

# AN INTUITIVE APPROACH TO BUSINESS ASSESSMENT

By Mark Eaton, MIOM, EEF South

We use intuition every day to sense problems and to see patterns in complex situations. The effectiveness of this 'sixth sense' increases both with use and familiarity.

An example of the use of intuition is Fleming's discovery of penicillin. His extensive experience in medical research and bacteriology enabled him to sense that what he saw in the dish was unusual and required further investigation. Without this experience, another person would have failed to spot the 'signs' that were apparent to Fleming and may have discarded the dish believing it to be damaged.

This article arose out of an extended discussion with a group of bankers who were working with manufacturing SME's (Small or Medium Enterprises). Although they used a range of detailed assessment tools to aid them, they always felt 'something' was missing and that they could offer more support to businesses if they could be trained to sense where the real problems were.

We created some 'rules of thumb', based on my own experiences of using 'signals' to spot problems. This is the basis of an intuitive approach that can be used to support a more structured assessment process and which can also be used to cut through to the real problems faced by a business.

I am not offering that this is a definitive list of rules, indeed they are based on my own experiences and you should feel free to add, modify or alter to create a list that works for you. However, you should find that the techniques described below are useful for most manufacturing sectors (except FMCG) and for companies or business units of less than around 400 employees.

## THE GROUND-RULES

This process assumes that you are not the line manager of the area being assessed, for example you are a Quality Auditor visiting the area, or a manager from another area or even a business consultant. If you are the line manager of the area you will get different body-language responses from those described below.

Also, whenever undertaking this process try to speak directly to shop-floor workers and junior staff and ensure that you actually visit the areas where value is being added. There can often be a big discrepancy between what is said in the board-room and the reality on the shop-floor.

## 4 KEY RULES

These four 'rules' help me spot the majority of problems within manufacturing and I use them as my 'quick diagnostic' when time is short.

### 1. Shop-floor Body Language

There is a lot to be said about reading the body language of the shop-floor staff. The quickest assessment in this area is to catch somebody's eye and then smile at them and in return you should expect to see them look back at you and smile back. If they look down when you look at them this is generally a sign of poor morale. Also, if they stare back at you but do not smile, this is often a sign of industrial trouble within the business. You will need to look into the

eyes of as many shop-floor staff as possible to ensure you didn't pick out somebody who was particularly happy or sad that day.

### 2. Notice Boards

Notice boards are often a good indication of communication within the business and indirectly of the morale as well. Notice boards that tell you nothing (ie contain no relevant data), are out of date or empty, normally show that there is a problem with communication in the business. Notice boards that are 'overdone' with complex, computer generated graphs that an ordinary human being cannot understand, often indicates that management are remote to staff in the business or that the notice boards are for show. You are looking for informative, easy to read notice boards (in the best cases created and put up by the shop floor staff themselves).

### 3. Ten Minute Shop-Watch

If you are able to, spend 10 minutes watching and listening to the shop floor, you should count how many people are adding value (ie doing something productive) and how many people are walking around, moving materials, looking for tools etc. The higher the ratio of people doing value adding work, the more effective the business is (although this can be fooled by people over producing and building stock that can't be sold – but you will be able to spot this later). However, if everyone is doing value-adding work the company may be at full capacity (not good if you are selecting them as a new supplier). Be careful to determine if people have been informed about the aim of your 10 minutes, as this will alter their behaviour.

Also, during the 10 minutes listen to the sounds of the shop-floor (if noise levels allow). A healthy company has a 'buzz' about it with a reasonable amount of banter and communication occurring. When the shop-floor operators are silent this often indicates a morale problem.

When doing the Ten Minute Shop-Watch, avoid periods before or just after interruptions in production (such as lunch, team briefs etc) or within 30 minutes of the end of a shift.

