



1989 Technical Review Summary
by *Romi Khosla*

1103.IDA

Citra Niaga Urban Development

Samarinda, Indonesia



Architects

Antonio Ismael
PT Griyantara Architects & PT Triaco
Jakarta, Indonesia

Client

Municipal Government & PT Pandurata Indah
Samarinda, Indonesia

Completed

July 1986

I. Introduction

Let it be stated at the outset that this project is a remarkable achievement. Apart from its fine architectural quality, the complexity of its astounding social success signals it for exceptional recognition. It is a project developed jointly by the Municipal Government of Samarinda and a private developer. In its implementation, major breakthroughs have been achieved in finance packaging, social uplift, architectural detailing, urban management and urban planning.

II. Context

a. Historical Background

The city of Samarinda is the provincial capital of East Kalimantan (Borneo). The population of some 360'000 persons in 1987 has shown a fairly steep rise recently due to migration. The population of Samarinda is a young population. Samarinda, located on a bend of the Mahakam river acts as a trade depot for the region. The economics of the region are shaped by the timber trade. Borneo exports a large volume of timber, and although this has had a devastating effect on its forest reserves, it continues to be the main reason for the economic prosperity of the town. The location on the river banks is, therefore, critical. It was the Dutch who established this town because transportation along the 600 kms route is done by river.

The other major economic activity in Samarinda is the off shore oil exploration. The logging, oil exploration and exploitation are mostly in the hands of Japanese, South Korean or Taiwanese companies. The extent of the timber industry can be evaluated by the fact that more than half the total timber of Indonesia is exported from the port of Samarinda. The result of the location of a highly commercialised raw material industry in the town is that the town of Samarinda lacks character. It is a place which is a high employment area, where people live in shacks and the town itself has very little character, although it was established by the Dutch in the 19th century.

The population of Samarinda grew fast. Its prosperity and the lack of planning had reduced the town to a network of squatter settlements. Squatter settlements in a monsoon area with water logged soil can be some of the most unpleasant environments in the urban world. The population increase in the town is worth looking at, because it forms the basis of such a project.

Year	Population of Samarinda
1905	4'730
1920	6'895
1930	11'086
1961	69'715
1971	137'918
1980	264'012
1987	343'198

Naturally, the slum population increased substantially as there was no way that the housing stock could be increased to accommodate this growth of families living in Samarinda. Such towns act as a focal point for migration, and Samarinda began to attract a steady flow of migrants from East Java, Central Java, South Sulawesi and south Kalimantan. Many of these migrants, pushed out of the over populated countryside began to settle and seek "hidden unemployment" in the town. That is to say, they essentially remained unemployed but opened some retail facility and the number of hawkers kept increasing. The term used by the project promoters to describe these pavement hawkers is *Kaki Lima* or the "informal sector" and that, term has been adopted for this review. The Samarinda municipality was faced with a serious problem of excessive pavement traders and

street hawkers who had grown from 1'000 in 1983 to 5'000 in 1985. These are the registered figures which only reflect a trend. The probable figure for these hawkers in 1985 was closer to 6'000.

In 1985, the municipality of Samarinda began to consider special programmes to tackle the problem of street hawkers who were choking the city's roads.

The Citra Niaga project was the first of these special programmes. The *Kampung* (urban slum) improvement schemes had been going on since 1975, but the Citra Niaga project was the first commercial (i.e. non-housing) rehabilitation programmes undertaken in the city.

The story of the project is interesting. The father of the developer, once Governor of the State of East Kalimantan used to worry about how the centre of Samarinda was occupied by slums. He asked his son, who had returned from Berkeley University, whether he could find a collaborator and perhaps develop a scheme for a town centre. The young son, Didik, then contacted a friend of his, a Berkeley architect, Antonio Ismael, who was working in a community based project in Mexico. Together they got in touch with Adi Sasono from the Institute for Development Studies, an NGO that was already working in Samarinda. They prepared a scheme and took it up through the maze of bureaucracy, level after level, presentation after presentation, till finally a presentation was made to the national Minister of the Interior, who gave his approval, subject to the condition that State finances were not used and that 30% of the space would be given to the pavement hawkers of the informal sector, who would constitute 60% of the shop owners of the centre.

