Simple Systems Thinking

An article exploring the benefits of defining, managing and improving any organisation as a system

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Defining, managing and improving any organisation as a system

This article is about systems. Not IT systems, but the way that organisations should be viewed as inter-related, inter-connected and inter-dependent systems. I am going to take the simple approach in order to help anyone to define, manage and improve the system that they work in. There are lots of academic papers out there about organisations mirroring biological ecosystems, about the psychology of inter-relationships within a system etc. But this is too complicated to be useful in an everyday situation. Therefore, I am covering Simple Systems Thinking. Many people struggle with the systems view, so I have included a couple of examples to demonstrate the thinking behind the approach and highlight the dangers of trying to manage the parts of the system individually.

A system encompasses everything that you need to make your organisation successful (and this may be wider than the organisation alone). For a publishing house this would include not only the company staff (editors, artwork, marketing, sales), but the outsourced printing works, the authors who supply the material, the distribution network serving the customers etc. For a junior football team, this is wider than the squad of players, and would include the coaches, the Mums and Dads, the training facilities, the tactics and the formation, the sponsor who provides the kit etc. It is always better to start with a wider view and narrow that down as you learn more about your system, than risk taking too narrow a view.

There are huge benefits to managing an organisation as (part of) a system; better alignment and direction, clearer roles and responsibilities, better overall results. The traditional (fragmented) approach assumes that each part can be managed individually, with the system taking care of itself. This creates the belief that it is important to keep people busy, keep them working, keep them productive. However, most organisations that I visit are busy working on the wrong things, busy fixing issues that they have created and busy serving targets not the customer. I would encourage everyone to take a step back and consider the system that they work in; is it managed as a system or as a collection of unrelated parts? The switch to simple systems thinking has the potential to transform the customer experience, make the organisation much more effective and make it a much better place to work.

3 Key Questions for any System

There are three questions to ask of any system...

1. Who is the customer?
2. Who owns the system?
3. What is the purpose of the system?

The temptation is to fragment any system down into manageable, bite sized pieces. However, this raises the significant risk of sub-optimisation, where the parts of the system act individually to the detriment of the overall system and the customer. This is a natural consequence of people trying to manage their piece as best they can (it is not anyone’s fault), blind to impact on other parts of the system. For example, a dental practice may schedule the dental and hygienist visits separately, in order to maximise productivity, but this results in patients (the customer) having to make two, separate trips.
Example - City Parking

It might be easier to envisage simple systems thinking by means of an example. Let’s consider a small city, a city with a parking problem. Traffic flows slowly, deliveries are disrupted and frustration is rising because of illegal parking. There are cars double parked, parked in loading bays, at bus stops, on pavements and it seems that everyone is complaining about it, residents, shop keepers, bus drivers. Something had to be done. And the solution seemedsimple, add more parking attendants.

The manager in charge of the outsourced contract for parking attendants simply contacted the company involved and asked for an increase in attendants. There was no real issue with budgets, as the increase in cost would be off-set by the revenue generated from parking tickets. Within days, there were more attendants prowling the streets, more tickets were being issued and the problem of illegal parking seemed to be getting better. Congratulations were issued. The local paper wrote of the solution, lauding the quick response of the council. However, not everyone was happy. Over the next few weeks some of the shop keepers noticed a distinct decline in footfall across their thresholds, a drop in takings and a dent in their profits.

Failing to see the problem as a problem of the system has produced a simple, obvious and seemingly effective solution that is detrimental to the end customers. This is surprisingly common. And it is not the fault of the council manager who authorised the increase in parking attendants, it is not the fault of the company providing this resources and it is not the fault of the customer. The only fault is of leadership not viewing the parking problem as a problem of an entire system. Each individual will try to make the best decision based on the information that they have in front of them; e.g. illegal parking must be stopped by penalising those who are flouting the law.

The leader of the city council was made aware of the shop keepers’ plight and, being an enlightened soul, made the correct call. He decided to study the system. He called meeting of the council and began by explaining the need to view their city as a system. This caused uproar; “but what about my budget?” “that is not in my targets”, “it is too complicated to connect it all together”. The issue with the council, in common with most organisations, is that it was split by department, by budget, by area of responsibility. Everyone managed their own little piece, but had never been encouraged to look at the entire system. This traditional, fragmented approach leads to sub-optimisation, where what looks good in one department (an increase in revenue from parking tickets) is detrimental in another (decline in profits for the shop keepers). The council leader asked everyone to go back to basics and answer the 3 key questions of any system...

