

Leveraging Data to Simplify and Streamline Sustainable Procurement

ecomedes

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Abstract

The Ecomedes platform consolidated product performance data from three Federal programs and three third-party ecolabels/standards. The result is a product performance database from over 300,000 products, representing 5700 brands, including over 4 million ecodata points. This data was mapped to the Green Procurement Compilation (GPC) requirements with some simple ROI impact calculators for energy and water savings. Energy reduction in kWh and water reduction in gallons, realized by the deployment of pre-vetted, high-performance products was converted into operational cost savings.

This platform reduces the typical multiple-hour procurement process to less than 15 minutes. Institutional buyers utilizing this platform can reduce overhead costs of procurement research and documentation by over 95%. When added to the energy, water, and maintenance savings generated by deploying higher performing products, the organizational ROI will significantly increase.

<i>Goals</i>	<i>Strategies</i>	<i>Results</i>
Reduce time spent searching for high-performance products	Consolidate data from multiple sources	95% decrease in time spent by procurement teams
Simplify the comparison of products	Organize data into impact lens for easier evaluation	75% reduction in time spent consolidating data for comparison
Automate the analysis of compliance toward sustainability goals	Build algorithms that automate the analysis	Fully automated energy and water savings analysis + Green Building Rating System compliance

Background

Ecomedes is a technology company dedicated to simplifying and streamlining sustainable practices through innovation. Our platform, the Fulcrum, is a free resource to buyers looking to find high performance sustainable products. We strive to grow the understanding of sustainability for both the buyers and suppliers and the marketplace as a whole. By simplifying sustainable product search, we can reduce the frustration many buyers feel when looking for the best product in a category. By automating the analysis required to make the best decision, we look to increase the amount of sustainable products deployed into the economy. Our platform is open to the public and we strive to grow the transparency in the marketplace.

Goals

Ecomedes is committed to simplifying and streamlining sustainable decision making. We believe selection of high performance sustainable products and solutions require data driven analysis. By simplifying the analysis, decision makers can make better choices. However, data volume does not equal data quality. In today's marketplace, data is seldom consolidated and organized in a way that allows for quick and easy review and evaluation. These realities have shaped our goals and objectives. Foundationally, we have evolved around three main components:

Sustainable Products: Less time searching, more time deploying. The scavenger hunt for sustainability data is an endless task for procurement professionals. Time constraints often end the hunt before the best solution is presented. With hundreds of ecolabels and standards in the marketplace, and thousands of brands competing for mindshare and market share, it is difficult to find the right data, in an efficient amount of time, which yields a quality decision. Institutional buyers absorb this substantial "cost of business" which leads to friction and frustration, often before they procure the higher performance product. Ecomedes recognized the frustration, defined the root cause, and created a path to improve the process. Our objective is to provide a quality research process in half the time.

Simplify Product Comparison: Use the Same Yardstick. Product categories are filled with a range of competitive brands making a wide range of claims. Each brand's performance data is presented in a variety of ways, and rarely compatible to the desired format. The marketplace offers over 200,000 qualified lighting products. While specifications are consistent and limited, brand-specific presentation can generate an inordinate amount of choices for the procurement professional. Ecomedes has developed a process to curate product performance data so that it aligns with the needs of buyers.

Automate Product Analysis: Achieve Sustainability Compliance: The sustainability goal is unique to each institutional buyer. Economic, environmental, and social impacts are important and woven into their corporate sustainability mission. Buyers define requirements from their supply chain. Suppliers position their offerings to align with buyers expectations. Often, multiple communications are necessary to validate. Ecomedes automates this work on behalf of the buyer and supplier.










Strategies (Activities)

Consolidate Data from multiple sources: The Ecomedes fulcrum platform configured for SFTool.ecomedes.com gathered product performance data from:

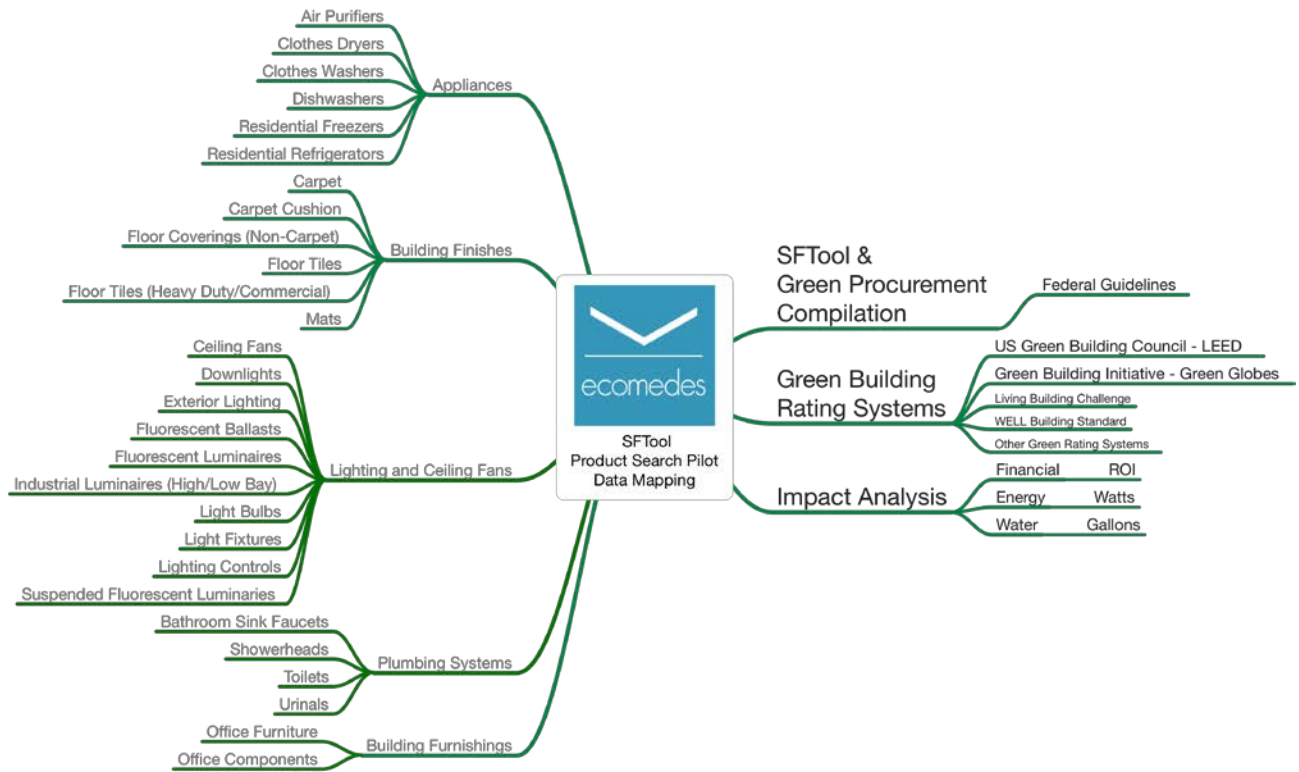
- EPA: Energy Star, WaterSense, SaferChoice,
- BIFMA: level
- Green Electronics Council: EPEAT
- Design Lights Consortium: Qualified Products Listing

We curated the data presented on the platform to simplify the review and utilization by federal procurement teams. The data was aligned with the requirements outlined with the Green Procurement Compilation.

Organize data into impact lens for easier evaluation: Product data related to sustainability comes in a wide variety of types, formats, styles and depths of detail. The Ecomedes fulcrum platforms utilize Impact Lens to help organize the data into buckets of data that can be more easily understood and utilized to make better decisions.

								
General	Economic	Energy	Water	Materials	People	Planet	Lifecycle	Certificates

Build algorithms that automate the analysis: When product data is ingested into the Ecomedes fulcrum platform it is organized by product category and the performance data within that product category is then mapped to the algorithms within the platform that analyze compliance with the procurement requirements. For the SFTool Product Search platform we analyze compliance with the Green Procurement Compilation performance requirements for over 200 product categories/subcategories. The platform also performs calculations for compliance and contribution for Green Building Rating Systems such as the US Green Building Council's LEED Rating system, the Green Building Initiative's Green Globes Standard, the International Living Future Council's Living Building Challenge and the International WELL Building Institute's WELL Building Standard.



Results

Goals Achieved

Ecomedes was pleased with the progress made toward our initial goals on this deployment of our Fulcrum platform.

Search-95% decrease in the time spent searching for product data by procurement teams:

By consolidating the product performance data into one centralized database of only products that meet or exceed one or more of the Federally required performance metrics. Not only did we reduce the scavenger hunt for data that involved hundreds of clicks on a wide variety of websites and databases, but we created a database of compliant products organized by the product category structure created by the Buyer.

Comparison-75% reduction in time spent consolidating data for comparison: Utilizing a structured framework of procurement requirements and our impact lens, the data being pulled together from a variety of sources can be viewed in a comprehensive way quickly and effectively.