The Developer, the NGO and the designer of the project, mainly represented by Antonio Ismael thus took this project up to the highest level to get the final approval. Once the approval from the National Government was obtained, the project began to materialise. It is important to understand that it was not the architectural component that required approval from such higher authority but two other aspects: one that they were using Government land for private development and two that they were proposing new methods of urban management which were not acceptable to the Municipality without the approval of much higher authorities in Jakarta.

b. *Local Architectural Character*

The city of Samarinda has a mixed architectural character. Very few traces of the Dutch presence are to be seen in the buildings. The rapid industrial growth of this town has given rise to fine box like concrete commercial development at one end and dilapidated slums on the other hand.

The Slum Architecture and Environment

Perhaps the almost uniform need to slope roofs because of the incessant rain gives Samarinda some sort of architectural discipline. Tiles and corrugated sheets are used together for both residential and industrial buildings. Concrete and timber are used for the framing of buildings. One has to remember that Samarinda is a large timber exporting town and wood for building is available at a lower cost than most other building materials.

c. *Climatic Conditions*

The data reveals that Samarinda has a heavy rainfall, 1'850 mm annually, with an average temperature of 20° to 34° C and with 85% humidity. The temperature variation of 14° C is caused by the large land mass of Kalimantan and the fact that Samarinda is inland on a river. This winter/summer range is not found on the smaller tropical islands. The sky is always partially cloudy and you never know when it may rain. Puddles of water stand in all the slum areas.

d. *Immediate Surroundings of the Site*

The site is flat and surrounded by commercial urban development on all sides. This commercial development is generally two floors high and gradually gives way to four- floor concrete structure as land values rise. The project's presence has transformed this area and it is now undergoing re-development from double storey to four floors of concrete. This is perhaps a consequence of the upgrading of this area prompted by the Citra Niaga project. The red tile shingle roofs of the project buildings are characteristic of local Indonesian architecture in the rural areas as well as the older parts of Samarinda. The site is surrounded by vehicular roads that are crowded with the enormous variety of mobile apparatuses that one sees in most parts of the third world. Immediately to the south is the Niaga Seltan dual carriageway created at the time of the project.

III. Description

The programme was formulated because the developer and designer were able to convince the Government of Samarinda that something ought to be done to improve the city of Samarinda before it became a vast slum.

The argument put across by them at the various levels of Government was as follows :

- Samarinda is the capital city of East Kalimantan and should show a spirit of modernisation without discrimination in all economic sectors.
- Development activities need to be undertaken to restore the image of Samarinda. Such activities should also increase the people's participation in the development process of all levels of society.
- The passive and apathetic attitude of the people of Samarinda should be transformed into active dynamism.
- A start should be made in one of the worst slum areas of the town. Here, new commercial facilities should be put up to start the process of transforming the town.

This idea was accepted in principle by the authorities and the detailed programme was elaborated as soon as the land had been identified. The government decree had laid down (27.8.85) that the shopping centre at Citra Niaga would allocate facilities, of which 30% of the area would go to the informal sector and 70% to other traders. The project developed at two levels simultaneously. At one level, the buildings were being designed in the regional style of this area, and at the other level, unusual organisational aspects were being tackled.

- "The two year long effort and struggle was the process of convincing, promoting and integrating all the participating sectors and designing not only a "self cost recovery/self financed" and self sustaining project, but also a profitable venture".

The key to the innovative approach was:

- "To call for the mobilization of various key resources available in the hands of, not only the local Government, the Central Government, not only the private sector, but most important, it included the participation of the existing inhabitants, the low income families that illegally occupied the area".

b. General Objectives

The designer of the whole project has been remarkably clear in the objectives of his scheme. He is articulate and it would be best to put across the objectives of the scheme from his own explanations. The complexity of the scheme meant a dovetailing of many objectives.

