THE SIX FACTORS OF

Knowledge Worker Productivity

SIX FACTORS THAT CAN CHANGE YOUR ORGANIZATION

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FOREWORD BY JAN JOHNSON

FOREWARD

Our industry has been hunting the elusive workplace "holy grail" for years – a universal, dependable, repeatable way to measure knowledge worker productivity – hoping it would help us to identify (and defend to the skeptics) aspects of the workplace that can be proven to positively affect performance.

So what if we could truly and reliably improve knowledge worker effectiveness? To create value for our organizations far beyond controlling costs? The role of the physical workplace in increasing productivity has always been the hardest to pin down, but the greatest opportunity.

Reader, you hold in your hand something rather unique in our industry: insights into knowledge worker productivity firmly grounded in real science. This book summarizes a research project undertaken by London-based Advanced Workplace Associates (AWA) and Amsterdam-based Center for Evidence-Based Management, for which Allsteel was one of several sponsors.

Allsteel was thrilled to fund this work for two main reasons: these findings are "the best available evidence" and backed up by scientific rigor (vs. opinion surveys or other "junk science"); and they give us far more specific, truly actionable insights than are typically a part of a discussion about "engagement."

Taken together – the "bulletproof" quality of the information described here and its clarity about what really matters – we now have data and insights that can truly add value. And, a much-needed piece of the workplace puzzle: we've known for some time that the workplace must effectively support the most critical activities that make up "work," and now this new material clarifies the interpersonal relationships and behaviors the workplace must also enable.

This research gives us credible, powerful knowledge to share with senior leadership. Organizations can use this information to drive greater enterprise alignment and to hone leadership and management behaviors, performance management systems and other HR programs, workplace design, and technology strategies.

Stay tuned...AWA and Allsteel are piloting tools and interventions that apply this tremendous information.

Jan Johnson
VP Design and Workplace Resources
Allsteel

Chapter **01**

The Six Factors of Knowledge Worker Productivity

The term "knowledge worker" was originally coined by the great Peter Drucker in 1956. Knowledge workers include leaders, designers, researchers, architects, software designers, engineers, consultants, analysts, scientists, writers, film producers, animators, and so on.

Over the last 30 years or more, business leaders have been focused on improving the productivity of their organizations. For many, their thinking is likely shaped by linear, measurable manufacturing environments – where you can work out the number of items produced and the resources that were linked to their production to come up with a few simple metrics. This enabled them to compare one plant against another, one location against another, one organization against another, and perhaps even one nation against another. Additionally, these measures made it somewhat straightforward to determine what lever to pull or which factor in the equation to try to improve.

This is still a relevant mindset in the world of manufacturing, and even in those service industries where people repeat broadly the same linear process over and over again in the delivery of a service; the ways to manage in the worlds of process and manufacturing are well-charted. But it has been clear for some time that equivalent measures or

reasonably universal methodologies do not exist for knowledge industries. Knowledge work is too varied, non-linear, and complex. For example, it can be difficult to tease apart what individual contributions make up the new product vs. how many came from the collective mind of the team, and the value of the outcome is likely to be determined by each consumer, not some objective, universally applicable standard of quality or performance.

Even though the term knowledge work has been around since the 1950s, and knowledge work plays an ever-increasing part in the economic fortunes of developed countries, there is little science on knowledge work productivity.

So with this conundrum as a backdrop, and given that our clients are all organizations that operate in the knowledge economy to one degree or another, in early 2014 Advanced Workplace Associates (AWA) decided to undertake research to answer

what we felt were unanswered questions about knowledge work and the factors that had the most impact on knowledge worker productivity. We wanted the research to be credible, scientific, and unbiased, and for its results to have the capability of being translated into business language, to give leaders practical guidance on what they should do to make a real difference for their organizations. We wanted to get to what we'll describe below as "the best available evidence."

Over the years, I've gotten to know Rob Briner, Professor of Psychology at Bath University, here in the UK. Rob has spoken at several of our events, and we've enjoyed many cups of coffee where we'd put the world to rights. It was at one of these sessions that I revealed our desire to undertake research in this area. Rob told me about his involvement with an Amsterdam-based group called the Center for Evidence-Based Management (CEBMa), a global network of science-based academics who teach, preach, and practice something called "evidence-based management." Once he'd explained its approach and methodologies, it became obvious that we should form a research partnership to answer our questions using CEBMa's rigorous, science-based process.

In 2014, we and several sponsors launched our first joint research project on knowledge worker productivity with CEBMa CEO Eric Barends and his team, in which we would work together to scientifically answer research questions and translate the results into tools, guidance, and understandings that could be used to make organizations more successful by making their workers more effective. Since then, we've maintained a very successful partnership in which we've applied CEBMa's methodology to unearth

the science behind several other questions associated with the link between work, human performance, the workplace, and organizational performance.

Our sponsors – BP, The Royal Bank of Scotland, Old Mutual, The British Council, Allied Bakeries, Telereal Trillium, and Allsteel – were invited to contribute their practical understandings of the challenges their organizations and clients faced to the setting of the research questions. The mix of representatives from the sponsors was interesting too, involving HR directors, chief operating officers, global heads of real estate, and real estate directors. This eclectic group later proved to be a valuable resource in the interpretation stage of the program. While their involvement in these stages was sought, they had no other influence on the research process or findings, so no one could question whether the research played to a particular commercial interest or bias.

First off, CEBMa used its highly efficacious Rapid Evidence Assessment (REA) methodology to undertake a review of the world's most credible academic databases in search of answers to the questions the group crafted: "What is known from the world's academic research about the measurement of knowledge worker productivity?" and "What is known about the factors associated with knowledge worker productivity and their effects?" The REA methodology involves identifying relevant studies, reviewing their contents, filtering for relevance to research questions, grading the research (for instance, a randomized trial conducted in a scientific manner scores higher than an expert opinion), and clustering the studies in relation to specific topic areas. What emerged was an enormous amount of information and credible answers to our research questions.

We believe that when the leaders of the world's great knowledge businesses understand and apply this information, they will have a profound impact on their organizations' culture and leadership competences and the design of workplace infrastructure. The findings provide new requirements for everything associated with the organization. Intriguingly, the findings are all about organizational effectiveness and culture – not design, technology, or agile working. And, once they are understood, they change everything and put a great many things into a unified context.

In this book, we'll reveal the information and insights that came from our research, and explore what they mean for each discipline in the business, and how, quite simply, the research findings change everything.

Chapter **O2**

Evidence-Based Management

Evidence-Based Management

When Rob Briner first explained to me the concept of evidence-based management, my first thought was that we all already do that, don't we? Let's face it, as leaders, we think we make decisions based on scientific evidence and logic. Rob very quickly put me straight and explained that, in fact, this was not true: that in most cases we use intuition, experience, and hunches to make decisions. And the more senior we become, the more we tend to rely our own experience and intuition instead of on hard evidence. As I looked back on my experiences as an employee, a consultant, and as a senior leader in the IT industry, I started to see his point.

The basic idea of evidence-based practice is that good-quality decisions should be based on a combination of critical thinking and the best available evidence. And although most management practitioners might use evidence in their decisions, many pay little attention to the quality of that evidence. The result is often misguided decisions based on unfounded beliefs, fads, and ideas popularized by management gurus. The bottom line is poor outcomes and limited understanding of why things went wrong. Evidence-based practice seeks to improve the way decisions are made. It is an approach to decision-making and day-to-day work practice that helps practitioners critically evaluate the extent to which they can trust the evidence they have at hand. It also helps practitioners to identify, find, and evaluate additional evidence that would be relevant to their decisions. Evidence-based practice is about making decisions through the conscientious, explicit, and judicious use of the best available evidence from multiple sources by:

1. **Asking**: translating a practical issue or problem into an answerable question

2. **Acquiring**: systematically searching for and retrieving the evidence

3. **Appraising:** critically judging the trustworthiness and relevance of the evidence

4. **Aggregating:** weighing and cross-referencing the evidence

5. **Applying:** incorporating the evidence into the decision-making process

6. **Assessing:** evaluating the outcome of the decision taken

When we say, "evidence," we basically mean verifiable, repeatable data and information. It may be quantitative or qualitative. Evidence may come from scientific research suggesting generally applicable facts about the world, people, or organizational practices. Evidence may also come from local organizational or business indicators, such as company metrics or observations of practice conditions. Even professional experience can be an important source of evidence – for example, an entrepreneur's past experience of setting up a variety of businesses should indicate the approach that is likely to be the most successful.

Think of it in legal terms. In a court of law, evidence is presented in a variety of forms, from eyewitness testimonies and witness statements to forensic evidence and security camera images. We know now that eyewitness accounts, for example, are often unintentionally inaccurate – so not all evidence can be taken at face value. A range of evidence may be included, but testing the method of acquiring or evaluating the quality of the evidence, to determine if it is trustworthy and relevant, is also a part of the proceedings. The same is true for management decisions.

What sources of evidence might be used? Before making an important decision, an evidence-based practitioner starts by asking, "What is the available evidence?" Instead of basing a decision on personal judgment alone, an evidence-based practitioner finds out what is known by looking for evidence from multiple sources. According to the principles of evidence-based practice, evidence from four sources should be taken into account:

Scientific evidence: findings from published scientific research

Organizational evidence: data, facts, and figures gathered from the organization

Experiential evidence: the professional experience and judgment of practitioners

Stakeholder evidence: the values and concerns of people who may be affected by the decision

Scientific evidence

The first source of evidence is scientific research published in academic journals. Over the past few decades, the volume of management research has escalated enormously, with topics ranging from evaluating merger success and the effects of financial incentives on performance to improving employee commitment and recruitment.

There is also ample research from outside the management discipline – like the work being done on what motivates us and our decisions – that will be relevant, since many of the typical problems that managers face, such as how to make better decisions, how to communicate more effectively, and how to deal with conflict, are similar to those experienced in a wide range of contexts. Although many practitioners learn about research findings as students or in professional courses, new research is always being produced, which often changes our understanding. In order to include up-to-date scientific evidence in your decisions, it is essential to know how to search for studies and to be able to judge how trustworthy and relevant they are.

