Data & Sustainability:
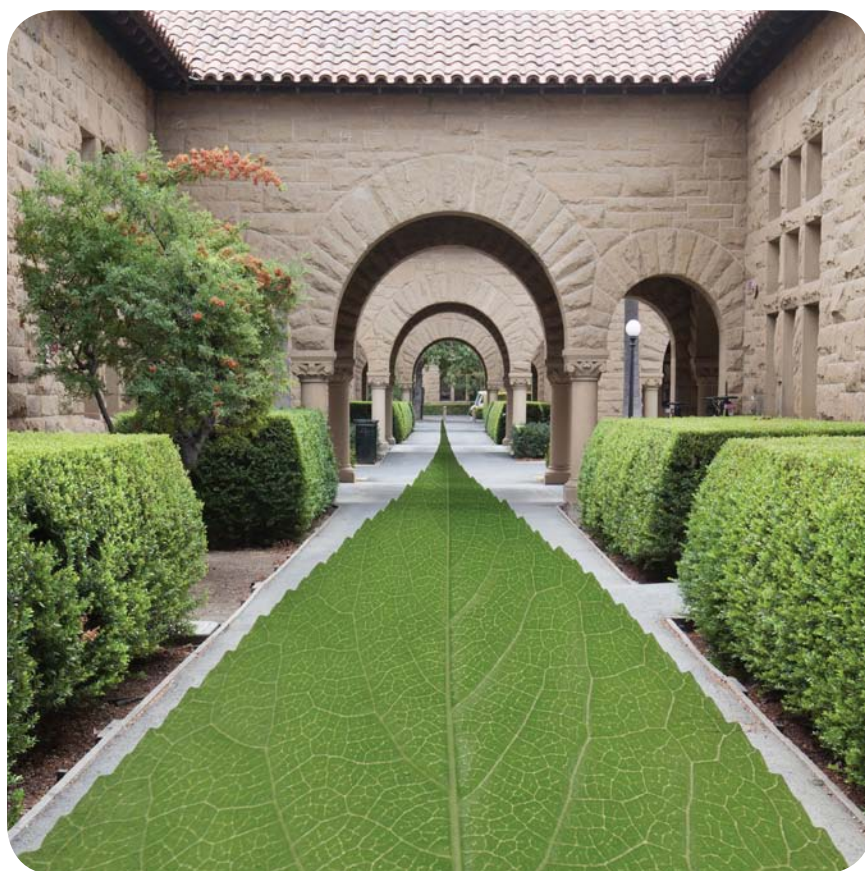
4 Ways Data Creates a Path to Progress

Today, many sustainability officers are stretched thin by their duties, which includes a heavy workload of measuring and reporting data, both internally and externally. Unfortunately, this limits the time these officers can spend advocating for policy change and making significant improvements on campus. Despite this potential drawback, data is not the enemy of sustainability leaders. In fact, the collection and proper use of data can provide opportunities for building a sustainability case and outlining opportunities for future improvements.

Four ways data can improve sustainability leaders' progress towards strategic goals are:

1. **Establishing a campus baseline**
2. **Identifying opportunities by using peer comparisons**
3. **Building campus support through communication & transparency**
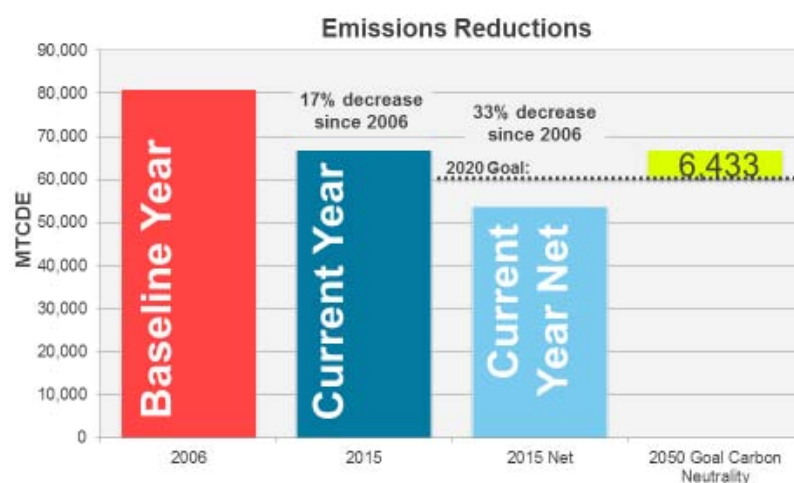4. **Tracking progress & looking towards future targets**

Establishing a Campus Baseline

The first challenge faced by a sustainability officer is often sorting through the data available on campus. Is this the right information and is it accurate? Can you complete your sustainability plan, report to AASHE STARS, or establish real goals with this data? Sometimes, the answer is yes, but all too often, there are gaps that must be closed before any forward progress can be made.

