



## How DuPont Opened the Black Box and Streamlined Sustainability Reporting



### Dupont's Carbon Commitments

Following the DowDuPontMerger and forming a new DuPont from Specialty Products, the new company published a list of Sustainability commitments in 2019. The organization pledged to reduce global absolute greenhouse gas emissions (GHGs) by 30% from 2020 to 2030, including sourcing 60% of electricity from renewable energy. DuPont further committed to deliver carbon neutral operations by 2050.

### The Problem

Prior to 2016, DuPont used an in-house custom application to calculate their greenhouse gas emissions. Evolving requirements led to lengthy code that was difficult to maintain and even more difficult to understand. The “Black Box” effect continued to magnify. By 2016 DuPont no longer had in-house technical resources or background to update the code and so they set out to find a replacement solution. DuPont initiated a project with a third-party vendor to develop a new application which went live in January 2017. By 2020 the new application had again become very cumbersome to maintain for both DuPont and the vendor. Each new report required custom coding which took away valuable time and resources from critical application upgrades.

**“It was old, antiquated, SQL-server based. The code became so long and nested that it was extremely difficult to understand. We were forced to constantly build on top of the old code to keep up with rapidly evolving business requirements. We knew it was only a matter of time before the next requirement would be impossible to implement and the system would break.”**

Rhonda Owens, Environmental Programs Manager, DuPont

To keep up with evolving environmental data management requirements the Sustainability Team developed sophisticated spreadsheet models based on data dumped out of the old system. While they were able to meet their deadlines this way it was a manual and extremely cumbersome process.

DuPont wanted a modern cloud-based system that was intuitive, easily configurable by in house staff and flexible to new requirements.



**“We wanted a simpler tool that we could adopt for a longer term.”**

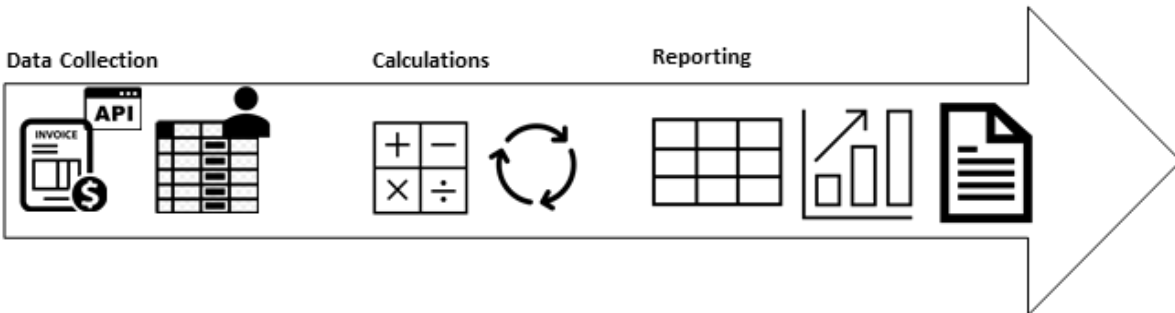
Rhonda Owens, Environmental Programs Manager, DuPont

In 2020 DuPont and xOverTime began discussions to understand both the value and pitfalls of the current Sustainability module. xOverTime’s spreadsheet-based solutions approach was intriguing to the team as they could continue to leverage their existing calculation models where they can control the analytics. Replicating that logic in proprietary code would not be necessary with xOverTime.

After much due diligence DuPont chose to partner with xOverTime in 2021 to build the next version of their Sustainability reporting system.

### **Objectives**

1. Reduce both the capital and maintenance costs of the system at large
2. Open the “black box” and make business logic and calculations transparent
3. Seamlessly integrate with other systems
4. Automated Inputs and Data Entry
5. Query and/or configure reports rather than coding each one
6. Provide visual comparisons of performance against future goals



