

Choosing Sustainability Management Software for Your Business



A Guide for Small and Mid-Size Organizations

Would you use a spreadsheet to track your corporate finances? To monitor your inventory? To log all of your personnel data? The old saying goes “If it is important, you must manage it; if you want to manage it, you must measure it”, but too many companies today use spreadsheets to track their environmental impacts. Don’t get us wrong, we love Excel as much as the next person, but for sustainability tracking, a spreadsheet is cumbersome and prone to errors. Whether you make a data entry mistake while flipping back and forth between screens or you simply have incorrect data to start, once you get it wrong in a spreadsheet, it is difficult to figure out where exactly you went astray.

Fortunately, an entire industry of software providers has cropped up to combat the problem of spreadsheet-based sustainability reporting, each promising to streamline the data collection, validation, and reporting of all things sustainability-related for you. These programs come in all shapes, sizes, specifications and styles. Some of these software platforms are fabulous; some, not so much. While many of the systems are more appropriate for big companies, some of them will be just right for you.

To help you find the right one, we’ve combed through a myriad of different sustainability software options and took a look at best practices in software selection. These are our findings.

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About This Report

While we're publishing this report in 2011, the idea first germinated in the fall of 2009, during a strategic planning meeting at Strategic Sustainability Consulting. In talking with a number of sustainability consultants about the state of our industry, one obvious trend was the appearance of a new beast: "enterprise carbon accounting (ECA)" software. As large, publicly-traded, multinational companies faced pressure to track and report their greenhouse gas (GHG) emissions, they needed to move beyond tracking environmental data in an Excel spreadsheet.

Savvy IT companies have seen this need and have rushed to fill it, with the number of software offerings mushrooming to over 75 solutions as of mid-2011. Many vendors even have multiple versions of their software available. While most of these software platforms were designed for really large companies (with really large budgets), we saw that small/medium enterprises would soon need similar technology to manage their sustainability impacts. This is especially true since they were probably already using software packages such as QuickBooks, Salesforce.com and the like for their financial, lead tracking and other business needs.



Our original intent was to prepare a report that reviewed each software option and provided a critical commentary of the good, the bad, and the ugly. What options were available within our clients' budgets? What platforms were "plug-and-play" with robust data packages and an intuitive interface? How easy would it be to expand to additional facilities and metrics as the company grew over time?

With the rapidly growing and evolving field of sustainability software, we had our work cut out for us. The research phase of this project took the rest of the year, and at the end of it we realized that there wasn't one clear winner. Rather, there were a small handful of "best bets" that we thought would make a client's short-list, depending on that client's industry, goals, and sustainability ambition.

Even so, we were hesitant to call out specific software packages – for better or worse. The field of sustainability software providers was (and is) rapidly changing, with new players entering the market each month, and updates and upgrades to existing software released almost daily. Any judgments included in this report would quickly be outdated. We realized that we needed to change course.

Therefore, we determined that a more useful approach for YOU would be provide our input on what we think YOU should be looking for when selecting a solution for your business. This advice covers some of the basics of making a software package selection as well as areas that we think are critical to make sure you get the right tool for your sustainability needs.

Companies reading this report should conduct their own due diligence. Do your homework. Ask for demos and trial accounts. In other words, don't make this report your sole source of information.

How to Use This Report

Think of this report as a roadmap to help you navigate the perilous journey toward making a purchasing decision. In each section, we'll identify a key question that you should answer or a critical factor that you should consider when choosing your solution. Finally, we'll wrap up with some predictions (and hopes) for the next generation of sustainability software.

Along the way, we hope you'll provide your feedback, comments and suggestions so that you can help make this guide better for future readers who are trying to make the same decision that you are facing today.

Our Methodology

To ensure multiple viewpoints were heard, the project team included representatives from three different sustainability consultancies, which focused on different niches of the small and mid-size market.

We began with an internet search for sustainability software, including terms like “carbon software,” “sustainability software,” and “environmental software”. The list generated more than 50 options and increased each month. We spent time reviewing the vendor materials and software demonstrations.



Additionally, we reviewed available industry sources for data. These included Groom Energy’s “Enterprise Carbon Accounting” report published in 2010 and the “2010 Directory of Sustainability Planning & Reporting Tools” published by Darcy Hitchcock and the International Society of Sustainability Professionals. Further material was gathered via the GreenBiz Enterprise Sustainability Tools virtual conference held in December 2010. Please note – we are NOT trying to duplicate or repeat their findings. Instead, we found each source valuable in developing our thought process and we encourage you to check them out yourself if you would like to learn more.

Finally, we followed one of our own recommendations: we took advantage of our own networks to get their feedback, input and suggestions on this article. We feel like we’ve got a lot of smart people around us – especially in the SSC Consultant Network – so we would have been crazy not to talk to them!

Want to Know More?

We welcome your feedback on this report – particularly if you’re struggling to choose sustainability software for your organization. We’d be happy to offer our insights into which options might be worth a closer look.

You can reach us online at: www.sustainabilityconsulting.com or by email at info@sustainabilityconsulting.com.

Fancy a phone call? Give us a ring at 202-470-3248.

Love a good handwritten note? Pop a piece of monogrammed stationary into the mail to us at 888 Station Street, Herndon, VA 20170.

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Introduction

This report consists of several components; read them in order or skip around to the parts that are most relevant to your current needs. As you'll see, an important theme of the paper is to do what is right for you. To help you decide which way to go, here's a brief synopsis of each section.

1. Do You Need Sustainability Software?

This is the fundamental question underlying the rest of the paper. Our presumption is that you'll say "yes", but we want to make sure you ask yourself that question and answer it appropriately.

2. "This porridge is too hot. This porridge is too cold. But this one is just right..."

Just like Goldilocks had to go through the process of finding the right meal, you need a process to select the right software for your firm.

3. Vendors, Vendors, Everywhere...

The first part of your evaluation process is to pull together your list of vendors. Here's what we think you should look for.

4. Show Me The Money!

You're probably not going to get the software for free. Plus, we think you should know what you'll gain from your purchase.

5. What Do You Really Need?

It's hard to select a software program if you don't know what you want it to do up front. Just asking for "Sustainability Tracking Software" isn't enough.

6. Just like Dora the Explorer – the Map is Your Friend...

Kids TV heroine Dora the Explorer calls on her friend "The Map" when she doesn't know which way to go. You

should know which way both you and your vendor are planning to go.

7. Using the Software – Who, What, When, Where and How...

You can't pick the right software for your company unless you know who's using it, what they'll be doing with it, when they're using it, where they are using it and how they are using it.

8. Where's that Instruction Manual Again?

Don't buy an important software program without ensuring that you and your users get the proper training.

9. "System Error 32"? What does that Mean?

All software breaks. Users make mistakes. What's important is to know what happens to you when these things happen.

10. I'm Getting Audited!?!?

One of the biggest reasons to do a better job of tracking and reporting on your environmental impact is to reduce the impact of future audits on your business. Make sure your software can actually help with this.

11. What We'd Like to See in the Future

This is where we provide our two cents' worth on what sustainability software vendors should offer in future releases.

12. But Wait, There's More...

Most of your software vendors will do more than just sell you software. You may want to take advantage of some of these offerings.

13. Glossary of Terms

We use acronyms and other industry terminology so we thought we should define what we think these things actually mean so that you don't have to go Google them.

1) Do you need Sustainability Software?

This is the very first question you should answer. You wouldn't be reading this paper if you didn't THINK you needed sustainability software, but we want to make sure you really think this through.

What's the business case for making this purchase?