- To create a place where the rich and the poor can live in mutual co-existence.
- To accommodate all economic levels of population from the high to the low in a significantly different way to what is commonly practiced such as the segregation of the low from the high income settlements and exclusive real estate developments.
- To innovate complex financing schemes through a mixture of "cross subsidy", "self finance", "self generating funds" and "resource financing".

It is based on risk management strategy on how to reduce cost by reducing risk and therefore be able to attract a mutually beneficial development.

- To understand real cost benefit analysis and to create a profitable business and yet include the usually ignored and forgotten social and ecological cost.
- To create a mixed use/integrated development scheme consisting of housing, commercial and other recreational facilities.
- To divide the project into phases to make the financing viable.

c. Functional Requirements

The functional requirements of the programme emerged through a series of discussions that went on for three years. The designer and the developer worked together as one and evolved a "brief" after discussions were held with the users as well as the Government. It is not very pertinent to go into the history of this because it was a rather lengthy and complex process, which at best, is difficult to document in hindsight. The principles that governed the brief were as follows :

- All class of users should have the same rights, treatment and facilities because all of them contribute to the prosperity of the region.
- Land use must be mixed.
- The design must be local and very attractive physically.
- The layout between buildings must make integration between all users easy.
- Rigidness in design should be avoided.

The marketing of the complex, by the developer, finally defined the following types of users :

1. The house-shop owner : From high and middle income level.
2. The kiosk/corner shop owner : From the low income level.
3. Pavement-trader/informal sector : From the lowest economic class.

The ratio of land use between the informal sector and others had already been specified by the Government. The developer therefore had to work out his economics very carefully because 30% of the built space in phase I and II was going to users who were getting a free facility and 70% of the users had to purchase the properties to generate the profit as well as the cross-subsidy. Thus the building programme had to be shuttled about on a computer to give the right cash flow and return.

The whole programme was therefore conceived in 3 phases with the first phase concentrating on a totally commercial development for sale to finance the second phase which related to the informal sector.

The phasing of the number of retail outlets for the 3 types of users was planned as follows :

Phase	I	II	III	Total
House-shops	58	27	56	141
Kiosks	--	25	54	79
Pavement-Trader shops	--	224	--	224

It can be seen that the informal sector was given its facility in one go in the second phase. Also, it can be seen that the developer was willing to wait to get his final returns until phase III where the ratio of commercial sale is high. Of course it was a risk but he said that it would pay off handsomely because property values have gone up and phase III sale rates will be higher than phase I sales. In addition to the retail outlets, the other facilities provided are as follows :

1. A tower for symbolical reasons to act as a focus and identification of the site from the rest of the town.
2. Public Toilets.
3. *Bale-Bale* - an open space to gather in the evenings.
4. Space frame - a performance space that is covered.
5. Car parking space.
6. A new traffic road between phase II & phase III portions.

The developer was very particular about the kind of activity that should be given as retail outlet. For instance he had already decided that only 6 major types of retail activities would be permitted in the informal sector :

	% of total shops (224)
1. Garment & Sewing	40.6
2. General Merchandise	9
3. Coffee & drink shops	17.4
4. Food	17
5. Shoes & Leather	6
6. Medicine	3
7. Others	7

d. *Building Data*

Site Area	2.7 hectares
Total built-up area	For all 3 phases 18'300 sq m (1.83 hectares) + 1'800 sq m.
(all floors, 3 phases) to the informal sector.	
Open space and pedestrian walkways	9'500 sq m
Roads	1'120 sq m

Summary of Built-up Space

Shop House area	16'870 sq m
Kiosks	1'443 sq m
Informal sector	1'800 sq m

The total built-up area consists of 18'300 sq m in all three phases of commercially saleable area and 1'800 sq m of free area given to the members of the informal sector co-operative as retail outlets. Thus in the final scheme the informal sector gets 8.5% of the total built up area.

The complex consists of double and single storey buildings. The double-storey buildings consist in most cases of a house above and a shop below, and are sold as single units. The informal sector has kiosks with pyramidal roof that are single storeyed.

e. *Evolution of Design Concepts*

The designer of the project was working on many fronts simultaneously. He is a remarkable man, extremely young and dynamic. His design concepts were ranging from designing management systems to building details and to financing patterns.

