

# Workplaces of the Future

*Effective, expressive & exciting*



In this Info Data, Davis Langdon reviews the issues surrounding the future direction of office fit-outs.

*Innovative thinking* |

**DAVIS LANGDON**



# Introduction

With a new office development cycle underway and a buoyant leasing market led by tenants seeking a 'flight to quality', the office fit-out sector is alive and well. Many cities are in fact recording vacancy levels that have not been seen for 20 years.

In this Info Data, Davis Langdon reviews the issues surrounding the future direction of office fit-outs and examines the costs of various projects in Melbourne, Sydney and London.

## Office fit-out sector

*91% of respondents indicate that workplace design has an impact on business success.\**

In a survey\* by Colliers International, staff retention and environmental performance were predicated to be the two biggest drivers affecting building requirements over the coming years – 91% of respondents indicating that workplace design had an impact on business success.

This shift in thinking has come at a time when many companies are paying increased attention to the triple bottom line – the financial, social and environmental aspects of their business. From this, a new generation of office designs are evolving that recognise the need for improved environmental performance and respond to the evolving workplace and organisational behaviour.

- › providing an appropriate density of small power and data points to enable simple reconfiguration

### Increasing the intensity with which workstations are used

The use of workstations within many organisations can be as low as 50%. Methods such as hot-desking have been used to counter this, however this will only suit an organisation with a highly mobile workforce.

### Effectiveness

*– getting the most from employees by providing space that supports the way they do work*

The types of space that may be included are:

- › open plan space with a combination of shared and owned desks
- › limited cellular office space
- › 'touch down' facilities
- › break-out areas
- › study booths for concentrated work
- › flexible meeting rooms
- › service areas for printing, photocopying, and the like

### Expression

*– the use of premises as an internal and external expression of corporate values*

The value of good design includes the way that occupants respond to workplaces that have strong expression and a relaxed atmosphere. Corporations are using this approach to connect their values to their people, to create a workplace that has energy and excitement, resulting in a happier and more productive workforce.

The challenge is therefore to maintain the overall efficiency of space planning while increasing effectiveness by providing appropriate work settings, segregating incompatible spaces and incorporating the corporate values of the organisation into the space.

Typically the cost of providing a workplace is the second largest business cost after employees so it makes commercial sense to link office design to an organisation's performance. Improved working efficiencies are now being costed to justify increased fit-out budgets.

## Objectives

The creation of office space incorporates many design variables including the buildings themselves and their internal and external environments.

The way these variables affect an organisation are many and varied and can be structured under the following objectives, any combination of which might define an organisation's priorities:

### Efficiency

*– highest and best use of space*

#### Floor plate efficiency

Selecting floor plates that have well planned cores and a layout that permits efficient circulation.

#### Space planning efficiency

Optimising occupation densities by:

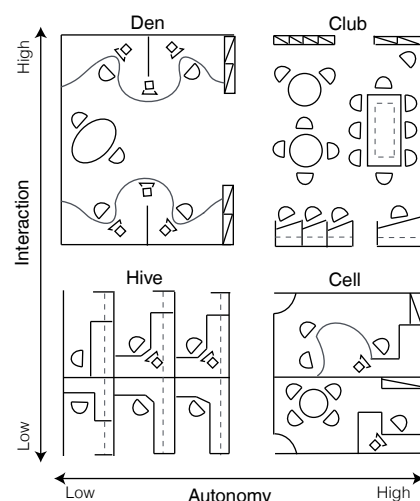
- › greater use of open plan office space
- › rationalising space standards
- › actively managing on-floor storage
- › minimising requirements for secondary on-floor circulation

#### Minimising cost of churn

Office churn has become a significant cost for many companies. The cost of moving staff can be minimised by:

- › adopting universal space planning standards – having the ability to move people without the need to reconfigure workspaces is vital in reducing the cost of churn
- › use of interchangeable furniture and partition systems

### Description of user needs within workspace (DEGW)



# Key cost drivers

The key cost drivers associated with an office fit-out will include the following:

## Type of business and their space requirements

The differing requirements of tenants such as corporations, government departments and professional firms will have a major impact on staff densities, floor plan (cellular offices versus open plan), quality, flexibility and servicing requirements.

## State of completion and suitability of base building

The base building will typically be complete to either of the following two standards when the tenant signs the lease:

- > finishes to landlord's areas only, with services distribution capped off at risers to each of the floors (shell & core)
- > as per above but including floor finishes, suspended ceilings and extension of mechanical and electrical services

There is no standard definition of either and the works included will differ from building to building.

