

White Paper

Unravelling Business Process Tangles

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Brian Hunt is a freelance consultant who specializes in business process improvement and simplification. His experience includes working with public, private and voluntary organizations.

He believes that achieving simplicity in business processes is the best way to reduce waste and to enable an agile response to market opportunities or threats. He applies experience from a wide range of industries and from knowledge areas including 6 Sigma, business analysis and quality systems.

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A characteristic of many business process improvement projects is that once process investigation and mapping starts, the hidden complexity of the process landscape becomes apparent. The size of the task required to untangle and improve the processes can then appear daunting and impossible. This white paper contains my observations on why these tangles occur and describes my approach to untangling them.

What are Business Process Tangles?

A business process tangle is when the journey from one end of a process to another is broken, unclear, loops back on itself in duplicated tasks and fails to follow a straight line between receiving customer requirements and eventually providing the required output to the customer.

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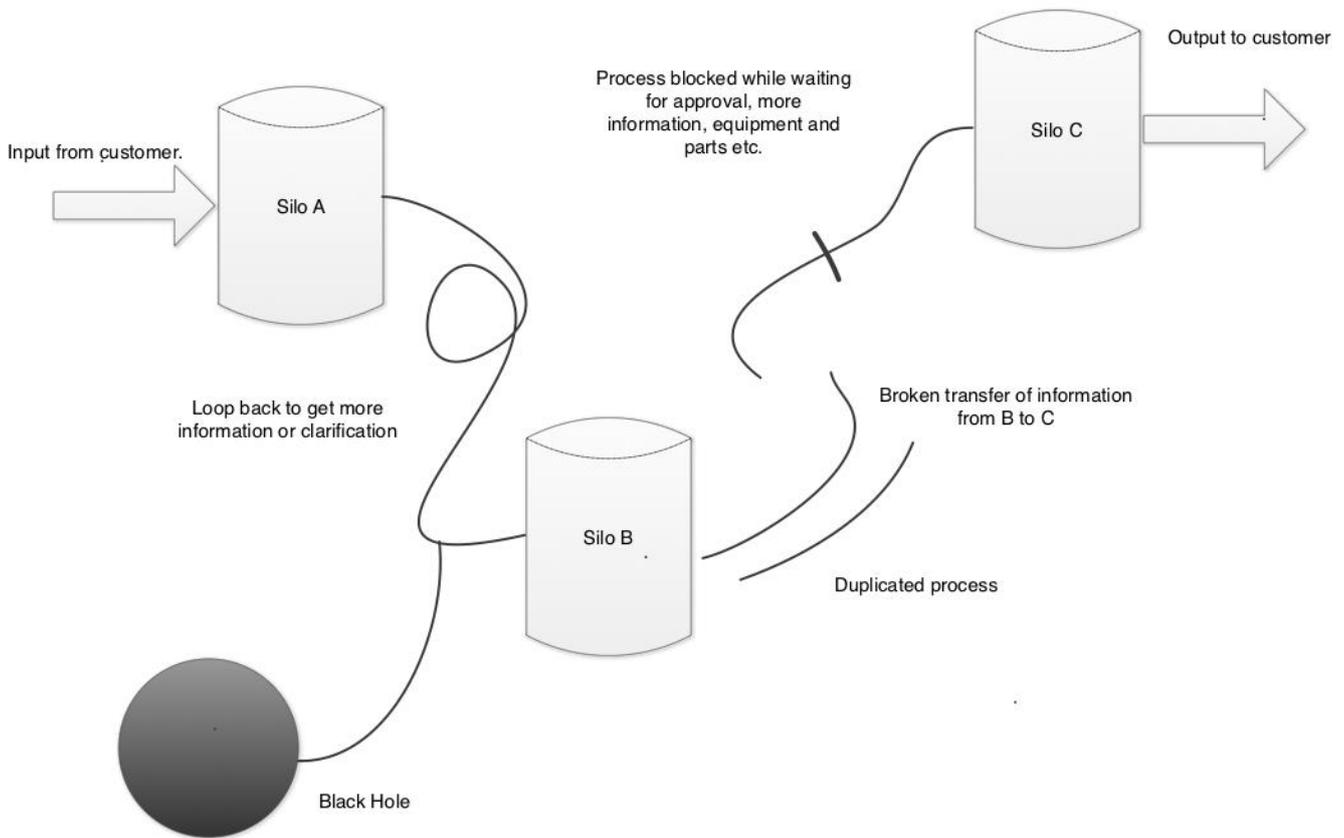


