

Business simulation as usual: Pattern Based Strategy

David Jones, CEO, Lanner Group

Executive Briefing



“Lanner has actively harnessing and deploying pattern based strategy on behalf of clients for over ten years.”

What is Pattern Based Strategy?

Pattern-Based Strategy™ (PBS) is an umbrella term that overarches a coalition of existing technologies and suggests how they can be developed. Developed by Gartner¹ it is a strategy designed to find and successfully exploit emerging patterns and trends within a department, business or industry sector and even within an entire market.

In late 2009, Gartner introduced PBS like this:

The environment after the recession means business leaders must be more proactive in seeking patterns from conventional and unconventional sources that can positively or negatively impact strategy or operations, and set up a consistent and repeatable response by adjusting business patterns.

PBS goes beyond this initial process of identification to assess the risk and opportunities the patterns and signals present. It then delivers an evaluation of how best to act to negate the risks / exploit opportunities.

Lanner has been actively harnessing and deploying pattern based strategy on behalf of clients for over ten years.

PBS chimes well with the recent shift of many businesses moving from a reactive, post-mortem view of business episodes to a proactive view that at the very least can act to prevent negative events arising. Lanner simulation, optimisation and experimentation technology has been delivering this capability for customers throughout manufacturing, financial services, the police and pharmaceutical companies since 1996.

From a “solutions” standpoint, the initial component technologies of PBS include:

- BI / Performance management
- Business Activity Monitoring
- Complex Event Processing
- Business Rule Management
- BPM suites
- Simulation

¹ See <http://www.gartner.com/technology/research/reports/pattern-based-strategy.jsp>

Structurally, PBS is based on four disciplines

The creation of a performance driven culture

Gartner stresses that businesses should look at leading (as opposed to lagging) indicators to improve performance. The aim here is to develop a business intelligence capability that can itself become predictive, rather than a simple analysis of what has happened at one static point in time. This technology is already in play in many instances.

The seeking of new patterns

Gartner advises that businesses should look for the emergent weak signals in communities. In identifying and harnessing these signals and patterns it is important to work with those communities inside and outside of the business. If these patterns and signals are absent, businesses should look to develop their own nascent patterns.

PBS is designed as an early warning system for problems and an indicator of opportunity to enable early adoption.

The development of an 'operational tempo'

(Gartner calls this Optempo)

Originally a military term, operational tempo refers to how often a unit would go into action and its consequent speed of operations. Gartner terms Optempo as a set of coherent guidelines and actions necessary for maximising the allocation and use of enterprise resources as new patterns emerge.

The idea is that, within PBS, an organisation adjusts the relative speed of its operations better than competitors. As a result, the business must understand the levers it can control to drive change. These levers are people, process, and information. Essentially, Optempo is a structure to match pace to purpose.

The use of transparency as a competitive weapon

This refers to transparency in the communication between the groups and places that are the source of the patterns and signals. This is both a demonstration of corporate health and the use of transparency for differentiation.

Ultimately, when charted against the backdrop of the recent recession PBS is an attempt to simultaneously look inward at a company, assess the possible external opportunities and experiment before committing to a course of action to ensure a better return.



Simulation can help explore scenarios at extremes or near a 'cusp' to help understand how to react.



Where do Lanner and simulation fit in?

Simulation is used to test processes in terms of design, resourcing and operational control. Simulation has also long been established as a means to stimulate innovation and gain consensus through its ability to visualise process and proposed changes.

When it comes to PBS, simulation applies throughout the structure of the strategy:

Pattern seeking – simulation can help the user understand the process, qualifying if the patterns observed are caused by factors identified by the organisation or due to other random influences. Simulation can help explore scenarios at extremes or near a 'cusp' to help understand how to react.

Optempo – we can interpret this in terms of the 'tempo' of the organisation, the frequency

with which it considers data and makes decisions. Equally important is the speed at which decisions are implemented.

On occasion, simulation inserted into a cycle of 'measure, analyse, plan and do' can be criticised for slowing things down. However, while agility is important, the direction of an organisation must be correct. Simulation 'off-line' can create a bank of 'knowledge' from which to make the right decisions first time, as opposed to simply using simulation 'in-line'.

Performance culture – simulation can identify and define the right measures (and KPIs) to drive the required behaviour.

It can also determine the levels at which to set the targets as they are 'proven' as reasonable by running the simulation with valid and representative data.

Business simulation as usual: Pattern Based Strategy

executive briefing



By simulating different business outcomes that arise as these patterns develop, businesses can move to exploit them better.



Transparency – simulation brings transparency to process decisions by playing out the process in the virtual world of the computer with a graphical representation and statistical reports to provide ‘independent evidence’. In the case of many organisations this can remove the ‘he who shouts the loudest’ influence that often guides change.

By simulating different business outcomes that arise as these patterns develop, businesses can move to exploit them better. The first step of this is a faster, more agile response.

