

Private Advice

Vol 5, No.1

FROM THE WORLDWIDE MANAGEMENT CONSULTANCY OF



Enjoying what you're good at as an overall business strategy

BY KEVIN BONES



KEVIN BONES
BE (mech)

A senior consultant with
Kepner Tregoe Australia

Playing to your strengths is one of the basic tenets of success. We all enjoy what we are good at and in many small ways our good performance is often reinforced by that.

It's the same for a management team but unfortunately we often focus more on the things people aren't doing well instead of getting the structure right to take advantage of what they are good at. A fuzzy focus, capability gaps or excessive costs all tend to make this situation worse.

Most manufacturing clients have hundreds of years of combined experience on their teams and their share of bright highly motivated people. Only a few capitalise on this as well as they could. Where do you start?

The business, not to mention each department within it, should be organised around delivering the key elements of the strategy. The inherent assumption is that an overall strategy and department functional strategies exist. If not then this is a first port of call.

At department level that is fundamentally important. How can you effectively set up a structure and fill the roles for an HR department if its purpose is not clear? How can you position the strongest players to deliver the key wins if the critical issues for the department are unclear? How do you identify tasks too important to delegate without understanding what is critical?

In summary, the overall strategy and the functional strategies for each department provide the context for decisions on how to get the most from the team.

Next is the organisation structure. Consider for a moment the importance of understanding the context and purpose when designing a structure. The steps for designing the optimal structure are then a classic application of decision analysis:

- Identify the group responsible for the design
- Develop the objectives for the new structure
- Design alternatives
- Compare the alternatives
- Assess the risks
- Identify the capabilities required
- Assign individuals to the structure
- Develop an implementation plan.

Getting the structure right and the right people in the right positions are crucial steps to success. They require the right process, the right data, and a serious level of engagement at top level. As individuals are assigned to the new structure it becomes clear where their strengths can be used. Those missing strengths and capabilities are also highlighted and programs can be initiated to develop, recruit or borrow these.

With the right people in the right positions one is well on track. Add well-defined roles, effective feedback and development where capability gaps exist and the structure comes to life and the pace can accelerate.



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When selecting KPIs it's important to make sure they measure up to the job

BY KEITH DAVIS



KEITH DAVIS
BSc (Eng)
A consultant with
Kepner Tregoe Australia

There would not be a manufacturing organisation in the world that does not have Key Performance Indicators (KPIs). Some organisations have only a select few while others have a whole catalogue

of them plus a dictionary to explain the acronyms used.

Of course, we have KPIs solely to tell us how we are performing. In this regard, they are absolutely essential. But manufacturing organisations have to be mindful of a few high level considerations. Firstly, **are the selected KPIs appropriate to indicate process deviations in a timely manner?**

Will they indeed indicate not all is well so there can be intervention as the deviation occurs? Too often KPIs are vague and show the results of processes rather than their health.

An example might be a KPI that reflects production volume. Such a KPI, unless tracked hour-to-hour or minute-by-minute will not indicate a problem in the manufacturing process until it may be too late.

Timeframe-relevant data needs to be captured and investigated quickly once a deviation is observed to take effective action to remedy process problems. It is still possible to resolve problems with data that is not timely but the task is much more difficult.

Because time is an important attribute to KPI designation, so too is coverage. This brings us to the next consideration that must be thought of in terms of KPI selection: **Are there sufficient KPIs chosen to indicate what process or processes are falling down?**

One might think by the very name – Key Performance Indicator – that it would be self-evident what processes are not as

they should be. But it isn't always that clear. Think about the KPI concerning throughput (e.g. tonnes/day, metres/day, cans/hour) and what that tells you.

It should tell you if production is not performing as it should, but among the various processes that make up production, does this KPI tell us where to look? Is the problem at the head of the line where raw materials enter the process, through the various steps of conversion to finished product, or at the proofing and packaging area of the production line?

It is important that each discreet aspect of production, each independent process has its own KPI. A generic KPI such as tonnes/day does nothing to help investigation, troubleshooting or decision making.

Not only should each discreet process have its own KPIs, but so too should each organisation level.

The third consideration when selecting KPIs is to **ensure appropriate levels of influence over and responsibility for the performance the KPI measures.**

It would not be appropriate, for example, to assign responsibility for the same KPI concerning availability to an operator on one process on the production line and also to the production manager.

The operator is responsible for the availability of his particular process, but not for the entire line whose KPI should be assigned to the production manager.

In this manner, ownership becomes quite relevant to the individual process operator as he/she understands and buys into the KPI and it becomes inescapable he/she is indeed responsible for that performance.

As a production manager, delegating this responsibility to all processes in the line – and thus to each individual operator – enhances the probability of the entire production line achieving targeted performance. This is one example of the sum of the parts being greater than the whole!

Of course, separating ownership and responsibility along the line can cause a bit of competition and potential conflict as one operator tries to out-do another. It is critical that **KPIs are selected so as not to create conflicts throughout the organisation.**

I don't want to count the number of organisations I have known or heard about where conflicting motivations have groups at odds and butting heads instead of working hand-in-hand.