With any type of measurement, setting a baseline is step one. From here out, all progress or setbacks will be measured against this starting point. In the chart at right, this institution's baseline year is 2006 and they have been able to reduce their net emissions by 33% since that first year. While they still have a significant challenge to reach their carbon neutrality goal by 2050, their current progress is clear.

When an institution makes a sustainability commitment, whether internally or externally to Second Nature, they need to know where they stand. We have found that commitment signatories have lower emissions and energy

Establishing a baseline data year of 2006 has allowed this institution to consistently measure its progress towards their emissions reductions goal.

consumption than institutions that have not signed, at least over the immediate term.[1] In order to make continued reductions, an institution must move beyond the "low hanging fruit" opportunities and make systemic shifts. With verified historical data, everyone can agree where the campus is starting, which helps define a path towards future success.

1 The State of Sustainability in Higher Education 2015: Emissions Metrics, Consumption Trends & Strategies for Success, p. 15

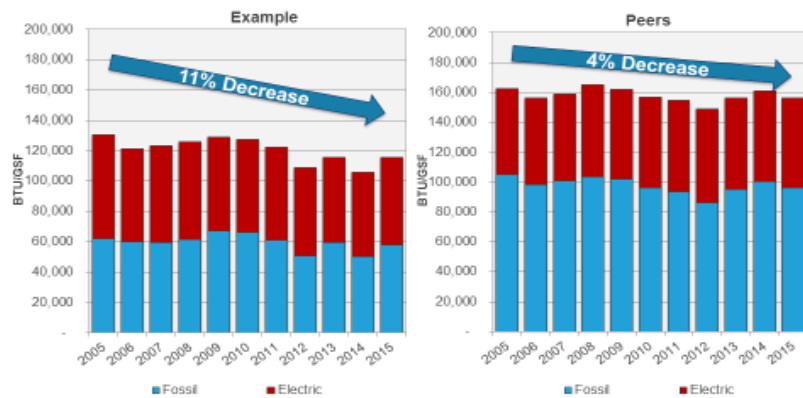## Identifying Opportunities by Using Peer Comparisons

Do you know what your peers are achieving when it comes to energy savings and emissions reductions? How do you know what's possible on your campus if you cannot look at others like you? Maybe your campus is outperforming others and you don't know it.

The chart here is from college that was seeing greater success than its peers when it comes to energy consumption. This institution had reduced consumption by 11% while peers had only seen a 4% decrease, over the same time period. It's also worth noting that this institution has a higher tech rating, meaning its buildings have a higher mechanical complexity which often has a direct correlation on energy consumption. (To learn more about tech rating, click here.) This institution didn't know that it had a good news story until it was shown a comparison to their peers. This helped drive new conversations on campus about how to build on this early momentum.

On another campus, sustainability leaders were excited about a 13% decrease in scope 2 emissions from 2006 to 2015, but they instinctively knew there were improvements that could be made. When they looked at peers' scope 2 emissions, they saw a 21% decrease and a much lower baseline starting point of emissions. This spurred a hard look at potential strategies for improving electric efficiency, and purchasing electricity from
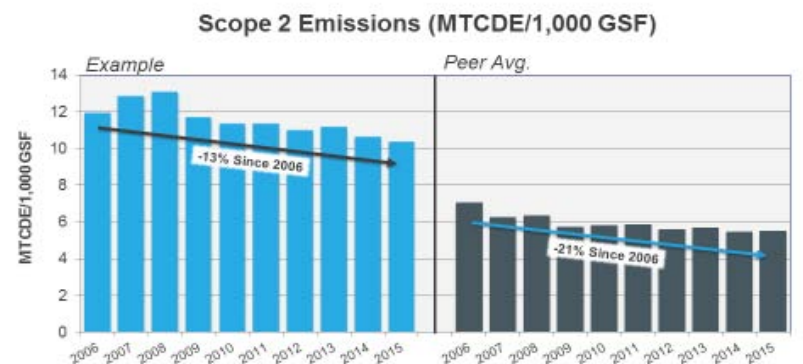
Low Energy Consumption vs Peers
Despite higher tech rating, Example consuming below peer average

With access to peer data, it's easier to draw meaningful conclusions about your own campus. This institution was able to better understand their own improvements in the context of their peers.

