



# Motivation

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# INTRODUCTION

In the session on Teams, we examined the importance of a team's purpose and bounding – the goal towards which the team is striving, and the parameters within which it operates. We described failing to create a sufficiently challenging purpose, or improperly bounding the team, as 'demotivating'. Motivation and its opposite, demotivation, are so common as terms that their meanings seem obvious – not least because all of us have experienced both emotions. Unless you're exceptionally lucky you will have worked on a project where you feel your work is not recognised and the work itself seems pointless or a waste of time; and unless you are extremely unlucky, you will have experienced feeling enthused and excited by your work, convinced that your contribution is making a difference and that together you are building something worthwhile.

Motivation is also a subject to which organisations devote a great deal of time and money. You may have some kind of bonus attached to your salary, dependent on a combination of your personal performance and the company's success. You probably have an annual review on which depends your chance of promotion – perhaps you have to conduct annual reviews for people you manage as well... Managers spend a great deal of time on making the assessment, discussing it and agreeing a final version. There is probably an entire HR department deciding on the best way of measuring and rewarding success. Perhaps your organisation has weekly pep talks, or invites motivational speakers along once a year.

There is a reason for all this, and it's that motivation has a close relationship with profitability. Companies that describe themselves as 'highly motivated' tend to have lower rates of absenteeism, a lower turnover of staff (and therefore reduced costs around recruitment and training), grow faster and are more profitable. And just for once – shhh, whisper it – we'll admit that whether it's more profitable or not, we all know how much nicer it is to work with happy, motivated individuals than miserable, demotivated ones. And there's nothing wrong with enjoying life.

So let's move on to consider the motivation both of the team itself and the individuals within it.

On completion of this session, the student will be able to:

1. Critique common current reward-and-punishment style motivations.
2. Understand the unintended results of reward-based targets.
3. Differentiate between motivation of individuals and groups.
4. Establish a motivational culture within the organisation.
5. Clear 'demotivating' blockages within the organisation.

## 1

# THE CARROT AND THE STICK

'We shall continue to operate on the Italian donkey at both ends, with a carrot and with a stick'

**Winston Churchill**

In a speech delivered shortly after the allies' invasion of North Africa, Winston Churchill promised to break Germany and Italy's alliance: using the invasion of Sicily (the stick) and the promise of a separate negotiated peace with Italy (the carrot).

Anyone who has ever seen a child in a tantrum, knows how natural it is to offer a combination of bribes and threats. I'll give you a chocolate if you stop howling. I'll put you straight to bed if you carry on like that. Anyone doing so has also learnt through bitter experience that carrots and sticks are not always quite as effective as they ought to be.

From war to toddler tantrums, the system of punishment and reward seems inbuilt to human experience – so it's not very surprising that we should find it so extensively in business. Punishments range from the extreme – being fired, to the mild – wry looks at the water cooler. Rewards can come in the shape of a banker-sized bonus to an 'employee of the year' sign or a pat on the back.

The point of all this carrot and stick approach is to motivate the employee to perform well in a certain way: acquire new customers; ship the product before Christmas; reduce costs.

There are two main problems with this approach:

1. Humans aren't donkeys. Moreover they don't like being thought of as donkeys (Churchill might have considered that the phrase 'the Italian donkey' was not going to win him many friends in Italy). Carrots and sticks are not the most effective methods of motivating people.
2. Rewards and punishments are very powerful forces, but hard to control. Tell your staff that they will be rewarded for making sales, and they will make sales. In the process they may make promises the company cannot keep, they may overstretch your capacity to fulfil the promises you can keep, or they may bring in low-quality customers who won't or can't pay. We'll go on to explore some of these unintended consequences later.

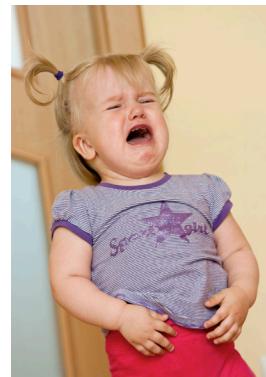


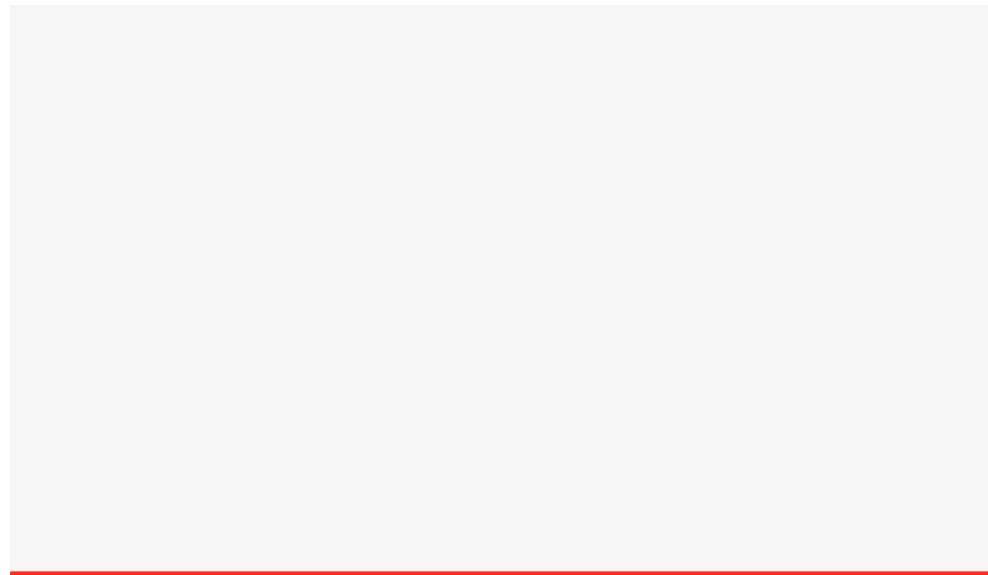
Figure 1. Child in a tantrum

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### **Activity 1: How does your company motivate its staff?**

This activity should take no more than 15 minutes.

Gather a group of colleagues together, 5 or 6 should do and discuss the methods your company uses to motivate people; there are some obvious ones such as bonuses, appraisal objectives and sales targets, but what others? Compile a list and keep it, as we'll use it in a future activity.



## 1.1. The difference between people and donkeys

Expectancy Theory, as developed in 1964 by Victor Vroom, states that effort will result in the attainment of desired performance, and by linking performance to desired rewards, motivation will ensue. This might be called the management science version of the carrot and the stick.