### 4. Walk The Process

Last of the big four for me is to walk the process from Goods In to Despatch for a typical product. Identify how many people are involved in handling, moving or progress chasing the product, also see how far the product has to travel during this journey (you will often be very surprised). Simple rules of thumb here, the further the distance travelled, the longer the companies lead time and the higher their WIP, the more people involved in handling the product and moving it and progress chasing it, the lower the business's productivity (moving, handling and counting add no value!) Lastly, if you can get the Operations Director to show you this process and they do it correctly it should give you a good feeling that they 'know their stuff' and are not remote from the shop-floor. Note as you go round how people treat your 'guide' if he/she is a manager/director – do they say hello to the guide and does the guide say hello to people by name. This is a good indication of the level of formality in the business and the closeness of managers and staff.

## VALUE WATCHING

If you have more time, or a need to assess a business further, the next stage I would use is the technique of Value Watching. This involves looking through a business to spot the signs of non-value adding activity.

Given that it is often much easier to help a business improve through dealing with the non-value adding activity rather than dealing with value-adding operations, the ability to spot 'clusters' of non-value add tell you where you can make the biggest gains. Also, by spotting a 'cluster' it also informs you of where the biggest problems may be.

When Value Watching you are looking to spot signs of the 7 Wastes (non-value adding activity groups) as described below:

### 1. Spotting Over-production

Over-production can either be the easiest or the hardest to spot. In the easiest scenario you will either trip over it or you will see more than 1 day's worth of WIP at a station. In the latter scenario, ask the operator what the throughput is per day for the operation. More than 2 day's worth of stock is often an indication of over-production.

Also watch out for EBQ's (Economic Batch Quantities) which are often created to produce long runs of items so that set-up time is minimised as a percentage of the total time. If the set-up times are long, the production runs will be long and will often lead to items being produced which are not required or for which there are no sales orders.

Lastly, a lot of over-production gets hidden in stores or finished goods areas so you may need to look there for it. Often, if finished goods are stored with raw material it is because they are surplus. Alternatively, look for finished goods with dust on the box/item.

### 2. Spotting Waiting and Delay

The easiest way to spot this is during the Ten Minute Shop-Watch when you should look for people who appear to have nothing to do. Often people are waiting because what they require has not been produced at an earlier stage, which in turn often occurs because the earlier stage is over-producing product because of long set-up times!

However, most companies would re-deploy the waiting operator onto other jobs so you should check the due dates of jobs that some people are working on. If the company has a typical lead-time of X and the operator is working on a job that is not required for a time equivalent to 6 times X, this can be indicative of an operator on waiting time having been re-deployed. This scenario also leads to over-production!

### 3. & 4. Spotting Excess Movement of People or Materials

This is another easy to spot problem that will drop out of your Ten Minute Shop-Watch on the shop floor and through walking the process.

On a more local level, I would also recommend watching individual operators as they work to see how much movement they need to make to reach parts and tools. This should be extended to include watching or asking questions to an operator about a machine set-up process. Ask them where the machine tools are kept, how they know what the next job is and how material arrives at their station. Their answers will give you a good understanding of how much movement is required to undertake their job.

## 5. Spotting Defects

There is generally a lot less intuition required to spot defects as they will appear in 'yield' charts or SPC graphs if they exist. Look for material with red tags on it (normally indicating either a 5S exercise or a defect area) or ask to see their defect/quarantine stores.

Lastly, if they have one, speak to the chief inspector or the person responsible for quality about defect rates.

I would always take note of a company who tells you they do not keep records of their defect rates as they may have a poor quality process and not know it, or they may be acutely aware of how bad it is and not want to tell you.

## 6. Spotting Over stocking

Again, this is often easier to spot than some wastes as you can look at the stores area. I have found that the amount of material that is sitting in Goods Inwards is a good indication of whether or not a company has an overstocking problem. However, you will always need to check that they have not just had a delivery!

As you walk through stores look for dust on material and dirty old labels. Ask how long these items have been in stock and the last time they were used.

Ask the store-man about slow moving or dead-stock, how much have they got, what do they do with it, where is it stored. Again, take note if they say they have no slow or dead-stock as this either indicates an extremely well organised business or one that does not realise they have a problem.

