HEALTHY OFFICES

WHY WELLNESS IS THE NEW GREEN
Helping businesses put their people first

CitySwitch is a free program involving more than 750 business leaders.

We have tools to help you:
- improve the wellness of your staff
- increase staff engagement and performance
- establish a workplace bike fleet
- monitor your office’s health.

Visit cityswitch.net.au for more about CitySwitch’s online resources, one-to-one support, events and awards.
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Lead author: Cameron Jewell with Sandra Edmunds
Cover: MYOB office in Richmond by Futurespace. Image by Nicole England.
Once you open this book and scan its pages, we promise you’ll be excited and impressed.

This isn’t an easy call to make because all of our books are very special and become industry guides, downloaded over and over. But I’m sure our Healthy Offices book will walk off its virtual shelf and become one of our very best performers. Why? Because if there was a topic that is top of mind right now with office designers, HR managers and developers, it’s how to create healthy buildings – office spaces in particular.

This book is all about people. It is rife with fabulous stories and photos of ordinary folk in amazing spaces. You can feel the underlying messages in the colours, the abundant greenery and joy that leap from the pages: treat the humans in our buildings with the respect and acknowledgement they deserve, give them healthy, creative and biophilic spaces, and watch the positive feedback loop soar.

A huge thanks to Cameron Jewell, our principal author in this book, who has dedicated many weeks of his multiple talents to making sure this book sings with the right balance of science, evidence and passion.

In a nutshell that’s what the sustainability movement is all about.

At long last the spotlight has swung to its natural resting place, the need to align our natural environment and our built environment with the needs of the living things within it.

Many thanks also to CitySwitch, our collaborators in this final of our four-part Greening Your Office series. Esther Bailey’s team is second to none in professionalism and dedication to creating a better future for the many thousands of people who every day make their way to our CBDs and other centres of commerce. And a big thanks in particular to Phill Raso from the City of Perth’s CitySwitch partnership office who has brought some deep thinking and structure to this project.

Thanks also to our advertising support partners, CBRE, Floth and the International Well Building Institute, each a key contributor to the development of this space.

We know this book will be the amazing guide to better, healthier offices this industry needs.

Tina Perinotto
Managing editor
The Fifth Estate
Rise of the healthy office
The average Australian spends 90 per cent of their time indoors. For many people a large proportion of that time is spent in the office – eight hours a day, five days a week (and often more).

But what are these offices doing to our health? Are they providing a healthy environment in which to be spending such a large chunk of our lives? Are they conducive to human sustainability? And are these environments enabling us to perform at our best?

These questions are being asked by more and more leading companies, and in the past few years have blossomed into what’s being called “the next wave of sustainability”: workplace health and wellness.

CitySwitch national program manager Esther Bailey welcomes the greater focus on people.

“CitySwitch is the champion for office based businesses and their staff so it’s great to see building owners move beyond the transaction of space to really increase their focus on the end customer – the thousands of people who inhabit their buildings each day. This is the point where place-making gets a soul,” she says.

“It’s important for businesses to understand the impact their physical space has on their people, their brand and their corporate culture. But equally, businesses must also move beyond both their corporate health program and their reliance on building owners to provide good indoor air or environment quality. A holistic focus on wellness and, dare we say aloud, happiness, has bottom-line benefits for companies.

“The time is right to set our sights on a broader sustainability horizon that puts people firmly at its centre.”

CitySwitch is focusing on wellness with its Healthy Buildings Campaign. At its core is an understanding that to be truly sustainable and efficient an office building must have human sustainability as a key requirement.

A NEW DISRUPTIVE LENS

But what do we mean by a building conducive to health and wellbeing? Partly, it’s one that neither adversely affects the health of its occupants nor that of the larger environment. Increasingly it’s a building that works to actively improve people’s health.

And that’s a very interesting, if not challenging, new lens for any corporate through which to view their staff, and potentially quite disruptive. It perhaps partly explains why this sector has exploded like topsy in recent years.

In the CitySwitch view, a healthy workplace can be organised into four key areas:

- **Mind**: The subjective assessments of office workers’ mental wellbeing: their...
happiness, their stress levels and their ability to concentrate and perform.

- **Body**: Measurable elements such as activity levels, hours worked, time sleeping and nutrition.
- **Culture**: Both office policies that impact on wellness, and the unwritten rules of the office. Can you take short breaks to regain your focus? Is it really okay to call in sick?
- **Workplace**: The actual physical environment that impacts on wellness – the layout, furniture, building materials, lighting, acoustics and HVAC.

Each of these areas must be addressed to create a truly healthy working environment.

“**Wellness is ‘the second major movement towards understanding the impact of real estate on the world around us’**.”

Bailey says modifying the physical characteristics of a building’s interior is not a new development and is typically referred to as Indoor Environment Quality, or IEQ.

“Corporate health programs are also nothing new. It’s just that now we’re looking at how things like IEQ and corporate health programs fit together, along with other things like culture, the business case and sustainability.”

Key is that this is a holistic package.

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**AUSTRALIA’S AHEAD OF THE PACK – AGAIN**

The concept of a healthy workplace isn’t so new. But as so many things when it comes to sustainability, Australia is ahead of the curve.

AMP Capital head of sustainability, real estate Chris Nunn says there is a range of tools available to measure, manage and optimise health in buildings.

“In the Australian commercial property sector, we’ve actually had a pretty mature suite of tools that addresses indoor environment quality, and health and wellbeing,” he says.

For example, the NABERS IE tool was launched in 2009 and focuses on achieving an office indoor environment conducive to health and productivity, through optimising the built form, services and technologies.

“**What good is a lunchtime yoga class if you return to a highly stressful environment? And what good is a healthy food option when the air is filled with toxins?**”

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**A HAT TRICK OF AWARDS AFTER A TRIO OF WORLD FIRSTS**

Flooth undertook the building services engineering and environmentally sustainable design for 69 Robertson Street.

The sustainability results speak for themselves:

- Winner of the 2016 UDIA (Nat) Award for Excellence in the Consultant’s Excellence category.
- The FIRST Green Star Design and As Built v1.1 certified rating in Australia.
- The FIRST building in Australia that has formally and publicly adopted the Australian Sustainable Built Environment Council’s (ASBEC) standard definition of a zero-carbon building.
- The FIRST 6-star NABERS Indoor Environment rating in Australia for their tenancy at Level 2 & 3, 69 Robertson Street, Fortitude Valley.
But what’s recently set this off as a massive global trend is the arrival of the WELL Building Standard – which has extended wellness to areas not often measured by traditional IEQ ratings, including comfort, nourishment, fitness and mental health.

It’s seen as a game changer for how we think about our buildings and their purpose, with companies such as Grocon, Macquarie Bank, Mirvac, DEXUS, Lendlease and Frasers Property getting in on the action.

In a nutshell, WELL put building professionals in the same room as medical professionals and asked, “What do healthy buildings look like?”

Rick Fedrizzi, chairman and chief executive of the International Well Building Institute (IWBI), which administers the WELL Building Standard, says wellness is “the second major movement towards understanding the impact of real estate on the world around us”.

“We understand the building. We understand the components and the integration. But what about the next level? What about the human being who’s inside those buildings? It’s not about the bricks and mortar, steel and glass. It’s about the human being inside those buildings,” he says.