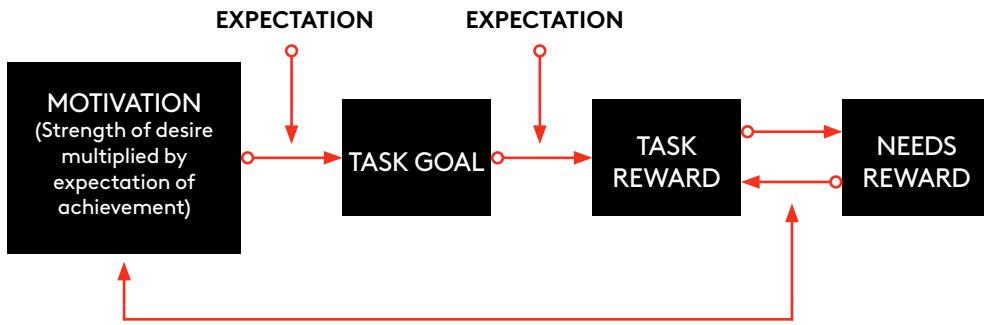


Figure 2. Expectancy Theory

Daniel H. Pink in his book *Drive*, reviews an experiment conducted by Dan Ariely in India. The point of doing it in India was so the researchers could offer what amounted to significant amounts of money without blowing their research budget. They created a range of tasks, some of which were routine, others creative or requiring concentration, and they split their subjects into three groups. Group 1 was offered a small reward for reaching performance targets (equivalent to 1 day's pay), Group 2 was offered a medium reward (2 weeks pay) and Group 3 was offered a large reward (5 month's pay).

What happened?

The fact that we're repeating this story should give you a clue that it was not what might be expected from the way all our business motivation systems are set up to run.

The largest incentive group fared worst, while there was no difference between the small and medium reward groups. In nearly every task, higher incentives led to worse results.

Although this may be radical because of the way it seems to impact on cherished ways of doing business, it might even be a surprise to some of us at a level of common sense.



Figure 3. A child's bedroom

Anyone with children knows that it can be hard to get them to tidy their room or help with the washing up. Many families have tried to implement a motivation reward system: pocket money depends on a tidy room or doing the washing up. And yet, most of those families have learned that the system drives them down a one-way street – now, a child demands to be paid EVERY time they help with the washing up and indeed, is still unlikely to do it. From being a shared family task, washing-up has become work which deserves pay. Paying people to donate blood actually makes the number of donations go down; charging mothers who are late to pick up their kids from nursery actually makes them more likely to be late...

In short, a simplistic application of

Expectancy Theory (and despite the best intentions of numerous managers and a sophisticated HR department, simplistic is what usually happens) results in the opposite outcome to what's intended.

## 1.2. When the carrot takes you in the wrong direction

There are other dangers as well. Objectives and metrics must be incredibly carefully set and aligned if they are not to lead people astray. In the Understanding Your Customer session, we quoted the case study of the salesman whose goals pressurised him into making a large sale to Amstrad and brought disaster to all parties concerned.

Nor do you have to go so far back – few weeks pass without bankers' bonuses coming under intense media scrutiny. In question is not only their size, but whether by focusing only on the next quarter's results, they actively encouraged irresponsible lending or investment.

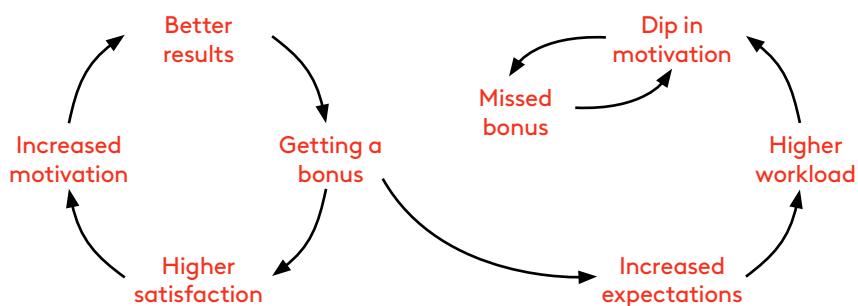
## Activity 2: Reviewing your list of motivators

This activity should take about 30 minutes.

In this activity you will use causal mapping, a tool that will help you explore the effects that one of the motivators that you identified in Activity 1 has throughout your organisation.

Gather a group of 5 or 6 colleagues together and review the list of motivators you defined in Activity 1 (it doesn't matter if it isn't the same group of people). Select one motivator that you would like to explore further using causal mapping.

For those unfamiliar with causal mapping, don't worry, we'll use a less strict variant than the standard. The following example demonstrates what some of the effects of the use of a bonus scheme might be, we place 'Getting a bonus' as the central theme, and our starting point. From there, we list the effects starting with the positives. Having done that, we then consider whether there are any adverse consequences.



### Commentary:

Incentive schemes are often put in place with the best of intentions. However, it might similarly be said that they are often used without a full understanding of the possible consequences. As we will go on to see, incentive schemes do have their benefits, and in some circumstances, when used in particular manner, they can be effective. As such, they should be used sparingly.

### 1.3. Are carrots ever a good idea?

One of the things we hope we have made clear is that while sometimes they don't work at all, at other times carrots can be so effective they send workers galloping across fields and jumping ditches in ways the company never intended. Carrots work – but they work in a very particular way and we may not like the results.

When tasks are mundane or dull, carrots can be exactly the right choice.

Please come in on Saturday to write and address 5000 Christmas cards for our suppliers and customers...



Figure 4. The joys of writing Christmas cards for suppliers and customers

Coming into the office on a Saturday to do a boring job is unlikely to be many people's first choice of weekend activity, and it is entirely appropriate to offer a carrot. The point of the reward is to say 'thank you'. The manager could offer a small payment or perhaps pizza and beer might be just as effective. The main motivation is that the workers understand the purpose of the task: that it's nice to send personal Christmas cards to suppliers and customers. The carrot is the consequence, not the purpose. Let's just imagine what might happen if the carrot became the purpose...

Three people – all desperate for some extra money – come in on Saturday. Since their payment depends on the number of cards they complete, they are soon scribbling addresses down wrongly, scrawling the same message over and over – completely negating the manager's original intention of personalised Christmas cards.

Dan Pink describes the two types of reward as the 'if-then' and the 'now-then'. His point is that 'if you write these Christmas cards, then you will get a reward' tends to lead workers in the wrong direction, degrading the worth of the task and creating unintended consequences. This is contrast to – 'Now we have written all the Christmas cards, let's go down the pub and drinks are on me' – which is an unexpected reward. It does not drive the behaviour, but it does give workers the feeling that their contribution has been appreciated and recognised.

## Does this mean money is unimportant?

No. People need to be paid for their work. They have mortgages and hungry children and a desperate desire to own the complete set of Royal Doulton ballerina figurines (OK we've never met that person, but you know what we mean).

If people are underpaid they may well leave for your competitors. But money is not everything. People regularly volunteer large amounts of their time to work unpaid; people often take paycuts in order to work on a product they love or for a company they admire... none of which is to say you should trade on being loved to underpay your workers, it is simply to point out that money in and of itself is not the prime motivation for people beyond a certain level of necessity. Abraham Maslow published his Theory of Human Motivation in 1943 – right about the same time Churchill was applying carrots and sticks to Italy. He had his own individual take on how he saw the 'pyramid' of human needs stack up, and we don't necessarily agree with his order or weighting. But we would agree that when organisations run themselves as if the only things that matter to their employees are salary and bonus, they are missing out on the drivers of motivation that make the difference between working to live, and living to work.



Figure 5. Royal Doulton ballerina figurine

### CASE STUDY: Google motivation

Phenomenally successful and with plenty of money, Google has enough cash to not only pay its staff well but also to provide large bonuses. And yet, according to staff, these are not the most motivating factors. Instead, every quarter the company holds an 'all-hands' review at which every project that launched is demonstrated and the team are applauded. This is a peer review culture in which earning the respect of your colleagues is deemed extremely valuable. This is embedded throughout the culture because performance reviews that lead to pay rises or promotion are based on peer reviews more than a line manager's review. Steve Yegge, a well-known blogger and Google employee also wrote, 'You can't help but want to do your absolute best for Google; you feel like you owe it to them for taking such incredibly good care of you.'