Some of the architectural concepts apart from those already mentioned earlier are the following : (source Designer Antonio Ismael)

- Creating a popular Bazaar or fair atmosphere where commerce and recreation are mixed up. This is intended to reflect the traditional public square concept of *alun-alun* and *bale-bale* as the community open hall.
- Pedestrianisation through which the design gives emphasis to the pedestrians and keeps vehicular traffic on the periphery. The intention was to create a varied walking experience.
- Cluster development for both the commercial street hawkers (informal sector) and the shop-houses. The arrangement was to promote the traditional *goteng royang* or mutual aid life style.
- Land sharing concept where several public amenities such as playing spaces, garbage collection, fire safety as well as nursery facilities are shared and maintained as one.
- Pocket parking to distribute parking along the entire perimeter to avoid "parking deserts".
- Urban planting to give awareness of nature.
- Urban art to provide a setting for art to be included as part of the landscape so that spaces are "humanized and remind the users about them being a part of a civilised and cultured society".

f. *Structure, Materials and Technology*

Excerpt from data submitted by the designer.

The building system for the project:

1. The foundations use mostly wooden piles, which was the common local practice and it is most appropriate to the relatively swampy soil conditions.
2. The super structure of most buildings is made of concrete columns and beams system. For the street hawker's stalls, it was made of *ulin* hardwood.
3. Most of the roofs are made of concrete tiles. For the street hawker's stalls, the roofs is made of wooden shingles. A special roof system at the corners of the shop-houses complex and the entrances of the plaza uses plexiglass supported by metal pipes.

4. The infill exterior walls are made of fire burned bricks and the interior walls of the residential spaces uses plywood partitions.
5. Some of the floor system are concrete and some are wood.
6. The sanitary system uses double chamber septic tanks.
7. Most open spaces such as the plaza and parking use concrete block pavers in which partial rain water can be returned to the soil through natural seepage.

The entire building technology is local as are the building materials.

IV. Construction Schedule and Costs

a. *History of the Project*

Some time in 1983 the developer, the designer and the Governor conceived the project.

Nov. 1984 Samarinda Parliament approved the project proposal made by the developer. Governor of East Kalimantan set up a task force to monitor the project & transfers the property rights to the local Government of Samarinda.

Aug. 1985 Minister of Home affairs approved the project with the following provisions :

- a) The construction of Citra Niaga shopping centre is not financed by the local government.
- b) The Management of the shopping centre is at the discretion of the local Government of Samarinda.
- c) 60% of the shops are for the informal sector and 40% to the other traders in phase I & II.

Sep. 1985 The city mayor issued a building construction licence & construction commenced.

July 1986 Letter of agreement was signed between the Mayor and the developer (Pandurata Indah Co.) about the construction of the complex.

1986-87 Sales of commercial spaces.

b. *Total Costs and Finance (figures at 1987 level)*

Determining costs in commercial developments can be rather hazardous. I managed to extract some basic costs from the developer after a little persuasion.

Total costs of the project :
(assuming the conversion rate of Rp 630 to US\$)

Phase I	Rp 1.1 Billion	US\$ 1'746'000
Phase II	Rp 1.3 Billion	US\$ 2'063'000
Phase III	Rp 1.5 Billion	US\$ 2'380'000
Total	Rp 3.9 Billion	US\$ 6'189'000

Add "other" costs Rp 0.4 Billion US\$ 634'000
in resettling those who did not want to come to the project.

Grand Total Rp 4.3 Billion US\$ 6'823'000

These figures include all fees but exclude tax and interest costs.

The total interest cost was Rp 160 million (US\$ 253'000).

The Gross-Subsidy

The kiosks and facilities for the informal sector (known locally as *Kaki Lima*) worked as follows :

Phase I	Shop House sales paid	38% for <i>Kaki Lima</i> facility
Phase II		18%
Phase III		44%

Out of a total project cost of Rp 5.3 Billion (US\$ 8'400'000) the *Kaki Lima* facility cost Rp 700 million (US\$ 1'111'000) which was taken off the profits of the 3 phases in the ratio 38:18:44 indicated above. The total extent of cross subsidy was 13.2%.