“Now for the first time we are able to look at buildings from a different standpoint – to understand how the human in those buildings, how all of the systems of the human body actually engage with the different pieces of the building at any given time, and ultimately advance the building for health and wellness.”

In Fedrizzi’s terms, there’s no separation between sustainability and health.

“Sustainability equals health. If you don’t have a building that respects you on every level, you are never going to the place of health that we want, not only for ourselves and our coworkers and employees, but our families as well.”

**THE BENEFITS OF HEALTHY BUILDINGS**

In a typical office building, 90 per cent of operating costs come down to staff. By comparison, just one per cent of operating costs typically goes to energy, though in the green building movement it is where much of the focus, until recently, has been placed.

From the chief executive’s perspective, then, the benefits of increasing the productivity of staff is both potentially massive and clear, and even a small change can have a big impact.

A poorly performing building can have productivity costs through increased absenteeism, increased presenteeism, higher staff turnover, inability to attract appropriate staff and medical costs.
Globally each year $1.1 trillion is lost to chronic disease, $300 billion is lost to stress, $250 billion is lost to injuries and illness, and $550 billion is lost to disengagement.

For some people, such as ISPT’s general manager, sustainability & technical services, Alicia Maynard, this represents an opportunity.

“The flip side is if in some way we can enhance the built environment to reduce stress or to reduce illness or injury or to make staff more engaged, it has a massive impact in terms of the financial bottom line for a business,” Maynard says.

“Healthy buildings and wellness are definitely on the agenda in terms of conversations we’re having with existing customers as well as new customers.

“I think we are really hitting that next wave of what sustainability looks like.”

DOES IT COST MORE? AND DOES IT AFFECT SUSTAINABILITY?

There has been concern that some indoor environment quality factors – such as carbon filtration or increased air flow rates – could attract an “energy penalty”. That is, require more energy to run.

NABERS national program manager Carlos Flores says if IEQ is done poorly then you could, for example, save energy at the expense of health and comfort.

“The flip side is that if you do energy efficiency really well, you can have significant positive effects on IEQ.”

According to Maynard, good facilities management can lead to savings in utility costs, and also “uplift for our customers in terms of a really healthy and comfortable environment for them to work in”.

ISPT has both NABERS Energy and Indoor Environment ratings across its portfolio.

“From our NABERS rating program there is no correlation to suggest that a building that does have a high NABERS Indoor Environment rating is more expensive to run.

“In fact these results indicate is that if you do have really good NABERS Indoor Environment performance, more than likely you are saving electricity as well.”

So with good management practices there needn’t be a trade off between sustainability and healthy buildings.

ALL SIGNS POINT TO WELLNESS: CBRE

CBRE’s Global Workplace Innovation Roadmapping Project has identified five key trends driving the growth of “workplace wellness”.

Employees are living and working longer: Life expectancy is rising and the workforce aging, with many choosing to work beyond the retirement age.

Declining health: While we’re living longer, it doesn’t mean we’re living healthier. Worldwide obesity has doubled since the ‘80s and heart disease, cancer and diabetes account for more than 60 per cent of deaths. This has led to rising healthcare costs. But if we were to eliminate the known risk factors for these chronic diseases, we could prevent 80 per cent of heart disease, stroke and diabetes, and 40 per cent of cancers.

In the workplace, absenteeism and presenteeism – much of which is due to health factors – cost billions. It is estimated to be up to two per cent GDP in the US and UK.

A talent drain: There’s a “war for talent” in our increasingly globalised world. Attracting the best and brightest – and keeping them there is crucial for business success. Wellness offerings are just the next key step in a business’s attracting and retaining policy. PwC found that a wellness program led to a nine per cent drop in staff turnover for one financial services firm, saving $2.7 million.

A growing awareness of stress and mindfulness: Stress can lead to huge costs for businesses. Across the EU, work-related stress is estimated to cost €20 billion (A$30 billion) a year, while all work-related illness was a massive €185-289 billion (AUS$277-432 billion) a year. The costs, however, can be managed by smart businesses, such as through flexible work arrangements to balance private and professional lives. To counteract the “always on” culture becoming more prevalent, businesses that set aside time for employees to disengage have seen increases in job satisfaction and lower levels of stress.

Technology: It’s now easier for us to monitor and measure our health with the rising prevalence of biometric sensors and wearable technologies that can measure things like sweat levels, heart rate, body temperature and movement, which can give an indication of stress, fatigue and illness. As the old adage goes, if you can’t measure it you can’t manage it. The more data we have on our health, the better able we are to target interventions to keep our performance optimal. The challenge, however, will be getting people to trust the technology and overcome concerns about privacy and security.
IN SEARCH OF THE MOST INTELLIGENT BUILDING IN THE WORLD

The trend towards wellness points to a future where the office as we now know it will be completely different to today. Key trends transforming our workplace include increasing choice over where and how we work, with technology being a key enabler of merging professional and personal lives thanks to technologies like telecommuting and cloud computing. Technology, CBRE’s Smart Workplace 2040 research predicts, will also allow us, and our workplaces, to become much more proactive in measuring and managing our health and wellbeing, thanks to inventions like wearable or even embedded sensors.

Today, buildings are already beginning to respond to innovations such as sensor technology. The Edge Building in Amsterdam is a classic example. Often referred to as the smartest building in the world, the Deloitte-occupied building is filled with 28,000 sensors all brought together by a smartphone app that works to control occupant experience. The app knows your schedule, will find you an appropriate workspace and locate your colleagues, and remembers your preferences around temperature and light to make it as comfortable as possible.

The building is also designed to feel more like the outdoors, thanks to variations in heat and cooling currents. Sensors in LED light panels above desks measure temperature and humidity and provide detailed feedback that can be used to adjust temperature settings. The app can also suggest desk locations to occupants based on their thermal comfort preferences. No one workspace is further than seven metres from a window.

The Edge is also one of the world’s greenest buildings, having scored UK tool BREEAM’s highest score. Developer OVG Real Estate sees itself as “the Uber of buildings”, and says connecting buildings and utilising space more efficiently means we will need to build fewer of them. And, as we know, buildings are responsible for almost 25 per cent of Australia’s greenhouse gas emissions so getting the most out of them is crucial.
Healthy workplace checkup
How do you know if your building is healthy? The first step is to ask the people working in it, according to CitySwitch program manager for WA Phill Raso.

“That alone will provide you with a wealth of information.”

Because of the subjective nature of many healthy building criteria – such as thermal comfort – gauging what occupants think is a key step. How does a worker feel in the building?

“A sensor can tell you what the temperature is but only a person can tell you whether that is the right temperature for them,” Raso says.

NABERS program manager Carlos Flores agrees that asking people’s opinions is crucial.

“There are elements when you talk about thermal comfort, indoor air quality, acoustics and lighting, that are better assessed by asking people how they feel about that component.”

Healthy and happy working environments is the vision of the Perth-based team behind Rate My Space, another qualitative assessment tool that came out of a university research project examining how to improve the energy performance of buildings while maintaining healthy working environments.

Founder Dr Samantha Hall evaluated numerous offices while completing her PhD in sustainable buildings and discovered some pretty poor health environments.

