

# **B2**

## **WORKBOOK**

### **DAYS 4–6**



**DAY 4 (morning): THE JOINER TRIANGLE**

*Activity 4-a (pages 49–50) comes from Day 4 pages 4–5.*

**ACTIVITY 4-a**

This Activity is in three parts: the second and third parts are overleaf. All three parts are likely to involve some deep thought—but I'm giving you plenty of time! *In each of the three cases, if you have not made much progress after, say, five minutes or so then take a look at my brief suggestions on Appendix page 22 to help get you started.*

- (1) Identify some situations with which you are familiar where people are being prevented by the system in which they live and work from doing as good a job as they would like. In this respect, what particular features of that system do you believe are doing the most harm? How could/should they be remedied?



(2) In *The Deming of America* video, one of the issues which arises is performance appraisal (of the judgmental kind, especially the *ranking* of individuals). In that video Dr Deming states:

“Ranking doesn’t do any good. Of two people, one would be worse and one would be better. I don’t know what we’ll do about it! The question is: Is one outside a control limit, or does the difference mean nothing?”

Expand on this statement, particularly with reference to the paragraph at the top of Day 4 page 4. Your thoughts and answers in (1) are also likely to be relevant.

(3) On *DemDim* pages 34–35 we saw Lloyd Nelson’s statement about the importance of “unknown and unknowable” figures, followed by a number of illustrations. Spend some time thinking of further examples of important unknown and unknowable figures.



Briefly continue at the top of Day 4 page 6.

Activity 4-b (pages 51-52) comes from Day 4 pages 6-7.

### ACTIVITY 4-b

Again consider situations familiar to you, perhaps at work, perhaps in your family, perhaps in clubs or societies with which you are involved.

Do the groups of people of whom you are thinking operate as All One Team?

If Yes ... what has brought about that All One Team state and spirit? What are some of the gains that would otherwise not have been obtained? Are you aware of anything or any things that might, now or in the future, harm or even destroy that All One Team relationship? What would be some of the losses?

If No ... please turn to page 52 overleaf.

If No ... what are some of the losses caused by them not being All One Team? What do you see as the biggest obstructions to their moving toward an All One Team state? What might be done to break down those obstacles? If you were to succeed in this, what would be some of the gains?

*(If you are not content with your answers here, you might like to return to this Activity after studying some of the 14 Points and Deadly Diseases in the forthcoming project.)*



*Continue on Day 4 page 8.*

Pause for Thought 4–c comes from Day 4 page 9.

### PAUSE FOR THOUGHT 4–c

Take another look at Deming’s Chain Reaction at the bottom of *DemDim* page 33. In later years, there was one link in the Chain Reaction which Dr Deming wished he had expressed differently. Can you suggest which it was, and why eventually he decided he didn’t like it?

It was “Capture the market”—with its implication of putting others out of business. In the interests of the “big system”, he later clarified (e.g. in *The Deming of America*) that his preference was instead for *expansion* of the market by diversification and innovation—with obvious advantages for both suppliers and customers.



Continue after this Pause for Thought on Day 4 page 9.

Activity 4–d comes from Day 4 page 10.

### ACTIVITY 4–d

Imagine the following situation. You want to celebrate, say, an anniversary or a birthday. So you and your friend/spouse/partner arrange to go out to dinner, perhaps to a restaurant that you haven't previously visited. Let me suggest three scenarios to you. At the end of the evening ...

**Scenario 1:** ... you are a *dissatisfied* customer. The menu was unexciting, the food was poorly prepared and cooked, the service was inattentive and slow (or alternatively, too fast—they seemed keen to rush you through your meal and get you out of there).

**Scenario 2:** ... you are a *satisfied* customer. There was nothing to complain about: the food was OK, the service was OK, the menu was pretty much what you expected, and so on.

**Scenario 3:** ... you are a *delighted* customer. Everything was *wonderful!* The menu was so crammed full of exciting possibilities that you'd need to come back several times to explore it properly. The food was delicious (it "melted in your mouth"). And the service was just right: immediate attention when you needed it, but without that irritatingly repeated "Is everything all right, Sir?".

There are two questions I'd like you to consider in each of those three scenarios:

(a) When you next go into work, or meet up with friends, do you talk about your experience at the restaurant? Do you recommend that they try it out for themselves? Suppose you had been ...

- (1) "*dissatisfied*":
- (2) "*satisfied*":
- (3) "*delighted*":

(b) In a year's time (the anniversary or birthday again), are you back in the same restaurant, or are you somewhere else? Suppose you had been ...

- (1) "*dissatisfied*":
- (2) "*satisfied*":
- (3) "*delighted*":

So what has

- (1) dissatisfying you:
- (2) satisfying you:
- (3) delighting you:

done for that restaurant's business?