We know you are probably already doing something to track your carbon emissions or report on sustainability. What we don't know, however, is if you are reading this because you are overwhelmed with the volume of data and inputs which are now cropping up for your business. Possibly, a consumer of your sustainability data has specified a particular protocol or sustainability data set for their needs. Maybe it is getting harder and harder for you to manually create all the reports and extracts that are needed to satisfy all the internal and external requests you receive for sustainability data. Data quality, ease of integration, system support costs and data security might be your chief concern if you have all the other areas sorted out (or if you are the CIO). If you've got a clear idea of what you hope to get out of this software purchase, then keep reading. If you're not sure yet, make a list of some things that you hope to gain (you'll need them later in this article anyhow) and then keep reading.

Do you know what you will be measuring and reporting on with this software?

Your intent may range from being able to perform life-cycle analysis (LCA) for your product supply chain to fulfilling a need to report on your carbon emissions to a customer such as Walmart and onward to one of the various international reporting protocols. Maybe you are being audited by an NGO or other stakeholder group. Knowing the reason for making your purchase will be essential to making the right decision as every package provides some or all of these functions to varying degrees. Plus, if you have a specific use in mind, you may be able to more easily narrow your list of vendors to review.

What are your customers, suppliers, competitors, friends and neighbors using?

It's unlikely that your business is operating in a complete bubble isolated from any other enterprise carbon accounting software users. Assuming that you are on good terms with at least some of these folks, it probably makes sense to reach out to them and see what direction they've chosen. For your customers and suppliers, it may make sense to select an option that aligns more easily with their own selections. With regards to your industry, you may be able to pick something that gives you a competitive advantage – at least in the near term – until the competition buys the same software. In any case, take advantage of what other smart people know and use that knowledge to your advantage.

What business processes will you need to adapt to your software? What business processes will your software need to fit?

Understanding both the flexibility of you and your company in terms of implementing a new system is critical. Unless you are developing your own custom sustainability software solution that exactly fits your business process, you will most likely need to be able to change your process or customize the software somewhat. Understanding the ease and cost of going in either direction is important to your final decision.



At the end of the day, the cost of purchasing this system must be outweighed by some combination of cost savings and other benefits if you are to pull out the corporate credit card and make a purchase. (For more on the costs and benefits, you can skip ahead to the section titled "Show Me the Money".)

2) “This porridge is too hot. This porridge is too cold. But this one is just right...”

The most important step in the process – after deciding you are going to buy a software solution – is to pick the right one for YOU. While you could throw a dart at a list on the wall or pick the first one alphabetically, we encourage you to go a bit deeper in your evaluation and selection approach.

All of these steps can be as simple or elaborate as you want. Maybe you invest an afternoon in going through the process. Maybe it takes you a year of analysis (and paralysis) to get through it. Invest the amount of time and effort in direct proportion to the level of your expected investment. This is a “Goldilocks” moment – only you know what level of effort is “just right”.

If you already have a standard process in place at your company, that’s great news. You should follow it. The rest of this paper will just be informational about the sustainability-specific things we think you should consider (plus you can find out more online at www.sustainabilityconsulting.com/software).

If you don’t already have a process in place, then you should be able to use the outline herein to go through the right steps for making the right selection of the right vendor for you. Alright? Here we go...

A. Vendor List

You need a list of vendors. Without it, you’ve got nothing left to do. You can skip ahead to the next section for more on identifying who should be on your list, but you’ll want to keep the rest of this framework in mind.

B. Selection Criteria

For you to decide on a solution, you need to know what’s important to you. Is it price? Functionality? Features? A whiz bang interface? Your friend’s recommendation? Your brother-in-law’s company? Establishing your selection

criteria and weighting up front will let you develop a scorecard and set of questions that will guide you through the vendor evaluation process. You’ll use it to make sure you collect the same set of information about each vendor. Establishing the relative importance of each factor up front will allow you to score each vendor objectively. Once you finish the discovery phase of your selection, the scorecard will help guide you toward an informed conclusion and optimal choice.



C. Dollars & Sense

Understanding your business case – both the cost side and the benefits side – is essential to any software selection process. You’ll need to have some idea of how much you are willing to spend – a range is best up front, along with any known caps on cost. This should even be built into your selection criteria and scorecard. You also need to know, at least at a high level, what benefits you expect to derive. Is it time savings, ease of integration with your other systems, specific reporting needs, etc? These key benefit categories should also be included on your selection criteria scorecard.

D. Cull the Herd...

At last count, there were 75+ vendors selling some kind of sustainability data management software. You can’t effectively consider all of them. You need to winnow the list. Cut the ones out that are too big, too small, and the ones that have too much functionality (yes, there is such a thing), or too little. Definitely cut the ones that aren’t going to be in your cost ball park. If you’re a small office, you might not need a full blown ERP level solution (but feel free to dream big!). If

they aren't going to deliver on your desired benefits (i.e. they don't produce reports for your target reporting standard) then you should cut them. Not every vendor is right for you – they know it too – so don't waste time on the ones that obviously won't fit your needs.

This first round of cuts should probably get you down to around 5-10 vendors that merit a closer look. Again, "closer" could be an afternoon spent reviewing their web site and online demos or a full blow site visit, marketing presentation, live demo and price quote. Use this round of research and analysis to pare your list down to your finalists: your top 2 or 3 options. (You'll perform the necessary level of due diligence as outlined below and out the bottom of this research funnel will come the right answer)

E. Test Drive

You wouldn't buy a car (hopefully) without taking it out on at least one test drive. You should absolutely do this with your finalists in the form of a product demo. You might find that the online demo they offer is sufficient for your purposes – but make sure you are getting more than just a marketing brochure in PowerPoint. You should be able to enter data, click the buttons and see what a report or dashboard view of your data looks like. For a bigger purchase (especially if you are still looking at an ERP level solution), you may want to ask for something as involved as a "conference room pilot" where your team of users sits down with the vendor and puts the software through its paces. This will make sure that your operations, facilities, legal, executives, and others can all get a better idea of how it fits their needs.



You can read all the marketing literature that can be thrown at you (hopefully digitally). The vendor will tell you about all the great things that their software does. Good ones will even tell you what their software doesn't do. All these messages require interpretation – and just because you asked for something or make an assumption about how it works, doesn't mean that will actually be what you get in reality. In the old days, this was known by the phrase "caveat emptor;" today, we think of it as "trust, but verify". This hands-on review is critical to verify how the system will work for you. And since you are the one buying it, that's a key piece of input for your scorecard.

F. Negotiate

It may be tempting to just write a check or swipe your credit card, but you will almost certainly be able to negotiate a better deal than the standard list price. Whether this takes the form of an actual price reduction (which we think it should) or if it just means adding on features, support, training or other similar goodies, you should maximize your investment. These vendors want your business and will work with you. If they won't, they might not be right for you anyhow. Keep in mind that unless you've hired someone to create a 100% custom solution for you, these guys have already written the software. You're just paying to use it. Vendor costs are shared across all their customers. You are simply negotiating how much profit they make from you. Don't force them into a loss on the deal, but don't pay too much.

G. Sign On The Dotted Line

Have your lawyer review the fine print of your agreement. You should read it too. After all, you are signing a contract. You need to protect yourself by ensuring that you are going to get the products and services that you expect. The vendor needs to protect themselves and ensure that you follow the terms of the license agreement including not giving away the software to someone else for free. Since this isn't just a product you are picking off the shelf at your local Staples or Best Buy, take the time to do this. If it is a big purchase, even though your lawyer may cost a lot per hour, imagine the costs of having your proprietary data get out or of losing access to your data as a result of some dispute with the vendor. Ensure

that you've got a process in place to resolve these disputes or disagreements as well as to make changes in the agreement if needed.

