



BUILD IT GREEN EN.01

LGW
LHYRA
GREEN WORLD

Solutions for a Healthy World



Build It Green



INDEX

Build It Green

GREEN BUILDING & BOTTOM LINE	2
LIVING PHILOSOPHY	4
THE 4 CHALLENGES	7
GOING GREEN ... REASONS	9
CONCLUSIONS	10



GREEN BUILDING & BOTTOM LINE

We hear about Going Green and Green Building more each day. Sustainability is a general term for Going Green and Sustainable Architecture is respect for a Green Construction Strategy. Building with bio-sensitive construction techniques demonstrates a commitment to the environment. Today the visibility and exposure for “Building it Green” is economically justified, socially acceptable and politically supported.

Advancements in construction techniques are available to both commercial companies and private citizens. The differentiation from traditional construction is apparent in all phases - better energy conservation, alternative energy sources, use of materials, water management, waste management and waste products



- Social responsibility, concern for health and the environment
- Conscientious about our responsibilities for conservation
- Protecting capital investments by greening existing real estate portfolio
- Adopting a comprehensive greening strategy for the total Company



GREEN BUILDING & BOTTOM LINE

Green Building is emerging quickly from an emotive, feel good segment to a legitimate, rationale approach based on solid business principles. As consumption and demand for traditional energy sources outstrips supply the search for viable alternative sources creates new business opportunities. More profitable energy companies will fuel investment and development for alternatives to fossil fuels. More advanced societies will embrace holistic **GOING GREEN STRATEGIES**

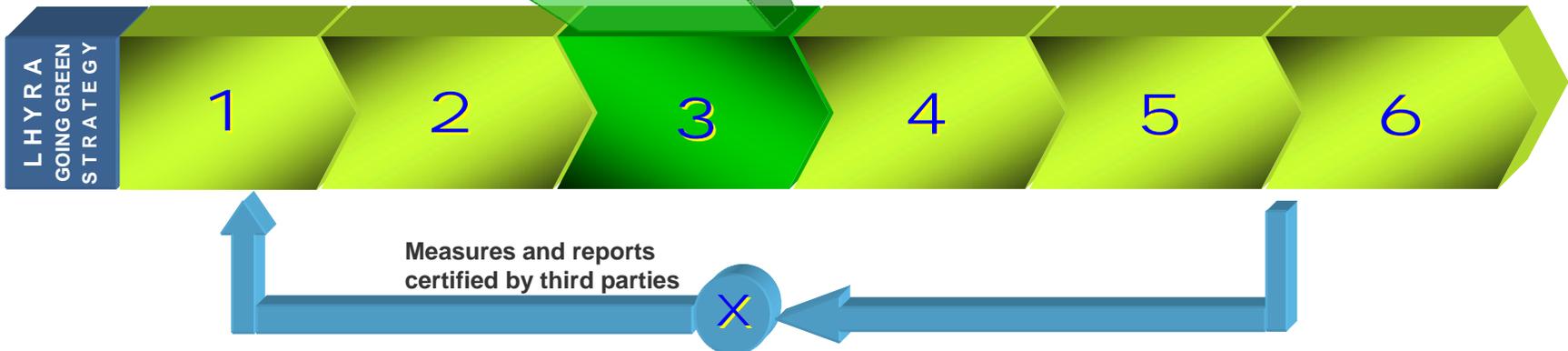
Real and measurable acts (i.e. GREEN BUILDING)



GOING GREEN STRATEGY

- 1) Evaluate the total company carbon footprint
- 2) Define opportunities for improvement
- 3) Development specific action plans for CO2 reduction, lower particulate emissions and alternate fuel sources.
- 4) Share and publicize strategies to create awareness and support
- 5) Perform a company wide assessment to set goals/targets for all
- 6) Establish annual objectives for board members bonus'
- x) Manage for long term – continuous improvement