1. Who is the customer? In this case they agreed that this would include residents of the city, those working there and any visitors

2. Who owns the system? This was the city council who owned the entire system that made up the city, encompassing all of the inter-connected complexity; i.e. it was within their power to sort this out

3. What is the purpose of the system? This generated the most debate, but, eventually, they decided that the purpose was to make their city a great place to live, work and visit

Although they were pleased with the output from their discussion, many were concerned that it seemed too simple and what difference would this make anyway? However, they agreed to reconsider the parking issue from a systems point of view. This lead to a series of questions...

- Who is it that is parking illegally? Is it residents, visitors or those coming into the city to work there?
- Why are they parking like that?
- For how long?
Where are they going and what are they doing?

Where are the places where illegal parking is most common?

What do the residents, shop keepers etc. think is the problem and what would they do about it?

No-one had really thought much about the parking problem as problem for their customers, so it turned out that these were difficult questions to answer. In the jumping to the conclusion that illegal parking was a behaviour to be punished, they had missed an opportunity to understand their system. They decided to get some data. The issuing of parking tickets in the city centre was put on hold and the resource was directed to talking to the people involved or affected; car and van and bus drivers, shop keepers, passers-by etc. A simple website questionnaire was developed to gain views from a wider group and several council members were given the task of visiting other cities to find out how they coped with this parking issue.

The data proved to be very interesting. It turned out that the majority of people who parked illegally were residents. They were just wanted to nip in and pick up a coffee or a newspaper or collect something that they had ordered. But they felt compelled to park in that way because there were few other options. The parking spaces on the streets were occupied all day (by the shop and office workers) and the official car parks were a long way away and very expensive. More worrying was the finding that most people who did want to nip in for something in the city centre would never park illegally; they were driving out of the city to get what they needed. This represented a huge unmet demand for goods and services simply because of lack of access.

The solution to the simple issue of illegal parking would take several years to solve, connecting disparate areas of transport policy (parking, bus lanes, cycle routes) in a way that would encourage growth and development. The council began to change their thinking, moving away from forcing people to comply with rules and regulations towards creating a city that met the purpose of being a great place to live, work and visit. They looked at what people wanted from their city (the demand) and tried to encourage that demand to be met through economic policy. The old departments were still in place but they started measuring, monitoring and managing the city with the customer in mind. They were adopting simple systems thinking.

**We are Doing all of this Already**

I visit many organisations that are characterised by people working alone within functional areas, unaware of and unmoved by anything done in other areas; completely disconnected. They may be working very hard, they may be hitting all of their targets but the overall performance of the organisation is pretty poor. But when I start to talk about the benefits of a simple systems thinking approach, the common repost is “we are doing all of this already”. To help initiate the discussion about the differences between the way that they are operating at the moment, compared to how this might look if they adopted a system view, I have developed the following table.
### Current Thinking

- Individual tasks within separate departments
- Must drive productivity, keep people busy (average handling times, number of jobs per hour/day)
- Tasks based on queues
- Problems are down to people
- Meeting commitments, keeping control over costs
- Audit people to make sure they get it right
- Key Results Indicators (lagging)
- Used to support preconceived opinions
- Chaotically busy, each day is a battle
- Tribal knowledge, informal networks, it helps to have worked here for 20+ years
- Mediocre customer satisfaction

### Simple Systems Thinking

- Focus
- Belief
- Manage
- Values
- Must do Well
- Improve
- Metrics
- Data
- Feeling
- Culture
- Results

- End to end customer journey
- Study the system
- Flow by balancing demand and capacity
- Problems are due to the system
- First time resolution (calls, jobs, everything) to eliminate failure demand
- Learn from the system and target processes for improvement
- Key Performance Indicators (leading)
- Solutions come from data analysis
- Work on priority issues, things are getting better
- Clear processes, roles and responsibilities give an understanding of everyone’s roles
- High customer allegiance
Historical Perspective

The first person to describe the importance of systems was W. Edwards Deming. He had his greatest impact on Japanese industry, where he taught a number of seminars after World War II focussing on understanding how the system determines quality. He emphasised that to improve quality you need to get things right the first time, as opposed to inspecting out mistakes, and viewing everything as an interconnected system. He used his famous model, where production is viewed as a system, for his lectures in Japan in 1950; here is that model...