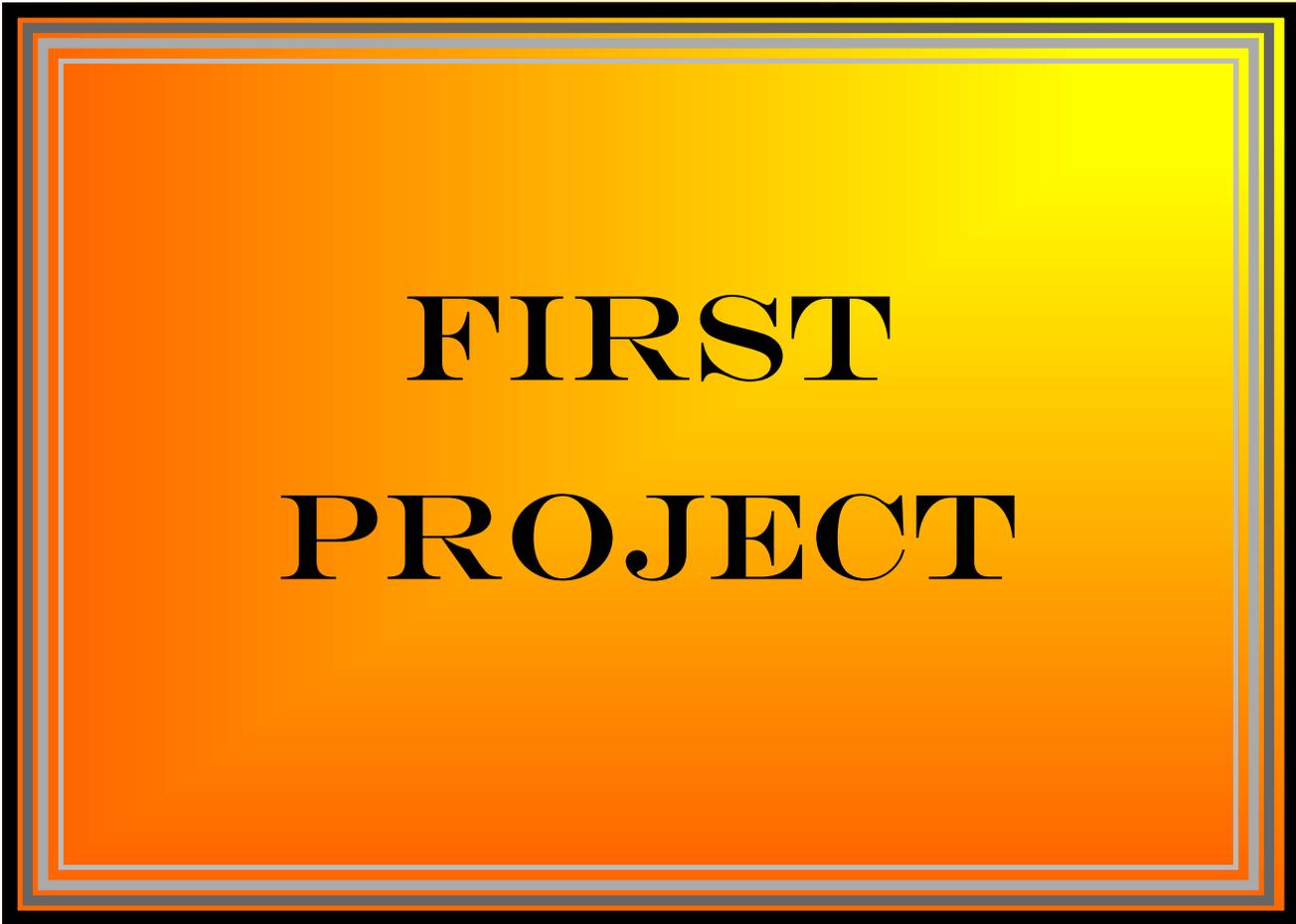
(For some brief discussion, again see Appendix page 22.)



Continue on Day 4 page 11.

**DAY 4 (afternoon) and DAY 5: THE JOINER TRIANGLE, THE 14 POINTS,  
AND THE DEADLY DISEASES**

*The First Project (pages 56–95) comes from Day 4 pages 16–27 and all of Day 5.*



**FIRST  
PROJECT**

Point 1 (pages 56–57) comes from Day 4 pages 16–17.

## Point 1. Constancy of purpose

**Create constancy of purpose for continual improvement of products and service, allocating resources to provide for long-range needs rather than only short-term profitability, with a plan to become competitive, to stay in business, and to provide jobs.**

Notice the nice link with the Deming Chain Reaction, finishing up (as in both versions of the Chain Reaction—see the bottom of Day 4 page 3) with “provide jobs”. We have already remarked (Day 1 page 23) upon Dr Deming’s hate of unemployment because of its huge waste of human potential. Deming clearly saw the “plan to ... provide jobs” as an *obligation* on the part of those people (management, especially senior management, and government) who have the power so to do.

It is already well worth referring ahead to two of the “Deadly Diseases” which you will study tomorrow afternoon:

- As indicated on Day 4 page 14, the first Deadly Disease can be expressed simply as the *non*-adoption of this first Point, i.e. *lack* of constancy of purpose. The fact that “constancy of purpose” thus heads both lists surely confirms how crucial Dr Deming saw it to be. Indeed, even in the 1982 book he describes lack of constancy of purpose as “the big obstacle”.
- The emphasis on “long-range” provides a close link with the second of the Deadly Diseases.

It is well worth noting that, although “innovation” is not included in the above statement of Point 1, there is in fact much specific focus on innovation in Deming’s description of Point 1 on *Out of the Crisis* pages 23–24[24–26]. Indeed, his discussion begins with the observation that “There are two problems: (i) problems of today; (ii) problems of tomorrow”—improvement and innovation respectively.

### Obsession With Quality

This is a very obvious and strong link with which to begin our work. The use of “*continual* improvement” (as compared with improvement only in areas of obvious trouble) is wholly in line with Joiner’s *Obsession With Quality*—as compared e.g. with improvement merely in order to meet specifications or legal requirements, as discussed earlier. Improving quality can all too easily slide down the agenda in favour of “more pressing” matters whenever they arise; and, without *obsession* with quality, it will be very difficult to get it back up to its rightful place.

If you are used to reading material from other sources on quality, you may have become a little puzzled by Deming’s, Brian Joiner’s and my use of “*continual* improvement” rather than the much more common phrase “continuous improvement”. If so, take a quick look at the top half of Appendix page 23.

## All One Team

Here we surely have a clear two-way connection. How can you continually improve unless you are working together as All One Team? Can you really do it on your own—or, worse still, if others are working against you? Conversely, what better motivation could there be for an All One Team culture than the purpose of continual improvement? But beware—especially management: *All One Team* has both horizontal *and* vertical implications. It is far too common for management to preach teamwork to “them down there” but subsequently to ignore or reject the results and consequences of that teamwork. If they do so then it will soon be goodbye to All One Team.

## Scientific Approach

The Scientific Approach is necessary for genuine improvement, be it continual or otherwise, because of its emphasis on the *system* and *processes* both in concept and in the methods that it provides, especially the control chart. We also need well-chosen data and the knowledge of how to interpret those data in order to reflect and guide us on how successful our attempts and experiments for improvement are working (but definitely **not** in the sense of whether or not we’ve met some numerical target—recall the second paragraph of Day 4 page 8).



Point 2 (pages 58–59) comes from Day 4 pages 18–19.

## Point 2. The new philosophy

**Adopt the new philosophy. We are in a new economic age, created in Japan. We can no longer live with commonly-accepted levels of delays, mistakes, defective materials, and defective workmanship. Transformation of Western management style is necessary to halt the continued decline of industry.**

This *is* a whole new philosophy. It's not just optional add-ons to what we are already doing; it's not the use of a few new tools. At the beginning of the course I interpreted the word "philosophy" as a "way of thinking". So this is indeed a whole new *way of thinking*. And, as I also said at the beginning, what and how we think so greatly affects *what* we do and *how* we do it.

This Point illuminates the danger of just "making do". The implication is that we may have become so used to lower levels of product and service that we have become resigned to them and skilled in compensating for them. But that might not be so true of your customer.

The reason for the description "created in Japan" which Deming included in the statement of this Point may be less obvious now than when he said it in the 1980s. At that time, Japan unarguably led the world in terms of quality and reliability. But even then I puzzled about the fact that the Japanese were seemingly no longer learning much from him. He occasionally delivered a speech at a Deming Prize ceremony, but there were certainly no four-day seminars there. I doubt whether many Japanese knew much about what he was teaching elsewhere during the final ten years or so of his life. I sometimes muse on the thought that perhaps, if they had, some of the difficulties subsequently experienced by their country might have been avoided. Recall my note in the middle of Day 1 page 27.