H. Write the Check

This sounds easy enough and hopefully it is. But your accountant will want to know how to treat the payment. Is it a Capital investment cost or just an Operating expense? What will the amortization schedule look like for any work being done? Do you pay an upfront fee, a monthly license fee, an annual maintenance payment, etc.? How do you pay for changes – up front, at the end, along the way? How often does the price change – and do you get a say in the change when it does?



You should have talked through all these details as part of the vendor analysis and negotiations, but just in case you didn't, get it sorted out before you write the check. Also, be sure to make sure you've got room left in your yearly budget to pay for it now and in the future.

I. Use It

Gather your data. Set up your models. Train your users (we'll talk about this in depth later on). Report and analyze. Go forth and make your business more sustainable!

3) Vendors, Vendors, Everywhere...

Where do I look for vendors?

Round up all the usual suspects, of course. You can always check Google or Bing. When you do, not only will you come up with a variety of software vendors, if you include keywords like "reviews" or "ratings" with your "sustainability software" or "enterprise carbon accounting" starting point, you'll most likely run across one or more reports that were released in 2010 (or more recently), including:

- Groom Energy's Enterprise Energy & Carbon Accounting Report (2011 Edition: <http://www.groomenergy.com/eca.html>)
- International Society of Sustainability Professionals Directory of Sustainability Planning & Reporting Tools: (2010 Edition: <http://sustainabilityprofessionals.org/directory-sustainability-planning-and-reporting-tools-2010>)
- Verdantix' Green Quadrant Carbon & Energy Management Software (2010 Edition: http://www.verdantix.com/index.cfm/papers/Products.Details/product_id/174/green-quadrant-carbon-energy-management-software-2010-/-)

Be sure to check out the offerings of your current software suppliers as well. If you like the firms you already work with, then you may want to go with what you already know.

What do you think is important in a vendor?

That's a bit like asking if you prefer chocolate or vanilla ice cream – it's really a decision that is specific to you. One key consideration for your company may be the size of the vendor – do you want someone with the size, breadth and history of an SAP (109,000 customers worldwide) or Johnson Controls (founded in 1885) or are you looking to support the local software startup run by some freshly minted MBA's and recent software engineering grads that was founded last year? The vendor's history should give you some indication if

you are going with someone who's likely to be in business 3-5 years down the road or if you are rolling the dice. We know that past performance is not always a good predictor of future success and that your neighbor's son's fraternity brothers may have just started the next Google or Twitter, but it is worth your consideration. In fact, you may prefer to be the "alpha" dog instead of some anonymous member of a vast customer base. You should also give some thought to what you'll do if your hot startup vendor gets bought by one of the big players – as your first choice begins to be assimilated, will they still give you the same reasons to like them?

Once you figure out your flavor of vendor, then it's time to choose what type of ice cream cone you want your scoops served up on: traditional cake – i.e. packaged software that you install yourself on your own servers, old fashioned sugar – i.e. hosted software that you install in somebody else's data center which serves you and only you, or the currently en vogue (and very tasty) waffle cone – i.e. Software As A Service (aka SaaS) that resides in the "cloud" and is most likely operated by the vendor to support multiple customers in the same software instance.

You can also figure out if you like sprinkles, toppings, and other ways to jazz up your ice cream by considering factors such as open-sourced software or a proprietary solution, operating system / platform (i.e. Unix, Linux, Windows, etc.), hardware needs for hosting and for your users, etc. You don't want to deploy a brand new software program to replace your Microsoft Excel 2003 spreadsheets and then realize that it won't work in your old Internet Explorer 6.0 web browsers that are still the corporate standard. And we haven't even started talking about how your users want to view reports on their smart phones...

Are you the right customer for this vendor?

Just because you think that Vendor XYZ.eco is the right one for you, doesn't guarantee that you are the right customer for this vendor. Find out who their reference customers are and see if any of them are like you. If you are a small manufacturing company in Kansas City, it may not matter that Wal-Mart, the City of Palo Alto, Coca-Cola and Toyota are customers. If they don't have some clients who are "like you",

make sure to ask them why they think you are a good prospect for them. "Because you have money..." is not the right answer. You may not be looking for a deep partnership, but find someone who will be attentive and responsive to your needs as a customer. It also pays to talk to their reference customers and if you are able, see if you can check out their own installations and get their direct input versus just taking the vendor's word for it. We understand that this level of diligence may sound like a lot for a software purchase, but think about what you do when you go out to purchase a new car or sign up for a new office lease – both of which are potentially in the same price range as your software purchase (depending on your taste in cars and office space).

Is this just a "Blind Date" or are you looking for "Marriage"?

Finally, consider whether you are looking to just make a quick purchase and go on your merry way or if you are looking for some more significant commitment. You may have gone down the short term path when you picked up your Microsoft Office software at your local retailer or even when you ordered your latest set of PC equipment for the office. Perhaps you even have an intimate relationship with your office supply retailer but are agnostic toward the packages that they sell you. That level of relationship may suffice for your sustainability software as well.



However, you might be looking for something a bit deeper and a bit more meaningful. Aside from the possibility of having your software vendor provide sustainability consulting services (which we'll cover later), the rapidly evolving nature of the field may lead you to look for a longer term relationship with your vendor. When you look at upgrades, extra modules, new data sets, new reporting requirements, etc. as you go

forward with your software package, you may not want to have to repeat everything we'll cover in these articles over and over again. Establishing a true partnership with your vendor may help ease your path going forward and produce better results in the long run. Just try to decide what level of commitment you are looking for and be sure to get a "pre-nup".

4) Show Me The Money!

The Vendor Says it Costs \$\$\$? Is that the True Total Cost of Ownership?

When you are evaluating software options, it is important to look beyond the base sticker price and to instead consider the "Total Cost of Ownership" or TCO. Most software options will have an almost-infinite variety of pricing options, depending on the number of locations you want included, the number of "seats" on your license, the amount of customization you'll need, the number of modules you want to purchase, and the level of technical support/training necessary to get you started. You'll need to factor all of these into your decision.



It can be really frustrating to call up a software provider to get a quote as they will frequently want to engage you in a lengthy conversation about how their software can be customized to whatever you need. Forty-five minutes later you're still listening to their pitch, without the slightest idea of what the bottom line is going to be.

To preempt this problem, be ready with the following pieces of information (we'll cover them in more depth later in this report):

- # of Locations – how many facilities do you want to include in the tracking/reporting process?
- # of Users – how many people in your organization will need access to the software? (Plan for at least one person per facility, plus a couple of people at your headquarters to review the data.)

Ask for a specific quote of their "basic package" for the number of locations and number of users you desire. (Don't let them talk to you about customization yet.) If they come back to you with the "very reasonable" basic package of \$50,000 a year, you'll know to politely get off the phone and move on to the next provider on your list. We found a number of "best bets" with starting prices closer to \$5k - \$10k per year. This "per year" part matters as we assume you are planning on purchasing the software and using it for a while instead of buying a new solution every year.

Another consideration is whether there is a "set-up fee" in addition to the yearly subscription/licensing fee. We think that a good software option (one that is intuitive, data-rich, and easy-to-use) should probably not require a start-up fee. If a vendor tries to charge you one, make sure that you are getting something really special in return – like a full day of training for all of your software users.

Once you've nailed down the price, it also pays to consider a couple additional elements related to the vendor payment. These include the payment method or invoicing process and the change request process. Make sure both you and your vendor are in alignment on how you'll pay them. And absolutely make sure you know how you go about requesting changes and what they will cost you down the road.

What Benefits Do I Get in Return for My Investment?