A recent case was where an engineering budget was used as a KPI and also as a big stick to keep the engineers in line despite the fact that it, conflicted with the multiple production KPIs in terms of line availability, production throughput, and the engineering department's own KPI of shut performance.

No way was that organisation going to be simultaneously successful with both KPIs!

Because the production line was a bit long-in-the-tooth, maintenance was simply a part of everyday life. The KPI for engineering had been set years ago without allowing for the fact that that an older line naturally required more maintenance. The KPI had not been challenged or changed since so an even older machine with incrementally more maintenance needs was being asked to both utilise equivalent or less R&M budget and produce more with improved availability.

That is not an unusual example of incongruent KPIs although most conflicts are a bit more subtle. It might be worth while to review KPIs and identify their position in respect of the four considerations just presented.

Of course there are other considerations and other topics concerning KPIs that have not been addressed here. Topics such as data gathering techniques, determination of the proper level of KPIs selected (too many or too few can leave you a bit short or overloaded), data analysis and database management to name only a few. Keep an eye out for future KPI discussion.

Supply chain complexity is here to stay so stop it keeping you awake at night.

BY DAN BOULTON



DAN BOULTON
*BSc (Hons) M. Bus.
Logistics*
*A senior associate with
Kepner Tregoe Australia*

Do any of the following situations look familiar? The number of products in your business has more than doubled in the past five years and a new range of products is in the pipeline. Yet you can't remember the last time a product was deleted from the range.

Your customers, especially the big retailers, have become far more demanding on pricing, systems alignment, delivery windows, returns or after-sales and information support.

The warehouse/yard is full to overflowing, yet customer service levels are down. Finance is in a fix about the amount of working capital sitting in the shed and nobody has any good ideas to solve the mounting obsolescent stock problem.

The production lines are struggling with increased changeovers, customised runs and more stringent quality and labelling requirements, yet are expected to achieve the same volumes. The supply store wants to know what to do with all the type-A components they bought and which are now useless because nobody told them about the upgrade to type-B.

Sales blames key product out-of-stocks for missing important targets; production blames planning for poor line rates. Planning responds by making more and more stock, driving overtime costs through the roof and leaving the warehouse stuck with piles of goods and increased labour and surge warehousing costs.

The software solution that was going to solve all these problems (as the silky salesman had explained over lunch several years earlier) has proven remarkably inflexible for the specific needs of your business, yet the painful licensing fees continue to roll-in.

It all sounds like a bad movie, but one you can't walk out on. Take comfort however that this supply chain nightmare is alive and well across businesses of all sorts as they seek to respond to rapid marketplace development brought on by globalisation, new technologies, powerful retailers and well informed consumers.

Fortunately there is a solution to these dramatically increased supply chain complexity problems. However it involves a change of thinking from the familiar localised process improvement.

In the past managers could comfortably focus on solving problems and improving efficiency in their own fiefdom, now they are required to negotiate, communicate and determine optimal solutions with managers from other areas who have different priorities, ways of thinking and methods of working. Cross-functional sum-is-greater-than-the-parts thinking is now needed, requiring different skills and processes.

The key process is known as Sales & Operations Planning (S&OP). This is not a new process but doing it well is very rare, particularly when the pressure is on. S&OP is the process via which the firm plans and executes all the activities required to meet customer demand. Specifically it seeks to efficiently match supply (production & logistics) with demand (sales & marketing).

The S&OP approach utilises a balanced scorecard to ensure that outcomes in all areas are recorded and understood. It helps participants to develop a common mission towards the best total outcome. As part of the S&OP process the company can investigate how:

- Production efficiency of long runs compares to warehouse carrying cost of excess stock
- Forecast accuracy impacts stock holding levels
- Supplier agreements impact production quality/yield.

Mostly though, an S&OP process enables participants to make good short-term tactical decisions in response to ongoing demand, unplanned events and new requirements.

Making S&OP work requires management to create aligning goals and systems that generate co-operative behaviours towards an optimal total. Sales needs to be encouraged to provide timely, accurate and well-thought forecasts. Production needs to be set a new direction that reflects an appropriate balance between responsiveness and efficiency. Planning needs to adapt to this new information-rich environment by adjusting inventory levels to reduce working capital.

When the many departments working across the supply chain work together and create a shared strategy then key gaps in efficiency are easily identified and specific software or capability solutions can be targeted, knowing they will be part of the solution.

Of course one is sometimes told: "This is a very political organisation; that won't work here"

Organisations become political when a blame culture exists. Supply chain problems run across functional areas rather than within them, so solving your problem requires other departments to change. And you may need to make an undesirable change to help another area.

Yet with everyone under pressure in their own department, nobody is willing to go the extra mile for another function.

So how do you overcome politics? You don't need weekend retreats, dinners and long lunches to engender workplace co-operation. It turns out that people will work very willingly and co-operatively when given a shared goal they all understand and when following a clear process.