Organizational evidence

A second source of evidence is the organization itself. Whether this is a business, hospital, or government agency, organizational evidence comes in many forms. It can be financial data such as cash flow or costs, or business measures such as return on investment or market share. It can come from customers or clients in the form of customer satisfaction, repeat business, or product returns statistics. It can also come from employees through information about retention rates or levels of job satisfaction. Organizational evidence can be "hard" numbers such as staff turnover rates, medical errors, or productivity levels, but it can also include "soft" elements such as perceptions of the organization's culture or attitudes toward senior management. Organizational evidence is essential to identifying problems that require managers' attention. It is also essential to determining likely causes, plausible solutions, and what may be needed to implement these solutions.

Experiential evidence

A third source of evidence is the professional experience and judgment of managers, consultants, business leaders, and other practitioners. Different from intuition, opinion, or belief, professional experience is accumulated over time through reflection on the outcomes of similar actions taken in similar situations. This type of evidence is sometimes referred to as "tacit" knowledge. Professional experience differs from intuition and personal opinion because it reflects the specialized knowledge acquired by repeated experience and practice of specialized activities such as playing the violin or making a cost estimate. Many practitioners take the need to reflect critically on their experiences and distill the practical lessons very seriously. Their knowledge can be vital for determining whether a management issue really does require attention, if the available organizational data is trustworthy, whether research findings apply in a particular situation, or how likely a proposed solution will work in a particular context.

Stakeholder evidence

A fourth source of evidence is stakeholder values and concerns. Stakeholders are any individuals or groups who may be affected by an organization's decisions and their consequences. Internal stakeholders include employees, managers, and board members. Stakeholders outside the organization such as suppliers, customers, shareholders, the government, and the public at large may also be affected. Stakeholder values and concerns reflect what stakeholders believe to be important, which in turn affects how they tend to react to the possible consequences of the organization's decisions. Stakeholders may place more or less importance on, for example, short-term gain or long-term sustainability, employee well-being or output, organizational reputation or profitability, and participation in decision-making or top-down control. Organizations that serve or respond to different stakeholders can reach very different decisions on the basis of the same evidence (compare ExxonMobil and Greenpeace, for example). Gathering evidence from stakeholders is not just important for ethical reasons: understanding stakeholder values and concerns also provides a frame of reference from which to analyze evidence from other sources. It provides important information about the way in which decisions will be received and if their outcomes will be successful or not.

Why should we critically appraise evidence?

Evidence is never perfect and can be misleading in many different ways: it may be over-stated such that a seemingly strong claim turns out to be based on a single, unreliable piece of information; a colleague's confident opinion regarding the effectiveness of a practice might turn out to be based on little more than an anecdote; or a long-standing way of doing things in an organization may have actually never been evaluated to see whether it worked or not. All evidence should be critically appraised by carefully and systematically assessing its trustworthiness and relevance.

Although how a piece of evidence is evaluated can differ slightly depending on its source, critical appraisal always involves asking the same basic questions: Where and how is the evidence gathered? Is it the best available

evidence? Is there enough evidence to reach a conclusion? Could the outcome be attributable to any other factors? Are there reasons why the evidence could be biased in a particular direction? If, for example, we are critically appraising a colleagues' experiences with a particular problem, we may wonder how many times they have experienced that issue and whether the situations were truly comparable.

Identifying the best possible evidence
In almost any situation, it is possible to gather different types of evidence from different sources, sometimes in quite large quantities. But which evidence should we pay more attention to and why? A fundamental principle of evidence-based practice is that the quality of our decisions is likely to improve the more we make use of trustworthy evidence – in other words, the best available evidence. Having said that, one other important consideration is the relative importance of the decision. This latter principle is apparent in everyday decision-making, whether it is buying someone a birthday present or wondering where to go out for dinner. If I know my sister likes bath salts, and isn't particularly picky about the brand or the fragrance, then not much effort needs to go into my selection. But if I'm choosing a restaurant at which to meet my in-laws for the first time, I'm far more likely to be thorough both about their preferences and the relative experience we may have at each of the options I've identified.

In this and other examples, we might actively seek out information from multiple sources, such as our partner's opinion, the experiences of friends, or the comments of a local food critic. At times, this information may be so weak that it is hardly convincing at all, while at other times the information is so strong that no one can doubt its accuracy. It is therefore important to be able, through critical appraisal,

to determine what evidence is the "best" – that is, the most trustworthy – evidence. In another example, the most trustworthy evidence on which holiday destination in Ireland has the least chance of rain in early August will obviously come from statistics on the average rainfall per month, not from the personal experience of a colleague who only visited the country once.

The same is true for management decisions. When making a decision about whether or not to use a quality management method such as Six Sigma to reduce medical errors in a British university hospital, information based on the findings from a study of 150 European university hospitals in which medical errors were measured before and after the introduction of Six Sigma is more trustworthy than the professional experience of a colleague who works at a small private hospital in Sydney. Unfortunately, such a study may have never been done. Instead, the best available evidence could be case studies of just one or two hospitals. For some decisions, there may be no scientific or organizational evidence at all, thus we may have no option but to make a decision based on the professional experience of colleagues or to pilot test some different approaches and see for ourselves what might work best. Given the principles of evidence-based practice, even if we rely on the experience of a colleague, this limited-quality evidence can still lead to a better decision than not using it, as long as we are aware of its limitations when we act on it.

Chapter **03**

When Is a Worker a Knowledge Worker?

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Knowledge workers are constantly making personal choices (consciously or subconsciously) as to how much to contribute their ideas, energy, and cognitive resources to the endeavors of their organization. Creating the conditions under which people choose to contribute their best knowledge and energy to each other and the larger organization becomes critical.

The term "knowledge worker" was originally coined by the great Peter Drucker in 1956. Even then he saw the emergence of new forms of organization that relied on the creativity, ingenuity, and competence of a new breed of workers: knowledge workers who would "think" for a living (as opposed to "do" for a living). knowledge workers include leaders, designers, researchers, architects, software designers, engineers, consultants, analysts, scientists, writers, film producers, animators, and so on.

All jobs have some element of knowledge needed in order to deliver their tasks. Some elements of knowledge are required for all jobs to be performed, so everyone is in some way a knowledge worker. But what we're really talking about here are primary knowledge workers, the people who are frequently and consistently undertaking highly intellectual tasks, the people whose output is less tangible than a physical good or service.

Sometimes the knowledge worker is contributing knowledge to others, often via papers, reports, or designs that lead to the creation of something else. Knowledge work can take many forms; and its ultimate value may be highly situational – including being judged by the recipient of the effort. In these roles, people are being paid to think, fusing their knowledge, experiences, and collective or individual insights with those of others to provide new knowledge that ultimately translates into commercial value.

In our research, we found various methods to assess the degree to which a job is knowledge based, but we found it helpful to use a simple spectrum to describe the concept.
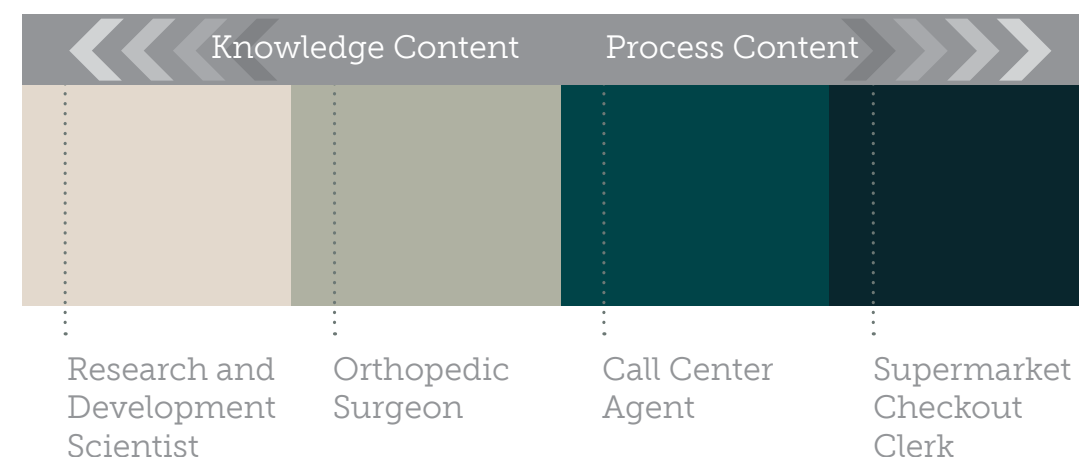
The knowledge worker spectrum

On the right-hand end of the spectrum, roles have much less dependency on knowledge and a greater dependency on adherence to well-defined processes. These might include delivery drivers, checkout clerks in a supermarket, or call center agents. On the left-hand side of the spectrum, we have the knowledge workers, such as researchers, development staff, designers, engineers, and creative teams in ad agencies.

Between these two ends of the spectrum there are, of course, many roles with differing levels of knowledge content. We had great fun in trying to decide where an orthopedic surgeon lay on the spectrum. The surgeon may be routinely replacing hip joints where a high level of knowledge is needed but where, by and large, the process is the same time after time. But we also realized that the surgeon's knowledge becomes critical when something is non-standard or goes wrong, in order to save the life of the patient.

The reason for our exploration of this definition is simple. While the practices and understandings we gained through our research could be viewed as the basis of good management in general terms, it is clear that they become critical in relation to organizational performance the further left on the spectrum an organization's jobs are.

The fact is that in a knowledge organization, workers are constantly making personal choices (consciously or subconsciously) to how much to contribute their ideas, energy, and cognitive resources to the endeavors of their organization. Creating the conditions under which people choose to contribute their best knowledge and energy to each other and the larger organization becomes critical.

The Knowledge Worker Spectrum

⟨⟨⟨⟨ Knowledge Content		Process Content ⟩⟩⟩⟩	
Research and Development Scientist	Orthopedic Surgeon	Call Center Agent	Supermarket Checkout Clerk

Measuring Knowledge Worker Productivity

Armed with our understanding of knowledge work, the research team and our sponsors crafted the first of our questions: "What is known from the world's academic research about the measurement of knowledge worker productivity?" For years, researchers around the world had been in search of the "Holy Grail:" a way to consistently, defensively measure knowledge worker productivity – enabling both reliable decision-making regarding ways to consistently affect it, and ways to effectively compare productivity between organizations, business units, or teams. We were looking for the knowledge work equivalent to return on capital employed, profit, or output per head.