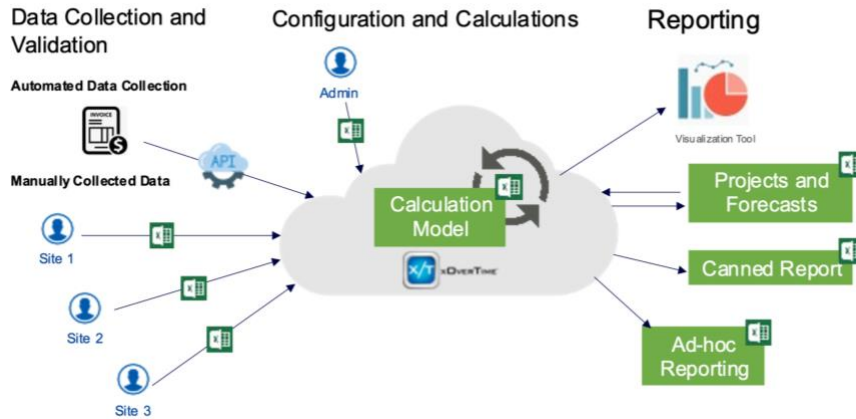
### **Design and Plan**

“First we needed to collect raw data from each site. We then needed the capability to apply our business logic to accurately report on our performance to internal customers. The collected data then allows us to extrapolate the reported emissions leading to a better understanding and prioritization strategy to reach our 2030 targets.”

After many brainstorming sessions, the team put together a design and plan for how the system would work.



## Sustainability Solution Overview



1. **Manual Data Collection** – Site data is collected with a single spreadsheet Data Entry Form. The design was adapted from a format with which staff were already familiar and successful. Leveraging xOverTime, the workbook refreshes based on the user’s site and parameters to report. Excel’s built-in tools such as data validation, boundary checking, conditional highlighting etc... make handling data entry errors a codeless implementation and ensures only clean and accurate data enters the system. Data that doesn’t pass the validation checks may still be uploaded if a valid comment is applied i.e. electricity use dropped to zero because the site was divested.
2. **Automated Data Collection** - Integrations with other source systems would be automated leveraging REST APIs. One of the awesome synergies xOverTime provides is the ability to run automated inputs through the same spreadsheet model in the cloud that the manually collected data runs through locally on the user’s desktop.
3. **Configuration and Calculations** – Existing spreadsheet models and reports are leveraged avoiding the need to re-invent the wheel. The transparency and configurability lift the covers and get rid of any notion of a “Black Box”. The familiar interface and skills of maintaining and evolving spreadsheets means the Sustainability team **owns** the solution.
4. **Visualizations and BI** – Visualization Dashboards are paramount to providing upper management the views and drill down capabilities to quickly understand the information. Seamless connectors from xOverTime to PowerBI and Tableau ensures development is easy and dashboards are automatically updated in real time as data flows into the system.
5. **Ad-hoc and Standardized Reporting** – Following the pattern of hooking into existing spreadsheets, several reports and pivots are now automatically refreshed directly from the cloud. These views drive reporting not only to internal stakeholders but also external ones such as the Carbon



Disclosure Project and Global Reporting Initiative. Additional canned reports, query and aggregation tools are easy to build with native xOverTime commands and the power user's have enjoyed the self-sufficiency.

### **The Results**

"Previously we were burdened with creating reports manually in the developed platform. With xOverTime we put so much more information in front of our stakeholders rather than spoon-feeding it to them through manual custom reports. We just give them the answers in the form of queries and dashboards. It's led to more efficient workflows; we've reduced a lot of effort and can become more strategic in the future.

For site user's the leap to xOverTime is not a leap at all; it's a spreadsheet they're very familiar and comfortable with. It takes only five minutes to train a site resource to enter data into xOverTime where our previous application required three one-hour training sessions and wasn't a good user experience. Now the user experience is put your numbers in, hit save and upload, you're done. It's a very limited use case and minimal effort with built-in data guardrails.

Analyzing our energy usage drives the business decisions for where to target emission's reduction. The beauty is that historical data can be easily queried and viewed in context to today's data with the click of a button. Combining these data points with future projections helps show the perspective of why our business prioritized the projects and tasks in the first place.

If we only managed this process through spreadsheets, it would have been impossible; the detail involved, keeping them all up to date, version control. With xOverTime integrating the flexibility of a spreadsheet user interface with the power of the cloud is simpler, easier and the best way to collaborate." – Rhonda Owens

### **Conclusion**

The new application went live in 2021 and to our users' delight, a once cumbersome data entry process is now surprisingly simple. DuPont and xOverTime continue to partner to evolve the solution, further automate and expand the value to other departments. DuPont has gained back control of their Sustainability reporting, streamlined the process, and opened the "Black Box" of calculations that was embedded in their old system.

What does Sustainability reporting look like in your organization? Do you inevitably fall back on spreadsheets to fill gaps where other systems fail? Reach out to us at xOverTime and let us support your journey towards a more robust solution that is useable and maintainable by your environmental staff. Sustainable data approaches for a more Sustainable world!