisure and physical activities for the citizens. The Arena do Futuro stadium, for instance, will house four city schools. Rio will have an Olympic Training Facility with tennis courts, running tracks and the Maria Lenk Water Park, focusing on high-yield athletes.

This is a smart way to structure a PPP: Give the land as payment and guarantee for the private partner, so 55% of the area will be destined for private investment later and 45% remain a public area, including training centers for high-yield athletes. It is worth mentioning that this part of infrastructure was also included in the PPP, as well as sewage collection, draining, water supply, paving - everything. And the facility is a private venture.

There is a bid for parking lots that is ready and also filed with the City Accounting Court, structured by PMI.

**Shared Electric Cars** - A concession ranging from 5 to 10 years and investment calculated in BRL 250 million.

#### Aspects of the project:

- Sharing electric cars similarly to the model adopted by Bike Rio
- Reduction of vehicles
- Reduction of emissions
- Addition of transportation modes
- One vehicle is shared by up to 7 users
- Guarantee of a parking slot at the destination
- Driving in lanes reserved by buses
- Cheaper than a cab
- In consultation
- Use of 100 shared electric cars (same model as Paris)

Environmental alternative that prevents citizens to buy a second car or use it for a specific purpose.

**Concession for the Zoo** - Study in progress to upgrade the zoo and bring new attractions, with investments estimated in BRL 60 million.

**“In an area of 1.18 million square meters, 16 Olympic disciplines will take place. It is a legacy for the city as provisory facilities will be transformed in schools and areas for leisure and physical activities for the citizens.”**



**The cinema and video center is a city asset owned by RIOURBE and consists of a property to develop Rio de Janeiro's creative industry."**

#### Aspects of the project:

- Rio's Zoo has 75 years
- More than 20 years without large infrastructure investments
- Old concept of small cages
- Bid scheduled for February 25, 2016.

**Olympic Arena Legacy Plan** - An Administrative PPP with investments calculated in BRL 60 million

#### Aspects of the project

- Build the infrastructure while preserving the Olympic legacy
- Maintain and operate the Tennis Olympic Center, all 3 main arenas, Running Track, Maria Lenk Water Part, Public Parks at the Olympic Road and Live Site
- Maintain training center for high-yield athletes;

**Light Rail Botafogo – Gávea** - A PPP with estimated investments of BRL 1 billion and works scheduled from October 2016 to December 2018.

#### Aspects of the project

- Light rail connecting the districts of Botafogo to Gávea
- Area not served by subway. A line with approximated 23 km
- More than 200,000 passengers a day estimated for the initial years of operation.

**Vargens Joint Urban Operation** - Investments estimated at BRL 15 billion.

#### Project Description

- Large area located at the West

area of Rio de Janeiro

- Operation similar to the Porto Maravilha's
- Investment areas in analysis: Urban, Infrastructure, Mobility and Environmental

As opposed to Porto Maravilha, where revenue is generated at once, as it is the case of CEPACs (Potential Addition to Construction Certificate), now it is a private plot of land whose revenue will be generated over time from different sources, with a joint urban operation to be completed in 2016.

**Cinema and Video Center** - A concession for the use of the space with investments estimated at BRL 60 million and works scheduled from February 2016 to December 2018

#### Aspects of the project

- To renovate, expand, operate and maintain the Cinema and Video Center at Barra da Tijuca
- Double the number of studios currently available
- Operate and maintain for 30 years
- Encourage the creative industry in Rio de Janeiro

The cinema and video center is a city asset owned by RIOURBE and consists of a property to develop Rio de Janeiro's creative industry.

It has a wide expansion capacity and its useful capacity would be more than doubled through a concession.

The goal is to launch a bid for upgrading the existing facility to leverage the creative industry concentration in Rio de Janeiro.

# Rio innovates by creating a Metropolitan Government Integration Chamber

Vicente Loureiro, Chairman, Metropolitan Government Integration Chamber Câmara Metropolitana do Rio de Janeiro) presented the entity, formed by mayors in the state and presided by the Governor of Rio de Janeiro, aiming to create a state of art in planning and governance for the city's metropolitan area.

The Chamber creates a new legal and institutional framework; proposes a governance model and facilitates the cooperation among several layers of government, as conceived by the 2015 Metropolis Charter, an important ruling by the Federal Supreme Court, that has now the challenge to further integrate metropolitan areas and their respective capital cities.

Rio de Janeiro is Brazil's second largest metropolis with 12 million inhabitants, featuring several environmental and urban liabilities but also offering a set of opportunities that require better leveraging. It is precisely at economic downturns, when resources are scant and perspectives darker, when we need to innovate and find options to go ahead.

The creation of the Metropolitan Chamber was a political act from governor Pezão, who took the job and indicated to the state mayors - and to society as a whole - that he would change how the metropolitan area was being treated. From such perception, he issued a Decree creating the Metropolitan Chamber.

For the first time in history, a Metropolitan Urban Plan provides a set of integrated strategies for infrastructure. We know that transportation cannot be conceived without think-

ing in housing, soil usage, sanitation. The work is more articulated and integrated, providing government with more efficiency at its efforts.

Avoid wasting resources is also a priority for the entity, such as subway's Line 2, which received successive investments and the result was a decrease in the amount of passengers transported despite growth in the Pavuna district and in the region around the Shopping Nova América. These resources could have been better applied somewhere in the region.

So money is invested to install conditioned air, trains are improved, all of which happens over time and administrations, and at the end of the day the outcome is scant in relation to the money invested. Why? Because, at the same time, it is a region that has degraded from the social standpoint, with drugs, crime, and other issues that weren't followed through as the housing policy wasn't applied.

For this reason, an integrated vision is the great strategy for the most developed metropolises in the world that are already working with future performance in mind.

## Metropolitan Management Executive Group

Rio Metropolitan Cham has an executive group tasked to:

- Operate Chamber's decision
- Coordinate metropolitan issues management
- Develop metropolitan plans, pro-



**Vicente Loureiro**

Executive Director, Rio Metropolitan  
Government Integration Chamber



“ For this reason, an integrated vision is the great strategy for the most developed metropolises in the world that are already working with future performance in mind.”

grams and projects

- Facilitate integration among cities comprising the metropolitan area

At this moment, there is a Bill Draft in the State Congress to support this process, creating a real governance method to meet all requirements from the Metropolis Charter, sanctioned by president Dilma in January 2015 and by the Federal Supreme Court.

Based on this Bill Draft, every and all public service of common interest in the metropolitan area must be shared. This is an innovation as decisions now must be taken together, it means that the State and cities in the area have to decide whether they will make a concession, an expansion of concession, a new system for any public service considered as of common interest in the area.

### Strategic Plan for Metropolitan Area's Integrated Urban Development

Governor Luiz Fernando Pezão announced this Tuesday (September 8) the winner of the international bid for the preparation of the Strategic Plan for Metropolitan Area's Integrated Urban Development (Plano Estratégico de Desenvolvimento Urbano Integrado da Região Metropolitana), that will define items as mobility and sanitation to support 21 cities in the region, including the capital.

The winner is the consortium headed by the office of architect and urbanist Jaime Lerner, and also comprising Quanta Consultoria and the Barcelona Regional Urban Development Agency, which was responsible for renovating Barcelona's metropolitan area after the 1992 Olympic Games in the Catalan city. At the same occasion, the governor sanctioned a law that creates an administration office to decide on issues of common interest in the

Metropolitan Region, which will jointly have managed by State and cities in the region.

The work is expected to be delivered by the end of 2016 so that new mayors elected in October can benefit from this metropolitan vision, conceived and developed in a planning process as open and collaborative as possible.

With resources from the World Bank, the Government of Rio de Janeiro run an international bid for the realization of a Strategic Plan for Metropolitan Area's Integrated Urban Development that will define items as mobility and sanitation to support 21 cities in the region, including the capital.

There is a proposal that AEERJ hosts a meeting with companies to discuss demands, ideas to be suggested to mature this planning process and hear the voices of those at the front with the real-world experience to identify challenges and the complexity to solve some of these issues.

Another challenge for this project is to map the region as some cities has not been mapped for 30 years, so we went to the former IPLANRIO - City IT and Planning Corporation, currently IPP - Pereira Passos Urbanism City Institute, to hire the service of Digital Mapping in Urban Areas and to deliver maps of urban areas at the 1:2000 scale for these cities. Whoever is an Engineer here knowing how much this mapping facilitates works and to help conducting a small engineering study, mainly a feasibility study. So this is a fundamental tool.

Finally, an information system to allow for the improvement of the metropolitan area management not only from the geo-referencing standpoint but also for other systems. All these efforts are already hired and in progress, due to be delivered within 1 to 2 years.



### Scenario for 2030

The planning effort is to find solutions for development, also assessing macroeconomic scenarios, how the country will be positioned against its development process as all variables will define positive or negative perspectives.

Challenges also include important liabilities, such as informal land occupation at the outskirts of the metropolitan area, lack of sanitation, mobility and low density areas.

There was an expectation about COMPERJ which was not fulfilled, but FIRJAN study unveiled other possibilities such as logistics, which has been intense specially at the outskirts of the metropolitan area.

There are areas available for metropolitan expansion with industrial or logistics vocation, albeit these areas are scant for a fast expansion or these areas are dispersed or there are conflicts to be prevented. This metropolitan plan will find opportunities and proper strategies for preservation or incentives for these areas, which are not many, to deliver their most relevant economic and social functions to develop the region.

Urban and housing activity in these areas are quite relevant as 85% in average of the land for expansion is focused in housing. So it is a problem in terms of occupation, in this model we have that is based in low density, informal, with horizontal housing.

### Opportunities and Investments

Thus, investing opportunities that are opened and are important to ensure at least an optimistic perspective for development are:

- Cepac - Potential Additional Construction Certificates;
- Demarcation of area for application of joint urban operations;

- Attraction of private investments with changes of indicators and characteristics of soil and subsoil demarcation, use and occupation, as well as changes to building coding, considering the environmental impact caused by such changes or the regularization of buildings, renovations or expansions executed in violation of the current legislation;

- Additional construction rights

### ICMS tax law

The ICMS tax law is another resource that can help specially the outskirts to establish interesting logistics activities, as there is no mobility system that can properly work when 75% of the jobs are concentrated in the city of Rio de Janeiro.

This is a model that has been unchanged for so long as it was considered as irreversible, unchangeable and now is the time to discuss this possibility and better distribute these development opportunities within these regions, as there is no transportation system that can meet such concentration.

Rio de Janeiro is the Brazilian city where people spend more time in commuting, while São Paulo is ranked second.

It is necessary to think and rethink this issue to reorganize this process of distributing job opportunities to create an equal metropolis and reduce the pressure over sanitation and mainly mobility services. There are excessive number of trips through the Supervia system, the metropolitan bus system, due to poor planning or poor distribution of equipment.

For instance, a mother in Japeri that needs to take her child to a hospital has to take the train to go to Ricardo de Albuquerque, in the city of Rio, which is the first family hospital she will arrive to. If this is not changed, the situation will be

**“With resources from the World Bank, the Government of Rio de Janeiro run an international bid for the realization of a Strategic Plan for Metropolitan Area’s Integrated Urban Development that will define items as mobility and sanitation to support 21 cities in the region, including the capital.”**

**“The ICMS tax law is another resource that can help specially the outskirts to establish interesting logistics activities, as there is no mobility system that can properly work when 75% of the jobs are concentrated in the city of Rio de Janeiro.”**

intolerable not only for the family hospital, in order to maintain the health system, as well as to maintain the mobility system.

Exame magazine conducted a couple of surveys about the real estate sector in Brazil, one in the beginning of 2015 and the other in the middle of that year, and found that there are 20 cities in Brazil that are not capitals and have up to 1 million inhabitants, and in terms of real estate valuation, 3 out of 20 are located near Rio de Janeiro: Niterói, ranked third in Brazil, Nova Iguaçu and Caxias.

There is potential. And there are no doubts that a joint urban operation is a concept that is here to stay, but we need to innovate in order to build an environment to allow for joint investments between public and private.

There are other assets that may be better develop, such as:

- Line 3 - Spatial structuring of the influence region
- Via Light - Expansion of use

through changing of transmission towers

- Old train lines - Study potential uses
- Tod - Renovation of train stations and surroundings
- Port and Access road to COMPERJ - Structuring projects
- Marambaia Park - Recreation park for the Baixada Fluminense region
- Federal and State plots of land that are unused.

There is an interesting perspective to resume governance with the construction of a planning environment covering not only one city or another, but a huge metropolis, with a future vision that may generate and leverage business and development opportunities in infrastructure to better serve the population in the next years.

Despite the crisis, there is a quite optimistic perspective to resume this development process.

# Potential concessions and PPPs for Rio de Janeiro

Riley Rodrigues de Oliveira, advisor for the FIRJAN System's Infrastructure Corporative Council, presented a context of Concessions and PPPs in Brazil, focusing on the state of Rio de Janeiro. In his opinion, challenges must be solved in order to massively expand PPPs in Brazil. The main challenge is to structure PPP programs as policies of State as opposed to policies of government.

Concessions and PPPs are long-term processes: Implementation, maturing and return are not taking place in a single term. It is necessary to think in the State's interests, focusing on serving the population and then Brazil will start to develop programs aimed not only to meet ad-hoc demands or needs, but to promote local, regional and national development.

One of the relevant issues is to organize these programs in strategic terms, thinking in competitiveness gains, increase of capital returns and making new investments. One example is the subway expansion, where stations shall be used as mechanisms for local development, integrating mass transportation system to regional planning with focus to development the surroundings, even by changing building parameters to allow for the consolidation of new stores, services and housing.

Risks of investing, that are the main concerns on a Public-Private Partnership, has to be weighed to avoid excessive contract renegotiation. It is necessary to adjust return to the activities required by the Public Administration, i.e., one

has to have the vision of what the State wants in terms of quality of services to be delivered to the population by that contract, and not forgetting that the citizen is the end user and not the government, mainly because contracts survive the government that launches the process.

Planning is key for concession projects. Consortium members need to see a pipeline several years long, obtain full information on projects and its complexities, with time suited for performing detailed studies.

But what is the use of a perfect planning if the project is poor? This is the question that many involved in concessions and PPP ask themselves, and it was one of the topics discussed in almost all regional seminars that took place before reaching Rio de Janeiro. One of the problems is that projects lack known, repeatable methodologies. One example is the lack of standardized instruments to analyze risks by capital markets, as each project, even those in the same sector, has a different methodology, many times not compatible with the project's own nature.

Many times, there is no consideration that two typical cases exist: One, when full knowledge is obtained about the behavior of the concession's object, where the project is known in terms of potential and behavior, i.e., the whole process is known, such as renewal of concessions of existing ports or highways.

The second case is when the project is new, such as the concession



**Riley Rodrigues de Oliveira**

Senior Expert in Industrial Competitiveness and Investments in FIRJAN System

**Planning is key for concession projects. Consortium members need to see a pipeline several years long, obtain full information on projects and its complexities, with time suited for performing detailed studies.”**

of a new highway and investments are new, and nothing is known about the future behavior of the concession's object. These two different characteristics require specific methodologies and instruments. Construction, demand, and environmental risks need to be taken into account, as they are large, as well as process model and bid's notice content, many times allowing different interpretations and generate insecurity to investors.