As pointed out in Chapter 1, while the measurement of work in manufacturing and service organizations is relatively straightforward using measures of output per unit of resource, such as calls per agent per hour, units per week, or cost per unit, there are no such current equivalents for knowledge work. What we were hoping to find were measures or techniques that were consistently applicable, repeatable, and universal – things like output per head.

What the research team found instead was that no such measures exist. Our search did not produce a single study on the validity and reliability of a universal, broadly applicable measurement tool or method. Our emphatic conclusion from this first exercise is that knowledge work is so varied and its outputs so intangible that it is not possible to come up with a single universal measure.

We concluded:
"We must therefore recognize that knowledge worker productivity measurement systems only provide limited evidence of (relative) productivity for a specific type of knowledge work within a specific organizational context."

While it is possible to measure the productivity of knowledge workers in a local and defined context, it is not possible to do so at a universal, macro level.

We have to see knowledge workers as receptacles of corporate knowledge, so creating the conditions for workers to flourish and for knowledge to flow is the key to knowledge worker productivity. Are we saying you can't have a universal measurement of knowledge work productivity? The answer is an emphatic "Yes." But is that the end of the story? In short, "No."

What the research suggests is that proxy measures may be used to measure the conditions that propagate knowledge worker productivity. In the next phase of our research, we set out to identify the factors that were associated with knowledge worker productivity, with a big emphasis on the team.

Our team set out to find the answer to a second question: "What is known from the world's academic research about the measurement of knowledge worker productivity?" In the next chapter, we'll explore the first of six factors that we identified as having the greatest statistical link to knowledge work productivity.

Social Cohesion

Our understanding and appreciation of knowledge work was developing rapidly; our team's combination of scientists and business practitioners was proving to be of great value in making sense of what the research was telling us, and putting it in a business context.

From the review of over 800 studies, our researchers identified many factors that were correlated with knowledge worker performance, but six came to the fore as the ones most highly correlated to knowledge worker productivity.

While many of the research studies were related to the productivity of knowledge worker teams, many of the findings can be translated to apply to units, divisions, and whole organizations, and providing the pillars of a new approach to thinking about the management of those organizations that rely on the continued and consistent performance of knowledge workers.

These six factors initially looked like a disparate set of influences that each had validity in their own right, but as we started to see them all together – and recognize the interrelationships between them – we started to understand the profound significance of them as a whole. Indeed, for me they bring into question the very fundamentals of today's traditional organizational structures.

The first and most highly correlated factor is social cohesion: a shared liking or team attraction that includes bonds of friendship, caring, closeness, and enjoyment of each other's company.

People get along with each other and are happy to share their ideas and knowledge with each other for the good of the team and the organization. Everyone in the team or community is so familiar with each other that they know what each other knows, so that, at some point, they can tap into that knowledge. Individuals are comfortable challenging the ideas of others and being challenged themselves without feeling offended, insulted, or disadvantaged. They feel safe in sharing their opinion, regardless of the seniority or importance of others.

Social cohesion applies within a team, between teams, and up and down the organization. The more the organization creates the conditions that encourage social cohesion, the more it will enable the release of knowledge, insights, and constructive debate for the common good of the organization.

Why is this important?
Quite simply, in the knowledge business, every person is a knowledge asset or repository, bringing to the team and organization the knowledge, experiences, and relationships gathered throughout his or her life. It is the fusion of each individual's knowledge, experiences, and relationships with those of others in the organization that creates the new knowledge that propels the organization forward and eventually turns it into commercial value. However, to make the organization work, people need to be willing to contribute their knowledge and ideas. If the knowledge of an individual or a team becomes "landlocked" for any reason, that knowledge is denied to the organization.

Take, for example, a worker who comes into a team from a different team, discipline, organization, or country – in a traditional organization he or she will either fit in or not. If not, that person's diverse views of the world, experiences, and knowledge – which could have huge value to the organization – may be denied to the team and he or she will likely be reticent to fully participate. Any criticism of past projects, current thinking, or work undertaken by the team may be seen as a direct affront, and could be taken as an insult.

Therefore, social cohesion creates the bond in which diversity can flourish, and comes to be understood by everyone as being important for the good of the organization. This implies that leaders need to see the value of fostering and facilitating social cohesion. Team members also need to understand that they have a responsibility to foster social cohesion, while new members need to be aware of their responsibility to help build positive relationships, regardless of their personality. All of this means that people may need encouragement, and potentially even new skills to make and keep friends, including a commitment to being honest with others.

Increasingly, teams don't work in isolation: team A may need knowledge or information from team B and C to deliver its output. Teams A and C may be socially cohesive themselves, but could be at war with each other, making cooperation difficult. This lack of cohesion may be because the team leaders don't get along, there is some historical tension between the teams, or because of "zero-sum-game" thinking: if one team is successful, the other will not be.

The way we set up organizations can – consciously or unconsciously – encourage that "win/lose" mentality. In traditional organizations, where "the only way is up," leaders of teams may often be competing with each other for superiority and career progression. Conflicting objectives may also set teams and leaders in competition with each other. Without the understanding of what their structure is generating, leaders can almost be forgiven for creating conditions that are anti-cohesion.

Further still, social cohesion is relevant up and down the organization, if employees are to feel that they can share their ideas, challenge convention, and seek input. Social cohesion is a big deal in knowledge businesses, and if organizations don't focus on this as a key organizational capability, they will not be maximizing the knowledge they have in their organizations.

All of this, however, leaves us with a few deep questions about our organizations and the way they work. First of all, can traditional hierarchical organizations create the conditions for social cohesion, or is whatever we do likely to be suboptimal in the face of the "only way is up" culture? Should we now hold leaders accountable for how effective they are at creating social cohesion? Are the behaviors that build social cohesion understood, encouraged, and endorsed?

Do we consider this understanding and skill set in recruitment decisions? Do traditional performance management and remuneration systems really help us with social cohesion vs. setting one leader and team up against others? Is it ever going to be possible for people in organizations with large "power distances" between those at the grass roots and those at the top to speak the truth and

challenge the status quo without feeling threatened? If so, I wonder whether the many examples of power-crazed leaders leading organizations over cliffs could be avoided.

It's also interesting to think about the amount of focus organizations place on social cohesion. When you understand the significance of social cohesion on the productivity of the organization, suddenly sports competitions, social clubs, quiz nights, the summer barbecue, and the holiday potluck start to look like good investments in creating the right conditions. But, frustratingly, how often are these apparently "low value" initiatives traded out under the banner of efficiency or cost-cutting initiated by finance directors? Sadly, most finance functions only measure costs as if there were nothing else that mattered in business.

There have rarely been measures of output or measures of the conditions that propagate good knowledge worker productivity in knowledge-based businesses. Consequently, finance directors can do largely what they want with a cost-cutting agenda because, until now, nobody could put up a solid, scientifically based defense as to why these apparently frivolous initiatives should be retained in the face of changing business conditions.

Another question to ask is how an organization's culture, behavior, rituals, and practices support social cohesion. Culture is often characterized by the acts that make employees "heroes" within their organization. Ask yourself who those people are in your organization and what they are being recognized for. Ask yourself whether they send the right signals about the social

behavior you want to see every day in the workplace. You might also be forgiven for asking how well the design of your office supports social cohesion, given that many real estate and facilities management professionals are primarily interested in the efficiency of the real estate portfolio, instead of the effectiveness of the people using it.

> Social cohesion creates the bond in which diversity can flourish, and comes to be understood by everyone as being important for the good of the organization.

Chapter *06*

Perceived Supervisory Support

The second factor most highly correlated with knowledge worker productivity is perceived supervisory support: how employees feel their supervisor helps them in times of need, praises them for a job well done, or recognizes them for extra effort. People need to feel that the person they report to is positively supporting them in achieving their endeavors and their own professional development, and not constantly "beating them up" or blaming them when problems arise. Put simply, using positive instead of fear-based management. This means supervisors who proactively develop professional relationships with team members, provide coaching, resources, and support to help employees do their best, encourage judicious risk-taking, and demonstrate mutual respect. And when life is tough, provide an open-minded hearing.

Why is this important?
In knowledge organizations, the role of supervisor is an important one with the power to set the atmosphere within the team to help all individuals complete their tasks, contribute their knowledge and, ideas and work in harmony with other team members and other teams.

This is quite a tough gig for supervisors. We've all known people who have been brilliant individual contributors, but when put in charge of a team, are not perceived as being supporting of their employees, and we've also all known people who do it naturally. The key word here is perceived.

Managers may think they are doing all they can to support their team, but are not perceived to be doing so. And let's not forget we're all different, so one person's perception of support may not be the same as another's person's.

It's about more than being there for team members. It's about proactively supporting every individual and the team in achieving both individual and collective endeavors, as opposed to issuing commands that people are required to carry out unquestioningly. And when things at work go wrong (as from time to time they surely will), it's not about beating people up or blaming them or others, it's about finding out what went wrong, why it went wrong, and seeking to make sure it doesn't happen again. If things are going wrong in a team member's personal life, it's about being understanding and seeing what can be done to help.

> People need to feel that the person they report to is positively supporting them in achieving their endeavors and their own professional development.

And by supervisor, we don't just mean your boss. We also mean your boss's boss and all the way up the chain. This also extends to the leaders of teams you deal with. In other words, creating a supportive culture in which we seek to help all members do their best work every day. With this kind of culture, people will be emotionally committed to giving their best for supervisors, colleagues, and the organization.

Once again, we have to ask ourselves some deep questions. Are our leaders selected and trained for their ability to support employees? Have we typically promoted employees who are effective technically over those who are effective managers of people? Do we seek to understand how well leaders are at being perceived as supportive supervisors?

Chapter **07**

Information Sharing and the Transactive Memory System

The third factor our team unearthed was information sharing and something called "transactive memory."

Information sharing: how teams pool and access their knowledge and expertise – which positively affects decision-making and team processes. This leads to the idea of a team "transactive memory system" (TMS), which can be thought of as a collective memory in a collective mind – enabling a team to think and act together.

