The Visible Campus

Bringing Sustainable & Energy-Wise Designs to Focus

1:30 PM Tuesday, January 24th

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4 Free Sessions on How to Make Sustainability and Energy Visible

The New Visibility & Interactions in the Building Automation Industry
9:00 am Monday

New Open Source Technologies that are Changing the Industry
1:30 pm Monday

The Tools of Visibility and Interaction
9:30 am Tuesday, January 24th

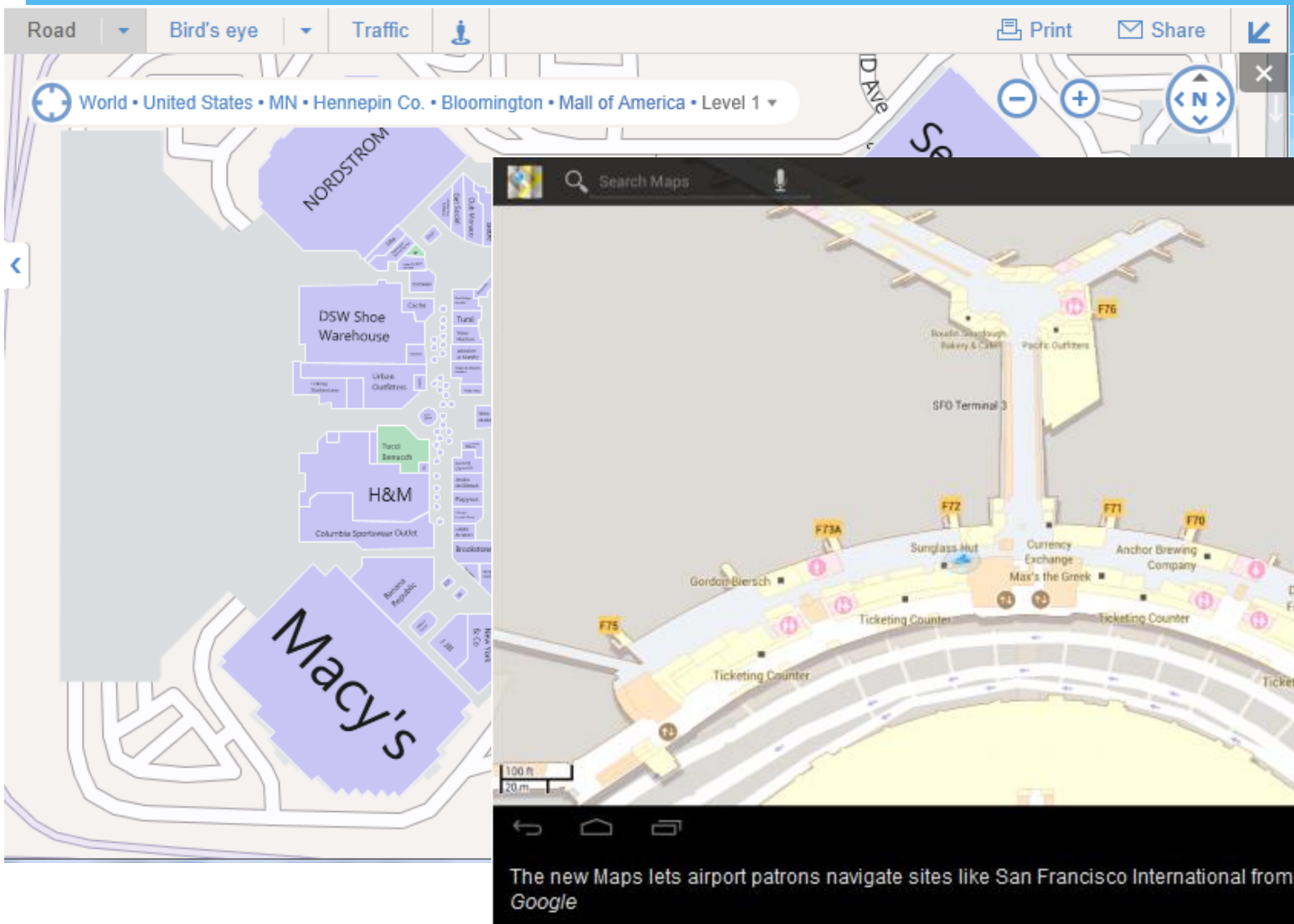
The Visible Campus – Bringing Sustainable & Energy-Wise Designs to Focus
1:30 pm Tuesday, January 24th