“Often companies don’t realise and staff don’t realise,” she says. “I thought there has to be a better way of actually getting this out because you get so much insight with occupancy surveys, but it’s still not really mainstream.”

The University of Sydney’s IEQ Lab in conjunction with the University of Technology Sydney is leading the way on qualitative data research with BOSSA (Building Occupants Survey System Australia), which integrates with all the major rating tools on the market.

The survey rates IEQ from an occupant’s perspective, covering indoor air quality and air movement, spatial comfort, noise distraction and privacy, connection to outdoor environment, building image and maintenance, individual space, thermal comfort, visual comfort, and health and productivity.

NAB BUILDING SHOWS STRONG OCCUPANT IEQ SATISFACTION

In 2015, BOSSA released results of an Australia-wide survey of 60 buildings, finding that NAB’s 700 Bourke Street building in Melbourne was the best performer for IEQ in the country, topping nine of the 13 categories.

“The results from the occupant survey conducted at 700 Bourke Street are without doubt remarkable,” University of Sydney architectural science lecturer Christhina Candido says.

“NAB’s headquarters topped nine out of 13 IEQ indicators: spatial comfort, individual space, indoor air quality, visual comfort, building image, productivity, work area comfort, building satisfaction, and health and maintenance.”

The survey also found there was a 17 per cent increase in staff satisfaction and 11 per cent increase in staff productivity.
Enter Rate My Space – an analytic platform that engages staff, collects feedback about the physical environment and turns it into actions for property and human resources teams to improve health and productivity.

The tool won a 2015 Curtin University innovation award and was selected under competitive merit for the 2016 Curtin accelerate research commercialisation program.

Following the program, Curtin commissioned the Rate My Space team – which includes Hall, an architect, an organisational psychologist and a technical developer – to trial the tool on campus. The team built the technology and surveyed more than 1000 office-based staff.

“We used to do this on a building by building scale,” Hall says. “With Rate My Space we wanted to grow this. What we are looking at is more of a portfolio approach – instead of going into one building and doing one project, we did 66 buildings.

“And really, for Curtin University, it was one of the most successful surveys that has ever been run on the campus.”

An intense engagement process including offering incentives was used to reach individuals. Participants received a link and jumped online to rate their space. In return, they received a personalised feedback report including tips for improving their working environment.

“We knew that staff were a little bit sedentary in most offices so we developed a ‘walking meeting map’ for staff for the campus,” Hall says. “Just ways of actually engaging not just with the organisations but with all the individuals in these spaces as well.”

“The growing [wellness] market is coming not just from companies wanting to do something about it, but from staff as well.”

Behind the scenes, the team turned the data into actionable insights for the property team.

“We have given some key insights in each building on the things that need the most attention,” Hall says. “And not just building by building but across the whole portfolio.”

The information will go into the university’s strategic asset management plan and will also be used to brief consultants on future works.

Hall plans to spend the next year growing the team and the technology.

“We have some interest from other universities, some large corporates, portfolio owners – even high-rise residential and schools,” she says.

Hall believes Rate My Space is entering a growing market.

“We are starting to get consumers that are more aware [of wellness],” she says. “With the standing desk, people are suddenly understanding the physical impacts that come from sitting all day. The growing market is coming not just from companies wanting to do something about it, but from staff as well.

“If you can start to identify just a couple of things in your building and change them it can contribute to your bottom line because you’re able to get more out of your staff.

“We want people to just love their space and enjoy going into their work environment.”
MEASUREMENT OF IEQ IS FINALLY COMING AROUND THE BEND

Unlike energy, where data has been relatively easy to collect from energy meters, and then used to make decisions regarding management and optimisation, the indoor environment space has in the past suffered from a lack of data.

Flores says while a lot of work has been done on energy, water and waste efficiency, indoor environment quality hasn’t had as much attention placed on it until the last 2-3 years.

Part of the story regarding the surge in interest in healthy buildings is around the technology now coming online that makes it much simpler to actually measure the elements of indoor environment quality.

The problem in the indoor environment space has been that there’s been very little data, and it’s been very low quality.

“So we had to start with: how can we create a system to first of all measure this in a consistent manner, and that’s been obviously a bottleneck for the whole indoor environment quality industry.

“We’ve had to focus on, ‘How do we measure this in the first place?’ A lot of the solutions is basically the analog to an energy meter – creating an instrument that is relatively straightforward for anyone to operate.”

There are a few solutions now on the market.

SAMBA

One tool, developed by the University of Sydney’s IEQ Lab, is SAMBA, which stands for Sentient Ambient Monitoring of Buildings in Australia.

The system monitors and display building performance against a range of indicators, including air speed, temperature, relative humidity, particulates, VOCs, formaldehyde, acoustics and lux levels.

It incorporates a range of benchmarks against which data is compared, such as the ASHRAE targets for CO2 levels.

The SAMBA project has been spearheaded by the University of Sydney’s Professor Richard de Dear.

While data is still being collected and processed, Professor de Dear says it’s already revealing some fascinating insights.

“The faster and easier measurements become, the more time we can spend on the real problems.”

“ASHRAE chapter 8 on thermal comfort has been around for decade. It predicts me, that’s for sure. Yet we’re finding that buildings are operating below the threshold of [predicted mean vote] recommended in that standard.”

De Dear says it is an interesting finding because there is an “energy penalty” for performing outside of these levels.

“So I’m still perplexed as to why it’s so common.”

Flores praises SAMBA’s ease of use.

“You don’t have to be a scientist with 10 years of experience to operate the device. It makes measurement much easier so we can now focus and put a lot of time and effort into how do we improve this place, not just measure.

“I’m really excited about that. The faster and easier measurements become, the more time we can spend on the real problems.”
USING SENSORS AND IOT

SAMBA is currently being trialled in a number of offices around Australia. Chris Nunn says AMP Capital is one of the companies participating.

“We’ve got 60 of those sensors and we’re deploying them in six buildings – 10 sensors per building.

“So we’re measuring [the IEQ parameters] in the space and sharing that information with our tenants and talking to them about optimisation. Most of the results are quite good, so it’s a validation that the IEQ in some of our offices is at the top of the spectrum.”

AMP Capital is now working with Sydney Uni on how to use its collected data.

“So it’s not automatically feeding into the BMS and making control adjustments, though that is the long-term trajectory of where we’ll go,” Nunn says.

“You’re getting a much richer insight into people’s experience with space.”

“I think we’ll have wide deployment of Internet of Things enabled sensors in the space that will feed back into building management systems in the future.

“This is probably an insight into the future direction of our industry – that the deployment of these sensors has traditionally been in central plant equipment, air handling units and in plant rooms, but we’ll see a wider deployment in the space of health and wellbeing, in terms of Internet of Things and big data analytics all come to the fore and enable the information to be turned into something decision-relevant for engagement and operations.”

RICH INSIGHT INTO COMFORT

The trial will establish how to co-optimise energy and comfort.

“So one of the things AMP Capital is doing with the sensors is to see if we could use seasonal set points that will save us energy – so running the building slightly warmer than the conventional 22.5°C±1.5-2°C that you might typically set.

“You might run it at 23°C in summer because people are dressed for warmer weather; you might run it at 22°C or even 21.5°C in winter when people are dressed more warmly.