### **Problems with regulations in Brazil**

Brazil currently has 58 regulation entities: 10 in the Federal Administration, 26 in the State Administrations and 22 in city administrations. Despite the large number, these entities are weak, operate under incomplete, unstable models and there is a lack of commitment from governments to structure solutions and transparent strategies to develop them. For this reason, projects are mostly financed at a high cost due to its increased regulatory risk, considerably impacting performance in the bid phase for concessions and PPPs, as well as for the outcomes of projects upon implementation.

The situation is worse on environmental licensing: Many times, no one knows which is the applicable legislation. Still, due to imprecisions and lack of clear, direct criteria, such regulation depends on the person in the other side of the counter with a “warped” interpretation of the law, which implies in a random interpretation, many times wrong as for the focus and cost efficacy of projects.

### **Brazil has potential and demands for new projects.**

The lack of infrastructure, sanitation, healthcare and so on is one of the points that make concessions and PPPs one of the main solutions for Brazil in the coming years.

There is plenty of room for expansion going beyond projects in progress or expected to be kicked off.

There are 260 studies and projects ready to be offered to the private sector. Estimated value of investment according is of BRL 404 billion. Some of the possibilities are projects ranging from infrastructure (urban mobility, railroads, highways, airports, sanitation, public lightning and data transmission systems by fiber optics) to service management, such as public healthcare and education. Considering projects in early stages of analysis, identified potential for PPPs in Brazil sums BRL 700 billion.

There are 85 PPP contracts in operation in Brazil since 2006, with investments totaling BRL 133 billion. Historical performance of PPPs in Brazil points to highways and sanitation as those more mature to progress faster in relation to new projects.

Looking to Rio de Janeiro, the state accounts for 9.4% of current contracts and 10% of contract value in Brazil. A highlight is the Porto Maravilha PPP, a project that will change Rio's downtown by giving back the social and economic relevance of the Port zone in addition to the port itself, where more taxes and jobs are generated per square meter in the state.

### **Rio de Janeiro's potential**

In addition to projects in progress, Rio de Janeiro has potential for areas like public lightning, solid waste - including waste treatment plants - subway and trains, healthcare management, education, public security and services to the citizen.

The state needs to increase investments dramatically, but this is only going to happen with a clear policy that encourages more partici-

pation from the private sector. It is necessary to admit that the private sector has larger capacity to deliver public services with quality and demanding huge investments. It is required to serve more sectors and to increase volume of PPPs. In comparison with the rest of the world, Brazil has few investments

achieved through PPP; and Rio has few investments in comparison to Brazil.

It is necessary to increase the space for small and mid-sized companies in projects in order to provide stimulus to the economy and reduce risks involving large concession portions.

**“Despite the large number, these entities are weak, operate under incomplete, unstable models and there is a lack of commitment from governments to structure solutions and transparent strategies to develop them.”**



## A new Rio de Janeiro through the Porto Maravilha Concession



**José Renato Ponte**  
Concessionária Porto Novo

The Porto Maravilha project in the coast of Rio de Janeiro is already considered a success after five years of progress. The project was discussed in the Seminar on Concessions and PPPs in the Southeast Region by the CEO of Concessionária Porto Novo, company that won the bid, José Renato.

The project for the renovation of Rio de Janeiro port zone was in discussion for a long time, as it was required due to the degradation of Rio's downtown. The project matured slowly by changing its characteristics until it was implemented.

It was developed based on the Cities Charter, where city laws are housed, to allow for the legal basis and financial conditions for deployment.

There are five million square meters, equal to the area of Copacabana, currently with 30,000 dwellers and a very low human development index for the area. Some of the project's objectives was to expand, articulate and renovate public spaces in the area; to improve local quality of living; to achieve environmental and social-economical sustainability for the area.

Several concepts applied to the project set Porto Maravilha apart. One of them is the usage of CEPACS (Potential Additional Construction Certificates), that are municipal real estate bonds used as payment of a counter payment for performing a Joint Urban Operation. It was something unseen in PPPs.

For Porto Maravilha, CEPAC was obtained from an auction after the creation of the Port Area Urban De-

velopment Corporation, that interfaces with Porto Novo concessionaire for this project. Work started in mid-June 2011.

This way, a potential addition for construction was created and the resources earned from the sale of that potential, from the sale of CEPAC city bonds that are regulated by CVM such as any other bond, will be invested in the region.

In this case, as it is a Joint Urban Operation, it is a service and work concession. All utilities are delivered for 15 years and the works considered valuation of CEPACS so that a virtuous circle could be built, where valued CEPACS can support the whole operation success.

There are other social demands in the region, such as the Morro da Providência slum and adjacent areas. These are areas requiring conservation of their urban characteristics.

Funding for the Port was provided basically by FI-FGTS, where BRL 6 million in CEPACS were bought in a single auction for BRL 3.5 billion and CEPACS are now being traded at BRL 2,000 or BRL 2,5000 at face value. A real estate investment fund was created with the participation of the city, that makes a commitment to buy all public land or make them available for buyers (CEPACS) that from the moment the land becomes available, make a commitment to fund the whole project during the 15 years of concession. (Approximately 75% of the area where the potential additional construction was defined is owned by the Federal Administration.)



It is a 15-year contract at the amount of BRL 7.6 billion with all public services included, such as urban cleaning and garbage collection, traffic control, maintenance of all roads, security and signaling, green areas and their preservation (both for existing ones and new ones), maintenance of public lighting and the execution of all infrastructure works required for delivering these services.

The project also will build 650,000 meters of sidewalks, plant 15,000 trees and deploy 120 km of water supply piping.

### Progress of the project

The project schedule goes to 2023 but 85% of the works shall be completed by June 2016, considering the Olympic period. The concessionaire divided the works into two categories: road works and infrastructure works.

- Road works: construction of Bimário do Porto Avenue to take over

Rodrigues Alves Avenue's role; and the construction of an expressway to be delivered in May 2016 to replace Perimetral with added capacity, a 3 km-long tunnel and two galleries built in the center of the city of Rio de Janeiro.

- Infrastructure works: rebuilding all streets in the region. Infrastructure in the region is old, built by former mayor Pereira Passos in the beginning of the 20th century. The whole infrastructure needs to be rebuilt underground, as only lightning poles with LED lamps will be at the surface and controlled from the concessionaire control room.

The company has a high technology control room with integrating systems, through which planning and execution of all public services the concessionaire was hired for will take place. The control room will also support the visualization of all services at delivery, which will provide a broad view of how the work is progressing.

**“There are other social demands in the region, such as the Morro da Providência slum and adjacent areas. These are areas requiring conservation of their urban characteristics.”**



## AP5 Sanitation project brings quality of living to Rio Metropolitan Area



**Sandro Stroiek**  
CEO, Foz Águas 5

With almost 30 years of experience in sanitation, Sandro Stroiek, CEO, Foz Águas 5, presented the project for sewage called AP5 that was developed for the city of Rio de Janeiro. Foz Águas 5 is a concessionaire formed in partnership with Odebrecht Ambiental and Saneamento Ambiental Águas do Brasil (SAAB).

AP5 is about the expansion of delivery of sanitation and sewage services and the commercial management of water and sanitation services. The contract covers almost half of Rio's area, from Deodoro district to Santa Cruz district. It was signed in January 2012 and the service order was issued in May 2012. AP5 has been exploring the 30-year concession for 3 years.

### AP5 Profile

The Concession serves almost 50% of the city of Rio de Janeiro, which translates into 21 districts of the city or 1.7 million people.

Although the demand is higher than the contract's, the impact is significant. At the start of the Concession, the bid's notice stated that 55% of sewage was collected but only 5% was treated - a great deal of collection was performed by unit systems, that are piping for water from rain.

The company created three operational hubs in the districts of Santa Cruz, Campo Grande and Deodoro. Then service units were created under a fully computerized system that distributes all demands related to sewage service to each operational hub.

Upon receipt of the service order, the first initiative from the company that was awarded the contract was to perform a system concept study. The West Area sanitation system was conceived through 10 large systems for a population of 2.3 million, requiring an increase of 4.8 cubic meters per second for the sewage treatment capacity - an investment of BRL 2.6 billion.

### Progress of the project

One of the elements that sets this project apart are 5-year goals determined by the contract, defined through Service Delivery Plans (SDP) that allow for structuring finance and the execution of the work.

The first batch of investments is for 500,000 people, almost the whole city of Niterói, expanding treatment capacity in 1,000 liters per second and resulting in 31.57% of service in sewage treatment by the 5th year of concession.

### The first 5-year goals were divided into three steps:

- First goal, already achieved: serve Deodoro Olympic Cluster equipment. Sandro says that this was relevant as most of these Olympic equipment were planned to have individual compact treatment plants in anticipation to the works for deploying a collection network in the region and expanding a small plant - the goal was achieved in June 2015 and there was no need to install these compact treatment plants.
- The second goal is to deliver 200 kilometers of sewage collection

pipng until May 2016. Currently, 150 kilometers are already deployed. Another detail is that 25,000 new sewage nodes and the opening of the new treatment plant processing 1,000 liters of sewage per second.

- The third goal is due December 2016, five months earlier than planned, to deliver more 100 kilometers of collection piping and 15,000 new nodes. At the day of Seminar, the Consultation Letter for SDP2 was delivered, representing investments of BRL 1.2 billion to meet goals at the tenth year of the concession. There are more than 615,000 people served through the deployment of 572 kilometers of sewage collection piping, more 57 kilometers of trunk piping and new 73,000 house connections.

### New goals

The Gericinó Prison Complex is a demand also in the concessionaire's radar. Today, the Complex has 26,000 inmates and only two compact sewage treatment plants, so sewage spills to the brooks in the region. A cooperation agreement is being elaborated to allow some investments in the collection of the sewage from the prison to the Deodoro sewage treatment plant that will start operations in May.

This investment will have a different character as it will be distributed all over AP5 in five fronts, as the first SDP was targeted at the basins draining at the Guanabara Bay.

The next phase of operations will take place in the regions of Sara-

puí, Santa Cruz, Campo Grande - which will be a large focus for the concessionaire, the Guaratiba area and an additional area in Afonsos, that missed the first step.

The Olympic Games will also gain a lot with this project, even as it is not completed. A positive point is the significant help to clean Guanabara Bay, with the opening of Deodoro sewage treatment plant that is able to process 1,000 liters of sewage per second. Also, 300 kilometers will be added to the network, preventing the release of 65 million liters of sewage a day to Guanabara Bay. Finally, the whole region will gain as the sewage from 500,000 people will not be released in Guanabara Bay.

### Project challenges and barriers

Some critical aspects place barriers to the project's progress. The area served by the concession is plagued with drug dealers and armed militia, which many times damage technical and commercial interventions.

Another challenge is the consolidation of the concession amid uncertainties and questioning, as if the AP5 works the model can be used in other cities as an alternative to disseminate sanitation services.

Finally, the surety that water will be supplied along with sewage collection services delivers an important impact that is critical to for us to effectively charge for the sewage service delivered to the community.

**“One of the elements that sets this project apart are 5-year goals determined by the contract, defined through Service Delivery Plans (SDP) that allow for structuring finance and the execution of the work.”**



## Asset Leasing in sanitation



**Fernando Marcato**  
Partner, G.O. Associados

Asset leasing is a very specific model for the sanitation sector but has been gradually being adopted by other sectors as it is an important partnership to unlock investments, with successful cases of sanitation companies in the implementation of these projects and to have the approval of control entities in this partnership model.

In the State of São Paulo, Sabesp deployed some 8 asset leasing projects and a series of control entities, Public Attorneys, are giving green light to the model as it is different from other concession types, such as ordinary, sponsored, and administrative concessions, SPEs, and private participation in the capital or PPPs.

Asset leasing is a different model, requiring a different legal and economic-financial model that is not the same as the other models. It emerged as an option to regulatory restrictions placed against CEF:

- Limit to CEF finance large state-owned companies.

- A specific finance line is created for works executed by the private partner.

- Large state-owned companies did not have the intention to delegate service operation.

- PPP requires more paperwork for approvals.

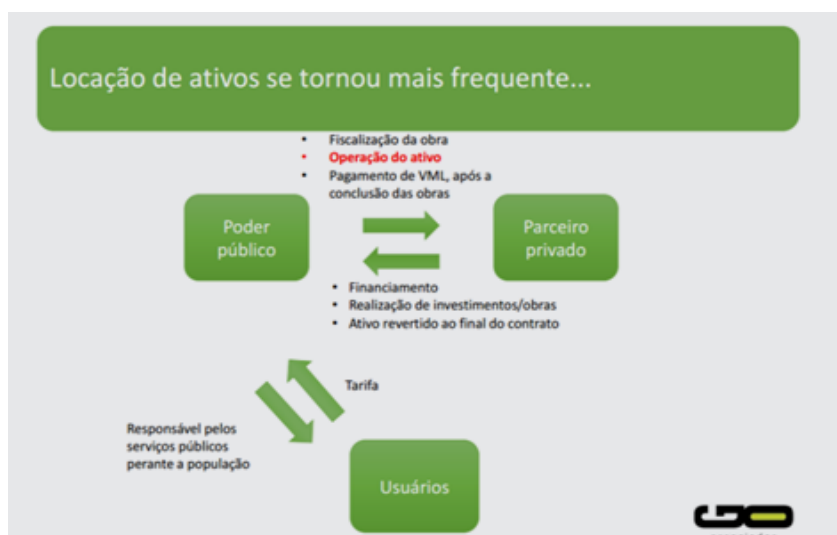
### What is the structure of asset leasing?

I usually say that it looks like an Administrative PPP, but without the operation in this case.

The structure is based on a state or municipal sanitation company and the private sector that is in charge of building and deliver the construction to the operation by the public partner.

The private partner does not operate the asset, as opposed to an Administrative Concession such as Sabesp's Alto Tietê.

The private partner has also to get



loans to complete the work, usually from Caixa Econômica Federal, as it will be only compensated when the work is ready for operation, and the public partner pays a monthly amount for leasing the asset.

### And why is it asset leasing?

Because in practice the asset is built in plot of land owned by the state, that offers a concession or rights to use (surface rights) for that land according to legal regulations to allow the private entity to build an asset in that location and such asset is owned by the private sector.

While the contract is in force, usually a period of 15, 20 years, a monthly fee is paid - the leasing monthly fee. Hence the denomination of leasing.

### Why is it similar to a leasing?

Because by the end of the contract, this asset is automatically incorporated by the state-owned company. So that asset, let's say it is a treatment plant, has its right to build up-

on that plot of land terminated at the end of the contract and the asset becomes property of the state-owned company.

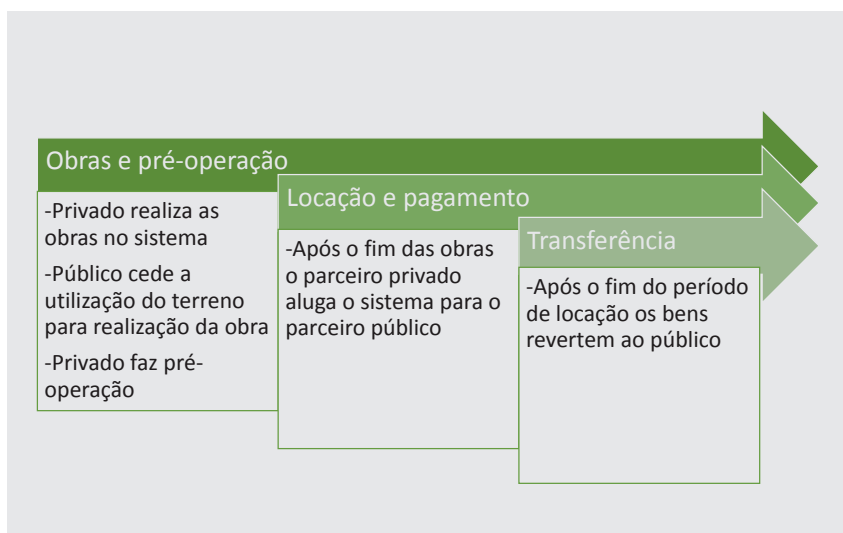
Of course, the state-owned company is in touch with users, oversees the work and pays for it when it is done. In this case, it is possible to determine a pre-operational period so the state-owned company can be supported by the private partner in the operation of the asset.