Whether you are a for-profit business or a not-for-profit organization, you still need to be able to justify the investment in this software package. Once you understand the cost, it's time to start nailing down the benefit side of the equation. This process can be as simple or as complicated as you would like to make it. Regardless of complexity, here are your basic steps:

- Know your strategy – is it a cost savings project, a revenue generator, or does it serve a non-financial need due to regulatory or other similar mandates.
- What benefits do you want to measure: labor savings, revenue, reduced risk of litigation, employee satisfaction?
- What's your starting point or baseline for each metric and what incremental change are you driving?
- How do you know you can achieve the benefit and how are you going to track it? You need to do more than just pulling this out of thin air.
- Are these hard financial benefits or soft qualitative benefits? Both are acceptable – they just require different explanations as to why they are relevant.
- Write it up – you'll need to be able to tell someone about it, whether your banker, your board, or your business partner who signs the checks.
- Measure it! This is how you know if you were successful or not.

In our research, we ran across success stories promoted by the various vendors. If you haven't figured out how to put your business case in the black yet, check out some of the suggestions listed on the SSC web site for some further inspiration.

5) What Do You Really Need?

As you sit down with your prospective software vendors, you have to be able to clearly explain what you really need out of the software. More importantly, you have to make sure that the vendor really understands your needs.

What modules are included with the base package?

Nearly every software option that we reviewed had the capability to be customized with additional modules, different data sets, and specialized auto-generating reports. Basically, if you're willing to pay for it, they can develop it.



Don't get caught in that trap. You can always add on to your software later – right now you just want to understand the core capabilities of the software "as-is".

Be sure to get a good understanding of what kind of data tracking and reporting capabilities are included with your standard subscription. Here are some specifics to investigate:

- What kinds of data does the software track? Emissions (electricity, natural gas, vehicle miles, air travel, Scope 1/2/3, etc.), water, waste, health and safety, employee training, environmental compliance, charitable giving, employee volunteerism, life-cycle analysis, legal.... The list goes on. Ask them to provide you with a list of all the standard data entry fields.
- What standard reports are automatically generated? For example, many software solutions will automatically generate the answers to some of the Carbon Disclosure Project (CDP) Report questions, or parts of a GRI Sustainability Report.

- What standards are these reports aligned with? You want to find a software platform based on respected standards like WCCSD/WRI GHG Inventory protocols. Reporting is covered in more detail later in this report.
- What capabilities exist for integration with your existing systems and those of upstream and downstream suppliers and customers? Does it need to integrate with your existing software packages? Or do you just plan on a swivel-chair solution?

What emissions datasets are included in the basic package?

There are a number of credible data sources that you may choose to use – but it’s critical that you understand what datasets your software provider uses as a default. For example:

- When you enter your electricity bill and the software calculates the resulting GHG emissions, what carbon factor are they using? Is it a carbon factor based on the actual power mix coming from your utility provider, or the state power grid average, or the national power grid average?
- What carbon factors are they using for business travel, for waste/recycling data, for natural gas, etc.? (Good answer = GHG emissions aligned with WCCSD/WRI protocol and/or EPA Climate Leaders Carbon Calculator)
- Do they recommend a specific dataset, or do they leave it up to you to choose your preferred model?
- Is there an easy way for users to see the source of each emissions factor and how old it is?
- How often is data updated? When an emissions factor changes, how does that affect old entries?
- Are there differences in carbon factors depending on the country in which the facility resides? (This is important if you have international operations, or

plan to include information from your global supply chain.)

- What benchmarking capabilities do they offer? Is it easy for you to compare your various operations or locations against each other? Against your industry? Against companies that share similar profiles to yours demographically or geographically?

Most software providers will be able to upload user-specific or even sector-specific datasets for an additional cost. Or they may be planning to add a new dataset in the future, but will only add it to your package if you ask for it specifically. (This is one reason why it can be useful to work with a sustainability consultant to identify which data indicators you should track, and which emissions datasets make the most sense for carbon calculations.)



When we conducted our initial review, many of the software providers were still scrambling to get their datasets in order. We heard lots of “that is coming next week” and “we anticipate rolling that out next month”. As the sustainability software market matures, we expect to see a stabilization of these datasets – but it’s worth making sure that the right datasets are in place before you commit to a software solution.

What kind of reports can the software generate?

No matter what other modules you select as part of your base package, one of the most important will be the Reporting Module. Aside from the question of “which reporting standard do I care about?” you need to think about some functional aspects of the software. These apply regardless of the

specific reporting standard that your software will export to or integrate with.

Your software should come with some “canned reports”. These should provide some basic read outs of your performance across your key performance indicators. They should also be able to be submitted directly to the various reporting standards bodies. This should happen pretty much at the click of a mouse button, or better yet be something that can be automatically generated and posted to your viewing audience in the appropriate format without requiring ANY human intervention or distribution.

After the “canned reports”, one of the most common features that you’ll see across the gamut of software vendors is a “dashboard” view. Just like in your car, the “dashboard” is intended to provide you a quick glance at performance on your key performance indicators (think of how simply your speedometer answers the question “how fast am I going?”). The dashboard option in your software choice will contain at minimum periodic snapshots of your performance (i.e. hourly, daily, etc.) and, depending on how tightly it is integrated with your other systems, may even enable a “real time” view of your performance. You’ll need to decide how timely the data needs to be in order to give you meaningful input. The dashboard should also let you easily “drill down” into the underlying components of your key performance indicators (i.e. if your overall carbon footprint is X, can you drill down to the geographic region, facility level, business unit, etc. that comprises X). Keep in mind – just because the software CAN do these things doesn’t mean that you NEED them.

Beyond the dashboard capabilities, you’ll want to consider some of the basic output formats – will your software package easily export data for further analysis in your standard office suite software or does it just produce basic text files that need to be manipulated and imported for further analysis? Does it provide an interactive view for users on your web site or does it just produce static PDF files? You’ll need to decide which formatting needs are important for your business.

Another capability that may be part of one vendor’s basic package, but fall into the advanced category for another, is

the ability to set goals and/or easily track progress toward a specific target that you need to report on. If you can feed your goals/targets into the reporting system, that may eliminate the need for you to extract the data and then format things for your external readers.



Finally, it is unlikely that any software package will provide 100% of your reporting needs “out of the box” – i.e. upon installation – without any customization or configuration. Even if you can get things customized as part of your installation, you will inevitably come up with a slightly different view of your data a week into using the software (if it takes that long!) At that point, you’ll be hoping that your software comes with some ad-hoc reporting capabilities that allow you or your users to get the data as needed from the tool without having to just dump it all back out to a spreadsheet – the place you were trying to get away from in the first place. The ad-hoc reporting capability may be rudimentary or very advanced depending on your solution so try to get one that most closely matches your needs and the skill sets of your team. If you have to hire someone to use your ad-hoc reports, that may defeat your entire business case around selecting the tool in question.

6) Just like Dora the Explorer – the Map is Your Friend...

The section above focused on the “basic package” – i.e. what you’ll get “out of the box” from your solution. Eventually though, you may want to start putting in some of those extra bells and whistles that weren’t important for you right out of the gate. To do this more effectively, it is helpful to have an understanding of how you expect your company’s use of the software to grow over time as well as the direction in which your vendor plans to evolve the platform.

Where does YOUR Software Usage Evolution Roadmap lead?

Look into your crystal ball. While you were building your business case to buy the software, you should have prioritized your needs – the basic package should fulfill everything that you flagged as a “Day 1” requirement. Now fast forward down the road three months. A year. Two years.

