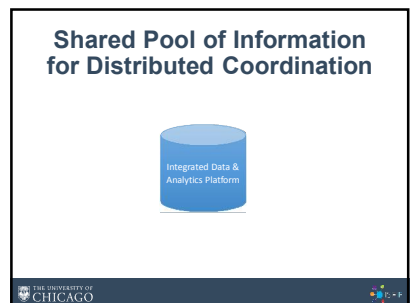
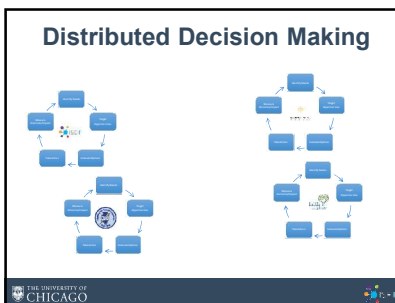
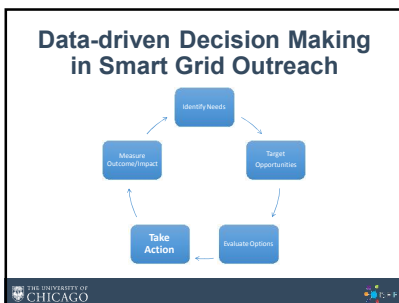


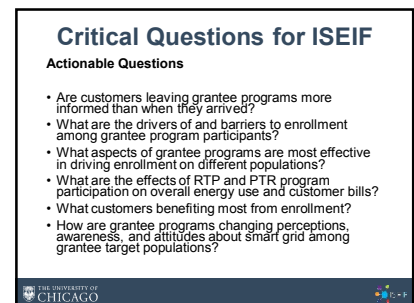
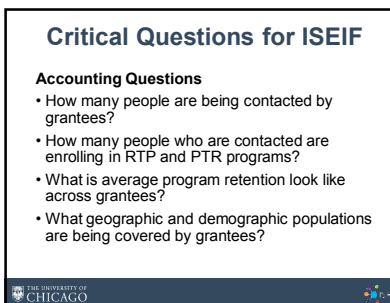
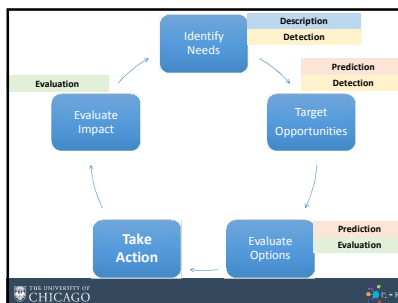
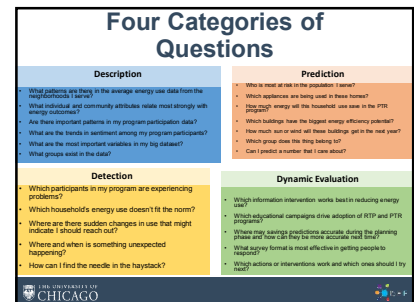
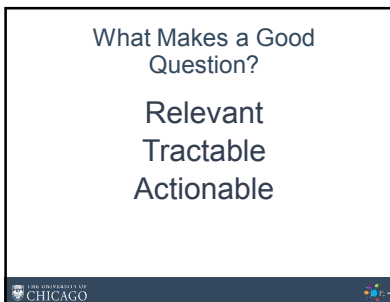
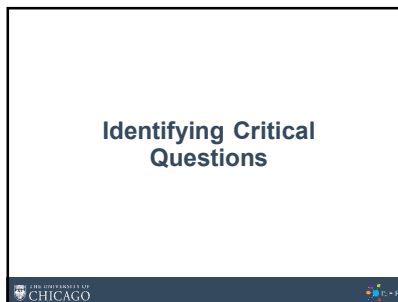
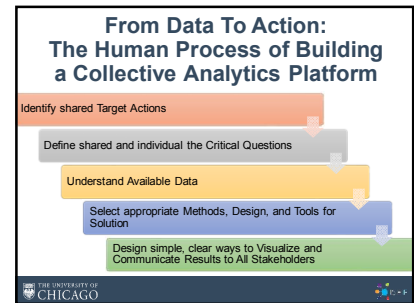
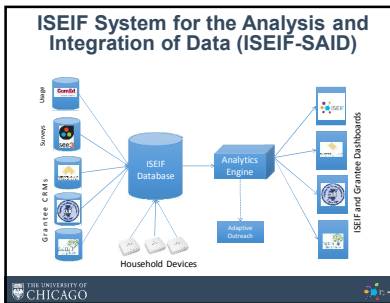
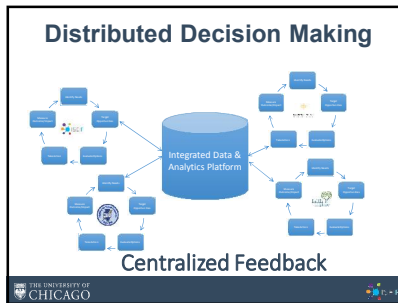
Goals

Everyone leaves understanding:

1. How data can be used to help program administrators dynamically understand & improve their programs.
2. How ISEIF's integrated data platform is helping them collect, connect, analyze, and visualize its data.
3. What the biggest challenges and road blocks you'll run into in trying to do the same thing.
4. Where you can go to get help overcoming them.