“Seasonal set points have been around for a long time but it’s only recently that we’ve had these sensors that we can deploy in the space to ask, ‘Are those comfort conditions what’s actually being experienced by our customers in the space?’ , and run things like the BOSSA survey quarterly as well to gauge customer sentiment.

“So you’re getting a much richer insight into people’s experience with space, and I think that’s a really good thing.”
HUX – A NEW FRONTIER OPENS

Another tool getting some traction in the market is Hux Connect, which has a goal of making it cheaper and easier for people operating buildings to optimise their IEQ.

The technology is an Internet of Things-based system – a network of distributed sensors that communicate wirelessly together and aggregate over the cellular network, storing data in the cloud where analytics are performed and then presented via a web portal.

The tool measures occupant amenity elements like temperature, daylight and humidity, which have follow-on consequences for energy efficiency. Recent installations include the City of Melbourne and University of Melbourne.

Hux co-founder and chief executive Rhys Sullivan says advances in technology and cuts in costs mean that non-premium buildings are now able to implement these solutions. He says Hux can act as a “poor man’s [building management system]” for the 90 per cent of buildings that don’t have a BMS.

“A big goal of ours is to start seeing all of these other [non-premium] buildings managed a bit more.”

NABERS’ Carlos Flores says when NABERS IE was updated a couple of years ago, one of the things built into it was the capacity for the tool to use data from these ongoing monitoring solutions coming onto the market.

“So absolutely, we’re definitely very keen to not only use those measurements, but also to be an agent in driving that sector of the industry,” Flores says.

“We’re going to see a significant increase in the number of things we can do [due to technology]. It will open the door to the next frontier in sustainability performance.”
A CASE STUDY IN SUBTLETY AND GETTING BETTER RESULTS

Hux shared a de-identified case study with The Fifth Estate to show how monitoring can lead to tangible IEQ improvements.

It was a complaint-driven issue where staff were not thermally comfortable, and a solution was not able to be found, with the potential for legal escalation between tenant and building owner.

Hux installed 23 sensors in different parts of the office for a period of four weeks. Results showed the problem usually occurred when external conditions were over 25°C, and the office was heavily occupied. Around 1-3pm, the system was unable to maintain comfort.

“This problem was not consistently occurring, but occurred often enough to be noticed by the occupants,” the company case study says.

“It remained within recommended temperature thresholds, but to combat the high thermal loads the HVAC system created excessively large thermal transitions (temperature changes over time and spatially) within the office, and it was these transitions that were driving staff discomfort.

“Hux could identify key issue areas (hot and cold), where the temperature comfort levels were recorded outside of acceptable limits.”

The company found over-conditioning, combined with large heat loads, was likely leading to discomfort for the occupants, and that, overall, the system had inadequate capacity to provide appropriate comfort.

The solution recommended to the client was to reduce the external solar heat load through reflective blinds, film treatments or other interior-mounted methods.

“Although the client’s facility management had suspected that actions would be necessary, they had been unable to get supporting material by which to prove this to the building owner, and as such had to settle with more conventional HVAC system upgrades.”

Hux said the subtlety of the problem made it challenging to diagnose with traditional means, but now the tenant had the data to approach the building owner to intervene.

“Hux continues to work with this client to validate the retrofit work now being negotiated with the client and the building owner.”

THE PERFECT MIX

In the end, good measurement is about having both quantitative and qualitative data.

“The measurements tell you things people do not necessarily perceive,” Flores says. “For example, when you talk about formaldehyde, it can be a pollutant and problem at levels that are much lower than the level when you can smell it. That’s why it’s really important to do measurements.”

“Just because you can’t perceive it, it doesn’t mean it’s not going to be an issue.”

The measurements also complement the subjective analysis.

“If a lot of people say they have an issue with thermal comfort then you can go into the measurements and see if a problem can be identified.

“If you can’t, you can go back and ask more detailed questions to find out why people are uncomfortable.”

CitySwitch program manager WA Phill Raso says that once you have qualitative and quantitative data, you can work with your environment rather than against it.

“It’s okay to have variations in temperature, light or sound levels. In fact, that’s great! If you allow people to be mobile, they can choose from a range of conditions that suits them in that moment. You have to measure and monitor though, so you’re not leaving these things to chance.”

In the end, good measurement is about having both quantitative and qualitative data.
Tools of the trade
Being able to measure is important, but being able to demonstrate what you’ve achieved – and having a framework to better that – is equally important. In fact, there’s evidence to suggest that using a rating tool to verify performance leads to better outcomes.

“NABERS IE and Green Star ratings give assurance to the tenant of the conditions they’ll be experiencing – it’s not a vague promise.”

For instance, the COGfx Buildingomics Study found higher cognitive function scores, fewer health symptoms and better perception of the indoor environment in green-certified buildings compared with similarly high-performing buildings that had not gone for certification.

There are a range of existing tools in the Australian market that are being used to assess buildings – most common are the WELL Building Standard, Green Star and NABERS IE.

“In the Australian commercial property sector, we’ve actually had a pretty mature suite of tools that address indoor environment quality, and health and wellbeing,” AMP Capital’s Chris Nunn says.

“Perhaps not to the extent of WELL, which is really focusing attention on nutrition, sit-stand desks, and the great things tenants can do in the space, but in terms of the delivered built form that’s the responsibility of the property owner, there’s a long history of delivering really high-quality spaces through things like conducting indoor environment quality audits.

“A small part of the market has been voluntarily using the NABERS IE tool, which the Americans and Europeans don’t have, which is one of the reasons WELL is so explosive in some markets globally. It’s seen as a new thing.”

Nunn says there is a fairly good knowledge of techniques for improve health in the building design community already, and there’s nothing stopping the B or C grade operators obtaining those important features without necessarily getting a formal certification – things such as increased outside air rates, access to daylight, internal blinds and glare control.

“But the formal certification really does help. For instance the NABERS IE and Green Star ratings are really a third-party verification that the design team has delivered this outcome that gives a level of assurance to the tenant of the conditions they’ll be experiencing – it’s not a vague promise. I think that’s really the value of certification.

“And certainly there’s a need for the certification standards to adhere themselves in a way that means a smaller project with a smaller budget still has the opportunity to achieve some of those health and wellbeing outcomes.”

NABERS IE

NABERS IE is one of the first indoor environment tools to come on the market, released in 2009.

Carlos Flores says NABERS IE was created to provide a rating, but also to provide a management tool where people are able to set targets and make improvements.

“It’s all about measuring how high are the levels of particulate matter in the office? How well is the temperature control being managed? What percentage of the year were the controls of this system able to provide adequate conditions? What areas are our buildings performing well? What are the areas where they are not?

“Really well-managed buildings can provide really good comfort conditions and temperatures throughout the majority of the year.

“In buildings where they haven’t really looked at these areas you can see for significant portions of the year they are operating at very cold or hot levels. And just because that’s happening doesn’t mean the building manager knows about it.”