Scope 2 Emissions Above Peers Historically
Since 2006, Example decreased emissions by 13%

At this institution, a significant decrease in scope 2 emissions was seen as a major accomplishment. However, peer context proved that there is still potential for much great achievements.

renewal sources.

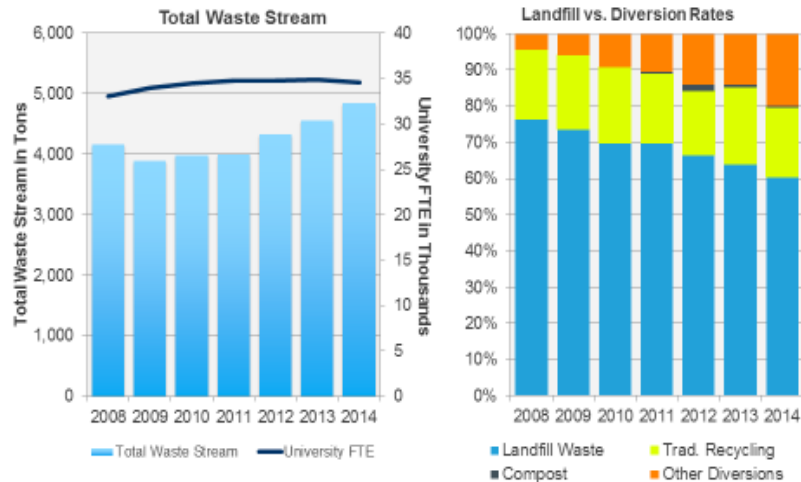## Building Campus Support through Communication & Transparency

Repeatedly telling your sustainability story on campus is a good way to get buy-in from faculty, staff, students, and leadership. Keep in mind that these diverse groups might need to hear different buzz words to get their full attention.

For instance, students might care about more visible programs, like those that focus on waste stream and recycling. The chart on the left shows that the total waste production on this campus has increased more than 15% while total university full-time equivalents has increased less than 5%. However, the chart on the right shows that more of that waste stream is diverted from landfills year-over-year.

The more fiscally minded stakeholders, such as board of trustees, the chief financial officer, and the president, might be more interested in seeing the potential monetary savings of the green revolution. Best in class institutions are able to reduce their energy consumption by 2.5% annually, which as the chart shows, quickly approached a million dollars in cumulative savings in a decade, for one institution.

Properly communicating good news and achievements is just as important as spreading the word about opportunities for improvement.
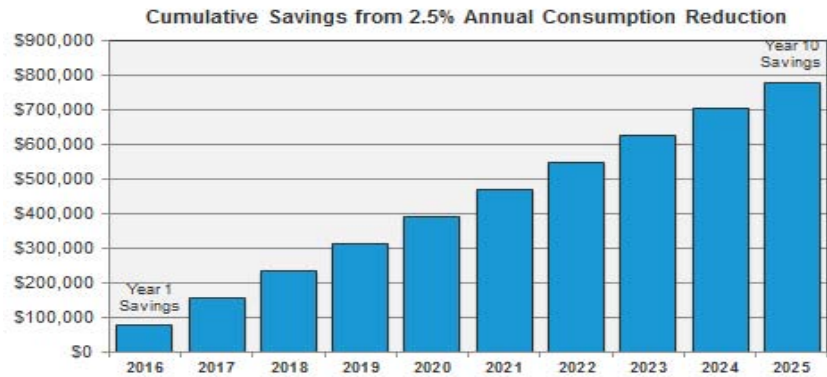
Total Waste Stream and Recycling Rates

It seems reasonable that as campus population increases, waste production will also increase. This institution was pleased to see that the distribution of the waste being produced was increasingly being diverted from landfills.

