Reflections on the modern office
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Context
The genesis of this paper lies in recent practical experience of workplace planning. This experience has, in short, led to a concern that office workplace design is moving in a direction that might, in the long run, prove unsustainable. Furthermore, the concern is that this direction of travel might prove detrimental to office workers and perhaps their organisations’ performance.

There is no suggestion here of the need for a wholesale retreat from what might be summarised as the new office, or flexible work styles agenda. However, the paper does question some accepted wisdoms of workplace design and in particular its response to workplace change programmes that are driven primarily – sometimes exclusively – by economic considerations.

Before getting into the detail of workplace planning, it is instructive to remind ourselves of the distinction between organisation, workplace and design.

Ultimate and proximate causation Evolutionary biologists refer to ultimate and proximate causation. The ultimate form explains how a particular evolutionary trait exists as an outcome of selection pressures. The proximate form explains how such a trait exists in a physical sense. For example, bats have extraordinary visual and aural abilities because selection, or ultimate cause, has favoured a particular form of living and hunting. However their visual and aural abilities are more directly explained through physiology, or proximate causes.

Ultimate and proximate causation helps us to distinguish between the fundamental driver of the workplace, or the organisation, and the design response, features such as layout, technological infrastructure and facilities services. These are, respectively, the workplace’s ultimate and proximate causations. And the metaphor enables us to crystallize the issue here: are the proximate causes of today’s workplace truly aligned with its ultimate causation?

New ways of working
Twenty five years is little more than half a working life in contemporary times. Yet, recalling some of the office technology events of 1987 reveals how much has changed in such a relatively short time span. Among the more important launches of 1987 were Windows 2.0; IBM’s PS/2 with 3.5 inch diskette drive; the MAC SE; the Sinclair Z88 portable computer, and the apple.com domain.

These and other advances in office technology provided a different prism through which to view office work itself. Indeed, during the late-1980s, the phrase “new ways of working” became fashionable as a catch-all term for working styles that were increasingly influenced by enabling technologies. The term new expressed what was literally true: that the typical modus operandi of much office work was new. By the mid-1990s there existed a burgeoning library of reference material outlining the implications of the changes taking place.¹

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Increasingly work was seen to be about enabling people to interact and collaborate, underlying the wider macro-economic shift from process labour to knowledge work. In doing so, the office was expected to have to provide a much richer palette of settings in which individuals and groups could work in a far more dynamic fashion compared with much of the sedentary work of the past. The technology would have to cope with a multi-tasking, mobile and itinerant work force.

Increasingly the office was becoming less a place to go to work largely alone on a set of prescribed tasks, and more a place to visit and interact with colleagues and use support services. Frances Cairncross argued that the “office will become a place for the social aspects of work, such as celebrating, networking, lunching and gossiping”. To cope with this shift in emphasis, office environments would have to be designed the enable increasingly complex relationships to flourish.

The ubiquitous impact of mobile phones, laptops, the internet and email all seemed to presage an era in which work itself would be transformed. And all this before the arrival of social media! Work could now be conducted in ways entirely different to even a decade previously. Working from home, hotels, trains and indeed just about anywhere was increasingly possible. Not only had the technologies released workers from the “where” issue, but they had also introduced the “anytime” option. Work, as many commentators noted, was quickly being defined as an activity rather than a place.

The term new ways of working seems a little anachronistic in 2012: what is new? When will new become established? From this point on, reference is made to flexible work styles: a more generic and non-temporal term to refer to the results of workplace change programmes aimed at bringing about agility both in the means by which organisations conduct their core business and in the manner in which their employees occupy their workspace. It encompasses modern work styles that entail a major reliance on mobile technology and which are, at least to some degree, free from the constraints of a fixed, single place of work.

New wave management

The explosion of office technology in the late-1980s, and the accompanying optimism associated with flexible working styles, was followed in the early-1990s with the chill winds of recession. As this took hold, real estate managers and their colleagues in other corporate resource areas came under pressure from Boards to reduce the cost base and improve the competitive position.

The pervading business mood was underpinned by a plethora of management books, all in various ways proclaiming to have found an angle on the emerging economic landscape: the management guru reached ‘popular’ status and in some cases, possibly cult status. New wave management theory and the names of Drucker, Hammer, Handy, Peters, Porter and Senge, became very familiar to anyone with even a passing interest in what was happening to business culture. Each had their particular theses and approaches, but through the dense undergrowth of books and articles that emerged, the consistent messages were about delayering, downsizing, mobility, outsourcing, re-engineering and virtual work: in short, methods for becoming leaner, more efficient, more agile and competitive. Scientific management was dead: new wave management was born.

