Macro & Micro Drivers

- **Macro → Urban / Building Planning:**
  - Governmental Regulations
  - Resource Scarcity
  - Public Perceptions

- **Micro → Owner Requirements:**
  - Financial Criteria (NPV & Payback)
  - Operating Factors: Reliability & Maintainability
  - Risk Mitigation

Smart Growth: Efficiency, Ecology, Economy
Macro Drivers

- Construction Development Trends
- Global Warming Reality
- Increased Resource Scarcity
- Growing Urbanization
- Consumer Demand for Comfort Cooling
- Government Activism

Smart Growth: Efficiency, Ecology, Economy
Micro Drivers

- Efficiency Investment Incentives
- Carbon Trading Markets / Emissions Caps
- Operating Efficiency / Power Requirements
- Cost: First, Operating & Total Cost
- Risk: Risk to the Owner

Smart Growth: Efficiency, Ecology, Economy
Evolving Business Model

- Financial savings & benefit to building owners is #1 driver
- Operating efficiency will increasingly drive capital equipment decisions
- Economies of scale will drive competitive markets: district vs. single building cooling

Smart Growth: Efficiency, Ecology, Economy
Innovation & Demand Creation

- Product Development Investment
- Product & Quality Standardization
- Efficiency Guarantees, Monitoring & Optimization
- Setting the cost, efficiency and project performance bar

Smart Growth: Efficiency, Ecology, Economy