



Sustainable Master Planning

“The community will not only work on creating cleaner energy, but also operate within premises that inspire sustainable living and incorporate best practices.”



Alexander Chemyakin, Partner at Urban Matter, November 2009

urban**matter**

Sustainable Master Planning and its application for the Algarve Energy Park

Everything seems to be green these days. And we are not just talking about in springtime. As F. Jodidio wrote in his recently published *Green Architecture Now*, "green is the name of the game". Eco technology is breaking into the DIY market and anyone can decide how sustainable they want their lives to be. "Sustainable" is everywhere from consumer products to professional talks, and urbanism is no exception. Sustainability has been an issue in urban planning for many years, but now it is top of the agenda.

It is remarkable how global environmental concerns have given an extra impulse to sustainable development. In many ways they have added complexity to the subject and have become a reason for heated discussions among urban planners. Nevertheless, nobody denies the significant role of a sustainable approach. Urban planning has actually evolved to a point where sustainable development is recognized as a key factor in controlling continuous urbanization. It attracts so much attention that it has the potential of becoming the next BIG IDEA in urbanism after Modernism.

What is important to remember is that "sustainable" has two interconnected meanings. On the one hand it signifies "sustainable planning" - adapting to future conditions without compromising its vitality and quality, while on the other hand it also includes "green planning" - aiming to reduce levels of CO2 and a general improvement in ecological balance.

SUSTAINABLE PLANNING

Sustainable planning, aiming at creating sustainable communities, has a history long enough to learn from its own mistakes. Evolved a few decades ago as a reaction to post-war rapid city expansion, it confronted the problems that it encountered. From the very beginning it focused mainly on understanding social, cultural and economic factors behind new developments and the way they change in time. It became an approach with long-term thinking and a vision for creating pleasant lasting environments where people could live and businesses could flourish.

One might argue that sustainable planning is common sense and has always been on the minds of urban planners. It is true, but it used to be taken for granted and, on many occasions, has failed. Hasty post-war urban planning with good intentions led to social exclusion and isolation, a waste of cultural resources, monofunctional development, and a loss of respect for regional character. While these problems are widely recognized, the planning models behind them are still deeply imprinted in the way development business is organized. Even today, many developments follow similar patterns, pursuing short term investment returns without seeing the bigger picture. In the continuing pace of urbanization, it is becoming a serious issue that keeps destroying social fabrics and bringing economic burdens on regions that are not easy to resolve.

Sustainable master planning is addressing these challenges with viable and equitable ideas on how to make places work. For example **DIVERSITY** is a model that supports mixed uses and social variety, and has been proven to be a vital model compared to post-war single use zoning. The decline of dirty industry and the emergence of the service economy nowadays allows for

integration between employment and residential activities without harming residents. Added to which, the concept of diversity in line with New Urbanism thinking goes even further with its use of time and place: diversity of activities means that places remain active and in use for the most part of the day.

ADAPTIVITY is another example. It explores the possibility of an easy change of activities in the future without major investments. Principles like The City As Loft, as a place that requires minimum resources to change it to another function, are widely adopted by Dutch KCAP and applied in their master plan projects in London, Rotterdam and Hamburg. Adaptivity of a certain place can be envisioned and planned for the next phase of development. It can also serve as a flexible component that can accommodate a different function when social and economic situations change.

Getting **LOCAL** understanding of regional cultures and taking them into consideration when creating a meaningful modern **IDENTITY** are contextual components that give heart and soul to a sustainable development. It has been seen in many cases that without reaching out to local communities and understanding how they live and work, it is impossible to achieve lasting success. In cases where identity is connected to the local culture, the transformation into a new development is becoming a more natural and sustainable process. It is more of an evolutionary than a revolutionary model.

DENSITY is another important strategy in sustainable planning. Quality of public space and effective **TRANSPORT** solutions are among many other vital concepts extensively researched at Urban Matter for the Algarve Energy Park. All these ideas of sustainable master planning take into account shifts in market and social dynamics. Meanwhile, the original meaning of

being sustainable in urban design is changing since the global environmental concern has become high on political agendas. It is getting a green edge.

GREEN PLANNING

Green planning is a relatively new movement that is not only high on political agendas, but recently has gone mainstream. General public awareness has never been greater since world figures like Al Gore with "An Inconvenient Truth" drew attention to the environmental issues. In the last decade the volume and quality of environmental legislation (international, national and local) has expanded hugely, and international agreements such as the Kyoto protocol have not only raised the profile of environmental change but also begun to drive a global policy switch. For urban planning it means the change from "nice to have" to "must have".

From the inside, green urban design is largely propelled by green technologies and an understanding of ecology at micro and macro levels. Environmental sustainability issues like energy, water, green, waste, transportation and sustainable construction are matters of concern. **SMART GRIDS** for the cities, compact energy plants, **RENEWABLE TECHNOLOGIES** and intelligent transport solutions help to minimize impact on the environment.