2 Cairncross F (1997) The Death of Distance Orion Business Books
Many observers took up the new wave management agenda with an almost evangelical fervour, interweaving the cost cutting agenda with theories about the nature of companies in the emerging office economy. We were told, for example, that as the efficiency measures took hold they would lead to horizontal networks replacing vertical hierarchies, and highly skilled, group-based knowledge workers replacing clerical, departmentalised information processors. Peter Drucker went so far as to suggest that the traditional factors of production – land, labour and capital – would become secondary to knowledge.\(^3\) Robert Heller picked up the theme, arguing that since “horizontal business processes are all multi-functional and multi-disciplinary; the manager is being led in similar directions. Cross-functional, synergistic and inter-departmental working is unavoidable now: so are task specific teams.”\(^4\) And Business Week argued that horizontal corporations should organise around processes rather than tasks; flatten hierarchies; use teams to manage everything; and reward team performance.\(^5\)

To some extent, the early evangelists for the new economy over-sold their case. The new wave management theories of the 1990s exhibited that familiar trait of dramatically over-estimating the short-term impact of innovation, while under-estimating its medium- and long-term impacts. However, “rightsizing”, outsourcing, delayering, re-engineering, and so on, were pursued with vigour.

In the workplace itself, new wave management adopted the possibilities presented by flexible working styles with a kind of missionary zeal. Telecommuting, hot desking, virtual work and more flexible home-work arrangements were grasped as panaceas for space and cost saving. Little attention was paid at the time to the impact of management fashion on the individual or, indeed, on the organisation.

**Technological possibility and economic necessity**

The enabling technologies underpinning flexible working styles, and the recession-driven new wave management zeal, coalesced and set in train the evolution of today’s workplace. In short we had the liberating impact of technology allowing us to do things differently, and the iron fist of economics forcing us to do things differently. These two contrasting and sometimes opposing forces drove workplace design in a particular direction. The question is: are the proximate causes of workplace form now working against the interests of the ultimate causes? To bring this question into relief, the following two sections outline two key influencers of workplace design, namely the efficiency and the effectiveness agendas.

**The efficiency agenda**

Design responded to the potential of emerging office technologies and the fashion in management texts with a new language in office design. Enclosed offices, seen to reinforce hierarchies and individuals, as well as to consume space, were replaced by areas for group interaction, co-operation and innovation: hot desking, hotelling, virtual offices, touchdown areas, lagoons, oases and docking stations proliferated. And new types of workers were identified: nomads, guests, teleworkers and core/periphery workers, among countless others.

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\(^5\) Cited in: The Horizontal Corporation *Business Week* 20\(^{th}\) Dec 1993 pp44-49
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Many of the design solutions were highly prescriptive and not actually based on a scientific understanding of workers’ needs, but rather on an imperative to reduce the real estate cost burden. Reflecting this latter point, a relentless attack on occupancy standards ensued, involving workplace design aimed at intensifying the use of expensive space, known less formally as max packing.

Higher densities There are two principal means of achieving more intensive use of space. First, space allocations per desk are reduced. For employees in open plan, there is simply less space around their workstations; while for others there are fewer enclosed offices, and those which survive become little more than cells. Increased density does, of course, have limitations imposed by building regulations relating to fire escapes, sanitary provision, and so on.

There are a number of sources that can be used for workstation density benchmarking data, but the sources themselves are not very consistent. One of the most thorough studies, in so far as it involved the actual measurement of space, was published by the BCO in 2009. The study sampled 88 organisations detailing occupancy levels in 249 UK properties. Most significantly, the sample was biased towards new, corporate space, i.e., space more likely to be occupied at densities representative of the new office. The buildings totalled over two million square metres (net internal area), and accommodated 173,000 workstations.

Over the whole sample, the mean overall density was 11.8 sq m NIA per workstation. The median value was 10.6 sq m NIA, with a wide range and a standard deviation of 4.6. The distribution of the sample indicates that 82% of the sampled properties have an occupancy density of less than 13 sq m NIA per workstation. There is no data available to place this benchmark in a historical context, but it is the author’s estimate that the same survey undertaken twenty five years ago might have revealed a headline density average of 16-18 square metres.

Higher utilisation The second step to intensify the use of space is to manage the work environment more dynamically. Many cost-conscious organisations maximised their desk densities but, as already noted, there are limits set by building regulations. To intensify use further, therefore, many have gone a step further and introduced desk sharing.