### Obsession With Quality

The third sentence of the statement of this Point ("We can no longer live ... ") provides a clear and strong link with the Obsession With Quality. This is improvement of quality "across the board".

## All One Team

The specific kinds of problems mentioned in that same sentence (“We can no longer live ...”) are most usually caused by the *non*-existence of All One Team. Very often people cannot do their job as well as they would like because poor product and service from “upstream” in the system prevents them. (Think of the red beads—the Willing Workers didn’t make them.)

## Scientific Approach

What causes the “delays, mistakes, defective materials, and defective workmanship”? Maybe the underlying system itself is reasonably good but is suffering from some serious special causes. On the other hand, the underlying system itself may not be *capable* of producing acceptable results even when it is *not* being affected by special causes. How would you know? These and other related questions cry out for the use of control charts, the fundamental plank of the Scientific Approach. Remember that the capability of the underlying system cannot even be assessed if its output is being disrupted by special causes. Also remember that (as was so clearly illustrated on Day 3) taking action appropriate for an unstable process when the process is in fact stable, or *vice-versa*, invariably makes things worse rather than better. Without the use of the Scientific Approach you are always running that serious risk.



Point 3 (pages 60–61) comes from Day 4 pages 20–21.

### Point 3. Cease dependence on mass inspection

**Eliminate the need for mass inspection as a way to achieve quality** by building quality into the product in the first place. Require statistical evidence of built-in quality in both manufacturing and purchasing functions.

In some areas at least, the world has fortunately moved on since Dr Deming came up with the third of his 14 Points. Dependence on mass inspection for quality has immediate implications about what the quality is like in the first place! It is now more generally appreciated that dependence on mass inspection is a costly and unreliable means of delivering quality. It costs just as much to make the bad as it does to make the good, and the additional costs of the mass inspection plus the scrap or rework that results from all which fails the inspection can add up to a very large bill indeed.

Except for some matters literally of life and death, mass inspection is a method for a bygone age. And sometimes, when I was relating the 14 Points, that indeed is what I was told: “Yes, we used to inspect 100%. But now we have improved our processes, resources, methods, and all else relevant so that mass inspection has become irrelevant”. I might then ask: “Do you have performance appraisal? For what is that but 100% inspection of your people?”. (Remember this when you reach Deadly Disease 3 tomorrow afternoon.)

Despite Dr Deming’s particular wording here, the lessons from this Point relate just as strongly to service and other areas as to manufacturing.

#### Obsession With Quality

An Obsession With Quality will surely result in quality being improved way beyond that which needs mass inspection to verify it. Notice again the words: **“the need for”**. Deming isn’t simply saying “Stop doing it”. He is telling us to improve things so that mass inspection becomes redundant.

There are more general practical lessons to learn from this observation. If you’re interested, take a quick look at the final paragraph on Appendix page 23.

### **All One Team**

An important aspect here is that, through being a member of All One Team, we both feel and become more responsible (through desire) for the quality of what we do—we don't want to let anybody down, and they do not want to let us down. This is a long way down the road from dependence on mass inspection to try to ensure quality.

### **Scientific Approach**

How may we be sure about what the customer will receive from us if we do not use mass inspection techniques? Answer: By getting processes and the product/service they provide into statistical control, and taking advantage of the resulting *predictability* thus implied. Dr Deming's second sentence in the statement of this Point makes it clear that the Scientific Approach is fundamental for success with Point 3.



Point 4 (pages 62–63) comes from Day 4 pages 22–23.

#### Point 4. End lowest-tender contracts

**End the practice of awarding business solely on the basis of price tag.** Instead, require meaningful measures of quality along with price. Reduce the number of suppliers for the same item by eliminating those that do not qualify with statistical evidence of quality. Move toward a single supplier for any one item, on a long-term relationship of loyalty and trust. The aim is to minimise *total* cost, not merely initial cost. Purchasing managers have a new job, and must learn it.

As with Point 3, the awarding of business on the basis of price alone is, or rather should be, a practice for a bygone age (NB “price *alone*”, which of course does not imply that price is unimportant). What is the logic of lowest-tender contracting? Surely that the required quality is either obvious or can be specified, so that then the only variable quantity to consider is the price.

But doesn't everybody *know* that is not the case? Simply ask yourself how, when you wish to acquire something, you reach the decision on which of the competing products/services you will buy. Do you really decide on exact specifications of what you want and then simply select the cheapest from amongst those that satisfy the criteria? Do you? Surely the answer is only “yes” if either (a) you are poverty-stricken or (b) you are buying something very elementary—perhaps a basic foodstuff like granulated sugar which may seem to be the same wherever you get it. But, even then, does not e.g. *convenience* enter your thoughts? Will you travel ten miles to buy sugar one penny cheaper? With other purchases, how about the reputation of the maker, the reputation and civility and helpfulness of the supplier, and all the other *non-specifiable* aspects of quality: “looks”, feel, trust, confidence, etc?

And if all these, and more, enter decision-making about purchasing for yourself and your loved ones, why shouldn't they enter the purchasing decisions of your company?

#### Obsession With Quality

All that I have just mentioned contributes to quality. Price does not. Obsession With Quality implies purchasing *best value* in the broadest sense of that term, including matters both quantifiable and non-quantifiable, and not only at the time of purchase but subsequently.

## All One Team

It is worth recalling that the famous 1950 flow diagram: “Organisation Viewed as a System” includes both the organisation’s suppliers and its customers—they are *all* part of the System.

We saw this diagram on Day 1 page 35 as the first of Dr Deming’s [“Summary of Teachings to Top Management and to Engineers in Japan”](#). We shall revisit it at greater length on Day 9.

The arguments in favour of a single supplier become especially important regarding long-term relationships for mutual advantage, involving improvement, development, innovation—and the cooperation for mutual benefit thereby implied. This is all part of *optimisation* of the system.

## Scientific Approach

Anyone who has been involved with the effects of awarding business on lowest price knows, through bitter experience, the huge additions to variation—and therefore effectively to cost—thereby generated through having to deal with different companies, different people, different methods, different procedures—let alone the different product/service received. Saving pennies can cost pounds (or whatever is your local currency).



Point 5 (pages 64–65) comes from Day 4 pages 24–25.

### Point 5. Improve every process

**Improve constantly and forever the system** of planning, production, and service, in order to improve every process and activity in the company, to improve quality and productivity, and thus to constantly decrease costs. It is management's job to work continually on the system (design, incoming supplies, maintenance, improvement of equipment, supervision, training, retraining, etc).