It's about creating a culture and infrastructure for sharing knowledge and treating the whole team and the wider community as a "knowledge memory" so that team members can short-circuit the search for the best sources of knowledge and avoid reinventing the wheel. It's about allowing people to find out who has what knowledge and experience (regardless of how relevant or irrelevant it is in the moment). It's about capturing this knowledge in a system or "knowledge register" and reinforcing sharing by rewarding positive sharing behaviors in all employees, regardless of seniority, power, or personality.

Why is this important?
Knowledge is power, so they say, and in traditional organizations, people can often hold back on sharing their knowledge with others within their team, in other teams,

and in other divisions for fear that their "knowledge generosity" will lead to their own power being diminished. Some may also feel that by making their knowledge visible, it may potentially bring into question the knowledge or initiative of another group or leader, and again they may hold back. If this culture prevails, the organization will be starved of the knowledge these people could bring and constrains the generosity of others.

As stated previously, knowledge workers can be viewed, in part, as knowledge repositories. Each time you give them a new project, they gain more knowledge that the organization needs to retain and ultimately needs to access. Culturally, people need to feel free to share their knowledge and information without worrying about the implications it might have for their own futures. Clearly this only works in a culture of openness and sharing, one where people are not fearful of being judged by those who can influence their future.

Complementing information sharing is a transactive memory system: members of a team form a collective memory in which people know what each other knows and there are binding events or pieces of knowledge that link everyone's expertise together. This is particularly important

when you have teams of experts in different fields. IT tools can help people know who knows what, while social networking can enable people to ask questions of the network, receive contacts and answers, and help capture and share community knowledge. For instance, by increasing the visibility of what everyone knows by encouraging everyone to keep an up-to-date wiki (a page on an intranet that details the person's history, interests, previous employers, contacts, and what he or she is working on), it's possible for people in other parts of the organization who have a "knowledge need" to make contact and seek input. Using tools like Yammer (a sort of internal Twitter), you can form online groups or communities of interest so that experts can get involved in online discussions and provide information, knowledge, or support.

The great thing about social networking tools is that they have the power to connect someone to anyone across the organization, regardless of role, power, hierarchy, or location. This provides them with the power to access the knowledge and experience that resides in the heads of people across the business. It does, however, require an open and egalitarian culture in which leaders don't feel undermined by one of their employees talking to their boss or boss's boss online. The tools are only really powerful within a culture that makes the sharing of knowledge a major cultural and leadership priority.

Chapter 08
Vision and Goal Clarity

The fourth factor that was highly correlated with knowledge worker productivity was vision and goal clarity: the notion of vision refers to the extent to which team members have a common understanding of objectives and display high commitment to those team goals. For this reason, "vision" at the team level is also referred to as goal clarity.

For people to be emotionally engaged with the work they do, they need to understand how it fits into their team's vision and goals. Further, they need to know how their team's vision and goals fit with the organization's broader vision and goals. They also need to identify with these visions in order to be prepared to dedicate their knowledge and time to the tasks they perform, to be prepared to go the extra mile, to commit.

Why is this important? We all need something that gets us out of bed every morning. If we're not clear about how what we do fits into what the team is doing, or don't see its value now and in the future, we're not going to be emotionally engaged or give our best. And if we don't understand how our team's work contributes to the success of the organization, it's even more difficult to give our best. If the organization doesn't articulate a vision, or the vision isn't "worthy," it may be difficult for us to commit our knowledge and energy to the cause.

Given the nature and (often) intangibility of knowledge work, it's pretty important that the team knows the priorities and scope within which they are trying to achieve a goal, so they can understand whether they are going off-course. The research also suggests that in order to support judicious risk-taking by team members, leaders need to be clear with them about where the boundaries of their endeavors should be.

When the success of the enterprise is based upon the combined cognitive resources, or brainpower, of a team or community, it is vital that all members have the visions for their organization and for their team in mind, and are clear about the strategic and tactical goals needed to achieve success. They also need a sense of how their work contributes to the success of their colleagues. Whereas goals are tangible and measurable stepping stones to the achievement of a vision, a vision is an articulation of the direction of travel.

The vision is a clear articulation of why an organization exists, its purpose, and how it will achieve its purpose given the external conditions (competitors, consumer needs, legislation, and so on). A vision can be expressed in a variety of ways. It can be written down in a document or expressed using images or video. But the best visions are brought to life by inspirational leaders who can succinctly and confidently articulate their ideas for the future of an organization, endeavor, or team.

While many organizations have leaders who can deliver a great vision, very few take the time and energy to have the vision understood consistently throughout the organization at all levels and emphasize the link between the vision and the work of teams and individuals. This doesn't happen through a "cascade" process in which leaders at different levels stand up with a consistent deck of PowerPoint slides, repeating the words they've heard someone else use, without fully understanding the strategy for themselves. Making a vision come to life with linkage to a team's goals requires a lot of discussion, a lot of questioning, and a well-thought-through interactive process. It's a big conversation with two-way dialogue, not a one-way, downwards dictate.

People can turn up at work and give you all their ideas, knowledge, ingenuity, and energy, or they can turn up at work to do the bare minimum. If people understand what their role in the team is and how that plays into the organization's vision and goals, they will be the most effective. If this linkage is not made apparent, they will not be nearly as effective.

This is generally more simple to do in smaller organizations, as it's often easier for leaders to be understood by employees and to communicate the linkage between the work of teams and individuals with the strategic aims of the business. But when organizations get big, leaders at all levels have to work harder to make sure their people really understand the visions and goals of the organization and the link to with the goals of the team. Leaders must also take responsibility not only for their personal success, but for the success of others, both inside or beyond their team or department. Again, the research begs some challenging questions: Do you think everyone in your organization could articulate your organization's vision in a consistent fashion? Do you think everyone in your organization could explain how their role and their team's goals are linked to the corporate vision? If not, you're probably looking at a further source of knowledge and energy leakage.

When the success of the enterprise is based upon the combined cognitive resources, or brainpower, of a team or community, it is vital that all members have the visions for their organization and for their team in mind.

Chapter **O9**

External Communication

By now, you are probably beginning to see a pattern emerging and perhaps you can see the connections between the first four factors. The fifth factor that our researchers found was external communication: the ability of teams to span boundaries (team and organizational) to seek information and resources from others.

Too often, employees spend their time at work cocooned in the world of their organization and that of their team. With this factor, we are talking about people exposing themselves to the views and experiences of diverse groups of people outside their team and organization, in order to inform their views of things and bring back new ideas and insights to the organization that can fuel innovation and maintain vigor.

Why is this important?
If people gain all their understandings, insights, and knowledge from within the organization, there is a danger of groupthink. In other words, we collectively talk ourselves into believing what we're all saying to each other. It's tempting – people gain comfort in thinking that the work the organization is doing is leading edge. They become very wedded to their own ideas and reject ideas that were "not invented here." Without exposing your employees to the outside world through events, reading, social networks, or professional institutions, there is a danger that their knowledge assets become out of date, devoid of challenge and new thinking. Your employees' knowledge becomes obsolete and your organization stagnates or is overtaken by the competition.

Too often, large successful organizations and their leaders become over-confident about their organization's capabilities, believing that they are at the top of their game and can do anything they want. This often leads to complacency and even arrogance within the organization. Having people exposed to the outside world with a process for bringing back and using new ideas makes sure the organization stays vibrant and relevant.

What should you seek to be exposed to? Consider people and organizations who are least like you and your business. Innovative ideas will seldom come from others within your sector or discipline. Developing relationships within your sector may be useful for understanding how a new trend may be interpreted and acted on by others, or certainly for future career opportunities and benchmarking, but you may not be challenged to think in radically different ways.

The research prompts some serious questions. How much time are you and your team spending outside your immediate work group? How much time are you spending outside the organization? How many new ideas do your employees bring back to challenge the status quo? Traditionally, we might have looked on activities that were not heads-down as being wasteful or frivolous, but it's clear through the research that spending time exposing yourself to new ideas and other ways of thinking is a serious part of a knowledge worker's job.

Trust

Factor 6 – Trust

The sixth and final factor is trust: the firm belief in the reliability, truth, or ability of others. It is created by the expectation that the actions of other people will be to one's benefit or at least not detrimental to him or her.

People need to feel that those around them will act in their interest, that the knowledge they contribute will be used responsibly, and that they can depend on the knowledge, advice, skills, and abilities of their colleagues.

We are dealing with two distinctly different things: first competence, and second, the feeling that people will not act in ways that put their own interests before ours or the team's.

Why is this important?

If you perceive that the knowledge or information provided by a colleague is not reliable (because of rumors, previous experience, or your gut feeling), you will not use that knowledge, and therefore your colleague's value diminishes – even though his or her knowledge, information, or input might be sound. If you perceive that someone is going to use your information or knowledge for his or her own benefit over and above the team's, you will also stop giving your ideas, knowledge, and cooperation willingly.

Trust links to social cohesion because when team members don't trust each other, social cohesion becomes difficult to achieve. Take this to a team-to-team level, and if one team doesn't trust another, prejudice will begin to creep in, which may limit the amount of cooperation between teams. Similarly, if people at operational and supervisory levels don't trust senior leaders, this too will detract from the level of commitment people have toward the organization.

Trust is hard won and easily lost. But what gives rise to mistrust? People saying one thing and doing another. This is often true at the senior level, where leaders make statements like "there will be no layoffs," and then three months later there are. At the team level, it might play out as people not doing what they say they will by a due date. The worst scenario for a loss of trust is when an individual is seen to put his or her interests before those of the team.

Trust is vital in knowledge-based businesses. But rarely do organizations, leaders, or individuals manage or measure the degree to which they are trusted – which seems strange once you consider the ramifications of a culture rife with a mistrust. If trust is so important, who is responsible for it? The answer has to be everybody, but it starts at the top. If senior leaders seem to be able to get away without keeping their promises, then how can everyone else be expected to keep theirs? In practice, trust has to be proactively and positively managed by every person in the organization. It comes down to making promises you can keep and doing what you say you will. It also involves honesty and being up front with uncertainty.

But managing trust in a rapidly changing world where people don't know each other particularly well is tough, which is why we have to do things very proactively to build and maintain trust at all levels. Of course you can see how this links back to social cohesion insofar that if you know someone well, you will be much more likely to make allowances because you understand them and their pressures or circumstances.

