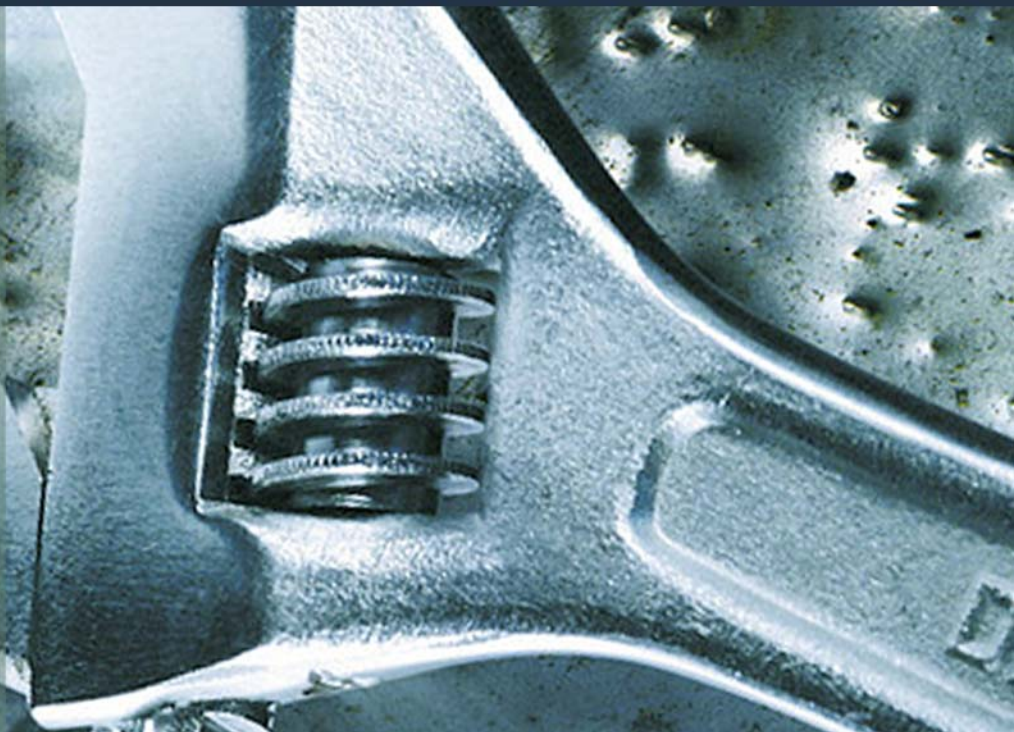


# OPERATE & OPTIMIZE

Info-Tech Advisor Premium - Operate



## About this research note:

Operate & Optimize notes provide recommendations for effective and efficient IT practices that help improve the performance or reduce the cost of technologies already deployed in the enterprise.

## Exercise Environmentally Preferable Purchasing for a Healthier Planet and Pocketbook

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Environmentally preferable purchasing (EPP) attempts to minimize negative ecological effects by procuring products and services with the least environmental impact. Many enterprises have added an EPP policy to their procurement process. Understand EPP, incorporate its principles into the procurement process, and follow Info-Tech's recommendations to implement a successful EPP program in IT.

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## Executive Summary

Environmentally preferable purchasing (EPP) is a policy that encourages purchase choices with a minimum of environmental impact, while still balancing traditional requirements of price and performance. Under EPP, purchases are assessed on a lifecycle cost basis.

In addition to defining EPP, this note describes the step-by-step EPP process, including planning an environmentally preferable purchase, and building and performing an EPP evaluation.

Finally, Info-Tech provides recommendations for successfully implementing an EPP policy in IT:

- » Establishing a formal statement of EPP policy.
- » Communicating and educating stakeholders about EPP.
- » Using pilot purchasing programs to demonstrate EPP effectiveness and success.
- » Providing adequate resources for effective EPP.
- » Measuring and rewarding EPP success.
- » Taking advantage of side benefits in public relations, marketing, and the supply chain.

Understand EPP, incorporate EPP principles into the procurement process, and follow Info-Tech's recommendations for a successful EPP program.



## *The Basics of Environmentally Preferable Purchasing*

Environmentally preferable purchasing (EPP) encourages the selection of products and services with the least environmental impact. By assessing environmental, financial, and performance factors in a systematic way, IT can use EPP to move to a more sustainable and responsible operating strategy.

EPP relies on two key considerations. First, EPP does not ignore business needs, but does add environmental considerations alongside price and performance criteria. As with any procurement process, the goal of EPP is to select the best value option – the one that yields the best combination of price, performance factors, and minimized environmental impact.

