

White Paper

Big Data and Process

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Craig is known throughout the business world as “The Process Ninja” – he is a passionate advocate of business process management.

His talent for making things simple has resulted in a proven track record of saving organizations millions of dollars whilst simultaneously improving the customer experience.

Named as one of the top process bloggers in the world by both the Process Excellence Network and Processpedia, Craig’s work has been featured on the BNet, Telstra, Flyingsolo, BPM Leader, PEX Network, iDatix and Orbus Websites as well as in the Herald-Sun Newspaper.

Contact Craig to discuss how he can improve your organization.

Big Data has become one of the most talked about trends in technology today. It has been pinpointed as a marketer’s dream – a way of targeting customers like never before – but there is little understanding about how Big Data could or should interact with Business Processes.

This White Paper attempts to identify how we can use Big Data and Business Process together to improve our organizations. In particular CIOs, Data Architects and Business Process Analysts can use this White Paper to identify how to use the two together to provide benefits to the organization and to customers.

In summary, this White Paper explains:

- What Big Data is
- Why organizations need to examine the impact of Big Data on Business Process
- The benefits of using Big Data and Business Process together
- Examples of how organizations are using Big Data and Business Process to add value

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What is “Big Data”?

Big Data is a term coined to summarize the nexus of “new” data that has arisen over the past 5-10 years. Major contributors to Big Data have been smartphones, social media and other electronic devices (such as tablets and eBook readers) – essentially any device that has internet connectivity. One of the key factors in

the Big Data equation is geospatial data. In the past we may have sat at our PCs and visited websites, but now we do so on devices wherever we choose and those devices keep track of our activities. And when we use those devices, most of us use social media: we “like” brands, companies, people; we share web pages, content on other social networks; in essence we weave a detailed digital tapestry of our lives where smart organizations can view every thread.

In February 2012 US based retail chain Target hit the headlines* when an angry father stormed into a Target store to complain about Target sending his teenage daughter direct marketing promoting maternity and baby products. As it turned out his daughter was actually pregnant – Target had used the girl’s purchase data to identify that she was pregnant and to send her targeted direct marketing. Target knew that the girl was pregnant before her father did.

Big Data – The Privacy Issue

The Target example highlights how Big Data can cause significant intrusion into consumers’ lives, solely from the predictive capabilities. With consumers becoming increasingly concerned with the use of personal data from mobile devices and the recent “snooping scandal” arising from the National Security Agency bringing Big Data into the mainstream media, it seems unlikely that companies will have such open access to customer data in the long term. Without protective legislation being put in place customers’ privacy is exposed so it is likely that there will be changes to legislation to protect consumers and consequently a rush for organizations to figure out smart ways around the legislation!

Big Data isn’t just about Marketing

Despite the amazing insights that Big Data can provide about customers, it’s important to remember that these insights are not only the domain of clever marketers. The data that is accessible for marketing purposes is equally useful across different areas of every business – particularly where organizations have interactions or “moments of truth” with

customers. Conversely, Big Data about our own employees can also be used to assist customers. Here's how:

How “Big Data” & Process Interact

When it comes to how Big Data and process interact, there are some key process instances where the power of Big Data can be harnessed to enable improved Business Processes. Here are a few ways the two can interact:



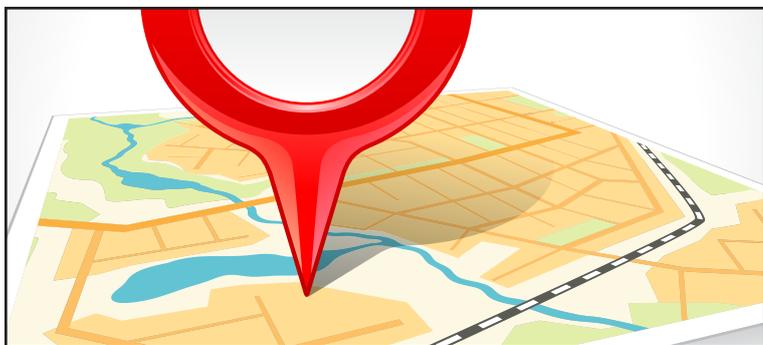
Cross Channel

Despite what many in business may believe, customers today do not follow a simple process of using one channel (such as phone, or in person) from the start to end of the process. Customers typically switch between channels depending upon the complexity of the process. For example, purchasing an item from an online

