Sustainable building solutions:
The way to build today and for the future

***CEO Middle East** takes a closer look at Green Precast Systems and Technologies to see how its technology is helping to improve sustainable solutions in the construction industry.*

The biggest challenge facing us in the modern world is the plight of the very earth we live off, walk on and exist in. Without doubt we are little by little destroying the planet that could and very rightly should sustain our existence infinitesimally.

Thanks to technology shifts, our world is getting smarter... with sustainability being key to our long term success. In essence though you can't have sustainable communities without access smart technologies these are now becoming the fundamental instruments for a sustainable future.

The subject of sustainability requires us to rethink the governance structure of sustainable designs, building, construction methods and most important construction systems and the how to deal with it not only at the national level, but also globally.

As population is growing Globally and looking at the middle eastern Growing market with it's amazing growth rate, sustainable designs and construction methods in such a harsh environments must become the Nations concerns. Being able to foresee the future impact on our future nations, should push us today to become more active and show our obligation, take responsibility and act accordingly.

The Middle East, is to become the most fertile construction grounds, where the worlds' most advanced construction technologies should be put into performance at the highest level.

Regulations have been implemented by the UAE government in fact at the opening ceremony of the World Future Energy Summit in Abu Dhabi in January, the government announced a $15 billion initial investment in projects targeting solar, wind and hydrogen power; carbon reduction and management; sustainable development; education; manufacturing; and research and development.

Salvatore Saker, CEO, Green Precast Systems and Tech.

It is very imperative and crucially important that the 'old school' approach to new systems is used to add value from experience in the field and not used to judge the supremacy of the new building technology. By saying this 'old school' should not feel threatened, on the contrary should embrace the new world and run with it, supporting it with its years of experience and knowledge.

Together they can become even more evolved. So what can be done today? There are, of course no silver bullets, however some companies are providing innovative solutions with immediate effect and long-term prospects.

One such company new to the region is Green Precast Systems; a company that claims to offer 'the way to build today and for the future'. Green Precast Systems has strict sustainable goals in its approach to its methodological and remarkably simple construction systems that have been conceptualised with the strict proviso to mitigate the massive environmental footprint of mass development.

The company strives to continuously research, develop, manufacture and deliver the highest quality monolithic precast structural dwellings that can be utilised for large-scale projects with repetitious design.

Naturally, certain prerequisites apply to the construction of any building. Developers and consultants alike require a timely and efficient method of creation. Likewise the contractor must see an increasingly cleaner and safer environment. And last but not least the end user demands a high-quality end product combined with the peace of mind that their investment is worthwhile.

In some cases this want list is often too much to ask. And if it isn't the economical impact is often too severe. Nonetheless the Green Precast System has the ability to meet all of the above criteria. And it is proven to do so.

Already, the international demand for the technology is proving remarkable, and the company is establishing an ever growing presence in both developed and undeveloped countries, such is its diversity.

So how does it work? Here's the science. Green Precast Systems is a smart technology, that has engineered 3D technologies to use much less embodied energy, from Steel and concrete diesel, transportation, with a

value adding in engineering that provide even greater savings; making concrete and steel "greener" by integrating a thermal UV-IR reflective paint solution, which has a solar reflective index (SRI) rating of 113%, reflecting ultra violet and infra red light to ensure energy savings of up to 50% at the same time as offering up to 90% savings on irrigation and flushing water.

This results in savings of up to 85% on energy bills. So not only is it environmentally agreeable, it is consumer friendly in addition. Already, the advantages of such a technology in the sun-drenched climates of the UAE are glaringly ostensible.

The Green Precast System is a sophisticated modular, recyclable, precast building method providing a concrete structure that is accurate, with a high quality finish which dramatically reduces overall construction time and provides superior acoustic, thermal and fire rating properties within one process. Underpinning the construction method are the unique smart moulds employed to produce each module. Each mould is an intricate piece of machinery, manufactured to Green Precast's patented design and specifications and is fully customisable, aside from its fixed internal dimensions. This means every time a new unit is made, the mould can be customised to meet the architectural requirements specified.

Furthermore, doors, windows and any provision for services (electrical, plumbing, etc) can be cast into the outer concrete walls. Each mould is fully automated and hydraulically driven with fine tolerances (+/- 2mm - 5mm) to allow accurate, repetitious casting on a daily basis.

The company recently commenced production on the AED450million, "Modern Residential City" (MRC) in Abu Dhabi — a 330,000 square metre development, providing accommodation for 25,000 people by 2010 (12 months from commencement).

The system is designed to produce from 1 to 20 x 500M2 villa or dwellings per day; that means from slab to superstructure complete within a 24 hours cycle. As a premier organization in Abu Dhabi Al Rayan investments, the developers of MRC, are committed to supporting the aspirations of the government in delivering environmentally friendly and sustainable technologies to the UAE.

In a sustained push for upholding Abu Dhabi's drive of green expectations, Green Precast Systems was a natural choice of development partner and without doubt, will be for today, and for the future on a truly international level. CEO