Sabesp is designing a sludge dryer facility as an asset leasing. This is a new technology that will require a pre-operational phase for transferring technology, so the public company will start compensating for the next 15 or 20 years - fixed payments, not tied to performance, which is different from the PPP where usually payments are variable to performance.

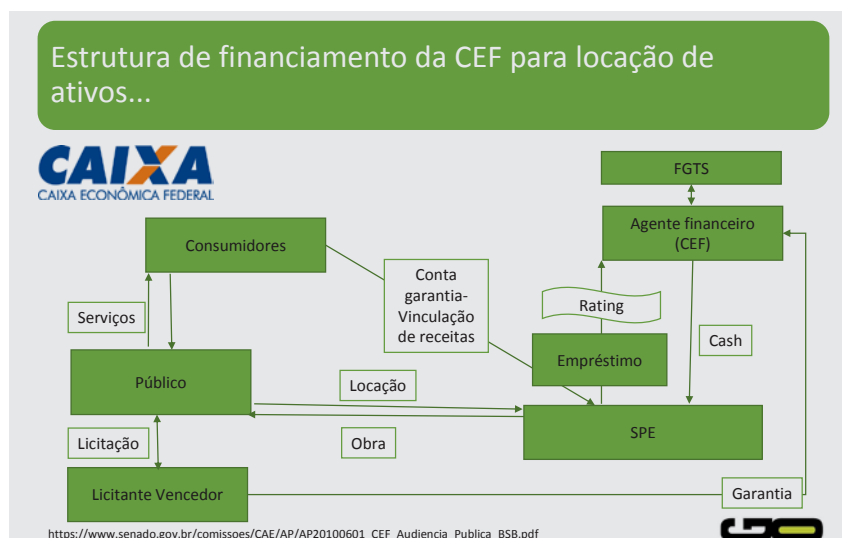
### Asset leasing rationale

### Where does this idea come from?

**“The state-owned company is in touch with users, oversees the work and pays for it when it is done.”**



So a specific financing line was created for these works executed by the private sector as an alternative to PPP, as state-owned companies resist to delegate to some service operation to the private sector.”



In the past, state-owned sanitation companies had a large volume of investments as they were the largest borrowers from Caixa Econômica Federal.

The problem is that in accordance to the Basel Agreement, the National Monetary Council and the Caixa Econômica have a limit to loan to certain corporation and the public sector.

So there is a specific financing line for the public sector that cannot exceed a limit of risk (it is now allowed to concentrate so much risk in a single borrower).

Due to this, large companies like Sabesp, Copasa, and Sanepar get the lion's share of investments whereas smaller companies cannot borrow due to technical issues.

### So how did Caixa figure this out?

It has decided to incorporate Built to Suit, which is a model from the private sector where one builds facilities for a given client and rents such facility to that client for a determined period, say 30 years, and when the contract expires the facility is incorporated to the client's assets.

So a specific financing line was created for these works executed by the

private sector as an alternative to PPP, as state-owned companies resist to delegate to some service operation to the private sector.

When one looks at Sabesp's PPP (São Lourenço and Alto Tietê), the service level is very low. CAB Ambiental, for instance, does not operate Alto Tietê water treatment plant - it only delivers ancillary services.

Delegating the commercial operation to the private sector is almost a taboo within state-owned companies, namely Sabesp, one of the best structured companies. So the PPP model did not fit, and it was seen as a bureaucratic model.

Asset Leasing was seen as providing most benefits for both the private and the public partners:

### To the Public Administration

- Ensures that the state-owned company's investment capacity is strengthened.
- Possible reduction on work delivery deadlines.
- May allow for technology exchange and knowledge before the operation.
- Strong incentives to complete the work within deadlines - the private



sector only gets paid when the work is delivered and operational.

- A public guarantee model and VML unrelated to the demand risk.

## To the private sector

- Business risks are not connected from an operation and are basically tied to construction and financing.
- High leverage.
- A broader set of companies has capacity to compete.
- There are financing from Caixa Econômica Federal that are able to attract the private sector.

## What does it take to bid an asset leasing?

- Preliminary draft.
- Benchmark economic-financial model - IRR suited to the market conditions.
- Based on the preliminary draft, estimate CAPEX and the result of the project's cash flow is the proper return.
- Economic-financial study of a discounted cash flow.
- Plot of land defined by the Hiring Party.
- Structure of public guarantees. Is there guarantee enough? They can guarantee other projects.

## How they can be presented:

- Within a PMI.
- It can be an expression of interest for a PPP project, where asset leasing reaches the same goals targeted by the Public Administration, with advantages.

## Main legal aspects of asset leasing

- A different contract.
- Needs to conduct a bid for hiring.

- No need to pay for measurement.

## Asset location vs. PPPs

The PPP Law determines a limit of BRL 20 million, but transaction costs are usually high depending on the state-owned entity. There is no such problem in asset leasing, so competition is higher as more companies are eligible to join, which is not the case in a PPP.

There are currently Caixa financing lines for asset leasing, such as Saneamento para Todos (Sanitation for All), without limitation on leverage. In some partnerships with Sabesp, the private partner was able to leverage 100%, significantly improving the project outcome.

## Caixa currently offers "Saneamento para Todos" finance line

- Borrower: Specific Purpose Entity (SPE).
- Resources: FGTS.
- Term: Up to 20 years with period of grace of 4 years.

## Including:

Financial cost - 6% p.a. (except for the Integrated Sanitation model, that has a nominal rate of 5.0% p.a.)

CAIXA basic compensation -2% over the debt balance.

Credit risk rate - Defined in line with borrower track record and limited to 1% p.a.

## Brief comparison of asset leasing projects.


## Asset Leasing cases

The first asset leasing made in Brazil was Sanasa's for the construction of ETE Capivari, with investments of BRL 60 million and a 264-month term, serving 60,000 people. Odebrecht won that bid.

There are 7 asset leasing projects.

**"There are currently Caixa financing lines for asset leasing, such as Saneamento para Todos (Sanitation for All), without limitation on leverage. In some partnerships with Sabesp, the private partner was able to leverage 100%, significantly improving the project outcome."**




**In a PPP, there is room to propose a basic project based on a preliminary draft for the bid, but on Asset Leasing there is no way to avoid this obligation of having a previously defined project.”**

Resumo comparativo dos VMLs por projeto

	Campo Limpo Várzea	Franca (Etapa 1)	Campos do Jordão	Franca (Etapa 2)	Socorro	São José dos Campos	Praia Grande
<b>VML - Edital</b> (R\$ mil)	1.227.000	1.040.000	1.214.757	544.671	215.126	833.474	486.583
<b>VML Vencedor</b> (R\$ mil)	1.128.840	1.030.000	1.111.987	-	-	-	-
<b>Investimento</b> (R\$ mil)	120.574.963	87.808.832	111.969.728	66.449.488	24.086.103	94.064.418	54.085.598

The first case was Campo Limpo and next was Várzea in 2009. Caixa worked with Sabesp's technical staff to design this model that became the reference for other Sabesp's models after it was approved by São Paulo Attorney General from a legal standpoint.

### Sanitation in the city of Socorro

- Value of works: BRL 24,086,103.00 (twenty-four million, eighty-six thousand, one-hundred-three Brazilian real).
- Term: leasing – 240 months.
- (MLV): Maximum Leasing Value: BRL 215,126.12
- Assisted operation: 12 months.
- MLV payment period: Oct 2012 to Oct 2032.

### Sabesp asset leasing in the city of São José dos Campos

- Amount: BRL 94,064,418.69 - MLV: BRL 833,474.11
- Object: Financing, construction and pre-operation of Pararangaba sanitation system.
- It will increase sewage collection levels to 93% from 91%

- Sewage treatment levels will go to 92% from current 88%.
- Population Benefited: approx. 130,000.
- Contract term: 276 months (6 months for the efficacy period, 30 months for works and 240 months for leasing assets).
- Drain: 640l/s.

### Sabesp asset leasing in the city of Franca

- Value of works: Phase 1 = BRL 93.8 million and Phase 2 = BRL 63.4 million.
- Object: Construction of a new water system.

### Sabesp asset leasing in the cities of Campo Limpo Paulista and Várzea Paulista

- Value of works: BRL 120.6 million.
- Term: 228 months (works + leasing).
- Object: Sanitation Preliminary draft

In a PPP, there is room to propose a basic project based on a preliminary draft for the bid, but on Asset Leasing there is no way to avoid this obli-

gation of having a previously defined project. As for Asset Leasing, similar to PPPs, it is necessary to open a Specific Purpose Entity to be responsible for that project.

## Other states have implemented asset leasing models, such as Alagoas.

Casal implemented a similar model to Sabesp's in 2013 in Alagoas, with a 32-year term and a high contract value. The company had already performed a series of PPPs and Concessions in 2013 and 2014, having asset leasing and PPP models within the same city.

But I guess that the message here is that this is a consolidated model in São Paulo by an important city operator, to transfer management to the private sector but at the same time ensuring expressive financing for the state-owned company (Sabesp, under the asset leasing model, has BRL 600 million), which is an alternative to Brazil especially in times of fiscal adjustment.

## How have control entities behaved? Does Law 8666 apply to this contract?

Yes, it does. But not all clauses. The 8666 Law contract model is based on works, which is not compatible with Asset Leasing. So by any chance I must run a price-based bid, there is no discussion about it, but in principle there would be any restriction to be a bid based also in technique. But as there is no need for payment by measurement, and some Law 8666 clauses cover solely the payment by measurement mechanism, allowing for a different interpretation that happily has been accepted by control entities.

## State Attorney General Statement

As for asset location for the city of Franca, the São Paulo State Attorney General agreed with the operation due to the contract's legal base.

- Re: Decision GPG.Cons # 60/2008.

- Date: September 30, 2008

## Is it possible to propose a project?

Most or all projects were proposed by the Government, but there is a situation where a PPP is being discussed through a PMI and the government suggests by saying, "PPP here is not application, what about an asset leasing?"

So it is possible to move from Concessions and PPPs to Asset Leasing (I don't see them as rivals) as in some situations the government will retain operation due to political or technical questions, and this is a proposal to be made.

I see no competition as this is an industry with a huge appetite for infrastructure, so there is room for everyone. And I think that it is important to think that this model is not exclusive for sanitation, it can be applied to other areas.

## Why can't I build a public building through asset leasing?

It is technically possible to negotiate with Caixa, which obviously would have to create a specific financing line or get resources from BNDES and other lenders.

Other infrastructure segments can also benefit from this model. So, for a public entity that is not able to borrow due to fiscal restrictions and run a work under the payment by measurement model, asset leasing can be an alternative and an opportunity for the private sector.

**"For a public entity that is not able to borrow due to fiscal restrictions and run a work under the payment by measurement model, asset leasing can be an alternative and an opportunity for the private sector."**



## Aegea Saneamento



**Bruno Baldi**  
Lawyer, AEGEA

Aegea Saneamento manages sanitation assets through concessionaires in several states in Brazil. The company manages public concessions in cities of all sizes, operating in water services across the board - supply, sewage collection and treatment in 44 cities from 8 Brazilian states divided into five regions, serving almost 3 million people or 18% of the whole private market.

To leverage this wide market, the company is highly efficient in reducing physical and commercial losses and has a solid commercial and distribution management through another company in the group, GSS - Gestão de Sistemas de Saneamento.

Also, its administration is in charge of defining strategy and coordination of operation of each concessionaire, as well as the coordination of Aegea Engenharia operation, using this vehicle as a mechanism to enhance returns.

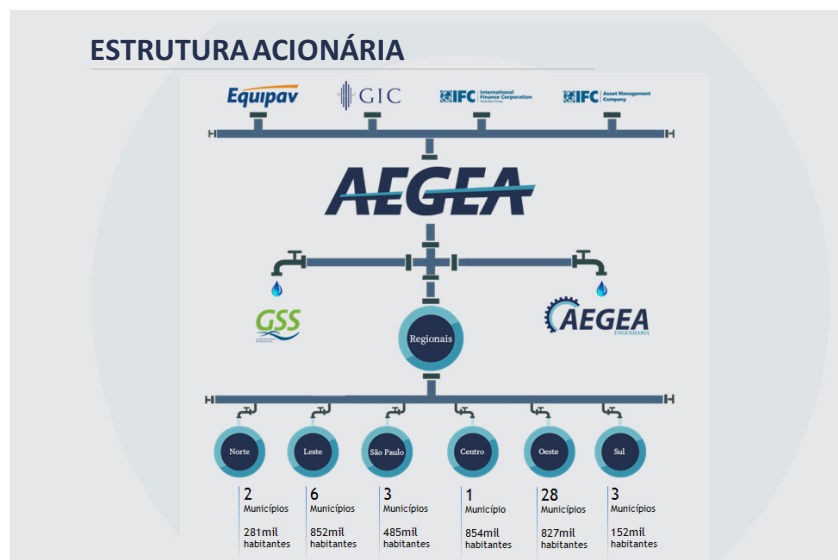
Aegea has a high operational per-

formance by applying synergies and separating activities per operation model, ensuring highest returns to the shareholder. With the entry of the company in the service delivery business, the company was able to join a market covering 93% of Brazilian cities served by state-owned sanitation companies with low levels of invested capital.

Recognition for executed works was achieved from 2013 to 2015, when Aegea was selected as the best and one of the largest sanitation companies. CEO Hamilton Amadeo as named "Valuable Officer in the Water, Sanitation and Environmental Engineering Industry" granted by Valor Econômico newspaper for two years in a row (2014 and 2015).

### PUBLIC-PRIVATE PARTNERSHIP IN PIRACICABA

The history of sanitation in Piracicaba gained another important chapter in 20 years with the uni-



versalization of sewage treatment that was reached due to investments performed by Piracicaba Rede Program - a PPP between Águas do Mirante concessionaire and the city sanitation company.

The current structure of Piracicaba sewage system started in the 1990s with the construction of the Piracicamirim Sewage Treatment Plant, designed and executed by the city's sanitation company and the city of Piracicaba. It was a pioneering project in the city as it was the first large STP in the city with capacity to treat 36% of sewage and serve 90,000 people.

By 2012, sewage treatment levels raised to 72% with the completion of the Ponte do Caixão STP, another large treatment plant and built with public investments at the left bank of Piracicaba river, with capacity to serve 150,000 people. Tupi and Capim Fino STPs also started operation and actively supported to reach that goal.

A Behavior Adjustment Agreement (Termo de Ajustamento de Conduta, TAC) signed by the city for the Public Attorney determined the universalization of sewage services in 2012, but at that time there were not resources required to fulfill that goal. So several options were considered and solution found was a PPP that was signed between the city sanitation company and the Aegea Saneamento holding, that won the bid.