Figure 1: Context diagram for small bakers

Indicators of business process tangles include variable cycle time, unexplained costs and delays, unclear process ownership and accountability and reliance on those individuals who ‘know how to make the process work’.

Within these tangles, there may be duplicated processes or processes that produce outputs of no visible business value and those that disappear into a ‘black hole’ where the progress of the process is lost from view. Both of these process failures exist because the process has not been questioned. Asking ‘Why?’ is one of the simplest and most powerful process improvement techniques: In 1940, British Prime Minister Winston Churchill ordered film reviews of military operations. When the operation of a gun battery was reviewed, it was noted that one of the six man crew merely stood to attention. Investigation revealed that originally this man would have been there to hold the reins of the horses. However horse-drawn gun carriages were discontinued about forty years previously.

Many business process or activities are performed ‘because we’ve always done it like this’. These include producing over-detailed reports of limited operational value, created because the customer requesting the report has not clearly defined what they want reported and in what format. Apart from wasting time and resources, these processes add unjustified complexity. Finding and removing them will be a significant step towards reducing tangles.

Many organizations operate a siloed structure where handover between silos may be late, incomplete or inaccurate due to the tangled processes in between. The processes operating within each silo may conform to internal performance measures but the end result of these tangles is the customer may receive late, incomplete or poor quality services or products. Within the silos the customer need has been ignored.

If processes are tangled, it is difficult to see the path that they take between start and finish. Mapping the end-to-end process by representatives of each silo makes visible the reality of the process path and often, for the first time, highlights the waste within it. The activities that consume resources and create waste are sometimes referred to as the hidden factory. Over thirty years ago, quality gurus including Joseph M. Juran and Armand Feigenbaum estimated that this hidden factory can be wasting 10% to 40% of total company resources.

Why do Tangles Occur?

In the early growth of an enterprise, business processes will generally cope with the volume and complexity of day-to-day operation because the people operating those processes have the expertise and motivation to see the enterprise succeed. As the enterprise grows and takes on a greater complexity and volume of work, it has to employ more people and formalize tacit knowledge into documented processes and procedures. Often, the experts who have this tacit knowledge have