The sad realities of downtime and bottlenecks are not always obvious to everyone who is involved

BY CRAIG SUTTON



CRAIG SUTTON

BE

A senior consultant with
Kepner Tregoe Australia

There was often a film crew stationed out front of the complex where I lived in Thailand, and with my rudimentary Thai language skills and questioning of the film crew I learnt that the area formed a regular scene in one of the many Thai soap operas.

I often sat in a nearby Starbucks and observed the goings-on from a consultant's perspective – although my wife was convinced my observations were confined to the beautiful Thai actresses.

While I admit that they made my studies more enjoyable the sad reality is that they spent most of their time off-set and along with most of the film crew seemed to be quite idle.

There seemed to be one or two very busy people constantly running around, always with a mobile phone fixed to their heads, but for the most part the set was lacking in activity.

To someone who spends his working life increasing efficiencies, optimising resources and business processes, watching this production was tantamount to visiting another planet.

What I was essentially observing was the human equivalent of a bottleneck process or bottleneck piece of equipment.

Nothing could continue or progress until the few busy people could process their tasks critical to the continued production of the soapie.

In the above case the bottlenecks were obvious; in our plants sometimes they are not!

Most of you have no doubt read Goldratt's book *The Goal* and are aware of Herbie. Herbie was the classic rate bottleneck i.e. The slowest of the scouts and hence the governing rate of completion of the hike. There are two types of bottlenecks:

- A *rate* bottleneck – the slowest piece of equipment or process
- A *variable* bottleneck – a piece of equipment or process that has a high variation due to stoppages or breakdowns.

Often it is the latter that are less than obvious and their impacts can be quite dramatic -again very rarely quantified. Goldratt is quoted as saying that in his experience only one in 100 is capable of identifying the true bottleneck.

In the case of variable bottlenecks Goldratt's rules still apply i.e. Identify, Protect and Exploit and each of these has its own unique challenges.

IDENTIFY: This often requires a more sophisticated diagnosis and access to sound data such as MTBF and MTTR for all processes or pieces of equipment. Once identified further modeling shows the impact on throughput and hence financial impact on the business.

PROTECT: Some simple formulas help determine optimal levels of buffer required to protect the bottleneck which will need to be constantly reviewed as the variation is reduced.

EXPLOIT: This is where all the data collection, troubleshooting, preventive maintenance tools need to be focused in order to reduce the variation.

As you progress this you should notice increased levels of throughput but also need to be aware that the bottleneck will move so continued vigilance in collecting and analysing the data is a must!

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Kepner-Tregoe Australasia Pty Ltd

Level 8, 50 Berry Street
North Sydney NSW 2060

Tel: +61 2 9955 5944

Fax: +61 2 9955 1625

Email: jtimbs@kepner-tregoe.com

One small step into the unknown can become a giant safeguard against the known

BY CHRIS GERAGHTY



CHRIS GERAGHTY
BSc, MBA (AGSM)
Managing director of
Kepner Tregoe Australasia

“*Reports that say something hasn't happened are always interesting to me because, as we know, there are known knowns; there are things we know we know. We also know there are known unknowns; that is to say we know there are some things we do not know. But there are also unknown unknowns – the ones we don't know we don't know.*”

— Donald Rumsfeld early in the Iraq war.

Although this quote earned Mr. Rumsfeld a Foot-In-Mouth Award from Britain's Plain English Campaign he may have had a valid message that can provide insights beyond the theatre of war right into the heart of many commercial businesses.

Let's try to translate Rumsfeld's muses: A known known is obviously what a company is aware of and on top of. A known unknown is essentially a risk of which the company is aware and can choose whether or not to manage. All too often this is not done effectively but at least the company has the option.

But what about the unknown unknowns? These are the things that can blindside an organisation, even the best at risk management.

Some interesting work by Daniel Diermeier from the Kellogg Management School has developed some cutting edge tools that help organisations to do just that – identify the unknown unknowns.

His premise is that there is extensive information out there but if you don't know what to look for then obviously you can't find it.

He has therefore developed some sophisticated analysis tools that constantly scour the web analysing blogs, media ...the chatter. His tools study relationships and eventually develop themes. These tools create a three dimensional topographical map of the web with themes represented as mountains. The bigger the mountain the more chatter on its theme.

A company looking at making an acquisition, changing a supplier, or launching a new product can then identify and research these themes or search for relationships.

Daniel gives the example of a large, well-known food company about to changeover some of its raw materials from vegetable oil to palm oil.

By using these tools it was able to identify issues several steps up the supply chain, in some cases all the way back to the growers. Issues such as extensive violence and poverty at the plantations, deforestation, and destruction of wildlife – all excellent fodder for many of the activist groups out there seeking to target such a prominent multi national.

By materialising these unknown unknowns ahead of time and well before they were picked up by activist groups or the media the company was able to modify its decision and manage the risks.

Rumsfeld may have had a valid insight!

Private Advice for a friend

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Level 8, 50 Berry Street, North Sydney NSW 2060
Tel: +61 2 9955 5944 Fax: +61 2 9955 1625