You need to think about what you need on “Day 100”, “Day 365” or other key future milestones – maybe the publication date of your next annual report or the day when you are visiting Wal-Mart to convince them your product should be on their shelves. Giving forethought to how you think you’ll use the software over the near-term, mid-term and long-term will give you a better picture of the “TCO” or “total cost of ownership”. If Package A costs twice as much to buy up front, but over 3 years won’t require significant additional expense, while Package B is low cost up front, but comes with a hefty yearly license fee that drives the payback period out to 5 years, then your capital budget may drive the decision.

What Updates and Upgrades are found along your Vendor Path?

Put your crystal ball away. Ask to peek into the vendor’s crystal ball to see their future upgrade plan. If you like a vendor, but they are missing a key module that you need, find out when they plan on offering that in the future. Are they weeks/months away, or is it not even on their radar for future work? Do they have resources committed to delivering

important functionality or are they more dedicated to the support of current customers? Find out how they handle upgrades – are they included in your base pricing or do you have to pay more? How often do they upgrade? Are the upgrades major or just little tweaks? Do you control when the upgrade takes place, or do you just have to do it when the vendor says so? This is YOUR software that you are buying so try to have a voice, especially if you are a key client for the vendor.

Where does your Vendor want to be as a company?

Another area of exploration with the vendor is to understand their corporate evolution plan – are they a long standing independent firm who expects to stay that way, or are they a VC-backed startup looking to cash out in the next couple of years through an acquisition? And if they are acquired, does that fact reflect positively or negatively in your vendor selection scorecard? On the flipside, is the company burning through cash and hoping that your purchase will give them a lifeline to eke out their existence a little bit further? You probably don’t want to be the final customer for a collapsing firm. But if you think you might be at risk, be sure you can get a copy of their code base held in escrow and make sure that you know what the data extraction approach is for you to be ready to move on to your next vendor. For that matter, if you decide to move to a new vendor on your own, you’ll want to be able to easily port your data over.



7) Using the Software – Who, What, When, Where and How...

Who is going to use the software?

When you first considered purchasing a software tool and put together the business case, you needed to figure out who was going to use the new package. Most likely, your “who” includes a wide variety of folks. They may be directly employed by your firm, they may be contractors, or they may be temps. They might be your executive leadership all the way down to the new admin assistant starting next Monday. They could be in facilities, marketing, supply chain, finance, IS, customer care, or any other aspect of your business. Most of them will NOT be sustainability experts or even software experts.



Expanding outward from your core employee base, you might have users accessing your software on behalf of your vendor. These vendor users could range from tech support to trainers, not to mention sustainability consultants provided by many vendors to help you along. If you are a SaaS based solution, the very definition of “your software” may even be a bit blurry; but don’t worry – if you selected the right vendor, security shouldn’t be a problem. At the other end of your business, you may need to consider how your software tool’s reporting engine produces reports for the broader public. Will they just have access to static PDF files that get posted on your web site or sent via email, or will they be able to access dynamic content via your web portal and get their own (limited?) view into your software ecosystem?

When thinking about the “who”, think about who in your company will “own” the software – i.e. make decisions about it, pay the bills, train the users, etc. Will this be your CIO, your CFO, your COO, your CSD, or do you wear all these hats? Someone should be designated as the responsible party for the care and feeding of the software tool and the vendor relationship once you have it in place.

Give yourself bonus points for thinking about the skill sets needed to use the tool. Do your users need technical skills, reporting skills, writing skills, sustainability knowledge, multi-lingual capabilities, etc? More importantly, do you have these skills on staff or will you need to outsource them to your vendor or to another supplier?

What will they use it for?

By “use”, we mean entering data. And reading reports. And publishing information out to the world. And sending it to your stakeholders on a regular basis. And generating ad-hoc queries to answer the latest survey you just received from a customer or supplier. And generating an energy efficiency report for your COO. And the list goes on and on (we haven’t even touched any of the real “techie” type stuff)...

When will they use it?

Your employees will be on it from 9AM – 5PM. Except during lunch breaks. And the guys from the European office will be on the tool early in the morning before you are even awake. And your supplier in China will be loading their latest information just when you are putting the kids to bed. That prospective client you just met at last week’s tradeshow will be checking out the report you emailed to him this morning when he gets to his office three time zones away – during your lunch break. You might even check it on your iPhone during the drive home, but only when you are stopped waiting on a long traffic light.

Where will they use it?

All the “when” scenarios above can also be turned around for the “where”. These folks could sit right next to each other at your headquarters office or could be dispersed just about anywhere around the globe in our current flat, connected world. Do they need a secure connection from a client site to

your internal server? Or are they just showing it off at your tradeshow booth? Whether they are in the field, on a manufacturing floor, at home, or just at their desk, you need to know so that you can make sure it serves your users' needs.

How will they use it?

While we cover the reporting formats and the like, you need to know what kinds of devices will be used to access your software. These can range from your basic desktop or laptop at your office to the plethora of smart phones and tablet computers that everyone seems to have these days. Maybe the icon sits next to Rovio's Angry Birds on their iPad or is on the home screen of their Android based smart phone. Or, given the latest wave, maybe your users will Tweet back and forth to each other and the main server to submit info and request data. Nothing is more frustrating to tech support than having to answer calls on a product that just doesn't work well for its users.



8) Where's that Instruction Manual Again?

Have you ever downloaded some cool new tool that you heard about from your neighbor or your kids and then found yourself wondering exactly how to make it work? That may be fine for a \$1.99 app on your iPad, but you just made a major software investment decision for your company. You and your team need to know how to use it.

Basic Training

While you can try to figure it out yourself, most vendors offer – and we recommend – a basic training program. A general training course should cover the basics of how to use the various modules, how to navigate from section to section, how to enter and extract data (in reports, dashboards, etc.), and how to get help. Beyond this core training, additional specific training modules may be available for targeted audiences – your data entry team, your support personnel and system administrator, and even for your execs on how to read and interpret the various reports. This training may range from the “how to” do something all the way to the “why to” do something as well as guidance on interpreting results in a particular way.

Home-Schooling for Grown-ups

Logistics for your training are also important. If you are just implementing a small rollout, some web-based training sessions may suffice – they also don't require travel. For larger or more complex solutions and training, you may have vendors come on-site or send your people to a class offered by the vendor. If you have a large installation, you may even want to hold a “train the trainer” session where you can bring the necessary knowledge to conduct training in-house so it can be delivered to the masses more cost effectively over the long term.

Any chances you have to get the training to travel to you versus you traveling to it are also most likely more cost effective. You can further minimize the carbon footprint of your training by doing it all virtually. Just make sure you have

the right infrastructure set up at your training location to hold the training course – whether it means installing the current version of Internet Explorer (or Chrome or Firefox) on your employees' computers or if it means a dedicated training room with projector and training computers. Have the setup in place to maximize the benefit of training.

Make it Stick...

The approach to conducting the training is also important. Different people have different learning styles and you'll want to meet these needs where possible to have the best effect. We think that having books, handouts or PDFs available for review are useful – especially as after-the-fact reference materials – but encourage actual hands-on training to get the best results. Ideally, you will even be able to use some "real" data about your company in this training program and not just be looking at "canned" or otherwise generic demo data. Your users know your company best, so seeing their own data go into the tool and come out in the form of reports will be most relevant to them.

How Long Does this Course Last?

Pacing of the course is also important. A simple system may only require a limited amount of training time; you might be able to cover everything in a few hours or an afternoon. More complex systems will require more in-depth training. In these longer training cycles, it is important to consider whether the training is self paced (i.e. the user decides how fast to do it, and if they'll do it at all), or if there a specific timeline that needs to be followed. This latter scenario may play out as a group course or as a simple requirement to pass a certain proficiency check or quiz at a set interval. This again is a case where different learning styles come into play. For some people, the system will just be intuitive – they'll "get it" right away. Others may take days, weeks, or months of use, reinforcement, and support to get to the place you need them to be.