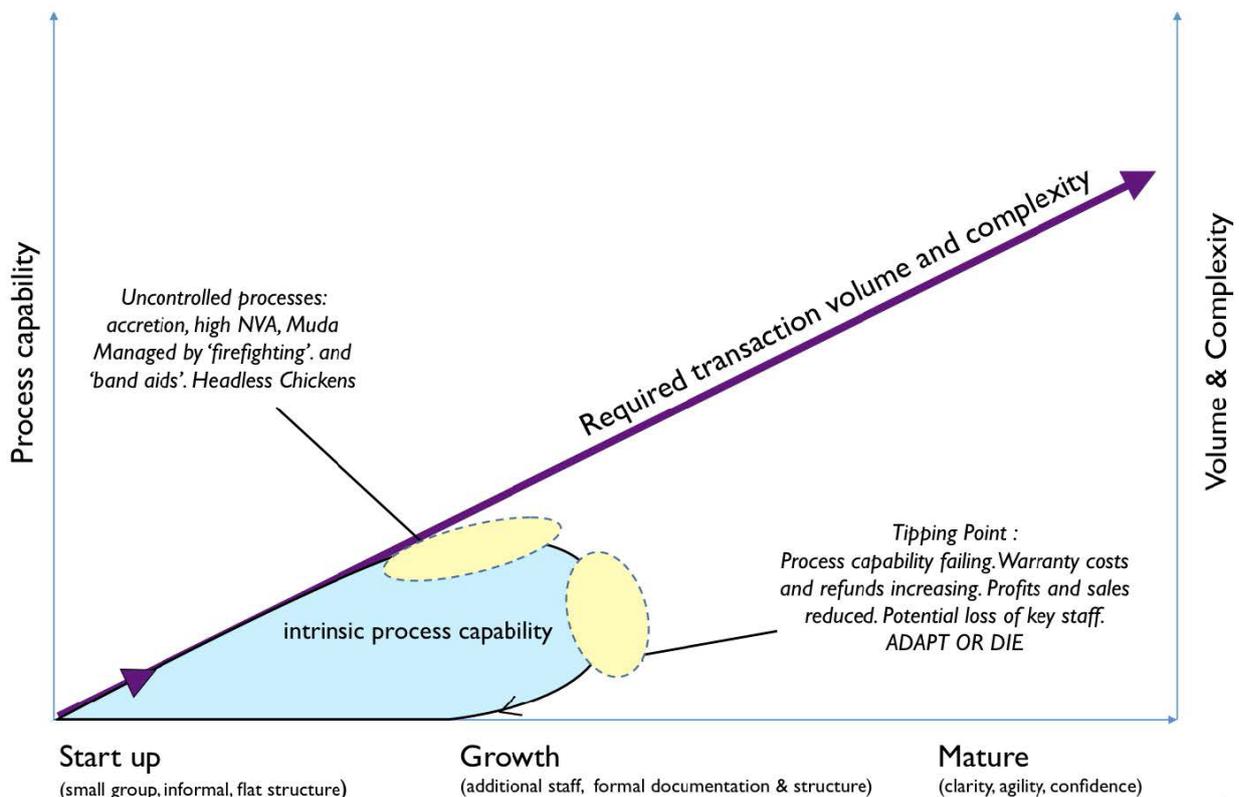


Figure 2 - Effect of increased transaction volume and complexity on tangled business processes

insufficient time to support this process and the documentation has to be based on hurried interviews, observations and assumptions, all based on knowledge of current or historic operation. This can result in the documentation of processes which are not robust enough to cope with future increases in volume and complexity.

Therefore, these processes have to be supplemented by unofficial workarounds and modifications as new demands arise. Additional processes or variants to processes are then introduced into the tangle.

Although processes may work in isolation, they may not function as part of an effective organizational system because the creation and approval of these processes is often performed within department silos which are not aware of the requirements and expectations upstream and downstream of the process. Changes to processes may be unannounced and only made visible when they cause a change (or failure) in the operation of adjacent processes.

By the time an organization reaches the point where business tangles are causing visible problems and waste, firefighting and “Band-Aids” are insufficient to bridge the gap between intrinsic process capability and required performance. Unless rapid action is taken, a tipping point may be reached where the cost of running the process is greater than the value it produces.

The first response may be to hold a number of process workshops across the enterprise. These may take place as uncoordinated activities within organizational silos so that parts of the same problem are dealt with by different people who are not talking to each other. Although ‘low hanging fruit’ improvements may be achieved, the fundamental problems may not have been resolved. The result may be a public presentation of success, which in reality may be a quick fix of symptoms rather than a solution robust enough to deal with future demands of volume, complexity and change. This creates an additional process variation and a further thread in the tangle.

To Untangle Tangled Processes

Start with defining the purpose of the enterprise i.e. what is the transformation it performs?

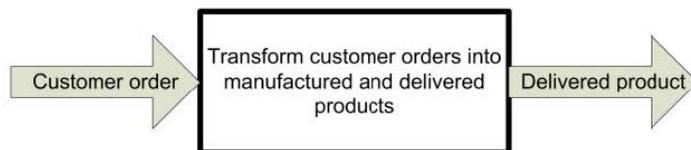
This defines the purpose of the business processes. All processes must have a defined outcome that contributes to the delivery of value to the customer. These processes should connect up as a sequence of activities where the output of the first process fully matches the requirements of the one that follows.