There are five components measured by NABERS IE:

- **Thermal services** – including temperature, mean radiant temperature, humidity and air speed
- **Indoor air quality** – whether there’s enough fresh air to people, levels of particulate matter, formaldehyde and chemicals on the watch list for being potential carcinogens
- **Lighting** – maximising daylight, while minimising glare and heat
- **Acoustics** – the ability of the building to minimise external noise as well as the noise levels within the tenanted space
- **Office layout** – including the spatial arrangements of walls, partitions, furniture and equipment in relation to fixed elements like windows and heating, ventilation and air conditioning

There are three ratings that can be achieved:

- **Base Building** – designed for building owners and managers, who generally control and maintain thermal services, air systems and building cleaning, and
the ability for the building to minimise external noise

• **Tenancy** – designed to measure the indoor environment parameters controlled by the tenants, such as fit-out, lighting and internal noise.

• **Whole Building** – for organisations that both manage and occupy their office space.

There are both qualitative and quantitative measures taken during assessment.

“Base building measurements are purely quantitative because it helps to provide a benchmark that building owners can use and incorporate into their management.”

The whole building rating includes physical measurements but also includes an occupant survey that measures what people think about the comfort elements.

The end goal is to get people working to improve their IEQ scores.

“The real end goal is that we want that building to set targets and improve to 4 stars and 5 stars and reach that best market practice space,” Flores says.

With the updated NABERS IE tool, a report is generated that provides detailed insight.

“The measurements we take are an absolute wealth of information about how your building is operating.”

The report breaks the data down, and shows where a building is performing well and where there is room for improvement.

“We wanted to make the process of analysing that data available to facility managers and tenants.”

Industry interest is growing rapidly.

Frasers, for example, in the last 12 months has certified a “significant number” of their properties, and Flores is aware of a number of property portfolios currently running tenders to certify their portfolio with NABERS IE.

The ventilation system is demand controlled, and a combination of standard and fresh air ducted indoor units with low fan speeds meets airflow requirements and provides optimal thermal comfort, with CO2 levels below 600ppm. Floth describes it as “practical yet elegant airconditioning design”.

An LED lighting system achieves a lighting power density of less than six watts per square metres, and is automatically controlled with occupancy and daylight sensors.

Sustainability outcomes include a 53 per cent reduction in operational carbon emissions, plus an additional 13 per cent reduction from solar PV.

“Happily, our 6 star outcome proves that a highly energy efficient and economical building can also provide an excellent indoor environment,” Marklund says.
Mirvac general manager workplace experiences, office and industrial, Paul Edwards says WELL has caught people’s attention because of its strong focus on people, which is “adding another layer” in what attracts and retains staff.

“There’s a recognition, and it’s growing, that mental health is just as important as physical health.”

“The outcomes are all about providing better, healthier places for people. There’s a recognition, and it’s growing, that mental health is just as important as physical health.

“And there’s a lot less information about it, and you don’t necessarily know when someone has a mental health issue.”

Edwards says there’s evidence that spaces for reflection and mindfulness, and which connect people to nature, improve mental health and reduce stress.

WELL features a range of credits that speak to improved mental and physical wellbeing across seven categories – air, water, nourishment, light, fitness, comfort and mind. There’s also an innovation category.

The credits extend wellness well beyond the physical building realm. For example, there is a credit for beauty and mindful design, one for fruit and vegetable promotion, one for activity incentive programs and one for olfactory comfort.

On the “softer” WELL features, where they’re not design related, “they’re much more related to the culture of the business, the operation of the business and everything that supports a culture of productivity and health and wellbeing.” CBRE sustainability director Emma McMahon says.

She says HR and workplace teams have become very engaged around the wellness conversation, are fully present at the table with the rest of the project team, and have a lot of input to contribute to the initiatives in place already within their organisation, as well as what is work in progress. Her team’s role, she says, is to help clients “identify where they can potentially improve their processes and policies in place already go that little extra step for the wellbeing of their staff, using the WELL Building Standard as a framework to do so, regardless of whether or not they decide to pursue certification”.

**PUSHING THE BOUNDARIES**

McMahon says when WELL came along, it was the next framework the Australian market was ready for – how could we push the boundaries a little more?

“It creates more of a focus not so much anymore on the core and shell, bricks and mortar, steel and glass of the building, but more about the people who occupy those buildings. Because at the end of the day, the people are a business’s biggest asset.”

The main difference with WELL is it “talks to experiences”.

“You can touch and feel it a bit more than you can good air quality, for example,” she says.
“At the moment it is only being done on premium commercial property. So you have a niche relevance in the Australian market.

“AMP Capital are implementing the WELL Building rating at Quay Quarter and we’re working towards certification. And that’s largely been driven by increased tenant demand in the market for a certified WELL rating at that really super premium end of the market.”

The International WELL Building Institute intends WELL to be globally adopted, McMahon says.

“The tool has been created to be applicable to any type of building typology in any region, whether it’s a commercial office space, hospital, retail shopping centre or community precinct.

“So with that intention comes a huge degree of variability, which has been the challenge to date. There’s obviously a lot that needs to be fluid and adaptable with a universal tool for it to be adopted at a local level. For example, some buildings in China have not been meeting the air quality criteria as prescribed in WELL so alternative adherence pathways have been developed to suit that market. Whereas, here in Australia, the air quality results have not been an issue, meaning features that require extensive filtration are not necessary.”

“The biggest adoption has been in that Premium grade sector.”

McMahon says part of this could be because the facilities are up to that standard already, or developers are building to a 6 Star Green Star standard, where there’s quite a “significant overlap” between the two tools.

“But absolutely I think the intention is for it to be adopted on a much broader scale. It’s just that that will take a lot longer to happen and may look quite different in your Premium grade versus your B grade asset. B grade buildings will be less likely to target a WELL rating, for example, and look for wellness attributes via local amenity instead.”

Just like any new rating tool, WELL has been going through the necessary “growing pains” since its pilot in 2013.

**IS THERE A PROBLEM WITH WELL AND SUSTAINABILITY?**

There have been murmurings that some of the credits in WELL could have a negative effect on the energy usage of a building.

McMahon says things are improving.

“The way I see it, it needs to be addressed on a case-by-case basis and understanding where the priority is for that landlord or occupier around wellness, the budget for the project and what baseline they’re starting with. I’ve learned that it’s important to bring IWBI into the conversation as early as possible in the discussions so we can explain the vision for the project,” she says.

“IWBI and the Green Building Council of Australia have collaborated closely over the past number of months, so it’s much less an issue than it was when the WELL Building Standard initially entered into the market, and we were looking at how carbon filtration was going to impact the load of the plant, driving higher energy usage, and therefore potentially impacting the NABERS Energy rating.”

McMahon says the Australian market educated IWBI on what local priorities were and what the importance of maintaining a high NABERS ratings was for the market.

The latest version of the tool also takes into consideration much of this feedback from local consultants, building owners and developers.
CASE STUDY: 200 GEORGE STREET

Sydney’s 200 George Street office is Australia’s first building to be certified under the WELL Building Standard, and just the sixth globally.

The 37-storey Premium grade building, designed by FJMT and owned by AMP Capital and Mirvac (who is also a tenant), was awarded Gold WELL Certification, already has a 6 Star Green Star Interior rating, and is targeting 6 Star Green Star As Built v3, 5 Star NABERS Energy and 4 Star NABERS Water ratings.