Making Sense of the Six Factors

Making Sense of the Six Factors

The six factors as outlined in the earlier chapters have been derived through a scientifically robust process, starting with a review of over 800 research studies related to knowledge worker productivity and the elements which could affect it. The studies were published in English, and were undertaken in many leading academic institutions across the world. We therefore believe that our work represents the best science in relation to knowledge worker productivity generated anywhere in the world.

Fundamentally, what we're saying is that where organizations or units depend on the insights, ingenuity, and expertise of their knowledge workers, the six factors are vital in releasing the energy, commitment, and knowledge of individuals and communities so they can be focused on business goals. The six factors are good practice in general, but critical in knowledge-based industries.

In the end, each person on the payroll has a multitude of experiences, viewpoints, and areas of knowledge that need to be made visible and harnessed for the good of all. That can best be done by employees talking to each other and using technology tools to record their knowledge and make it searchable. If you don't know what knowledge and experience people have in their heads, you are missing the opportunity to access and deploy it. At a corporate level, this could be immense.
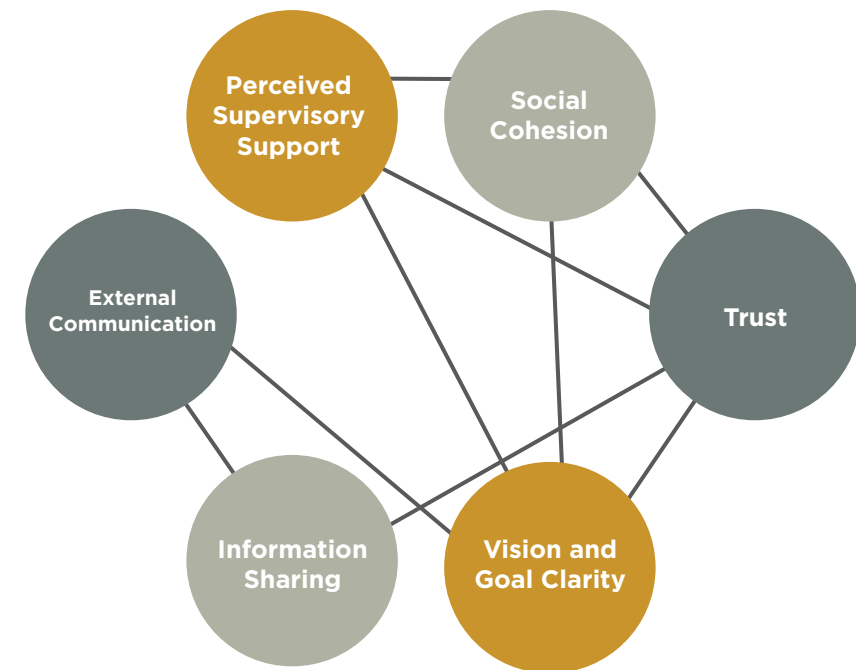
Without vision and goal clarity and a worthy purpose, it's difficult for people to give their all to the organization intellectually and emotionally and be clear that their work is entirely relevant to the organization's direction.

Without trust and social cohesion, people will keep their ideas, knowledge, and genius to themselves and won't challenge the ideas of their teammates, colleagues, or leaders, or generate new ideas and knowledge. Their knowledge is "landlocked" to the organization.

Without a culture of knowledge generosity, where people aren't disadvantaged by sharing their knowledge, people keep their knowledge to themselves, use it for their personal gain, and deprive the organization of their wisdom. Without social tools that help people know what knowledge colleagues are carrying around in their heads, the organization isn't likely to be making the most of the knowledge of its community. Without a culture of external inquiry, new ideas, knowledge, and stimuli are denied to the organization. And without people looking outside their world into diverse organizations, complacency and organizational arrogance ("we know best") will almost certainly set in, which may, one day, render the business uncompetitive.

You can begin to see how these factors link together to create the conditions for knowledge work productivity to flourish. But you may be asking how the six factors link to the much-talked-about "engagement" on which the HR community and many others are fixated. It's quite simple, really. If I feel comfortable with my colleagues and feel that I can say my piece, if I feel that my supervisors are supporting me, if I know people well enough to know what

they know and am trusted, I am going to feel more engaged and will be more effective and productive in my work.

The other question people ask about the six factors concerns diversity. Didn't diversity come out as a top factor in the knowledge worker productivity research? The answer is no; however, it's clear to see why that is the case. If you have a diverse workforce with people from different genders, disciplines, and perhaps nationalities, then they have the ability to bring different areas of knowledge to the table – a good thing. But if social cohesion and trust are low in the organization, these employees may not feel like they fit in, and even if they ARE able to find common ground, they may not feel particularly comfortable in making their knowledge available.

I hope you can also see that if you live by the six factors, you start to have some deep questions about the ability for traditional models of management and leadership to create the conditions under which the six factors can flourish. I hope you can see that the six factors really do change everything: organizational structures, performance management systems, recognition systems, leadership recruitment and training, team member training and development, workplace design and management, and the technology infrastructure.

Chapter **12**

How the Six Factors Impact Leaders and Culture: How Good Can We Be

How the Six Factors Impact Leaders and Culture:
How Good Can We Be

Let's take a look at what the six factors could mean for leaders and culture. Many organizations are heavily committed to initiatives that have been implemented with the best intentions, e.g., Best Company to Work For awards, "Engagement," Investors in People, etc. Our question is this: How many of these initiatives have their roots in science? How many of them have been generated through a scientific review of ALL the academic research? How many organizations are doing them because of fad, fashion, or someone's most recent idea? And how many are being done because they've always been done or because others in the same sector are doing them?

Given the scientific and bulletproof derivation of the six factors, we think that they should be preeminent in setting the priorities and measures for the organization. It may be that some initiatives should be abandoned. There may be others that should be undertaken within a framework of the six factors.

If, as we state, the six factors are based on robust science, we strongly believe that all leaders and their teams at all levels should spend time understanding the six factors in some depth, so they can articulate them confidently and have a level of understanding such that they are competent to teach others. We believe the six factors are critical and should be taught in the workplace, and should be used to challenge and shape our organizations.

Coaching, private study, briefings, online videos, or workshops are powerful tools for learning. Armed with these understandings, leaders should systematically review their leadership style, practices, and processes so that the likelihood of achieving the best conditions is maximized.

This review might include:

1. Existing initiatives. What should we abandon? What should we keep? How can we align and evolve what we are doing to relate to the six factors?

2. Levels of trust up and down, across the organization. How trusting are relationships within the organization? Can people rely on what they are told? Have promises been broken in the past that are impacting trust? Do people keep their promises? Do leaders (in particular) understand that their "trust-ability" relies on keeping promises and providing information with integrity that can be relied upon?

3. Existing leadership capabilities, styles, and models for recruitment. How comfortable are leaders in being socially cohesive? What are their attitudes? What training do we give leaders before we allow them to lead a team?

4. The behaviors and cohesiveness of the leadership community. Are leaders acting as role models to others consistent with the six factors?

5. Recognition and performance management systems. Are they aligned to the six factors or do they create divisions? Are they rewarding the right behaviors? Are they making heroes of the people who live the six factors?

6. Organizational culture and processes. Are there things that support the six factors? Are there things that get in the way of them?

7. How social IT tools could be used to aid knowledge sharing. Are tools like Jive or Yammer in place? Are people comfortable and confident enough to use them?

8. Organizational structures. Is the structure promoting "upward only" progression? Is it creating unhelpful competitiveness between peers that works against social cohesion?

9. The degree to which structures and measurements support the six factors. Do your structures create zero-sum-game ("you win, I lose") competitive situations?

10. Performance management. Do personal objectives link to team objectives and the organizational vision? Do objectives link together between teams? Are the goals and objectives visible to everyone across the organization? Do employees have an opportunity to share their objectives and discuss personal objectives with people in their teamor with other teams?

11. Relationships between teams and divisional units. Is there organizational prejudice? Is there "history" between teams that gets in the way of them working with each other? Are there organizational stereotypes and attitudes that discourage cohesion?

12. The processes associated with developing, sharing, and discussing corporate strategy, vision, and the linkage with team goals and personal objectives. Is enough quality time being committed to these activities?

13. Strategy, training of leaders, and social induction of new recruits into teams. Do onboarding or transition management processes emphasize and coach to the six factors' attitudes and behaviors? Is there a proactive process for people to spend time with other teams and external groups?

In summary, what should we stop doing, start doing, or keep doing to strengthen those values and behaviors that enable the best performances from our people?

Bringing the six factors to life
How do you bring the six factors to life and keep them alive? Easy to talk about, but not so easy to do, given existing initiatives and business pressures. One way to attack this daunting task is to form a Six Factors Steering Group of senior leaders. Two or more take responsibility for reviewing each specific factor and come forward with proposals to improve performance relative to their factor. In parallel, form an infrastructure group made up of CRE, FM, HR, and IT representatives. Each of these subgroups then takes responsibility for proposing actions to the steering group, and ultimately implements agreed actions.

To give the steering group some data to work with, you can use an online survey to find out how employees feel about each of the six factors in relation to their own team and the other teams they have dealings with. This reveals strengths to be celebrated and weaknesses to be worked on. The strength of this approach is to unemotionally reveal organizational stresses and strains in order to work on them.

By implementing these ideas, you can quickly raise awareness of the six factors and put in place an action plan to improve on all factors. Now you need an investment pot and a way to monitor actions and keep the energy alive month in and month out, keeping the six factors in the spotlight amid changes in personnel, organization structures, and business challenges.

Chapter **13**

The Six Factors and the Design of the Workplace

The Six Factors and the Design of the Workplace

The six factors describe a sort of "social infrastructure." For those in "workplace making and managing" professions (real estate, facilities management, workplace, design, project management), the six factors provide a new "science" to be used to guide the design and management of the workplace. More and more, those involved with workplace making are moving to using a deeper understanding of critical processes and behaviors as the basis of design. The six factors give us new insights and tools to get from "what needs to happen" to how the workplace can best support it. Leaders can use the factors in discussions with colleagues in HR and IT and with senior leaders, who we're often finding "get" the six factors. Instead of design being driven by fad or fashion, at last we have some positive science against which to design and manage the workplace.