It is well known that traditional office layouts are underutilised most of the time due to people being out of the office, and many organisations have introduced flexible working styles and desk sharing as a means of improving their use of space. More dynamic use of space, aka desk sharing, allows a building to support more people in the same amount of space: spaceless growth. The impact can be dramatic, often reducing an organisation’s appetite for space by around 20%-30%.

Organisations typically undertake surveys of their staff to understand broad working patterns and then produce templates for space allocation. For example, administrative staff who are desk-based and sedentary might be allocated a dedicated desk and ancillary equipment. By contrast, a mobile consultant or field

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worker might be expected to share a desk with five or six colleagues and have no personal space at all.

As already noted, higher densities and higher utilisation can have a dramatic impact on demand for space. There are countless case studies, but just one anecdotal example must suffice here. The author is aware of one professional services firm that consolidated its real estate and shrunk from a 100,000 sq m estate into a single 50,000 sq m building with more or less the same headcount. Most of this reduction was due to flexible work styles.

It is perhaps worth noting at this point that the drive for efficiency as outlined above has by no means been dominated by profit-driven, private corporations. The UK government has been, in many senses, a trailblazer, and has for a number of years been working towards targets for increased density and higher utilisation. At first these were set at 10 sq m per FTE and eight desks to ten people (the “8:10 rule”). During 2011, as austerity measures bit ever deeper, these targets were stretched to eight square metres and 7:10. There was no “science” behind the change (nor indeed was there much behind the original targets), simply a desire to squeeze ever greater efficiencies out of the government estate. As the austerity agenda spreads inexorably through the wider public sector, the author is aware of local authorities planning sharing ratios of 6:10 and even 5:10.

**A new relationship between worker and workplace** As a consequence of efforts to improve occupancy standards, expensive real estate is being used far more prudently than in the past: a fact to be lauded. Growing numbers of organisations are dramatically changing the way in which they occupy their office buildings.

Traditional layouts are yielding to more dynamic environments in which team work, collaboration and meeting space occupy far greater proportions of space. At the same time, these environments are used far more intensively. Part of the drive is economic as organisations respond to competitive pressures; part of the drive is organisational as they transform their work processes to respond to fluid business environments. Technology is acting as the key enabler. A key outcome is the ability to realise the Holy Grail of “spaceless growth” – accommodating growing headcount without acquiring additional costly real estate.

Thus described there would appear to be little dispute about the changing workplace. However, questions do remain, and there are legitimate concerns over the *degree* to which efficiency measures are being pursued in some workplaces.

High density, highly utilised office environments bring to the worker a set of working conditions that challenge many basic precepts about personal space, co-worker relationships and alignment to employer. For example, as well as taking away dedicated desks, such environments de-personalise space: there is little or no scope for personalisation or for the traditional paraphernalia of the office desk (for example, personal effects). Whole floors (sometimes the size of football pitches) can be subjected to a corporate cookie-cutter space plan which can, if not designed and managed appropriately, resemble the featureless production line office layouts of 1960s and 1970s offices. Untidiness and personality are sacrificed on the altar of efficiency and agility.

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A further development of this philosophy goes under the acronym of “BYOD”, or “bring your own device”. The essence of this is that with the development of Cloud technology, and with the increasingly grey area between workers’ business and private lives, not to mention the impact of tablet technology and social media, workers will increasingly provide their own computer technology.

The danger here lies in the possibility that more and more workers might become physically and emotionally distanced from the organisation of which they are a part. Is this in the best interests of the organisation in terms of its ability to harness the skills of its employees and direct them toward a shared set of goals? It might well be the case that the answer to the question is “yes”; but the objective evidence is wafer thin. Similarly, while in the office, does the straightjacket of cookie cutter space planning and minimal personalisation really enhance productivity? Do the benefits of social space really outweigh the disbenefits of personal space? Again, real, objective evidence is as scarce as hen’s teeth.

**In whose interests?** There is a further mantra underlying the design agenda that does not get challenged in open forum: that such transformation projects represent a great leap forward for the worker, or even that the changes are being made for the worker. Such environments are often described as *liberating workers, freeing them from the shackles of the office; providing them with work-life balance and enabling them to make choices*. All of these might be true, but where is the evidence? The concern is that for some workers, the claims might not be true. For some workers, such schemes can appear to turn them into units of labour input rather than valued members of an organisation whose objectives they share and contribute towards.

Certain workplace transformation projects tend to attract a good deal of publicity, such as those of creative businesses and brand-aware corporates, who often feature in articles describing their “funky” layouts and “quirky” features. Putting aside for one moment the fact that such articles rarely articulate the tangible business benefits of the changes (how they directly contribute to organisational culture and performance), they fail to address the fact that what might be “liberating” for one type of worker (personality, function, station) might be threatening to another with a different profile. While templates of worker types might be employed to define shades of grey in terms of what office facilities each is “entitled” to, the overall impact is a fundamental change in the relationship between worker, employer and, literally, their common ground – the workplace.