# 2

# SO WHAT DO WE DO DIFFERENTLY?

Everyone is motivated by different things, unique to themselves. Motivation is as individual and personal as who you find attractive or what your favourite poem or ice cream flavour is. And beyond that, there are levels of motivation that we will never explain or expose to our professional colleagues – perhaps not even to psychotherapists after five years in analysis!

So what? We're saying it's all too difficult?

In a way.

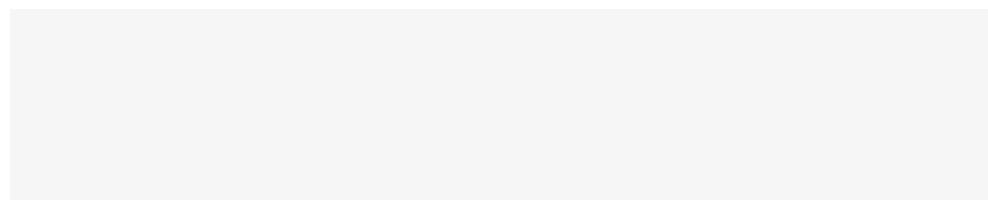
We would argue that most people are already motivated, and that the true challenge for a company is to remove any barriers that block their natural enthusiasm and drive, and to ensure that people are channelling their motivation in the right direction. We should add that we do not see this as the sole responsibility of the manager – each individual within the organisation must also share that responsibility for the flow of motivation.

Rather than spending time motivating certain types of behaviour (which can often have unintended consequences as discussed previously), or trying to motivate people, companies should examine the environment and tools which they provide and how they help or hinder people's ability to get the job done.

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### Activity 3: How are you motivated?

Take a moment to think about what motivates you. Don't just consider what you do in your work, also consider the things outside of work that you are strongly motivated to do. When you examine what motivates you, what are the core things that drive you to do what you do? Conversely, what are the things that demotivate you?



#### **Commentary:**

Later in this session we define a list of the factors that we think contribute to an individual's motivation, you might like to keep your list to compare the two; we think you'll see that motivation is far more socially biased than it is individually biased.

## 2.1. People are already motivated

Really? It seems a bit of a daring thing to say, given how much of life is dedicated to ensuring people behave in a certain way through our complicated system of punishment and rewards.

We'll begin with two fairly non-contentious statements:

1. Humans are more than the sum of their physical needs;
2. Humans are social beings.

Without requiring a lengthy discussion of evolutionary theory or neuroscience, most people would agree that human beings have a desire to contribute towards something they believe is meaningful. Moreover, 'meaning' itself is a construct based on the social group of which we are a part.

We want to do something that matters – and 'what matters' does not have to mean world peace. If our social group thinks being a snappy dresser is important then we will devote lots of energy to the way we look. If our social group is convinced that reaching Level 85 in World of Warcraft implies status then we will devote ourselves to achieving that.

How we measure our contribution towards the purpose also depends on the social group. I might be completely useless at playing rugby, but if my team mates view me as a lucky mascot and insist I am necessary to their success, then I will probably continue to attend the games and practice sessions.

Most people derive much of their sense of self and well-being from what they do at work, and how they are regarded there. We want to be very clear that this is not the same as a politician glibly insisting that 'work provides self-respect'. Rather we would say that work provides a highly regarded outlet for our natural desire to participate in a purpose larger than ourselves. Most people who work want to do their work well.



Figure 6. World of Warcraft t-shirt showing level attained

Perhaps it's easiest to see the truth of this by looking at where the opposite is true. In the nineteenth century prisoners were forced to work – not to earn their keep, but because work was seen as a virtue. They were employed in pumping water from one container to another, or trundling heavy shot from one room to the next – completely pointless labour which, it won't surprise you, was much hated. Yet, modern day prison reformers often claim that the mental wellbeing of prisoners in jails in Thailand, for example, where prisoners must work in order to be fed, is better than those in Britain, where enforced idleness leads to severe depression and natural energy being channelled into destructive activities.

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**CASE STUDY:** A change in culture yielding a change in attitude

A mixed 11-16 comprehensive school in a deprived inner-urban authority in North West England with approximately 1100 students on roll, of whom one-third were eligible for free school meals, managed to effect an enormous improvement. From just 9% of pupils passing GCSEs, attainment levels rose to 65% of pupils achieving 5 or more GCSEs at Grades A-C. The intake did not change, the social and economic deprivation of the area remained constant – what enabled the school to improve so dramatically? The head teacher commented, 'To raise attainment we put lots of things in place like target setting, good teaching and mentoring but most important of all was to try and get into the peer culture.'

Previously, the pupils concerned were not being motivated either by the reward of scholastic attainment, nor by threats (exclusions were common). Rather a social background that included parents with few expectations from schooling and a peer group that saw academic achievement as uncool combined to ensure universally poor results, especially amongst boys. The school sought to remove barriers to achievement through a combination of a zero-tolerance approach to 'anti-school' attitudes that refused to allow disengaged students to opt-out and consistently made relevant the benefits of educational attainment (proving how even a few GCSEs could widen job opportunities). Teachers identified 'key leaders', children seen to have social clout, and targeted them specifically to keep them engaged in the school, something which made these individuals feel valued and made their influence a positive, 'pro-school' one.

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## 2.2. A meaningful purpose – is everyone committed to it?

Which brings us, in what you might think is a rather large circle, back to where we started – the purpose. It's worth revisiting one of the key concepts from the Teams session: since most of us want to work towards a purpose that matters, it is extremely important that the purpose we set is framed in meaningful terms that are challenging, achievable and compelling.

Our understanding of motivation adds an extra element: that it is important that this purpose is fully shared and understood by the individuals within the team. You can't motivate the individuals directly – but you can ensure that they understand the overall purpose, and decide whether they want to buy in to it or not.

Commitment to an overall purpose motivates us not only to do things that we want to do (like work hard or creatively), but even more impressively, things that we DON'T want to do. There is strong evidence that attachment to the overall organisation can enable people to think beyond their own narrow group within it, and that attachment to the team enables people to think beyond their own individual motivation. This is what allows a departmental head to accept a lessening of his own budget for the good of the company, or that which encourages an individual to take on work they find personally distasteful or dull for the good of the team.

### The organisation's purpose and commitment

In a better-regulated world, we would rarely find ourselves working for the wrong company. After all, taking a job is a choice. If you are a pacifist you shouldn't take a job working for an arms manufacturer. If you hate pressure and deadlines, trading shares probably isn't for you. The purpose, values, culture and environment of an organisation ought to be the kind of matter that is brought up in interview and discussed.

Very often, such questions don't even get a look in. Instead the interview focuses on skills and domain knowledge. If the purpose of the organisation exists at all, it is slipped in as a statement on a sheet of A4 paper. Yet knowing whether this is the kind of organisation you want to work for is often the most important element in an individual's motivation.

The organisation's purpose should directly drive the purpose of departments and teams within it – these should be a nested series of goals – understood and presented as such to all employees. Otherwise an organisation risks highly motivated teams pulling in opposite directions.

