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"Retrofitting of Social Housing: Financing & Policy Options"
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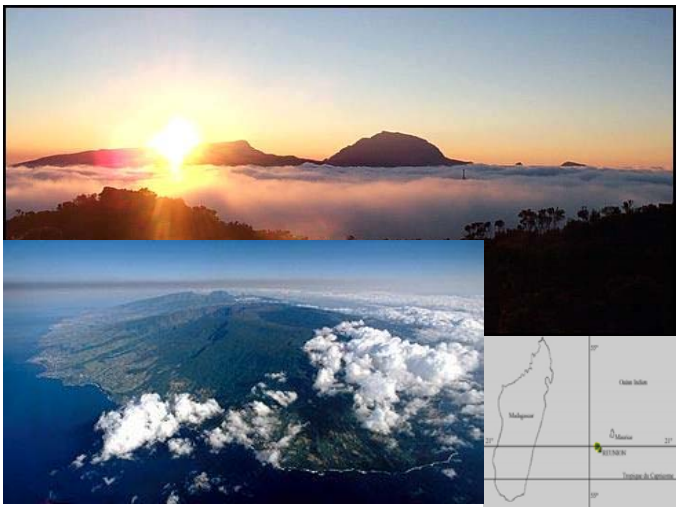
"Urban Renewal, Architectural Requalification, Social Supporting, and Sustainable Development" Related in a Social Housing Refurbishment Operation"

Presentation by Mr Herve P. GAERTNER

Summary

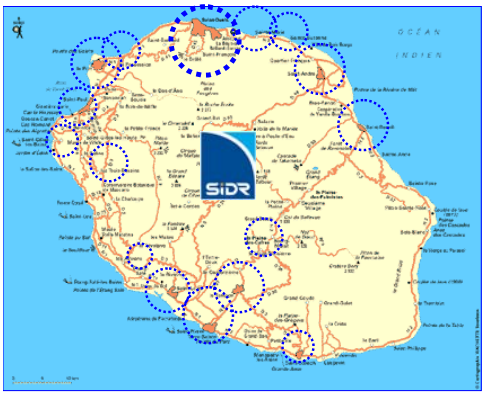


1.- THE GENERAL REUNION ISLAND CONTEXT:

Reunion is a tropical vocanic island located in the south of the Indian Ocean with a very mountainous relief. It has been inhabited since the middle of the 17th Century.

Its population, which comes from various ethnic and cultural backgrounds that have been mixing for 3 and a half centuries, grew from 670 000 inhabitants in 1999 to 760 000 in 2004 with more than 55% of them less than 25 years old, and will reach a million souls in 2020.

Its demographic development matches exactly the pace of its economic and social development, and this French Overseas Department is now a leading actor of the European Community in the Austral Africa and Indian Ocean zone.



Since 1949, the SIDR has been accompanying this development on the social and property holding levels.

By building over 28 000 accommodations in the main towns over the last 50 years, it has contributed to housing over 10% of the whole population, and for the most part it is essentially the most underprivileged one…

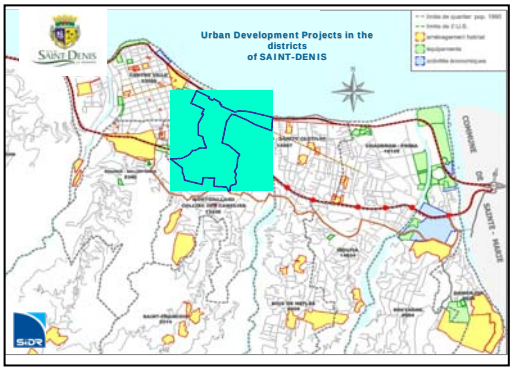
In some urban areas such as St-Denis, over 30% of the inhabitants are now housed by the SIDR.

Yet this healthy economic and social growth has some important drawbacks, not the least of which are:

- The increasing scantiness and expensiveness of building lands.
- An over-consumption dramatically and durably relying on raw material and energy source importations.

It has thus become imperative to rethink deeply the way the island develops.

