

# Principles of Process Measurement

## SIMPLE NOT EASY:

The principles of process measurement are very simple, but not always easy to turn into practice. Experience shows that many of the challenges are actually “cultural” rather than “technical”.

By “cultural” we mean both individuals’ willingness to develop and use process measurements and the organisation’s use of measurement. The “technical” issues are far easier to resolve as they usually relate to the definition of what to measure and how the data will actually be gathered (e.g. sample sizes and frequencies, analysis and presentation and the use of IT for efficient data gathering).

## WHY MEASURE?

No doubt those of us who have tried to encourage Process Owners and others to develop robust measurement systems for their processes have spent significant amounts of time debating the value, and the cost, of measurement. Often, those most vehemently against measurement are very passionate in their views. So why is it that they just don’t seem to want to measure performance?

“The opinions that are held with passion are always those for which no good ground exists; indeed the passion is the measure of the holder’s lack of rational conviction.” – Bertrand Russell

Some of the more obvious reasons why you might want to measure your process include:

- your manager wants to know how good a job you are doing
- you want to be able to demonstrate to customers, or stakeholders, that your process offers good value for money
- you’re fed up with all the problems you face each day and want to get some data to help find the root causes
- you want to demonstrate how well your process is performing, or that it is improving
- you can’t benchmark your process against others (internally or externally) until you have some data



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On the downside, you might not want to measure your process because:

- it might show up how badly you are performing (and that might give you some grief)
- it might show up how little work you are actually doing, or how little value you add for your customers
- managers might use data to “beat you up”
- managers might raise the targets and make you work harder
- you already measure lots of things and find it takes huge amounts of time, for very little benefit
- you think your process is just “so different” that it really isn’t sensible, or possible, to measure its performance

If you really are that worried about somebody finding out about the performance of your process, then wouldn’t it be better to start measuring it (quietly) now and get on with some real performance improvement before somebody does take notice and really does give you some grief? How long can you hide in today’s environment of performance improvement?

“No matter how many times you weigh the pig, it won’t get fatter” [Anon.]

The “weighing the pig” quote above is a great argument for not measuring, until you get behind it and ask how on earth will you know when the pig is ready for market unless you weigh it AND USE that data to take some action. You might also need to measure other factors such as the nutritional value of the food, the rate of change in the pig’s weight and customer’s satisfaction with different levels of “fatness”.

Some of the “cultural” resistance to measurement is caused by the organisation’s reactions to data. For example, what is the reaction of managers if you highlight an error rate of 10%, or re-work levels of 20%, in your process? If the reaction is to “beat you up” or “make you look incompetent”, I’m not surprised you are reluctant to demonstrate the quantified performance of your process. If, however, the reaction is to ask for some improvement, help you set realistic targets, and to support you in achieving those, it’s far more likely that you will want to display your process data.

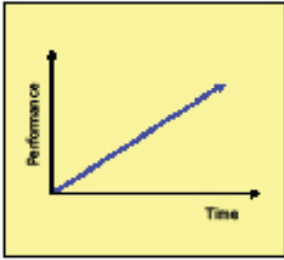
The other cultural issue can be that senior managers often don’t want to hear “bad news”, so everyone is focussed on presenting performance in the best possible light. Clearly, this is not a great long-term strategy for success, but since senior managers typically move on to new jobs fairly rapidly, you can usually keep bad news well hidden for long enough to stay safe!

## THE 3 TYPES OF PROCESS MEASUREMENT:

A simple model of what to measure was originally proposed in “Total Customer Service”, by Davidow & Uttal:

**Three Types of Process Measure**

- **Internal Measures**
  - Time, Volume, Cost
- **Output Measures**
  - Quality, Delivery, Success
- **Satisfaction Measures**
  - Perception



Source: Total Customer Service: Davidow & Uttal

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Every process should be measured using a balanced set of these three types of measurement. Internal measures tell you something about what’s going through the process (volume, cost, processing and cycle time), Output measures tell you about the quality of what the process is doing (accuracy, timeliness, completeness, complaints, success rates), and Satisfaction measures tell you what your customers think about the process and its outputs (often perceptions of performance).

As a Process Owner, it’s your job to define that set of measurements, put the systems in place to gather and analyse the data, and then to take action on the results.

You’ll probably need a set of 4-7 different performance measurements in order to manage and improve your process. Fewer than three and you won’t have balance. More than seven and you probably don’t understand what is really important.

## SELECTING THE RIGHT MEASUREMENTS:

While many people find it relatively easy to identify possible measurements for their process, they often find it more difficult to know which are the RIGHT measurements.

The guiding principle in selecting your set of measurements is to start from what you are trying to achieve. So, for example, if your process customers are complaining about how long it take you to do something, it’s likely that a measure of cycle-time will be important. If you’re trying to demonstrate value for money, it’s likely that cost per transaction will be important to measure. However, it’s almost always necessary to measure the volume of transactions being processed. It’s fundamental to know how many times you are performing the process and you may need to stratify that data by time (e.g. by hour, day, week, etc.), or by type of transaction (e.g. simple, average, complex).

Choosing what to measure might be driven by:

- what your customers say is important
- what problems you want to solve in process performance
- what business objectives you are being challenged to achieve

It's also important to recognise that you may need to gather a range of "diagnostic data" to help you understand how well your process is performing and why there are problems. Diagnostic data may be additional to the data you select to manage the process on an ongoing basis.

### BUT MY PROCESS IS DIFFERENT...

For some people, it's easy to understand the principles of process measurement described above, but they have the opinion that their process is somehow different and these principles either don't apply, or are so difficult to apply that it's not worth bothering.