Second, EPP takes a lifecycle costing approach to procurement. While traditional procurement may consider up-front costs alone, EPP examines manufacturing, acquisition (initial cost, delivery and installation), use (maintenance and consumables), and retirement (decommissioning, disassembly, recycling and disposal). EPP also quantifies environmental impact by considering measurable costs that directly affect the environment. For example, in the use lifecycle stage, an energy-efficient server will use less power and generate significantly fewer carbon emissions.

Purchases without a lifecycle approach may be misinformed. For example, the production of data center equipment with inexpensive but harmful chemicals leads to a lower purchase price. However, a shorter lifespan and higher disposal costs could contribute to a higher lifecycle cost than buying long-life, low-toxicity equipment. Considering costs over the entire life of a product or service often leads to a lower total expenditure. Therefore, EPP allows IT to help the environment, with the possibility of decreasing long-term spending.

### **EPP's Sibling Is Social Purchasing**

Many definitions of EPP, including ones used by the U.S. government, include social impact. Social concerns are numerous, and range from concern about engaging other businesses in the local community to avoiding adverse employee health effects to preventing the use of poorly paid sweatshop labor. Although this note restricts its discussion to environmental impact, consider including social impact criteria to procurement decisions as well.



To help the environment while decreasing long-term costs, learn about the specific process to use for EPP, and follow Info-Tech's action plan for implementing a successful EPP strategy in IT.

#### Examples of Negative Environmental Impact in IT Equipment

- » Heavy use of hazardous chemicals in manufacturing
- » Energy-intensive production methods
- » Poor manufacturing waste reuse
- » Wasteful packaging
- » Difficult upgrades
- » Lack of recyclable design or easy disassembly
- » Lack of take-back programs
- » Poor recycling practices

### *The Environmentally Preferable Purchasing Process*

The EPP process adds environmental considerations, in the form of lifecycle and waste reduction precepts, to the standard purchase price and performance criteria. Add the following steps to the traditional purchasing process to make environmentally responsible purchases.



## Step 1. Plan the Environmentally Preferable Purchase

1. Assess Purchase Necessity	<p>Avoiding a purchase may be the most environmentally responsible action. Define the need for the purchase. Is the purchase needed to fulfill that need? Alternatives to purchasing could include:</p> <ul style="list-style-type: none"><li>» Fulfilling the need with existing equipment, resources, services, or employees.</li><li>» Sharing resources already available internally, or repurposing less-used resources from other offices, departments, or branches.</li></ul> <p>In some cases, the purchase is required <i>for</i> environmental sensitivity – for example, if older data center equipment is found to contain previously unknown cancer-causing materials. If the purchase is indeed a necessity, continue with substep 2. to determine the most relevant EPP considerations.</p>
2. Evaluate Alternatives	<p>Alternatives to purchasing should be defined here. If they are feasible for the purchase in question, they should be considered as options in Step 2. Possible alternatives could include:</p> <ul style="list-style-type: none"><li>» Short-term renting, leasing, sharing, or hosting.</li><li>» Purchasing with other departments to reduce packaging and shipping costs.</li><li>» Purchasing used or refurbished.</li><li>» Reusable, refillable, or upgradeable options.</li></ul>
3. Find Available Information & Benchmarks	<p>Since every product category will have different environmental impact, perform some basic research on the type of product under consideration to uncover its most relevant environmental concerns.</p> <p>A couple of major sources exist for this information. First, vendors that use the most current best practices for environmental sensitivity might provide a benchmark for the product under consideration. Second, public environmental data is readily available for a myriad of product and service categories. Most specific performance attributes are already defined and ready to use in EPP. For example, the <a href="#"><u>Electronic Product Environmental Assessment Tool (EPEAT)</u></a> provides ratings for desktops, notebooks, and monitors. Before defining relevant attributes, investigate what is already established for the particular purchase in question. Consult public data before speaking with vendors, who may be tempted to make exaggerated claims about their environmental sensitivity.</p>



4. Identify Relevant Environmental Attributes Throughout the Lifecycle

For each purchase, identify the handful of key environmental considerations in terms of the purchase. A complete environmental cross-examination is cumbersome, and even fruitless if the purchase's environmental impact cannot be avoided, regardless of the solution chosen. For example, a laser printer has a few key environmental considerations throughout its lifecycle: toner consumption, particulate emissions, and availability of a take-back program at end of life. A server purchase will involve different considerations, such as power conservation, power supply efficiency, ease of life-extending upgrades, and compatibility with virtualization. Even smaller purchases have environmental factors to consider: for example, purchasing chlorine-free paper. Each purchase option should be evaluated using available benchmarks or the most relevant environmental attributes, in addition to standard criteria such as price and performance. This occurs next.

## Step 2. Build and Perform the Environmentally Preferable Purchase Evaluation

1. Define & Measure Environmental Performance Attributes

Using the information gathered previously, build a comparison of key environmental metrics to inform the purchase decision.

