FINANCIAL SHARED SERVICES

Ian Herbert from Loughborough University CGSS talks to Shell's Tanya Lam about how data analytics is providing insights into what to improve and how to improve it

Putting 'who' into 'what'...and why?

One of the hot topics in shared services right now is generating insight and making business impact through data analytics and big data. Research by Loughborough University's Centre for Global Sourcing and Services suggests, however, that this potential may not be realised if organisations do not ask the right questions about the links between business partners, business process centres and business units.

While corporate-wide master data has improved significantly in recent years, big data requires new thinking and this means creating a new culture that values and leverages data to better support global end-to-end processes that deliver real outcomes to frontline business operations. Yet, few organisations have a comprehensive strategy to create new insights from either their existing master data or new big data sources.

There are many individual examples of innovation, yet many shared service centres (SSCs) are having difficulty in articulating what a systematic approach to data analytics might look like, or

indeed, why shared services should be leading the agenda in preference to other departments and functions across the organisation. While the SSC model has been a success story to date, SSCs are usually predicated on a continuous cost-cutting agenda and that may be at odds with the mindset and resources necessary to create sustainable advantage from data. There are two broad strategies available to the SSC; using data analytics to improve the processes of the SSC or helping the business.

What is your role?

I am the continuous improvement lead for Shell Finance Operations supporting the revenue process that covers credit assessment, billing and receivables management for our downstream business. It also includes transactions between the various Shell entities across the world. Currently there are around 1,300 staff located in specialist centres in Malaysia, the Philippines, India, Poland and Scotland.

My own team consists of 10 people who are all Lean Six-Sigma (LSS) professionals. Our key focus is looking

for improvement opportunities that will generate value for Shell, such as cost savings in process execution, reducing working capital and generating more income. We do this by leading improvement initiatives, coaching others that are working on improvements and creating a continuous improvement mindset among our leaders. Our aim is to support operational teams not to do it for them. In this way, the solution becomes their solution, which they implement and maintain.

Could you give examples of how Shell Finance Operations uses data analytics in the revenue process?

In the revenue process, we use an analytics tool from Deloitte called Process X-ray $^{(TM)}$ to identify process improvement opportunities. The tool captures and stores extensive historical data extracted from our global ERP on different aspects of the revenue process including billing, customer, and payment information. It captures the key activities for each transaction including customer order date, product delivery ▶

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▶ date, delivery location, invoicing date and customer payment details. Each activity has a time stamp and the tool also shows who completed the activity. While the last two items might appear inconsequential, together they increase the analysis opportunities almost exponentially. By putting the "who" into the "what" we can ask "why?".

This wealth of information enables us to identify improvement opportunities such as:

1) Which part(s) of the process has high rework?
2) Which customers or our own divisions have late payment patterns?
3) Where invoices are issued late, by whom and why?
4) Which areas/countries perform best and can share best practice?
5) How to build a corporate-wide platform that enables benchmarking?

Data analytics is a process that helps us to identify problems and improvement opportunities. If the system can do that automatically, it means less monitoring and intervention is required by management. Paradoxically, we can allow people more discretion in what they do because we have more knowledge of what is happening and that strengthens our control system without having to have lots of detailed rules that stop people doing their job in the best way.

But, how do you know the output is right?
As the data is directly from the global ERP, we do not have concerns over the accuracy of the data. Our biggest challenge is in how we interpret the data. For example, if we see a delay between invoicing date and product delivery date, is that really a value leakage, or is it caused by our business model, or is it as per the specific sales contract that we have with the customer? Sometimes, an extended product delivery and invoicing gap may not matter if the customer has been allowed a month-end plus X days payment term. We always focus on understanding whether a deviation from the norms will have

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any impact on the total contract value for Shell.

Before we take action or declare that there is value leakage in a particular process stream, we will share the information from Process X-ray with the business managers and get their views on whether there is actual value leakage that needs to be addressed. If the business manager is unable to justify a valid reason for the variation in the data, then with their support we usually turn the identified opportunity into an LSS improvement project. We work with parties from different departments to understand the issues, identify root causes and derive and implement solutions to reduce value leakage.