Here we have a direct contradiction to a familiar saying—and maybe a familiar attitude: “If it ain't broke, don't fix it”. This is instead: “If it's broke, fix it; if it ain't broke, *improve* it”.

An objection to Point 5 sometimes heard from those who are not yet in tune with what Deming was teaching is that we can't *afford* to keep improving! It comes from those who think that improvement can only be achieved expensively by buying dearer materials, buying new machines, carrying out more inspection, hiring more consultants, etc, etc. But, to put it mildly, these were not Deming's focus on improvement. His emphasis was instead on *reducing* costs, particularly through improvement of processes and reducing variation—such improvements are frequently very *inexpensive* yet can produce considerable rewards. For confirmation, again refer back to his Chain Reaction (*DemDim* page 33).

### Obsession With Quality

We have already pointed out that Deming was talking about quality “across the board”—quality of the end-product or service, of course, but also quality of all that contributes to delivering that product or service. This link is therefore particularly strong.

## All One Team

Without All One Team, Point 5 could in fact be rather dangerous, and I have come across examples. Such danger will be multiplied if teams are encouraged or even forced to *compete* with each other (in total contradiction, of course, to All *One* Team). I am thinking of situations where lots of local “improvements” are made which look fine in their local context but whose side-effects elsewhere in the organisation are neither known about nor cared about. (Later you will find the examples of *suboptimisation* on Day 9 to be particularly relevant here; the same is true of both Day 8’s Major Activity and also the powerful case study on *ST*—my book of *Statistics Tables*—pages 79–82.)

## Scientific Approach

The link here is obvious: the Scientific Approach is directly concerned with *how* to improve systems and processes—including how to avoid tampering with them.



Point 6 (pages 66–67) comes from Day 4 pages 26–27.

## Point 6. Institute training

**Institute modern methods of training** for everybody's job, including management, to make better use of every employee. New skills are required to keep up with changes in materials, methods, product design, machinery, techniques, and service.

“Training and education” are often lumped together as if they were pretty much the same thing. Perhaps surprisingly, Dr Deming did the same in very early versions of the 14 Points. But he soon clearly divided them into the two widely-separated Points 6 and 13 respectively.

In Deming's terminology, the purpose of “training” is the acquisition of specific skills for specific tasks. Training is thus narrowly defined and finite in scale and scope. In contrast, as we shall see in Point 13, “education” is the opposite: very non-specific, very broadly defined, and essentially infinite in scale and scope.

Training budgets in many organisations are absurdly small. So how do people learn the skills necessary for their jobs? Notice Deming's emphasis in his second sentence above on the need to keep up-to-date. Also heed the fact that “**Worker training worker**” was one of his favourite examples of the toxic Rule 4 of the Funnel.

### Obsession With Quality

Clearly, a prerequisite for people to do quality work is that they have received appropriate training for that work and can understand it. Notice that here Deming is at pains to emphasise the particular relevance of this to *management*. He quite clearly considered, and often said, that potential managers do not learn it in most MBA courses.

As a personal viewpoint regarding training, I think it may be insufficient to simply pack people off to some external consultants' training course, however expensive. Note the above words: “**to make better use of every employee**”. Far better if the training can be arranged in-house, whether or not using external trainers: there is then a much better chance of *everyone* receiving training that is relevant to their particular needs. Further, as Deming often emphasised, “**people learn in different ways**”. Person A may respond better than Person B to a particular kind of training, yet the reverse may be true with another method of training: again this is likely to be far better catered for in-house than externally.

## All One Team

Part of a sensible training strategy is that people are trained to carry out their tasks in ways which are consistent with the ways that others do their work. They can then contribute *together* to the improvement of processes, enhancing both stronger teamwork and self-fulfilment. Without appropriate training, people have no option but to “do their own thing”. This breaks up teamwork even at a micro-level, let alone at the macro-level implied by All One Team.

## Scientific Approach

Here it is appropriate to recall the original expanded version of the Joiner Triangle on Day 4 page 11 in addition to my subsequent suggested modification. As we saw, Joiner Associates’ own expanded version of the Triangle included flowcharting and other “old tools” of quality under the Scientific Approach. Obviously, the control chart is in both versions!

**NB** My alternative list of topics for the Scientific Approach on Day 4 page 12 was not intended as a criticism of the original expanded Joiner Triangle! Regarding the difference in nature between education and training, consultants in the Deming area clearly need to work with *both*, and thus the version of the Scientific Approach on Day 4 page 11 was entirely appropriate for Joiner Associates. But, equally clearly, the primary nature of *12 Days to Deming* is education, and so a different emphasis regarding the Scientific Approach is usually appropriate here.

As you know, this project will continue throughout Day 5.  
So get ready to keep up the good work tomorrow!





**DAY 5: THE JOINER TRIANGLE, THE 14 POINTS (part 2),  
AND THE DEADLY DISEASES**



**FIRST  
PROJECT  
CONTINUED**

Points 7–12 (pages 70–81) come from Day 5 pages 2–13.

## Point 7. Institute leadership of people

**Adopt and institute leadership aimed at helping people to do a better job.** The responsibility of managers and supervisors must be changed from sheer numbers to quality. Improvement of quality will automatically improve productivity. Management must ensure that immediate action is taken on reports of inherited defects, maintenance requirements, poor tools, fuzzy operational definitions [*operational definitions will be studied on Day 11*], and other conditions detrimental to quality.

Rather than my attempting to contrive introductory comments in this case, it will be far more useful for you to **turn to *DemDim* page 335 and read through the list of “Attributes of a Leader”** which Dr Deming used in his four-day seminars around 1990. (Don’t focus your attention on the technology—simply Dr Deming’s own handwriting and a typewriter!—but on the wisdom.) That list provides many clear links with the Joiner Triangle.

There is considerably more on Day 12 concerning Deming’s specific guidance on leadership. However, you should find *DemDim* page 335 more than ample in the current context or, if you’re particularly interested in this topic, you might like to read the whole chapter (*DemDim* Chapter 25 pages 333–339).

Particularly with reference to All One Team, my friend Dave Kerr wrote to me as follows: “A point which always comes out very clearly to me is that, in order for a group of people to behave as a system, there has to be active leadership that focuses the group to align their behaviours around a commonly-understood purpose. In my experience within corporate land, this kind of leadership is largely missing—with just a few notable exceptions.”

(See Appendix page 24.)

## Obsession With Quality

**All One Team**

**Scientific Approach**



Point 8 (pages 72–73) comes from Day 5 pages 4–5.

## Point 8. Drive out fear

**Encourage effective two-way communication and other means to drive out fear throughout the organisation** so that everybody may work effectively and more productively for the company.