New Visibility & Interactions

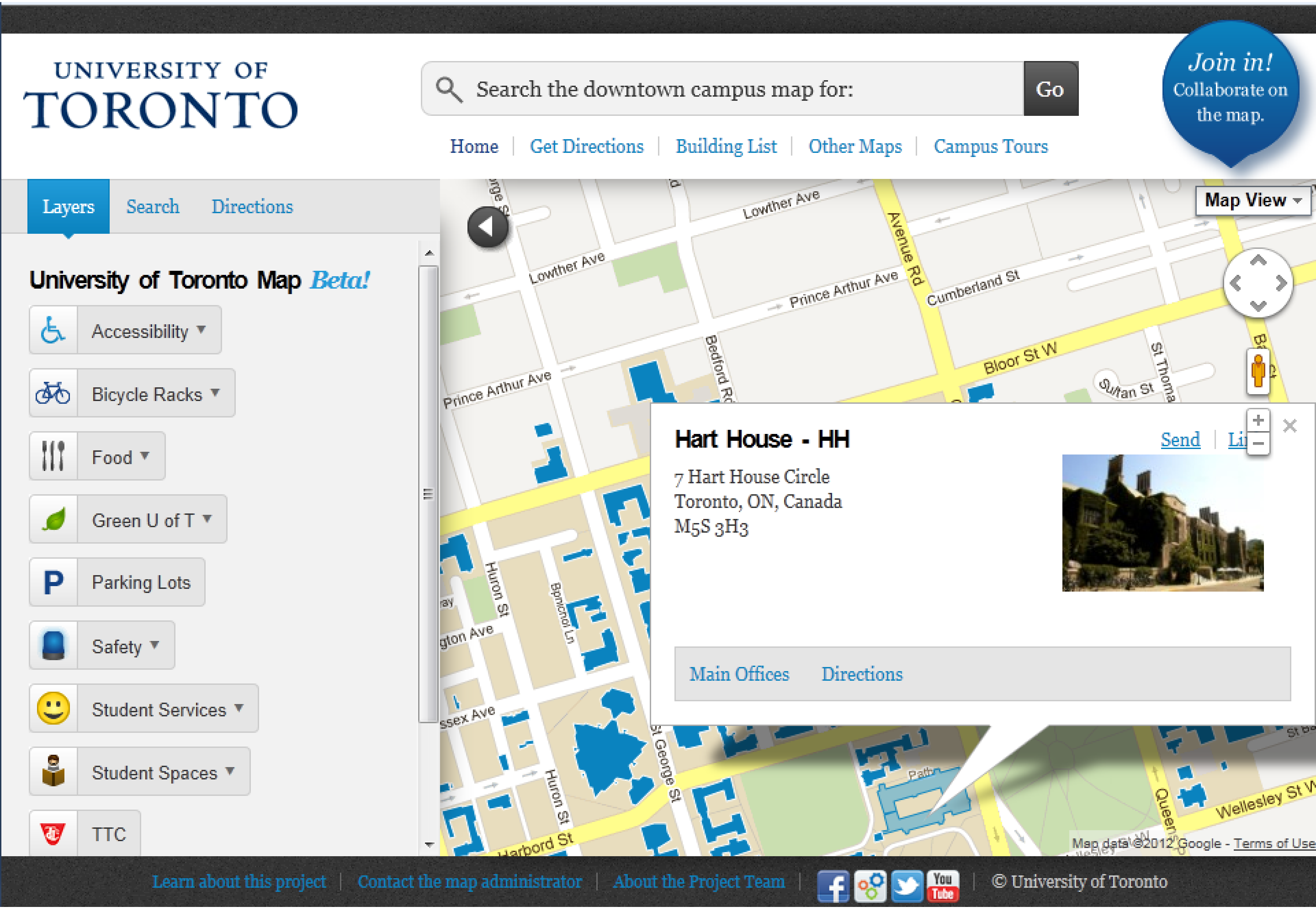
"Making the Invisible Visible" is about how we as an industry depict our invisible cornerstones of comfort, energy, and environmental impact.

