

BUSINESS PLAN

AMOR-TIERRA

Executive Summary

For the past 20 years, the environment has been evolving at such great heights that there is a need for us to start employing measures to sustain the earth. The main objective of this all-new apartment is to introduce affordable modern living with environment-friendly technology that not only sustains the environment, but also benefit both the residents and investors.

We have researched and found some of the main factors that contribute to high energy and water consumption and generated ideas accordingly. As shown in the figure above, most of the energy (40%) is used in the common area lighting and thus we designed a auto light dimming system working on the principle of sound waves. Also, there is a need to reduce each households' consumption by switching to alternative sources of electricity such as piezoelectricity. Finally, the last factor we would like to tackle is water consumption, by using the latest water purification techniques, we managed to create a sustainable water supply to the complex as well as reduce water consumption.

Market Opportunities and Target Market

We will sell the units to people who value environmental-friendliness, this group of people is increasing in number in Singapore as it is now highly-regarded and seen as a status symbol. Our project will be targeting the ever increasing number of environment-conscious people who may be attracted by the use of environment-friendly technology in their residences as they can then do their part in conserving the Earth.

Competition

As of now, only 1% of all the constructed buildings in Singapore are certified to be green and we aim to achieve the Green Mark from the Building and Construction Authority (BCA)

Projected Market Grow

The demand for green apartment complexes is predicted to be very high in the future since the BCA has plans to bring up the proportion of green buildings in the country to 80% by 2030.

Prototype Product Summary

Using of water turbines to generate electricity for various uses

As wastewater gets flushed down from the households through a main pipe, it drives the water turbines located on the ground level. Then, the potential energy will be converted to kinetic energy and subsequently into electrical energy through a generator. Energy saved= 200,000 kWh per annum (4% of all energy usage)

Using of sound waves to determine the intensity of light in common areas

Since this is a fairly large apartment complex, much of the energy is channelled to lighting up to common corridors at night from 7pm to 7am the next day. By making use of a sound waves detector, only when there is sound will the lights be switched on. During time when no sound can be detected, which also mean minimum activity, the lights will automatically dim to 25% of its original brightness. Energy saved= 400,000 kWh per annum (20% of lighting usage, 8% of all energy usage)

Using Piezoelectricity at home

As the floor depresses slightly when people step on them, piezoelectric crystals embedded underneath will be activating, thus generating electricity. Amor-tierra will be applying this technology to all the exposed areas of the house. Energy saved= 300,000 kWh per annum (6% of all energy usage)

Mini-NeWater plant

With the size of only 0.5% of a full-sized NeWater plant, this plant can produce 250,000m³ of clean water a year, effectively fulfilling all water needs. In total, it saves \$230,000 per year in terms of water cost. In addition, maintenance is cheap. Although it requires a substantial amount of electricity (150,000 kWh per year), it will be fully supplied by the wastewater turbine. Therefore, reducing water consumption very significantly. (>75%)

Total energy saved= 750,000 kWh per annum (15% of all energy usage)

Total reduction in energy and water consumption= 15%+75%= 90%

Product Uniqueness

None of the apartment complexes in Singapore can produce its own water using NeWater technology and this is our main selling point, in addition to the large energy savings in Amor-tierra.

Pricing

Building a normal apartment complex:	\$ 400,000,000
Implementing mini-NeWater facility:	\$ 1,000,000
Building water turbine:	\$ 100,000
Innowattech tiles:	\$ 1,000,000
Sound-controlled lights:	\$ 100,000
Total:	\$ 402,200,000

To cover for the expenses, Amor-Tieria will sell its 1500 units and the price of minimum \$ 300,000 per unit.
Profit = \$ 450,000,000 - \$ 402,200,000 = \$ 47,800,000

Utilities bill, though, will be significantly lowered for all the residents.

Electricity bill:	\$ 1,087,500 (Normal apartment = \$ 1,250,000)
Water bill:	\$ 100,000 (Normal apartment = \$ 330,000)
Total saving in utilities = \$1,580,000 - \$1,187,500 =	\$ 392,500 per annum.

Promotion

We will promote Amor-tierra through newspapers, TV ads, Internet and other viable mediums. We will also be co-operating with real estate agents to help sell the units.

Place of distribution

Amor-tierra will be built in Singapore, outside the Central Business District, where land is relatively cheaper but still highly accessible.

Financial Forecast

The prospect of green apartment complexes is bright, as the demand for green buildings still grow amidst the economic downturn. Our energy and water saving methods attract environment-conscious customers as well as decreases utilities bills.