2.- URBAN DEVELOPMENT & RENEWAL IN SAINT-DENIS

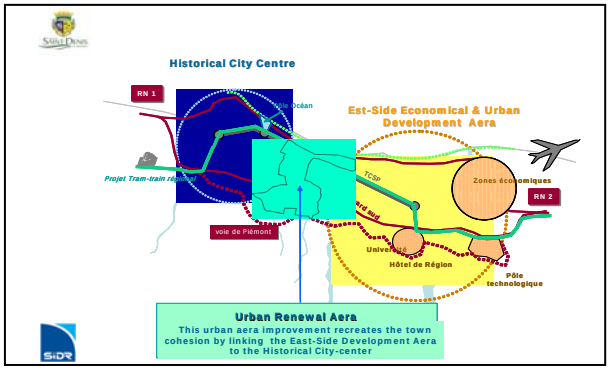


The city of St-Denis, located in the north of the island, is the administrative centre of the Department and counts 130 000 inhabitants, half of whom live in social or affordable housing.

The SIDR alone houses 35 000 people, dispatched up in districts of 3000 to over 10 000 inhabitants each.

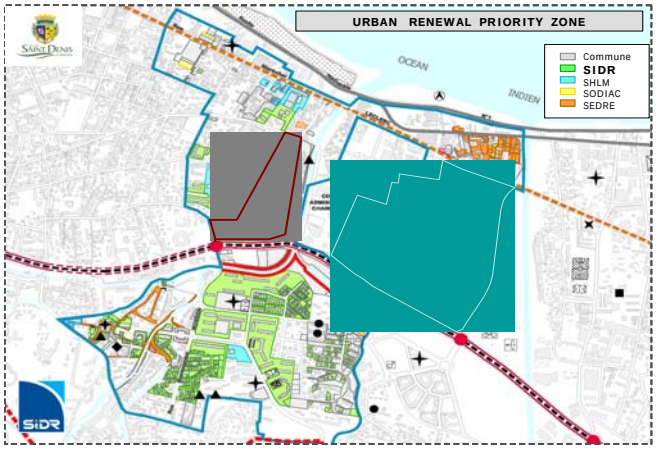
Over the last 30 years, strong economic and social development has lead the city to spread over the available easy building lands along the shore, between the sea and the mountains, while the mountainous slopes that surround the city remain the privileged environment for "wealthy" residential housing.

Over thirty development plans are currently under way or on the drawing board over the district.



This developed site counts about 3000 social housing units, built for the most part between 1965 and 1980 and owned by several Housing Companies.
(N.B : The areas in green are SIDR property).
In addition to urban transports enhancement and services grouping, one of the city's top priorities has been to build the boulevard linking the two sides of town and to enhance the side way linking sea shore and foothills districts.
The "VAUBAN" Renovation plan, which will be presented, is located on the side of these urban roads.
It is both part of the Urban Renewal Plan designed by city authorities, and of the SIDR's strategy to perpetuate its property by refurbishing it.

The main outcome of this strong development is that suburban social housing areas built over the 60's-80's period are now located right in the centre of town, close to the new business, administrative, cultural and judicial centres.
It has thus become imperative to renovate this area. This is one of the major focuses of the City's Urban Renewal Plan.
The territory covered by the plan spreads from the shore to the foothills of the mountains, and counts two distinct areas split by natural barriers – water courses flowing down from the mountains (gullies).



3.- THE SIDR SOCIAL HOUSING REFURBISHMENT PLAN

Since 1985, the SIDR has been investing in property refurbishment operations and it has renovated or rehabilitated about 4500 units from 1985 to 2005.

- 1985 to 1995: The first operations were focused on individual housing or on small clusters of single-story apartment buildings, with family transfer or temporary rehousing.
- 1996 to 2000: With the advent of the 1st Property Holding Plan the refurbishment also concerns collective housing buildings and the renovation program reach a 200 units/year rhythm. Rehousing constraints and difficulties to manage important family transfers lead the SIDR to realise alterations and improvements witho the tenants allowed to stay in their flats all throughout the process, and set up inhabitated collective apartment buildings rehabilitation.
- Since 2000: The 2nd Property Holding Plan pushed the rehabilitation rate to another level, and the improvement scheme took in sustainable development standards.
  - Progression to 400 renovated accommodations / year.
  - The Refurbishment Plan becomes a part of the Urban Renewal plan.
  - Creation and implementation of an accommodation upgrade plan with thermal improvement dispositions and solar-powered hot water production.