Cost breakdown	Labour	20%
	Material	80%
Professional fees		6.5% of the project cost.
Project Management fee		4.5% of the project cost.
Service infrastructure for the complex cost		12.5% of the total project cost.

The developer says that he got a rate of return of 27% before tax which is high despite the gross subsidies of Rp 700 million (US\$ 1,111,000). He says that the rate of return was high because the cash flow was worked out meticulously and the interest charge kept to a minimum of 3% of the project cost. The whole cashflow exercise was monitored on computers.

The developer borrowed money from the State Bank which exceeded at one time 40% of the project cost at a rate of interest of 21%.

c. *Qualitative Analysis of Costs*

The basic arithmetic agreed to by the developer was Rp 5.3 Billion divided by the total Built-up area of 18,300 sq meters which gives a cost of Rp 289'000 per sq meter (\$458/sq m). To-day, two years later this sq m cost for similar buildings is Rp 425'000/sq m. (US\$ 674/sq m).

d. *Maintenance Costs*

The maintenance of the complex is carried out by a self managed board with representatives from all the users :

Service charges, parking and toilet fee generate an annual income of Rp 124.5 million (US\$ 198'000) and the maintenance expenditure comes to Rp 114.5 million (US\$ 181'000).

For instance the service charge to each *Kaki Lima* of the informal sector is Rp 1'500 per day (US\$ 2.5).

This Rp 1'500/day is composed of

Rp 200 to the government
Rp 72 Rent
Rp 200 Electricity
Rp 200 Water
Rp 828 Management Board.

This is a very favourable situation for the *Kaki Lima* who, before the project, were paying Rp 2'000/day in extortion and another Rp 1'000/day for water.

V. Technical Assessment

This statement broadly combines the involvement of users, professionals and the significance of the project. The project area is located in the centre of town and this gives it an enormous importance for the town. It is a well known project and it is a very successful project. The town looks upon the project as a clearly identifiable place. If you mention Citra Niaga, people always know to what area and to what effort and to what project one is referring to. The importance of the project is really two-fold. Firstly, its immediate architectural achievement is significant, in a town which was more shanty town than any thing else. Here, in the midst of this, has been set up a well-conceived, planned and rather beautifully constructed complex of buildings, which has a unique character within the town itself. In terms of planning, the success of the project can be gauged by the fact that, suddenly, Samarinda has acquired a city centre.

The Citra Niaga project has become the focal point where people gather in the evening. It is an enormously crowded, active area in the town. It is an area where people go to in the evening, particularly the young. One could not help noticing that 90% of the people who are walking up and down the project area are youngsters, teen-agers, looking for entertainment in the evening. The other aspect of the project is the "software" aspect. This is the aspect which deals with the way in which a community has been galvanised into achieving success in running the project. There were five main actors in this activity. 1. the developer; 2. the non-governmental organisation or the voluntary organisation together with the consultants; 3. the banks; 4. the co-operative, which was formed as a result of the project; and 5. the government at two levels, the State level and the national level.

Whereas the architectural achievement of this project is clearly apparent to any one who goes and visits it, it is, in my opinion, the software aspect that is really significant it succeeded in obtaining the co-operation of five different members of the community to support a strong idea and make the project succeed. The most important reason for the success of the project is that it has been achieved through commitment. The major commitment was of course of the developer, a young person (36 years old) from a wealthy family and who decided that he wanted to do a different kind of development. The catalyst in the entire project is Antonio Ismael (he has perhaps some Philipino blood), a U.S. national married to an Indonesian who speaks fluent Indonesian and who visualised the entire project.