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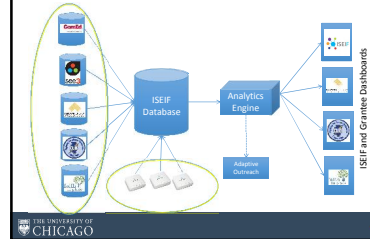
Critical Questions for Grantees

Actionable Questions

- Am I leaving program participants more informed than when they arrived?
- What are the drivers of and barriers to enrollment among my program participants?
- How is my program changing perceptions, awareness, and willingness to enroll among my target populations?
- Which outreach method among my programs is most effective in driving enrollment?
- How can I change the wording and timing of my outreach to increase program enrollment?
- Which neighborhoods, networks, and populations that I'm currently not serving should I target for my program?
- What are the effects of participating in my program on overall energy use and customer bills?
- Which program participants are benefiting most from my program?

Lessons from Identifying Critical Questions

Data Discovery and Collection



Data Sources

- Surveys
 - Grantee Participant Surveys
 - See3 Participant Surveys
- Grantee Programmatic Data
 - Dates, times, and participant lists of events
 - Participant demographics
 - Text-based summaries and impressions of events
- Customer Usage Data
 - Monthly billing data
 - Hourly AMI data
 - 6-second interval data from hubs
- Community Data
 - Neighborhood demographics
 - Household locations (building footprints & voterfile)
 - Zip+4 load profiles
 - Smartgrid rollout shapetiles

Data

- Surveys
 - Grantee Participant Surveys
 - See3 Participant Surveys
- Grantee Programmatic Data
 - Dates, times, and participant lists of events
 - Participant demographics
 - Text and writeups of events
- Customer Usage Data
 - Monthly billing data

Survey

Have you enrolled in the Real Time Pricing Program?

- A. Yes
- B. No, but I might if I had more information about it.
- C. No, and I do not plan to.

Have you enrolled in the Peak Time Rebate Program?

- A. Yes
- B. No, but I might if I had more information about it.
- C. No, and I do not plan to.

Survey (continued) If they answered "Yes"

What was your primary reason you chose to enroll in the program?

- A. It seemed simple to enroll and didn't really have any downsides to enrollment.
- B. I found out how much I would likely save by participating.
- C. A friend, neighbor, or colleague who is in the program suggested I enroll.
- D. I found out how participation in the program would benefit my community and the environment.
- E. Other (fill in blank)

Survey (continued) If they answered "No, but..."

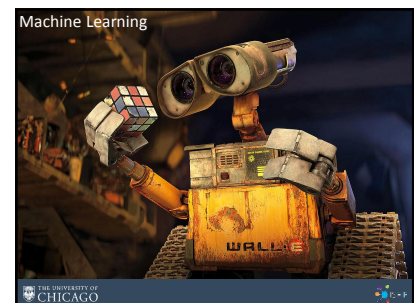
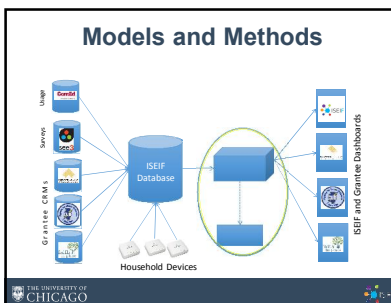
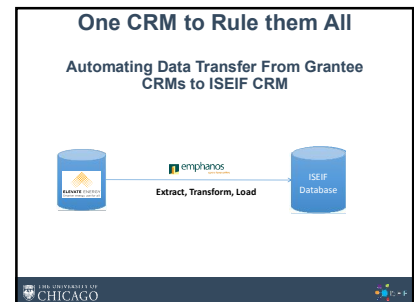
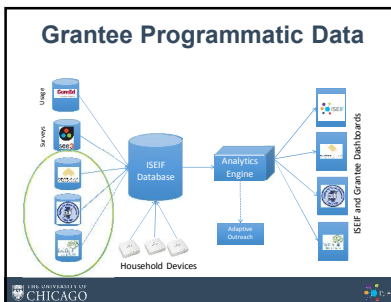
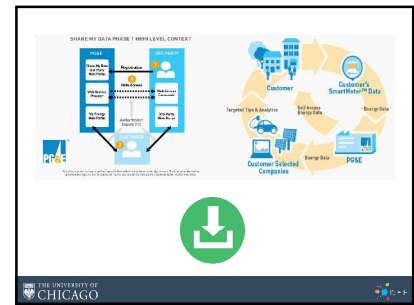
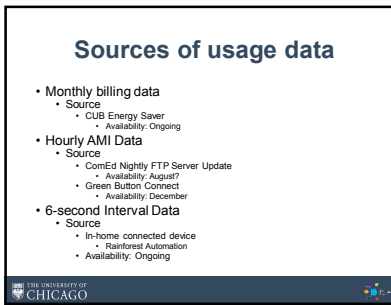
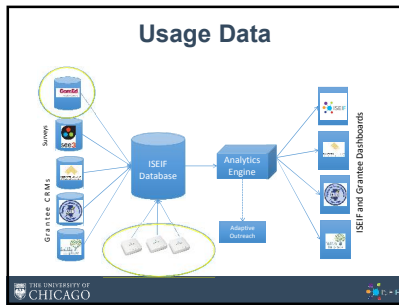
What information would be most useful to you in deciding whether or not to enroll?