How can we best show what cannot be seen: Temperature, Comfort, Electricity, Performance and their relationship to sustainability, and the necessary information and interaction to maintain all?

Google and Bing take street level to our level with evolving standards



The new Maps lets airport patrons navigate sites like San Francisco International from the inside. *Photo courtesy of Google*



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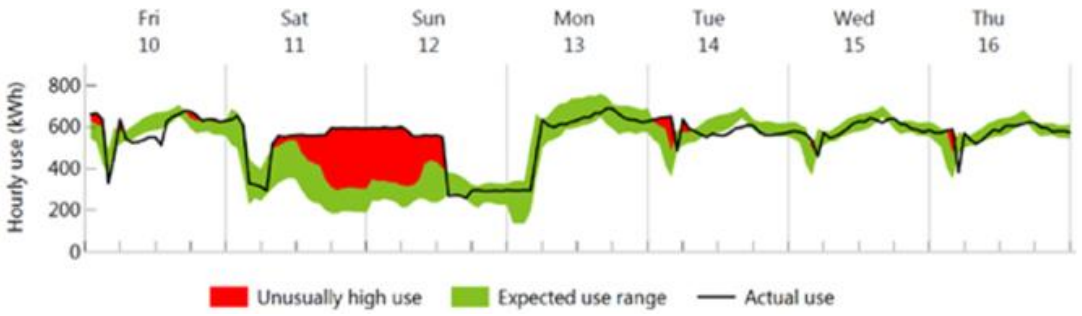
Buildings Becomes Mobile
Any Platform, Any Place, Any Time