© LHYRA @2007

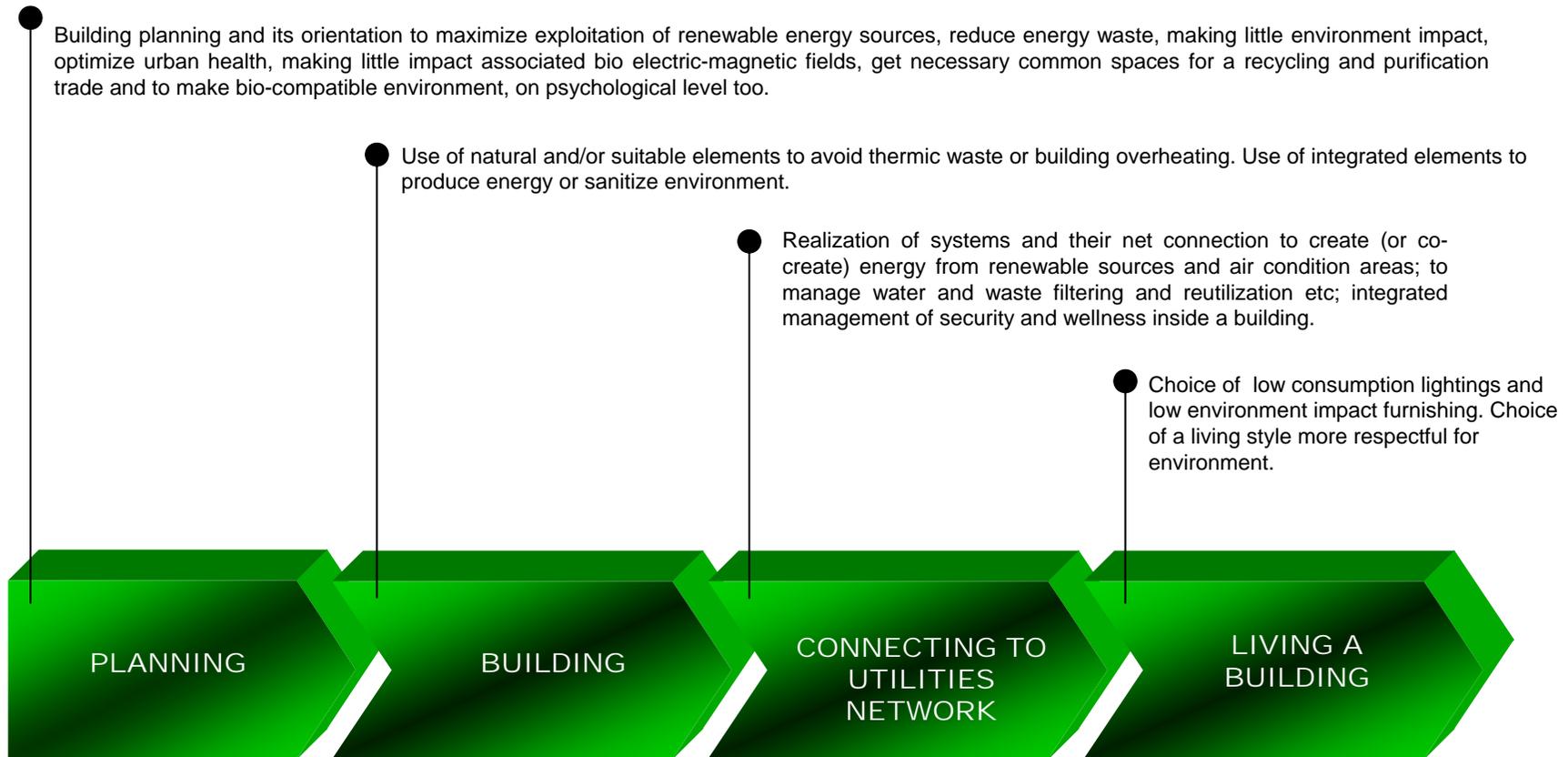




LIVING PHILOSOPHY

Green Building” is not a simple constructional methodology nor a pure stream of activities to make our own building eco-compatible. Green Building is a philosophy following a building from its planning, to its construction, to its every day use, to its retro-fitting and repeating this cycle to remain current.

State of the art Green Building is dynamic – what is progressive today will be replaced in the future. A Green Building Strategy embraces the Sustainability Philosophy through all phases





Some possible solutions to realize a bio-compatible building:



PLANNING

Optimizing building orientation.

Paying attention on windows arrangement to maximize energy conservation during the day .

Planning a photovoltaic and or solar thermal system on roofs or on a whole front facing South as decorative elements

Planning an irrigation system increased by reutilization of waters

Planning outdoor wind breaking and storm breaking barriers

For commercial offices and other kind of offices design buildings with moving walls and glass perimeter outside walls

Planning essential and effective lighting avoiding to over light unnecessary spaces



BUILDING

Heat and acoustical isolate ceilings, walls and floors

Setting up low temperature heating systems in floors and walls

Setting up structure integrated central air conditioning systems

Using recycled building materials to make paths and other outdoor works avoiding both superfluous waste and wild interment of materials

Prefer building materials made with recycled products

Double flush button for all toilets and, for commercial buildings, verify the possibility to place waterless urinals

Using recycled rain water or recycled fresh waters for toilets

Building bicycle tracks and routes around the complex



CONNECTING TO UTILITIES NETWORK

Setting up “active” windows able to reduce loss of heat during winter and to avoid overheating in the summer.

Setting up of power generation systems from renewable sources (photovoltaic or wind powered system).

Setting up of warm generation system from renewable sources (solar thermal or geothermal energy) or with cogeneration.

Setting up of condensation boilers and other highly productive devices.

