Tom Shircliff
Chairman, Envision Charlotte

(Managing Partner - Intelligent Buildings, LLC - tom@intelligentbuildings.com)
History and The Big Idea

• CCCP adding sustainability to 10 year planning process
• Wanted it to be very measurable and business-like
• **BIG IDEA**: Why not plug in every building in uptown and measure energy as one number in real time?

"Can you do that?"
Yes you can!

68 buildings ALL connected:
- Digital meters
- Cloud
- Touch Screens
This concept got us on the big stage.
...and Inspired a Formal Partnership

Government, NGO, Academia, Economic Development, Business

Logos of participating entities:
**Envision: Charlotte** is a unique public-private collaboration that is leading Charlotte to become a **global model** for environmental **sustainability** that promotes economic development.
**Envision: Charlotte** will develop programs, measure all activity and leverage regional strengths:

1. **Model Programs** - Make the center city a living laboratory to foster innovation and first-of-their kind programs in **energy, water, air and waste** that can be scaled and replicated in other communities.

2. **Detailed Measurements** - Measure and document qualified efforts that simultaneously improve the environment, the business conditions and the overall quality of life in communities.

3. **Regional Strengths** - Leverage our strengths and accomplishments in the **energy** sector and build on our **history of cooperation** between corporate-citizens, academia and government.
Different from Other Organizations

- **Geography** …only a sub-market at a time and inside a hard loop
- **Use-types** …energy program is only for commercial office
- **Measurement** …hard wired, data base, analytics, displays
- **Business community involvement** …98% signed contractually so far
- **Focus on reality** …base approach is not a demonstration
- **Focus on solution provider value** …quickly create a new global business model
Next Steps

Additional Model Programs

- Water (connect, measure and aggregate)
- Air (Electric Vehicles Program)
- Waste ("connect", measure and aggregate)

Policy and Research
What they’re saying..

“…reduce energy use 430MM kWh and 220,000 metric tons of CO2 …and pay for itself with lower utility bills …sounds like a pretty good deal to me”

President, Bill Clinton

“With Envision Charlotte we can completely transform a city… suddenly we see a model for the rest of the nation and the rest of the world”

John Chambers, CEO Cisco

“Charlotte’s uptown within the I-277 loop is a highly concentrated urban area that provides an excellent site to demonstrate what is possible with advanced energy efficiency and smart grid technologies.”

Jim Rogers, CEO Duke Energy

“It’s amazing to me how technology is changing so many industries…”

Maria Bartiromo, CNBC

“Envision: Charlotte is different from every other smart grid initiative because its focused and manageable, measurable, and collaborative.”

William Pentland, Forbes
Tom Shircliff
Chairman, Envision Charlotte

(Managing Partner - Intelligent Buildings, LLC - tom@intelligentbuildings.com)
Envisioning Charlotte as the **Energy Capital:**
Sustainability for the Sake of Economic Development
All CGI members are asked to define and pursue a new, specific, and measurable approach to a global challenge. Making a commitment is a responsibility of membership, and CGI members determine the focus and scope of their commitments.

“CGI is a global movement where every word spoken, every partnership discovered, and every promise made can have a direct impact on the lives of millions of people across our planet for generations to come.”

– Nelson Mandela, Former President of the Republic of South Africa
The dollars and sense of green retrofits

*Sooner is better than later, and it could cost less than you think*

A joint study by Deloitte and Charles Lockwood

---

**Motives for undergoing a green retrofit (survey responses - 2007)**

- Greater indoor air and environmental quality: 88%
- Corporate environmental commitment: 88%
- Value of public relations and free publicity: 75%
- Greater workforce productivity: 75%
- Operational cost savings from energy efficiency: 75%
- Attraction and retention of quality workforce: 69%
- Greater overall building value: 31%
- Higher occupancy rates: 19%
- Operational cost savings from water efficiency: 19%
- Reduction of greenhouse gas (GHG) liability: 13%

February 9, 2012
POTENTIAL BENEFITS OF GREEN BUILDINGS

May be realized by:
- Occupants
- Tenant, employees, customers, guests
- Non-occupant owner
- Landlord, investor, lender
- Nearby property owners
- Community
- Society
- Ecosystem

Contribute to triple bottom line:
- Economic
- Environment
- Social

People, planet, profit!

February 9, 2012
INVESTMENT HYPOTHESIS: WHAT TO LOOK FOR

1. Higher rents
2. Lower operating expense (less risk)
3. Faster absorption
4. Lower tenant turnover
5. Lower risks
6. Higher value
7. Recovery of added costs

MYTH-BUSTING

The commonly held belief that green building necessitated higher costs has proven a false assumption, as design and building professionals, together with product manufacturers, have found ways to achieve savings in up-front costs.
The 2009 Ernst & Young business risk report
Real Estate

1. Continued uncertainty and impact of the credit crunch
2. Global economic and market fluctuations
3. Impact of aging or inadequate infrastructure
4. Global war for talent
5. Changing demographics
6. Inability to find and exploit global and non-traditional opportunities
7. Pricing uncertainty
8. Green revolution, sustainability and climate change
9. Economic vulnerability and regulatory risks in developing markets
10. Volatile energy costs

The top 10 business risks