Our palette also grows larger

Graphics Convey a Message

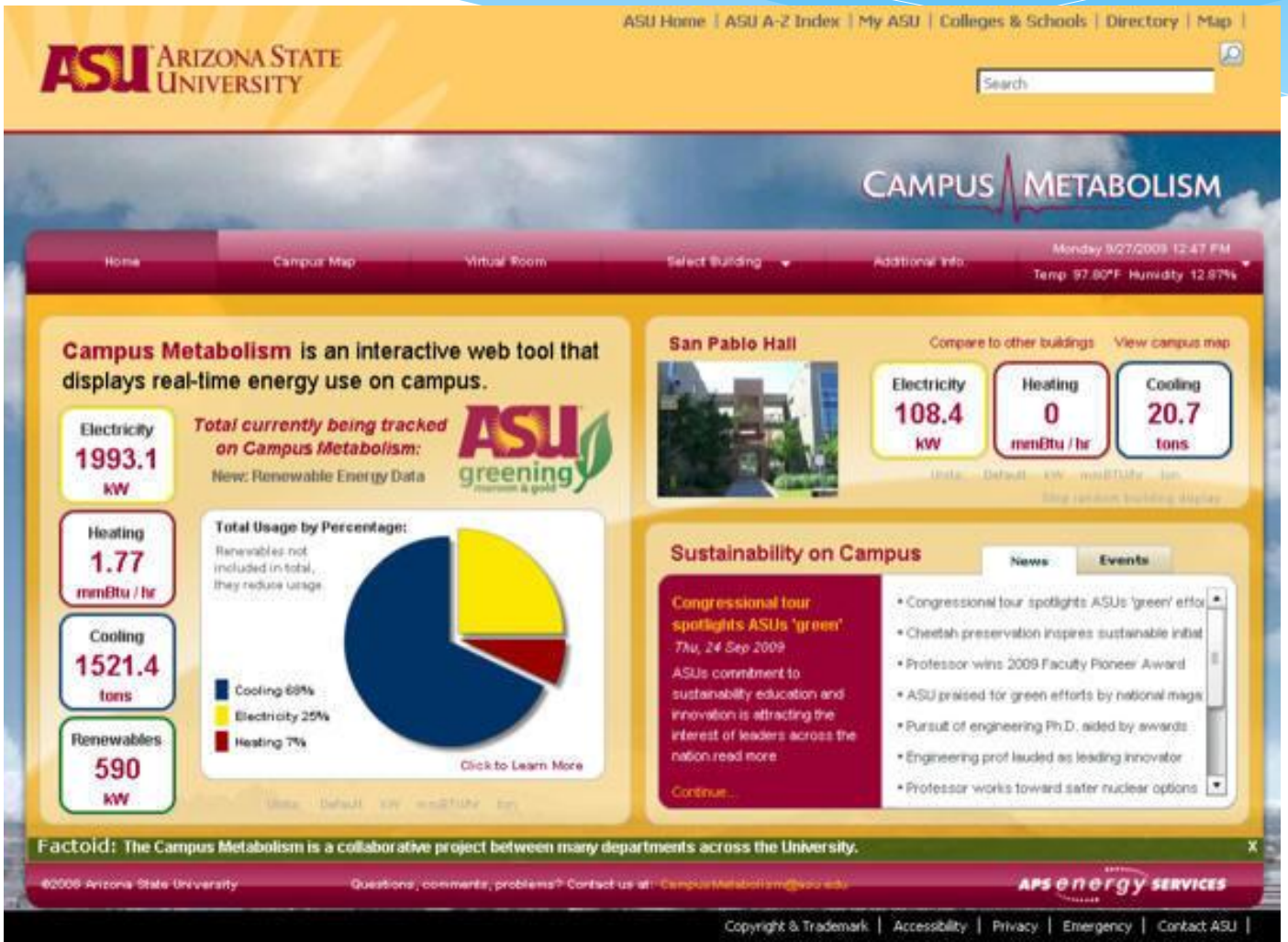
Make the Invisible Visible



Connecting Communities speaks about the many new communities that building automation now is part of.

Automation Turns Green

Energy Information System (EIS)