The amount of green information recently is overwhelming and, to a certain extent, causes confusion. In the world of commercial real estate hardly any European development similar to the Algarve Energy Park is done without the requirements of being eco-friendly. In fact its absence is becoming equal to development suicide. Trying to keep up with eco requirements, it is easy to get lost in an overflow of "greenformation". How to navigate in the green jungle of master planning and how to benchmark one green against another?

Making green **MEASURABLE** will help. When looking for the green references in urban design there are a few established assessment institutions like LEED and BREEAM that set higher standards and measure both site and building environmental performance. Both started in the 1990s and every year gain more ground internationally and in Europe accordingly. In 2009, in Europe alone, BREEAM has been responsible for over 110,000 projects certified, and over half a million registered for certification. The International Council of Shopping Centers (ICSC) has also adopted BREEAM as an assessment system for their retail portfolio. LEED, on the other hand, is increasing its international presence elsewhere in the world, becoming even more competitive outside its home base in the United States. The process will be even more interesting with Europe slowly moving to one common regulatory system and a choice will be made between the assessment methods.

Making green **MANAGEABLE** is another solution. An actual environmental performance can only be achieved when it becomes a core value. Being on a wish-list of green enthusiasts is not enough. One of the keys to successful implementation of green is setting up objectives in the beginning of the project and evaluating them further in the process. This requires comprehensive management. Mastering the sustainable agenda and considering it in economic decisions have to become everyday tasks of the project management. Better understanding of the complexity of environmental relations also helps to make green manageable. This begs for a more integrated approach.

An integrated, or a **HOLISTIC APPROACH** as it is often called, is especially crucial in long term projects like urban planning. The consequences of the initial decisions have a lasting impact, and strongly determine the eventual ecological performance. Though the work of

urban designers has always been a creative synthesis, the vastness of the environmental themes today requires more integrated thinking. From the early stages of the planning, urban designers, architects, ecologists, environmental engineers, traffic specialists and other specialists should look for smarter solutions for the benefits of our environment. This crossover thinking has already proved to be successful. Michael Braungart and William McDonough and their Cradle to Cradle message is the most well-known example of such cooperation. Even more important is that a holistic approach extends itself to include both green and sustainable planning.

SUSTAINABLE + GREEN PLANNING

At Urban Matter we believe that sustainable (as in sustainable communities) and green approaches cannot be seen separately. These two main strands of sustainable master planning are woven together and one is not sustainable or green without the other. If the development is poorly planned and needs a major transformation in twenty years' time, it is hard to call it green after all, however ecofriendly it might have been originally. The whole issue is really about the balance between nature with its resources and human activity. That makes a true sustainable approach an ethical approach. It puts the land into an ethical equation of individuals and groups and the way they evolve modes of cooperation.

True sustainable master planning, combining green and sustainable approaches, possesses the power of innovation and creative energy needed to meet the urban challenges ahead. It connects global expertise with local experience. It works in social, cultural, economic and environmental dimensions to develop vital planning models perceptive to changes and with minimum impact on the environment. Urban Matter applies this approach



to the Algarve Energy Park and aims to be an exemplary sustainable initiative.

ALGARVE ENERGY PARK

The Algarve Energy Park aspires to be a model sustainable cluster community, designed to attract leading partners in the renewable energy and preventive health-care sectors. The master plan Urban Matter constitutes the following principles:

DIVERSITY. AEP will be an exemplary project in the mostly touristic region of the Algarve. It will provide social and economic regional diversification and be supported by year-round activity scope based on knowledge economy, independent of the tourist industry. The development will create working, living, educative and leisure environments both day and night.

ADAPTIVITY. The project will incorporate shared spaces and multifunctional areas that will strengthen on-site activities and be able to adapt to future conditions.

IDENTITY. AEP will get a recognizable identity of a destination where Nature meets Technology. It will get an international edge within Algarve local culture.

DENSITY. Densification of the building clusters in a park-like setting will play an important role in efficient land use while minimizing impact on the environment.

TRANSPORTATION. The project will make an optimal use of the existing road network. Proximity of the world class race-track and R&D facilities will provide ideal ground for developing, testing and demonstrating alternative ways of mobility.

ENERGY. The core activity of AEP is research and the development of renewable energy technologies with its main focus on solar energy. With the possibility of local manufacturing and implementation, these new technologies will also become part of the general public experience.

WATER MANAGEMENT. Using the scarce and season dependent water resources of the Algarve will require innovative ways of keeping water on site and waste water re-use.

WASTE MANAGEMENT. During and after construction waste cycles will be developed to optimize material re-use.

GREEN LANDSCAPING. There will be a rich greenscape surrounding the site, celebrating the nature of the Algarve and bringing back some of the indigenous species of the region.

SUSTAINABLE CONSTRUCTION. In demonstrating sustainable living and working communities, AEP will be built according to the highest environmental criteria using sustainable construction methods and local materials.

The way in which the Algarve Energy Park team envisions the project shows an understanding of sustainable principles at regional and local levels. With its ambitious agenda and an integrated approach, it has all the chances to succeed in creating a model sustainable cluster community in the Algarve. By connecting global expertise with local experience, it has the potential to go beyond regional development and connect to the global issues.