The tenant can realise the following potential benefits when leasing office space in the first condition particularly as a pre-let with integrated fit-out:

- > avoiding demolition and alteration costs
- > opportunities to change the base building specification without incurring significant on-costs
- > potential for reduced programme durations

## Space requirements

Although general office space will take up the bulk of the floor plate, as described earlier, the move towards more effective designs will now see fit-out projects include additional facilities such as breakout areas and 'touch down' facilities which have different cost profiles.

## The extent of services installation

The key cost drivers associated with services are as follows:

- > level of density in open plan areas
- > amount of cellular space (ie offices, meeting rooms)
- > level of security
- > extent of AV installation
- > IT requirements including redundancy for power and IT

## Overall programme

The overall project programme will affect cost, particularly the amount of acceleration required to meet client needs. Fast tracking the overall project programme can be achieved by:

- > overlapping the design, procurement and construction processes
- > shortening the tender period
- > integrating the fit-out with the base building works

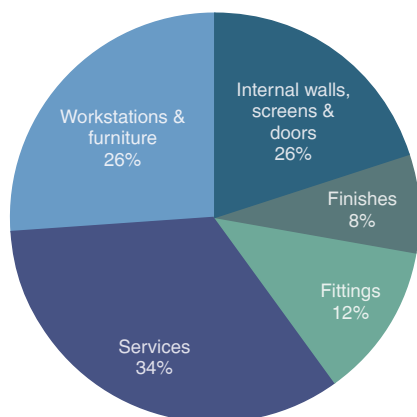
Cost penalties may be incurred for fast tracking when compared to traditional procurement methods although the benefits of faster occupation can offset these additional costs.

## Incentives

The negotiation of any lease incentives, such as landlord contribution to the fit-out cost, rent free period, or similar, needs to be considered.

# Indicative building costs

Typical breakdown of elemental cost



The following should be used as a guide only. Please note that the figures are based on the fit-out of a Melbourne CBD office building with the base building works having been completed to include floor finishes, suspended ceilings and extension of mechanical, fire and electrical services. For regional or refurbishment variances, please contact Davis Langdon direct to assess your specific requirements.

The below costs are current as at the first quarter 2008.

Business sector	Cost per Net Lettable Area (NLA)
Government departments	\$1,000 – \$1,300/m <sup>2</sup>
Professional firms	\$1,200 – \$1,400+/m <sup>2</sup>
Corporations	\$1,200 – \$1,600+/m <sup>2</sup>
Typical design professional fees cost	4.0% – 6.0+%
Typical workspace per employee	14 – 17m <sup>2</sup>

Exclusions: GST, AV equipment, IT equipment, removalist costs  
 Assumptions: Based on the fit-out of Melbourne CBD office space, >3,000m<sup>2</sup> NLA

# Managing risk on fit-out projects

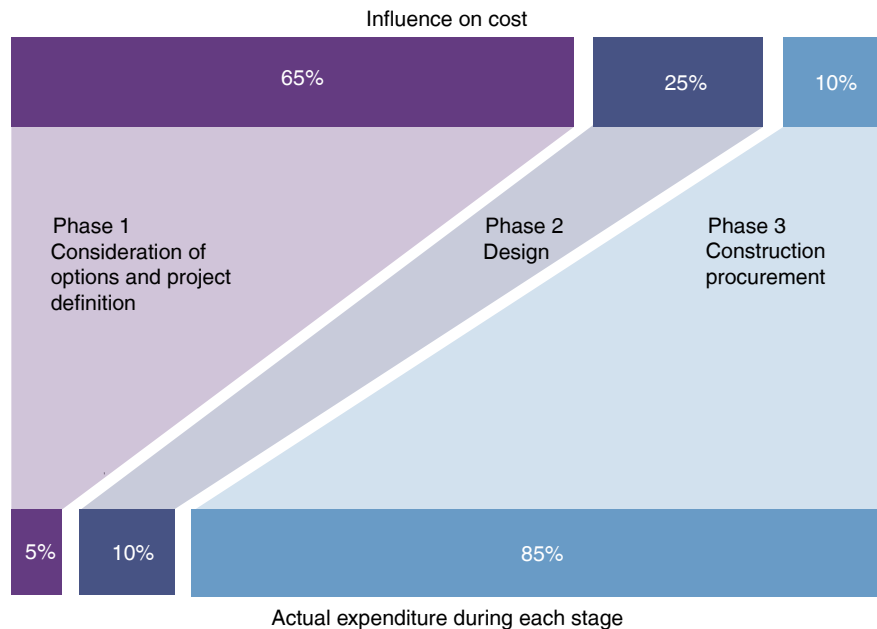
*If the programme is particularly tight then negotiation with a single contractor may be the best option.*