Are you using big data?
The data we are using for revenue is more enterprise rather than big data. We do, however, have a data analytics team in Shell Finance Operations that has been looking at big data for over two years. We are now at the stage of rolling out the proofs of concepts (pilots) across Shell.
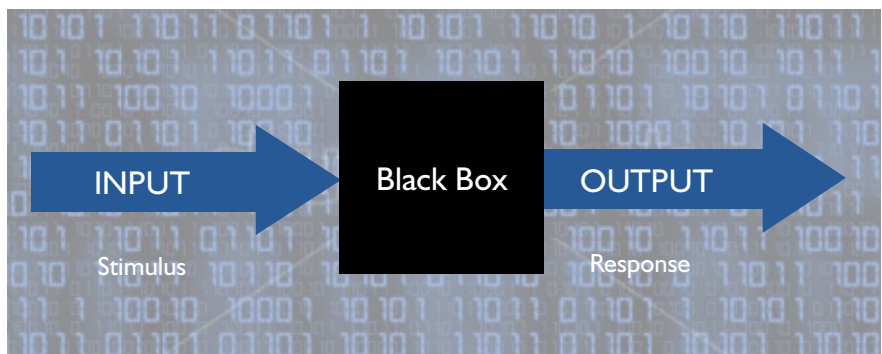
How far do you see data analytics going?
Within Shell the focus on data and data quality has increased significantly over the last three to four years. Our initial focus was on improving the quality of our master reference data, however, as we have developed our capability to capture, store, structure and analyse the master data. We are now exploring how big data might help us to structure our product offerings. For example, we are exploring using big data to determine the optimum opening hours for retail service stations.
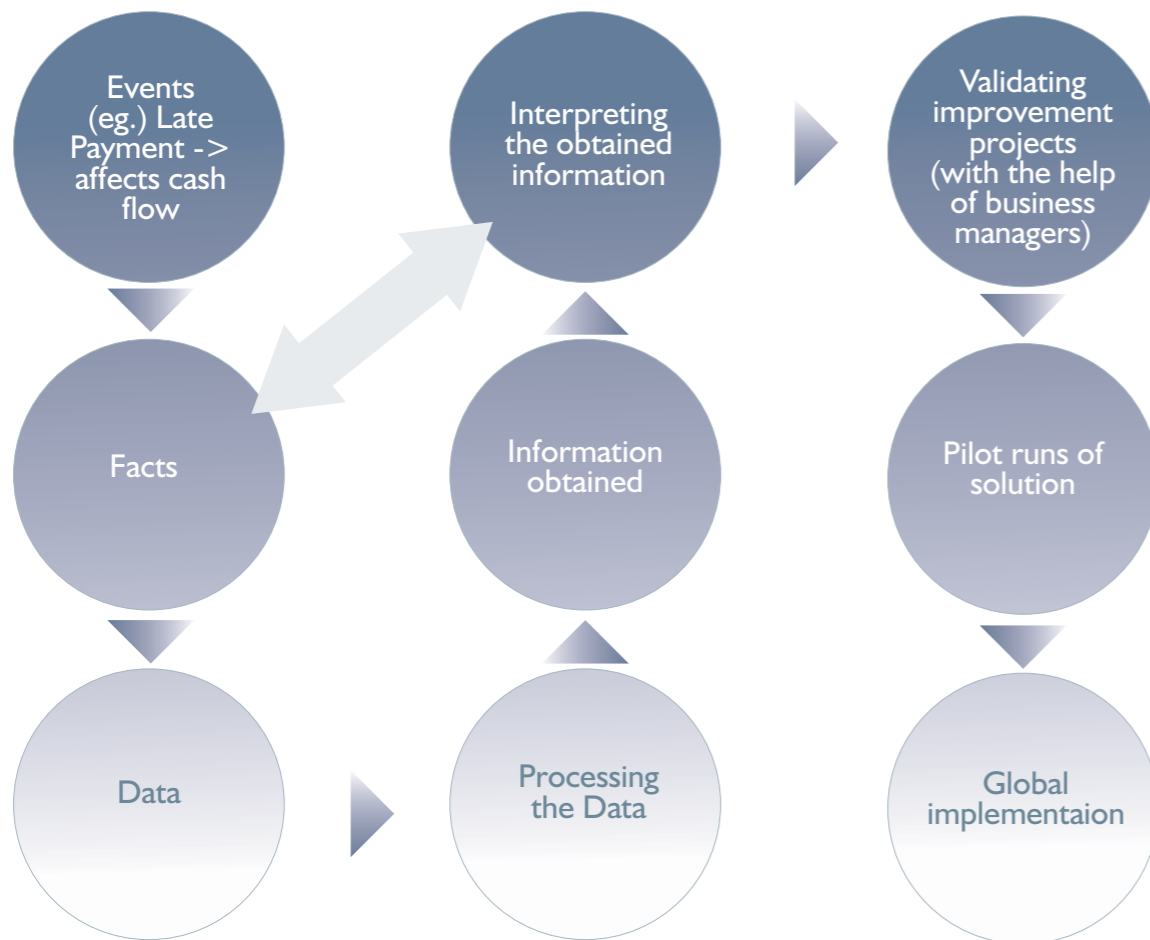
I think both data analytics and big data will play a more significant role in influencing key business decisions in the future and many companies will use such tools to help them remain competitive and generate greater value.

How do you assure yourselves that the result is right when perhaps (and with all due respect) business partners and line managers don't actually understand what is happening in the analytical blackbox?
We always validate what we might call synthetic data back to real-world facts. ▶

INPUT — Stimulus → Black Box → OUTPUT — Response

Events (eg.) Late Payment -> affects cash flow	Interpreting the obtained information	Validating improvement projects (with the help of business managers)
Facts	Information obtained	Pilot runs of solution
Data	Processing the Data	Global implementaion

▶ Numbers show us where there are potential improvement opportunities and our job is to understand the difference between data and facts. Facts can only be derived by talking to the staff who do the job and understanding the process or the business well.

Wider facts
Data and statistical outcomes usually do not tell the entire story. We talk to our frontline teams to validate our understanding and the interpretation that we have concluded from the data analysis.

Additionally, for many improvement projects we tend to run pilots to validate the solutions before we roll out the solutions at a global scale. This enables us to test the effectiveness of the solutions and also take learnings from the pilot to increase the chance of success in full global rollout.

Key learnings

● **While there is a lot of hype around data analytics, there are emerging examples of success in the low-hanging fruit.**

● **Data analytics and big data require a coherent strategy to develop a deep data culture in the organisation as a prelude to using analytical techniques.**

● **Data analytics offers new insights into continuous operational improvement and delivering better outcomes for customers.**

● **While business process centres might appear to be the natural areas to build analytical capability, progress will stall if the overall strategy is based on continuous cost-cutting rather than building value. A twin focus is easy to say but often difficult to do.**

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