Analysis-Fully automated energy and water savings analysis + Green Building Rating System compliance:

The Ecomedes platform has automated the majority of the analysis work that procurement and project teams perform every day for institutional buyers and suppliers alike. The users of the platform don't need to worry about the ever changing landscape of procurement regulations and green building rating systems, they only need to select the products they feel are most aligned with their needs and the platform will run thousands of potential mappings, credit contribution calculations and impact analysis for energy, water and ROI within seconds.

Changes in Purchasing and Related Practices

During the deployment of the pilot, the ability for a procurement team member to jump directly into a directory of products that have provided some of the information required for compliant procurement was added to the Green Procurement Compilation. Now buying teams can jump right

into a specific product category within SFTool Product Search and immediately see how many brands they can choose from. They can sort the results in product category specific ways. They can sort the results from an efficiency point of view as well. The platform was launched in November of 2016 and will now begin rollout to various agencies and project teams.

Unexpected Results

As we began to work with more and more product data sources the original 26 product subcategories we initially targeted in the pilot quickly began to expand to over 200 product subcategories. Also during our design, development and implementation of this configuration, we began to see the alignment with the Federal Government's move toward category management. Much of our work was already focused on Facilities and Construction, which happens to be the largest of the categories they identified as a focus on their development roadmap.

LESSONS LEARNED

The data is in a constant state of flux

When building a platform to support data driven decision-making, the data needs to be accurate and up to date. When designing the data ingestion infrastructure the team had to review the frequency of updates sent by our data partners. From our work with many industry leaders from the supplier side of this equation, we understand that product data is always changing due to the highly complicated nature of the global supply chain that many manufacturers relied on every day. Many of the product data aggregation systems within the industry do not have current data being represented.

LESSONS LEARNED

Vendors struggle to have up to the date product data within their procurement systems

While manufacturers typically have up to date information within their massive ERP systems, they vendor supply chain of distributors, dealers and retailers struggle to have current data within their procurement platforms that buyers typically interact with.

LESSONS LEARNED

Project teams within the AECFM (Architecture, Engineering, Construction, Facility Management) Industries struggle to get accurate information quickly

The project teams that typically deliver commercial construction and renovation projects go through a multitude of paths to find the data that they need to create design, engineering and construction plans and strategies to meet the needs of institutional operators of facilities around the world. Their time constraints to deliver projects on time and on budget are not typically improved by the addition of sustainability criteria for projects or the products within them.

Benefits

The fulcrum platform is designed to deliver valuable benefits to both buyers and suppliers. The majority of time spent on high performance sustainable procurement is spent in the research phase.

Internal Benefits

The federal government operates out of 360,000 buildings worldwide and is the largest single marketplace for goods and services in the world. Over \$450B is spent annually to operate the federal government (not inclusive of defense). There are over 30,000 individuals (internal & external resources) involved with procurement for the federal government and our focus was on saving them time and money while helping them meet their missions through the alignment of policy and procurement.

External Benefits

By helping the Federal Procurement Community save time and effort and procure the right products/solutions generates:

- Energy Savings: kWh & \$
- Water Savings: Gallons & \$
- Material Savings: More recycled Content, More recycling
- Maintenance Savings: Materials, Hours, Replace Cycles
- Human Health Impacts: Healthier building components put into use in the built environment
- Planet Health Impacts: Less impactful products selected
- Social Responsibility Impact: Better brands that operate better supply chains win procurement contracts.

Business Case

Ecomedes strives to simplify and streamline sustainable procurement for all parties involved. Deployment of our platform serves both Buyer and Suppliers and each of the parties involved save a tremendous amount of time in the process of connecting with each other.

For the deployment of our platform to institutional buyers, the following metrics are utilized to establish a business case for Ecomedes:

# of Procurement Professionals	A	(We see between 10 – 15,000)
Average Hourly Rate	\$B	(Yearly Salary / Total Hours / Year)
Avg. Hrs. Saved / Procurement	C	(Ecomedes saves between 5-hrs)
Avg. Procurements / Mth	D	(We are seeing 5-20 / Person / Mth)
Monthly Productivity Savings (Hrs.)	$A * C * D$	
Monthly Productivity Savings (\$)	$A*B*C*D$	

Within the Federal Government we believe the following impacts can be realized when the platform is fully deployed.

15,000 Procurement Professionals @ \$50/hour saving 15 hours per month will generate \$135M in annual time savings + the sustainable impacts of deploying the better performing products that reduce the impacts on: energy, water, materials, maintenance, human health, planet health, social responsibility.