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**CASE STUDY:** The US Marines

Figure 7. US Marines in action

The US Marines were formed in 1775 and are famous throughout the US military, and indeed the world, for the strength of their esprit de corps. The intense pride and loyalty demonstrated by the Marines is not merely the result of luck, but is carefully fostered throughout training and a Marine's career.

The Marines' founding values of 'Honour, Courage, Commitment' are integrated into every aspect of training – this is not a question of a poster on a wall and a lecture from the commander, but a values-based approach which begins with a formal instruction of core values as soon as the marine joins the service. It's then reinforced throughout training by instructors who tell personal stories of the meaning of these values in a Marine's daily life, sharing memories of heroic colleagues and actions, and is sustained by emphasising practical ways to live those values. For example, in 2001 the Marines instituted a martial arts programme. Because they were concerned that the troops were likely to have many encounters with unarmed civilians, they wished to ensure they had a range of non-lethal methods with which to combat hostility. This is a real investment into the value of 'honour' which proves to each individual that its leadership and structure is committed to the values. The sense of belonging engendered is so strong that the phrase 'once a Marine, always a Marine' has gained such traction in the service, that people no longer speak of an 'ex-Marine' but only a 'Marine' or occasionally 'retired Marine'.

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## The team's purpose and commitment

In business, as in any part of life, the admiration and respect of your peers, or its counterpart, the fear of letting them down or disappointing them, works as probably the most effective motivator of all. Because this feeling is so natural, organisations need to work hard to make sure it is harnessed effectively, clarifying what is your true team. Functional divisions are a by-product of the fact that you may care more about what the other developers think of you than about what the maintenance member of your cross-functional team thinks.

The point we want to make here is how strongly linked motivation of the individual is to how the team is working. To use a rather well-worn analogy, in a closely-bound, focused sports team, individual players create opportunities for one another. However disappointed number 7 may be at the manager substituting another player at half time, he submerges his own ego in the success of the team. When this does not happen, and individual players are focused on grand-standing – looking to how often they score a goal, or make a flashy pass – it tends to spell failure for the team. Revelations regarding the motivation of England's Rugby Team in the Rugby World Cup 2011 proved the point. Internal analysis of the team's failure was leaked to the press, in which it was claimed that players were more interested in 'getting cash and caps than about getting better on the pitch'. Since the team failed to play well together, they lost, and the individuals therefore also lost money as well.



Figure 8. Martin Johnson, England team manager during the 2011 World Cup, at a press conference after England crashed out in the quarter-finals

We often assume that simply announcing the purpose is enough, but a statement can be understood differently by different people, while in a new or dysfunctional team, individuals may not connect to the group's purpose. Spending time exploring the purpose as a group, questioning, testing and refining it, is rarely wasted. You may be surprised by the new thoughts such an exercise throws up.

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## Activity 4: Defining your purpose

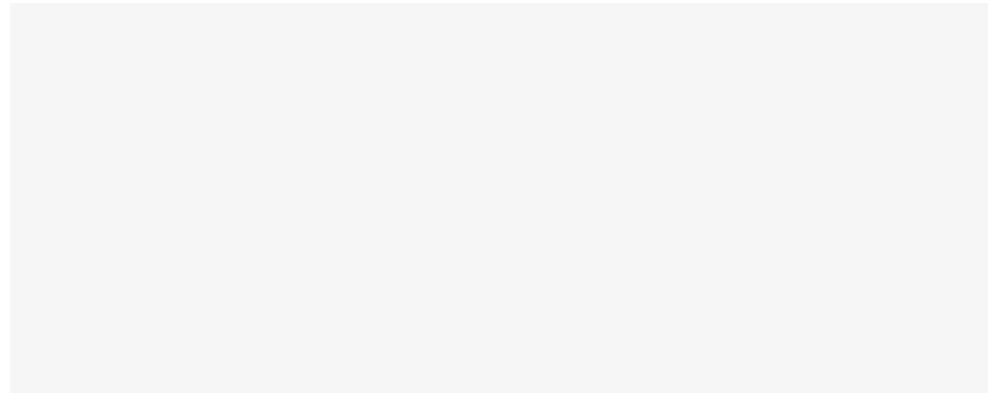
This activity will take about 15 minutes.

You'll need to gather a group of your colleagues together, preferably those that work within your immediate team. A whiteboard and some Post-its would be helpful in this activity but are not essential.

We saw in the Teams session that for a team to succeed it needs a clear and consequential purpose. We go further in this session and say that a purpose is essential to ensuring a well-motivated team of people.

With the group of colleagues you have assembled, spend about 7 or 8 minutes discussing the purpose of your team. Our advice would be to think about how your team is aligned to the organisation's vision and what it does to contribute to the delivery of value to your customers. As suggestions are made, note them down and make them visible.

Once complete, use the remaining time to discuss and document what you all agree to be the purpose of your team. Don't just throw it away though, write it up and display it somewhere within your team space.



### **Commentary:**

You might well have come across the story of the supposed visit by President Kennedy to NASA at the time the project was underway to put a man on the moon. It's said that when he asked a cleaner what he was doing there, the man responded "I'm working to put a man on the moon". We can't all have purposes such compelling purposes in the work we do, but working to define one and communicating that within the team can have very positive effects.

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## 2.3. Getting the job done: what, who and how

### Contributing

So once we have our purpose, it's time to get on and do the job. Let's just pause for a moment to consider the fit between the job itself and what you can bring to it – your contribution. We mentioned earlier the idea that your contribution being valued by others is motivating, even if there are few objective signs that your effort is making a difference. Preferably, however, your contribution will have an impact. The academic psychologist Mihaly Csikszentmihalyi is noted for his study of human happiness. In his book *Flow*, he describes a state of intrinsic motivation where the challenge of the task is in balance with the skills of the individual – if the task is too easy, it becomes boring and the individual will probably stop doing it or not bother doing it well; if the task is too difficult, it leads to anxiety and eventually the individual will give up.

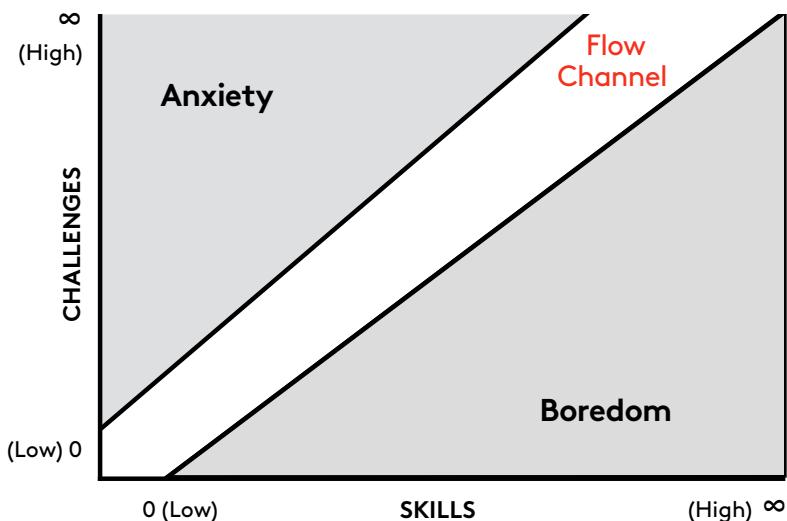


Figure 9. Intrinsic motivation - balancing the challenge of the task with the skill of the individual

The perfect balance or flow is, 'being completely involved in an activity for its own sake. The ego falls away. Time flies. Every action, movement, and thought follows inevitably from the previous one, like playing jazz. Your whole being is involved, and you're using your skills to the utmost'.