The Renovation of "VAUBAN" buildings group:

Although the buildings do not look derelict from the outside, a closer look reveals the need for alterations, improvements and comfort enhancement works in 35 years old buildings failing to match current standards:

- Run-down accomodations,
- Smallness of the rooms,
- Absence of doors inside the flats,
- No floor coverings,
- No hot water,
- Token equipement and facilities,
- Etc…

The VAUBAN's project specifical features

➢ **Fact sheet:**

- 400 social housing units (> 1 500 Inhabitants) dispached in 12 collective apartment buildings – 6 of which board the street, with 18 shops on the ground floor.
- A restrictive urban environment (road trafic, noise) requiring anti-noise devices.
- A strategic preference for renewable energy sources which implies specific technical and financial imperatives.
- A poverty-stricken population in a very « socially unstable » area:
  - 30% of family heads are employed, and the often have precarious jobs
  - Over 50% are unemployed and benefit from social welfare (ASSEDIC, RMI)
  - About 15% of the tenants are retired persons.
  - The average global income for each household is 20% below minimum wage.
  - Dramatic area fragility in terms of economy and security.

Because of the very "underprivileged social status" of this urban area, SIDR have to design a made-to-measure plan for this program so as to optimise its chances of success.

➢ **Necessity of preliminary dialogue with the tenants :**

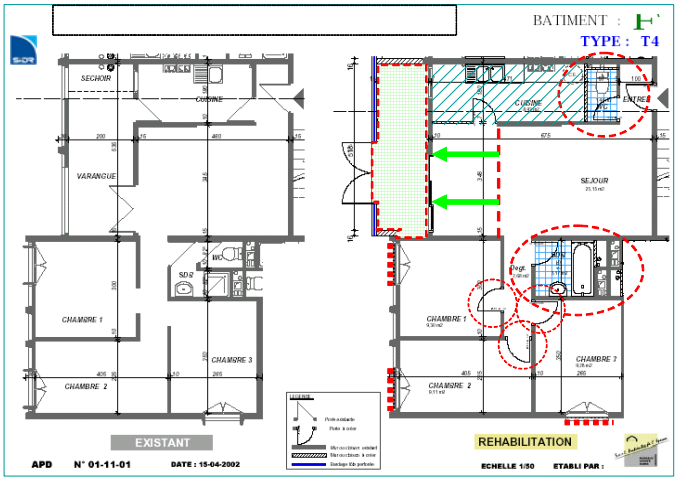
Once the technical and strategic options were determined, the project management team had to guarantee that it would suit both the inhabitants and the shop owners, and adapt the project according to their reactions while maintaining the initial objectives. Then, dialogue and individual social and economic support were vital to the achievement of goals :

- o Tenants and shop owners are invited to take part to the choices related to the improvements and alterations planned in the course of the rehabilitation process,
- o Design and signature of a convention between the landlord and the tenants, defining the collective agreement of all residents with the renovation plan.
- o Concerted redefinition of the accommodations' «occupancy balance» according to :
  - Accommodation sizes and family composition.
  - Family income and works-related costs.
  - Possibilities of / families' wish for a transfer to other apartment buildings in the same area (about 15% of housed families).

➢ **Social & Economic measures :**

- o Creation of a social support unit specificaly assigned to the operation to provide individual counselling and support to each family throughout the renovation works, which is composed of 5 trained professionals (1 « Social support » Project manager & 4 Social advisers)
- o Partnerships with institutional social and welfare administrations (CAF, ASSEDIC, PLIE,…)
- o Financial support tailored to individual needs :
  - To help tenants in trouble to pay rent and maintenance charges for the duration of the works.
  - Compensation contracts signed with shop owners to make up for important drops in sales.

➢ **Accomodation Upgrades :**



The same technical refurbishment implementation is applied to all the units :

- Living room enlargement and integration of the existing balcony.
- Kitchen enlargement and complete renovation.
- Creation of an independent toilet room.
- Complete renovation of the bathroom,
- Installation of doors inside the apartments,
- Building of a new front loggia equiped with a clothes horse,
- Replacement of old windows.

➢ **Constraints of renovation in inhabited environment :**

The execution conditions demanded a high degree of performance from the contractors as well as the consideration of the area's "social background" and of the inhabitants and shop-owners' living conditions. It is made specifically clear to all companies that a single team must be assigned to a given accommodation throughout the work process.
The standard durations for inside work in accommodations have been set to minimize nuisances related to "inhabited work sites".