“We set ourselves the objective of creating a space where people would leave healthier and smarter than when they arrive.”

Mirvac’s Paul Edwards says a process of employee engagement was the first step that led down the WELL path. An external, independent change management company was engaged, and a key element that came out of that process was an employee desire to know how health and wellbeing was being incorporated in the new building.

He says the decision to go with WELL was due to it being evidence based and robust – it is aligned with medical research institute the Mayo clinic in the US, with five years of pre-work having been done to ensure the tool has scientific backing.

“We saw it as a great tool,” Edwards says. “As a company, we set ourselves the objective of creating a space where people would leave healthier and smarter than when they arrive. That was one of our key objectives as a business.”

Another reason Edwards mentions is the need to demonstrate to staff that you’ve achieved what you’ve set out to do.

“You can’t just say, ’Trust me, we’ve done it.’”

“We saw WELL as the leading global standard to demonstrate this. I must say, it’s definitely done that.”

Mirvac conducted pre-occupancy surveys and has just completed post-occupancy surveys to measure staff satisfaction regarding the new building, and while post-occupancy results weren’t available at the time of publishing, Edwards says anecdotally he knows what they’ll say.

“People really do love this space.”

So what do staff love?

Daylight. We have heaps of daylight in this space,” Edwards says. “The blinds control that so you can manage glare. That’s a big positive.

Next up is nutrition.

“We have small and large portions, so you don’t have to buy large portions if you don’t want to. Personally, I find that very useful. Salads are always first and foremost on the menu. We’re continually providing information on health and wellbeing.”

This help meet WELL’s “nourishment” credit.

There’s a nice social sustainability aspect here too, with the cafe – The Song Kitchen – a social enterprise run by the
YWCA NSW, with 100 per cent of profits going to fund services for women and children experiencing domestic violence.

Edwards says, **connection to nature** is another important factor, particularly due to its effects on “cognitive and emotional health”.

“We’ve made sure we’ve got over 1000 plants in this space, and our blinds are timber, a lot of the finishes are timber,” he says.

“People generally feel healthier, particularly regarding mind and mental state, when they can access nature. And we’ve made sure you can access nature everywhere in this space. If you want to go and sit in amongst greenery, you can. If you want to book an office that has plants going up to the ceiling, you can.”

As an “agile working” environment, Edwards says acoustic comfort is a primary concern.

“We’ve given different spaces for people to break out – quiet spaces, phone box spaces – which then helps to reduce impact on others.”

**Ergonomics** has been another concern.

“It’s agile working format, so you can work anywhere. But you’ve got soft chairs, soft furnishings, you have sit-to-stand desks – everything that enables people to pick how they want to work.”

Edwards is an advocate for **agile working** as something that facilitates wellbeing.

“If, say for example, one of your pet hates is being cold in the office, you actually can go and sit somewhere where you know it’s not cold. If you don’t like the sun in the morning, you can move to a different part of the office. You can move around.

The office does its best to avoid all those issues, but there’s always going to be something that might not suit you.

“22°C might not be right for someone. If that’s the case, they might go sit somewhere that’s not quite as directly associated with the airconditioning system.”

Edwards says this “breeds comfort”, “because people are able to pick and select where they sit and how they wish to work, where they get less distracted”.

Overall, it’s a “variety of things” that combine to make the office a pleasure to work in, Edwards says, including “hidden things” like air quality that people may not even notice.

WELL ACHIEVEMENTS

**Air:** SAMBA sensors throughout the tenancy monitor air quality and create the optimal indoor air quality for employees; air pollution removal, proper ventilation and air filtration

**Water:** Safe and clean drinking water is provided through filtration methods, and accessible 30 metres from regularly occupied spaces to encourage hydration

**Light:** 75 per cent of workstations are located within 7.5 metres of a window, increasing access to natural light to provide physiological benefits; lights are also programmed for varying brightness and darkness throughout the day to maintain optimal circadian rhythms

**Nourishment:** Mirvac’s café, The Song Kitchen, provides healthy food with high nutritional value and clear labelling to help employees make informed selections

**Fitness:** A dedicated health and wellness educational seminar series, run by professionals, educates staff on health and wellbeing; pilates classes are held in the office once a week with a professional instructor; a wellness library with a range of health and wellbeing literature is hosted online for all employees

**Mind:** In response to a physiological need to be around nature, Mirvac has developed a biophilia plan that incorporates nature’s patterns throughout the tenancy design; around 1171 plants are in the tenancy – more than one plant per person.
GREEN STAR

Green Star, administered by the Green Building Council of Australia, is probably Australia’s most recognisable rating tool, and contains IEQ credits in its Design & As Built, Interiors and Performance tools, alongside traditional categories like management, energy, transport, water, materials, and land use and ecology.

For the Performance tool, the credits cover indoor air quality, hazardous materials, lighting comfort, daylight & views, thermal comfort, acoustic comfort and occupant satisfaction.

The Interiors tool – a tenancy tool – includes credits around indoor pollutants, ergonomics, visual comfort and the quality of amenities.

The IEQ credits have been included in Green Star “to encourage and reward initiatives that enhance the comfort and wellbeing of occupants”.

WHICH TOOL SHOULD YOU USE?

Whether a building goes for a WELL rating, a Green Star rating, a NABERS IE rating, or a combination of all of these really comes down to who the results are being communicated to, what the reporting requirements are and the “edge” you are looking for when compared to your competitors.

McMahon says NABERS IE gives a much more quantifiable result regarding performance of the space, whereas WELL talks to the stress levels of staff, how productive they are, what that workplace looks like for them, and how we feel they can work better and be more engaged while they’re at work.

“So it talks to wellbeing at a much more personal level, and I think that’s what’s gotten the market engagement.”

DSQUARED: ANY OFFICE CAN BE HEALTHY

A healthy office is achievable no matter how small your office space.

dsquared Consulting, a sustainability firm in Adelaide, achieved a 5 Star Green Star – Interiors rating for the fitout of its 100-square-metre office.

Director Deborah Davidson says the company searched for an office space with natural light and the ability to achieve natural ventilation, and found it in a warehouse that had been converted into five small tenancies.

“It has a lot of the natural light through a saw-tooth ceiling, so there’s lots of skylights, and we have large balcony doors to our main office area and boardroom,” Davidson says.

“Because we have balconies, we can open the doors when it’s not too cold outside so that we can have as much fresh air as we want.”

The office was divided into smaller spaces so the team removed the partitions to benefit from the cross-flow ventilation. The carpet was replaced with low-VOC non-toxic carpet.

The office features potted indoor plants as well as a vine that grows across the main desk. Plants on both balconies create pleasant outdoor spaces.

A breakout space with natural daylight and sofas provides somewhere for casual meetings.

The site provides excellent access to public transport and, as most meetings are within two kilometres of the office, staff can walk, cycle or take buses and trams.

Davidson and co-director Paul Davy wanted to work in a space that felt as natural as possible.

“We wanted to feel excited about coming to work every day and we wanted our staff to be healthy and happy at work,” Davidson says.

“We’re a sustainability consultancy so it was important to us … we wanted to show people that it was possible to have a small office space that was focused on sustainability and wellbeing.”

Since the fitout, the company has continued to tweak aspects of the office to ensure comfort.

