Pantelion: Value Proposition and Adaptation for the Cypriot Market

Pantelion

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Company Profile:

Pantelion is a small company based in Nicosia (Cyprus) that sells BRAC grey and rain water systems.

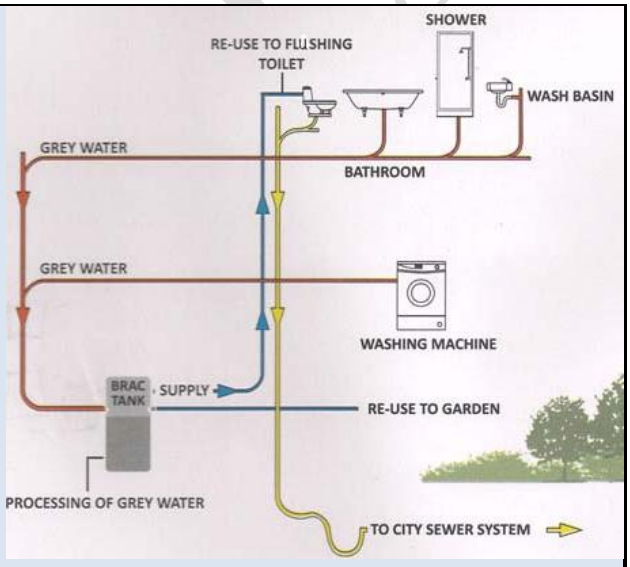
The systems are imported from Canada but require substantial modification by Pantelion in order to be ready for use in the Cypriot market.

Greywater may be taken from bathroom sinks, showers and washing machines but will not have come into contact with faeces, either from the toilet or from nappy washing.

It may thus contain traces of dirt, food, grease, hair, and household cleaning products. These may be polluting if released into rivers or lakes, but can provide a beneficial source of irrigation water and fertilizer if applied directly to the non-edible parts of plants.

Greywater is processed in the Brac tank and pumped directly to the garden or recycled for toilet flushing. The intelligent pumping system ensures a constant pressure at a rate of up to 1.7m^3/min.

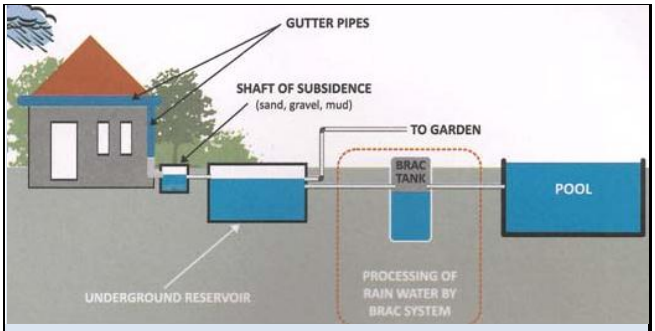
Drinking water consumption is typically reduced by more than 50% (a reduction of approximately 200 l/day in a 4 person house).



Greywater system

Rainwater harvesting is the accumulation and storage of rainwater. Rainwater can be used to provide drinking water, water for livestock, water for irrigation or to refill aquifers.

Rainwater is gathered from the house roof and stored in a small container which allows mud and gravel to sink to the bottom (shaft of subsidence). Subsequently the water is stored in strong high density polyethylene tanks before being processed and *disinfected* in the Brac tanks and lastly pumped to the place of use.



Rainwater system

Value Proposition

Pantelion import Brac Greywater and Rainwater systems from Brac Systems Inc in Montreal, Canada. The basic value proposition of the technologies for both the domestic and commercial markets has

remained the same as that proposed in Canada:

Financial

- Reduction in consumption of municipal water, and associated reduction in **cost** and **risk**
- Provision of an emergency supply of water.

Convenience

- Brac tanks are stored underground, avoiding unsightly plastic tanks and maintaining the water in cool, dark conditions which reduces the chances of contamination.

Safety

- The Brac systems are unique in providing a disinfection phase that ensures that bacteria and pathogens are eliminated before reuse.

Environmental

- Reduction in load sent to sewage or septic system (greywater system)
- Reduction in the rate of stormwater run-off and associated risk of flooding (rainwater system).

Adaptations for the Cypriot Market

However there are some characteristics to the Cypriot market that meant that the system required adaptation, both in terms of physical elements and sales communications.

Characteristic	Solution
Widespread use of artificial soaps and other cleaning products with ingredients that are toxic to plants which made the greywater and rainwater unsuitable for use	Provision of information on which soaps and detergents are safe to use in conjunction with the systems, e.g. salt-free liquid soaps, and no products containing boron
A lack of filters on taps and a tendency to allow food waste to go down the drain	Introduction of filters into the taps and production of communication material to encourage a reduction in the quantities of food waste disposed of in this way
A need to meet specific quality criteria (determined by Government) for use of the water for irrigation purposes	Introduction of sand filters
Strong fluctuations in humidity between day and night, causing problems with the electronic circuit	Underground reservoir provides protection from humidity fluctuations

The company faced some initial problems in communicating the benefits of these two technologies to the local community. In addition to the traditional advertising methods (newspapers/magazines radio/television) the company therefore undertook a pilot demonstration in a new build primary school in Nicosia. This was well supported by the Environment Commissioner of Cyprus via his website and personal visit to the site.

Once the systems had satisfactorily demonstrated compliance with specific water quality criteria, the Water Development Department (Government of Cypus) also agreed to provide a grant of approximately EUR 3000 towards installation of the systems.

The result has been a good uptake by the domestic and SME market.