You have probably experienced this state of mind in your work from time to time – it is especially common in creative work. Not only is it productive, the state is in and of itself, motivating. It means that there needs to be significant effort in thinking about the skills of the individual and the challenge of the task. We said that motivated teams would take on tasks they did not value for the good of the team – which is true, but this is not a good strategy in the long term. Even when the ideal state of flow occurs, it is easy to break by demanding that people switch tasks or by interrupting them with emails, phone calls and cups of coffee – a subject we will go on to consider a little later.

## Achieving a flow state in software development

At the Object Technology conference that took place in 2000, a think-tank met to discuss different proposals to promote or assist flow within the workplace. The group selected 14 main ideas and then rated them on the impact they would have combined with the effort it would cost to set up the proposal in the workplace. Each participant had 10 votes to distribute across the proposals.

Proposal	Impact/Effort				
	H/L	L/L	H/H	L/H	Total
Acknowledge flow in others	10	1	0	0	10
Turn off phones/wear earplugs	10	0	0	0	10
Structured interruptions	9	0	7	4	16
Have a whiteboard	7	2	0	0	7
Set realistic goals/timescales	5	0	6	0	11
Delete code religiously	4	0	6	1	10
Publish pre-entry to your zone	4	0	3	0	7
Remove everything from your desk	4	1	0	3	4
Schedule for flow	3	0	9	1	12
Flow room	1	0	15	5	16
Work in isolation	1	0	3	4	4
Have a view (stare into space)	0	2	8	1	8
Variety of environments	0	0	4	4	4
Support network (run interference)	0	0	4	2	4

They are ordered with the highest impact / lowest effort first. It is clear that the proposal believed to create the most impact overall is a separate ‘flow room’ where there are no interruptions. Some are highly practical in nature and about clearing mental and physical space (deleting code, using a whiteboard, tidying the desk); others are about mental attitudes which may require a rigorous approach to change attitudes (awareness of others’ flow state).

Later in this session, we go on to examine some of the positive results where people feel they have an environment that promotes flow. Coding War Games (DeMarco, T. & Lister, T. Peopleware.) showed significantly higher scores from developers who rated their environment as free from interruptions and appropriately quiet, for example.

On the other hand, it should be noted that flow does not have to be a solitary activity. Those who work creatively know they have experienced the same ‘magical’ sense of flow in groups or pairs as well as alone. Once again results bear out the anecdotal observation – pair programming, for example, consistently produces higher quality code. There are several reasons for this, but it at least proves that flow states need not be solitary.

## What?

'Build projects around motivated individuals. Give them the environment and support they need, and trust them to get the job done'

### The Agile Manifesto

The Agile Manifesto cheerfully posits a manager who is going to create the right 'environment and support', but we would suggest that although the principle is sound, the reality of building that environment is rather more complex and requires active involvement from everyone. The purpose of the team leads to the 'what' of work, and as we suggested above, it's good to have involvement from individuals in formulating that purpose.



Some companies go further than this in terms of encouraging employees a greater say in the 'what' they do. Atlassian, a major software company, allows its employees a percentage of their time to do with as they will. These days are called 'FedEx Days', so called because people have to deliver something overnight.

The pioneer of the concept was 3M, whose famous product the Post-it was invented by the scientist Art Fry during an innovation day. Although there is obvious mileage in the concept, the problem is that a day a month, or even a day a week is an entirely arbitrary period of time. If these are the periods of work that deliver growth and value – why not do them all the time?

If an 'innovation day' is not firmly embedded in the company culture, the concept results in the opposite effect to that intended, becoming demotivating. It is depressing to work on a personal project, only to find it repeatedly ignored by the senior managers who are required to sign off further development time. If the company does not clear real space, then what could be more demotivating than being expected to get a week's work done in four days, in order to deliver extra value to the company on the fifth day?

Tom DeMarco suggests in his book *Slack* that fostering entrepreneurship and innovation depends on ensuring employees have sufficient time around their normal work to be able to develop new ideas, and the autonomy to push the development on to prototype and test. People who are working flat out the entire time will end up using an innovation day to get their filing done or slope off to the pub – both examples which we have seen in businesses who have imported the idea of innovation days, without being prepared to sign up to the philosophy behind them.

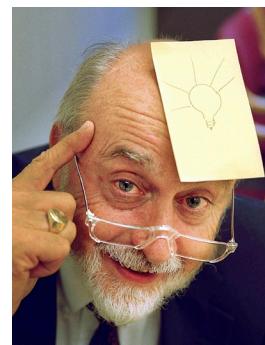


Figure 10. Art Fry, inventor of the Post-it

## Who?

We mentioned that joining a company is a form of self-selection. There is no reason that joining a team should be any different. Some companies work

exclusively by asking ‘who wants to be on this team?’ and allowing the existing members of the team to agree or disagree with an applicant’s inclusion. Google sets up teams to work on new ideas by circulating a list which allows people to sign up to the ideas they would like to work on. The retailer Wholefoods in the US, gets new employees to work for a 30 day trial period, after which their fellow workers decide whether or not the person should stay.



Figure 11. A Wholefoods store in the US

Since the team is the unit which will be most affected by whether a member is capable or not of doing a specific task, it makes a great deal of sense to give them the responsibility of seeking out and interviewing the person they need. It should be stressed that this does not tend to a false harmony – effective teams are those where members hold one another to account, and to the team’s high standards. A team’s autonomy over choice of membership actually increases this. Responsibility remains within the team – there’s no chance of complaining ‘oh Roz is hopeless, but she was forced on us by finance...’ or ‘we have to be nice to Derek – he reports directly to the CEO’.

## How?

One of the greatest temptations in work is to tell another person how to do something. We’re not talking about the control-freak boss who explains why you should use a particular font on a PowerPoint chart (although those exist), but the belief hidden within all of us that we know best.

Point your people to the objective – how they get there is up to them. Pretty much everyone agrees with that statement as the correct way to engage a team’s creativity and enthusiasm.

The very honest manager might admit: ‘Yes, but I already know how they ought to get there. Why let them meander about lost, when I can just show the route?’

It is a natural response. Whether we admit it or not, most of us approach tasks by pointing out the route we want a team to take. Perhaps you are more experienced in a particular area, and you really do know better. Or perhaps you have been at the company longer and so, in an especially dangerous phrase, you can help people avoid ‘reinventing the wheel’.

When you are focused on the end result, and your solution seems so obvious, sensible or efficient – you risk turning your team's process of problem-solving into a mechanical series of tasks. Because there is no space for curiosity, decision-making, creativity and – yes – making a few mistakes, you will end up with a demotivated team who do not pour their energy into their work. And you never know – there may be an even better solution, which you hadn't thought about just waiting to be discovered. There was undoubtedly once a bronze-age metal-maker who exasperatedly told his apprentice to stop fiddling about with trying to make the fire hot enough to smelt iron because there was an urgent order in for some more bronze arrow-heads...