**The office fit-out sector is complex and challenging.** Due to tight programmes and budgets the risk profiles can be high when compared to other projects. As one of the keys to delivering a successful project is remaining flexible, it is important to have the contracts, contingencies and change management procedures in place to allow this flexibility.

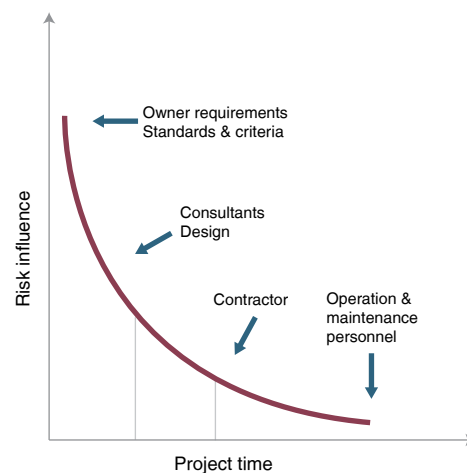
Time is usually the most significant factor for the client when choosing a procurement route. The overall programme will usually be dictated by business needs or lease dates. Lump Sum contracts, where the programme allows, can often deliver the best results. To achieve this the design information must be complete before construction starts.

Fast track approaches such as Construction Management or Two Stage Tendering can themselves be a significant source of risk if the design information does not keep pace with the construction works. Because of this it is important that consultants and contractors with specialist expertise are selected.

If the programme is particularly tight then negotiation with a single contractor may be the best option. Some cost competitiveness will be lost when compared to a single stage tender. However the benefits of having contractor input into buildability, value engineering and ordering of long lead time items may well offset the premium paid. Through the benchmarking of project costs, competitiveness can be verified to ensure value for money.



## Major decision-makers' influence on risk



## Green fit-out

*... additional costs are in the order of 0-5% for a Five Star Green Star certified fit-out.*

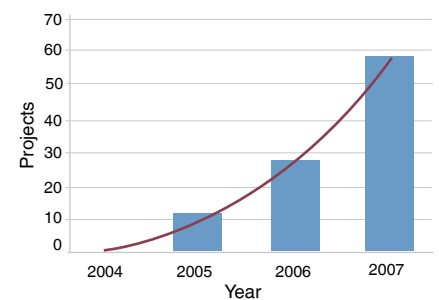
The popularity of green/sustainable office fit-outs is evidenced by the number of projects registered for certification under Green Star Office Interiors<sup>#</sup>. Through an innovative and life-cycle approach to design, these projects are demonstrating the sizeable business and environmental benefits that can be achieved – without compromising commercial viability.

Projects are indicating that the additional costs (above a comparable non green project) are in the order of 0 – 5% for a Five Star Green Star certified fit-out. However, over time we would expect the perception of 'extra' cost to diminish as innovative design becomes the norm and companies realise the cost benefits of going green.

Some of the green initiatives that have been used in green fit-out projects are as follows:

- > extensive commissioning and building tuning
- > providing tenant guides to enable the fit-out to perform to its potential
- > re-use and recycling of construction waste
- > provision of outside air exceeding the requirements of the Australian Standard
- > indoor air quality improved through:
  - use of low-level off-gassing materials such as paint, carpet and adhesives/ sealants
  - minimising formaldehyde in composite wood products
  - minimising PVC
- > external views and natural daylighting provided to a significant proportion of the work area
- > efficient lighting zoning and power density, equipment, controls and building design enabling fit-outs to achieve the Five Star Australian Building Greenhouse Rating (ABGR)
- > provision of tenancy sub-meters
- > peak energy demand reduction methods including on-site renewable technologies
- > use of workstations, floor finishes, chairs, tables and storage units that have a high proportion of recycled content and the ability to be re-used or recycled
- > use of Forest Stewardship Council (FSC) certified timber and composite wood products
- > large areas for recycling collection provided throughout the office space