So how can workplace professionals use the six factors?

Fresh start
If you are involved in the creation of a new workplace, you have a moment to be the catalyst for a discussion based on the question, "As a business, what are we trying to achieve and how can the workplace be used as an enabler?" All too often, this moment is lost along with the opportunity to use workplace transformation as a mighty weapon in the battle to modernize the organization and set it on its way for the next 5, 10, or 15 years.

Clearly, if enhanced worker productivity is one of the things you are trying to achieve, you have the opportunity to share the science of the six factors with leaders, get them to consider what they might start, stop, and keep doing to strengthen them, and then design the workplace to bring those strategies to life. You can also use the change program to let people know about the six factors, what behaviors you'd like to cultivate, and how the space is intended to support them. In what ways might the design of the physical workplace and workplace practices link back to the six factors and the behaviors they encourage?

Social cohesion
If an organization already has a robust mobility program, it may be consciously managed to provide other benefits. For example, if you sit next to the same people every day, you can become socially cohesive with them, but if you do so to the exclusion of relationships with other members of your team, division, or organization, other potential benefits are lost.

Enabling people to sit in different places from time to time – overhearing different conversations and catalyzing the formation of new friendships and sharing of knowledge – can be encouraged to promote social cohesion.

For example, Mintel's Chief Executive, Peter Haigh, insists that each member of his leadership team sit with a different team in different locations within their building every month. Another organization "gamified" the idea by operating "desk bingo," where in a month you have to have sit at every desk in your team area. Other things you can do to facilitate social cohesion spatially include making sure each team has a "home" – which reinforces the sense of team identity and is meaningful

to them, but doesn't serve to make others feel unwelcome. In addition, having shared community spaces on each floor, creating a "heart" for a building, and encouraging people to come out from their own locations to meet or eat; designing cafés as a "destination" social space (not just as a lunchtime eating place); running lunches and social events with different themes to bring people together who may not normally come together should enhance cross-team cohesion which is so often lacking in many of today's siloed organizations.

Even furniture choices can support social cohesion. For instance, use round tables in meeting rooms and social spaces to aid eye contact between members of teams. Locate them in spaces where they don't create interruptions for others nearby or where privacy is lost – which might impede people saying what they think or even from using the spaces in the first place. Make the organization of social events (with a purpose) a part of the remit of the facilities or workplace management function. Use events to break down barriers and help form bonds between teams.

Perceived supervisory support
Design the workplace so that leaders can sit with different members of the team every day, allowing support and coaching, and allowing the team to get to know the leader better as a person. Include places for quiet work so they can also, be used for coaching conversations. This way, using that space doesn't signal to others that you're being taken to the woodshed.

Having a leader locked in an office may aid their ego or ability to concentrate, but it deprives the leader of a powerful source of information about what's going on in his or her team and who is feeling what, and reinforces the power difference between leader and team members. If private offices are a part of your office

landscape, consider designing them so they can double as meeting rooms when the occupant isn't in. And given what we described above about shared community areas, permission (and indeed encouragement) should be given to use them as a meeting room.

Information sharing and transactive memory
Support visual persistence – give teams walls, boards, or other methods to write and post things related to their work and their progress. We've seen systems like u-channels that can support 4'x8' light-weight boards, so they can be displayed in one location (say, the team's project room), then taken to another space (like a presentation room to review things with senior leadership).

Make sure the team has places to do their group work in close proximity, but without distracting their not-in-the-discussion colleagues, to make quick updates or just-in-time problem solving easy.

Make the design of your collaboration and meeting spaces across your buildings different. Give them unique names. Why? Because your employees' recollection of the experiences they have in a place is aided by the memory of the event and the place in which it occurred. Create meeting rooms that are designed to maximize eye contact with easy-to-use IT tools to access and share information. Introduce social tools like Yammer, Jive, and Sharepoint to enable employees to share knowledge, get help, and know who knows what.

Vision and goal clarity

Support visual persistence with graphics and/or mobile displays to make visible the team's vision, purpose, and key goals so the members are reminded of their contribution to the larger objectives of their department or organization and to their own team, so they and other teams they work with can see how what they do links to the others. I visited a UK car manufacturer some time ago whose main goal was to reduce the time from the "idea" to the introduction of a new model. I was astounded to see that each department was locked behind a secure door, so there was no way of knowing what each department did. And it definitely didn't send the right message about working together to reduce time to market. Interestingly, while they also had a "street" down the middle of those enclosed spaces intended to encourage discussion and information sharing, they were surprised that it didn't seem busy and people weren't using it that way.

External communication/outreach

As mentioned previously, Yammer and other social media tools can help workers learn more about others in the organization and their skills and interests. This can be helpful if their team needs expertise they don't already have.

No reason why real estate and facilities management can't be the catalyst for "show and tell" sessions – facilitating a systematic program of cross-organization presentations or events at lunchtime, for example. Adding in some fun helps, too. Another idea is to facilitate a "work anywhere" program allowing people to work with teams in other parts of the building or in other buildings to expose them to different points of view and a different world than their own.

Or, for teams who frequently need to coordinate with members of other teams, include touchdowns within the team's own cluster of desks, so those ad hoc members can sit with the team as one of them while information or insights are exchanged or problem solving happens.

Trust

Having only enclosed spaces with opaque walls so that people can't see what's going inside isn't going to support trust. While some may be very appropriate, like the interview room in the HR department, having some measure of transparency not only feels more open to knowing what's happening, but it can also facilitate finding a colleague or feeling encouraged to join in on a discussion. Trust can be supported by making things both physically and behaviorally open and transparent so as to indicate that there's nothing to hide. Trying to break down barriers between teams who need each other (and discouraging silo working) is harder when there are physical boundaries between them. On the other hand, having some areas available for privacy and confidentiality means that sensitive conversations don't have to take place where they can be overheard by those not intended to be party to the discussion.

Awareness

The six factors are important for everyone to get involved in and to be reminded of. You can use walls with graphics of the six factors provide a constant reminder of these aspects that make a difference to the performance of the team and community.

Finally, as a workplace leader, adopting workplace "science" in delivering your role will also enhance your professional standing in a business context, because we're finding that the six factors resonate with leaders and at last give a baseline against which creative designers can design meaningful workplaces.

Chapter **14**

The Six Factors and Technology

We've talked about how space could encourage the behaviors that support the six factors. In this chapter, we're going to take a look at the way we can use information and communication technologies as well. Increasingly, technology is freeing us to make new choices about where, when, and how we perform tasks. It allows us to work wherever we and our organizations choose – both as individuals and as teams and communities – in slow time and in real time across cultures, geographies, and time zones.

While technology can't replace the fully immersive experience of face-to-face communication, it can go a long way in supporting teams working away from each other.

We'll talk about specific technologies in a minute, but I'd like to start this discussion from a different place. If we're going to get maximum value from investments in IT, particularly in relation to the six factors, we can only do it when everyone (and I mean everyone) in an organization feels

confident and highly competent in using the evolving set of tools that are increasingly available. I make this point at the outset because from our vantage point on organizations, it is very clear that IT functions don't spend the amount of time they should in making sure users become confident in using the tools they provide.

With younger workers, this belief that training isn't needed MAY be justified to some degree because of their natural competence and comfort with technology. But what about senior leaders who perhaps have never really gotten along with technology – do they need executive IT coaching to use it properly?

Further, rarely do IT departments spend the time needed with leaders to help them see how new tools and technologies could help them solve business problems, streamline operations, and enhance team performance. In my view, it's IT's role to bring new tools to the table, make sure all leaders and users understand what they can do (not only functionally, but also to improve business processes), and then manage the technical, skill, and sometimes behavioral changes that help the organization get the maximum bang for its buck from its IT investments.

How can IT be deployed to support the six factors? Let's take social cohesion first. Physical mobility is a key. By proactively encouraging people to move about the office as needed, and work where they feel is best for them, they can more easily interact with different colleagues every day in the team, community, and from other departments or divisions. When that happens, more people get to know each other as people and know what they know. Consequently, physical

mobility (however it is afforded) is an important base function. This sort of mobility can also be useful in reinforcing supervisory support by giving leaders the opportunity to sit with different members of their teams or communities to provide coaching or simply to gain an insight into the challenges team members are facing – and being able (where appropriate) to empathize or intervene.

Physical mobility in the office can be provided through a number of different mechanisms. The most obvious is by providing users with tablets or laptops and network connectivity (wireless or wired) so that they can pick up and work in other parts of the office. Mobile phones or IP roaming telephones can be used to enable voice calls to be received and made from any desk, a baseline for physical mobility. Some IT departments are reluctant to give workers laptops because they are generally more expensive than desktops, are challenging to administer and support, and provide a potential information security risk if lost. Often IT departments prefer a "visualized" desktop solution, where applications are hosted on the organization servers in data centers and workers use thin or (increasingly) "thick" client devices (dumb-ish terminals) that allow workers to sit anywhere and quickly log on and access all their applications, data, and their own personalized desktop. This virtualised arrangement is also accessible from laptops and (with the right security tools) home desktops, giving people complete freedom to roam and work with the employees they want to be with.

Occasionally (and thankfully less frequent now), IT departments deploy "roving profiles" that allow users to log on to PCs each time, drawing down their own specific desktop

profile from a central server that sits on the PC. However, this arrangement is cumbersome and slow.

Mobility outside the office can be provided by laptops that can use 3G, 4G, 5G, public wireless networks, or home broadband services to connect to central systems. These are the basics.

Of course, in today's world, teams are not always physically together in the office, so new social tools should be used to enable people to feel and work together when they are not together. Tools like Skype for Business (previously Lync), known generally as "unified communications" (UC), provide a number of capabilities that support social cohesion. The first is instant messaging. Users have a series of small picture icons of each person they have dealings with permanently visible. This provides a persistent reminder that their team members are with them. You can drop a quick message or inquiry to a team member. From a supervisory support standpoint, this allows the leader to be visible and available for quick input.

Using this technology, you can quickly and easily convene a meeting among team members to discuss an issue or challenge, or to share an update. This could be a voice call or audio conference. But greater cohesion and understanding is generated through the use of video and data sharing applications where all parties can see each other's screen (e.g., spreadsheets, presentations, or even websites and the whites of each other's eyes). You can even record these online discussions for colleagues who were unavailable to catch up. This easy-to set-up group communication gives a sense of virtual closeness and helps with a feeling of social cohesion.