- A. I need to know how to sign up for the program.
- B. I need to know how much money I would likely save by participating.
- C. I need to talk to someone who is currently participating in the program about their experience.
- D. I need to know how my participation will benefit my community and the environment.
- E. Other (fill in blank)

Survey (continued) If they answered, "Will not enroll"

Why did you decide not to enroll in the program?

- A. I believe it will be too complicated and take too much time to participate.
- B. I believe I will not save money participating in the program and may end up paying more.
- C. A friend, neighbor, or colleague had a bad experience participating in the program.
- D. I believe my participation in program won't benefit my community or the planet.
- E. Other (fill in the blank)



Models & Methods

- Targeting
 - Contactability model
 - Persuadability model
- Enrollment
 - Intervention effects model
 - Nonparametric matching methods
 - Within-intervention attribute effects model
 - A/B testing
 - Multi-armed bandit
- Program Persistence
 - Survival analysis
- Program Effects
 - Energy usage effects model
 - OpenBaseline
 - Bayesian structural timeseries
- Network effects
- Neighborhood effects
 - Neighborhood load profile model
 - Difference in difference

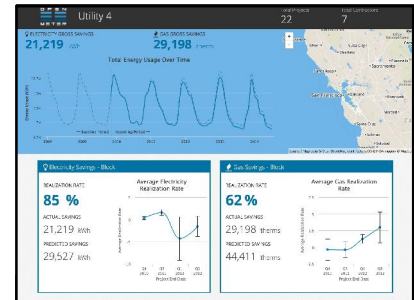
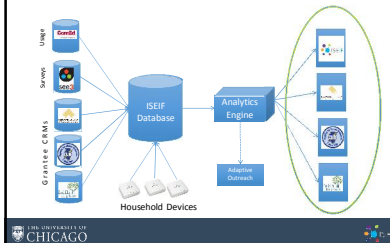
Opportunities for Adaptive Outreach

- Text-based engagement with program participants
- Email campaign testing for improving enrollment

Lessons from Selecting Appropriate Models and Methods

Visualization & Communication

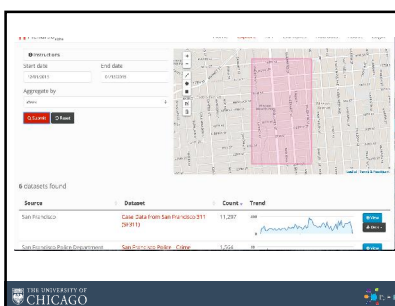
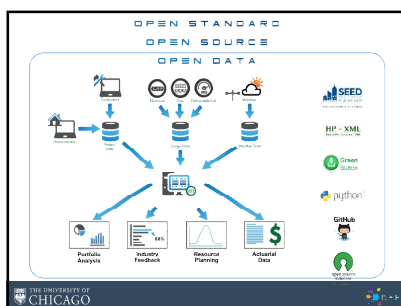
Visualization and Communication



Lessons from Communicating Back to Stakeholders

In conclusion...

We're getting better at this



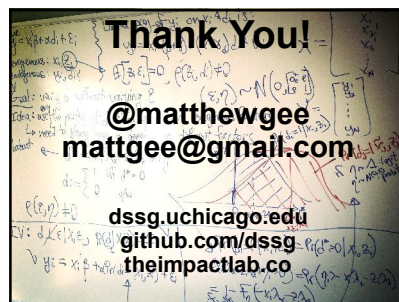
The critical skills for the big data future look like the essential skills of the little data past

- Ability to connect people and organizations
- Ability to build and lead cross-sector coalitions
- Ability to sell the big vision
- P-values: patience, persistence, perseverance
- Seeing the opportunities through the risks



"Make no little plans; they have no magic to stir men's blood and probably themselves will not be realized. Make big plans; aim high in hope and work."

Daniel Burnham



Questions