The “Virtual Office” Energy Calculator

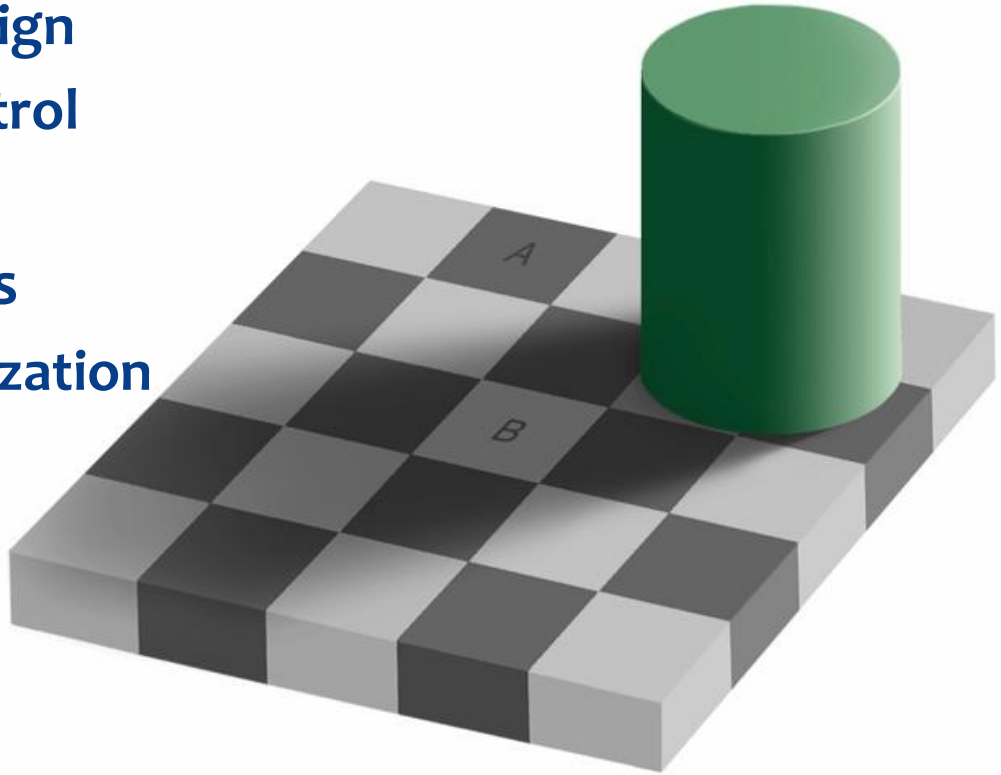
3D Graphics

Creating Interactions

Wiki defines Interaction design very well -- "embedding information technology into the ambient social complexities of the physical world."

Psychology of Building Performance

- Historical Methodologies
  - Reinforcement by Design
  - Limited Access to Control
- Current Methodologies
  - Performance Familiarization
  - Increased Sensitivity