The business model deployed by Aegea in Piracicaba was different from the other businesses in the group, as Águas do Mirante is a Specific Purpose Entity creat-

ed solely for managing the sewage system, not the water collection or treatment processes. In addition to sewage collection and treatment during the 30-year concession, the maintenance, expansion and replacement of collecting pipeline; upgrading of existing Sewage Treatment Plants and Sewage Lifting Plants; new sewage connections, construction of new plants and the upgrading of meters are also under the company responsibilities. Investments are expected to reach BRL 333 million across the concession period.

From the contract's signature the holding started the operation and management goals plan focusing on reaching regulatory benchmarks. The first step was the installation of the concessionaire in the city within 30 days, and operations started 12 days before the due date.

The main challenges in this operation was the deployment of a business model that was new to the group, staffed by the city's inhabitants combined with the technical staff's expertise imported from Águas Guariroba to ensure that all employees could support the growing demand in the city. Also, the fulfillment of benchmarks determined in the bid process, such as expand sewage treatment to 100% from 72% in two years was an aggressive goal.

In order to fulfill this goal, the company has adopted operational procedures that accelerated the fulfillment of a benchmark at a record time of 8 months, with the completion of Bela Vista STP that started operation in December 2013, pushing the indicator to 98% due

**“Piracicaba gained another important chapter in 20 years with the universalization of sewage treatment that was reached due to investments performed by Piracicaba Rede Program - a PPP between Águas do Mirante concessionaire and the city sanitation company.”**



**Social and environmental projects developed by the company aims to clarify doubts from the population in Piracicaba about sewage treatment, share knowledge and change people's mindset on the environment.**

to the capacity of treatment above 400 liters per second.

Sewage treatment universalization was achieved in July 2014 with Anhumas and Ártemis STPs, which added Piracicaba within the selected group of cities with full sewage treatment coverage.

The achievement of outcomes and the company evolution in a short time of operation evidenced the holding's maturity and business strategy efficiency. Considering the complexity and the challenges that involved the concession process steps, results obtained in almost three years of operation reinforced the values prioritized by the group and the commitment Águas do Mirante made to Piracicaba: to enhance quality of living and the preservation of Piracicaba river through services delivered.

### Piracicaba's sanitation system

Currently, the city's sanitation system is comprised of:

- 27 Sewage Treatment Plants
- 43 Sewage Lifting Plants
- 1,200 kilometers of collecting piping

• 126,766 connections to the sewage collecting network until 2015

• 1,349,596 m of sewage collecting network extension

### SANITATION VS. QUALITY OF LIVING

Some of the objectives and values adopted by Águas do Mirante are social commitment and incentives to environment preservation. For this reason, the company's Social-Environmental Projects is constantly studying ways to raise awareness of the population in environmental issues.

Social and environmental projects developed by the company aims to clarify doubts from the population in Piracicaba about sewage treatment, share knowledge and change people's mindset on the environment.

The company currently has 20 projects in execution that reached the following indicators until December 2015:

Questions: One of the highlights of Concessions and PPPs is the efficiency in operation as what I understood from asset leasing, it is basically a means for the Public





Administration to bypass fiscal limitations. So PPP and Concessions have an edge as the private sector operates and manages services, bring more efficiency, isn't it right?

Fernando Marcato: Asset leasing does not encompass operation. And actually sanitation needs to stop talking about works and start talking about operation. I mean, it is time to talk about quality of operation. However, asset leasing is a model for those clients that are not convinced yet or are not in conditions to develop a PPP or a concession.

Sabesp example is quite clear, the company is relatively well managed and for internal issues the company simply does not agree on transferring commercial management.

So asset leasing allows for investments that the company would not afford the other way and because Caixa would probably make a loan without financial limitation.

There is some prejudice against privatization. The term is wrong but this is the usual expression. So when a public manager experiences an asset leasing project, where control is retained, a gap opens to a potential Concession or PPP. So Asset Leasing is like a date.

Swapping phases is not possible in asset leasing bids as it is in PPPs. Phase swaps simplify the bidding process. This was a concern that made some interested parties shy away from Sabesp:

Fernando Marcato: Sabesp's first bid's notices created a notice for register. So two notices were created. The first was what we called pre-qualification and the second was launched next as a competition bid.

At that time, it was performed without phase swap, but now the state's legislation determines phase swap as a rule.<sup>118</sup>

So, for asset location, as an uncommon issue and even for competition matters, it was decided to now allow phase swaps and I am not aware that recent bids had phase swaps. But in principle I guess that there would not be any limit. There are today some vendors that are adapted to this model so I guess that such inversion would not make interested companies shy away.

Gains for the public healthcare system are considered in the calculation?

Bruno Baldi: No, it is not. Maybe it is a factor for designing new

## PPP – PIRACICABA – REGRAS DE CÁLCULO

**Aguas do  
mirante**

$$CP = (0,12 + K) \cdot VFe \cdot Pr$$

CP= Contraprestação mensal devida

Pr= Preço de Referência (R\$/m<sup>3</sup>)

VFe= Volume Faturado de Esgoto no mês

K= Fator em função do evento já atingido, conforme tabela abaixo

O valor do Preço de referência (Pr) é de R\$ 1,45 por m<sup>3</sup> (R\$/m<sup>3</sup>)

Evento	K
Assunção das ETÉs existentes	0,25
1. Assunção da ETE Ponte do Caixão e atendimento ao primeiro marco de investimento	0,35
2. Início de operação da ETE Bela Vista e atendimento ao segundo marco de investimento	0,65
3. Atendimento ao terceiro marco de investimento	0,75
4. Atendimento ao quarto marco de investimento	0,8
5. Início de operação da segunda fase da ETE Sta. Rosa e atendimento ao quinto marco de investimento	1

$$\text{Índice de Reajuste: } R = 1 + (0,50.IPCA + 0,20.IGPM + 0,15.INCC + 0,15.E)$$

IPCA: Índice nacional de preços ao consumidor

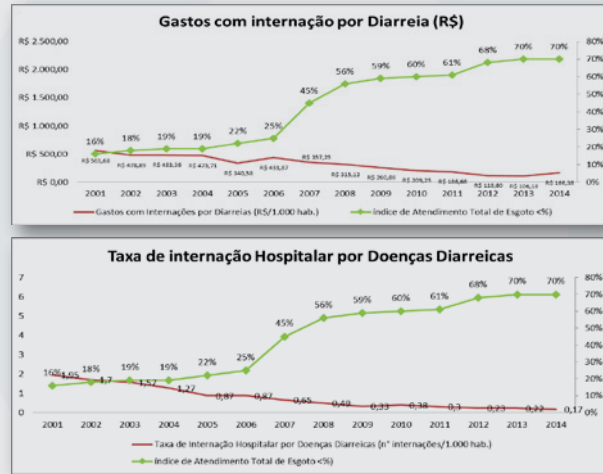
IGPM: Índice geral de preços do mercado

INCC: Índice Nacional de custo da construção

E: Índice de energia elétrica

There are public shares offered as guarantees or tie up a given project for a highway with any real estate property, for instance."

#### SANEAMENTO x QUALIDADE DE VIDA - REDUÇÃO DE CUSTOS EM SAÚDE PÚBLICA



projects, but certainly there is a gain for the Public Administration as concessions do not weigh on public budgets, since investments in sanitation translate as gains in healthcare.

In the current Brazil's situation, cities can't even pay their bills let alone set up a guarantee fund to ensure PPP payments, right? Are guarantee funds demanded by law? Are there PPPs without a guarantee fund?

Fernando Marcato: I think there are many projects that considered other alternatives than guarantee funds. The fund in itself is useless, the resources is the matter.

Without the money, all that is left is the shell. Furthermore, we know of some cases when even banks argued against the legal nature of these funds.

But royalties from oil and mining have been used as guarantee, as well as resources from State and City Participation Funds, that are mandatory transfers from the Federal Administration. Of course these transfers have also been reduced, but they have been offered as a guarantee as well.

To design highway concessions, especially the Tamoios highways in São Paulo, fines were grouped in an investment fund and then quotas of the fund were given as a guarantee. Alternatives are plenty.

Water receivables, for instance, allow for a PPP for sewage and then give water receivables that the city would get as a payment as a guarantee. Minas Gerais has many examples of guarantees.

There are public shares offered as guarantees or tie up a given project for a highway with any real estate property, for instance.

The state can expropriate a plot of land and add some ancillary revenue associated to gains from the property into the project.

I mean, I can capture this value as infrastructure projects generate externalities.

São Paulo has been pushing the private sector to think out of the box. Even MP 700, about to be voted, mentions real estate investment funds in association with infrastructure projects.

In this regard, for instance, developers launching new ventures must provide sewage treatment to get

city approval. This is a demand.

A city's fiscal responsibility situation puts limits to the PPP Process?

Luiz Antônio Messias: The city's fiscal responsibility is a limitation. As any investment, a PPP has a compensation, a cash counter payment that must fit into the city's budget. It is worth mentioning that maybe the political situation has a bigger impact than the economic crisis.

It is clear that Sabesp is not interested in transferring the operation, but has some value for money study being conducted to compare the concession model against this leasing model?

Fernando Marcato: Yes. No value for money was performed, such as in PPPs, but at the time, Sabesp had some holes in its financing plan. Sabesp gets resources from the World Bank, from Japanese banks and BNDES.

**“As any investment, a PPP has a compensation, a cash counter payment that must fit into the city's budget.”**

## São Paulo is the benchmark for housing projects in Brazil



**Rodrigo Garcia**

Secretary, State of São Paulo Housing Secretariat

When talking about housing, São Paulo has tradition and has been showing over the years that has potential to develop more projects in this field.

Some 20 years ago, São Paulo has been investing 1% of its tax collection in social housing projects, which currently translated into BRL 1.5 billion every year. The city of São Paulo also has the Housing State Corporation (Companhia Estadual de Habitação), which also helps to tell this success tale.

For some 50 years, São Paulo has 360,000 active borrowers and a considerable receivable portfolio, a stock of approximately BRL 5 billion the generates gains of BRL 600 million to the State every year. The Public-Private Partnership model applied by the state is consolidated and now can move on with bid's notice, hiring and start of works after two years of feasibility studies and legal characterization of this model.

### Renovation of urban spaces

The first example is an administrative PPP to renovate the urban space of the city of São Paulo. The project aims to renovate the city's old downtown with a lot of degraded areas and abandoned buildings. Another goal is to reduce commuting.

The Sé district in the city, the old downtown, has 17% of jobs and 3% of houses. This means that 3 million people commute every day only from the East Zone, overcrowding public transportation and damaging population's quality of living.

This way, the project was also thought of as to improve social inclusion. The Public-Private Partnership contract determines different social interest income ranges from BRL 900 to BRL 4,000, and demands from the private partner the inclusion of a popular market to allow for a social integration.

### Main characteristics:

- Contracts need to contemplate an amount of HISs and HMPs
- Targeted audiences are people working downtown but not living there
- Income ranges covered: HIS up to BRL 4,300 and families with income of up to BRL 8,100, thus reaching a low income market through the Housing Financing System.

The bid's notice aims to acquire plots of land, elaboration of projects, execution of housing works and an additional point that is new: The PPP contract for HIS demands building maintenance for 20 years and support for services.

The first public debate determined the hire of 14,000 units (9,000 for HIS and 5,000 for HMP) and it is expected that the private sector invests BRL 3.5 billion, whereas the State would pay a yearly counter payment of BRL 330 million maximum.

The city of São Paulo was a partner by indicating areas valued at BRL 280 million for a 20-year contract, with partial deliveries from the second to the sixth year. This prevented the private partner to fully pay the contract in and having a high financial cost in this investment.

### Contract guarantees:

- Primary Guarantee: A asset corporation in São Paulo
- Secondary Guarantee: A portfolio of receivables.

The bid's notice was posted in October 2014 and the contract for batch 1, comprising 3,683 units, was signed in April 2015. It is a contract worth BRL 1,840 billion with State counter payment of BRL 82,562 million.

### New projects

A second invitation for São Paulo's metropolitan area was made for an area called Fazenda Albor, owned by São Paulo Housing Corporation. The difference will be the significant ancillary revenues as it is a plot of land with 2,7 million square meters in a privileged location. The Presidente Dutra Highway is an area 10 kilometers away from the airport and it is located at the most expensive corner of São Paulo today, Rodoanel East with Presidente Dutra

Highway towards Rio de Janeiro.

The new project will build 10,000 housing units (7,000 for HIS and 3,000 for HMP). The goal is to make partial deliveries in a four-year schedule. This is an investment that will impact the local economy as it is located in a strategic location and quite expensive in Brazil, among the cities of Itaquaquecetuba, Arujá and Guarulhos.

As the level of ancillary revenues will be high, it is believed that there will be no subsidies. To characterize the PPP, the service takes place after construction, with building maintenance and supporting services for 20 years to justify the yearly counter payment from the Public Administration.

Secovi and Sinduscon interest on housing is quite clear as both entities see Social Housing PPP as an opportunity. It is considered that even during economic downturns this segment allows governments to keep the pace of hiring.

**“The city of São Paulo also has the Housing State Corporation (Companhia Estadual de Habitação), which also helps to tell this success tale. ”**

## PMIs show Espirito Santo interest in growth



**José Eduardo Faria de Azevedo**

Secretary, State of Espirito Santo Development Secretariat

The year of 2009 was critical to establish Public-Private Partnership legislation in the State of Espirito Santo.

The 2009 legislation approved guidelines and goals, i.e., priority areas to develop projects. Furthermore, at the same time the Partnership Managing Council was created, with the task to strategically evaluate projects based on the government and its operation. The legislation also determines mechanisms for hiring, counter payment and guarantees and the Partnership Guarantee Fund - that is in use by State now.

### Full structure

- Managing Council - CGP-ES: A Steering Committee for the Program, comprised of Development, Planning, Economy, Management and Human Resources, Government Secretariats and the State Public Attorney.
- PPP Unit: Technical support to government entities. Dissemination of knowledge on PPPs.
- PPP Industry Units: Entities developing PPPs.
- Intergovernmental Network to Develop PPPs.
- PPP Network: Efforts required to elaborate policies, guidelines, alignment of procedures, mutual collaboration between PPP structures and managers in Brazil.

One of the Unit Coordination differentials is that it is led by two technical advisors to ensure continuity and the build-up of knowledge over projects, immune to changes

of governments.

### PMIs published in Espirito Santo

The first Espirito Santo's Procedures for Express of Interest, or PMI, were launched between 2011 and 2012 through Decree. The process was successful and provided a lot of learning, namely the possibility of hiring studies for projects with quality at a low cost - as per Law 8.666, as discussed in other regional events, this is quite time-consuming and little satisfactory.

The PMI experience is important as it opens the possibility to build and find good options for projects in the market and subjected to bureaucratic procedures of Law 8666.

### Six PMI notices has been posted:

#### Hired PPPs

#### - Faça-Fácil

The first PPP aimed to expand the Faça-Fácil service network (similar to São Paulo's Poupatempo). The unit in operation was hired by Law 8666 and was incorporated to the PPP contract bid and structured through a PMI. The selection was made based on two competitors that developed studies but the selected company had to improve on some items to meet expectations. PMI allows this dialogue, resulting in a very efficient project structure. This project was then bid and become the first PPP contract signed directly by the Public Administration.