The three-word heading to this Point is one that everybody who has heard or read it seems to easily remember. Perhaps that is because it is one of the bluntest expressions imaginable of how the Deming philosophy is diametrically opposite to what is going on in many organisations. Do *you* produce your best work when you are in a state of fear? If so, I feel genuinely sorry for you. You might produce your *fastest* work—but your *best* work?

Much of both management and government strategy seems based on driving fear *in* rather than *out*. Certainly, for many years, British governments have made excessive use of targets, league tables, threats, “weeding out bad teachers”, etc. Do these drive fear *in* or *out*? What is the effect?

In Point 12 we shall find Dr Deming talking of the value of “**pride of workmanship**” and indeed “**joy in work**” (recently seen in Attribute 3 on *DemDim* page 335). Presumably the only way that they could be compatible with fear is in the case of a confirmed masochist.

(See Appendix page 24.)

## Obsession With Quality

**All One Team**

**Scientific Approach**



Point 9 (pages 74–75) comes from Day 5 pages 6–7.

### Point 9. Break down barriers

**Break down barriers between departments and staff areas.** People in different areas, such as Research, Design, Sales, Administration, and Production, must work in teams to tackle problems that may be encountered with products or service.

As a considerable change of source, here is a short extract from the soundtrack of a video made in 1984 for the UK Government's Department of Trade and Industry in support of a National Quality Campaign. The video was called *The Case of the Short-Sighted Boss*. An electrical goods manufacturing company was not doing very well. In a dream, the Managing Director engaged Sherlock Holmes as a management consultant!

Holmes was speaking to the Sales Director, Peter Marks.

*Marks:* Just get the goods out of the factory gates—that's what I always say.

*Holmes:* Do you indeed? (*Beckoning Marks over to the window, and watching a large truck leaving the factory:*)  
Come here. Is that what you mean?

*M:* Yes.

*H:* So what's in this lorry coming in?

*M:* That one's bringing back faulty goods that are under our guarantees.

*H:* And how much does that cost the company?

*M:* I don't know. It's not my Department.

(See Appendix page 25.)

### Obsession With Quality

**All One Team**

**Scientific Approach**



Point 10 (pages 76–77) comes from Day 5 pages 8–9.

### Point 10. Eliminate exhortations

**Eliminate the use of slogans, posters, and exhortations** for the workforce, demanding Zero Defects and new levels of productivity without providing methods. Such exhortations only create adversarial relationships; the bulk of the causes of low quality and low productivity belong to the system, and thus lie beyond the power of the workforce.

This Point in particular needs reading beyond the first few words—including to the very end of the first sentence! Dr Deming was pretty scornful of mere “slogans” and “exhortations” as ways to improve quality. But, of course, not all “posters” are bad. E.g., on *Out of the Crisis* page 59 [pages 68–69] he writes:

“Posters that explain to everyone on the job what the management is doing month by month to (for example) purchase better quality of incoming materials from fewer suppliers, better maintenance, or to provide better training, or statistical aids and better supervision to improve quality and productivity, not by working harder but by working smarter, would be a totally different story: they would boost morale.”

A little later he says, with obvious regret:

“I have not yet seen any such posters.”

If something so shallow as alluded to in this Point could have any positive effect, I can only conclude that the management environment must be pretty feeble. If something so feeble really could motivate, the organisation’s employees’ motivation must be at rock-bottom—and whose fault is that?

(See Appendix page 25.)

### Obsession With Quality

**All One Team**

**Scientific Approach**



Point 11 (pages 78–79) comes from Day 5 pages 10–11.

## Point 11. Eliminate arbitrary numerical targets

**Eliminate work standards that prescribe quotas for the workforce and numerical goals for people in management.** Substitute aids and helpful leadership in order to achieve continual improvement of quality and productivity.

Here we have the topic that used to be regarded as probably the most controversial of all of the 14 Points (other than Point 12 if that is incorrectly regarded as being primarily about performance appraisal). Nowadays, repeated failures of the “target culture” have raised some awareness of the truth in what Deming was getting at so long ago. Yet managers and governments still *love* targets. They are easy to set, and then those who set them can sit back and wait for the results to arrive—as they will (or will appear to) if the threats and promises are sufficiently impressive. But at what cost?

An obvious trouble then is that it is the *number* which becomes the aim—as opposed to (a) *quality* being the aim and (b) the number (amongst many others) being an indicator of a possibly rather questionable aspect of “quality”. What is the consequence? Using some of Dr Deming’s own words: [fudging figures](#), [creative accounting](#), [suboptimisation](#). Remember also from Point 8 (in my comments on Appendix page 24 relating to the Scientific Approach): “[Where there is fear, there will be wrong figures](#)”.

Resources are channelled into reaching that number, irrespective of the harm caused elsewhere. Methods of measuring or counting are changed. Definitions are changed. “Punctual” is revised from being 5 minutes late to being 10 minutes late (*DemDim* page 113). The definition of an “unemployed person” (or whatever term is used for those who contribute to the monthly figures) changes maybe three times a year (*DemDim* page 111). With crime figures, certain types of offences are surreptitiously dropped from the count (I refer ahead here to Day 6 pages 25–26).

(See Appendix page 26.)

### Obsession With Quality

**All One Team**

**Scientific Approach**



Point 12 (pages 80–81) comes from Day 5 pages 12–13.

## Point 12. Permit pride of workmanship

**Remove the barriers that rob hourly workers, and people in management, of their right to pride of workmanship.** This implies, *inter alia*, abolition of the annual merit rating (appraisal of performance) and of Management by Objective. Again, the responsibility of managers, supervisors, foremen must be changed from sheer numbers to quality.

This Point is unusual in that people have largely ignored its main focus and argued instead about a subsidiary (but nonetheless very important) aspect. The main focus is the value and mutual benefit of “pride of workmanship”. The subsidiary aspect (which Deming introduces as “*inter alia*”—“amongst other things”, indeed amongst *many* other things)—is performance appraisal. I believe it was at least partly due to this, i.e. lack of attention paid to the Point’s main issue, that in 1988 he began to talk of something very closely related but with those short and considerably more impactful words: “joy in work” (to be discussed on Day 8).

The matter of performance appraisal itself is the subject of the third of the Deadly Diseases, so I strongly suggest we leave that topic until then and instead concentrate here on the essential and main Point: pride of workmanship.

(See Appendix page 26.)

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### Point 13. Encourage education

**Institute a vigorous programme of education, and encourage self-improvement for everyone.** What an organisation needs is not just good people; it needs people that are improving with education. Advances in competitive position will have their roots in knowledge.