Deming’s Model - Production Viewed as a System

This has been developed into the SIPOC Model, although Deming himself never used that term. SIPOC stands for Suppliers, Inputs, Processes, Outputs, Customers; this is the basis of process mapping and value stream mapping that are so popular today.

Deming’s ideas of viewing everything as a system led him to develop his System of Profound Knowledge, consisting of four parts:

1. **Appreciation of a system**: understanding the overall processes involving suppliers, producers, and customers (or recipients) of goods and services
2. **Knowledge of variation**: the range and causes of variation in quality, and use of statistical sampling in measurements (based on the work of Shewhart)
3. **Theory of knowledge**: the concepts explaining knowledge, the overlap between truths and beliefs, and the limits of what can be known
4. **Knowledge of psychology**: concepts of human nature and change management

This article will focus on the first point, Appreciation of a System, but I believe that all four are critical in building an improvement capability within any organisation.

It took many years before Deming received recognition outside of Japan, but many people now talk of systems thinking and the roots of most thinking in quality improvement can be traced back...

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1 The New Economics for Industry, Government and Education by W. Edwards Deming
to his teachings. However, his ideas are not always readily accessible (try understanding some of his books). My own theory is that the use of a translator helped considerably when in Japan; i.e. the conversion from Deming’s rather obtuse language into something that the audience could understand. However, it is also true that, while the Japanese were ready for Deming, the Americans had fallen into the trap of quantity not quality. Their focus in the post-war era switched to economies of scale, management by numbers and the creation of functional hierarchies; flawed thinking that blights our organisations even today.

The current exponent of systems thinking that is having most impact in the UK is Professor John Seddon of Vanguard\(^2\), who is lobbying service organisations and government to study systems and drive out the enormous waste of failure demand. John’s mantra is that you must study your system. There is an excellent summary of the various system thinkers and their theories on the Vanguard website\(^3\). I would recommend that anyone new to systems thinking start with the teachings of Deming, Taiichi Ohno (Toyota Production System) and Peter Senge (Learning Organisations), plus John Seddon himself. However, be aware that Systems Thinking is wider\(^4\) than my simple view (which is really linked process thinking or end to end customer journey). Start simple and then add the level of complexity required for your own situation.

**Half Baked Lean**

The implementation of many improvement programmes highlight the problems inherent in non-systems approaches. Lean is the most commonly applied programme, having surpassed the complex and complicated Six Sigma statistical method. Now I love the ideas inherent in Lean, but see very few cases where they are being applied successfully. And the areas where Lean seems to be working are most likely to be high volume manufacturing companies. This is because the focus is on Lean tools, not the Lean system.

Lean Manufacturing was born out of the Toyota Production System (TPS), where the basic idea is to shorten the cash conversion cycle (the time between paying for materials and getting paid for finished goods) by removing waste. It is a systems approach. And the way that Toyota achieves their success is well known. Womack and Jones first documented the TPS in “The Machine that Changed the World” over 20 years ago and hundreds of books and articles have been published since. Lean has been extended beyond manufacturing to encompass all types of organisation, including service, government and charities. In spite of all this available knowledge, the track record of lean implementations remains extremely poor. The reason is that organisations are picking parts of the system, rather than the whole system.

There are five key elements to lean...

1. Identify value from the customer’s perspective
2. Organise into value streams
3. Improve flow (through removal of waste)
4. Pull to customer demands
5. Strive for perfection

Most of the lean implementations that I have seen have skipped the first two points and jumped straight to point 3, improve flow. This is where all of the well known lean tools, such as 5S, the 7 Wastes, Kanbans, Standard Work etc. are applied. And this is most commonly done via a Kaizen

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\(^2\) Vanguard see [www.systemsthinking.co.uk](http://www.systemsthinking.co.uk)

\(^3\) [www.vanguard-method.com](http://www.vanguard-method.com) and click on Library, then System Thinkers

\(^4\) My thanks to Geoff Elliott for introducing me to the wider system thinking world
Blitz; a one week lean transformation of a particular area (usually Operations). This is nonsense, utter nonsense. It is no wonder that the success rate is so low. (The Kaizen Blitz is a terrible way to make improvements, benefiting only the external consultant who has to make just one trip.)