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### **Activity 5: Team independence check**

Ask each of your team members to anonymously rank the following questions on a scale of 0 to 10 where 0 means "practically none" and 10 means "pretty much entirely":

**What:** how much latitude do you have over selecting which tasks you do when undertaking a project; in what order they are done and who does them?

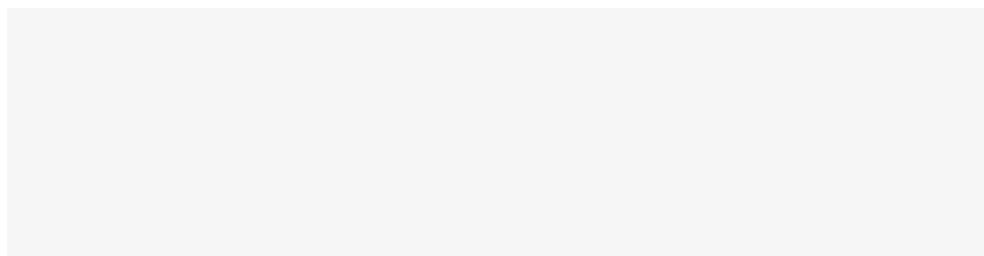
**When:** how much freedom do you have over managing your time; can you work flexible hours and decide what to do when?

**Who:** can you pick your own team or have a say in who you work and collaborate with?

**How:** are you able to pick and choose your own working technique and how you fulfill your job responsibilities?

Now collate the results and work out the averages.

What do the scores tell you? Are there any potential weak spots or surprises? Share the results with the team and see if any ideas come to mind that would increase independence.



#### **Commentary:**

We see that independent teams that have a strong guiding coalition typically perform better – they appreciate that the investments they make in taking control of something will result in tangible improvements to their own world. This is in contrast to teams who are continually told how they should work, or made to feel oppressed by the way work is thrust upon them.

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## 2.4. Removing the barriers to motivation

"Work on knowledge worker productivity begins with asking the knowledge worker themselves: What is your task? What should it be? What should you be expected to contribute? What hampers you in doing you your task and should be eliminated?"

**Peter Drucker**, quoted in *Leading Lean Software Development: Results Are Not The Point*

Assuming that a group of people understand and buy into a goal or purpose, their natural enthusiasm can still be eroded by barriers that hamper their ability to get on with the task. When a company does not seem to care about eliminating these barriers but even, perversely, to insist on placing them in an employee's way – the demotivation that results is truly damaging.

The American psychologist Frederick Herzberg wrote a famous theory of motivation called the Two Factor Theory. He suggested that there are a lot of factors which have an important impact on motivation which he called 'hygiene factors'. He pointed out that many of them are short-term and cyclical and that they are more important when they go wrong than when they go right. For example, people who have a nice desk space and office environment rarely walk around being grateful to their company all day long. They may be thrilled when they first get the job, but soon the office is just the office. Yet move in a further 30 staff, get rid of the meeting rooms, squeeze up desks and take away their cherished spot by the window, and you'll find they've become deeply unhappy.

Herzberg suggested that 'prevention of dissatisfaction is just as important as encouragement of motivator satisfaction'.

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### CASE STUDY: SAS: a company with a low turnover rate

The software company SAS pays perfectly good wages, but not stratospheric, and yet they have a turnover rate of below 4% - astonishingly low for the industry. Part of the reason for this is the investment they put into areas which encourage a sense of social unity and cohesion. They have an on-site health centre with doctors; an on-site child care crèche, a gym and subsidised restaurant. These might be seen as benefits, but in reality they are about removing dissatisfaction: trying to fit a doctor's appointment in around work, worrying about being late to collect your child... The result is to make it easy and pleasant for employees to come to work. Since workers interact with one another naturally in all these areas, there are greater and deeper ties binding the company together.

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## 2.5. Do you have the right working environment?

The environment in which and with which we work affects the culture of an organisation. Open plan offices were intended to promote free and easy communication, stimulate discussion and remove false hierarchical barriers. Like other revolutionary plans, they turned out to have a few flaws...

Work should drive the environment, and not the other way round. This doesn't just mean the physical layout of an office, but the other cultural factors that also make up the work environment. For example – does your office insist on exact time-keeping or does it permit flexi-time? Do people make personal phone calls? Do team members interrupt one another during meetings? We're not trying to make a value judgement on which behaviour is right – simply to point out that such cultural questions have a real impact on how people work. Some individuals thrive in a confrontational environment, others are miserable.

In a 'Coding War Game' run by Tom DeMarco and Tony Lister, developers from different organisations took part in a series of tests, as well as answering questions about their working environment. Those who scored highest came from organisations with more desk space, more quiet time and fewer interruptions. Those who said their workplace was 'acceptably quiet' were one third more likely to deliver error-free work. Of course, the important word is 'acceptably' – this is a subjective statement. What is acceptably quiet to one developer might be bedlam to a second and soulless silence to a third.

What the test makes clear is that there is a need for flexibility in our working environment: for quiet space when we need to concentrate on creative, intensive work; or plenty of meeting areas for when we need to brainstorm ideas.

Organisations that fail to understand the unique needs of each job end up setting barriers in the way of their people's energy for work. We know of several companies where the daily team stand-up was frowned upon as too noisy, and which therefore took place in the corridor.

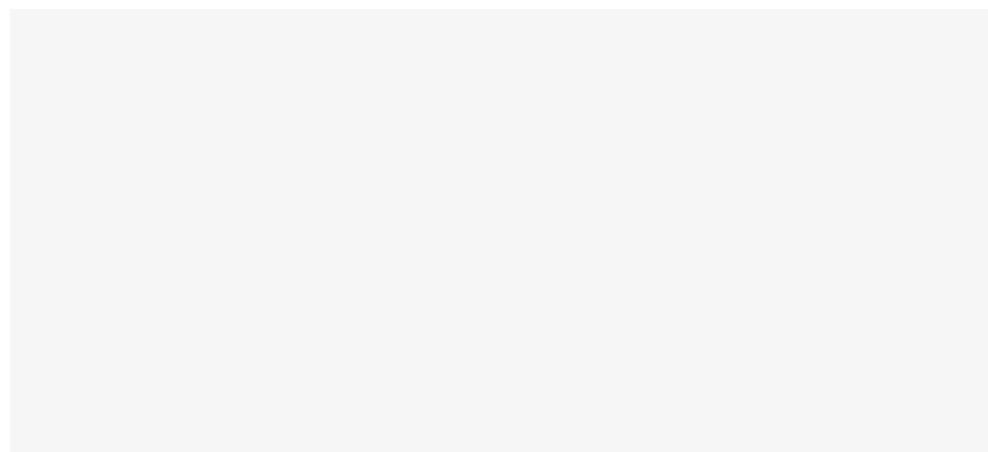
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### **Activity 6: How 'clean' is your environment?**

We've described some of the things that have been shown to affect motivation in the workplace. There is a tendency in all of us to note such advice, agree – and then carry on as before. To avoid this, you need to attempt one change now.

Identify an aspect of your working environment that you think could be improved. Examples might include a dedicated meeting area for your team, additional monitors for those that need them, or perhaps even upgraded hardware. Take this improvement to the person in your organisation who has the ability to assist making the change you feel necessary; prepare a case that you can present to them as to why the change should be made – this may need funding, so ensure you have a cost benefit analysis to provide a convincing argument.