Once the purpose of the enterprise is understood, we can identify the process categories, groups, processes and activities.

Making the processes visible is one of the first steps to untangling them as this allows the process steps and handovers to be seen. With the process made visible, the logical steps can be perceived and questioned against what is really happening in the process.

For example, in the custom manufacturing company example below, there will be a logical sequence of events between agreeing the customer order, taking payment for that order, designing and building to that customer order and then delivering the product. Here, the purpose is to provide a product to the customer's design in exchange for payment. In other words, the customer's order is transformed into a product delivered to the customer and payment received by the supplier.

Custom Manufacturing Company



Contains these processes:

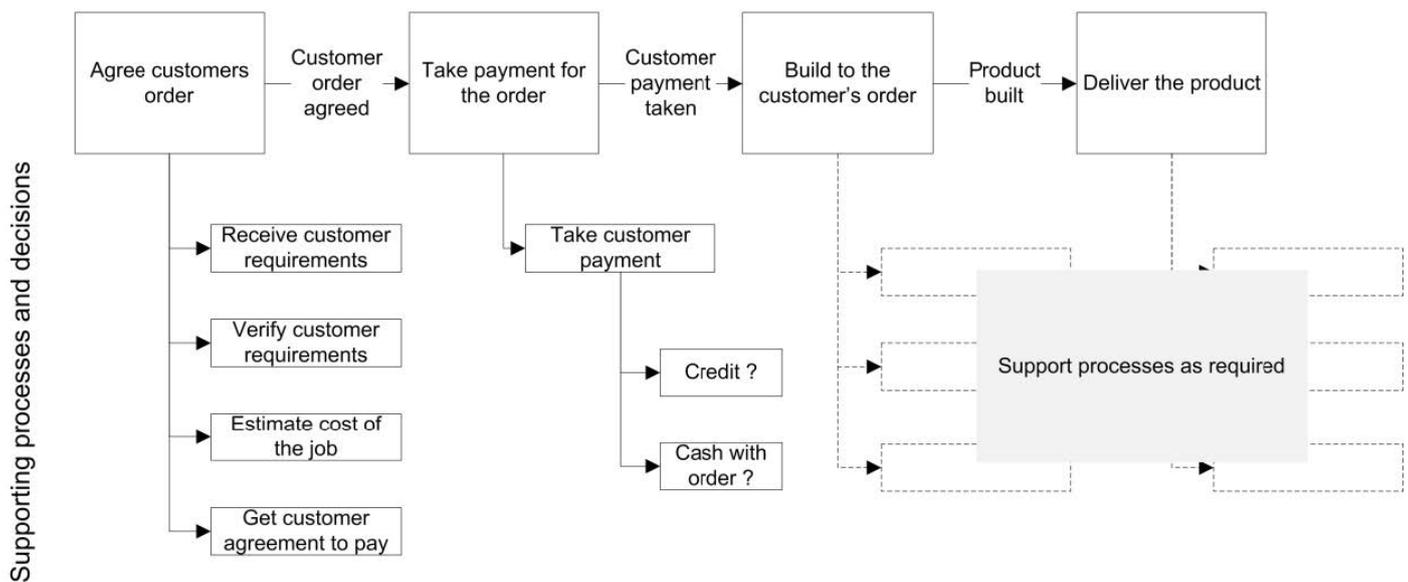


Figure 3 - Example of process decomposition for a custom manufacturing company

Capturing the processes and sorting these into categories is the foundation of untangling the tangles. Once sorted into categories, these processes can be evaluated by asking the following questions:

- Does the output of a process deliver what is required by the next process, complete, correct and on time?
- Are the requirements of the next process known?
- Are all process steps and supporting activities defined?
- Do processes produce non value adding output e.g. unread reports and duplicated test results?
- Are customer expectations matched to what can be delivered?