Since the Federal Government is the largest single operator of buildings/facilities in the world and the largest purchasers of products, a ROI/payback analysis doesn't directly correlate to other institutional buyers.

An average Business Case Analysis looks like:

# of Procurement Professionals	25
Average Hourly Rate	\$50
Avg. Hrs. Saved / Procurement	5
Avg. Procurements / Mth	10
Monthly Productivity Savings (Hrs.)	1250
Monthly Productivity Savings (\$)	\$62,500
Yearly Productivity Savings (\$)	\$750,000

The typical Payback Period for an Institutional Buyer is < 3 months for a standard Enterprise License. This does not include the Internal and external impacts listed below:

The internal benefit to the organization is an alignment of:

- Mission: To Procure Products and Services from a Sustainable Supply Chain
- Policy: To establish performance criteria based on mission
- Procurement: To create a procedure to document the right products and services are procured
- Deployment: To put those product and services into the operation of your organization that will have a sustainable impact
 - Energy Savings: kWh & \$
 - Water Savings: Gallons & \$
 - Material Savings: More recycled Content, More recycling, Better material components
 - Maintenance Savings: Materials, Hours, Replace Cycles
 - Human Health Impacts: Healthier building components put into use in the built environment
 - Planet Health Impacts: Less impactful products selected
 - Social Responsibility Impact: Better brands that operate better supply chains win procurement contracts.

Define Mission / Policy / Performance requirements clearly with metrics

Having a clear Mission helps establish Policy

Having a detailed Policy defines the Performance Metrics for Procurement

Having a set of simple procurement rules helps deploy the right products/services into operations

When sustainable products and services are deployed, the lifecycle impacts begin day 1.

Process

How we got started

Ecomedes was an established software platform focused on helping suppliers connect with Buyers. We focused on organizing and presenting the performance data that buyers were using to drive product selection. Paul Shahriari met Michael Bloom at a conference in Atlanta and we began discussing how the Federal Government/GSA's high performance green procurement requirements could be integrated into our data-mapping schema. We started by reviewing the SFTool.gov website and the Green Procurement Compilation.

Who was involved

The Ecomedes team has been working on the development of our fulcrum platform since January of 2014. We initially worked with suppliers in 2014 and developed a platform for BIFMA in 2015. In May of 2015, we began to scope the configuration needed to serve the Buyer side needs of the marketplace. Later that year we began to configure our platform for the needs of Institutional buyers like the GSA. The development of the SFTool Ecomedes platform was done by Ecomedes in conjunction with Noblis the Technology partner responsible for the creation and management of SFTool.gov under the leadership of Michael Bloom.

How we set goals

We started the project off by reviewing some of the major product categories we all felt would be the most impactful from a \$ Procured and Energy and Water impact view point. We wanted to target time savings and a reduction of consumption impact.

How we agreed on strategies

To achieve energy and water savings we targeted the EPA's Energy Star and WaterSense Product Categories and also realized we could include the Green Electronic Council's EPEAT program. The BIFMA furniture trade association was already utilizing Ecomedes for their product registry, so we included their product database. At the same time, the Federal Government was ramping up activity focused on Category Management and ways to simplify procurement. Category Management has defined the top 10 Spending sectors with Facilities & Construction, IT and Office Management defining spending that accounts for over \$125B annually.

How we got commitment

Michael Bloom from GSA and the team at Noblis helped drive the development of this project and wonderful partners in the ecoprogram/ecolabel space have made integration of policy, procurement and performance data into Ecomedes a smooth process. As the platform grew with more and more product manufactures and ecolabels participating, it has become easier to scale the platform.

How we implemented the strategies

Once target product categories were identified and the data requirements defined, we reached out to Suppliers and ecolabels/certification bodies to integrate their product data into the SFTool. Ecomedes platform so that Federal procurement teams could find, compare, evaluate, analyze and document their purchases in less than 15 minutes as opposed to the typical 15-20 hours it currently takes.

How we measure and report results

Currently the SFTool. Ecomedes platform generated procurement documentation for the individual user level. This is done as a free service/feature of the tool and it is an open platform for anyone to use in the marketplace.

Financial Information

Enterprise licenses of the Ecomedes platform for institutional buyers are based on the functionality required and the scope that needs to be integrated. We have enterprise SaaS (Software as a Service) licenses that start at \$60,000 and can be fully configured to meet the needs of any public or private institutional buyer.