I Have Two Other Meetings and a Financial Report to Finish...

Assuming that you aren't hiring all new employees to use the new software, you also need to make sure you align training

requirements with their job description and responsibilities. If they've already got a full plate of other things and this is just an informational/awareness offering, then it might not be as important to wedge it in their schedule. However, if this is a core part of their job description, then you can more easily justify having them take time out to participate.

Timing is Everything...

In the short term, you'll need to make sure your folks get trained in time to use the software once it is installed. Don't train them so late that your system sits idle waiting for people who know what to do. But don't train them too early or else they may forget it by the time the system is up and running.



To prepare for the longer term, you will want to get an up-front understanding of what you'll need to do in the future with your software training. Are there yearly updates to the training courses/materials? Is there a short "refresher" course for someone that has already been trained which doesn't require him to go through the full blown course? Does training need to occur every time the vendor installs a software upgrade or new release? What if there are new modules being installed – do they come with specific info related to their training, or do your users need to be retrained on the whole system?

Your Dollar, Your Vendor's Training...

The cost of your training should be clearly spelled out as part of your negotiations. You'll need to determine if your training is bundled with the overall software licensing fee or if you pay separately. If the vendor is bringing someone to your location,

do you have to pay for this expense or does the vendor cover it? If you don't use the all the training that is bundled with the purchase, can you get a credit against future costs? Do you lose the training hours if you don't use them? How many people are covered by the fee? If you have more folks that need training, does it cost more? It is your money – make sure you know how it is going to be used.

At the end of the day, your vendor should have a recommendation on what the best training approach is for their software. You should know what type of training works best for your team. Match the two sides up to achieve the best results.

9) “System Error 32”? What does that mean?

When you run into a software problem, do you click the “Help” icon or Google an answer? Do you ask your cubicle neighbor or do you immediately call tech support? Are you someone who likes to download something and install it yourself before figuring out how to use it? Do you read the instruction manual before you put something together or has the owner’s manual for your car never left the glove compartment? Every person reading this article probably has a different combination of answers to these questions. This means that anyone claiming they have a “one-size-fits-all” approach to training and support for you either doesn't have much depth to their approach and/or doesn't want you to contact them for assistance.

We talked about your user base previously, so make sure you look back at the list of users you came up with. How will they answer each of these same questions? They'll have an even wider array of responses than you came up with. A multi-faceted approach to support will be essential to a successful software deployment with your users.

What Kind of Support is Provided?

Your vendor probably has multiple support offerings that range from offline email responses to live chat to onsite visits from a vendor representative. Taking into account the cost difference as well as the relative effectiveness, you'll probably want a mix of these options for your installation. Although in some situations, it may be appropriate to just do your own reading online (aka – RTFM – Read the FAQ/Manual), there are some cases where you need some sort of live body on the other end of your inquiry to get the best results.



While you are figuring out what kinds of support are available, find out where those “live bodies” sit. If their support is all in India and you are in Indiana, they probably won't make house calls. If they're in Indiana, will you get an answer if you call them at IAM on a Saturday night? If your facility in Bangladesh has a problem, will there be Bengali language support available? While you may or may not have influence on the answers to these questions, you should know the answers at the beginning so you can plan appropriately.

What does support cost?

As with your training, it is important to negotiate your ongoing support costs along with the upfront purchase of your software. You don't want to find yourself in a situation where you avoid calling for help because it costs too much to talk to a live representative.

In most cases, you should be able to get a certain amount and specific types of support bundled with your purchase, while other support down the road will most likely be provided on a time and materials basis. You may even decide to pay extra

for enhanced support that goes above and beyond the base (free) level.

An additional consideration when negotiating your support costs is your status as a customer for the vendor. Are you an early adopter? Is this a new product? Ask for MORE, FREE support. Don't be shy. They want you to be happy so that you'll be a good reference customer for them. They want your logo on their web site and in their sales presentation. They want to say "call Jim Jones, he'll tell you all about his experience with our product".

How does the Vendor's Support Process Work?

Something isn't working. It may be an accessibility problem (can't get to it on my iPad). Perhaps it is a performance problem (the web page is really, really slow). A data error (it's loading KY data instead of NY data for my emissions). Functionality (I clicked the button and nothing happened). Security/Access (my password doesn't work; worse yet, should the public really see all this info?).

When you identify an issue, what do you do? What does your vendor do to address the issue? Get this spelled out up front to avoid hassle down the road. It's a lot easier to preemptively sort issues such as your Service Level Agreements, bug fix process, etc. out before you start using the software than when you have encountered a major problem while using it.

Some special cases of support may also need to be addressed. While common "cloud-based" solution providers theoretically have geographic redundancy and failover capabilities built into their platform already, it may be useful for you to get this spelled out. In the case of a natural disaster or even human error, you don't want your data to be at risk of total loss without chance of recovery.

Another consideration is to understand how the vendor is staffed between their support team and their development team. Do the majority of their folks work on developing the next release, leaving only a few to fix bugs or deliver small interim enhancements? Or do they maintain a more even distribution to ensure that they take care of their current customers in the timeliest manner possible? Every vendor will

face these competing pressures, so be sure to ask up front so you know what to expect later.

Service Level Agreements

Software breaks. Sometimes it's because of a defect in the code. Sometimes it's because the user did something wrong. Sometimes it's because the road construction crew outside your office managed to cut your internet connection while you were in the middle of saving your newly created annual report. When something breaks, you need to know what sort of Service Level Agreements (SLAs) you have in place with the vendor to correct the issue. (In the latter example above, you need to call your Internet Service Provider, not just your Sustainability Software Vendor. You'd be surprised at how many times these connections get cut!).

Your SLAs should define the various levels of severity and corresponding response time for the vendor to resolve it. A high impact "Severity 1" issue (i.e. "the system is down") may dictate a one-hour response time and folks working round the clock to resolve it. A low impact "Severity 4" issue (i.e. "there's a typo on screen 7") may wait for resolution a couple months down the road with the next software release.



Make sure you and your vendor are in agreement up front with the definitions of each severity level, how fast service requests are turned around, how they are escalated, how they are dealt with and how they are defined. Just because you think something is a Sev1 situation that your vendor should drop everything to fix doesn't mean your vendor will think the same thing. This definition is also critical when you inevitably run across something that you think is a defect and your vendor thinks is an enhancement request. You may not be able to eliminate all ambiguity, but try to address the major

stuff up front to save yourself some pain and suffering later. When you have a software issue, it already isn't doing something that you think it should – you don't also want to have to fight with your vendor over definitions, and contractual responsibilities.

Tracking Your Issue

If you've called a help desk or customer service line in the last decade or two, you've probably been given a reference number, ticket number, service call number or the like. Your vendor should be no different in this regard. When you identify and report an issue, you should get a tracking number to go with it. Make sure you know what severity level it is assigned, what their plan is to address the issue and how quickly they'll get back to you with updates. Even though your vendor will be tracking these tickets or issues on their end (and should be able to give you a report on them), it probably makes sense for someone on your side to keep track of your open issues – even if it is just a quick list kept in email – so that you can make sure things are moving along at an acceptable pace.

We also like the vendor to have some skin in the game for you as an important customer. Assuming you aren't customer number 1,037,222 (and even if you were), some personal attention to your issues can be nice. Some vendors may offer you the option of having a "customer advocate" within the vendor who attends to and champions your needs at the vendor. In some cases, this may simply be your sales rep. In other cases, you may have a shared or even dedicated "go to" person who is there for you whenever you need to go above and beyond the regular call to customer service. See if you can get yourself an advocate on the inside with your vendor.