The contract is for the expansion of Faça Fácil network to serve 254,000 citizens in the cities of



Colatina, Serra and Cachoeiro do Itapemirim. The 12-year concession is estimated at BRL 833 million and includes two mobile units and three fixed units, in addition to their operation.

#### **- Sewage collection and treatment in the city of Serra (CESAN)**

The study and model of this PPP were developed under an agreement between EBB and BNDES, which originated the bid. The contract was signed in 2014 for a 30-year concession, with estimated worth of BRL 630 million.

It determines water supply universalization at the end of 30 years. The schedule determines that within eight years, 95% of the urban area still not served by sewage collection and water supply networks will be covered. The network is currently 787 km long and more 246 km will be added, an investment around BRL 320 million in sewage collection and treatment network. There are also operation and maintenance services at a cost of BRL 309 million, totaling a contract of BRL 628 million.

#### **Projects to be developed**

Among published PMIs, some shall be developed in the next years, such as the Police upgrade, non-educational services and the waterways system, which is currently being reassessed. There is also a study on recovery of public buildings and the sewage collection and treatment project for the city of Vila Velha, which is more developed.

The basic sanitation project is progressing well at the PPP model phase and hopefully the bid's notice will be available for public consultation before the bid. The model shall be similar to Serra's except for adjustment required for this particular city.

It is believed that a large effort is required to enhance Brazilian's legislation and create an environment based on trust that is better than the one we have today. For this reason, one must be careful to not open a wide range of PMIs but to focus on the ones the State really considers as strategic, in order to keep credibility and build a trusted relationship with the private sector.

**“For this reason, one must be careful to not open a wide range of PMIs but to focus on the ones the State really considers as strategic, in order to keep credibility and build a trusted relationship with the private sector.”**



# An analysis on the road transportation and its impact on Brazilian economy



**HalpherLuiggi**  
Director General, DER-ES

The need for security, comfort and effectively positive economic demands for the road transportation user is one of the State of Espírito Santo's priorities. The lack of resources by the Public Administration is a large barrier for the transportation industry.

By improving the highway network, the transportation industry and other industries will gain too. The main factor is economy's competitiveness.

If you have a better highway then it is possible to move goods or produce services at lower costs, reflecting on transportation of agriculture production.

One of the most concerning issues is the waste caused by improper transportation. A load of tomatoes produced in the state of Goiás loses 10% until it reaches the state of Espírito Santo. So if the load has 1000 boxes, 100 of them are lost. Which is a lot.

## History of Highway Concessions

Highways were effectively granted to the private sector in Brazil in 1994. The pioneering project under this model was Rio-Niterói Bridge, again granted to the private sector in 2014. It was 1,316 km from six federal highways.

Lula and Dilma administrations also focused on this topic as an alternative to meet the country's demands even if they were not so aligned to the concession process.

During Lula administration, from 2003 to 2010, 3,305 km from eight highways were granted. And on Dilma's first term, 5,350 km

from seven federal highways were granted.

The concession is not necessarily suited only during economic downturn or few resources. It is an option for infrastructure management, such as highway infrastructure.

## Experiences from Espírito Santo highway network

Espírito Santo granted its first highway to the private sector in 1998, the Sun Highway, which is a quite mature concession now that received many investments, such as Guarapari control room and the duplication from Vila Velha and the North access to the city of Serra de Guarapari. It is a 25-year contract covering 67 km, for recovery, improvement, maintenance, duplication and user service. This contract is currently in force and set to expire in December 2023.

The second experience happened in April 2013, the concession of BR-101 federal highway of 458 km in the state of Espírito Santo and 17 km in the state of Bahia. It is at the early stages and shall be valid for 25 years. The concession improved the conditions for the region. After the concessionaire took over, side streets were equipped with medical service, repair shops, lane recovery and other services, improving the region's performance and the quality of living of citizens.

## Waste due to lack of investment

According to the World Bank, Brazil loses 1% in growth due to issues in the transportation system. It means that during Dilma's first

term from 2011 to 2014, Brazil could have grown 4% to 4.5% more. It is estimated that the loss for Espírito Santo could reach BRL 1.3 billion every year. The economy becomes weak and does not grow because we have problems in our infrastructure.

### What is necessary to better develop the state?

The Espírito Santo Highway Department conducted a study to find the main investments for the highway development in the state for the next 15 years. The goal is to bring that 1% of growth from the national economy to the local economy. Local and federal highways would be involved.

- Paving Plan: The analysis considered some 2,500 km of non-paved highways. From this total, some 1,265 km have interesting internal return rates, ranging from 10% to 66%. This means that if the state had paved these 1,265 km, the investment would generate a return above 10% per year to the investment made. Investments total BRL 2.4 billion (at 2009 prices) but in

15 years, returns would total BRL 6.6 billion, almost three times the invested amount.

- Capacity increase plan: Such capacity increase plan forecasts investments of BRL 1.57 billion from 2011 to 2025 (at 2011 prices), two thirds of it for federal highways and one third to state highways. In this case, investments are higher because highways are quite consolidated.

### Lack of investment vs. smaller growth

It is no news that Brazil is experiencing a severe downturn that reduces the capacity of investment by the Public Administration. Here concessions emerge as an option to leverage the country and improve cities development.

Whether it is a pure concession or a mixed concession, it can dramatically reduce the amount required to be invested by the Public Administration over time.

A fast comparison of Espírito Santo against other states as São Pau-

lo, Rio de Janeiro and Minas Gerais unveils that the state of São Paulo is the most dynamic in Brazil with 22 concessions. Rio de Janeiro is catching up fast. Minas Gerais has some concessions in the South of the state - and it is not coincidence that this is most developed region in the state. The State of Espírito Santo is late on granting highways when compared with other states in the Southeast region.

An overview of highways in Brazil shows small growth. The state invested heavily in infrastructure in 2010. That was the year when the Growth Acceleration Program (Programa de Aceleração do Crescimento, PAC) most invested in federal highways. What was the outcome? Few highways in good conditions, a handful in acceptable conditions and many others in poor state. And this is because of the way how the state manages its highway network.

In the other hand, investments made by concessionaires are similar to public investments but there is a right time for the application of the project or to recover the highway.

# Smart, Human Cities: An inspiring look into the future



**André Gomyde**

Chairman, Vitória Development Corporation

André Gomyde, Chairman, Vitória Development Corporation (Companhia de Desenvolvimento de Vitória), introduced the Smart, Human Cities concept - spaces with different needs and problems but using technology to solve environmental, economic and social issues to improve people's quality of living.

The Brazilian Smart, Human City Network was created to accomplish and disseminate this concept in Brazil, and connects public officials from several cities, entities and local and foreign governments to collaboratively develop integrated projects and plans for the benefit of member cities.

According to Gomyde, the network was the creation of the Science and Technology City Secretariat National Forum and exists since 2012, but it was constituted as an entity in 2014 connected to the Mayor National Front (Frente Nacional de Prefeitos, FNP) and to the Europe-based Global Smart, Human City Network.

The Brazilian Network gathers Mayors, Secretaries and City Officers in Science and Technology, as well as Universities and Science and Technology Institutions (Instituições de Ciência e Tecnologia, ICT) to fulfill the important role to connect three economy sectors: University, Public Administration and Private Sector.

Some of its goals are to articulate, research and support Brazilian cities to deploy smart, human city projects that improve delivery of public services and the quality of living.

He stresses that the world has undergone huge changes:

- 1st Cycle - Agriculture – The man was a nomad by then and by discovery of agriculture he fixed in a portion of land and then cities started to sprout.

- 2nd Cycle - Industry – Emergence of factories, labor unions and new labor relationships.

- 3rd Cycle - Creativity, Innovation, and Technology – Dawn of the 21st century, where information, knowledge and technology took hold of the global economy.

- 4th Cycle - Nanotechnology and Biotechnology – The so-called Life Sciences, governing a multidisciplinary range of fields of knowledge, that answers by the name of nanoscience.

André Gomyde believes that this cycle might generate multiple businesses in the world, in research, technology and innovation, and Brazil can take advantage of this by starting to implement smart, human cities.

The speaker highlighted successful case studies about smart, human cities all over the world, such as:

## Chattanooga, TN – USA

Once considered the most contaminated city in the US until the 1980s, Chattanooga, Tennessee, managed to change its economic profile and became one of the greenest cities in the world. After industries brought development specially in the 1930s, the city reinvented itself from a polluting economy to a cleaner, more sustainable one, creating technologic structures and acquiring land from deactivated plants to build public aquariums and renovating the Tennessee river banks

(one of the five largest rivers in the US) with leisure and sport areas, in addition to building parks, plant trees downtown and in other areas as well.

The role of Communication and Information Technologies in this process is to integrate by using information data, including people in the search for solutions through the joint creation of smart solutions in lightning, education, transportation and many others that can be supported by technology.

“Before, solutions were not integrated, it was like each solution had an intelligence, a method to deal with information. European cities were the first to integrate and to realize that integration would not be useful if the people could not take ownership of that information, hence the concept of open cities, providing transparency, dialogue, appropriating information and working together with the Public Administration to find solutions. This means to place the players themselves into the process.

And it is precisely for this reason that the name of smart cities must include the word “human”.

This is the role of the Brazilian Smart, Human City Network, that is to integrate companies, debating how these ideas can be deployed and how societies from several Brazilian cities can perform this huge exchange of information and experience.

The foundation for this is the technologic infrastructure that allows for connecting people to an innovation ecosystem, linking the following structures:

City - by means of a Technology City Council.

Living Labs and Science Squares - with live labs for open innovation, which integrates research simulta-

neously by means of a Public-Private Partnership.

Public-Private Partnership - provides the technologic infrastructure in public lightning parks.

Factory of Ideas - operating in concepts of creative economy.

If the city sets up an ecosystem such this one, the city ensures sustainability for this innovation process and technologic development over the years.

### Infrastructure for Smart, Human Cities:

- Technologic
- Smart Grid
- CICC
- Open Platform
- Sanitation
- Power Generation
- Health
- Education
- Creative Economy

One example mentioned by Gomyde is an integrated command and control center in the city, using sensors in each lightning pole to send information to an open platform, thus making the city smarter and more human.

### PPPs lead the way to Smart, Human Cities

- PPP Lightning
- PPP Sanitation
- PPP Power Generation
- PPP Health
- PPP Education

Technologic Infrastructure offered in the PPP for Public Lightning

- Cameras, Application, Sensors

- Capture of information

Information flow through fiber optics

- Command and Control Hub
- Integration of Information
- Open Platform
- Best Services

### PPP for Lightning in Vitória - State of Espirito Santo

Vitória's first PPP was launched in 2015 through an open invitation for deploying a new lightning system for the state's capital.

This idea came up while we were discussing the City Technology Park and found the need for connecting the population anywhere in the city. We would transfer public lightning management for the private sector so it was natural to deliver the people with high speed internet access wherever they are in the city,” highlighted André Gomyde, CDV Chairman. One of the technologies included in the contract was to provide Wi-Fi Internet in the city's lightning poles. Furthermore, 32,000 poles with LED lams generate efficiency and energy savings.

### Format:

- Upgrade Term 03 years
- PMI
- Invitation
- Studies
- Final Model
- Debates
- Bid
- Contract: BRL 430 Million
- Investment: BRL 150 Million
- Upgrade Term 03 years



# Private investment: Actual possibility to accelerate deliveries to society



**Jorge Arraes**

Secretary, Special Secretariat for Concessions and PPPs for the city of Rio de Janeiro

How do Public-Private Partnerships and Procedures for Express Interest work for the cities in the state of Rio de Janeiro?

The chart shows the applicability of the PPP model that requires more investments from the Public Administration, as well as Procedures for Express of Interest, that although also receive public resources, they also provide a myriad of options to cities to implement infrastructure, sanitation and transportation projects.

In Brazil, investments made under Public-Private Partnerships shall comply with Law 11.079/2004 (PPP Law) and Law 8.987/1995 (Concession Law) that comprise an advanced legal framework to foster business within the legislation, which requires projects structured according to:

## Qualified team assembly

Porto Maravilha's institutional-financial model is new to Brazil. The same project used urbanistic mechanisms from the City Charter; a federal law and instruments from capital markets, such as Real Estate Funds and CEPACs. Everything was supported by a PPP contract, which makes the combination of these elements something unseen in Brazil.

## The Real Estate Investment Fund was structured this way to reach its goals:

- It must be evaluated by a rating agency
- Placement is open to the investing community

- Present historical liquidity on negotiation of quotas for income funds

- Have potential for long-term returns

- Ensure protection against inflation, with asset income flows indexed to the market

- Low quota volatility (asset with stable equity characteristics);  
Note: the fund's assets are real estate, CRI, LCI and LH

Revenues: Income from rent, sale of assets and real estate bonds and quota appreciation;

## Instruments from capital markets:

- Regulation and oversight from CVM

- Transparency in operations

- Established public governance

- Relative protection against politics

## Concessions generate an amount of BRL 6.2 billion encompassing the projects below:

- Engenheiro
- Multipurpose Arena
- Water park
- Orla Rio
- Cuca fresca
- Urban equipment
- Bike rio
- Street plates
- Marina da Glória
- Transolímpica
- West end sanitation
- Lamsa
- Cemeteries



For PPPs, the amount is of BRL 10.1 billion, covering Porto Maravilha (BRL 7.6 billion), Olympic Campus (BRL 1.4 billion) and the tram (BRL 1.1 billion).

The following projects are the highlights:

### Porto Maravilha

Joint urban operation for the Port of Rio de Janeiro, Porto Maravilha is the largest urban intervention in size and number of CEPAC in Brazil, rescuing the port area of one of the most important cities of Brazil with an urbanistic proposal based on sustainability principles and improvement of quality of living in the region. The operation's total cost is BRL 8 billion and it covers a 5 million square meter area, limited by avenues Presidente Vargas, Rodrigues Alves, Rio Branco, and Francisco Bicalho. The operation shall last 15 years, from June 2011 to June 2026, but can be extended to 30 years upon approval of a new law.

### Olympic Campus

The PPP was created to build the core of 2016 Olympics and the dif-

ferential is that the guarantee was the former Jacarepaguá race Track. The Olympic Campus has business opportunities that can be leveraged with private resources.

The Olympic City was also designed to improve mobility. The Light Rail (VLT) with 28 kilometers long and capacity to carry 300,000 passengers a day, will connect Rio's downtown to the port area and will feed trains, ferries, subway, buses, the Santos Dumont Airport and the Providência's Funicular.

### Light Rail - VLT

The deployment of this new transportation means has an estimated cost of BRL 1.157 billion, out of which BRL 532 million were provided by the Federal Administration's Growth Acceleration Program for Mobility and BRL 625 million invested under a Public-Private Partnership (PPP).

The Light Rail is a sponsored PPP. The PPP regime was instituted by Federal Law 11.079/04, and at the city level, PPPs are allowed by Supplemental Law 105/09. According to these pieces of legislation, Pub-

lic-Private Partnership is the concession administrative contract, under a sponsored or administrative model, and:

- A Sponsored Grant is the grant of public services and public works covered by Law 8.987/97 whenever it involves counter payments in cash from the Public Partner to the Private Partner, in addition to fees charged from users.

It is a pioneering project, the first in the world totally with fiber optics cabling underground that will enhance dependability and quality of telephone, internet and even power supply services, once aerial cabling overweight poles, causing damages and harming data transmission. Furthermore, it will deliver enhanced security to passers-by and drivers in thoroughfares.