The well-known Japanese teacher, Kaoru Ishikawa, is often quoted (e.g. near the end of the Preface to his book: *Introduction to Quality Control*) in such words as “QC starts and ends with education”. (*It should be noted that the Japanese interpretation of the term “Quality Control” (QC) is much broader than ours.*) I would expand Ishikawa’s statement to something like: “QC is generated by education and generates yet more education”.

In the very useful Volume 21 of *The Deming Library*: “A Theory of a System for Managers and Educators”, Dr Deming asks:

“What do we mean by quality in education?”<sup>a</sup>

Sharpening the point of his question, he enquires more specifically:

“Do we mean the ability to think, or to pass tests?”

On the same theme, in *The Deming of America* he states categorically:

“Our education is failing. We just don’t educate people, youngsters. We grade them, but don’t educate them, don’t teach them to think.”

Whereas training (Point 6) is specific, finite in scope, education’s domain is (or needs to be) unbounded, unlimited, infinite. One of Deming’s big complaints about familiar so-called education “systems” is that, because of their concentration on passing examinations which are usually more on the lines of regurgitation of information (memory, not thought) rather than understanding (knowledge), the result is destruction of creativity and innovation. In fact, are not our supposed “education” systems more truthfully *training* for the skill of passing examinations? Instead, Deming is virtually *defining* “education” as “teaching to think”.

Point 13 implies far more than might be noticed at first glance.

(See Appendix pages 26–27.)

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Point 14 (pages 84–85) comes from Day 5 pages 16–17.

### Point 14. Top management commitment and action

**Clearly define top management’s permanent commitment to ever-improving quality and productivity**, and their obligation to implement all of these principles. Indeed, it is not enough that top management commit themselves for life to quality and productivity. They must know what it is that they are committed to—i.e. what they must do. Create a structure in top management that will push every day on the preceding 13 Points, and take action in order to accomplish the transformation. Support is not enough: action is required.

“Top management commitment” has unfortunately become something of a cliché—you can hear it, almost robot-like, from just about all teachers of just about all approaches to what they call “quality”. But most other approaches do not really require people in management themselves to change significantly, if at all: they just need to “support” whatever is going on. However, as you will have realised by now (and we saw it in Point 2), Dr Deming was talking about *transformation of management*—and he meant it! So what chance does his priceless teaching have of getting anywhere in an organisation without Point 14?

(See Appendix page 27.)

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*Before moving on to similar study of the "Deadly Diseases", continue at the top of Day 5 page 18.*



The "Five Deadly Diseases" (pages 86–95) come from Day 5 pages 18–27.



## Disease 1. Lack of constancy

**The crippling disease is lack of constancy of purpose to stay in business by planning to provide product and service in the future that will help man to live better materially, and which will have a market, and provide jobs.**

In fact, Dr Deming began this statement with "The crippling disease in America ...". I have omitted the two extra words for the obvious reason that this Disease is far more widespread.

We already know that "constancy of purpose" heads both the list of 14 Points and the list of Deadly Diseases, and how Dr Deming has thus focused upon its crucial importance—that's if his description: "the crippling disease" doesn't already have sufficient impact!

It is relevant here to point out the error in a phrase glibly trotted out by many speakers: "If you always do what you've always done, you'll always get what you've always got". *Wrong!* The world is ever-changing. Even the *same* products and services need to be produced more efficiently and cost-effectively: in other words, the *processes* involved still need to be improved—for, if you don't do it, others will. Secondly, of course, those same products and services may sooner or later have no market, because better products and services will have become available—and if not from you then from elsewhere. The market for even the best horse-drawn carriages soon plummeted once people were able to switch to cars. So it should be no surprise that Dr Deming's wording here is focused on *innovation*.

(See Appendix page 28.)

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The second Deadly Disease (pages 88–89) comes from Day 5 pages 20–21.

## Disease 2. Short-termism

**Short-term thinking defeats constancy of purpose to stay in business with long-term growth.**

My choice of Dr Deming's words here are few but surely "hit the nail on the head".

My friend Dr Jackie Graham, based in Australia, points out how government cycles (i.e. the times between General Elections) can seriously obstruct long-term projects: "The big joke in Australia is the fast train from Melbourne to Sydney. Been talked about for more than 30 years. Every election time it gets rolled out, dusted off, and then after the election gets put back on ice. No government can build it in one term and so it does not get done." Jackie told me that one can drive a car between the two cities (without speeding) in considerably less time than the train currently takes! The latter barely averages 50 miles (80 kilometres) per hour. No wonder she observed: "the busiest air corridor in the world is between Melbourne and Sydney".

With even greater focus than the words I have quoted above, on *Out of the Crisis* page 84[99] Dr Deming expresses this Deadly Disease as "Emphasis on short-term profits". Short-term profits (like other figures discussed in Point 11 on page 78) can always be made to *look* better. In his first paragraph on this topic (*Out of the Crisis* page 85[99]), Dr Deming describes how to do it:

"Ship everything on hand, regardless of quality: mark it shipped, and show it all as accounts receivable. Defer till next quarter, so far as possible, orders for material and equipment. Cut down on research, education, training."

This will be so familiar to many readers that I need say no more.

(See Appendix page 28.)

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The third Deadly Disease (pages 90–91) comes from Day 5 pages 22–23.

### Disease 3. Appraisal of performance

**The effects of performance appraisal (personal review system, merit rating, evaluation of performance, annual review, system of reward, pay for performance, etc) are devastating.**

As you can see from *DemDim* pages 50–51, Dr Deming’s opinion of performance appraisal was unambiguously damning. But the term “performance appraisal” means different things to different people. So what exactly was Deming so heavily against, and why?

Basically, it was anything that judges individual performance with the implication that it is primarily the individual’s *fault* if there are any supposed shortcomings. From Deming’s viewpoint, one big reason is immediately and patently obvious: yet again, the vast majority of performance, behaviour, results, quality, productivity, etc comes from the *system*, not the individual. In particular, if appraisal means that a person will be rated or ranked—and, worse still, if this results in some kind of reward or punishment, be it financial and/or other—then that is what Deming was talking about and saw as so harmful.

As a personal observation, I can honestly say that I have never heard anybody who is involved with performance appraisal talking about it with any enthusiasm. From what people have told me, my impressions are these. For those to be appraised it is a matter of apprehension at least, even for those who usually escape pretty lightly from it—they might not be so lucky next time. For the appraisers it is an irritating chore. For all it is an unpleasant interruption to their “proper job”.

Many organisations protest that this does not reflect *their* appraisal system—that is there to *help* the individual, for coaching, for seeing how management can assist the person to do a better job. If that is really the case, fine. But, if so, why only once a year? And also, if so, why call it “performance appraisal”? Consult your dictionary for its definitions of “appraise” and “appraisal”.