Vendor Performance

In an effective partnership, both sides know how things are going. Your vendor can tell how things are going based on how often they get support calls and how easy it is for them to convince you to renew their contract. You will have a perception about how well they are doing based on how few issues you have and how well you think the system works. Wouldn't it be nice to move beyond a state where the relationship is assessed simply on thoughts and feelings and instead on something measurable?

One option for doing this is to create a "Vendor Scorecard". This will ideally let you have an objective conversation with your vendor representative about how well they are doing. You will be able to provide them feedback and documented examples of things that are going well and things that need to be done better. Metrics to consider may include number of issues, issue resolution/turnaround, system availability, system response time, etc. – figure out what makes sense for your particular relationship. You're making this software purchase so that you can better manage and measure your carbon footprint; why not do the same thing with your vendor relationship?



Where Else Can I Turn for Help?

Don't worry – you probably aren't the only people using this software. In fact, your fellow customers and users are probably interested in learning from you and would reciprocate by offering you useful insight into the use of your product.

Aside from just basic "networking" or customer referrals, you may want to see if your vendor has any sponsored or independent user groups out there. These may exist in the form of small local groups that meet a few times a year, or larger national or global alliances of customers, vendors, consultants and other interested parties. They might be known as "SIGs" (Special Interest Groups), "RUGs" (Regional User Groups), or just ordinary trade or professional societies.

Once you buy the software, it may be beneficial to have one or more of your folks join, attend, and otherwise participate in activities offered by these user groups. A strong user community that extends the core vendor offering may be an appealing attribute – no one should have to do this by themselves.

10) I'm Getting Audited!?!?!

One of the key drivers for many firms to go and select a software vendor package is the prospect of being audited. An audit can mean different things to different people. It can be scary to some folks and a non-event to others. One of the benefits that you should look for from your new software package is the ability to make it a "non-event" for YOU. By "non-event", we mean that your independent, third party auditor should be able to come in, review your data, meet with the necessary members of your team, and validate that you've got the necessary processes and procedures in place. They should then go off to write their report stating that your data is free of material defect and that you adhere to the standards and principles appropriate for your firm and reporting approach. More simply, you should look for a result like this:

"If the EPA walks in, I want to give them that instant Mmm, Mmm good feeling that everything is fine, because it is. Our goal is for all future audits to be done in less than an hour with auditors leaving confident it's done right." - *Environmental Manager, Campbell's Soup (Harbin & Ehrlich)*

So how do you make this happen at your firm?

Is the software set up for a sustainability data audit?

One of the key things your software can offer is an audit trail. Simply put, an audit trail offers you, your team, or an auditor the ability to trace a piece of data from entry into the system to its appearance in the final report. You should be able to see who entered the information, how it was entered (i.e. batch load of an emissions data set, manual entry in the field, etc.), and when it was entered. You should be able to see the same type of information for any changes or modifications to the data that occurs along the way.

Additionally, your software should maintain some sort of reason codes or free text description field for the person making a modification to document his reason for making the change. A related feature should be version control that lets

you see what both the "before" and "after" states of a change in case something needs to be rolled back to a previous state.

Finally, for ease of use, your software package should be able to produce an audit/traceability report that documents all these changes without requiring someone to manually go through and try to pull them all out or otherwise track them in a separate system. At some point, you are going to want and need to reconcile the data – whether as part of your efforts to benchmark against the previous year, to figure out if you've got it right or not, etc. – and this traceability feature will be critical to that activity.

Does your software support an appropriate level of processes and controls around your data?

A key component of your auditor's report will be to validate that you have the appropriate processes in place to enter, maintain, and report on data accurately, as well as the appropriate controls in place to ensure that the right people have the right access to your data at the right time.



In the area of processes and procedures, your company probably operates somewhere along the continuum between "well, we ask Joe over there what he thinks and then do it", to "here's our 427 page manual explaining what we do, how we do it, etc. – and you can go to our intranet site if you need to deep dive further into these processes and procedures". Ideally, you'll exist at a happy medium for your firm and your software package will support your level of documentation. At the minimum, your basic efforts at implementing a "governance" process should probably include some basic documented steps that cover data capture, data entry, data maintenance, and data reporting on your that could be shared with your auditor. This would include information on "who", "what", "when", "where", "why", and "how" your data is

tracked. Quality control on the data and your reports will be a key topic of interest. If you can't answer a question about "how do you know your data is accurate," your auditor definitely won't be able to answer it. For more specifics, you should reference the appropriate reporting audit standard that you are planning to achieve or an industry standard such as AccountAbility 1000.

From a controls perspective, your data needs to be securely held and maintained. This will boost the auditor's confidence that your data is complete and accurate. While you may want a wide variety of folks, including the public, to view your reports, you should restrict the ability of people to create, update and delete information in your software package to those trusted users and administrators who merit that access based on their job descriptions.

You should spell out these access controls in your process documentation, and you should enable these multiple levels of control in your software package. Whether you have a single person set up as the overall administrator who does everything or a team of folks from your IS, Finance, and Operations departments who each own specific pieces of the data or system, you'll need to have these controls in place to minimize the chances of the wrong person inadvertently (or purposely) inputting incorrect data to your system. And if this does happen, you'll want to make sure you have the audit trail that we previously discussed to follow and figure out where the error occurred and how you need fix it.

11) What We'd Like To See in the Future

Whither the future of software development... This is the section of the paper targeted at the software VENDORS, not just the software buyers.

As we talked about in our section on software roadmaps, every one of our software vendors has an idea of where they want to go. Some of these destinations resemble each other and some of them are widely divergent. Every vendor would like to be the next Google, Twitter, Microsoft or even Rovio (the publisher of the game Angry Birds).

In this section, we cover our current thoughts on what we think vendors should try to do in the future. Hopefully, our roadmap and the roadmap of these vendors are in alignment.

Usability / Ease of use

The software must be easy to use. Whether online or offline, we'd like to see the vendors conduct some "Human Performance Engineering" or "Human Factors Interface Design". After all, we're talking about (mostly) humans who will be using the software. Vendors should take a little time out to make sure that their screens are easy to read, that they flow in a logical order that doesn't require a PhD to understand, and that simple tasks don't require 87 clicks (scrolling down a page is a click) to complete.



We've even seen a software screen where the users had learned to hit "OK" on the same error message that popped up seven times in a row so that the system would allow them to go on to the next screen. We're not sure if it is scarier that the system worked after hitting "OK" seven times, or that the

users had learned to accept this as a standard operating procedure. Vendors – make sure this doesn't happen anywhere in your products!

Scalability

In an era when anyone with a smart phone in their pocket has more computing power on their person than was used to conduct either the Manhattan Project or Apollo Project, we should be able to have systems that aren't limited by numbers of users, volumes of data, numbers of facilities, table size, record length, etc. Your vendor solution should be able to scale up (or down) depending on your unique needs without requiring major investments in hardware or software to support these changes.

Installation time

We're believers in Software-as-a-Service for the ECA space, so we think your installation time should trend towards "zero". Yes, you'll still need to get trained on the new software system and you'll want to make sure your existing data gets loaded. You need to have the right emissions data sets available and be able to test some of the results out before you "go live". But you shouldn't have to allocate time or money for software installation on your systems or their server. You should be able to simply sign your contract with the vendor, get your login info and "go".

Portability

Many of you have given up being tethered to your desk by replacing your desktop PC with a laptop. Dare I say that most everyone has a smart phone? Apple has released iPad2 and if you prefer Android, you can always go with Samsung's Galaxy Tab or the Motorola Xoom (or an ever increasing number of other options). Your sustainability software needs to go beyond the screen of your PC and be usable on these other mobile platforms as well as some that only exist in fiction.