The project commenced with an initial investment from the developer. What is significant again is that both Antonio and the developer Didik were committed to a rather unusual aspect of this development, which in many ways is idealistic and much talked about but very seldom realised. From the outset three basic social and economic groups were targetted - the first group was the pavement hawkers, who were to be given a free space. They were required to register in the co-operative and this entitled them to a built-up space to carry on trading. The second group were the shop-owners who are the middle level retailers between the pavement hawkers and the big shop owners. The commitment from the developer was to let them have a shop at cost price without profit for the developer. Not many units in this category (26), but it was essential as a component of the mix of the market. The third group were the big shop-owners who were sold a shop and a house at a commercial rate prevalent in the town. The logistics of the project were

based on a system of using the commercial price for the big shop-keepers to subsidise the construction of the public areas and the pavement-hawkers. The developer was able to show us the economics of the whole scheme.

The success of the venture was confirmed by all the banks. Architect Antonio's role was to design a complex which used this mix in an effective way so as to create an environment which could be commercially successful. The planning aspect is important because here we have an urban development whose roots and logics are much more Asiatic than anything I have seen. Commercial and project developments of retail areas, often follow the logic of the American market where large shopping-malls are constructed. We have the example of the Mesrah Indah in Samarinda which is a profitable venture, of course, but is purely a profit-oriented development. The achievement of a mix in retail outlets has given the project such an enormous dynamism that it becomes a complex market to visit and it gives the visitor a complex experience. For instance, eating places range from expensive restaurants to very inexpensive fast food counters and on-the-spot eating places - similarly, clothing shops range from rather rich stores to middle-level-stores and off the shelf or off the pavement clothing stalls. This large choice offered to anyone coming to shop in this area conveys the idea that this market is indeed representative of the retail outlets from all over the town. The commercial success is therefore not difficult to visualise because a shopper can actually shop in a small area and experience the entire range of commodities available in the town.

Too many Asian cities have physical divisions between areas which are highly urbanised, expensive and contain the most expensive shops and the cheap areas which are located on the periphery of slums; shoppers are per force required to visit both for different kinds of products. In this respect, I do feel that the Citra Niaga has achieved a truly Asian urban development and its relevance to other countries cannot be underestimated.

We visited the adjoining area which contains slums and retail outlets similar to Citra Niaga area prior to the project. What is interesting is that the mix of shop-type in the project design was very tightly controlled by the developer. For instance, all junk shops, metal selling shops or shops requiring an extensive amount of external space were not allowed in the market. There is a certain cleanliness about the Citra Niaga market which you do not find in a slum retail space where anything and everything is sold, in the most unholy mess. A preference was given to clothing, food and similar activities which are not noisy or messy; for instance, repairs and maintenance of machines are not allowed to be conducted in project shops. The developer had a clear idea of what he thought would be successful for the town centre.

VI. Users

As a town centre for Samarinda, the project area is used virtually by the entire population of Samarinda because it is a commercial area. However, the predominant users seem to be young.

The success of the project, as far as the users are concerned, are the crowds that mill through this place every evening and crowd the restaurants and eating places.

VII. Persons Involved

The Facilitator and Regulator

Mr. H. Soewandi, ex-Governor of East Kalimantan.
Mr. Waris Hussein, the Mayor of Samarinda.
Mr. Soedarsono Sukardi, Head of the Regional Planning Board.

The Developer/Promotor	Mr. Didik Soewandi - PT Pandurata Indah.
The NGO	Mr. Adi Sasono - Lembaga Studi Pembangunan.
Community Mobilizator	Mr. Eddy Salman - PPM. Mr. Suwignyo - LSP. Mr. Memet - PNT.
The Architects	Antonio Ismael - PT Griyantara/PT Triaco (phase I, II and III). Hadi Parjono - PT Griyantara (phase I and II). Dedi Azis Achmadi - PT Triaco (phase II and III). The Street Hawkers (<i>Kaki Lima</i>) as the major user's through "Participatory Planning".
Project Management	Didik Soewandi/Antonio Ismael-Pandurata Indah.
Construction Management	Hadi Riyanto - PT Triaco. Danny Setiadi - PT Pandurata Indah.
Structural Engineering	PT Lamda Citra Karya (phase I and II). PT Triaco (phase II & III).
Electrical & Mechanical Engineering	PT Elmes Epsilon (phase I and II). PT Triaco (phase II & III).

Romi Khosla
New Delhi, 25 May 1989