“We do suffer a little bit as we move into autumn and the sun gets a bit lower in the sky – we get a bit of glare because we have so many windows,” Davidson says. “So we’re just about to change our blinds so that we can block that out without blocking out the daylight.”

The office now use a Dyson airblade fan in instead of the airconditioner. Their attention to saving energy has also earned them a 5.5 Star NABERS Energy rating.

Davidson says there are many advantages to their office space.

“The most obvious benefit is lower ongoing energy bills because we don’t use the air conditioner or the lights very often,” she says. “I think the staff benefit because they are happier at work … they enjoy being in the space.”
WELL, McMahon says, is a mind, body, soul approach compared with NABERS IE’s “scientific” approach.

“That being said, there is overlap between the two; NABERS IE certainly has its place in the market for those not wishing to pursue a WELL rating – particularly in existing buildings where doing WELL can be quite an expensive exercise or where it’s not being driven by a tenant, so why bother spend the money.

“We want to feel excited about coming to work every day and we want our staff to be healthy and happy at work.”

“It also depends on the scale of how much engagement around health and wellbeing you want to invest in your space. Is it a NABERS IE rating, where you get a certificate at the end and you understand on an annual basis what the indoor environment quality looks like for that space? Or are you looking at a whole plethora of options beyond air quality, now looking at the nourishment options that you’re providing your staff, the fitness initiatives there for your staff or occupants of the buildings, and stress management?”

Nunn says tools like NABERS IE and the IEQ credits within Green Star “perhaps have a slightly broader application, which might make them more cost-effective and therefore more widely used”.

ALIGNMENT

The tools are also all working together to reduce duplication and make it easier to go for multiple tools.

For example, NABERS IE results can be used in the WELL Building Standard, when looking at best practice IEQ. Green Star and WELL have also entered a formal partnership to make getting both ratings simpler.

“The IEQ category [of Green Star] contains a number of credits that the WELL Building Standard is concerned about – air speed, fresh air rates, daylight, views, acoustic comfort,” Nunn says.

“We’re really interested in ensuring strong alignment between WELL and Green Star, so WELL isn’t seen to be replacing the existing tools.

“Ideally you could get a Green Star rating that would automatically give you a certain number of WELL credits that would allow you to market your building as WELL ready, so when the tenant comes in and does the WELL rating that is largely focused on the tenant space, that’s supported by the fact the building owner has already done the WELL credits as part of their Green Star rating. That’s the direction I’d like to see it go.”

Flores says NABERS IE will work with both Green Star and WELL.

“I think they’re complementary. We’ve been in touch with the team at WELL, and we’re trying to align the areas we both cover.”

He says having a NABERS IE rating is one of the easier way to meet the thermal comfort credit requirements for a Green Star Performance rating.
A healthy culture
A healthy environment is a necessary base for a healthy office, but it can all be for naught if it isn’t backed up by a healthy workplace culture, which can affect both the physical and mental wellbeing of staff.

Chris Nunn says there’s a lot of policy decisions around corporate behaviour that will support an organisation’s health and wellbeing outcomes.

“That’s one of the interesting things WELL has added to the debate,” he says. “It really focuses on those corporate policies around access to gyms or subsiding membership, promoting sit-to-stand desks. So I think it’s adding another layer of actions by the tenant which we haven’t necessarily had a focus on, because a lot of our sustainability issues in the Australian property market focus on owner issues.

And that’s great. You need those built form interventions, but you also need those corporate policies on the part of tenants.”

According to CBRE’s *Wellness in the Workplace* report, there are many easy, low-cost ways to begin to integrate wellness into the workplace.

Some short-term workplace wellness interventions include:

- using a spare meeting room to offer a lunchtime health class like yoga or pilates
- asking suppliers to offer healthy alternatives in cafes and vending machines
- organising a subsidised gym membership with a local provider
- making sure window blinds are opened to maximise natural light
- implementing a policy of “screen breaks”, and promoting stretching and walking during this time

In the medium to long-term a more structured and holistic approach to wellness is necessary, and necessitates a strategy rather than adopting individual initiatives.

**INTRODUCING A WELLNESS PROGRAM**

Martine Beaumont is CEO of Select Wellness, a wellbeing strategist company that offers tailored health and wellness interventions, including for tech firm Atlassian, which in 2015 was voted the best place to work in Australia by the Great Places to Work survey.

She says the first thing her company does when engaged to create a wellness program is to meet with “the most senior person we can”. This could be the HR director or someone in the C-suite. This is because the first step of a successful wellness program is management buy-in.

“If you don’t get senior management behind wellness programs, they generally don’t get funded properly and they don’t work.”

“If you don’t get senior management behind wellness programs, they generally don’t get funded properly and they don’t work,” Beaumont says.

“We won’t work downstream unless they let us work upstream. If the boss isn’t modelling [good behaviour], staff are unlikely to either.”

The next step is to perform a needs assessment of the individual organisation. Beaumont says while a lot of companies have employee benefit programs like gym memberships or yoga classes, she doesn’t view these as “wellness programs”.

“They’re quite generic. They’re not actually addressing the profile of workforce or the particular issues an industry might struggle with, and what the individuals in that company struggle with.”

She says any wellness program or policy needs to be “tailored and specific” to the organisation. There are a lot of examples where the wellness offering is just “ticking the box”, Beaumont says, “but they don’t actually realise if you genuinely improve wellbeing you’re going to get a much better result.”

People of different ages performing different tasks means that one size is not going to fit all.

Martine Beaumont
The more you know what’s happening for someone, the more you can prescribe something that will fix it, rather than throwing a generic yoga class at it.”

“If you’ve got people in a call centre, they’re going to have such different needs to, say, investment bankers. Look at the workforce profile.”

Again, starting at the top of the company is a good idea to work out necessary interventions and create an action plan.

“We do a wellbeing assessment with leaders in the organisation,” she says. “Once you switch the leaders on you get a multiplying effect. Not only are they modelling good behaviour, but they become more supportive of staff looking after themselves.”

Beaumont uses the Managerial and Executive Wellbeing Survey (MEWS), which is designed for senior leaders (though she uses it on other staff members), to help gauge wellbeing. It measures physical, social, emotional, intellectual and spiritual wellbeing.

“The more you know what’s happening for someone, the more you can prescribe something that will fix it, rather than throwing a generic yoga class at it.”

Different companies respond to different approaches. At Atlassian, for instance, Beaumont says that, as a tech firm, it was strongly motivated by interventions that had hard data on effectiveness and scientific evidence as to why a particular strategy might work, and how.

“So we never mentioned a meditation class first, but we did send articles on the science behind why it would help. We gave them suggested interventions, with snackable digital-based resources to prove the evidence-base.”

Measurement and assessment is also crucial.

“You’ve got to have a constant process of assessing your staff – getting the insights and developing programs around those insights, switching on the leaders and getting them behind the most scalable programs. It’s a continual process. You’ve got to have really good measurement tools, assessing what’s working and what’s not.”

POTENTIAL INTERVENTIONS

SA Health’s Healthy Workers – Healthy Futures initiative notes a number of potential workplace interventions, including:

Smoke free: creating a smoke-free workplace is the best way to address smoking rates in an organisation, and may include providing support services for those wanting to quit, fostering a quit smoking message with promotional materials, or even sponsoring a quit program.