Performance Indicators

Building Energy -

- **Primary Energy Consumption**
- **Renewable Energy Consumption**

Water Use

Pollutant Emissions & Water Discharges

- **Greenhouse Emissions**

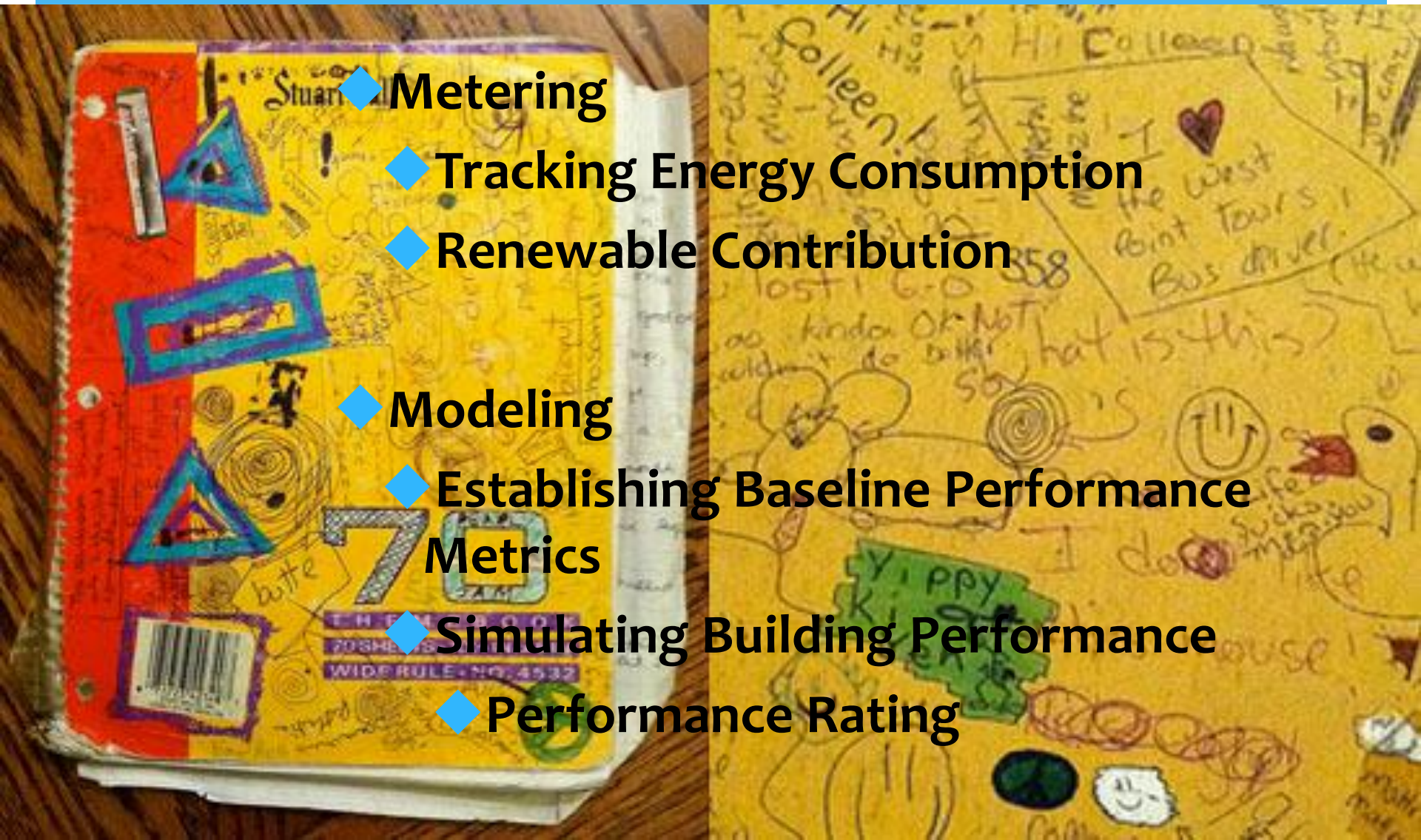
Materials Use & Solid Waste

- **Percent Recycled**

Related Issues

- **Building Utilization**

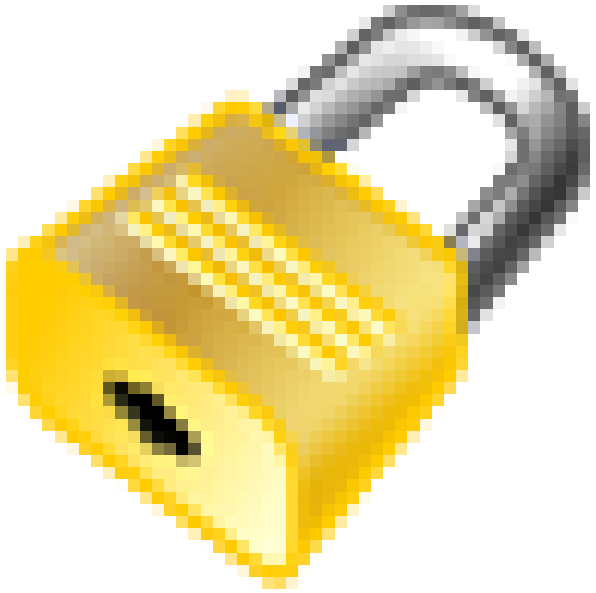
Benchmarking



- Metering
  - Tracking Energy Consumption
  - Renewable Contribution
- Modeling
  - Establishing Baseline Performance Metrics
  - Simulating Building Performance
    - Performance Rating

Revealing Performance

* **Measurement & Verification**
* **Continuous Commissioning**
* **Monitoring & Reporting from BAS**
  * **Building Dashboards**
  * **Other Indicators**



Performance Reporting

* **The Building Automation System**
  * **Real-Time Reporting**
  * **Performance Icons**
  * **Energy Dashboards**
* **Performance Comparisons**
  * **Current v Baseline**
  * **Building v Campus**
  * **Building v Similar Class**

Campus Building Energy Performance