

Stress Point Analysis - Identifying and Overcoming the Barriers to Operational Excellence

Developing operations into a source of competitive advantage is increasingly recognised as central to strategic success. Developed through research undertaken at Warwick Business School's Supply Strategy Research Unit, Stress Point Analysis is a 'forensic' approach to evaluating an operation using a robust analytical approach, explicitly intended to help organisations identify and evaluate the inhibitors, constraints and barriers to their development of excellent levels of operations performance.

In this briefing paper we describe the Stress Point Analysis (SPA) approach.

A Betts, Dr. S Croom, October 2003.

Introduction

We have seen a major shift towards greater emphasis on developing the strategic contribution of operations. As noted by our colleagues Professor Nigel Slack and Dr Michael Lewis, operations process development now constitutes the single largest area of investment in strategic management consultancy worldwide. Furthermore, over the last thirty years we have seen a raft of 'best practice' initiatives including TQM, Just in Time, lean manufacturing, Kaizen, BPR, six sigma and e-business.

We would not detract from the great advances made in many organisations' operations performance as a result of adopting some of these best practice initiatives. Sadly, however, simply emulating aspects of the best practice does not deliver real, lasting strategic advantage. The marketplace changes;

competitors also adopt the same practices; we focus on things that don't deliver competitive advantage to us; our workforce receive mixed messages; and we fail to develop long term, sustainable capabilities.

Our research over the last ten years has reinforced the view that there is no 'magical answer'; no 'one right way'; and sadly, no 'operations panacea'. Every organisation has distinctive and unique needs and problems. Consequently, we have developed Stress Point Analysis as a methodology for helping YOU to develop appropriate capabilities in YOUR operation.

But firstly, it helps if we can have a view of what such capabilities may look like....

What Makes An Outstanding Operation?

Outstanding operations are easy to recognise when you see one. There are at least six characteristics we've identified in great operations:

- They know just how to make customers happy. Their processes give 'value' to their customers who always chose them first. Their customers tell others so that word of mouth recommendation and a reputation for excellent operations becomes synonymous with their business.
- Their employees belong. They know what they are expected to do, they are able to do it, and are recognised when they do well.
- Senior management does not "micro-manage" them; instead it is happy to provide resources because they know they will be well used.
- Everyone can see how the business is operating and has an opportunity to contribute to making it even better. Efficiency and effectiveness are ingrained into their measurement and control systems.

- They don't stand still. Constant improvements, even minor ones, are encouraged. They are creative in all aspects of their business - in their products, their service offering and in the design and management of their manufacturing processes.
- They have an 'edge'. Life in a great operation is not laid back and relaxed - it has an energy about it that makes each day interesting and rewarding.

Why are most Operations Just Average and Not Outstanding?

Average is OK. Average means we're like most of the others, no better, but no worse. There are natural reasons why operations tend towards the average in terms of the six factors above. It's hard to excel, partly because we may not have the aptitude, but mainly because we've not been shown how to overcome the natural barriers to becoming great. No matter how hard an operation may try to adopt the latest good teachings and methods it still finds it can't quite get to the levels of capability and performance that really make a difference. And sustaining the performance is even harder. Often, though, managers have a feel for what a truly outstanding operation might look like, but know that there are limits to their own operation. They often see **stresses** appear in their operations processes, resources, people and measurements when they try to make improvements. Even when adopting the latest operations 'best practices' they still find things don't quite work the way they hoped and wanted.

So, What Are the 'Stresses' in an Operation?

All of us have stresses in our life. Stress is a natural way of living - in some ways we know we're alive because of the existence of stress.

But stress is really about the barriers or pressures that hold us back. Outstanding operations have found ways of dealing with

their stresses; sometimes countering them, sometimes overcoming them, and sometimes just living with them. But, the one thing all outstanding operations have in common is that they know what their stresses are and how to deal with them.

We've looked at bad, average and excellent operations and identified five key barriers to excellence that we call **stress points**:

- Improvement & Innovation** - improvements may not be actively sought out across the operation and creativity may be thought to be confined to a narrow set of individuals.
- Alignment & Fit** - an operation may be facing stress because it is not focusing on what customers really value, clearly defining roles, encouraging employees, or helping its suppliers to support their processes and people.
- Measurement and Control** - an operation may face conflicts between what it measures and what its customers' value. Senior executives often have specific information needs from metrics, which differ from those metrics and targets needed to run the operation. Having confusing or even conflicting performance measurements will burden the operation with stresses in terms of giving mixed messages to its employees and diverting attention away from important process characteristics.
- Resource & Demand Management** - an operation may have difficulty delivering what customers want, when they want it. Stress of this kind arises when an operation faces volatile demand, when it has frequent interruptions, when its resources are be limited or when its processes are unresponsive.
- Process Capability** - an operation may not meet its obligations in terms of service or product specifications because its process accuracy is variable, it does not

measure how good it is or its employees feel they are not motivated.