Unless Lean is implemented as a complete system, results will be sub-optimal. It is critical to define who your customer is and what they value. Then to re-organise into value streams to deliver that value for the customer. Implementing the first two of the five key elements of Lean is extremely difficult for most organisations, so playing around with lean tools will have little impact. Standard work applied to call centres - nonsense. Takt time applied to financial transactions - nonsense. Value stream maps applied to local councils - nonsense. Lean is a system that must be implemented as an entire system. Cherry picking parts may look and feel like improvement, but the overall impact on the workers, the organisation or the customer will be minimal. This is what I term half baked lean.

Implementing Lean as a system is so difficult that most attempts fail. Better to start with simple systems thinking and progress to something like Lean only once the foundations of a system are in place (2-5 years).

3 Steps to (Simple Systems) Heaven

There are three steps to implementing Simple Systems Thinking...

1. Define the system
2. Map, measure and manage the key processes
3. Train everyone in a simple problem solving method

Simple Systems Thinking

It really is that simple. But very hard to do because it requires leadership to study, understand and improve their system.

Example - Boiler Maintenance

Here is another example, this time to show how the 3 Steps to Simple Systems Heaven could be implemented. Imagine a utilities company, Gas Boilers Ltd., supplying and maintaining gas boilers for households and small businesses. It was split into two divisions, one for the supply and fitting of new or replacement boilers and one covering the service and repair of existing boilers. The business was not doing well; profits were down and customer satisfaction was at an all time low. But the staff were meeting their targets and the balanced scorecard of metrics looked pretty good, so it was not obvious where the problems were. Only customer complaints were above the target
(set at last year -10%). Keen to sort things out, the Managing Director instructed the leadership team of the Maintenance Division to come up with solutions and quickly.

That afternoon they poured over the complaints from the past year. They discussed, argued over and analysed every one, eventually coming to the conclusion that the customers were complaining about the time to fix their problem and poor quality workmanship. But they knew that they were meeting nearly 90% of their commitments for appointments, so the root cause had to be the quality of the work. The solution was obvious - add more Quality Inspectors to check the work of the repair men and force them to correct issues quickly and at their cost. By the next morning, they had the proposal planned, costed and presented to the MD for approval.

“For every complex problem, there is an answer that is clear, simple and wrong”

H.L. Mencken

The Maintenance Division leadership team had made a classic mistake, jumping to conclusions based on their intuition and experience in the business without really understanding the situation. Let’s take a step back and look at how the business was set-up to help explain how Simple Systems Thinking might help them to come to a better solution.

The organisation consisted of a call centre, a quality team, finance, HR and contracts; each with their own management team and represented on the Maintenance Division leadership team. It was a similar set-up in the Supply Division, as shown in the following organisation chart...

Supply Division

The key difference was that Supply had a group of engineers who designed and installed new boiler systems, whereas Maintenance had outsourced the repair and service to three external companies; an internal quality group checked the work done by these contractors.

The management method was to manage the parts separately, in silos; the traditional fragmented model. The underlying assumption was that, if every function meets its targets, if every department meets its budget, if every project is completed on time, then the overall organisation will be successful. This does not work, it has never worked. A quick look at the metrics starts to highlight the issues...
The first thing to notice is that there is no metric for the customer, which is interesting. Secondly, these are all Key Results Indicators, rather than measures that give information on how the process is operating, Key Process Indicators. And finally, the information is gathered in order to reward or punish particular individuals; i.e. the belief that productivity must be driven and the problem people identified and corrected.

The Managing Director of Gas Boilers Ltd. decided not to approve the requisition to double the number of Quality Inspectors, recognising the flimsy information that substantiated the proposal. But he did decide to study the system. He called a consultant that he knew was good at seeing the big picture and asked him to come in and spend a few days to help them define their system.

The first thing that the consultant did was to talk to people working both in the organisation and with the contractors to get a view of the end to end customer journey. This proved to be difficult, as each function was driven its own internal targets and no-one had ever looked at the service provided from the customer’s point of view. They did not have data for the total cycle time for boiler repairs, but masses of data on the number of appointments made/kept, the number of calls received/made, the type/number of boiler failures. It looked like the separation into two divisions and then into functional departments had made everyone lose sight of what was important to the customer. Good performance on internal metrics against arbitrary targets did little to placate a customer with a broken boiler.
Applying the 3 Steps to Simple System Heaven, the leadership team started by defining the system (with guidance from the consultant). It quickly became apparent that this would include both divisions and all of the outsource partners; i.e. everything necessary to satisfy the customers, thereby making the company successful. They tried to answer the 3 Key Questions...