The question is whether the contemporary office workplace design agenda really addresses the manifold personal, cultural, business and professional issues arising from greater mobility, flatter organisations and an increasingly impersonal work environment. And all this before mentioning the pressures associated with information and communications overload and the expectation of 24/7 availability.

It is not the intention here to suggest that the efficiency agenda is wrong. The argument for making more efficient use of expensive real estate is undeniable. Accommodation should enable organisations to adapt to rapidly changing conditions; to churn and restack, and to reduce the impact on the bottom line. The question is whether the emphasis of the workplace design agenda has perhaps leant too far in one direction. The fact that it has done so without any real, objective evidence makes the question both relevant and important.
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The effectiveness agenda
Most organisations in the modern, service economy have very few physical assets: they largely trade in the less tangible “knowledge economy”. Increasingly, short-term leases are replacing long leaseholds and freeholds; and capital intensive plant has yielded to rapidly depreciated and quickly obsolete desk-top equipment. As a consequence the single greatest asset (and cost) for most organisations today is their people. Estimates suggest that for typical office-based organisations, people costs can represent over 75% of total business costs.9

It is within this context that the role of the workplace, and its design, in supporting organisational effectiveness is a critical one that has relatively recently come under the spotlight of senior management teams. Whereas in the past the workplace was seen by senior management simply as a leaden, inert and inflexible cost of doing business, it is now coming to be recognised as a strategic resource that can be actively managed to improve the effectiveness of the valuable and costly assets which it houses: the workers.

Explaining effectiveness The relatively recent tendency to see the workplace as a lever of organisational effectiveness has led to an almost frantic search by designers to demonstrate how this or that aspect of the workplace experience can influence productivity, or effectiveness.10 Environmental quality, facilities services, furniture, heating and lighting, and space planning are all routinely cited and measured. The question here is whether such indicators are in fact sufficiently robust and reliable to form the basis of what can be quite radical and expensive workplace change programmes.

The real danger of extrapolating the impact of context-free influences is a form of reductionism: the tendency to divide the world into ever smaller boxes until, finally, we find one that helps to confirm our expectations. This process of description and categorising is comforting because it gives us a level of simplicity that isn’t otherwise there. The danger comes when we use these specific boxes to generate prescriptive models that claim to provide a more general understanding. Such output can be used to help paint a picture that is incomplete and, at worst, possibly hopelessly wrong. It is therefore inadequate to argue that “we are working with the things within our control”.

In other words there is a danger that a set of narrowly focused variables is stretched almost to breaking point in an effort to explain issues or solve problems that actually require “cross cutting” thinking in order to provide workable and sustainable solutions.

Thus while current approaches to measuring effectiveness are not wrong, per se, their limitations must be recognised. For example, empirical work usually limits the definition of effectiveness to that of the individual (rather than the organisation), and it tends to limit the definition of the workplace to the physical aspects of the fit out.

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9 A report published by CABE and BCO in 2005, The Impact of Office Design on Productivity, suggested a figure of 85%.
10 For the sake of brevity, the question of “what is productivity” is not explored here. For a useful exploration of the issues see: Thompson B (2008) Workplace Design and Productivity: Are they Inextricably Linked? RICS, London
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Such approaches define the work environment as a physical entity, largely ignoring the business, social and systemic influences on performance. *Reductio ad absurdum?*

In another example of the limitations, many empirical studies rely on self-reporting, whereby individual workers record whether they “feel” or “believe” that their effectiveness is affected by the environment, facilities, furniture, space planning and so on. Leaman and Bordass¹¹ recognised the difficulty of defining a productivity measure for office occupiers, suggesting instead self-reporting on workplace factors as an acceptable surrogate. Indeed most practitioners and academics seem to take the view that in the absence of anything else, this approach will suffice. Again, while this is not wrong, such data cannot possibly contextualise the motivations of the individual: how closely they are aligned with the organisation, their general level of work satisfaction, or their relationships with colleagues and bosses.

No matter how well planned and responsive the work environment is, if individuals are not comfortable, or aligned, with the organisation, their effectiveness will suffer. Conversely, individuals who are highly aligned to an organisation, and deeply motivated by their work, might put up with all manner of workplace discomforts and shortcomings while at the same time being highly productive.