### New projects:

Projects to be bid in 2016 include: PPP Olympic legacy, Rio de Janeiro Zoo; Barra da Tijuca and Jacarepaguá sanitation; electric cars, Smart Parking Lots; Joint Urban Operation Vargens; New Bus Terminal and Polo Cine Vídeo.

# Concessions and PPP progress in Belo Horizonte



**Luciano Teixeira Cordeiro**

PBH Ativos

PBH Ativos is a stock corporation having the city of Belo Horizonte, PRODABEL - Empresa de Informática e Informação do Município de Belo Horizonte S/A and BHTRANS - Empresa de Transportes e Trânsito de Belo Horizonte S/A as shareholders, and aims to supplement public policies by supporting the city of Belo Horizonte to perform structured financial operations and other similar activities.

The relationships established with the private sector are:

## Ordinary Concession

Concession of public service delivery through a competitive bid to a company or a consortium of companies that evidence that is able to perform it by its own expenses under a determined term.

## Public-Private Partnership

Administrative: Service delivery contract where the Public Administration is the direct or indirect user, involving execution of works or provision and installation of goods.

Sponsored: Grant of public services and public works covered by Law 8.987/97 whenever it involves counter payments in cash from the Public Partner to the Private Partner, in addition to fees charged from users.

## Privatization

Legally, the expression is decentralization. Transfer to the private sector of execution of public services delivered by the Federal Administration or the transfer/grant of rights over Federal Administration's

assets. It is the definitive sale of a public asset.

## Project structure/model

Internal: It is when the Public Administration develops a project using their own technical team. Additionally, this internal team may be supported by a consulting firm, hired as per legislation, for this specific purpose.

External: PMI: Procedure launched by Direct and Indirect Administration to obtain studies with informed opinions and justifications on feasibility, surveys, research, data, technical information, project or reports from interested parties in sponsored, administrative, ordinary concession projects and permission.

MIP: Submission of proposals to develop projects, studies or surveys drafted under request from an individual or company to be used for structuring Public-Private Partnerships with a city's Direct and Indirect Administration.

## Contracts in force in Belo Horizonte

PPP Education: Administrative Concession to perform Engineering works and services and delivery of supporting non-educational services to Belo Horizonte basic school system. Contract signed in July 2012.

PPP Macaúbas (sanitary landfill): Administrative Concession for public service delivery of final disposal in sanitary landfill and solid waste treatment originated from Belo Horizonte cleaning services. Contract signed in November 2008.

PPP Hospital Metropolitano do Barreiro: Administrative Concession for Engineering works and services and delivery of non-medical services to management and operation of Belo Horizonte's Hospital Metropolitano. Contract signed in March 2012.

Healthcare Centers PPP: Administrative Concession contract for delivery of non-medical services to support and infrastructure to the

primary healthcare network.

**Public Lightning PPP:** Administrative Concession for delivery of public lightning services in the city of Belo Horizonte, including development, upgrading, expansion, energy efficiency, operation and maintenance of the city's public lightning system. Public consultation in progress.

**“MIP: Submission of proposals to develop projects, studies or surveys drafted under request from an individual or company to be used for structuring Public-Private Partnerships with a city's Direct and Indirect Administration.”**



## Know the Concessionária Serra Ambiental case



**João Lúcio Souza  
Lima Filho**

Sales Director, Sonel Engenharia S/A;  
Counselor, Concessionária de Saneamento Serra Ambiental

This is a consortium comprised of Sonel Engenharia, Construtora Aterpa and Mauá Participações that won the bid conducted by Cesan (Espírito Santo Sanitation Corporation) in October 2013, at Bovespa.

Next, the consortium opened a SPE with a paid-in capital of BRL 65 million. The 30-year contract was signed in July 2014 and the operation started in January 2015.

The concession goal is to provide 100% of sanitation services to the city of Serra, the most populous in the state with approximately 467,000 inhabitants. The contract determines investments of BRL 660 million through 30 years, BRL 394 million out of it to be invested until 2020. A BRL 240 million financing is expected from BNDES for investments in the 6 first years of the concession, during which expansion works for the collection network and sewage treatment plants shall occur.

Compensation is twofold: A fixed installment that pays for investments and interests, and a variable installment as per cubic meter of sewage treated.

Expertise in sanitation is a crucial issue for this project. Sonel, for instance, is a 50-year old company founded in Minas Gerais and that is specialized in sanitation, believing that the only way to provide sanitation services to all Brazilians is through Public-Private Partnerships as this is a service requiring high investment.

### Counter payment guarantees

Serra's receivables are the project's guarantees both for water and sewage. Also, there is an escrow account in BANESTES to support guarantees requested by BNDES.

When the consortium took over Serra's concession, sanitation services and sewage treatment coverage was of 60%. The goal is to reach 95% in next 8 years, which means that a lot of investing needs to be done, as in treatment plants to allow for the service's universalization.

From January to September 2015, 11,000 service requests were serviced and 21 sewage treatment plants and 108 lifting platforms are in operation.

The contract relies on performance levels, demanding that the concessionaire fulfill requests for removing jams from networks in 24 hours - currently, the consortium manages to do this task in 19 hours.

Requests for other works shall be fulfilled in 48 hours and the consortium does so in 26 hours, and satisfaction level is at 95% according to surveys conducted with the population.

Serra Ambiental deployed an Operational Control Center. The company has 50 lifting platforms connected online and operating 24 hours a day. That is the advantage of the private sector, as it can hire

faster and make faster management moves.

#### Situation of sanitation in Brazil

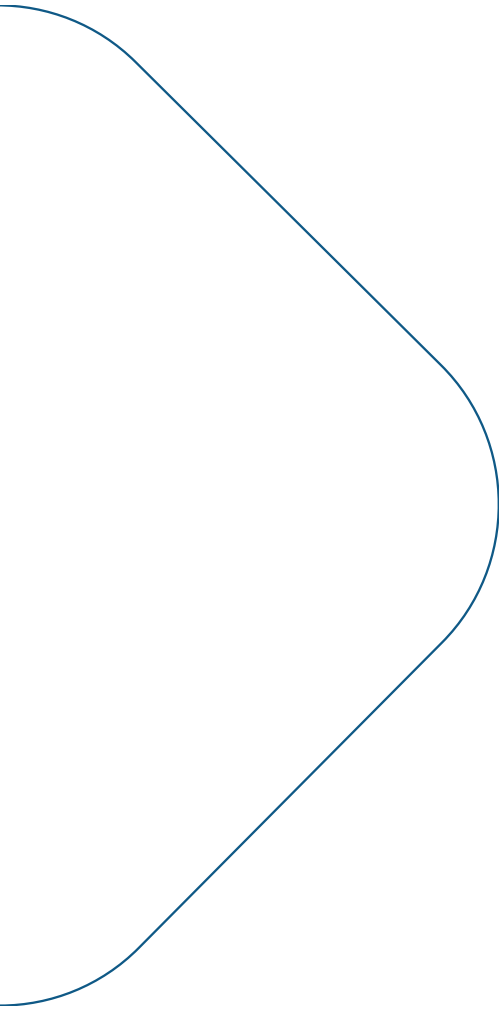
- 76% of sanitation is managed by state-owned companies

- City-owned companies and Water and Sewage Autonomous Service companies represent 12%.

- 12% of concessions are in the private sector hands.

**“When the consortium took over Serra’s concession, sanitation services and sewage treatment coverage was of 60%. The goal is to reach 95% in next 8 years. ”**





# Mid-West Region

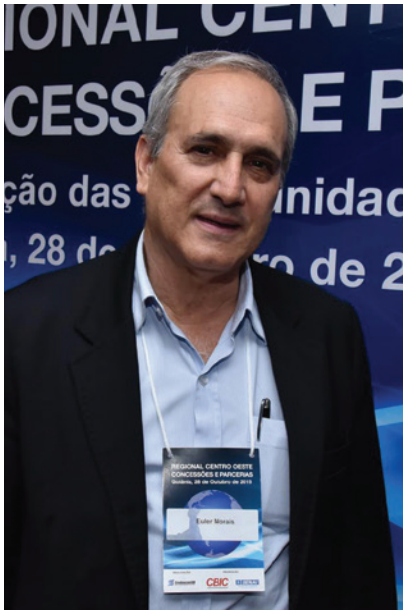




# City and state pipelines of PPPs and Concessions in the Mid-West Region



## A new look to Aparecida de Goiânia



### Euler Morais

City Secretary for Government and Institutional Integration of the city of Aparecida de Goiânia

Carlos Alberto de Paula Moura Júnior, Sinduscon-GO chairman, entity that hosted the seminar, was the facilitator of the last panel: City and state pipelines of PPPs and Concessions in the Mid-West Region. The first speaker, Euler Morais, is the City Secretary for Government and Institutional Integration for the city of Aparecida de Goiânia, highlighted that Concessions and PPPs projects are not for large cities only.

The city has more than 500,000 inhabitants and is growing fast. The city is located in Goiania Metropolitan Area by the BR-153 highway, with easy access to all Brazilian regions. Its strong industrial vocation is attracting the attention of Brazilian and foreign investors.

Currently, Aparecida de Goiânia is ranked fourth in terms of consumption power among metropolitan regions, and is also among the 10 best cities for business and among the 100 cities to invest in real estate in Brazil.

In 2014, the city of Aparecida invested the same amount of Goiânia and Anápolis combined. It was BRL 152 million invested in works. For this reason, FIRJAN (Rio de Janeiro Industry Federation) ranked Aparecida as first in the Goiás, and 21th in Brazil, in fiscal management - ahead of 26 Brazilian capitals.

### Public Lighting PPP

In April 2012, the city received a proposal from a company to perform studies to replace all lightning in the city by LED lamps.

The company was authorized to conduct the required research for the

project, whereas the legal framework was updated. The PMI was regulated and then submitted by the company, and then a permission was granted for elaborating the studies, which were completed in May 2015.

An analysis found that the study should be corrected as it has many errors. The Managing Council felt the need to hire a private consulting firm to support reviewing the study, as well as to perform economic and financial feasibility analyses.

The lightning PPP will have a 300-month contract. The initial amount expected for the counter payment was of BRL 876 million, an average monthly cost of BRL 937 million, but aiming that by adopting the LED system, savings of 6.5% would be generated per month as well as average savings within the period of 16%. The investment would be around BRL 180 million, whereas the city would spend some BRL 236 million in the same period. This is savings of BRL 44 million among other benefits: A modern lightning system that would generate savings and deliver proper lightning without costs to the city.

### Goals of the PPP:

- Change of the whole lightning system in 36 months;
- Total number of light fixtures was around of 50,000 was increased to 70,000;
- To have an online management system to manage the process well.

### Garavelo Space

The Garavelo Space aims to imple-

ment a complex involving leisure, entertainment, a “mini shopping” in his words, with many attractions to upgrade and leverage the region. It is well located at the Igualdade Square, one of the most expensive areas in Aparecida adjacent to SINE/SAC, CMEI and CAIS.

#### Public Administration expectations:

- To generate revenue to the Space;
- To create new job and income opportunities;
- To create a modern, attractive space to enhance leisure in the region;
- To benefit society, investors and also local companies.

#### Other projects executed

- América Park: A private business in a former public area. A swap was agreed with the companies: the payment of urban regularization fees by the public partner and the implementation of the square by the private partner.
- Children’s Park: a company was

the owner of a preservation area and wanted to raise residential buildings there but a small plot of the land was owned by the city. So a partnership was established for the creation of the Children’s Park (Parque da Criança) in the area, at the initially estimated value under the legislation, providing the required transparency from the Public Administration.

- Family Park: it was the consequence of a new shopping mall, which believed that the area in front of the building would be better used to urbanize and attract visitors to the mall by opening a park.

#### Demands being studied

One of the city’s demands is the proper disposal of residues as the consequence of its fast growth. The city has been pursuing alternatives and estimates to spend around BRL 183 million in a PPP for solid waste.

Some two years ago, the city of Aparecida transformed a garbage dump area in a landfill. It was a big achievement for the whole region. Scavengers were grouped in coop-

eratives for a selected collection and the next step is to analyze proposals for technologies being submitted to completely get rid of the landfill.

The sole commitment by the city would be to provide an area to deploy a plant that would lead garbage into wood, diesel, energy and so on. The garbage collection and disposal would be executed under a PPP.

Some of the partnership deliveries are the implementation of eco-friendly stations to recycle garbage; deployment of containers; implementation of facilities for selecting residues for cooperatives; provision of equipment for cooperatives; mechanized cleaning, implementation of paper recycling equipment and service units for citizens, even for awareness.

The goal of this PPP is to ensure better collection, transportation and treatment of waste generated by households, fairs, hospitals and even of dead animals from the whole city.

## Expertise from other states was critical for the creation of PPPs in the state



**Zaida de Andrade  
Lopes Godoy**

Coordinator, Central PPP Unit,  
State of Mato Grosso do Sul

Mato Grosso do Sul was also one of the last Brazilian states to pass a PPP bill in the Mid-West, but the difference is that the state could learn from other states, specially their failures.

The model created by the state was supported by the World Bank through a program to build roads, meeting Mato Grosso do Sul goals of institutional strength and also tackling environmental and planning issues.

In 2003, before the Federal PPP Bill was passed, a Work Group comprising state secretaries was formed by Decree 11.501, with the task of elaborating strategies for the adoption of Public-Private Partnerships in Mato Grosso do Sul. The Work Group was coordinated by the Production and Tourism Secretary at that time. The group was formed by Secretaries of: Planning, Science and Technology; Infrastructure and Housing; Tax and Control; a representative from the State Public Attorney and another from the Government General Coordination.

The Work Group found that transportation and energy were priority, as well as eliminating barriers for the program's implementation in the state, due to the low level of Net Current Income, breach of debt levels, and the high risk of demand aligned to the need for building a complex structure for managing projects. However, in 2012, after a new Work Group was formed and new studies were performed, an innovative governance arrangement was implemented as a network, using existing structures in a coordination involving many institutions

and disciplines, aiming to exempt the Public Administration from new costs and keep a high technical level in the PPP institutional arrangement in Mato Grosso do Sul.

The state partnership program was thus created by the State Law 4.303/2012, instituting governance with financial sustainability mechanisms to develop and expand the program, building strategic partnerships with the private sector for investments. Currently, the PROPPP(MS) is comprised of a technical unit, UCPPP Central Unit, for supporting the PPP Management Council on regulation, planning, finance and oversight. This is a regular program directly connected to the Mato Grosso do Sul Planning Secretariat, as per the legislation.

*This is a work accomplished in collaboration with society, universities and the Brazilian Law Association.* Still, the minutes for the PPP Bill was the object of the "Regulation and Partnerships" workshop at the 1st Mato Grosso do Sul Regional Development State Conference, that gathered representatives from society, business and universities, to allow a broad discussion about the Law. One of the goals was to elaborate a Regional Development Plan, i.e., to think Public Management in different terms: Public officials in dialogue with civil society.

Society took an active role in the 1st Regional Development Conference, when a list of demands from the State was compiled. The State PPP Law was effectively crafted by all involved, even public service users.

### Environment is the focus on Mato Grosso do Sul

One of the issues identified by officials and had become a PPP opportunity is Preservation Units within state parks, as the Pantanal takes one third of the state's area, ensuring relevance to the local environment.