The results of these questions can be entered into a SIPOC matrix which defines the process requirements and transformations. This can be extended into a SIPOCIP matrix which includes supporting IT systems and Process Performance Metrics so that all key process data is maintained in one location.

Creating an operational model of the enterprise will help identify what processes or process elements have to be in place. An excellent prompt for creation of such a model is the APQC Business Process Classification Framework¹ as this provides decompositions for the generic process categories, process groups, processes and activities within a typical enterprise. This can be used as a checklist of the required processes needed within the enterprise.

(For more information on Orbus Software's iServer APQC Accelerator visit <http://www.orbussoftware.com/accelerators/apqc>).

Preventing Business Process Tangles

To prevent business processes becoming tangled the following actions should be taken:

- Produce a clearly defined business process model on the company intranet with hyperlinks to the supporting documents and process maps. This reduces the risk of processes being duplicated because people cannot find the authorized version. (See Orbus Software's iServer Portal <http://www.orbussoftware.com/business-process-analysis/iserver/portal>).
- Use a common business language to define the processes within the model. If different terms are used to define the same thing, it invites tangles.
- Establish accountability and responsibility for process management.
- Define appropriate process performance metrics for the activities and agree responsibilities for ensuring that these are analyzed and acted upon.
- Establish simple mechanisms to ensure that any changes to business processes can be proposed and implemented with a level of control appropriate to the level of risk. Too much bureaucracy and delay to approving changes may result in these controls being bypassed and people 'doing their own thing' creating more process tangles.

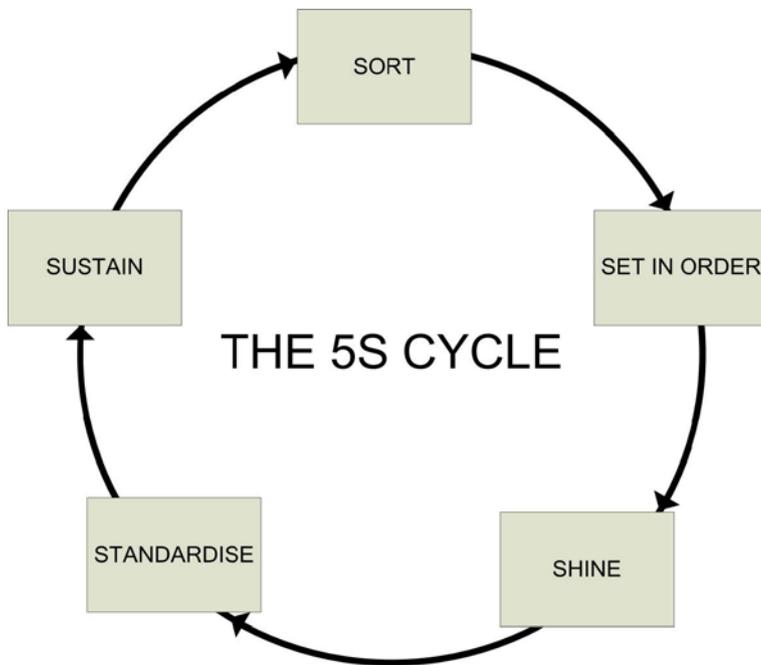


Figure 4 - The 5S cycle

Then start using the 5S methodology as in *Figure 4*.

SORT: Find and get rid of the waste in processes.

SET IN ORDER: Categorize processes so that they can be found and reused. This saves time in looking for processes and elements for reuse or modification.

SHINE: Improve the effectiveness of the processes as business assets. Documented business processes are tools that should be maintained by continual review and development.

STANDARDIZE: Use a common business language and business process modeling methodology (eg, BPMN).

SUSTAIN: Repeat the first four steps of 5S in a cycle of continuous improvement.

Conclusion

Tangled business processes are a symptom of poor process management. Investing management effort and commitment in agreeing process ownership and process management will help to reduce tangles. Accurately documented business processes are business support tools that allow consistent operation and communicate process knowledge. They should be used and developed as part of developing organization-wide best practice.

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