For example, when considering a server purchase, build a chart that compares purchase options along these lines:

- » Power consumption at various utilization levels.
- » Upgrade options and limitations.
- » Quantity of toxic chemicals used during production.
- » Particulate emissions levels.
- » Percentage of the server that can be recycled.

Use specific attributes to measure alternatives as well. For example, the alternative of using hosted servers instead of purchasing might garner higher environmental marks because resources are being shared rather than acquired. Note that while hard quantitative data is the most effective, it may not always be available in every purchase category; subjective ratings based on research of each choice's environmental impact may be required.



Draw a conclusion for each purchase option by assigning a relative environmental ranking to each choice. For example, using the five attributes above, each attribute can be assigned up to 25%, for a possible total of up to 100%. The top performer in each category gets 25%, with other choices ranked relative to that performer.

2. Define & Measure Best Value Criteria

Blend this environmental assessment with the standard procurement criteria. Using the ranking created above, build an overall best value index:

Assign weighting to each factor, for a total of 100%. An example analysis might consist of the following factors:

- » Environmental Ranking – 30%
- » Price – 30%
- » Performance – 40%

(Note that the price and performance rankings should be derived from the traditional procurement process.)

Multiply the ranking by the weighting. For example, a choice with 90% environmental ranking would receive 27% in that category.

Add each performance factor together to come up with an overall best value index.

This best value method allows for some trade-offs in each category to make a well-rounded choice. For example:

	Choice A	Choice B	Choice C
Environmental Ranking	10%	30%	23%
Price	30%	22%	18%
Performance	30%	30%	35%
<b>Overall Best Value Index</b>	<b>70%</b>	<b>82%</b>	<b>76%</b>

In this example, although Choice C has slightly better performance, and Choice A has a slightly better price, Choice B is well-rounded because it combines reasonable price and performance with excellent environmental marks.



### 3. Enforce Best Value Limits

Although environmental performance is part of the best value equation, place limits on trade-offs. For example, some enterprises give preference to environmentally-sound purchases, provided the up-front premium is less than 15% over a less environmentally attractive choice. A premium greater than 15% requires that a director sign off on the purchase. This gives those with purchasing responsibility flexibility to pay for environmental benefits in scenarios where the business case is relatively clear.

A higher up-front price may reduce overall lifecycle costs; in the server example, an ultra-high-efficiency power supply could command a significant premium but will more than make up the difference with lower energy consumption over the life of the server.

## Recommendations

The above steps allow inclusion of EPP into the procurement process itself. Take the following steps to ensure EPP success in IT:

1. **Establish a formal statement of EPP policy.** A formal set of principles that commits IT to environmentally responsible action is the first step in greening the procurement process. This should incorporate specific commitments to ongoing improvement and provide the basis for a formalized EPP process. For an example of a formal EPP policy statement, see [StopWaste.org's template](#).
2. **Communicate and educate.** Create a communications plan that clearly explains EPP, why it is needed, and potential benefits. Disseminate it throughout IT and ensure that senior management understands and supports EPP. Helping people think differently about procurement will require the education of purchasers, product analysts, end users, vendors, and possibly clients. For those directly involved in EPP, offer training sessions. For procurement staff, this should be a part of their mainstream curriculum. For sample training materials, consult the [Environmental Protection Agency \(EPA\) General EPP Training Tool](#).
3. **Use pilot programs to demonstrate success.** Choose a purchase where environmentally-responsible success is both highly tangible and easily achievable, and apply EPP. For example, using the EPP framework in acquiring printers may result in a choice that saves significant ink and paper. Such a success can showcase the cost savings of EPP, and IT can boast environmental sensitivity. This can also convince decentralized purchasers that adopting the new processes of EPP is worthwhile.



4. **Provide adequate resources.** EPP requires additional research and planning. Understand that dedicated staff time to coordinate EPP efforts may be required. However, lifecycle cost savings may very well offset this extra staff commitment.
5. **Measure and reward EPP successes.** Ensure that EPP performance is annually reviewed and measured. Success can be reported through quantifiable measures, such as a ratio of EPP spending to traditional spending. Weaknesses should also be identified and addressed if necessary. Whether through monetary incentives or general recognition, reward staff that create EPP successes.
6. **Take advantage of side benefits.** EPP is excellent for public relations. IT and the enterprise can market themselves as more green outside the company. In fact, this may distinguish the enterprise from competitors and get the green thumbs-up from clients who are starting to use EPP themselves.

## Bottom Line

EPP attempts to minimize negative ecological effects by procuring products and services with the least environmental impact. Many enterprises have added an EPP policy to their procurement process. Understand EPP, incorporate EPP principles into the procurement process, and follow Info-Tech's recommendations to implement a successful EPP program in IT.

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