Then there's trust. It seems that in order to maintain our trust in colleagues, we humans need some cues that help us confirm that we can continue to trust them. Trust in virtual communities is associated with a sense that people are where they should be, doing what they should be doing, and that they, and the information about them, can be relied upon. Along with the visibility of each other's calendars, UC technologies allow peoples' status to be known to each other (free, offline, in a meeting, etc.), providing an openness and basis for trust. This may be a particularly important initial "crutch" for leaders moving to a virtual management model, who need regular reassurance that the team members are doing what they are supposed to be doing.

Information sharing is another important capability supported by technology. Tools like Sharepoint enable sharing of team information, including files, updates, and social and business bulletins. We talked about the idea of transactive memory systems in a previous chapter – everyone knows what everyone else knows.

This is possible to achieve when the team is small and everyone knows each other well, but how do you know what other people know, or what their interests are, when they are not all together in the same location? Personal web pages can be used to detail a person's experience, interests, and knowledge.

Each individual takes responsibility for keeping his or her page up to date – almost as part of their "shop window. "

These pages can be browsed and searched by colleagues from across the organization, and where there is value in having constant visibility to other colleagues' developments, they can be followed, meaning that you are automatically updated about their latest work and updates. Applications like Yammer and Jive also allow team members to seek help or input from others in their work community, by posting questions or queries that the whole community can see and respond to.

There are also interesting apps such as Spark Collaboration that help you make new connections in the office, proactively introducing random people to each other and facilitating them in meeting for lunch or for coffee. Making friends outside of the day-to-day transactions of work is an important dimension of information sharing.

We shouldn't lose sight of meeting room technology to aid easy sharing when the team is physically or virtually together. Network connectivity should be provided either wirelessly or at the desktop through a wired connection. Easy-to-access power supplies should be provided at each desktop. The use of smart boards and easy-to-connect-to monitors, decent sound systems, and cameras all help to provide an easy, seamless, and fault-free experience that makes sharing information easy and therefore more likely. As tools like Skype for Business are used by organizations, the need for heavyweight videoconferencing solutions should wane in favor of cheaper, user-administered technologies.

Vision and goal clarity can be supported by tools like Sharepoint. Visions are often best delivered as video footage with leaders talking honestly and openly about their aspirations for the future. These need to be accessible and persistent so that employees are continually reminded of them.

Team and personal goals can also be made visible virtually using team pages in Sharepoint, where each team makes clear its goals and tasks, and articulates how they relate to the vision for the enterprise – or made visible in the workplace using large monitors.

External communication and outreach (communication and connectedness) with people outside the team is again supportable with IT tools like Yammer, Jive, and Sharepoint, while exposure to external communities and stimuli can be gained using tools like LinkedIn, Twitter, Pinterest, and YouTube.

Technology itself and technology competence are very important parts of creating the infrastructure that can support the six factors – particularly in an increasingly virtual world in which people are working as part of teams and communities across different geographies, cultures, and time zones.

Chapter **15**

Using the Six Factors to Make a Difference

Using the Six Factors to Make a Difference

The first question leaders ask us is, "How can we find out how we stack up against the six factors?" The good news is that we have the technology to answer this question. Through the course of our research, we gathered together a fully validated question set with which to enable teams to score themselves on the six factors. We've now gone even further to evolve this tool to allow each team member to also score the other teams they work with. Putting the intrateam and interteam views together, we can build up a pretty good picture of how an organization works against the factors – which is proving to be valuable on a number of levels.

We wanted to put our tools to the test, so in June 2015, we approached the executive team at London & Partners, London's official promotional company. We knew London & Partners are a progressive and open-minded organization, having worked with them to create an agile workplace and working practices at their office at More London. They were interested to see how they measured against the factors, and to use the experience of assessment to generate a more informed and deliberate language to address relationships within the company.

Gathering data
Before we started gathering data, we spent time with leaders and their teams, briefing them on the six factors and the research that led to them. Then we launched an online questionnaire to measure each team and their relationships with other teams on the factors. We wanted to know how strong "within team" relationships were and how good "between team" relationships were, as well.

The questionnaire used statements drawn from the original research and asked respondents to agree or disagree with each statement on a 5-point scale. We asked every staff member to score their own team and the other teams in the organization. They also indicated the groups they worked with on a regular basis and those they didn't. In analyzing the data at a headline level, we looked to see what percentage of respondents had agreed with each statement.

Results

We were delighted to get a 90% response rate from the 140 London & Partners employees, giving us an excellent baseline of evidence from which to draw conclusions. As well as providing responses about their own team, employees gave us feedback about twelve of the fourteen other teams, on average. Naturally, not every relationship is critical to business outcomes, but the research suggests that even if you don't work regularly with other teams, it's still important to know about them, know what they do and what they know, and have positive views about them in order for knowledge to flow.

The graphs shown here are not those of London & Partners, as we wanted to preserve confidentiality. They are, however, examples of the findings that can be obtained from this type of data analysis.

Unlike the example shown in Figure 1, London & Partners results showed that the trust statements were the most highly endorsed when staff considered their own teams – a significant achievement for a four-year-old organization that was formed by combining three separate organizations with their own cultures, relationships, and ways of working. When looking between teams, the highest endorsement overall was for information sharing – exactly what you would want in a knowledge work business of talented people working in centers of excellence.

The areas less well endorsed when looking between teams were external communication (the degree to which teams share their knowledge and expertise with other teams) and social cohesion (the degree to which people feel connected to each other). Generally, teams get on well with each other (particularly where they are working closely) and are happy to share with those in other teams. However, they don't necessarily want to socialize with each other and seemingly don't always seek the expertise of other teams to the degree that might be expected.

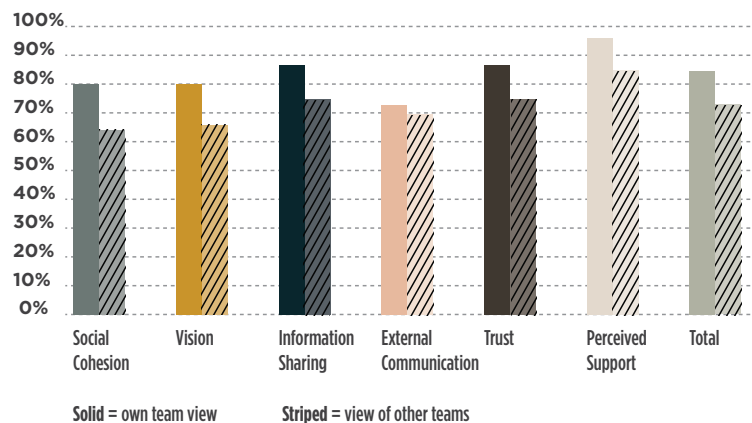### Percentage of respondents agreeing with statements

Figure 1 – An example of the data provided – not actual data

Team X – View of other teams and vice versa
Results for all six factors together

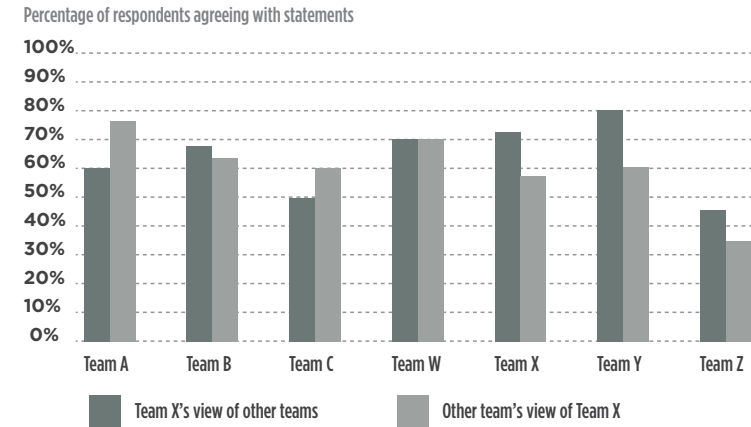Percentage of respondents agreeing with statements

Figure 2 – An example of the data provided – not actual data

What the data also reveals is that even in a business of this size, it's impossible to know and work closely with everyone – and indeed that isn't appropriate to the roles people carry out. Most organizations focus their teams on meeting their own objectives – not necessarily helping others to achieve theirs (particularly if in doing so, they risk missing their own). But what does that do to overall organizational performance?

For example, Figure 2 shows very low levels of endorsement (in both directions) between Team X and Team Z. If these teams don't need to work closely together, that may not be a cause for concern, but if they do, then there is certainly work to be done – through understanding the underlying factors that contributed to that result and exploring the nature of the relationship. The six factors survey results don't necessarily tell people things they didn't already know about their relationships, but they do provide a language and a less emotionally charged playing field to discuss what's going on.

Sharing the results

Armed with these results, we presented them at an all-staff-conference at the end of June 2015, and used them to generate an immediate brainstorm of ideas relating to social cohesion that employees could put into action (there are many ways to generate it other than socializing after work), and identified ways to continue building and maintaining trust within the business (levels of trust between teams were less strong than within teams, as would be expected). Trust takes a long time to build and is easily broken, so a good score now is no guarantee that it will be maintained unless people work to ensure it is protected.

These ideas are a small extract from those generated, and for sure they aren't rocket science. However, they come from the individuals within the business – and we know that people are more likely to commit to ideas they've come up with themselves. In our pressured, results-driven world, the humanity can be beaten out of us – so the six factors focus helps us to recognize that we are all people, trying to do our best – although, let's face it – too often with competing objectives.

The executive team also saw that the six factors have a broader reach than simply within London & Partners. As a partnership business, they could see the relevance of examining and evaluating relationships between their business and those they work with closely – with a view to addressing and improving, for example, their information sharing or social cohesion with their partners.

What's next?
Since June 2015, we have been working with the individual directorates to help them make sense of their own results and to consider things they might want to do or approach differently. They can see what their team said as a whole, what their team said about other teams, and what other teams said about them – giving two-way feedback for each of the factors. This provides a basis upon which teams can discuss their results and seek to understand more about what has driven those levels of endorsement from the other teams.