Financial Impact of Reduced Consumption

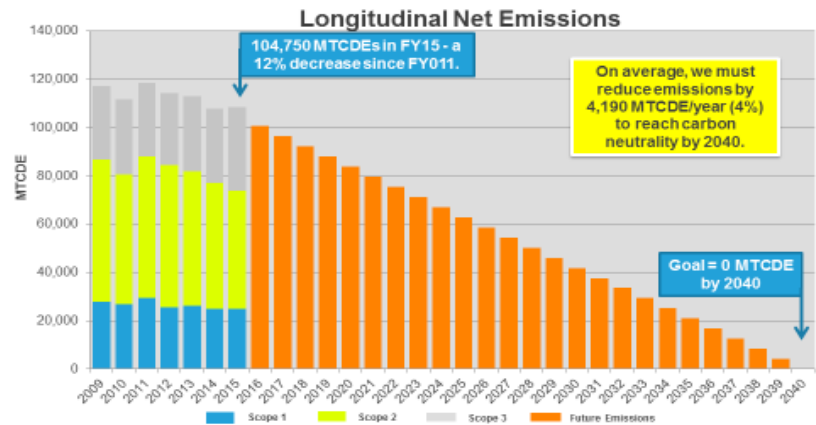"Best in Class" Institutions Cut Consumption 2.5% annually

CFOs and campus presidents like to see opportunities for cost reductions. Best in class institutions are reducing their energy consumption, which leads to measurable cost avoidance going forward.

Tracking Progress & Looking Towards Future Targets

With the right data, constituents across campus can understand institutional history, see where you stand currently, and plot a course for the future. Aggressive planning requires persistent tracking. The chart here shows the progress and projected reductions needed to reach a carbon neutrality goal by 2040. With seven years of historical data as a starting point, this institution can see they need an average annual reduction of 4% to attain their goal. As the sustainability and facilities leaders update this data each year, they can adjust their efforts to stay on track.

With a proper baseline established and sound tracking practices, good data can help provide actionable recommendations. This institution can now project a need to reduce their net emissions by 4% annually in order to meet their 2040 neutrality goal.

Conclusion

As sustainability leaders strive to create an atmosphere of discourse and change on campus, these four benefits of data can help make the difference between progress and stagnation. The right, verified data will provide peer context and show how sustainability challenges can fit into the bigger facilities picture at your institution. Data can also help get the attention of the executives who are primarily concerned about financial outlooks and institutional goals. Using a common vocabulary and concise communication, your sustainability plans can gain traction with diverse constituents from boiler room to board room and everywhere in-between.

"Carleton College has led by example for many decades when it comes to environmental issues. As a signatory to the American College and University Presidents' Climate Commitment, Carleton recognizes that sustainability and climate change are critical issues for campus operations. Sightlines' services helped us more quickly and accurately measure our institutional impact. The context Sightlines provided through benchmarking against peer institutions helped highlight areas we are excelling in as well as where to focus future efforts. Now that we have confidence in our data, and a process for annual updates, we can shift our energy to finding new ways to reduce our footprint and engage the community on these issues."

Martha M. Larson
Manager of Campus Energy & Sustainability
Carleton College

![sightlines logo]

Benchmarking and Analysis

Having completed more than 500 operational sustainability analyses and carbon emissions inventories, Sightlines core sustainability service allows you to:

- Save time, free-up resources and build constituency for change

- Stay on the cutting-edge of reporting standards from the Sustainability Institute at the University of New Hampshire

- Access valuable metrics related to key sustainability issues

- Compare your institution against peers

- Generate your own benchmarks through our online Member Portal

Reporting

Although incredibly valuable, AASHE STARS reporting is complex, time-consuming and resource intensive. Sightlines sustainability reporting service eases this burden by:

- Collaborating across departments to minimize their data collection and reporting involvement

- Expediting timelines through effective and transparent project management

- Compiling, reviewing and verifying results to assure comprehensiveness and accuracy

- Accurately reporting results to ensure proper ranking against other participating institutions

- Making strategic recommendations to improve future performance and boost STARS scores

Planning

Whether writing reports, or submitting climate action or sustainability plans, Sightlines sustainability planning service keep you focused on your mission by:

- Determining how to meet climate targets going forward

- Advising on the integration of sustainability with education and campus life

- Using credible forecasting to show the current trajectory of campus emissions

- Harnessing the most detailed benchmarking available to create attainable climate targets

- Documenting your plan to satisfy reporting requirements and to gain support of the community

Our suite of sustainability solutions are standalone yet interrelated services that can be combined to meet your needs