**Registered Green Star office interiors projects<sup>#</sup>**



Source: Green Building Council Australia

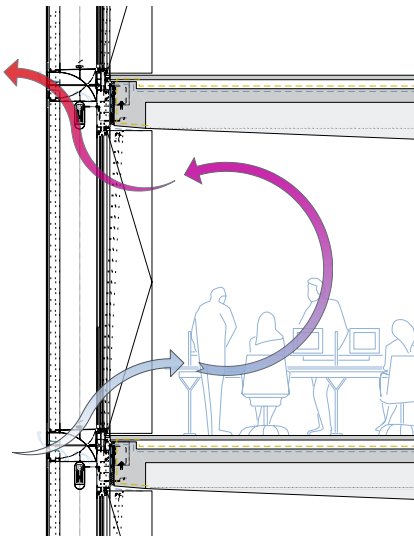
# Case study

## 1 Bligh Street Sydney

Architect	Achitectus
Office levels	29
Average office level (NLA)	1,600m <sup>2</sup>
Unique features	Designed with intent to achieve Six Star Green Star Double glazed façade Passive cooling/air circulation Elliptical plan 12% more efficient than a rectangular building

Source: Architectus & Ingenhoven Architects

### Passive circulation



Source: Architectus & Ingenhoven Architects

Concepts currently at the forefront of office design and fit-out are represented by the 1 Bligh Street development in Sydney.

The building distances itself from conventional design standards by achieving several complex and modern building initiatives and an increased desire for improved Indoor Environment Quality (IEQ).

### Initiatives

- › Double glazed skin façade providing mixed mode ventilation (ie optional natural ventilation) drawing the air through the inner façade using convective currents generated by the northern exposure
- › Natural ventilation system utilising an atrium at the southern end of the building to exhaust 'used' air and allow cleaner non-recycled air to be passed through the office space

This fundamental concept of designing more intelligent office spaces moves closer to limiting 'sick building syndrome' from workplaces and is the basis for reducing staff sick days and improving overall productivity. Building designers are now recognising this and constructing buildings to suit the flexibility desired by prospective tenants and employees to more open, collaborative and inviting work spaces.

The 1 Bligh Street development has anticipated the increasing demand for improved working environments. Unlike traditional buildings where the office fit-out was restricted by the base building design, this development has been driven by the realisation that tenants desire more collaborative and open environments. Therefore the buildings function has been designed to accommodate this trend to open plan indicating the future of office fit-outs.

The open plan layout at 1 Bligh Street provides the following:

**Flexibility** – easily modified layout to suit expansion or contraction of existing space or through acquisition of neighbouring tenancies

**Mobility** – workstations that are adaptable in size and location to manage differential growth between various service delivery lines of the organisation

**Communication** – faster interaction between colleagues through immediate awareness and contact, thereby addressing queries, discussion and conclusions faster

**Materials** – reduction in construction materials (socially and environmentally responsible)

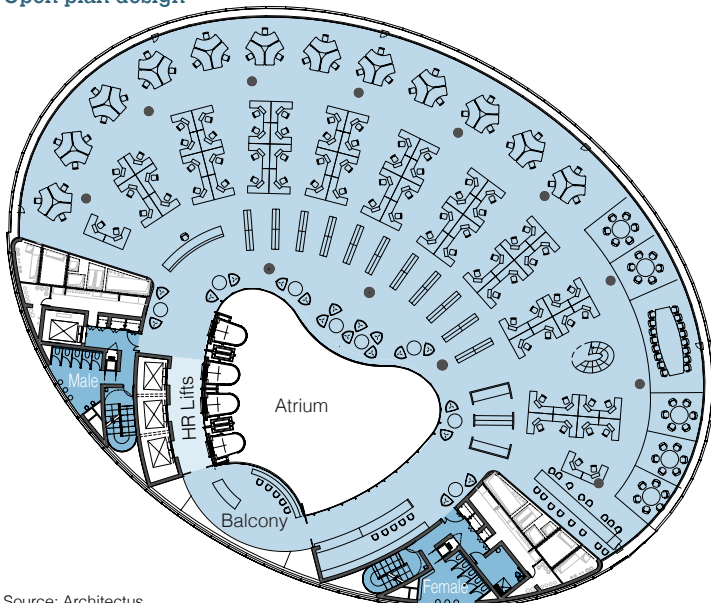
**Environment** – improved IEQ, reducing sick leave, improving productivity, improving employee sentiment

Variations in office fit-out design practices can also yield variations in floor space occupancy.