It may be wise at this stage for me to remind you of my warning at the bottom of Appendix page 23 (see also my “Obsession With Quality” comment on page 60 about the danger of merely stopping doing something undesirable and thus leaving a vacuum. In the context of performance appraisal, what is in my opinion the quite brilliant Chapter 9: “Performance Without Appraisal” in Peter Scholtes’s *The Leader’s Handbook* provides tremendously good guidance.

(See Appendix page 29.)

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The fourth Deadly Disease (pages 92–93) comes from Day 5 pages 24–25.

#### **Disease 4. Management job-hopping**

**Mobility of management causes instability, results in decisions being made by people who do not know the business [i.e. *this* business] and thus blindly use experience gained elsewhere which may be totally irrelevant.**

This fourth Deadly Disease needs some clarification in order to avoid misinterpretation. Dr Deming is not suggesting that one should necessarily be stuck in the same place in the same organisation for life! But, as we are viewing an organisation as a *system*, broad knowledge across the organisation as a whole as well as substantial knowledge of part of it is *necessary*. How does the organisation work? How does what happens in one part of it affect what happens in other parts? And how is what happens in one part *affected by* what happens in other parts?

Moving around the organisation in order to acquire that broader understanding is clearly good. So what is the fourth Deadly Disease? What Dr Deming is warning us against here is the culture of flitting from one location to another, one job to another, one company to another, not for better understanding but just for self-advancement. In some environments you can be regarded as a “stick-in-the-mud” if you don’t move on within a few months from wherever you are now. This encourages development of ability at short-term impact without concern for long-term effects (for you’ll no longer be there); it encourages superficiality rather than depth; it encourages action without understanding. As so often the case, Dr Deming summed it up superbly in few words (*Out of the Crisis* page 103[121]):

“Mobility from one company to another creates prima donnas for quick results.”

(See Appendix page 29.)

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*The fifth Deadly Disease (pages 94–95) comes from Day 5 pages 26–27.*

### **Disease 5. Use of only visible figures**

**One can not be successful on visible figures alone. Of course, visible figures are important: the bank account must be watched, and employees and vendors must be paid. But he who would run his company on visible figures alone will in time have neither company nor figures.**

A familiar joke is “In God we trust; all others, bring data”. Apart from religious objections some may have to this humour, it is dangerous in its implication that “data” are all that is needed for any purpose. By “data” is meant numerical information. Yet we have already become very familiar with Lloyd Nelson’s claim that the most important figures for management of any organisation are “unknown and unknowable”—and now we have Deming drawing attention to the limitations of “visible figures”.

This fifth Deadly Disease can come as a shock even to those who are warming to Deming’s teachings—especially if they are statisticians or accountants! So what are these “most important” but invisible figures? You’ll recall working on this in the third part of Activity 4–a (page 50). Here is a summary of those mentioned by Dr Deming in his discussions on this Disease (*Out of the Crisis* pages 103–105[121–123] and elsewhere); they include ...

“ ... measures of improvement in quality and productivity from continual improvement of processes, from elimination of work standards [see the important note at the top of the next page], from better training, better supervision; from a team composed of the chosen supplier, the buyer, engineering design, sales, customer, working on a new component or redesign of an existing component; measures of loss from the annual rating on performance, and from inhibitors to pride of workmanship; measurements of the multiplying effect on sales that comes from a happy customer, and the opposite effect from an unhappy customer. Where are the figures?”

In conclusion, and back to the main issue (from *Out of the Crisis* pages 104–105 [page 123]):

“He that expects to quantify in dollars the gains that will accrue to a company year by year for a programme for improvement of quality by principles expounded in this book will suffer delusion. He should know before he starts that he will be able to quantify only a trivial part of the gain.”

*(See Appendix page 30.)*

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**NB** There may be a potential danger in using the summary on the previous page without clarification: it is a possible misunderstanding of the term “work standards”. But we only have to refer back to Point 11 (page 78): “[work standards that prescribe quotas for the workforce and numerical goals for people in management](#)” to be clear about Deming’s focus with those words. That focus is, of course, in no way related to e.g. *standardising* work, procedures, operations, etc once they have been found advantageous. Apart from anything else, this clearly reduces variation. Some refer to these more appropriate practices by alternative terms such as “standard work” which helps to avoid possible ambiguity.

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That’s it! Congratulations on completing this major project. You may now relax and look forward to a considerably shorter and less challenging Day 6!



*Finally, please see the note on Day 5 page 28.*

**Approvals, Acknowledgments and Information**

<sup>a</sup> (page 82) This and all other quotations from Volume 21 of *The Deming Library* have been included with the approval of Clare Crawford-Mason.

## DAY 6: GALLERY FURNITURE AND OTHER TRUE STORIES

*This paragraph comes from Day 6 page 3.*

### **Your organisation**

Recall that, at the end of Day 5, I gave you advance notice that today's Activities will ask you to focus some attention on "your organisation". The Activity which follows is the first such occasion. So, if you are not currently involved as an employee or a manager in an organisation, you will instead need to consider a "surrogate" organisation as discussed yesterday and on Day 1 page 15—preferably with the help of a colleague or other friend(s).

Activity 6–a (pages 98–99) comes from Day 6 pages 4–5.

### ACTIVITY 6–a

Firstly, for your own interest and later use, I'd like you to spend some time thinking and "scoring" your organisation with reference to the 14 Points and Deadly Diseases. How does your organisation match up with what the 14 Points guide managers to do? Is it inflicted with the "Deadly Diseases" or not? This exercise is for your eyes only—you are not expected to divulge your scores to anybody else!

I suggest a 0–5 scale, scoring 5 if, with respect to Deming theory, the organisation already seems to be pretty much there; 0 if it's as "non-Deming" as you could imagine; and 1, 2, 3 or 4 in the likely event that it's somewhere between those two extremes. So, for example, with regard to Point 8: "Drive out fear", score 5 if the organisation seems almost totally devoid of fear (very rare!); 4 or 3 if there is some fear around but nothing too serious; 2 or 1 if a lot of people are pretty fearful much of the time; and 0 if everyone seems virtually paralysed by fear all of the time (hopefully also somewhat rare—but maybe not as rare as the score of 5!). And similarly with the Deadly Diseases. For example, with Disease 3: Performance appraisal, score 5 if the organisation uses no kind of (judgmental) appraisal system, 0 if there is a feared, *extremely* judgmental appraisal scheme used throughout the organisation, with considerable reward or punishment involved including advancement on the one hand and the firing line on the other. You might score 4 or 3 if there is some kind of appraisal scheme but it is relatively informal and is less concerned with judging and scaring than with coaching and helping. And you might score 2 or 1 if the reverse is true.