Lastly, some manufacturing businesses do not have a formal stores as they store material directly on the line or at point of use. I have found that this approach normally indicates a business that manages its stock well and does not have a problem with overstocking (unless you cannot move for material).

## 7. Spotting Inappropriate Processes

This is the hardest non-value adding group to spot. The best way I have found is to use your common sense when you walk the process looking for abnormalities.

## COMMUNICATION CHAIN AND MANAGEMENT STYLE

This is an important area as it affects the morale and indirectly both productivity and quality. I pay particular attention to such things as:

- Frequency and content of team briefings
- Frequency and outcomes from development activities (such as appraisals)
- Number of training days per employee
- The management of skills (through such things as skills matrices etc).

A good indication of morale is the absence rate of the business when compared to similar organisations. In general, the higher the absence rate in comparison to the company's peers, the worse the morale of the staff.

Figure 1

Opinion Chart

KEY for SCORING:  
 0 - No / very weak  
 1 - Need For Improvement  
 2 - Slightly Below Average  
 3 - Average  
 4 - Slightly Above Average  
 5 - Best Practice  
 7 - Don't Know

**PRODUCT DEVELOPMENT OPINION CHART**

New Product Development DIAGNOSTIC REVIEW - ANALYSIS

		Respondents (initials)					Average	Spread
General	1	How well understood are the terms 'value added' and 'non-value added' as applied to NPD?						
	2	How well has the NPD process been 'mapped'?						
Time to Market	3	How do you rate your 'Time to Market' (concept to production)?						
	4	How well are you using concurrent engineering techniques?						
How good is your NPD process	5	Are your products designed to optimise manufacture/assembly?						
	6	Are your product launches on schedule?						
	7	Are your product launches trouble-free?						
	8	How much involvement do your customers / end users have in the NPD process?						
	9	How innovative do you believe your products to be?						
	10	Are your products regularly 'First to market' rather than 'me too'?						
Environmental	11	How do you rate the value for money of your company's products?						
	12	How environmentally friendly are your products?						
Strategic Issues	13	How much are environmental issues considered during the NPD process?						
	14	How closely is your NPD process aligned to your business strategy?						
Procedure	15	Do you have an NPD strategy, and if so how good is it?						
	16	Do you have a written NPD procedure, and if so how good is it?						
	17	Are there clearly defined milestones in the NPD process?						
People Issues	18	How good are you at hitting project milestone dates?						
	19	How would you rate your project leaders' Project Management skills?						
	20	How much do you use team roles (Belbin etc.) in your NPD teams?						
	21	How well trained are the project leaders in people skills?						
What do you think are the biggest issues / opportunities for improvement, relating to NPD within your company?								

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**OPENING UP THE DISCUSSION**

One final tool that I sometimes use (although it is more like a business assessment tool) is an opinion chart (see Figure 1 for an Opinion Chart focused on Product Development). This is a set of simple questions that you get a wide variety of personnel within the business to fill in based on their own feelings (it is a subjective not objective process). Preferably, the forms are completed 'blind' (ie not seen beforehand) and all at the same time. Try to get as broad a mix of people as possible.

Once completed, collate the data onto a single form (remove names from them) and look at the spread and the mean of the data collected. This data can be used to open up a discussion and it often highlights things such as:

- Where there is friction between departments
- Where there are communication gaps
- Where there is a need for some training
- Where the company believes their key problems are located.

Lastly, if this form does nothing else it will give you something to discuss when you return to the board room after your factory tour and at best it will help to reinforce your findings.

**FINAL COMMENTS**

An intuitive approach to business assessment could never be described as 100% accurate, nor would you expect it to be given that it is based on observation and instinct rather than objective 'numbers'. However, I have used these tools to assess a large number of businesses and have found that it is right far more often than wrong for me.

As mentioned earlier, this process is based on my own experiences, which will be different to your own and you may need to add, amend or change the process to suit your own experiences and to make it 'work' for you.

Given that this is not a perfect process (and probably never will be) and that it will continue to evolve, I would be delighted to hear about your additions to these rules.

**About the Author**

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