The Unit's management was crucial to consider a partnership, as management expertise must be provided by a specialized company. The officials themselves admitted that this is not something they can do. "The focus was to distinguish between what concerns to Public Administration and to Private Administration. This was very clear to the Preservation Unit team. We explained this to the Management Council and it was easily approved."

### PPP management strengths

During 2013 and 2014, the State worked on decrees, PMI, training and regulation. 2015 was the year to realize existing projects, launching reference terms both for PMI and those projects directly structured by the State. The Public-Private Partnership Office (Escritório

de Parcerias Público-Privadas, EPE) was created in the same year, enhancing the institutional arrangement in the current term, as the governor is quite open to Concessions and PPPs.

Zaida states that the governance arrangement, with a Council and Technical Support Unit in an integrated governance networks was one of the innovations in PPPs in Mato Grosso do Sul. Instead of appointing a Secretariat for a PPP, the State Public Attorney, the Secretariat of Planning, Finance, a representative from Government coordination and a chairman appointed by the governor shall comprise a team, as a minimum. Eventual members are admitted but without voting rights.

The Council also relies on a very nimble structure, which accelerates discussion and approval of projects. The Management Council met twice and on both occasions it was easy to submit and get doubts cleared, speeding projects up.

Local priorities are sanitation and highways, just like the rest of Brazil.

**"Instead of appointing a Secretariat for a PPP, the State Public Attorney, the Secretariat of Planning, Finance, a representative from Government coordination and a chairman appointed by the governor shall comprise a team, as a minimum."**



## Improvement of public service delivery is the focus in the state of Mato Grosso



**Vinicius de Carvalho**  
CEO, MT Participações e Projetos

Founded three years ago, MT Participações e Projetos SA was originated from a demand from the state of Mato Grosso to encourage the private sector. Heading the company, Vinicius de Carvalho participated of a panel to present the state's pipeline. He started his presentation by saying that Mato Grosso was one of the last states to develop a state PPP program, at the end of 2011, which delayed some partnerships.

The entry of the state into PPPs shows some lack of experience. One of the attempts was to resume construction of Hospital Central, that is interrupted for almost 30 years. Another is the construction of a prison complex for 3,000 inmates. There has been PMIs and models were developed, but nothing went further.

The main problem is to conceive PPPs as the last resort, whereas the potential lies in establishing partnerships at the beginning of a project. There is money, but there is no good planning. There is money in excess, but good projects are lacking.

### Project portfolio

Mato Grosso's main case is the Ganha Tempo project, a hub of state and federal services, as well as some services from the city, and utilities gathered in a single place to reduce paperwork for the citizen. This model exists in other states, such as Goiás, São Paulo, Rio de Janeiro and Minas Gerais.

The project has a PMI already published and it is being designed now. It proposes six Ganha Tempo units in several cities throughout the state. Demand for these six units is estimated in 6,000 daily operations or approximately 130,000 operations per month.

Total investment is calculated at BRL 36 million for construction. A difference is that only public properties will be used as per decision from the MT-PAR Board and the Program Managing Council, to reduce project costs. Another step would be a concession for the operation, worth BRL 446 million for 15 years.

The business model is based on the amount of operations, so the company is compensated by each citizen served in Ganha Tempo irrespective of the service delivered. Compensation is 70% fixed and 30% variable, according to performance levels. So the company has incentives to deliver a good job.

Another priority project for Mato Grosso is the management of public schools. Partnerships to build or renovate, maintain and manage public schools in expansion all over Brazil, delivering cleaning, security and even food services. The state of Mato Grosso owns currently 747 schools and is assessing how many will be benefited.

The state has a project called In-fovia to digitally connect all cit-



ies in the state, or at least a majority of them, through a digital road that allow for taking IT or ICTs to improve delivery of public services. The reason is that Mato Grosso is the third largest state in Brazil and most of the cities have less than 20,000 inhabitants.

The challenge is to deploy the technology across the state to improve public service delivery specially in small cities.

**“The main problem is to conceive PPPs as the last resort, where as the potential lies in establishing partnerships at the beginning of a project.”**



# Águas Guariroba case: The importance of increase dialogue with society



**José João de Jesus da Fonseca**

Chairman, Águas Guariroba

In this discussion, facilitated by lawyer Lucas Navarro from Navarro Prado Advogados law firm, two speakers were invited to talk about their experiences and views on the market.

The first was José João de Jesus da Fonseca, CEO of Águas Guariroba, concessionaire delivering water supply and sewage collection and treatment services for Campo Grande, capital of the state of Mato Grosso do Sul.

The organization is a member of AEGEA Saneamento group that manages sanitation assets through concessionaires in several states of Brazil, supported by Engespav - a company that delivers overall maintenance and management services.

Brazil's gap in sanitation is huge. Almost 50% of the population is not served by a collecting network and for the other half, only 39% of sewage collected is treated.

It is important to keep a close relationship with a constant dialogue with society, as raising awareness is critical to prevent issues and reduce waste.

An example of this is Agbar (Águas de Barcelona) in Campo Grande, which had a series of divergences between shareholders, society, politicians, Justice and the company's work was heavily damaged.

The same happened with EPAL (Empresa Portuguesa de Águas Livres) that invested in the region and had Brazil's best sewage treatment plants but decided to sell the concession also due to difficulties with control entities.

So it is important to keep a constant conversation with the society as hard the topics may be, as the best is always bring everyone together to find the best solutions.

## Campo Grande System

When Águas Guariroba started works in Campo Grande, in 2000, only 18% of the city had sewage collection and now 82% of the population is served by the system. Only 96% of the population was served by the water supply network and now everyone is served.

The concession is a 30-year contract that can be extended for another 30 years - one of the longest in the country. The concessionaire was mandated to provide sewage coverage to 70% of the city until 2030, but the previous mayor wanted 100% coverage.

After many analyses and discussions about adjusting the contract, it was agreed that the full sewage coverage was feasible to be completed by 2025 and the contract with the concessionaire would be extended for 18 years and a half.

Águas Guariroba supplies water from two superficial uptakes and 150 underground wells, including one super well taking water from the Guarani Aquifer.

Through a Loss Reduction Program (Programa de Redução de Perdas, PRP), the concessionaire brought water losses down in Campo Grande to 19% from 56% in 2006, one of the best national average levels for water supply. The work is systematic and ongoing.

After many investments in man-

agement and technology, the concessionaire's power consumption is the same as of 8 years ago, even with the increase of 12,000 new homes to the water supply system every year and forecasting the evolution of the whole sewage system. There were 1,100 leakages a month in the network, now there are 135 leakages in average.

The search for efficiency is continuous. The concession business is not making money through works, but selling water supply, sewage collection and treatment services.

### PPP Piracicaba

Piracicaba's Public-Private Partnership is similar to the Águas Guariroba project, but here it covers only sewage services.

The 30-year contract was signed in June 2012 and operations started in the next month, forecasting in-

vestments of BRL 416 million.

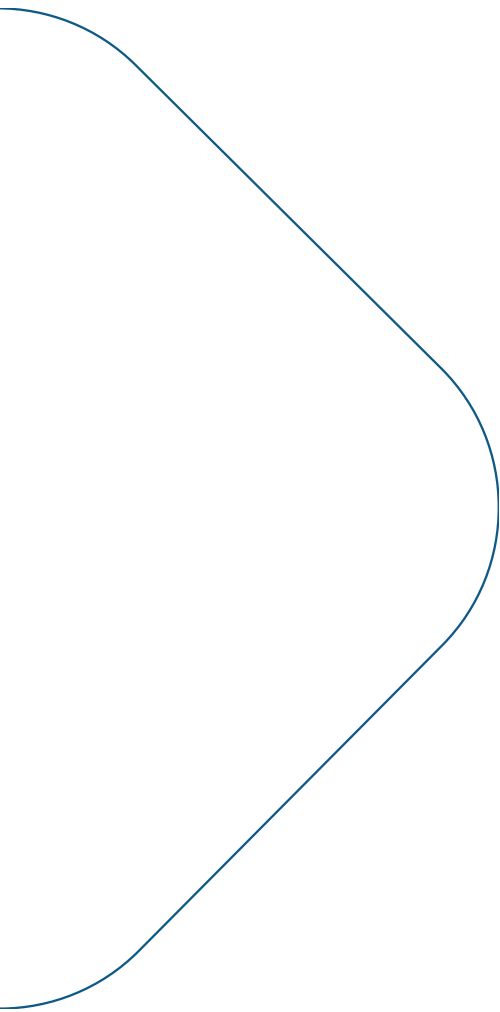
Piracicaba has an Operation Control Room and the service had 100% coverage in two years. BRL 300 million were invested in the last 24 months.

To provide full water and sewage coverage in Brazil within 20 years, according to the Basic Sanitation National Plan (Plano Nacional de Saneamento Básico), the state must double investments in this field.

Due to fiscal adjustment, the Public Administration is not able to invest that much so it needs to partner with the private sector. So there are opportunities in infrastructure with the benefit that these projects do not require public counter payments, as in general they are sustainable with fees charged from sewage and water supply services, thus reducing risks for investors.

**“Through a Loss Reduction Program (Programa de Redução de Perdas, PRP), the concessionaire brought water losses down in Campo Grande to 19% from 56% in 2006, one of the best national average levels for water supply. The work is systematic and ongoing.**





# North Region



# Concession and PPP Cases in the North Region



## Águas Guarairoba case: The importance of increase dialogue with society



**Adnan Demachki**

Secretary, Economic Development,  
Mining and Energy Secretariat

Pará's growth is bringing opportunities for concessions as suggested by the Pará 2030 project, to develop the State at long-term. Some of the goals are to increase production, improve logistics and reinforce the use of the Amazon brand, one of the most representative symbols in the world.

The new administration's view in concessions and PPPs added some improvements for processes. The institution core is being restructured with the support of McKinsey & Company consulting firm. The technical team visited São Paulo and Minas Gerais to learn more about topics and assess what is working at these states.

### Projects in progress

The Liberdade Highway is a project submitted to the state to serve the region of João Paulo, cross the roundabout and run in parallel with BR-316 highway and then go towards the city of Castanhal or Santa Maria. The inclusion of the roundabout is interesting to Pará so a deeper study was authorized and managed by the Economic Development Secretariat.

Another PMI was about a railroad to connect Santana do Araguaia to Barcarena with approximately 1,400 kilometers. This project has two phases. The first one goes to the Marabá's steelmaking plant. The second phase would connect Marabá to Santana, more than 600 kilometers away. Studies have shown that the second phase is not feasible at this point as there is no load available to pay

it off. Hopes are that it will be feasible by the time the first phase is completed as there is plenty of soybeans in the region of Santana do Araguaia and in the neighboring state, Mato Grosso. From Marabá to Santana there is potential for mining: iron, gold, nickel, copper - not owned by Vale but by small owners and not explored due to the lack of logistics.

This project is pursuing environmental permits and some strategies were adopted to fast-track it. In projects like this, there is a bid, the concessionaire wins and then the environmental permit is pursued. Here, government went to speed the process up according to the legislation. The Secretariat has already requested the environmental permit to the State SEMA and settlements and Indian areas were excluded from the project. When the winner is announced, the Secretary transfers the environmental permit to the concessionaire. It is a simple concession, the winner builds and operates.

This railroad will connect Pará's north to the south, crossing land owned by 1,700 people. Can you imagine a concessionaire dealing with so many people? In order to make things easier, the State surveyed all landowners in the rural environmental registrar: what are the plots, the passing range and dominium, how many hectares and then the state itself will expropriate all the plots. The bid's notice determines that the payment is made by the concessionaire. Three companies have expressed interest.



New possibilities for railroads in the state were open by this proposal. The secretary is discussing with the Federal Administration, the Ministry of Economy and the Ministry of Planning the intention of building a supplemental railroad to the North-South railroad.

The intention is that the Federal Administration transfers to the state the capacity to add to the railroad's bid a segment of 50 kilometers from Açailândia to Rondon do Pará, to connect to the Pará's railroad. The main point is that the railroad would provide access to Brazil's mid-south through the North-South railroad. The proposal was welcomed by the Federal Government and technical teams are in discussions right now.

A critical point is that constructing the railroad would not be fundamental only for the State but to Brazil, as it shall cross 20 cities in Pará and contributing a great deal to the economy.

In Rondon, Votorantim Metais has a project to be deployed that has environmental permission, but is facing difficulties due to the poor logistics for bauxite and aluminum.

The steelmaking plant in Marabá is also under consideration, although there are many steps ahead. Brazil had two steelmaking plants closed in the last months. Steel is not going through a good moment. Even facing difficulties, there is a company willing to develop and a business environment is being built as suitable as possible to allow this company to win.

Pará is also working in other areas. In healthcare, there is a commitment from the state to build some hospitals through asset leasing: the bid winner builds and the state

rents the building.

The state is aware that in the next three, four years, public resources will be even more scant from today, when even funding has not enough resources. For this reason, new alternatives were pursued as this model. There is also the construction of an administrative center to integrate in a single facility all secretariats and many other demands.

### Pará 2030 Plan

Pará was Brazil's tenth largest GDP in 1940. Seventy years later, the State ranks 22nd, which shows failures in the development within this period.

Based on this analysis, the government has decided to plan the future in a new model to reach their goals. One of the goals is to catch up with the Brazil's income per head, which will demand growth of 6% on a yearly basis. It would be the same as transforming Pará into China, so it is a goal very hard to meet.

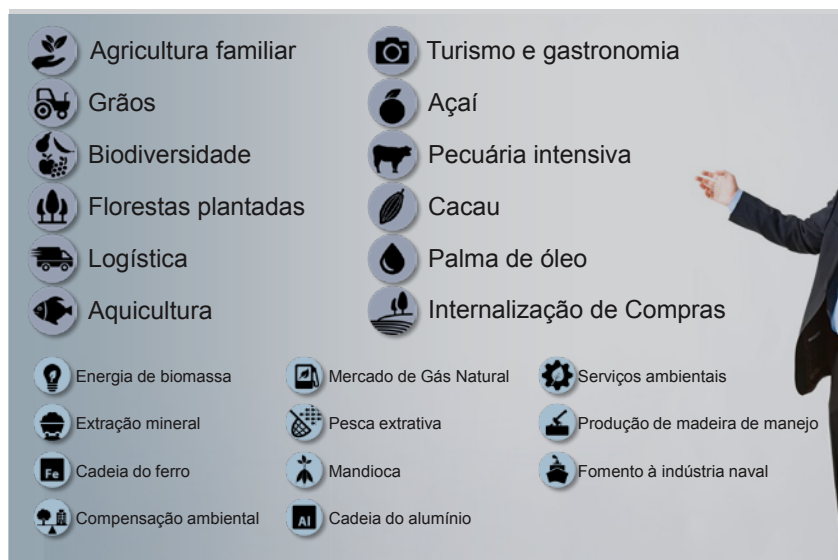
To leverage the state, 23 opportunity chains were listed based on discussions with more than 150 institutions, the Industry Federation and the private sector. Each government secretariat submitted a strategic planning and all this information is being used to deliver Pará 2030 plan.

Agribusiness is a huge bet in Pará. The state has today some 300,000 hectares of soybeans in the regions of Santana, Paragominas and Santarém, producing a total of 1 million tons. The project aims to reach 9 million tons to expand the industry and support local economy.

Pará 2030 is based on verticalization of all chains and improve production. By adding value to

**"The state is aware that in the next three, four years, public resources will be even more scant from today, when even funding has not enough resources. For this reason, new alternatives were pursued as this model."**





soybeans, income goes up 300% to 350% its price.