So, in each case, write down some relevant comments. Then summarise those comments in the right-hand column by inserting what you feel to be the most appropriate score using the above 0–5 scale.

Work through the table reasonably carefully and accurately, but there's no need to spend a huge amount of time over this. In some cases your entries in the table may become obvious quite quickly: others may need more thought. This Activity is simply a device to help guide you on what aspects of the learning from the case study that follows might be most relevant to your organisation and which might be less so.

|   | Comments | Score |
|---|----------|-------|
| <b>14 POINTS</b>  |          |       |
| 1. Create constancy of purpose                          |          |       |
| 2. Adopt the new philosophy                             |          |       |
| 3. Cease dependence on mass inspection                  |          |       |
| 4. End lowest tender contracts                          |          |       |
| 5. Constantly improve systems                           |          |       |
| 6. Institute training                                   |          |       |
| 7. Institute leadership                                 |          |       |
| 8. Drive out fear                                       |          |       |
| 9. Break down barriers                                  |          |       |
| 10. Eliminate exhortations                              |          |       |
| 11. Eliminate arbitrary numerical targets               |          |       |
| 12. Permit pride of workmanship                         |          |       |
| 13. Encourage education                                 |          |       |
| 14. Clearly define top management commitment and action |          |       |
| <b>DEADLY DISEASES</b>                                  |          |       |
| 1. Lack of constancy of purpose                         |          |       |
| 2. Emphasis on short-term profits                       |          |       |
| 3. Performance appraisal                                |          |       |
| 4. Management job-hopping                               |          |       |
| 5. Running a company on visible figures alone           |          |       |



Continue on Day 6 page 6.

Major Activity 6-b (pages 100–103) comes from Day 6 pages 18–21.

## MAJOR ACTIVITY 6-b

To focus on the learning from the Gallery Furniture story, and to help you relate it to your own situation, I now ask you to carry out two similar exercises with Gallery as you did with your own organisation in Activity 6-a: i.e. commenting on and “scoring” Gallery in relation to adoption of the 14 Points and cure of the Deadly Diseases. The first of the two exercises is based on what you know of Gallery at their “pre-Deming” stage, i.e. reflecting the company as it was, say, back in the summer of 1990. The second exercise will then be based on what you know of Gallery as it was nine years later. Obviously, your awareness of what was happening in Gallery Furniture at both times will simply be based on what you have read in Mack’s account. Although he doesn’t refer to the Points and Diseases explicitly, I think that in many cases you will have read enough there for you to draw valid conclusions about what was going on. (Indeed, often you may find your comments here can simply be a relevant choice of Mack’s own words.) Otherwise, simply write something relevant (like “Don’t know”) and don’t bother with a score.

Both to save space, and for ease of comparison, I am providing you with the single table opposite on which you can write your thoughts on both the “Before” and “After” exercises. Leave the central yellow column blank for now.

As recommended on Day 5 page 28, I hope you have been able to supply yourself with an enlarged copy of this table: you will find it very useful to be able to compare the two situations side-by-side, but at the current size you have little space in which to insert your comments, etc. You will also find it particularly convenient to be able to refer to this table directly (without having to keep turning back) while completing this Major Activity—see page 102.

Now that you know what this Major Activity involves, I also strongly recommend that you take my advice on Day 5 page 28 by reading through Mack’s story once more before continuing any further. Read through it quite slowly and carefully, and this time highlight and write a brief comment on every aspect that you see which can contribute to the table—there are lots of them! This is where you will find the benefit of having prepared a single-sided “working copy” of the story as advised on that “out-of-hours” note.

You *could* then start at the top of the table on the next page with Point 1 and work through each of the 19 rows issue by issue, to end with Deadly Disease 5. But I suggest a better approach would be to check through all of the items you have highlighted in his account, and then immediately transfer your appropriate brief comments along with page references into the relevant place(s) in the table.

Then, after completing that, now comes the time when I *would* advise you to start at the top of the table and work through it, issue by issue. Where there is a blank, have a think to see if you can recollect anything from Mack’s story to include there. Otherwise, even if you have inserted something into a particular cell of the table, you might take a minute or two to reflect on whether there is anything further that you might add.

Finally for the time being, work through the table one more time, now considering the comments you have made on both the “Pre-Deming” and “Post-Deming” sides of the table. In each case, summarise your comments with a relevant score on the same 0–5 scale as used in Activity 6-a.

|   | "PRE-DEMING" |       |  | "POST-DEMING" |          |
|---|--------------|-------|--|---------------|----------|
|   | Comments     | Score |  | Score         | Comments |
| <b>14 POINTS</b>  |              |       |  |               |          |
| 1. Create constancy of purpose                          |              |       |  |               |          |
| 2. Adopt the new philosophy                             |              |       |  |               |          |
| 3. Cease dependence on mass inspection                  |              |       |  |               |          |
| 4. End lowest tender contracts                          |              |       |  |               |          |
| 5. Constantly improve systems                           |              |       |  |               |          |
| 6. Institute training                                   |              |       |  |               |          |
| 7. Institute leadership                                 |              |       |  |               |          |
| 8. Drive out fear                                       |              |       |  |               |          |
| 9. Break down barriers                                  |              |       |  |               |          |
| 10. Eliminate exhortations                              |              |       |  |               |          |
| 11. Eliminate arbitrary numerical targets               |              |       |  |               |          |
| 12. Permit pride of workmanship                         |              |       |  |               |          |
| 13. Encourage education                                 |              |       |  |               |          |
| 14. Clearly define top management commitment and action |              |       |  |               |          |
| <b>DEADLY DISEASES</b>                                  |              |       |  |               |          |
| 1. Lack of constancy of purpose                         |              |       |  |               |          |
| 2. Emphasis on short-term profits                       |              |       |  |               |          |
| 3. Performance appraisal                                |              |       |  |               |          |
| 4. Management job-hopping                               |              |       |  |               |          |
| 5. Running a company on visible figures alone           |              |       |  |               |          |



**MAJOR ACTIVITY 6-b (concluded)**

To complete this Major Activity, transcribe from the table on page 99 in Activity 6-a the scores for your own organisation into the central yellow column on page 101. Think about what they tell you. For a start, you will see “at a glance” whether your organisation relates more to Gallery as it was in its “pre-Deming” or its “post-Deming” days. More particularly, with Points or Diseases where both the “pre-Deming” Gallery and your own organisation have low scores, while “post-Deming” Gallery has a high score, there may be something to learn from the Gallery story about what your organisation might do in order to improve matters. Give yourself plenty of time for this. Write down your thoughts on these two pages.

*Continue at the footnote on Day 6 page 21 and then the "More True Stories" section beginning on Day 6 page 22.*



