



Forecasting the future



Let us point you in the right direction -
There are signs everywhere if you know where to look.

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CORPORATE SOLUTIONS
Micro-Area-Partnerships (MAPS)

Our Knowledge is your Property



FAST FACTS

▶ GREEN BUILDING

- Shading for neighboring buildings
- GHG reductions
- Lighting & heating with less CO2 emissions

▶ SMART BUILDING

- Sensors in paint – control temperature
- Sensors in windows – control tint
- Motion detectors – control temp and lights

▶ TIMELINE

1997	Kyoto Protocol (Treaty) Signed
2005:	Kyoto Protocol Enacted
2006:	GHG's Attract Lawmakers' Attention
2008-2012:	Reduced GHG's per Kyoto Treaty
2010-2015:	Governmental Regulations Enacted
2020:	All buildings create 50% less GHG's

2030 CHALLENGE

*"...immediately transform building design to require all new buildings and developments be designed to use only half the fossil fuel energy they would typically consume for each building type and that all new buildings be carbon neutral by 2030."
www.architecture2030.org*

WHAT IF AL GORE IS RIGHT... AND NEW YORK FLOODS?

GREEN HOUSE GASES—A SHORT HISTORY

In 2005 the Kyoto Protocol became a law in a number of countries. The Protocol calls for a reduction in Green House Gases (GHG's) by the years 2008-2012 to levels below what they were in 1990, and was signed by 169 countries (Australia and the United States did not sign). Only countries that signed the treaty are bound by its commitments. As the effects of global warming are realized, corporations are asking how will it impact the way they do business and service their clients, and more specifically how will it affect their real estate functions.

EFFECTS ON CORPORATE AMERICA BY 2020

- ▶ Addition of reduction devices for Green House Gases
- ▶ Lower utility costs when utilizing GHG reduction devices
- ▶ Less office space—lower real estate costs
- ▶ Building "Green" and "Smart"
- ▶ GPS vehicle tracking
- ▶ Environmental awareness will attract top employees

NO MORE BUSINESS AS USUAL

Expect the way that corporations do business today to change considerably. Individuals and corporations are taking the initiative to play an active role in reducing Green House Gases. According to a poll done by the PEW Center on Global Climate Change of their member corporations, 90 percent of these companies believe that the government will begin imposing regulations and laws between the years 2010 and 2015. Forward-thinking companies have already started changing the way they do business to incorporate some GHG-reducing solutions in the way they manufacture products and in how they occupy real estate. We anticipate more companies will recognize the money saving attributes, such as lower heating and cooling bills and lower real estate costs due to a decrease in the amount of office space needed resulting from the increased amount of telecommuting and desk sharing. Companies will take advantage of the new trends to create products, strategies and solutions for the consumers to use.

Commercial and residential buildings represent a larger source of global warming than cars and trucks combined! They account for 48 percent of the Green House Gases on an annual basis, with global numbers being even higher. Keeping that in mind, it only seems natural that Corporate America will be at the forefront of efforts to reduce GHG's. The up front cost for some of the environmentally savvy solutions, such as renewable energy resources in the form of photovoltaic panels, wind turbines, fuel cells, biomass and recovered methane gas may seem daunting; however, there will be long-term cost savings and benefits that make it worthwhile. An initial investment of \$100,000 to add these additional features to a \$5 million project would actually save \$1 million over a 20-year period in energy bills alone. The cost of incorporating these new features would be recaptured within two to three years. For a smaller company, it is important to budget and plan ahead for these changes to start realizing the cost saving benefits. For larger companies with significant real estate, those costs will rapidly add up, making it even more important to plan for the future.

In the year 2020, this will evolve from a wake-up call to a way of life. The cost to adhere to government regulations and/or to make voluntary changes to the way buildings are run and the way companies are producing is so high that, if not planned in advance, could put some companies so far in the red they will not be able to survive. Forward-thinking companies will take advantage of the new trends and will create solutions, while continuing to realize a profit.