Planning the chance to set up air filtering systems.

Planning central separate collection systems and wastes compression.

Obtaining a building power certification.

Using photovoltaic, not polluting, not staining, antibacterial paint.

LIVING A BUILDING

Planning surrounding parks and gardens with local plants climate suitable, not needing for too much irrigation.

Setting up of light intensity controlling systems according to the outdoor light.

Setting up of lack of movement recording systems to turn off light and /or reduce air conditioning and heating where it has no use (especially in shopping center).

Using blue-tinted lights with scotopic properties to give more visual results with less light intensity.

Setting up LED lights.

Setting up home automation and building remote control system.



THE 4 CHALLENGES

A Green Building is a strong endorsement our world and environment is precious. It is an acknowledgment that MAN does not rule a WORLD with unlimited resources. For the privilege of living on this earth MAN has the responsibility to sustain our WORLD for the future. In the last 10 years we realized that energy and water are not unlimited; that our wastes are a problem both as wasted resources and for disposal; that changes imposed to the system and the struggles to control localized resources (petroleum) are endangering our health and our security. Therefore a Green Building is desirable for its ability to interact in its domain. Green Buildings to contribute solutions for 4 fundamental challenges for co-existence.

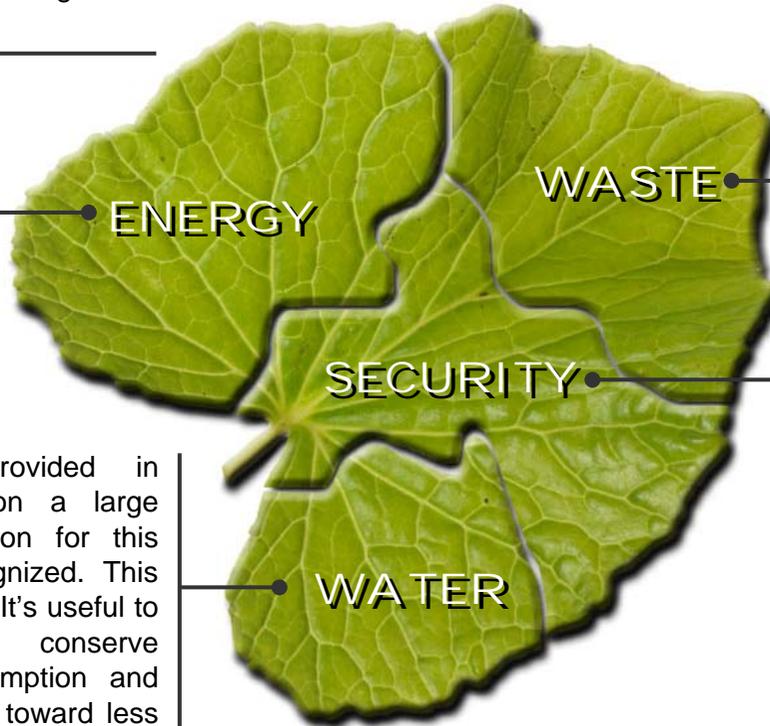




THE 4 CHALLENGES

Reducing energy dependence from fossil sources emanated from responsibility to combat global warming. However it is also economically viable to establish power producing systems to conserve fuels and reduce wastes. This is a long term business advantage.

Drinkable water is provided in industrialized countries on a large scale, yet the appreciation for this service is largely unrecognized. This situation will change soon. It's useful to develop technology to conserve drinking water for consumption and provide non-potable water toward less critical tasks.



Waste management is progressively becoming a social problem in addition to an environmental one. You can dispose of waste in a landfill without regard to its composition and bio-degradability. Waste generation and management is getting more and more governed by regulatory procedures. A Green Building assists occupants to easily, efficiently and legally separate waste for storage and collection; generally invisible to the occupants. This allows for a better time utilization and higher security of the whole building, in environmental and health terms.

The connection of power, wastes, water and security is not routine, but a more futuristic analysis can envision tensions arising between central power sources management (gas, petroleum) and individual security. We can find similar social tensions at around the globe caused by lack of water. Within a community, there are many examples where improper waste management has generated unhealthy consequences. A Green Building with sufficient energy availability can implement systems for the micro-climatic, environment control and to protect itself from expensive security violations.



GOING GREEN ... REASONS

Easy answer for this question: Why should I do it?" The Environment is a responsibility for everyone one of us and we have to do our best to pass it to future generations.

Modern societies have the need to list and to give value to usually obvious or intangible ideas. The have the responsibility to demonstrate a return.

Green Building, in a socially responsible way, gives a clear and tangible business case, while reconciling manager/entrepreneur requirements with personal obligations.

The justification for Green Building becomes more evident when integrated into a more general "**Going Green Strategy**".

