



A Strategist's Perspective

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Green BPM: Processes with a Conscience

While many of us are very familiar with the productivity benefits of BPM and the visibility that process intelligence can provide to optimize resources from a cost and time perspective, what we have not asked BPM to do yet is to optimize the use of scarce resources. We have not tasked BPM to help regions, countries and organizations to extend their sustainability over a long period of time. We are constantly reminded that we have more competition for scarcer resources with constantly rising prices of commodities such as oil, water, copper, trees, plants etc. We are at the beginning of our efforts to conserve and optimize resources with the goal of reducing our collective **carbon footprints**.

*The Wikipedia definition: A **carbon footprint** is the total amount of [carbon dioxide](#) (CO₂) and other greenhouse gases emitted over the full life cycle of a product or service. There is a direct relationship between our collective carbon footprints and the sustainability of our planet. There are helpful carbon footprint calculators for those of us who buy this idea. For a perspective on what an individual might do to reduce his or her carbon footprint, www.begreennow.com provides information as good as any of the current websites on the subject. Organizations might consider having an outside auditor work with them.*

I do not propose this column to be an exhaustive list of scarce resources and opportunities to leverage BPM to optimize the consumption of these scarce resources. I hope, however, that these examples stir your creativity and lead to processes that are focused on the conscientious use of our global resources. I also hope that you see other possibilities, including opportunities for making significant profits while supporting sustainability.

Be content with content

It cannot be denied that trees provide a significant service to our environment in the way they scrub the atmosphere and emit oxygen. Most of us are unaware of how much paper we use and just how many trees could be saved with more judicious use of paper.. "Just reducing worldwide paper usage by 10% would save over 100,000,000 trees, 100,000,000 metric tons of carbon dioxide in the atmosphere, and a staggering \$3.5 billion in paper costs" says expert James DeRosa. At www.GreenPDF.com, James DeRosa offers an interesting analysis of the effect of consuming trees on our world. I downloaded it for a good read. Keep in mind that in addition to PDF, there are other imaging and content systems that can reduce the indiscriminate use of paper and help conserve this important natural resource.

The very early years of BPM (under the name workflow) leveraged electronic content, but for the most part the processes were only there to support content movement. BPM aims to support the end to end process and has, to a certain extent, made content a "second class citizen." The green movement could change that viewpoint.

Today the processes are being optimized on human resources and applications, so frequently

content is merely along for the ride and subsequently forgotten. There is an immediate opportunity to avoid paper carrying costs and to obviate the cost increases as paper inevitably becomes too expensive to maintain. While trees are considered renewable resources, we are tearing them down faster than we can renew them. We must also be mindful of the harmful chemicals needed to process paper and the ultimate effect used paper has on water resources and landfills. Scanning paper and creating electronic images early in the process cycle will greatly reduce the negative impact that unnecessary paper consumption has on our environments.

With the increased industry and governmental requirements to archive more records for compliance and other legal considerations, the consumption, the creation, tracking and archiving of forms is increasing rapidly. This is a strong trend that only promises to increase paper consumption. Why not respond by leveraging electronic images throughout our processes?

Minimize Movement

Goods Movement

The movement of goods and people creates a tremendous drain on our resources. We rightfully eliminated warehouses to reduce costs and replaced them with just-in-time goods production and hyper logistics. What we did not include in the equation was the amount of movement that a "good" goes through to get from "order to client". The best way to look at this is by pretending to be "the good" before assembly and calculating the component parts. Consider distance and optimize a route with the least distance from finished goods to your intended client to get an end-to-end view of the distance traveled. This needs to be a new variable in the optimization formula. Advanced BPM technologies have solid optimization capabilities that could play a key role in reducing the amount of movement from beginning to end.

Create a dynamic supply chain that customizes itself around the closet "finished good site" to the client. In other words, optimizing on the goods to client distance to minimize movement would be an obvious target for supply chains. If you outsource the logistics process, make sure your provider includes efforts to reduce movement in their process. The same criterion should apply to source parts. There is green opportunity here as well, and I hope companies will soon realize that costs can be reduced at the same time the drain on resources is minimized. Similar considerations could be applied to service engagements when bringing people to a common job site.

Remote Monitoring

Today physical remote assets are usually monitored by moving people to inspect them for potential failures. This is a waste of effort and energy that can be avoided by applying available technology. For example, railroads use temperature sensitive RFID technologies to measure temperature readings on axles (journals) on each of the rail cars as they pass by sensing devices. The goal is to avoid overheating and resulting derailments. When an exception is sensed, a process notifies the engineer of the nearest side track, and the problem rail cars are isolated and dropped from the train before they can cause catastrophic damage to tracks and the environment.

By applying video/pattern matching techniques and GPS to specialized train cars, the tracks, ties and bridges could be flagged for exceptional visits, thus saving energy and time while increasing the frequency of inspection. This assumes, of course, that the pattern matching algorithms can be tuned to reduce false positives to avoid the unnecessary movement of personnel to physically inspect tracks. Keep in mind that trips to known hot spots for periodic physical inspections will not be eliminated, but significantly reduced.

Remote Process Participation

Today most process participants are located near to where the process is actually executed. With the advent of web-based process participation and/or mobile devices, process participants do not have to be present. One Canadian healthcare organization discovered this by accident. A number

of their healthcare professionals were exposed to a highly contagious form of tuberculosis. The administrators did not want to expose the process workers as well, so they leveraged their brand new web-enabled process to keep the support people going without any interruption of service. As a result of this unintentional experience, the organization now dynamically schedules part-time process workers around peak periods. As processes become more collaborative, they will move to the knowledge worker from the process worker seamlessly, and this feature will become increasingly important. This is an essential building block to reestablish an emphasis on value and supply chains going forward.

Turn, Turn, Turn: Leveraging Existing Assets

Process optimization and/or simulation can be applied to scarce resources to target full capacity and workload balancing. Early examples include workforce optimization and scheduling, but there is a growing movement towards sharing and leveraging scarce equipment. Rather than build another facility, leverage the ones that are production ready. This saves resources and much of the duplication that is rampant in the healthcare industry. One savvy provider used simulation to optimize the use of surgery theaters in existing surgery centers to avoid overbuilding. While this meant shuffling patients, doctors and support personnel along with equipment and surgery supplies, there was a 30% increase in utilization of each surgery theater. In fact, this organization is part of a network that allows for the sharing of other equipment for patient testing as well. Predictive analytics were also applied to predict aging and seasonal peaks and valleys for surgical procedures to avoid bottlenecks and to carefully plan network and facility expansion.

Bottom Line

There is so much opportunity for processes to become greener over time. I have just scratched the surface here and would implore you to share ideas on green BPM on my newly announced blog, "Jim Sinur's BPM blog" at www.global360.com/blog. We are faced with a great and honorable challenge of extending the sustainability of many natural and human resources; fortunately, we are also provided with a tremendous opportunity to "green" our critical processes through better BPM.