1. Who is the customer? This would include both current and potential customers; i.e. anyone within their area that had a mains gas supply. It was not the company shareholders.

2. Who owns the system? This was the combined management team, plus representatives from the outsource contractors; i.e. they had the power to change things

3. What is the purpose of the system? They agreed that all customers wanted a working boiler, even if they had not yet chosen Gas Boilers Ltd. as a supplier

The second stage was to map the processes. This proved to be extremely interesting and illuminating, particularly when some data was added. Here is a summary of what was found...

- Every customer phoning the call centre to report a boiler fault was asked to hang-up and wait for someone to call them back; this could have been the contractor to schedule a visit, or an engineer to gather more information

- 25% of call centre calls were repeat calls from customers, normally chasing up a visit or just to find out what was going on. (This is failure demand)

- The call centre advisors were measured on Average Call Times. If they exceeded the average for a week in any month, they were given 1:1 coaching. In order to avoid these dreaded “coaching sessions” advisors had a number of tricks to beat the system; hang up on customers after one second, call in themselves from their mobiles, transfer calls to another department and ask customers to look at the website

- The external contractors were driven on the number of customer premises visited each day. In order to meet their targets, the technicians would often leave one customer mid-job to go and visit another. The remaining work at the first customer was re-scheduled at the bottom of the queue. This resulted in the productivity metric looking good, but the customers being very frustrated

- Repeat visits were seldom carried out by the same technician, therefore requiring the customer to explain what had happened previously

- There was no visibility of the number of visits taken to effect the repair to a boiler or the total elapsed time. Each visit was just another job in the queue

- Technicians visiting a customer often lacked information about the fault, the type of boiler installed and found that they did not have the correct spare parts. They simply turned up at an address when that job came to the top of the queue

- Each repair was seen as unique; there was no learning captured from the visits to spot common faults or the best way to tackle a problem

- 80% of the repairs were to boilers that had been installed by Gas Boilers Ltd., but there was no consistency. Procurement bought the cheapest make of boiler available at the time, resulting in a wide range of different boilers installed and increasing the variety of spare parts that had to be carried
They all agreed that they were measuring the wrong things and needed to look at what the customer wanted. They drew out the following system to see how it should work for the customer...

The system starts with some sort of boiler issue and the purpose is simply for the customers to have gas boilers that work. When the customer calls the call centre, the advisor has a checklist to capture all of the relevant information and takes time to fully understand the situation. The advisor can then assess the priority (high for the elderly and infirm) and schedule an engineer or technician to visit. Armed with better information and the correct parts, the aim is to install or fix the boiler on the first visit. It was estimated that only 20% of cases should require a repeat visit. Crucially, lessons are learned from each customer visit and fed back into the system to improve the first time fix rate, including buying only the most reliable parts and new boilers. This results in reduced boiler issues for existing customers, allowing the organisation to focus on gaining new customers.

Drawing out the system in this simple way immediately suggests the key metrics; first time fix rate, lead time for installation or repair (total time between first contact and customer happy), lead time for repeat visits, the number of calls (demand), the times when customers call, the split between priorities, the type of boiler issues, number of repeat visits etc. All of these metrics conform to the 3 rules of a process metric...

1. Give information about what is happening now
2. Help to understand the process
3. Drive the correct behaviours

The final step from the 3 Steps to Simple System Heaven was to train everyone in the organisation in a simple problem solving method; Practical Process Improvement\(^6\) is probably the best available. This means that the key problems identified during the analyses of data can be given to a team of employees to solve; e.g. currently, the lead time for boiler repair is too long, currently, the error rate in boiler installation is too high, currently, the first time fix rate for boilers is too low.