The results have led to some interesting discussions about the nature of social cohesion and how it is generated – literal socializing is but one way to develop strong relationships with other teams. And although the time spent socializing is a valid measure, it illustrates that there is potential for quite low levels of endorsement when only one or two specific measures are used – and yet using more would reduce the impact of any one statement within a factor. At its heart, social cohesion is about whether we know each other well enough to feel comfortable sharing ideas, information, and knowledge, and not jumping to erroneous, problem-creating conclusions about what the other person's intentions are. Groups have also discussed ways in which they can share their knowledge and expertise with others – realizing that generally people are happy to share, but aren't necessarily called upon to do so by others.
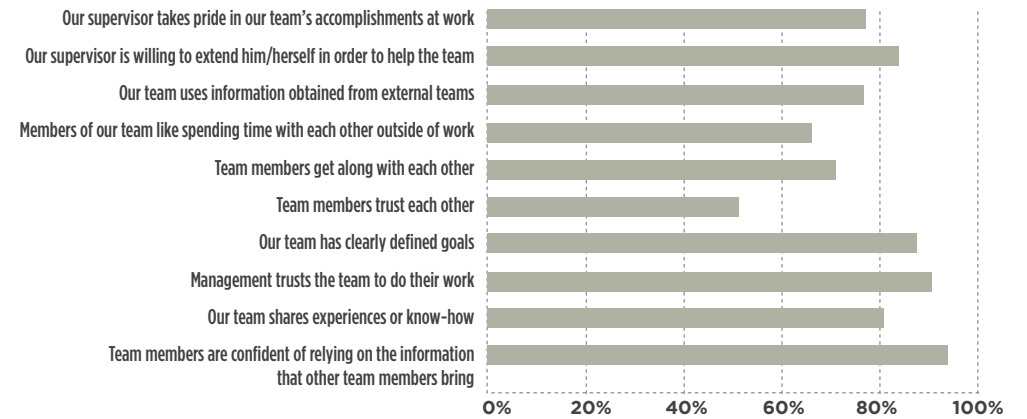

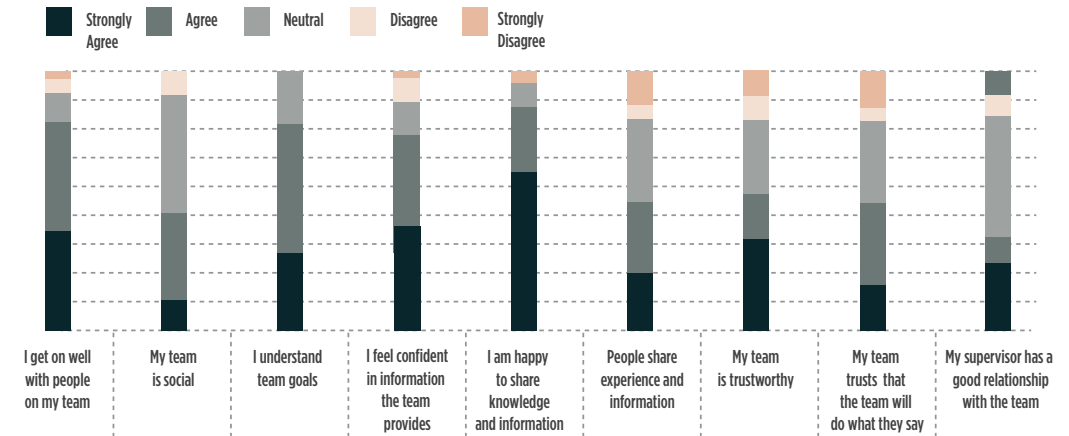**Figure 3** – An example of the data provided – not actual data

Figure 4 – An example of the data provided – not actual data

Figures 3 and 4 are examples of the analysis we provided to each team to illustrate the level of detail they've been able to work at. Some of the activities being explored by teams are actually things they used to do, but fell out of the habit of doing (i.e., holding "lunch and learn" sessions where a team shares what it does in an engaging, entertaining way over lunch). Other things are in place but are perhaps a bit passive – for example, "everyone is welcome to come to our team meetings" is replaced by active invitations to be a part of a team meeting if the team feels there is benefit in inviting specific people to attend.

Another aspect is recognition for a job well done – a key element of perceived supervisory support. It is clear that some managers and directors feel that to keep thanking people is "over the top" and doesn't feel genuine after a while, whereas it is clear that when expressed genuinely, people really do value recognition and appreciation.

In working with the directors and teams on the results, it has become clear that even the best organizations don't always do all the right things.

But having a light shone on the intrateam relationships (seeing what others think about you when you think you're doing a really good job for them) will highlight challenges around communication, cooperation, conflict, or lack of clarity in priorities, and the degree to which teams actually feel in competition with each other. Whether these are intended or unintended consequences of the way things are organized is a matter for discussion. There is also something rather significant about managing expectations – which in busy, time-pressured organizations may feel like a real time-waster. But if you don't manage expectations, take time to explain, to thank people, to appreciate them, to agree on joint objectives – then the risk is that however good the relationships are, they can suffer over time.

Measuring again
At this stage, each group is considering its feedback and working on actions, interventions, and initiatives within and between teams. In the coming months, we will run the questionnaire again to see how things have changed as a consequence, having kept track of what the teams have been doing to address the things they wanted to improve or maintain.

Chapter **16**

In Summary

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In Summary

Over the course of the study and the chapters set out here, our team has realized the power of the six factors. Our research team has exposed the findings to many senior leaders from the UK, Holland, and the United States, and in doing so, these leaders have understood the depth to which the factors can go in creating organizations that can fully harness the brainpower of their knowledge workers.

Increasingly, we are of the view that the six factors provide a solid framework with which to consider how to evolve the management of organizations and their infrastructure. Imagine if a leadership team were to apply the factors across all aspects of their organization so that every function was focused on creating the conditions to give knowledge workers their best chance of being effective. What if leadership teams were brave enough to start again with a blank sheet of paper?

Tangentially, in 2012, we at AWA were invited by Regus, the world's leading serviced office provider, to undertake a study to assess the effectiveness (or otherwise) of traditional command and control organizations and then to propose an alternative "agile" model that would be scalable and would fix the weaknesses of command and control models. We called it the Kinetic Organization. A copy of the report can be obtained online at: advanced-workplace.com In rereading the report, it's clear that we inadvertently created an organizational model that supports the six factors and creates the conditions under which knowledge workers flourish.

When we developed the Kinetic Organization model, we first set ourselves six design requirements that we subsequently called the six fundamentals. We said the organization must:

1 Allow the enterprise to "turn on a dime," changing without pain to adapt to new threats, opportunities, and economic conditions.

2 Allow it to keep its promises to clients, shareholders, and people.

3 Maintain a flexible cost base and infrastructure so that it can inflate and deflate its operations without incurring penalty costs.

4 Create a safe environment in which people feel able to contribute and share their knowledge and innovation, constructively challenging to achieve a better end.

5 Constantly keep its products, services, people skills, capabilities, processes, infrastructure, and costs under review to make sure every element of the business always remains fresh and competitive.

6 Allow elements within each structure to be treated and structured in different ways depending on their risks, activities, and the markets in which they operate.

On revisiting the Kinetic Organization model in the light of knowledge worker productivity, it becomes clear that the model goes some way to creating the right conditions for knowledge work to flourish. It's clear to us that to gain the maximum leverage out of knowledge workers, alternative ways of organizing need to be explored. Leadership teams need to be asking themselves some very fundamental questions.

How can we organize our operations to get the best out of our knowledge workers? What would it mean for leaders, leadership, and team behaviors? What might it mean for communication? What would it mean for recruitment? What would it mean for the shape of the organization and the way objectives and goals are set? What would it mean for performance management? What would it mean for the coaching support provided to individuals? How could we refocus IT investments and training to help achieve the six factors? How would we shape our workplaces to facilitate the six factors? Finally, how would we bring the disciplines together to make real change happen?

But the six factors are not simply for strategic leaders prepared to take a "blank sheet" approach. They also provide guidance for team leaders wanting to improve the performance of their teams, and business leaders seeking to take a more informed approach to knowledge worker productivity. They also provide a new, more enlightened, and relevant basis for the design of the workplace. The journey to the six factors can start in a number of areas and for a number of reasons.

At AWA, we are on a mission to get every leader in the civilized world to deeply understand the six factors and the implications for their organizations. This book is the first of the tools to assist leaders in grasping the fundamentals of the six factors. But to enact the six factors, we're developing a range of online resources, workshops, group exercises, and videos to bring the six factors to life.

Andrew Mawson is the Founding Director of Advanced Workplace Associates, a London-based workplace consultancy. Formed in 1992, AWA is a leading change management practice that uses workplace science to make a step change in organizational performance. AWA has a team of over 20 workplace professionals skilled in business strategy, program management, workplace strategy, cultural change management, space planning, facilities management, interior design, and technology.

Andrew is a leading thinker on the evolution of work and the workplace. Passionate about the unanswered questions that trouble organizations, Andrew pioneered the formation of these research initiatives with CEBMa to fuse academic research with practical application. He is closely involved in the research and guides the development and application of new processes and tools that are derived from the research results. For more information, visit: www.advanced-workplace.com

Center for Evidence-Based Management is a non-profit member organization dedicated to promoting evidence-based practice in the field of management. They provide support and resources to managers, consultants, teachers, academics, and others interested in learning more about evidence-based management. CEBMa is supported by several leading universities, including Carnegie Mellon, Stanford, New York University, University of Toronto, University of Bath, and the Free University of Amsterdam. Learn more at: www.cebma.org.

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Jan has spent her career strengthening the correlations between business strategies and the planning, design, and management of workplaces. She is a highly respected workplace strategist; leads Allsteel's Workplace Advisory team; and frequently writes, speaks, and teaches. Her team applies research and extensive workplace experiences and insights to assist organizations develop and implement a situationally appropriate workplace strategy: one that aligns with their organizational culture and business goals, supports their workers' ability to work effectively, utilizes their real estate assets as efficiently as possible, and is highly adaptable to changing business and work practice requirements. For more information, visit: www.allsteeloffice.com, or email Jan at: JohnsonJan@allsteeloffice.com.

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