There is a huge effort to deploy industries in Pará, so the persistence to make the steelmaking project happen. The cornerstone is that any state will develop by just producing raw materials.

Pará exports native wood for 40 years, virtually a majority of local large forests moved to other states. Now a lot of eucalyptus is being grown at least in the last 15 years, to be sold to Marabá pig iron producers. These pig iron producers required coal hence the change.

Today the state has many forest assets at the margins of Belém-Brasília highway, BR-222 highway, PA-150 highway, but a large part of it is being sold to Suzano in the city of Imperatriz. When one sells one cubic meter of eucalyptus, the maximum value is of BRL 70 per cubic meter. In the other hand, when the sale is made on logs, value is added to it by the transformation in MDF. One cubic meter of eucalyptus equals to 48 square meters of MDF. And there is the potential to sell to furniture plants, adding more value to the raw material.

In order to fully leverage the state's potential, investments in logistics were prioritized by the plan, as the foundation of FEPA-SA. Logistics is a large bottleneck in the state of Pará, which has also become a challenge.

Today, the main gap of the state preventing expansion of production is the register of land, item 5 in the chart.

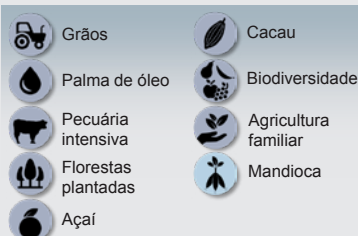
It is necessary to admit and understand that there is a lot of work ahead to expand production and it will not happen if all properties in the state are not registered properly. This is a historical process and progress is slow.

Another factors are environmental license optimization, training and attracting investors. For this, products made in the region will carry an Amazon brand. It is the biggest brand in the world but barely used.

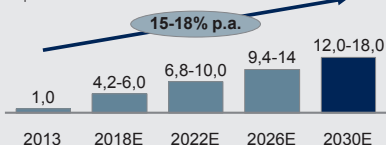
Pará 2030 is being conducted by the McKinsey consulting firm and 13 state secretariats, totaling 30 people. The project shall last 15 years or three administrations. Thus, it will be conducted in the

## O Agronegócio e a Mineração são alguns dos protagonistas deste movimento em direção ao crescimento e desenvolvimento do Estado

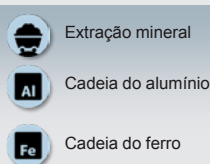
### Oportunidades de criação de valor do Agronegócio incluídas no Plano 2030



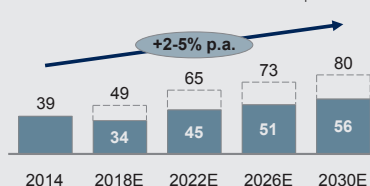
### Receita da produção de soja e milho R\$ bilhões



### Oportunidade de criação de valor da Mineração incluída no Plano 2030



### Valor total da produção mineral R\$ bilhões



## O Plano tem ênfase na proposição de soluções para 5 temas críticos no desenvolvimento do Estado



| 23

next three years of the current administration in two ways:

- The government does its homework to ensure the project's continuity;
- Private sector and society take ownership of the project as it can't be a project from the gov-

ernor or secretary, it has to be a project from the society.

While the state's economy is strengthened, the construction industry gets stronger as well. Job and income generation are increased, new opportunities and new businesses arise.

## Case Study: Hospital do Subúrbio - Bahia



**José Atilio Cardoso  
Filardi**

Project Coordinator, State of Bahia  
Economy Secretariat

The presentation that closed the Regional Concession and PPP Seminar in Belem highlighted the success case in the Northeast Region, Bahia's Hospital do Subúrbio. From the concept to the grouping of players, the case also presents technical questions of the financial project, the bid and the contract execution, the challenges and the situation at this moment.

The Rede PPP, entity leading the project, is the entity in several states and cities that aim to develop projects and discuss subjects about Concessions and PPPs. Even development banks join a network aiming to improve Rede at a national level.

Hospital do Subúrbio is the white apron (cases where medical assistance is also provided by the consortium) and delivers all types of medical services as well as laundry, nutrition and building maintenance. It is also called "open door" as it serves all the population for A&E. The institution is SUS member so people pay nothing to use their services and the compensation is entirely done by the private sector.

It is located in an area with high demand, in Salvador railroad district where HDI is lower than Brazil's. So it is a poor district that needs this service.

In specific questions, it is an administrative contract, which means that the private partner is fully compensated by the Public Administration. There is no ancillary revenue in this project to reduce counter payments owed by the State. Initial investments for this project were BRL 58 million, as of 2009. Currently, the

monthly counter payment is BRL 15 million or BRL 180 million a year. The contract is valid for 10 years.

This is the first PPP in healthcare in Brazil and the only one as "white apron". It is accredited by the National Accreditation Organization (Organização Nacional de Acreditação, ONA), that checks services provided by a given hospital - and this hospital was granted accreditation in record time: 18 months, as determined by the bid's notice goals. The project also gained social recognition from the overall population.

### How did the hospital come up?

The city of Salvador had a lot of issues with hospital beds. The last hospital was built in the city 20 years ago, so the population almost doubled but capacity did not follow - and facilities are old.

The Health Secretariat decided in 2007 to build a new healthcare unit. But the city did not have the resources. So the state found an opportunity in Public-Partner Partnerships inspired by experiences in Brazil and in Spain. The decision was then for a full-service hospital.

As it was a novelty, there was strong resistance and plenty of doubts: is it going to have a SUS hospital and no state employee is allowed in? No state employee will be a part of it? Unions, public employees and the population itself got scared. Little by little, as meetings took place, the State managed to convince all segments of society.

The State couldn't afford to maintain this type of hospital. However, for Hospital do Subúrbio, the State obtained BRL 58 million from the Federal Administration for its building. There was the land, the physical structure was built and then a PPP was conducted to find a private partner to equip the unit on a 10-year concession.

The hospital with a long-term contract also ensures economies of scale in several consolidated services that do not change with every new administration.

Costs are the main benefit of the PPP. In the concession, the user pays the fee in full. This does not happen in PPPs, as all responsibilities, like equipment, services and so on, are centralized into a single service provider.

In terms of location, the State considered that in addition to demand, access is relatively easy for people

from other areas of the State, supporting the goal of serving poor people with a very low HDI to provide this low bracket income a social treatment. It is located at the West area of Salvador, an area with more than 1 million dwellers - a third of total Salvador population.

### Project development

Developing the project is critical at the start of a PPP. There are 10 years (Hospital do Subúrbio project), which is relatively short as other contracts can go beyond 30 years.

Financial issues weighed on in the decision to build the hospital through a PPP. In this model, payment is only going to happen after the service has been delivered. The private partner equips the hospital, hires and train employees, buys medication and opens the door for patients. Then it gets paid by the State.

**“Financial issues weighed on in the decision to build the hospital through a PPP. In this model, payment is only going to happen after the service has been delivered.”**





A project needs to be thought of in global terms, so an agreement was signed with AFC/BNDES to support the project's structure. The State lacked the know-how. It is important to recognize the lack of expertise to look for subject matter experts.

Many issues arose when the decision was made for a PPP. What is that we want with this project? Which outcomes do I want it to have? What do I want? I want a good private partner.

A factor to be considered in PPPs is the collaboration of all parties involved. It requires collaboration from the State higher administration levels - secretaries and the governor. Projects like this get stalled if secretaries do not work along with the governor. Hence the PPP Managing Council, comprised of several secretaries to make such collaboration happen.

A cost-based analysis led them to the following equation: Hospital of Subúrbio would cost the same as two public hospitals in the state at the same level, A&E, with a similar amount of beds and 100% public.

The project is adjusted to the population needs. In terms of service mix, the hospital delivers almost all the services listed:

The hospital provides supporting services, diagnosis, lab services, X-Rays, MRI, CT scan and other treatments. Services are full range.

### How is the private partner paid?

It can be compensated twofold: from indicators - 70% related to quantitative indicators and 30% related to qualitative or performance-based indicators.

The private sector must have a minimum compensation level. Specifically, for the quantitative indicator, the minimum for payment is 75%. Anything less than that and it is a loss. This way, if the private partner fails to meet that quantity and there are no resources to pay doctors and

pay for medications and supporting supplies, the hospital goes belly up.

You may ask if such indicator is very high or very low. At the time the model was created, cost division was prudent and for this reason, there are no problems with that figure.

### Performance Indicators

One example is mortality rate - it was defined as 3 at a maximum, but the rate reached 3.52%. Some sort of penalty will be applied due to this performance level related to this matter. There is also a financial calculation that changed on a yearly basis for the hospital to adapt to a new project that the private sector did not know as a whole.

The performance indicator follows the same logic, so 70% of indicators are quantitative and 30% are performance indicators impacting compensation.

### Financial model

The maximum amount for the contract was determined to be BRL 100 million. Considering a 10-year term for the concession, there would be terms and amount enough to amortize all investments and have a real internal return rate of 12%.

This is compatible with the activity, so a WACC study was made for this specific case: investments of BRL 58 million during 10 years of concession. At the first year, it was invested BRL 40 million. If inflation is at 11%, this rate will fall a lot. So this is a question that begs analysis.

In terms of costs and expenses distribution, any PPP model for health will have more costs in operating and maintaining the hospital, because investments are relatively low.

PPP contracts in Bahia have never had a single day of delay since 2010, so the mechanism works.

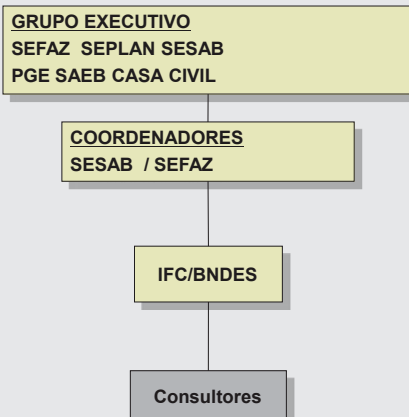
### Contract's scope



## Organização e Coodenação do Projeto

### Governo estadual

- **Grupo Executivo Intersetorial:**
  - Secretaria de Saúde
  - Secretaria da Fazenda
  - Secretaria de Planejamento
  - Procuradoria Geral do Estado
  - Secretaria de Administração
  - Casa Civil
- **Coordenadores: SESAB/SEFAZ**
- **Equipe IFC/BNDES**
  - Equipe principal
  - Consultores



- Free, universal delivery of healthcare within SUS;
- Acquisition, management and logistics of supplies;
- Acquisition, management, preservation and maintenance of raw materials, assets, equipment and furniture;
- Hiring and management of employees;
- Provision and management of food services, cleaning and security and all other services required for hospital's operation;
- Development of health programs and efforts in partnership with SESAB;
- Handling and disposal of hospital residues;
- In-house hospitalization.

The state only oversees the contract by analyzing if indicators and commitment levels are being met by the concessionaire. The rest is under full responsibility of the private partner.

The contract requires a guarantee of BRL 2.5 million at the signature and demand of capital pay-in of BRL 20 million at least. If investments in the hospital is of BRL 58 million, equity

must be invested as well.

## Project's schedule

### Innovation

The Hospital do Subúrbio created a mobile app that shows the waiting times, or the occupation rate in the moment, for the patient in the hospital. A consultation and control tool for the state.

The whole system is computer-based for registering, control lines, cost management - initiatives from the concessionaire, based on the contract. The State has direct access to check how the hospital is operating.

The hospital is also paying attention to the continuity of service quality and with experts so it invites students for internships, residency and specialization.

## User satisfaction survey

The assessment shows that the population knows to require a quality product. But this increases demand.

The hospital's demand was calculated for an average occupation rate of 90%. However, it operates at 115%, 25% above the hospital's capacity. That is why contract adjustments are important, to forecast new costs due to change of context.

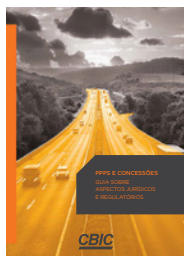
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for Infrastructure  
Year: 2016



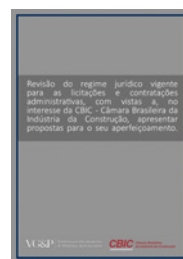
Investment in Infrastructure  
and Economic Recovery  
Year: 2015



Dialogues between CBIC/  
TCU CBIC contribution for  
“Guidelines to Elaborate Budget  
Spreadsheets for Public Works”  
Year: 2014



Report International Meeting  
Infrastructure and PPPs  
Year: 2015



Proposal to Change the  
Bid Act  
Year: 2015

## TOPIC: SOCIAL AND CORPORATE RESPONSIBILITY



Ethics and Compliance Guide for Institutions and Companies in the Construction Sector  
Year: 2016



Code of Conduct on Competition  
Year: 2016



Industry Sustainable Leadership Platform  
Year: 2016  
[cbic.org.br/liderancasustentavel](http://cbic.org.br/liderancasustentavel)

## TOPIC: ENVIRONMENT AND SUSTAINABILITY



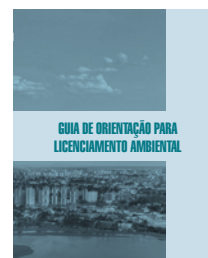
Manual for Implementation of the City Development Council  
Year: 2014



Guide for Responsible Purchase in Construction  
Year: 2015



Mapping of Economic Incentives for Sustainable Construction  
Year: 2015



Guide of Obtaining Environmental Permit  
Year: 2015  
[cbic.org.br/sala-de-imprensa/apresentacoes-estudos/publicacoes-cmabc](http://cbic.org.br/sala-de-imprensa/apresentacoes-estudos/publicacoes-cmabc)

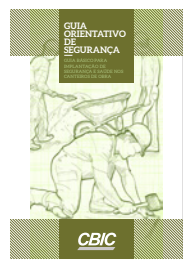
## TOPIC: LABOR



Guide for Correct Hiring – How to Hire Contractors and Subcontractors in Civil Construction  
Year: 2014



Guidelines for Common Areas  
Year: 2015



Guidelines for Security  
Year: 2015



Guidelines for Becoming a Formal Company  
Year: 2016  
[cbic.org.br/publicacoes/cprt](http://cbic.org.br/publicacoes/cprt)

## TOPIC: TECHNOLOGY AND INNOVATION



BIM Implementation  
Compilation – Volumes I to IV  
Year: 2016



Guidelines for Compliance  
to Standard BNT NBR  
15.575/2013  
Year: 2013



Best Practices for Delivering a  
Building since its Inception  
Year: 2016



Innovation Catalogue in  
Civil Construction  
Year: 2016



Tehnical Standards for  
Buildings Catalogue  
Year: 2016



Analysis of Compliance  
Criteria for ABNT  
NBR 15.575/2013  
Performance Standard  
Year: 2016



National Guidelines for  
Elaborating the Building's  
Use, Operation and  
Maintenance Manual  
Year: 2014

## TOPIC: REAL ESTATE



Permanence of Housing  
Programs – PMCMV: Relevance  
and Impacts from na Eventual  
Discontinuity  
Year: 2016



Improvements to Real Estate  
Financing System – The Brazilian  
Savings System and Credit for  
Real Estate  
Year: 2015



1st National Meeting on  
Licenses for Construction  
– Year: 2014



The Cost of Paperwork to a  
Property  
Year: 2014



Corealization

Realization