What is Stress Point Analysis (SPA)?

Developed after many years of research at Warwick Business School, Stress Point Analysis (SPA) is a *forensic tool* developed explicitly to help managers and executives understand what is driving the operation, what is holding it back and where the priorities lie in order to direct attention to the areas that will really make a difference. It employs a detailed online instrument designed to identify the nature and levels of stress in the operation. A substantial number of operatives, supervisors, managers and executives are engaged in completing the initial online phase of the analysis so that the analysis offers an accurate reflection of the stresses faced by the operation. By adopting a forensic methodology SPA provides a valuable base of evidence for further improvement and innovation activities intended to help develop an outstanding operation.

What does SPA do?

1. It engages the workforce

SPA works by gathering the thoughts of the workforce. It helps to build a holistic view of the company from the shop floor up. The results will be owned by the whole workforce who can then be engaged on moving the operation forward.

2. It diagnoses

SPA will diagnose areas of the operation that are under stress and may fail. It also diagnoses areas of competency which can be leveraged.

3. It benchmarks

SPA will tell you how you are doing by providing comparative data from other organisations inside and outside your sector. Using a

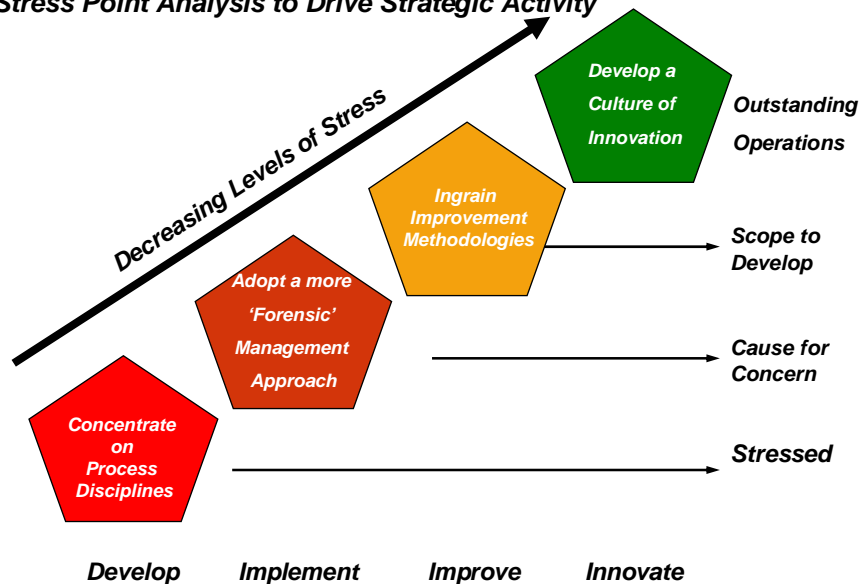
four stage model SPA will also give your operation a 'health check' against outstanding levels of operation.

4. It provides a route map

SPA will provide clarity about the next steps to take wherever you are on your journey from poor to outstanding.

Our research has identified four states that an operation may demonstrate in terms of its levels of stress, which we describe by the terms, 'stressed', 'cause for concern', 'scope to develop' and 'outstanding'. Moving between these four levels

Using Stress Point Analysis to Drive Strategic Activity



5. It helps overcome confused messages or direction

SPA will help provide a common language and purpose across the operation, from senior executive to front line operative.

Why can it help?

As a forensic tool SPA provides clarity in terms of the drivers and barriers to outstanding performance; helps to deliver consensus across the operation and consequently enables

operations to develop a clear, common purpose for its improvement activities.

How is Stress Point Analysis done?

Spa is a web-based questionnaire which is completed by all levels of the organisation. As such it means we can collect large quantities of quality information quickly and economically. The responses are analysed using an analytical engine based on advanced statistical software designed specifically to generate the SPA diagnostics. The analysis is then presented back to the organisation through a series of reports a detailed SPA workshop.

What Does the SPA Report Show?