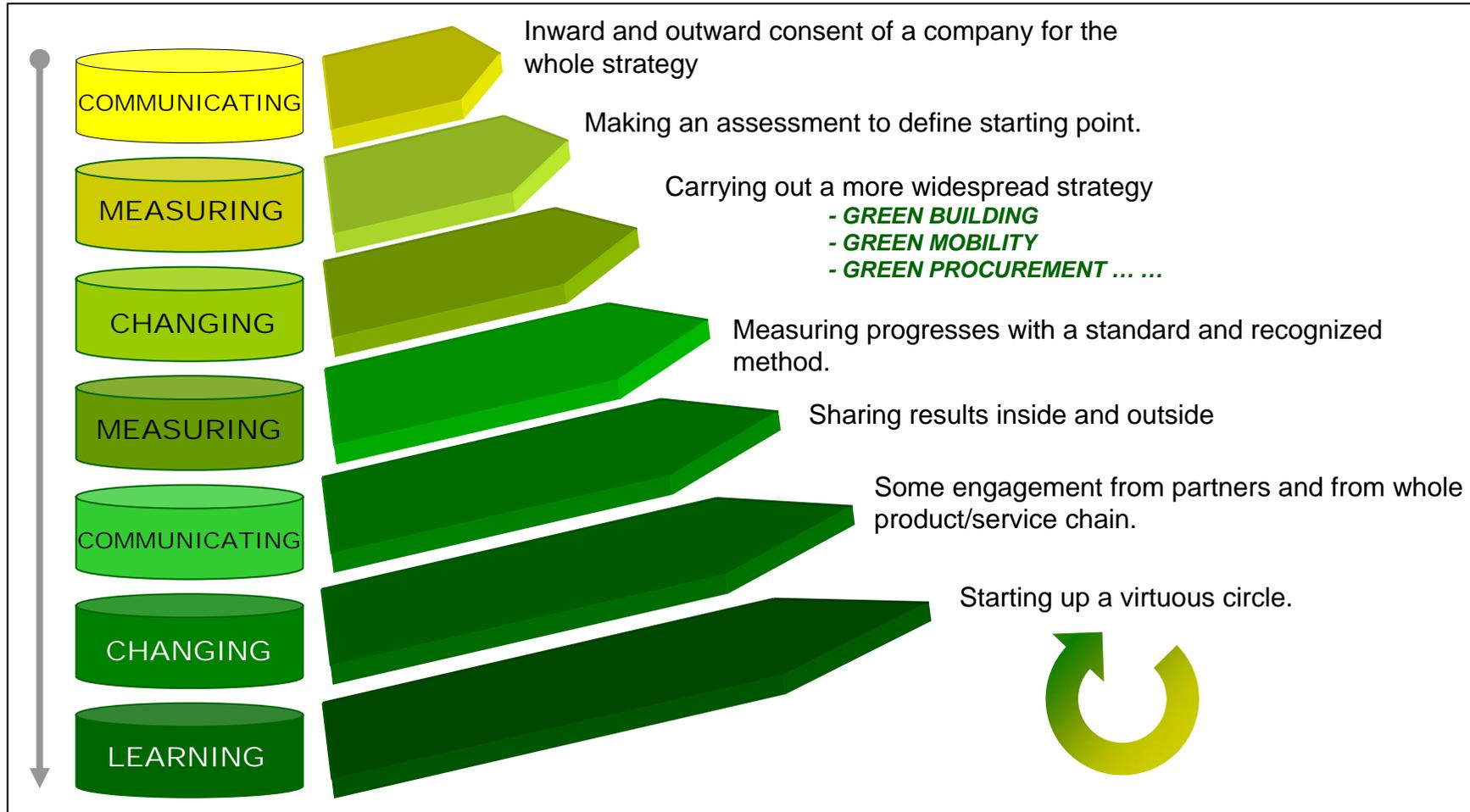




CONCLUSIONS

It is generally easier for large companies to demonstrate economic advantages. For smaller businesses the payback may not be obvious. This can be attributable to a number of different reasons:

Big industrial groups can see it more clearly than small entrepreneurs because they have the skilled environmental staff to manage this risk. The ability to understand the total impact serves everyone, even shareholders, to define a this as a priority and to allocate staff or hire resources to protect company image and capital. All of this will be recognized through a focused bio-building approach and by a more general environmental strategy.





CONCLUSIONS

Presented considerations are based on a situation analysis easily checkable on markets with anticipating signals.

A clear TOP-DOWN process began in big international companies reality and reached capital community.

Influences will be soon clear on mid-size companies, first to arrive to micro-business realities and then to every single person.

September 2007

Do not hesitate to address any question to greenworld@lhyra.it

LHYRA srl

Via Mario Savini, 15
00136 ROMA

www.lhyra.it
info@lhyra.it