

# SEPLAN: Manaus Monorail & PROSAMIM

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September 30<sup>th</sup>, 2010

Today, we had the opportunity to visit SEPLAN, (Secretaria de Estado de Planejamento e Desenvolvimento Economico) where we would first have the presentation of two projects where SEPLAN is involved with: Manaus Monorail and the PROSAMIM program. It is interesting to note that SEPLAN is also involved in two other study tour related projects: the Arena Amazonia and the Rio Negro Bridge, but the morning of the 30<sup>th</sup> of September we had presentations on the Manaus Monorail project and the PROSAMIM program. After a lunch we would had a tour and site visit by coach.

## Project 1: SEPLAN – Monorail

The following describes the most useful information gained at the presentation and the Q&A session at SEPLAN for the Monorail of Manaus.

SEPLAN is a state organization. It is planning to construct a monorail, which is part of the transport plan for the Fifa World Cup in 2014. The current BRT system of Manaus (which is of very poor quality, because of bad maintenance, bad information system and hard to access stations) will be upgraded, so it connects to the monorail. However, this is a plan of the municipality and thus not of SEPLAN.

### *Why a monorail?*

The monorail was chosen out of a set of four possible option: a VRT system (light rail, trams), a BRT system and a monorail.

The metro was not chosen because the construction and maintenance costs are too high. The main point why the VRT was not chosen is the visual damage the necessary infrastructure would bring to the center of Manaus. The capacity of the system was also too limited and the system would not fit well in a city where the driving style is fairly aggressive (so many accidents would occur). The main reason why the BRT was not chosen is that such a system would take too much dedicated space. A BRT must have exclusive driving lanes, which means shutting off lanes for cars in an already very congested city network.

A monorail can, however, operate above the current driving lanes for cars. Only while constructing the monorail, one lane needs to be shut down. Visual interference is also lower because the monorail is high above ground level. The capacity is also medium to high, which makes it fit with the demand forecasts by PriceWaterHouse (expert in economic aspects of systems). These are a few of the reasons why the monorail was chosen.

### *The monorail*

The monorail will have the same route as most of the main bus lines today. The monorail system is also expendable in the future, but will not be extended over the Rio Negro in the south. The monorail will be situated above the flower beds and one lane needs to shut off during the construction. Phase 1 and 2 of

the construction will be ready in respectively 2013 and 2014. The operator still needs to be found (there will be an open tender soon). The maximum ticket price will be R\$3,50 for a combination ticket for the monorail and BRT. This price is not more expensive than the current public transport, which means even the poorer families can use the system.

#### *Planet*

The electricity will be generated with natural gas, which will reach Manaus through a pipeline which is being constructed. The 'fund' which plays an important role in the promotion campaign of the monorail, is an already existing 'reforestation' fund called RED. Part of the ticket price is donated to this fund.

#### *Land use*

SEPLAN believes the monorail will improve and increase commercial activity around the monorail stations (especial around the stadium and downtown). There are no plans to develop these areas. According to SEPLAN, the private sector will take care of this. Possible land use changes around stations did not play any role in choosing the locations of the station.

### **Project 2: PROSAMIM; social sustainability**

The second presentation of the morning was about PROSAMIM. Before this visit - during the visit of the Arena de Amazonia - we met the former project manager of PROSAMIM José Antonio Grajeda Fernandes, he spoke very highly of the program. The representative today provided a presentation concerning the problem definition/history of the program and about the current developments of the program. The basic, but very apparent problem of the water bank settlements in Manaus are a result of the growth of Manaus that has not been accompanied by the necessary investments in land use policies and infrastructure. After 30 years of neglecting the state finally designed an elaborate plan to solve this problem: PROSAMIM.

The program (PROSAMIM I, II and a supplementary project) will ultimately help 580.000 people, which is ~32 % of the population of Manaus. The program is aimed to improve the living conditions and quality of life drastically in a total of 33 Iguaрапés (small streams that run through Manaus). People living here, mainly with very low incomes, are provided with (new) houses that will replace the informal settlements. After completion, there are parks, sanitation, protection against flooding, and so on. One of the most important aspects is the institutional sustainability of the program that insures success of the program. Institutional sustainability is provided by environmental education of the people and the high level of community participation.

Our questions mainly concerned the financing of the project and methods and policies to prevent the (re)creation of the informal settlements. On financing we asked how the benefits of the program were taken into account, the PROSAMIM program will generate savings (health, actions against pollution etc., and also increase the overall quality of wealth). According to the PROSAMIM representatives the benefits will be worth the investment, although they did not present any numbers. They further mentioned that financing PROSAMIM is no challenge for the state so the programme can proceed without running into financial difficulties.

Concerning recreation of settlements they stated that they do several things to prevent this. People living in the recreated areas e.g. attained ownership of their new dwelling, but are not allowed to change anything to their house; making it impossible for ‘new’ people to claim land in these new neighbourhoods. Not allowing people to change their own dwelling is a fundamental postulation, most small scale houses in Brazil are continuously changed by their owners; it is a demand contrary to the Brazilian housing culture. One of the most important aspects mentioned was that the program was considered a success by almost everybody, the government, the financial institutions, and the population. The state of Amazonas e.g. received an award for sanitation management for the results of the program during the 2010 World Water Week congress. This positive image helps for future investment; the main financing institution, IADB, already supports future phases of the PROSAMIM program. The program’s success also eases participation of future people involved, although, during the question round the representatives of PROSAMIM indicated that one of the main concerns for the future of PROSAMIM is its own success; many citizens of slums/Iguarapes in Manaus demand the government to apply a PROSAMIM program on their neighbourhood more swiftly.

Later that day we had the opportunity to see one of the new parks and one of the new neighbourhoods. What this visit showed that PROSAMIM really constitutes a major improvement in living conditions. But also clear was that old habits die hard. People still tend to throw garbage on the street for instance. Luckily, there is a continuous effort in education these people and to ensure that problems of the past stay in the past.