The SPA Report provides analysis of each individual's responses to the SPA online survey. It assumes that these responses are an accurate reflection of the operations. The analysis can thus be used to revisit initial views and check understanding as well as provide a 'dashboard' of the operations stress levels.

The SPA Report highlights key areas for attention and provides some guidance to appropriate development activities.

There are 3 elements to the Report:

1. Each respondent may receive a personal Stress Point Analysis which provides a 'health check' of their operation. This examines each of the five Stress Points and further identifies the specific operations management issues that require particular attention.
2. The Residual Analysis, which matches SPA results to our global database selected to provide a benchmark comparison with other operations.

3. A Business-level SPA, which aggregates certain dimensions such as the distinctions across different levels of the organisation and between different functions. It may also be used to provide both industry and global benchmarks for the business.

What does a 'typical' SPA Report look like?

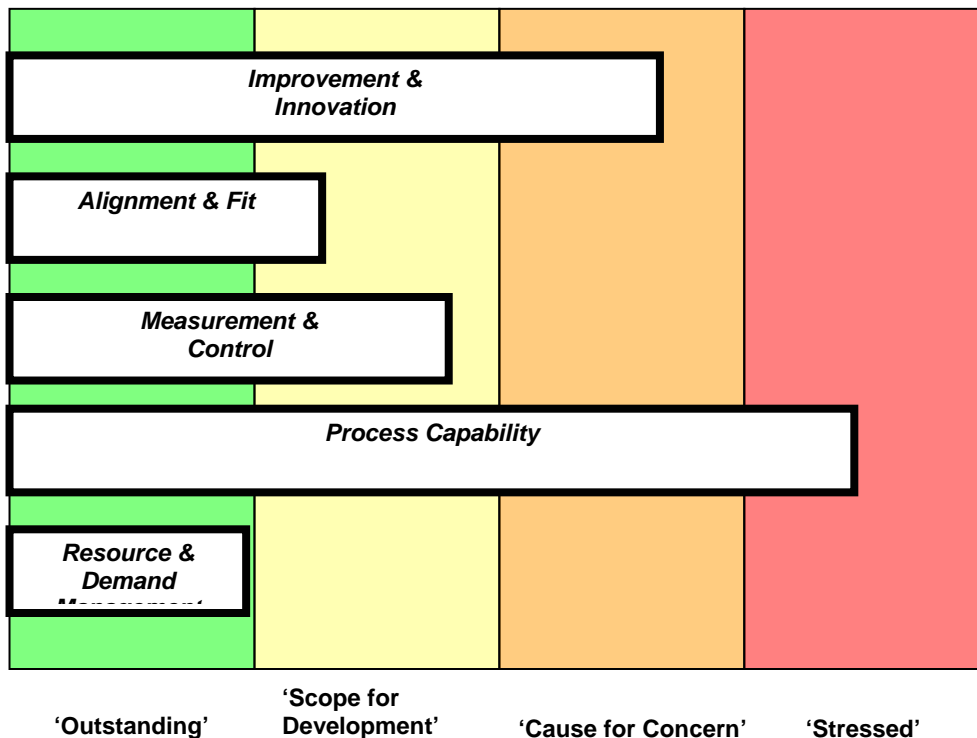
The following is an illustration of the type of report generated by the Stress Point Analysis.

Subject: A.N. Other

Analysis of your SPA responses is contained in this report.

Section One: Your Individual Analysis

Your stress point 'dashboard' below shows the extent of the stresses in your operation for each of the five Stress Points in your operation.



1. Improvement & Innovation: 64%

Your level of stress in terms of **Improvement & Innovation** shows there is **Cause for Concern**.

Importance of Innovation & Improvement to senior management

There is a degree of "tokenism" evidenced in how senior managers are perceived to feel about innovation and improvement – time to "walk the talk"

Skills for doing Innovation & Improvement

Your people have limited skills in improvement and innovation techniques – if you are serious about improving they need “topping up”

Processes in place to share learning

Some limited signs that you take the sharing of learning seriously but frankly not enough

Motivation for doing Innovation & Improvement

You need to do more if you want people to be really interested in innovation and improvement – take a good hard look at your HR practices – are they getting in the way rather than helping?

Strategic importance of Innovation & Improvement

A limited amount of understanding of the “big picture” when it comes to the strategic importance of improvement and innovation – perhaps a top team session is needed to refocus

2. Alignment & Fit: 29%

Your level of stress in terms of Alignment & Fit shows there is **Scope for Development.**

Fit with customers

You take your relationship with customers seriously and there are some good signs – just develop a little more and you would have a real strength

Fit with suppliers

Your relationship with suppliers is a cause for concern – take a long hard look at your responsibilities in this respect

Fit with other departments

Your relationship with other departments is a cause for concern – take a long hard look at your responsibilities in this respect.