Got the go ahead to make the change? Great. Now it's time to implement the change.



#### **Commentary:**

An environment conducive to the way we are working is a motivational factor obvious to most – how many of us would willingly work in an office without windows? Yet so few teams have even a degree of control over their environment that we can only assume that they are unaware of its benefits. We'd suggest regularly reviewing with those around you whether the space you're within is working for you.

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## CASE STUDY: The work environment fosters creativity

Lilly, a pharmaceutical company, decided to redesign 470,000 square feet of its office space in order to allow its 3,300 employees to work better.

Lilly had a typical cubicle-style environment, clustered by department. Since most workers were in inter-disciplinary teams, workers spent much of their time away from their desks in meetings, or used email, leading to lengthy response times. Cubicles do not shut out noise or distractions, but nor are they so open as to encourage communication and visibility. Such constraints led to the kinds of problems commonly seen by the consultancy DEGW who had conducted 44 surveys involving 7,312 knowledge workers at 18 organisations. Their research suggested that it took workers an average of 4.7 hours to get a response from colleagues and 8.8 hours to get one from managers. DEGW also found they lost 66 minutes a day due to inefficiencies, hassles, and distractions and spent only 35% of their time at their desks.

Lilly reduced the amount of assigned space and increased the amount of shared and temporary, unassigned space, which employees could use during the two-thirds of the day when they weren't at their desks. A big step forward came with ensuring the new spaces were designed for different kinds of work (quiet focus rooms for tasks that demand concentration, cafés and team rooms for collaborative work, enclaves for private conversations). Employees felt the new layout promoted communication and stimulated creativity. In the initial series of pilots, Lilly saw workers' satisfaction with their workspace almost double, associated capital costs nearly cut in half, and the amount of time lost to distractions, waiting, looking for meeting rooms etc. decrease by 16%.



Figure 12. Before and after photos of the Lilly work environment

## 2.6. Do you have the right tools for the job?

Some jobs need special tools. It's as simple as that. If you employed an electrician, it's true that he could strip a wire with his teeth and turn a screw using a paperclip, but the job would go faster if you bought him a pair of pliers and a screwdriver set.

Despite this seeming obvious, there are plenty of organisations that treat their IT departments as if they had no specialism whatsoever. Take developers using a ten year old version of an IDE because 'it still works' on 3-year-old PCs (the company insists all hardware must be kept for a minimum of three years in order to write the cost off for tax purposes). Consider companies that refuse to give dual monitors to programmers because it 'takes up too much desk space'. Or departments that use a second-rate design package because it came free in a bundle with other software.

These are false economies, not only in and of themselves, but because they make people's lives harder. It gives staff the sense that their work is not really valued, which undermines natural pride in good workmanship.

## 2.7. Are your schedules realistic?

Everyone has known the misery of being asked to work to a schedule that simply cannot be met. There are times when a 'sprint to the finish' is called for, and it often draws extraordinary reserves of energy from the team because of their sense of pride and excitement in managing to deliver a project after all. But such efforts are sprints and not marathons. They simply cannot be sustained week after week, and indeed they become counter-productive causing people to burn out, or deliberately misuse their time at work since they feel they are 'owed' the right to browse the internet (probably for new jobs).

That doesn't mean you shouldn't have a schedule, rather that its purpose is to honestly predict when the work can be finished, taking into account known limitations, and not to create a false milestone based on optimism.

## 2.8. Do you give people responsibility and hold them accountable?

In Greek mythology there were two dangers on either side of a narrow strait – Scylla and Charybdis. In steering away from Scylla (a six-headed monster who liked to eat sailors), it was all too easy to fall into the whirlpool Charybdis.



Figure 13. Caught between the Scylla and Charybdis by Steve Somers

Two demotivating actions sit on either side of a narrow strait in management: being held responsible for something over which you had too little control is deeply demotivating; yet many workers complain that one of the biggest demotivating experiences is seeing people not being held responsible for their actions (or lack of action).

The answer must lie with the responsibility held within the team: the team and each individual commit to the goal and their own portion of the task; the other members of the teams then hold one another accountable. This, of course, is a behaviour that needs to be seen throughout the organisation – politicking, scapegoating and credit-stealing at board level sends a clear message to those lower down the hierarchy about how to behave.

Scrum stand-ups are a good example of this in action. At the daily meeting, each team member announces where they are and what they plan to accomplish that day. The next day, each member

updates on progress. Of course it's fine to say: 'I discovered a bug that broke the build and had to spend all day finding and fixing it so I haven't yet finished the new feature', but not: 'oh I just haven't got round to that yet'.

## 2.9. Are you measuring the right thing?

We will talk about metrics at greater length elsewhere. What needs to be mentioned here is only that the act of measuring has an impact, which can be positive or negative. This is sometimes known as the Hawthorne effect. The term comes from a factory where various experiments on productivity were carried out. The factory managers wanted to see if their workers would be more productive in higher levels of light. Productivity rose and then fell again after the project ended. The hypothesis was that the change itself was immaterial – it was the effect of focusing attention on the workers that made them briefly more productive. In other studies at the factory, intense measurement was interpreted as a lack of trust, which had a counter-productive effect causing workers to slow down because they feared they might be laid off.

# 3

## DEMOTIVATION THAT STICKS



Occasionally an organisation can be doing everything right, but an individual refuses to engage. What then?

The truth is that a highly-motivated company can carry a few demotivated individuals. They also tend to stand out far more in a motivated company, which allows more attention to be given to them. It may well be that an individual has a personal issue which has removed their attention from work. From illness to divorce, such demotivation is normally temporary. If handled sensitively by the company, it ensures that when the person does return to full capacity, their loyalty and depth of commitment will be increased.

Alternatively a demotivated individual may be struggling with their role or a simple mismatch with the company's expectations or method of working. In this case appropriate training and development may help, or a move to a different job inside or outside the company is likely to leave everyone happier and more productive. There's nothing wrong with understanding this. Indeed, if a demotivated individual is threatening a team's capacity to succeed then it is the duty of the team and of a manager to try to deal with the problem. Being interested in motivation and the team does not mean group hugs every morning and refusing to criticise; part of holding one another accountable can include a formal system of review and even dismissal.

# 4 CONCLUSION

It's easy to motivate behaviour using the traditional system of carrots and sticks – but it's not easy to ensure the outcome is the one you wanted. Motivating individuals is also something of a dead end, because at the most important level people motivate themselves.

A company's motivation works best at the macro level: its purpose, culture and environment, and the freedom teams have to operate within that. Because human beings are such social animals, motivation is a virtuous circle – join a highly motivated company and you will catch the culture. The bad news is that because human beings are such social animals, demotivation is a vicious circle – and just as catching.

Motivation is worth thinking about because it is such a major contributor to success. Motivated teams work more creatively and productively; motivated organisations have lower costs and higher profits – they harness the talents of the people who work for them rather than hobbling them. Although success is in itself motivating, it is not a pre-requisite. Motivated teams have succeeded in turning around failing companies or even separating from a troubled company to form a highly successful off-shoot. The highly successful British company Victrex was formed through a management buy-out of a particular polymer project from the huge corporation ICI. There can't be many better examples of team motivation than the team investing so heavily in the project that they buy the company. Victrex is now listed on the FTSE 250. ICI, founded in the 1920s and described as the 'bellwether of British industry' sold off its commodity businesses, failed to integrate new acquisitions and was eventually taken over by a Dutch company. It's a stark reminder of why motivation matters.