**The need for integrated thinking** Because of these limitations, the extent to which such an approach is reliable as an evidence base upon which to build business cases for change management programmes is questionable. Influences and symptoms often get confused, and as a result, solutions can be unsustainable palliatives. Something more broadly-based, which is systematic, replicable and objective, is required if we are to truly understand workplace effectiveness.

There are at least four areas which will influence an individual’s effectiveness (Figure One). Some are beyond the control of the workplace designer/manager; others can be more directly influenced. The key point here is that worker effectiveness is influenced to a very large degree by factors other than those listed under “Place”.

In order to design a workplace that is aligned to operational needs, Organisation, People, Systems and Place factors need to be addressed in an integrated manner. This ecological approach recognises the interconnectedness of influences. Too many work style projects fail to have a demonstratively positive impact on the wider effectiveness of the organisation because they are based on a very narrow set of indicators.

The implication of Figure One is that as the workplace becomes more fluid so its management will need to become more sophisticated and responsive, and so the need for greater co-ordination with other infrastructure areas such as human resources and technology will increase. Workplace designers and managers will need to work less in isolation, and increasingly work in multi-disciplinary teams, in an enabling role, providing support to complex business processes though space and time.¹²


To be effective, the workplace will need to result from collaborative efforts, “where IT and HR along with workplace management are combined to achieve an effective integrated support service for business operations”. Workplace managers must engage with organisations in a far more meaningful fashion.

[They] need to become ‘multi-lingual’ in terms of their ability to interpret the needs of their customers (individual, group and corporate) and translate facilities related issues into a language that enables them to communicate effectively with managers of the business.

Figure Two shows a simplified model of this convergence (there could be many variations depending on specific circumstances). The model describes the role of business infrastructure management (BIM). There are already a number of examples of this arrangement in large, corporate organisations. Four features of this model should be noted.

First, the traditional property or FM function is referred to as occupancy management to recognise its real role: to manage the occupation of space for operational effectiveness. Secondly, the BIM function acts as an intelligent client unit, gathering, interpreting and providing for the needs of the organisation.

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15 Harris (2006) ibid
Thirdly, the BIM leader is likely to be the Board representative, and might not originate from any of the three named resource areas. Finally, Treasury is excluded from the model, though its influence is recognised.

One further point about Figure Two is worth highlighting. This is that while there have been numerous workplace transformation projects where the property and technology functions have worked in concert to bring about physical and work process changes, in a good proportion of these cases, the HR function has been singularly unengaged.

As a consequence, far too many “workplace transformation” projects have failed to adequately transform the contract between employer and employee. The physical surroundings change; the tools of the job change and the right to a dedicated desk and associated paraphernalia change, but the contract with the employer is, it seems, immutable. More often than not HR functions have only a passing influence on projects. Yet the influencing factors outlined in Figure One, and the interconnectedness of functions suggested in Figure Two, amply demonstrate the need for HR to be an integral part of change.

Concluding thoughts
The title of this paper, Reflections on the Modern Office, was chosen with some care. The overall purpose here was to reflect on a number of issues that have arisen within the context of practical workplace planning experience, and to pose a number of questions about some accepted truths in the design and management of modern offices. The intent was not to assert that current approaches are wrong; neither was it to set out an alternative agenda. Either of these would require supporting evidence that simply does not exist.

“Change is inevitable. In a progressive country change is constant.”[16] Disraeli spoke at a time when society was on the threshold of an earlier period of rapid change, leading to the introduction of electricity, the motor car and the skyscraper, to mention but three world-changing innovations. And the technology-enabled

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[16] Benjamin Disraeli Speech Edinburgh, 29th October 1867
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business revolution of the past two decades is no less profound. There is a danger therefore that to question how workplace design has responded to this revolution might attract accusations of backward-looking, or anti-progressive thinking. But these are not features of the current analysis.

This paper has shown how primarily economic considerations are pushing the efficiency agenda further and further in order to reduce demand for expensive property (albeit that office rents today are less costly in real terms than before the oil crisis of the early-1970s). While sometimes disguised as technology-enabled change, the underlying motivation is cost reduction. And while the effectiveness agenda could potentially ameliorate efficiency drives with compensating design measures, many projects aimed at improving effectiveness are based on a startlingly narrow evidence base.

The combined impact of the efficiency and effectiveness agendas is a wholesale change to the manner in which modern office space is occupied. This is a fact. There is a fundamental shift underway in the relationship between worker and workplace.

To return to our introductory metaphor, the issue upon which to reflect most deeply is whether the proximate causes of today’s workplace are damaging the interests of its ultimate cause. Has the design response become overly prescriptive and is it, perhaps, in the longer term, working against the very interests of the organisations it seeks to support?

The jury is far from returning.