Reporting Interfaces

We'd love to see increased standardization amongst the reporting standards. While attending the 2011 State of Green Business Forum in Chicago, we got to hear about the launch of the ULE880 standard as well as how the GRI guys were

establishing a stronger North American presence so they could drive adoption of their standard. And SSC works with a variety of Wal-Mart suppliers who need to align with the GDP format. Most of the software vendors we've looked at will support (more or less) each of these different standards either out of the box or with some customization. It would be simpler if we could get to one common and consistent target though – for both the vendors and for the folks doing the reports, not to mention the folks who just want to read the reports.

Coverage of additional sustainability issues

We won't claim to know the future of the Sustainability arena. New concerns seem to arise yearly and old hot buttons that we thought were put to bed may bubble back to the surface in a new, slightly different format. Maybe the scientists are learning new things about climate change. Maybe someone is about to announce a major breakthrough in development of new forms of alternative energy, sustainable building, efficient transportation, or something entirely unforeseen. Maybe there will be another Hurricane Katrina that will drive new legislation. Maybe the US Congress will get past their partisan bickering and arguing and get some work done (we can dream, can't we?).



While we don't know what will drive the change, we can be certain that the environment will change. As a result, we want to make sure that the software vendors build platforms that are adaptable and flexible so that these changes can be incorporated without causing everyone to have to go through a major upgrade or selection of an entirely new system. Just make this process simple for your user base.

What Else?

We'll probably think of some additional things after we post this white paper. In fact, we'll probably add to it and post new versions. We're not the only ones that have ideas about where things should go though. We want to hear your feedback on what you want to see in the future.

12) But Wait, There's More...

Do you just want software? Or do you also want (need) sustainability consulting?

As part of your overall purchase decision from a vendor, you should also consider if you'll need any ancillary services from them. These could range from technical resources through training assistance all the way to pure sustainability expertise. Many of the vendors in this space provide one or more of these service offerings to augment their software sales solution. In fact, for many of the vendors, the software sale could be a loss leader to get you to purchase their more lucrative consulting services. There's nothing wrong with that! After all, they are trying to run a sustainable and profitable business just like you.

Beyond general sustainability consulting, other services that your software vendor may offer include:

- Reporting – the actual filing of your report to GRI, CDP or other standards organizations.
- Data Collection – many of these firms are eager to build their own databases of information to further improve their future product offering, so you may be able to get them to improve your own data collection processes in return for letting them anonymously incorporate that data into their own centralized data repositories.
- Data Analysis – at the opposite end of the spectrum from data collection, many of these firms have

developed expertise in interpretation of the data. If you don't have an in-house team of expert analysts, you may want to consider taking advantage of their offering in this space.



- Technical Support – we covered this previously in the Training & Support section, but you may be able to take advantage of additional technical services that aren't directly related to your vendor's core sustainability software offering. Maybe you want to make more use of cloud-based services, or have other enterprise or systems needs? Check out the rest of your vendor's offerings to see if there are any other logical fits.
- 3rd Party Audits – while you may not want to hire your software provider as your auditor, they most likely can refer you to auditors who are familiar with their software package and don't require new training. When you hire an auditor, do you really want to pay to train them or would you prefer to have them come ready to hit the ground running?

While there are numerous offerings available from these firms, just keep in mind the reason you are looking at them in the first place – their sustainability software package. Don't let the other bells and whistles and decorative materials overwhelm your primary decision making criteria. The primary consideration for you is to get the right package with the right support from the vendor that best meets your needs.

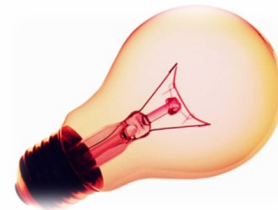
13) Glossary of Terms

We've used a variety of acronyms and industry terminology throughout this report. This section is our attempt at spelling out the acronyms, providing some definitions and referring you to further online reference material directly without making you Google or Bing everything. If we've missed anything throughout the paper, or if you'd like further clarification or improvement on the details below, be sure to let us know.

- **AA1000** – the AccountAbility 1000 comprises a series of standards focused on the materiality, completeness, and responsiveness of respondents' reporting performance; it is intended for use by external auditing bodies, but can be adapted for any organization looking to develop its processes around accountability. For more information, visit the AccountAbility web site at www.accountability.org.
- **Benchmark** – a measure of comparison for your metrics; this comparison could be made against your own previous year or period results, against other specific companies, against your industry, within your geographic region, etc.
- **CDP** – the Carbon Disclosure Project is a not-for-profit organization holding the largest database of primary corporate climate change information in the world; for more information visit their web site at www.cdproject.net.
- **ECA** – Enterprise Carbon Accounting is a process intended to allow companies to prepare and maintain a comprehensive inventory of their greenhouse gas emissions and other sustainability impacts that enables better management and reporting of these items.
- **EPA** – the US Environmental Protection Agency is the US governmental agency charged with the protection of human health and the environment (potentially including greenhouse gas emissions

depending on the current political mindset in Washington DC); for more information visit them online at www.epa.gov.

- **ERP** – Enterprise Resource Planning – typically a large, integrated software system that handles information from your financials, human resources, operations, manufacturing, sales and service, facilities, and other major back office functions. Systems are often modular in nature and are most commonly used by mid-sized to large companies.
- **FTC** – the US Federal Trade Commission is a government agency set up to protect consumers from predatory commercial practices and appropriately encourage competitive commercial markets; for more information visit them online at www.ftc.gov.



- **GRI** – the Global Reporting Initiative is a network based organization that develops and publishes a widely used sustainability reporting framework; for more, please visit their web site at www.globalreporting.org.
- **HFC** – *Hot, Flat & Crowded* – a book by *New York Times* columnist Thomas Friedman first published in 2008 outlining the current challenges faced by America in a world experiencing climate change, global interconnectedness, and over-population in the 21st century, as well as offering suggestions on how America can lead in developing solutions. (On a side note, have you thought about how your company will address these challenges?)
- **KPI** – Key Performance Indicators are a defined set of measurements that tell you whether you are successfully achieving your goals or not; picking

the right set of goals, targets, and measurements is critical to determining whether your software implementation or any other project has been successful.

- **SEC** – the US Securities & Exchange Commission is a government agency whose purpose is to protect investors while maintaining fair, orderly, and efficient markets and facilitating capital formation; for more, visit them online at www.sec.gov.
- **SOX** – the Sarbanes-Oxley Act of 2002 is a US Federal law which set new or enhanced standards for all US public company boards, management, and public accounting firms. For more, see the Wikipedia article: http://en.wikipedia.org/wiki/Sarbanes%E2%80%93930xley_Act.
- **SSC** – Strategic Sustainability Consulting is a firm focused on providing organizations with the tools and expertise they need to actively manage their social and environmental impacts; visit them online at www.sustainabilityconsulting.com.
- **TCO** – Total Cost of Ownership is a measure of product cost that includes not only the upfront purchase price, but also any ongoing yearly maintenance costs as well as costs for any installation, labor, customization, training, and other services that may be necessary for a software product. TCO for your automobile would include all fuel costs, oil changes, yearly service costs, automobile insurance, etc. in addition to the sticker price.
- **WBCSD** – the World Business Council for Sustainable Development is a CEO-led global association of companies that deals exclusively with business and sustainable development; for more information, visit them online at www.wbcsd.org.
- **WRI** – the World Resources Institute is a non-profit global environmental think tank dedicated to solving urgent environmental challenges; for more information visit their website at www.wri.org.