Internal “team” fit

You take your relationship with your team seriously and there are some good signs – just develop a little more and you would have a real strength

3. Measurement & Control: 38%

Your level of stress in terms of Measurement & Control shows there is **Scope for Development.**

Management of people

Some of the basic HR policies should be applied to tackle issues around the management of people – it is holding you back

Performance Management

Your performance management is missing some important opportunities. You are more concerned with measuring for measures rather than measuring for performance. It’s time to get some basic disciplines in place here.

Measuring what’s important to customers

You have little correlation between your measures of process quality and those of your customers.

Understanding customer requirements.

You are well on the way to treating every customer in the way they would want to be treated, a bit more consistency and this could be a real strength

4. Capability: 88%

Your level of stress in terms of your Process Capability is **Stressed**.

Understanding the capability of the process

You appear to have little understanding of capability and therefore must investigate some basic process measurement - and you need to move fast!

Understanding the Capability of the front line

You appear not to be investing enough in your staff - you need to develop the capability of the front line

Understanding what level of capability is required by customers

You need to put in a lot more work to understand the needs of customers. If they are internal customers, you are not supporting them. If they are external customers, they may leave you.

Role of management in managing process capability

The basics of mapping and following processes seem to have passed you by.

Action needed NOW

Use of technology to improve process capability

Automation has had a detrimental effect on your process capability

5. Resource & Demand Management 24%

Your level of stress in terms of Resource & Demand Management shows **Scope for Development**.

Measuring resources

Your productivity is important to you and there is some evidence to suggest sound principles in position – your measures could be more sophisticated though.

Utilizing resources to meet customer demand

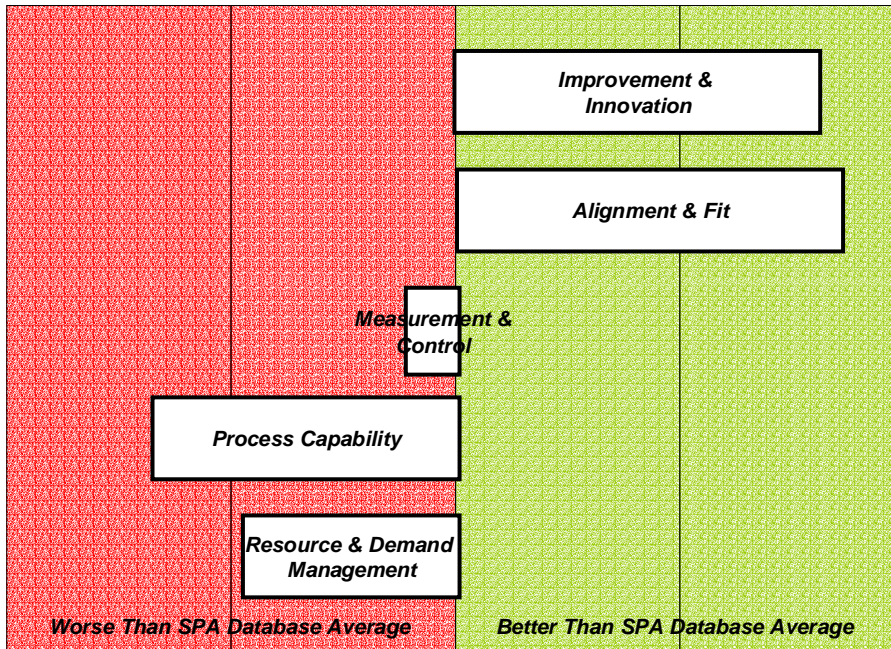
You are struggling to understand the patterns of demand; – you need to get better at having resources in place when customers want them. Are you inflexible or do you have reliability problems? Do you know?

Managing resources to meet demand

You are not the worst when it comes to managing resources to meet your demand, but you are a very long way from being anywhere near the best. Just look at all the waste around you and start taking some focused action

Section Two: Your Residual Analysis

A comparison of your responses to the global SPA database provides a 'benchmark' of your stress levels. In the chart below



In comparing your SPA Results to our global database a negative score indicates that your Stress Point levels are **below** the Database average. A positive score indicates that your Stress Point levels are **above** the database average.

This graph is primarily intended as a means of comparison.