store may be relatively simple and completed via one channel, such as using a mobile app or a website. However a more complex product such as a home loan may be initiated in one channel, such as a website enquiry, which may later lead to the customer calling to obtain detailed information, which may then in turn involve a mobile lender visiting the customer, and then the customer calling or emailing to check the status of their application – that's five channels across one process. Again the nexus of Big Data can help us to provide a better cross channel experience. Firstly the geographic data can help us identify if there is a retail outlet or a mobile service that could assist the customer. We can also use the data generated by use of the customer's smartphone app or call / contact records to identify what channel the customer typically prefers to do business in and which they respond to most readily. This leads to a better experience for the customer and a greater likelihood of making contact, which reduces the time spent by staff “chasing” the customer.

Geographic

One of the greatest advantages of Big Data is that much of the data has a geospatial component – or in other words companies not only know what you are doing with your time, but thanks to smartphones and tablets with web capabilities they know where you do it! This can be of great advantage to bricks and mortar businesses that rely on footfall to build sales. For example, you are walking through your local town centre and you receive a message via your favourite store's app on your



smartphone “We see that you are nearby – we have a \$20 voucher for you to spend today - just pop in!” Could you resist?

But it’s not only sales processes that can benefit from geospatial data – take for example an insurance company’s claims process. A customer has a car accident and immediately opens the app on his phone to report it to the insurance company. He takes photos of the accident and the smartphone logs his location. Within seconds the insurance company not only has a record of the claim, they do not have to input any data and they can alert a tow truck to come to the exact location! The work has been completed by the customer, and the customer receives a speedy response. Furthermore the insurance company retains valuable data about how and where the accident occurred as well as the time of the accident. This information can then be used as part of the calculation of future premiums e.g. if more accidents occur at night, should the premiums of nightshift workers that drive be higher?

Pro-active Process

Big Data can also play a part in “proactive process”. This is essentially about prevention rather than cure. For example, using predictive weather data, insurance companies can monitor storm activity and alert customers – thereby helping customers to “batten down the hatches” and reduce the likelihood of them making a claim, as well as proactively diverting staff resources to handle claims in those particular areas.

A classic example of using Big Data proactively is to predict customer behaviour. By analyzing the data about customer’s interactions with the company, we can predict what they will do next. For example, a customer complains on the company’s Facebook page and via twitter. Our records show that the customer called the company ten minutes prior. Big Data can be used to monitor these social media networks and combined with the internal data about the customer’s interaction we can determine (in this instance) that the customer was extremely dissatisfied with the outcome of the call to the company. The company can then take pro-active measures to appease the customer’s dissatisfaction before they do more reputational damage or terminate their patronage and take their business to a competitor.

Conclusions

Big Data provides a tremendous opportunity for companies to understand customer data in conjunction with their own internal operational data. By combining operational process data with customer “Big Data” we can improve the operation of our processes in the following ways:

- Cross channel – using Big Data to identify channel of choice and to enable the switch to the channel that is best for the customer at the appropriate time
- Geographic – utilizing geographic data in order to improve the customer’s experience of the process where they need the process and a time that suits them
- Pro-active process – using “Big Data” as a means to predict what the customer will do and take action to ensure the best outcome for the customer.

The opportunities for using Big Data can be almost overwhelming, but by focussing on the process and using business intelligence to compliment operational data we can gain unique insights which can simultaneously improve operational productivity and the customer experience. Tools such as iServer can be utilized to run simulations which can visualize how Business Processes and Big Data interact – thereby helping to provide a more structured and cohesive strategic approach.

If you’d like to read more about Business Process Improvement, please visit Craig’s blog, The Process Ninja at www.theprocessninja.com

*Source Forbes: “How Target Figured Out A Teen Girl Was Pregnant Before Her Father Did”

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