VERY STRICT RULES ARE IMPOSED ON CONTRACTORS :

1.- Upon signing work contracts :

Commitment to a «social» clause (priority given to the young workers from the area during the recruitment process)

2.- While the work is in progress:

- o Outside and on building fronts :

  Specific day time schedules organised according to the type of work (security, noise, traffic jamming, obstruction and cluttering) so as to create a little nuisances as possible and to allow the shops to remain open.

- o Dans les parties communes:

  Contractors intervene only after the tenants were informed of the list and time of the operations to be conducted.

- o Inside the accommodations:
  - Throughout the work period, only one - and the same - team works in a given accommodation.
  - Work in an accommodation can only begin after an appointment was taken with the tenant and confirmed by the social workers' unit.
  - Intervention times and deadlines for the contractors are established on a daily basis, with high performance objectives: - *1 room = 2 days' work*

    Technical work (electricity,joinery,…)…….....1 Day

    Surface treatment (floor coverings, painting)…….1 Day
  - It is the tenant who is responsible for moving the furniture (most often with the help from the contractors).
  - The company is responsible for furniture protection and the daily cleaning of its work site.

➢ **Site's aspect while improvement work is in progress.**






➢ **Final architectural product……**

On the Urban Boulevard side…

On the side way and the shops' side….

In the inner court …

The shops and inside the accommodations …

…. And the constant presence of a social adviser….

➢ **The operation's social outcome :**

- o Prior to the operation (November 2001):
  - 463 families lived in the 400 accommodations.
- o Wile the operation was in progress (> 3 ans) :
  - 372 families have not moved from their accommodation,
  - 28 families were rehoused on the site, in accommodations left free by tenants who moved out.
  - 25 families were rehoused in new buildings completed in 2005 next to the operation site.
  - 20 families were rehoused in existing SIDR property accommodations located close to the site.
  - 14 families were rehoused in other operators' properties.
  - 4 families chose to leave the area.
- o Upon work completion (August 2004)
  - 399 renovated accommodations.
  - 1 tenant had refused that contractors come into his apartment:
    - The outside work and the improvements in collective areas were made according to plan.
    - The work inside the apartment was made in 2005, after the « rebellious » decided to leave.
- o No particular conflict or problem was to deplore between the tenants and the contractors wile work was in progress.
- o 11 shop-owners out of 18 received financial compensation for significant sales drop (15 to 25%) over 2 to 5 months.
- o Since the work was completed, no act of vandalism has been reported (apart from a few occasional « tags » at the foot of 2 buildings)
- o A satisfaction survey made in the end of 2005 - that is, 18 months after work completion - reported satisfaction rates of:
  - > 95% for accommodation and environment quality
  - > 78% for financial features related to rental & maintenance charges costs.
- o The statistics established by the Local Council for Security and Juvenile Crime Prevention (CLSPD) of the town of St-Denis show that crime and delinquency in the area dropped by 55% between 2003 and 2005…

4.- SEPECIFIC TECHNICAL FEATURES & SUSTAINABLE DEVELOPMENT

➢ **Thermal comfort features :**

The «ECODOM» label, designed for overseas territories by the French Eletricity Company (EDF) and the Agency for Energy Control and Savings (ADEME), sets standards:

- o Relying on the juxtaposition of simple technical solutions
- o Without thermal calculations
- o Mainly affecting housing disposition and accommodation organization:
  - "Crossing" flats with opposite openings
  - If possible : East-West oriented apartments (predominating wind)
  - Enhanced roof-coverings : 10 cm thick insulating coating
  - Wide openings
  - Doubling the front walls exposed to the sun by a 4 cm thick insulating coating lined on the inside surfaces
  - Solar protection given by the new loggias built from alveolar materials on building façades
  - Installation of « ECODOM - SIDR » doors made of a frame with enamelled steel shutters, guaranteeing a secure locked position, and an inside casement allowing air circulation through the flat even when the door is closed.