## Learning outcomes

Now that you have completed this session, you will have an appreciation of:

### The connection between motivation and profitability

- Companies with highly motivated employees have lower staff turnover, lower recruitment and training costs, fewer absentee days, grow faster and are more profitable

### The carrot/stick or reward/punishment system of motivation used in most organisations today

- Why people often respond differently to how they 'should' behave
- The unintended consequences of reward/punishment for business
- Repetitive or mundane tasks where a 'now that' reward can help with motivation
- How motivation and remuneration interact

### A different model of motivation

- People have a natural sense of motivation in their work
- People's natural motivation can be blocked
- People are motivated most by what their social group values

### Harnessing people's natural motivation

- Setting a meaningful purpose to which people want to commit
- Making clear the organisation's purpose to attract those who find it motivating
- Defining a team tightly to encourage social bonds
- Expecting individuals to hold one another to account – including for their own motivation

### What makes people feel valued and valuable

- What they can contribute: the right balance for a task between challenging and achievable
- Freedom to choose what they want to work on
- Freedom to choose with whom they want to work
- Autonomy over the method of reaching a goal, not carrying out instructions from a manager

### Removing barriers that block people's motivation

- Preventing dissatisfaction is as important to motivation as encouraging satisfaction
- Ensuring people have the right environment in which to work for their particular type of job and preference
- Providing the right tools they need to do their jobs well
- Setting realistic schedules to avoid burnout
- Holding people accountable for their action or lack of action
- Recognising that measuring people's motivation according to a standard of productivity can have unintended consequences

# BIBLIOGRAPHY

- Agile Manifesto**, 2001. Principles behind the Agile Manifesto. [online] Available at: <<http://agilemanifesto.org/principles.html>>. [Accessed 17 October 2011].
- Appelo, J.**, 2010. Management 3.0: Leading Agile Developers, Developing Agile Leaders. Addison Wesley.
- Baard, P., Deci, E., Ryan, R.**, 2004. Intrinsic Need Satisfaction: A Motivational Basis of Performance and Well-being in Two Work Settings. [online] Available at: <[http://www.selfdeterminationtheory.org/SDT/documents/2004\\_BaardDeciRyan.pdf](http://www.selfdeterminationtheory.org/SDT/documents/2004_BaardDeciRyan.pdf)>. [Accessed 28 October 2011].
- Barrett, R.**, 2011. New Leadership Paradigm. lulu.com.
- Beecham, S., Sharp, H., Baddoo, N., Hall, T., Robinson, H., 2007. Does the XP environment meet the motivational needs of the software developer? An empirical study. [online] Available at: <<http://doi.ieeecomputersociety.org/10.1109/AGILE.2007.22>>. [Accessed 21 October 2011].
- Csikszentmihalyi, M.**, 2008. Flow: The Psychology Of Optimal Experience. Harper Perennial Modern Classics. (Physical Copy).
- DeMarco, T.**, 2001. Slack : Getting Past Burnout, Busywork, and the Myth of Total Efficiency. Dorset House Publishing.
- DeMarco, T., Lister, T.**, 1999. Peopleware: Productive Projects and Teams. 2nd Edition. Dorset House Publishing.
- Fisher, K.**, 2000. Leading Self-Directed Work Teams: A Guide to Developing New Team Leadership Skills. McGraw-Hill Professional.
- Harvard Business**, 2003. How to Motivate Your Problem People. [online] Available at: <<http://hbr.org/2003/01/how-to-motivate-your-problem-people/ar/1.html>>. [Accessed 24 October 2011].
- Harvard Business Review**, 2008. Employee Motivation: A Powerful New Model. [online] Available at: <<http://hbr.org/2008/07/employee-motivation-a-powerful-new-model/ar/1.html>>. [Accessed 17 October 2011].
- Harvard Business**, 2011. The Fundamental Purpose of Your Team. [online] Available at: <<http://blogs.hbr.org/hill-lineback/2011/07/the-fundamental-purpose-of-you.html>>. [Accessed 21 October 2011].
- Hersch, M.**, 2010. Dan Pink Gets Motivation (a little bit) Right. Three Sigma Systems, [blog] 27 January. Available at: <<http://www.3sigma.com/dan-pink-gets-a-little-bit-right/>>. [Accessed 20 January 2012].
- Kohn, A.**, 2000. Punished by Rewards: The Trouble with Gold Stars, Incentive Plans, A's, Praise and Other Bribes. Houghton Mifflin.

- Lencioni, P.**, 2002. *The Five Dysfunctions of a Team: A Leadership Fable*. Jossey Bass.
- Marick, B.**, 1997. How To Misuse Code Coverage. [online] Available at: <<http://www.example.com/testing-com/writings/coverage.pdf>>. [Accessed 23 May 2012].
- Merchant, N.**, 2011. Culture Trumps Strategy, Every Time. HBR Blog Network, [blog] 22 March. Available at: <[http://blogs.hbr.org/cs/2011/03/culture\\_trumps\\_strategy\\_every.html](http://blogs.hbr.org/cs/2011/03/culture_trumps_strategy_every.html)>. [Accessed 28 October 2011].
- Pink, D.**, 2011. *Drive: The Surprising Truth About What Motivates Us*. Canongate Books Ltd.
- Poppoendieck, M., Poppoendieck, T.**, 2009. *Leading Lean Software Development: Results Are Not The Point*. Addison Wesley. (Kindle).
- Shore, J., Warden, S.**, 2007. *The Art of Agile Development*. O'Reilly Media.
- Tomasello, M., Carpenter, M.**, 2007. Shared Intentionality. [online] Available at: <<http://www.anthro.utah.edu/PDFs/tomasello-carpenter07sharedintentionality.pdf>>. [Accessed 18 October 2011].
- University of Cambridge**, Institute for Manufacturing. Deming's 14 Points. [online] Available at: <<http://www.ifm.eng.cam.ac.uk/dstools/process/deming.html>>. [Accessed on 19 Jan 2012].
- Wikipedia**. Expectancy Theory. [online] Available at: <[http://en.wikipedia.org/wiki/Expectancy\\_theory](http://en.wikipedia.org/wiki/Expectancy_theory)>. [Accessed 19 January 2012].
- Wikipedia**. Maslow's Hierarchy Of Needs. [online] Available at: <[http://en.wikipedia.org/wiki/Maslow%27s\\_hierarchy\\_of\\_needs](http://en.wikipedia.org/wiki/Maslow%27s_hierarchy_of_needs)>. [Accessed 20 January 2012].
- Wikipedia**. Hawthorne effect [online] Available at: <[http://en.wikipedia.org/wiki/Hawthorne\\_effect](http://en.wikipedia.org/wiki/Hawthorne_effect)>. [Accessed 9 July 2012].
- Wikipedia**. Two-factor theory [online] Available at: <[http://en.wikipedia.org/wiki/Two-factor\\_theory](http://en.wikipedia.org/wiki/Two-factor_theory)>. [Accessed 9 July 2012].

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