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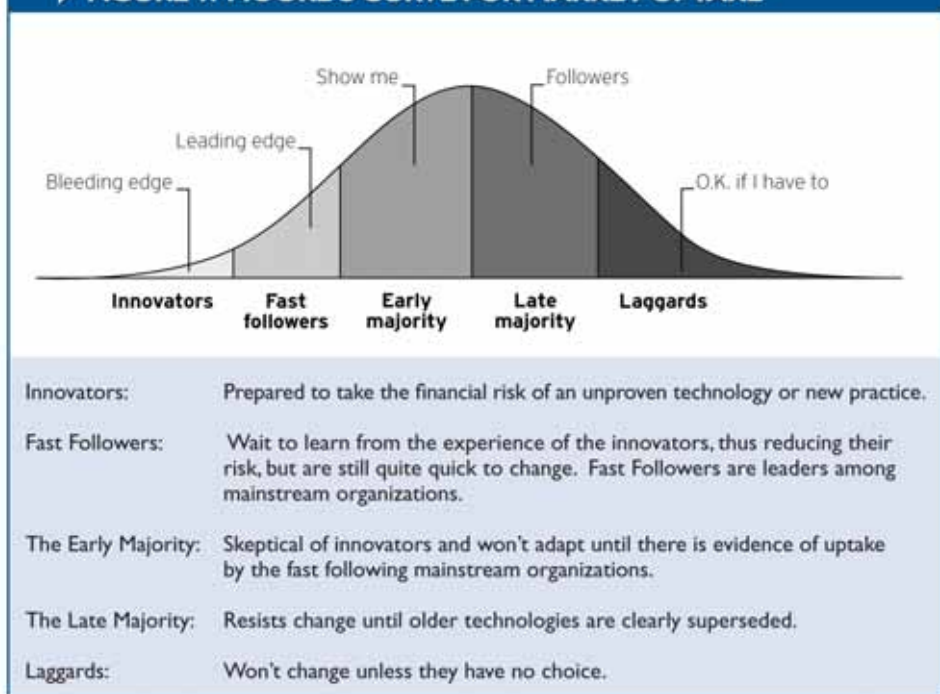
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Companies who are able to see the environmental trends and react proactively will save money, send a positive message to their community and attract the best employees. It's a win-win situation!

NEW TECHNOLOGIES AVAILABLE TODAY

- Biomass
- Photovoltaic Panels
- Wind Turbines
- Sensors – Motion lights, paint, window tinting
- Xeriscape Landscaping Techniques

▶ FIGURE I: MOORE'S CURVE FOR MARKET UPTAKE



Source: Geoffrey Moore, 1991

LOOKING GREEN FOR THE NEXT GENERATION

Kids entering college today are already living in an environmentally and electronically savvy world. Gadgets and a higher awareness of issues like global warming have been etched into their way of life. Companies will have to offer more than just attractive salaries and health benefits to get the best college graduates. If a young person is going to spend eight hours a day in an office building working for a company, they are going to demand corporate values and buildings that are environmentally sound. Things like "Smart" and "Green" buildings will make corporations more competitive to the younger generation entering the work force. It is not a matter of "if" it will happen; it is a matter of "when" and that date is fast approaching. Companies who are able to see the environmental trends and react proactively will save money, send a positive message to their community and attract the best employees. It's a win-win situation!

BUSINESS IMPERATIVES FOR THE NEXT DECADE

Businesses are facing emerging imperatives for action. The next decade will prove increasingly challenging for businesses as they form strategies for the future.

1. **The Transforming Workforce**
Employers will need to respond to a generational and gender mix that have a new set of expectations and will demand environments in alignment with their values.
2. **Corporate Social Responsibility**
Businesses will use their buildings and workplaces as tangible demonstrations of their environmental performance and concern for the wellbeing of employees and communities.
3. **Corporate Environmental Duty**
Thorough risk management is critical, including compliance to evolving codes and standards and responding to emerging areas of risk such as indoor air quality.

Source: Colliers International Australia, 2006

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