For example, it may be that a logistics depot shows better throughput with canned products rather than those in glass. PBS would pick

this up and the simulation could explore the feasibility of moving to a portfolio of canned products. The speed of simulation would mean a more agile change when implemented throughout the business. This is a slightly reductionist example but the point remains; simulated change means faster, more agile real change with increased confidence.

Alternatively, there have already been well publicised cases of ‘biometric’ analysis systems in credit card companies and telecommunications companies. A huge amount of transactions are monitored and assessed for unusual / inappropriate behaviour for anti-fraud purposes.

Simulating internally

Simulation - when looking at defined, programmed transactions - is often a quick route to easy ROI. However, it is only when simulation is applied to far less controlled “people intensive” processes that simulation can really show its potential.

Consider for example, workforce optimisation within an environment such as a contact centre or police incident response. There are hundreds of possible variables at work here that may impact on the outcome.

At the operational level processes and people go through the motions as they have been instructed to do. Identifying the cycles they undertake and the process times these activities take gives the first indicators from which patterns can be drawn: are people faster in the morning than in the early afternoon? Does the weekend shift handle bigger incidents faster than the week day shift?

There are then the issues of resource availability and optimising the right skill set to handle these different patterns. These soon impact on the larger, “business” issues of performance and capability overall. But to take the data and identify the most efficient pattern of work / allocation of resource, businesses need to simulate the different conditions and then optimise responses.

Experience shows that simulation delivers the most value in people rich processes. Instead of making people conform to the processes as mandated by technology, it looks for a better way to optimise what people are doing.

HR development and workforce optimisation are fertile grounds for PBS success. Aligning staff and other resources to the profile of specific events or processes can be done at an incredibly granular level.

By then simulating changes in these resources - from everyday staff illness of holidays to one off disaster response - businesses can optimise their response. Forecasts of performance can be applied to situations that previously had no guidance.

Simulation also affords the ability to experiment with alternative methods of working to limit the negative impact of such changes, or indeed, suggest changes to current structures or business processes that can eliminate the possibility for damage in the first place.

Proactively, a sustained commitment to employee training and development can help counter the effect of a downturn and result in long-term growth and faster recovery success. However, this is a significant gamble, particularly for large businesses that may be looking at six figure sums to develop its staff. Simulation here can help make the case for investment and ensure the new processes put in place do what is expected and realise ROI faster.

Many advanced businesses now realise that when it comes to the work force nothing is static and things are either progressing or regressing. Ongoing use of simulation can ensure that this continual movement is harnessed for the positive evolution of the business.



Simulation here can help make the case for investment and ensure the new processes put in place do what is expected and realise ROI faster.



Simulating externally

Alternatively you can focus the simulation element of PBS on external elements such as an industry, or market. Watching the likely impact of regulation on sensitive industries such as defence or the nuclear industry, or simply tracking consumer behaviour gives you the all-important first set of data.

Simulation then enables you to feed in as many different variables as are needed on both the external and internal sides to assess what opportunities or unseen threats may exist. For example, the likely impact of a rise in interest rates on mortgage insurance uptake and the consequent impact upon a decision to outsource the contact centre for that (and at what level of staffing).

However, simulation does not only bring the ability to experiment with possible courses of action and business rules based on the data fed into a PBS “programme”. It also enforces the discipline needed to get the most out of the entire project by demanding granular level information right throughout these early stages.

One of the advantages that Lanner can bring to the issue of PBS is green risk assessment. The Lanner WITNESS PWE edition enables businesses to specify and simulate green performance metrics from energy consumption to CO2 emissions. As a result, as part of a PBS strategy, Lanner can deliver a unique environmental dimension to decision making.

Simulating the possible outcomes of pattern development is however, only half of the story. By creating various hypothetical outcomes, businesses can look to optimise their response to these emergent patterns. This elevates these early PBS adopters to a very strong position, able to assess the best response to any emergent pattern.

Indeed the simulation and optimisation enables such organisations to consider if the pattern itself is evolving as the business wants it to, and can intervene if needed.

Developing PBS in the real world

While PBS is not a product but a framework and approach, there are some companies whose use of simulation does show the way to achieve many of the outcomes and benefits of a PBS strategy.

Automotive manufacturer Nissan has used Lanner simulation to model production for its new plant in Russia, planning the production capacity and activity of over 750 employees. Initial data was fed in not only from the internal production “history” of Nissan but also the Russian market and demand for cars.

Another example is Siemens which has used simulation to alter its production of magnetic resonance imaging (MRI) technology,

evolving away from a traditional batch ‘push’ arrangement to lean manufacturing. Again, internal data was used to identify patterns and then business rules were developed and simulated to give an accurate depiction of viable options.

Pattern Based Strategy is very much a new kid on the block – and on occasion it has been met with some cynicism. However, it does promise to develop some strong strains of competitive advantage. Simulation is a critical component of the approach and as the above examples indicate, can focus efforts in driving benefit from data gathered from both inside and outside of a business.