We all know that these processes are NO different, but that's no argument to their owners. It can therefore be helpful to get people to think about their process, in terms of why it might be different, and then focus in on useful measurements.

We've identified a number of different process types and their typical characteristics which can help stimulate thoughts about useful measurements.

| Process Type                              | Characteristics   | Questions to prompt measurement   |
|---|---|---|
| Service Delivery (Intangible)             | A process where the typical output is advice, or guidance. Customers may not know what they want, or if the output is good, or bad. In some cases, the customer may not even have asked for the output, but it is initiated by the supplier.<br>Examples: Providing advice on Health and Safety, Financial standards or compliance. | Can, or do, the customers actually use the output?<br>How often do they come back for clarification?<br>What is asked for repetitively? |
| Service Delivery (Tangible – low volume)  | Small volumes of similar transactions, usually for a small group of customers. Customer requirements are usually clear. Timescales and deadlines are often important.<br>Examples: Staff recruitment, High value procurement  | Do customers get what they want, on time?<br>How easy is it to initiate the process?<br>How easy is it to track progress?               |
| Service Delivery (Tangible – high volume) | Large volumes of similar transactions, maybe involving many different customers. Customers usually know what they want. Cost efficiency is often a key requirement.<br>Examples: Purchasing routine goods and services, routine maintenance, paying invoices  | What are the error rates?<br>How much delay is there?<br>How many complaints are there? For what reasons?                               |
| Decision Making                           | Process exists to give approvals, or make a Yes/No decision. Very dependent on knowledge of users.<br>Examples: Capital spend approvals, budget approvals   | How many pass/fail the decision gate?<br>What hold-ups are there?<br>How long does it take?   |

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| Policy Making             | Process exists to create guidance for other people. Typical outputs include plans and policy documents. Usually dependent on a few "experts".<br>Examples: Produce HR and Financial Policies, Business Planning  | Do policies get deployed?<br>What do their users think of them?<br>How often do they have to be re-written?<br>How many non-compliances are there?                                |
| Research/Trials           | Process exists to investigate something. There may be no clear requirement for an output, other than data. Customers may not know exactly what they require. May require several iterations to get to a useful output. Very dependent on consistent application of the process and set-up of equipment.<br>Examples: Any "blue sky" research | How many iterations does it take to get the answer you want?<br>How many should it take?<br>What problems cause the process to be delayed, or aborted?                            |
| High Volume Manufacturing | Outputs are many tangible "things", with clear physical specifications, often produced at high speed and repeated frequently. Customers usually have very clear requirements for the output and how it should be delivered.  | To what extent is the output produced accurately, on time and in full?<br>How long does it take to change-over between "batches"?<br>What is the ratio of "work" to "delay" time? |
| Low Volume Manufacturing  | Output is a tangible "thing" with a clear physical specification. May occasionally be a "one-off". Customers usually have very specific requirements.  | What is the Right First Time performance/yield?<br>How well does the output conform to specifications?<br>What are the batch sizes?   |
| Project                   | Exists to guide the progress of "one-off" activities, often where major costs are involved. Usually includes Stage Gates, where Go/No Go decisions have to be made.<br>Examples: Any project   | What are the pass/fail rates at key stage gates?<br>How clear are input requirements at each stage?<br>How fully are they supplied?   |

The process types are not meant to be definitive and many people may feel that their process fits the description of several types in this list. That's OK. It's only a way to start thinking about how your process may differ from others and what it is really trying to achieve.

### WHY DOES THE PROCESS EXIST?

Of course, one of the easiest ways to help identify what to measure is to develop a very clear and concise purpose statement for your process. This should give some big clues as to what to measure.

For example, the purpose of the "Recruit Staff" process is not to recruit staff. It is actually to ensure that the right people, with the right skills are available, when and where the organisation needs them. This implies the need to measure things like:

- Timeliness of recruitment (recruits available when needed)
- Success rates (e.g. job offers accepted/rejected)
- Line Manager satisfaction with new recruits
- Average time to get "up to speed"
- Attrition Rate within 6 months of joining
- No. or % of re-worked recruitment campaigns

Process purpose statements should relate to their business purpose, not simply their “day-to-day” purpose. In this way, you can see what they have to achieve and therefore what might need to be measured.

### THE DEVIL IS IN THE DETAIL:

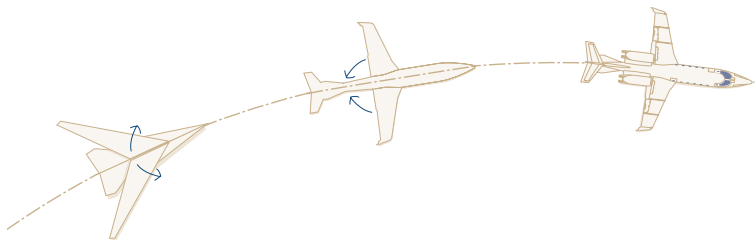
Choosing the right measurements is obviously only the start. You then need to be able to implement them and ensure they are actually of some use. A process measurement system should be subject to continuous improvement in the same way as a process.

Defining how the data will be gathered, analysed, reported and acted upon is a whole new article on its own!

“If you can’t measure it, you can’t manage it and you certainly can’t demonstrate that you’ve improved it.”

### MORE INFORMATION:

For more information on how to measure and manage the performance of processes, contact Ad Esse Consulting at: [seriousfun@ad-esse.com](mailto:seriousfun@ad-esse.com)



### FURTHER INFORMATION

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