

## **SMART GROWTH, SMART GRIDS and SMART BUSINESS**

© White Paper by George Tukel and Enrique Rob Lunski; Entrepreneur360

The cities and towns of Argentina are addressing many of the same challenges that other urban areas, throughout the world, are facing due to dramatic population increases located in urban centers.

This dynamic can stress the provision of services especially the supply of electricity as electrical demand outstrips production. Most would agree that the energy infrastructure of a city is its most important as the unavailability of electricity, over time, erodes all other aspects of city living. This is why the creation of an energy infrastructure that is reliable, resilient and responsive to change is a pressing concern for Argentina (especially for its business community that requires dependable and affordable electricity for its success).

Smart Grids are, increasingly, looked to for providing this stable energy infrastructure. In broad terms, a Smart Grid strives to provide network reliability and power flexibility by applying information and communication technologies to the improved management of the existing electrical grid.

Others, including ourselves, take a broader view of the possibilities of Smart Grids including the following:

- Smart Grids can encourage the safe integration of distributed and renewable energy resources into the traditional centralized grid, for example household PV systems, green buildings and solar and wind farms.
- Smart Grids can be realized as a Smart Microgrid which, like centralized grids, generate and distribute electricity but does so at the local level. However, they can also serve community defined needs and goals (for example, reliability and carbon emission reduction) and builds upon a diversification of energy sources, energy storage and cost reduction. An example of this would be a smaller municipality or larger neighborhood owning and operating its own Smart Microgrid.
- Smart Grids can encourage the education of consumers to the conservation of electricity through the use of more efficient appliances and LED lighting. In addition, low cost meters can be installed in homes and businesses so consumers can make more intelligent and autonomous decisions on how to save money by using electricity more wisely.

This vision of sustainability has great merit, especially in building a safe and healthier energy future, but can be criticized as being too engineered or technology based and not attentive enough to the needs of local communities and businesses.

Increasingly, the common vision and purpose for the hard and important work of urban revitalization is drawn from the model of sustainable communities. This concept and practice of sustainability is unique in that it provides a holistic approach to community building by founding itself on three cornerstones:

- Vibrant Communities
- Environmental Health
- Economic Well-Being

In the past, most urban programs have usually addressed only one of these cornerstones, resulting in less than satisfactory outcomes. The overriding value of sustainability is that it precedes along these three fronts together, knowing that it takes this simultaneous effort to create safe and flourishing urban landscapes that have strong commitments from their residents and businesses.

It is being recognized that economic prosperity and job creation are advanced by companies integrating sustainability practices into their day to day operations.

Business sustainability is often defined as managing a triple bottom line - a process by which companies manage their financial, social and environmental risks, obligations and opportunities. These three impacts are sometimes referred to as Profits, People and Planet.

As published in *Fortune* magazine, a McKinsey survey of 340 executives revealed that more than 90 percent said risk management - whether from consumers, regulators, or the market (for example, high resource prices) - was an important factor in pushing them toward sustainability initiatives.

In mid-2014, McKinsey completed a study that found a strong correlation between resource efficiency and financial performance: the companies with the most advanced sustainability strategies did best of all. A Harvard Business School study found similar results based on companies committed to sustainability showing a higher return on equity and assets. The authors concluded that, “developing a corporate culture of sustainability may be a source of competitive advantage in the long run.”

Evidence for this is that top world companies - like Intel, Nike, Unilever, Wal-Mart and DuPont - are making sustainability practices a core part of business.

As small and large companies have discovered the value of sustainability planning, so have local communities. Over the last twenty-five years, Smart Growth and Transit Oriented Development (TOD) planning ideas have gained real currency in that they build strong local economies, neighborhoods and towns. They can be briefly explained in the following way:

- Smart Growth is planned economic and community development that attempts to curb urban sprawl and worsening environmental conditions by containing a wide range of housing and job types. Important characteristics include:
  - Green building approaches that reduce operating costs and increase profits for businesses.
  - Reliable, safe and environmentally healthy energy, water and transportation infrastructures that communities and business growth can depend upon.
  - Compact neighborhood design geared to walkability so neighbors know each other and shop locally.
- Transit-Oriented Development is a mixed-use residential and commercial area designed to maximize access to public transport. Important characteristics include:
  - Employment opportunities, especially office type uses, and retail uses that are oriented to commuters.
  - Encouraging a livable density of uses so businesses can thrive in unison with communities.