➢ **Anti-noise devices (on street fronts) :**

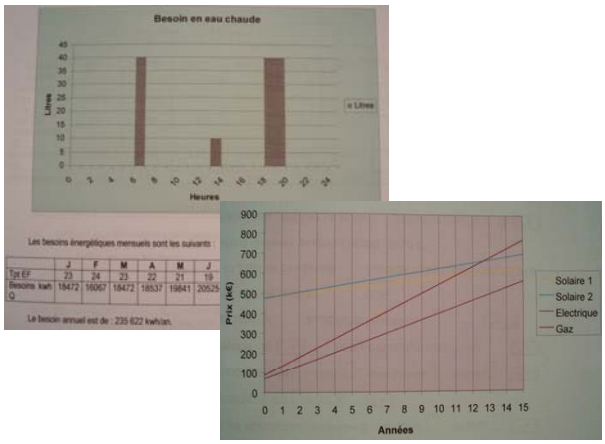
- o Creation of double-wall facades, with balconies set in front of living rooms as noise-traps.
- o New, reinforced 8mm thick windows.
- o Special acoustic absorbant wall-coverings applied to loggia and balcony walls when possible.

Anti-noise device assesment :

- o <u>Expected results</u> :
  - Noise level expected on the fronts : 65 dB(A)
  - Noise reduction wanted:
    - Windows opened: DnAT > **15 dB(A)**
    - Windows closed : DnAT > **32 dB(A)**
- o <u>Achieved results</u> :
  - Noise emission 2 meters away from the facade : 70 dB(A)

  Results (measures taken in the centre of the living room):
    - Window opened : 55db(A)
      > ***Noise reduction:*** ***15 dB(A)***
    - Window closed 38 dB(A)
      > ***Noise reduction:*** ***32 dB(A)***

➢ **Solar-powered hot water production:**



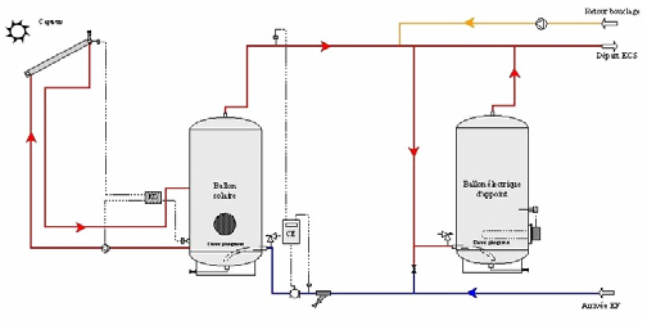
Hot water needs are assessed :
- For each building
- On a daily basis divided into hour time-slots

The necessary power is thus determined in function of:
- A given site (appartment building)
- A given time in the year (monthly basis)

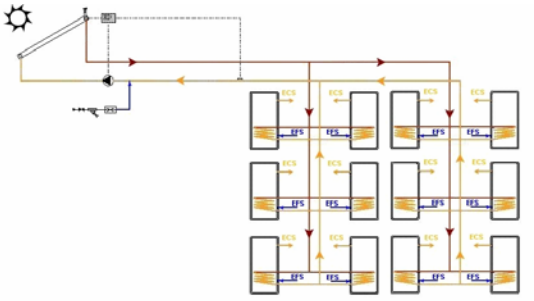
Comparing projected running costs for each energy solution allows for an assessment of return ratios and financial balance.

Technical solution adopted :
- The solar panels set on flat-roofs.
- 2 technical solutions were adopted according to equipement installation possibilities in the builldings :

SOLUTION 1:
Collective water stocking, and distribution to each accommodation with distinct water meters for hot and cold water.



SOLUTION 2:
Individual Stocking & Distribution.



IN BOTH CASES:
- Installation of a global tele-control system, and constant evaluation of individual water meters with tele-reported measures for water and electricity.
- Creation of a long-term maintenance contract (10 years).

Quality assesment of the Solar Plan :

☺ - Comfort
☺ - Energy Savings
☺ - Environment friendliness

In the VAUBAN project, 356 units are under solar-powered hot water production and.
The positive consequences of this equipment are :
►- Gas and Electricity savings for the tenants, and enhanced comfort.
(Ex. of gas saving : a individual 13kg gas cylinder used only for hot water production in a 4 persons family must be changed every 3 or 4 weeks. The cylinder refill cost 17,5 €…)
►- Electricity savings amounting to about **490 000 KW/h / year**
►- Avoid **380 t.of CO^2** rejections into the atmosphere (greenhouse effect gases)

7 000 units of the SIDR property stock are concerned by the SIDR solar equipment program :
- 2 800 already equiped or in process
- 2 300 in study (realisation : 2007-2013)
- 1 900 projected (> 2013)

☺ - Projected outcome in the middle term :
►- Eletricity savings: **9 8000 000 Kwh / year**
►- CO^2 emissions reduction: **7 500 t. / year**