Where your SPA score is worse than the SPA Database Average, it is clear that there are opportunities to learn from others, to adopt 'best practice' and that you need to ensure you are clear about how well you perform within both your industry and, more importantly, in comparison to your customers' expectations. There are three areas in which you may not be particularly stressed, but are performing below your potential.

Where your SPA score is better than the SPA Database Average, you must recognize the limitations of adopting best practice and emulating others. We find that many operations are like yours, too introspective and have little incentives or mechanisms to stimulate innovation & improvement. However, these are critical areas to address in terms of your strategic development.

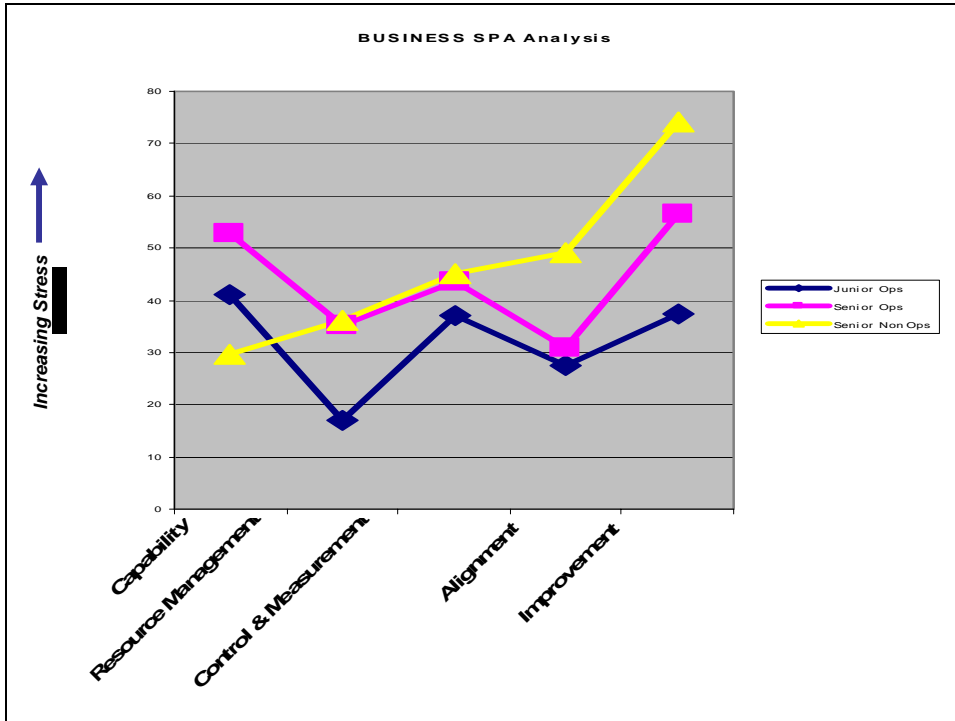
Section Three: The Business Level Analysis

(The Business-level analysis is a bespoke option and as such can be designed to provide a selection of analysis and comparisons. Below we provide an indication of some of the analyses available:)

Comparison of executive, front line and non-operations:

We can provide a comparison of the stress point analyses for different levels of the organization and across different functions. Below is a typical comparative

graph of the non operations (yellow), Senior operations (purple) and front line operations (blue) responses.



Comparative analysis of executive and front line perceptions

Through further comparative analysis it is possible to identify key 'gaps' and coherence between senior executives in operations and their front line operative. A 'typical' report may look like this:

- Significant mismatch between senior and junior managers views of how well your processes and staff meet requirements
- Evidence of poor internal relationships between Operations and Sales & Marketing
- Frontline Operations feel they are doing better than their Management think!
- There is a heavy emphasis on Technology as a driver for improvement.
- However, there is also evidence of a weak culture of improvement across the business. Some of the issues you may need to examine:
 - Q: Is Six-Sigma training helping to embed process analysis?
 - Q: Are your operations too isolated from other parts of the business?
 - Q: Why is Improvement seen as an 'Operations Issue'

Summary Statistical Analysis

Detailed statistical presentation of the SPA data may also be provided, for example:

- 86% of frontline staff has less than 2 DAYS improvement training p.a.
- Only 11% of frontline staff sees improvement as their role.
- 88% of frontline staff say they receive no reward for sharing best practice
- 92% of Senior executives believe there are good procedures for leading improvement
- 34% of Supervisory managers believe there is little opportunity for them to integrate the business' improvement initiatives with their operations activities.