With current demand for office space exceeding supply and the imminent introduction of an emissions trading scheme, adding to the costs of conducting business either directly or indirectly, organisations will be seeking to improve productivity within the constraints of their environment.

Moving away from the traditional cellular office system to open plan systems can achieve a reduction in greenhouse gas (GHG) output per occupant. Although current leading environmental rating systems do not credit points for such initiatives, the financial impact on businesses not utilising their work-space effectively and efficiently will become increasingly burdened by the rising cost of energy.

### Open plan design



Source: Architectus & Ingenhoven Architects

The table below is based on alternative architectural office fit-outs for the 1 Canada Square development in London:

### Typical office area types

	Circulation zone	Cellular	Open plan	Support	Occupancy (sqm/person)
Cellular (single offices)	21%	40%	15%	24%	<b>19.8</b>
Intermediate layout	20%	20%	35%	25%	<b>12.6</b>
Open plan	16%	12%	45%	27%	<b>10.6</b>

# The future of office fit-out

The changing needs of individuals are impacting on office fit-out designs. Employees are exhibiting changing expectations about the nature of work, and as the work/life balance of staff becomes more valued a growing sophistication in the design of office fit-out is emerging.

## The drivers of change

### Global skills shortage

With the lowest levels of unemployment on record, corporations are increasingly concerned about retaining staff and this in itself is becoming a persuasive factor in fit-out decisions.

Skilled employees are sought after, highly mobile and exert a considerable amount of employment power. Smart firms know that their office's fit-out has the potential to attract and retain staff – a competitive advantage in this tight market.

### Changing demographics

Boundaries between family and career are set to blur further.

Smart employers have already recognised that providing workplace crèches as a part of office fit-outs can set them aside in attracting working mothers to remain in the workforce.

At the other end of the spectrum there are predictions that a similar groundswell of changing demographics will change the way we work. The aging population will see increased need for people to care for aging relatives at home – which in turn will see more home-based workers.

### The 24 hour workspace

In workplaces where long hours are de rigueur, employers are recognising that a 'rest space' (where employees can intermittently nap) can make productivity sense.

Parents of newborns who have returned to work are better armed to cope with stress and deliver better productivity given the opportunity for a lunchtime rest.

The Journal of Sleep Research uncovered that short naps between 6 minutes and 50 minutes can substantially improve a worker's ability to do work.

Daytime naps improve procedural and motor memory.

## Design

Designers and manufacturers are becoming increasingly aware of the impact that fit-out lighting can have on occupants. Light temperatures at the blue end of the spectrum between 6,000K and 8,000K increase activity and stimulate occupants, while colours at the warmer end of the spectrum (around 2,700K) help to increase concentration, relaxation and help soothe workers.

Aroma and sound are also being used internationally to produce desired effects from occupants – to enliven, to invigorate and to reduce stress.

## Technology

The much touted 'virtual office' has long been considered as the next step in the evolution of our workplaces. While we have yet to see the virtual office take hold in any significant manner, we acknowledge that employees are certainly less dependent on the office itself.

The internet, wireless technology and mobile computing have allowed employees to work in a less structured way and become increasingly mobile. Simultaneously technology has allowed companies to track and monitor their employees more easily.

## In conclusion

With all of these considerations in mind, the role of the office space itself is undergoing its own evolution.

The office has become more of a cultural centre, with workspaces, meeting spaces, private spaces and chill out spaces – everything required for employees to meet and socialise with their associates.

Futurologists, looking into the nature of employment in 2018<sup>^</sup>, are still predicting an exodus from the traditional workplace.

However, with offices in most cases being occupied more intensely for longer periods than ever before, it remains to be seen if this is a utopian dream or the future of our workspaces.

## Endnotes:

\* *Colliers International Office Tenant Survey* (Colliers International 2006)

# *Green Building Council of Australia*

<sup>^</sup> *Environmental Scanning – Trends affecting the world of work in 2018* (Chartered Management Institute March 2008)

## Our Offices

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	Melbourne	+61 3 9933 8800
	Perth	+61 8 9221 8870
	Sunshine Coast	+61 7 5479 2005
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Townsville	+61 7 4721 2788	
New Zealand	Auckland	+64 9 379 9903
	Christchurch	+64 3 366 2669
	Wellington	+64 4 472 7505

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**Certification Services** – Third Party Certification to National and International Standards

**Sustainability Services** – Strategies for New and Existing Buildings

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