4 .- FINANCIAL DATA

INVESTMENT BALANCE

OPERATION

	REFURBISHMENT	THERMAL IMPROVEMENT	NOISE PROTECTION	SOLAR HEATING (WATER)	TOTAL	
Nbr of UNITS :	400	290	187	356	400	
Nbr of SHOPS :	18				18	
UNITS PROGRAM AMOUNT (1+2) :	9 932 130 €	580 000 €	1 393 150 €	1 281 600 €	13 186 880 €	
TRADERS PROGRAM : & COMMERCIAL COMPENSATIONS	273 600 €				273 600 €	
					13 460 480 €	100%

(1) All the amounts are net of V.A.T.
(2) The UNITS PROGRAM amount includes cost of Engeenering team (625 K€) and Social Supporting team (183 K€)

FINANCING

			REFURBISHMENT	THERMAL IMPROVEMENT	NOISE PROTECTION	SOLAR HEATING (WATER)			
FINANCED AMOUNT :			9 932 130 €	90% 522 000 €	95% 1 323 493 €	95% 1 217 520 €	12 995 143 €	100%	96,5%
Amount / unit :			24 830 €	1 800 €	7 078 €	3 420 €	32 488 €		
-1-	Special Housing Main LOAN	< 2,5% 40 years	45% 4 469 459 €				7 856 373 €	60,46%	33,2% 58,3% 25,2%
-2-	Complementary LOANS	Market rates 20 years	30% 2 979 639 €	15% 87 000 €	15% 198 524 €	10% 121 752 €			
-3-	SUBSIDIES		25% 2 483 033 €	75% 435 000 €	80% 1 058 794 €	85% 1 034 892 €	5 011 719 €	38,57%	37,2%
	EDF			33,3%			145 000 €	1,1%	1,08%
	ADEME			33,3%			145 000 €	1,1%	1,08%
	REGION			33,3%	100%	40%	1 617 751 €	12,4%	12,0%
	ETAT		100%				2 483 033 €	19,1%	18,4%
	EUROPE (FEDER)					60%	620 935 €	4,8%	4,61%
-4-	SIDR self funding		273 600 €	10% 58 000 €	5% 69 658 €	5% 64 080 €	191 738 €	1,48%	
							273 600 €		
							465 338 €		3,5%

RENTAL MANAGEMENT BALANCE

	INITIAL OCTOBER 2001		FINAL PROJECTION		FINAL EFFECTIVE AUGUST 2005				
	Min.	Max.	Min.	Max.	Min.	Max.			
Unit Floor Space	17 m²	83 m²	21 m²	92 m²	21 m²	92 m²			
	57m²		64m²		64m²				
RESS. Tenant Income :	285 €	3 025 €	285 €	3 025 €	350 €	3 245 €			
	856 €		923 €		997 €		141 €	16,5%	
RENTAL VALUE Net Rent Value :	65 €	216 €	77 €	290 €	79 €	297 €			
	168 €		221 €		226 €		58 €	34,5%	
Ratio m²	2,95 €		3,45 €		3,53 €			19,8%	
Maintenance Charges :	13,50 €	67 €	17 €	75 €	18 €	77 €			
	46 €		52 €		54 €		8 €	17,4%	
Ratio m²	0,81 €		0,81 €		0,84 €			4,6%	
Global Rent Value	79 €	283 €	94 €	365 €	97 €	374 €			
	214 €		273 €		280 €		66 €	30,8%	
Ratio m²	3,75 €		4,27 €		4,38 €			16,5%	
Housing Benefit :	0 €	170 €	0 €	170 €	0 €	195 €			
	77 €		86 €		89 €		12 €	15,6%	
BALANCE Residual Rent Value :	55 €	258 €	55 €	258 €	61 €	325 €			
	137 €		187 €		191 €		54 €	39,4%	
Income Prop. Contrib.:	11%	24%	11%	24%	13%	26%			
	16,0%		20,3%		19,2%		3,2%	19,7%	
Must be < 25%									
FINANCIAL SAFETY Avail. money / month	719 €		736 €		806 €		87 €	12,1%	
Family Typology Adultes	1,5		1,7		1,8				
Children	2,7		2,4		2,5				
Ratio /Person /Day	5,71 €		6 €		6,25 €		0,54 €	9,5%	
Must be > 5 €									

EVOLUTION