\(^6\) See Understanding Practical Process Improvement by R. Edward Zunich in collaboration with Dr. Mike Bell
Viewing the system as a system allowed Gas Boilers Ltd. to see how the individual parts should be linked together and work together to meet the overall purpose, Gas Boilers that Work. Better process metrics allowed them to measure, monitor and manage the system as a whole, rather than lobbing jobs of work over the wall into the next department. Studying the system highlighted just how much failure demand there was; i.e. issues caused within the system. As an example, imagine the effect of a technician leaving a customer premises without completing the repair. A new job has to be raised, it is placed in a queue, someone schedules a visit, the visit takes place, the customer may have called back in by then to question progress, the customer may raise a complaint over the length of time their boiler has been out of action, the complaint needs to be investigated, letter have to be written to the customer, compensation has to be assessed and paid (if appropriate) etc. All of this failure demand could have been avoided if the technician had spent an extra 20 minutes on site to complete the original job.

Failure demand is created by driving productivity (keep people busy) through average call times, the number of jobs per day, the number inspections made. Under traditional (disconnected) management, these metrics seem logical. Each function tries to manage the part of the system that is visible to them and has no idea of the impact that they are having on other parts of the organisation. Switching to a Simple System view encourages everyone to work together.

**Personality Type in relation to Systems Thinking**

We are all different. Therefore, the way that we think of our work will be different. However, our thinking will be more similar to some people and quite different from other people. It can be helpful to apply some form of personality typing to understand these similarities and differences in the way that people, think, act and react to change. The best format within an organisation is Myers Briggs\(^7\), which I have used for the last 15 years to enable people to understand themselves and appreciate others who are different. A further enhancement to this approach is David Kiersey’s Temperaments\(^8\), which identifies Guardians, Artisans, Idealists and Rationals (based on the four humours identified by the ancient Greeks over 2000 years ago).

I am not going to give a detailed explanation here of the different types (you can watch a short video here\(^9\)) but it is important to highlight the difference in one preference, the way that we take in information. People have either an S or N preference. Those who have a preference for S (S for Sensing) are more in tune with what is going on around them, they notice details, they have their feet firmly on the ground. Those with an N preference (N for iNtuition) want to see the big picture, love to understand how things connect together, they have their heads in the clouds.

It is important to have a balance of different types in any leadership team, but equally, people should play to their strengths. Therefore, it is ideal to have intuitive N types to define the system and use the more detailed S types to implement and manage the system. Also, keep in mind that the majority of people have an S preference, they like to see the detail and the step by step mechanisms. So ensure that any communications about the system take this into account.

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\(^7\) Gifts Differing by Myers and Briggs  
\(^8\) Please Understand Me II by David Kiersey  
\(^9\) [http://www.simpleimprovementblog.com/2013/05/personality-types-temperaments.html](http://www.simpleimprovementblog.com/2013/05/personality-types-temperaments.html)
Things that Get in the Way of Simple Systems Thinking

- Functional departments
- Targets
- Outsourcing
- Productivity measurement
- Poorly selected, analysed and reported metrics
- Personal performance appraisals
- Management by objectives
- Global organisations set-up by function
- The feeling that everyone should be kept busy, as busy equals productivity
- Decisions made on intuition and experience (guessing)
- The need to blame someone when things go wrong (scapegoats)

Summary

Most organisations are broken down into parts, fragmented, in order to make the job of management easier. The underlying assumption is that, if every function meets its targets, if every department meets its budget, if every project is completed on time, then the overall organisation will be successful. Manage the parts closely and the system will take care of itself. This does not work, it has never worked. Unless everyone is aware of the connections within the organisation, they will sub-optimise; i.e. produce solutions that look within a particular area but are detrimental to the overall organisation and the customer.

There are huge benefits to managing an organisation as a system; better alignment and direction, clearer roles and responsibilities, better overall results. And it is not difficult, requiring a simple change to view everything from the customer’s perspective. There are three steps to Simple Systems Thinking...

1. Define the system
2. Map, measure and manage the key processes
3. Train everyone in a simple problem solving method

Have a close look at the organisation that you work in. Is it managed as a system or broken down into fragmented parts, each seemingly disconnected and unrelated to the next? Are your metrics driving the wrong behaviours? Are people praised or blamed when they have little influence over actual performance? Do you rely on informal networks in order to get things fixed? Are targets set to keep you busy, even if this does little to help the customer? Switching to Simple Systems Thinking has the potential to transform your organisation. It could be be the most significant change that you ever make.

Dr. Mike Bell runs Simple Improvement Ltd. a continuous improvement training and coaching business based in Scotland. He uses Ed Zunich’s Practical Process Improvement (PPI) program to help organisations establish a simple continuous improvement system where they can realise quick results and build an in-house capability to train and coach their own staff.

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