Healthy eating: a program on healthy eating can address concerns around lack of options in the building or nearby areas, a lack of food preparation and storage areas or poor understanding of healthy options. Healthy options choices can be provided onsite, nutritionists can be employed for information sessions with staff or you could even negotiate removing unhealthy options from vending machines.

Responsible drinking: Employees can encourage a responsible approach to alcohol by providing plenty of non-alcoholic drinks at events, providing training or seminars on safe alcohol consumption, and including alcohol policy information during staff induction.

Active workplaces: increased physical activity can reduce stress and absenteeism, and lead to higher performing staff. Interventions can include encouraging the use of stairs, providing sit-to-stand desks, conducting walking meetings, organising a corporate rate to a nearby gym, and conducting health classes onsite.

Mental wellbeing: Workplace stressors can include heavy workloads, inflexible schedules, bullying, and feeling a lack of influence over job-related decisions. Ways to improve mental wellbeing are vast and varied, and may include managing staff levels to ensure appropriate resources are available for tasks; introduce a bullying, harassment and discrimination prevention policy; establish a culture of recognising and taking lunch breaks; implement a sleep and fatigue management policy; have regular social events and volunteering opportunities; and provide onsite seminars, workshops on financial planning, stress reduction techniques, organisation and time management.

The initiative says the keys to a successful program include being people-centric; having management buy-in; being sufficiently resourced; tailored to the needs of the organisation; consisting of a mix of strategies to address the individual, the workplace environment and the organisational culture; connects to WHS efforts and core organisational values; having regular communication and messaging; having long-term commitment; and an evaluation and improvement process.
EASY WINS

Beaumont is a big fan of providing a nap room and sit-to-stand desks, and says there’s a lot of evidence backing up the provision of healthy snacks and annual health checks. Other tips she has is to provide education on the importance of sleep, and to encourage people to manage anxiety issues during the day, rather than when their head hits the pillow at the end of the day.

She notes that a lot of interventions are enabled by workplace design, such as having a “wellness hub” where different practitioners can come in to conduct classes or provide wellness advice. Indeed, a CBRE report found that almost half the wellness features staff look for come down to workplace design.

Beaumont notes that forcing people to do anything won’t work, and any wellness offering has to be entirely voluntary.

UNspoken expectations

Office culture, which can often include unspoken expectations regarding staff overtime, breaks, out-of-office work and the use of programs, can be a huge issue, and it’s usually the senior level that dictates this.

“We’ve got a company we’re dealing with where one of the senior people sends emails at 2am, and if a reply is not received by 6am, they are upset,” Beaumont says.

“They’ve got to where they’ve got to by how they operate, but they end up burning and churning through us mere humans.”

This is a huge barrier to wellbeing, and another reason why Beaumont demands wellness programs start with senior management.

“If we can get in with those people, we can address those issues.”

Getting across the importance of wellbeing to the company is crucial to getting that senior buy-in.

“My favourite message is, ‘Your people are your business.’ You want them as well as they can be.”

Office culture can be cemented in policies, procedures, job descriptions, employee handbooks, and Enterprise Bargaining Agreements. Review these documents to see if they work for or against health and wellness.

Wellness equality – it’s about sharing the good

Another element of healthy buildings that can affect productivity by decreasing both worker health and morale is to do with equality. Who gets access to the best places to work? Are there staff stuck in noisy areas with poor air quality while others get good natural light and ventilation? Are some groups of workers treated preferentially?

The fact is that everybody deserves a healthy space to work. New working formats like activity-based working or agile working are helping to change this (see 200 George St case study) by giving people choice in where they are working, but companies still need to review their policies to make sure some employees aren’t being preferenced over others regarding access to a healthy working environment.

“Review policies, procedures, job descriptions, employee handbooks and Enterprise Bargaining Agreements to see if they work for or against health and wellness.”
CASE STUDY: AUSTRALIAN ETHICAL ON LEADERSHIP

Australian Ethical’s Jacqueline Lapensée says the success of the company’s wellness offering has been a result of both engaged staff pushing for action as well as buy-in from the CEO.

She says it has been wonderful to work for a company that prioritises the wellbeing of its staff, noting that there have been organisations she’s worked for where senior staff have been a roadblock.

Senior buy-in has been crucial. “Ultimately if you didn’t have that engagement it wouldn’t happen,” Lapensée says. “They have to give their sign off.”

AE’s chief executive Phil Vernon, she says, has “always been supportive” of wellness initiatives, and uses the offerings himself. “He leads by example.”

The ethical superannuation company’s office near Martin Place in Sydney houses about 50 staff over 770 square metres. At the moment it has decided not to go down the formal certification route, but has an internal wellness policy that incorporates a number of programs designed to improve health and wellbeing.

One is on food. The company provides organic food to staff all week, including bread, milk and a range of staples including teas and coffees. Every Wednesday, the cupboards and fridge are stocked with gluten-free, vegan and sugar-free snacks. There’s also a smoothie bar, where staff can make fruit smoothies and add things like flax seed and cacao.

The company provides six-week courses focused on wellbeing in a multifunctional space. At the moment AE is running a meditation course and is about to move into a pilates program. Staff also are provided with a quarterly 30-minute massage and annual health checks.

Lapensée says the amount of money spent on wellness is increasing year-on-year. “The CEO is happy to spend [on wellness] because he feels it’s an important investment.”

The company has utilised the Happy Body at Work program, a wellbeing program designed by physiotherapist and mind-body expert Anna-Louise Bouvier in partnership with the ABC.

“They come in to do interactive sessions and address issues with sleep, stress and exercise. It’s a very effective program, and you can see staff integrating those lessons into their work.”

The company also provides a $300 reimbursement for personal development, which can include things like professional development courses or gym membership.
Healthy body, mind, workplace
Having excellent workplace culture and health programs won’t matter much if it’s happening in a poorly performing building. Ensuring workers have a physical environment that promotes and enhances their physical and mental wellbeing is key.

A healthy building needs to be thermally and acoustically comfortable, have good access to natural light, adequate rates of fresh air, and minimal pollutants such as carbon dioxide, carbon monoxide and volatile organic compounds (VOCs). It needs to be designed so it is easy to navigate and have spaces suitable for a range of different work types and occupant preferences.

Increasingly research is also showing that a connection to nature is an important factor in lifting mood and increasing productivity.

Finally a building needs to be equipped to support healthy lifestyles – things like end-of-trip facilities, a location near amenities and access to public transport.

**SICK BUILDING SYNDROME**

On the other hand, a poorly performing building can lead to sick building syndrome (SBS), a phenomenon affecting building occupants who claim to experience acute health effects that appear to be linked to time spent in a specific building. Every person has a unique response to toxins, noise, pathogens and other external factors. However, about 10 acute symptoms such as itchy eyes and sneezing have been attributed to SBS and usually disappear shortly after the person leaves the building.

The finger has been pointed at a number of factors, including poor ventilation, low humidity, large changes in temperature, airborne particles such as dust and chemical pollutants, poor lighting, and even psychological factors such as stress or poor morale.

**WHY INDOOR ENVIRONMENT IS KEY TO PERFORMANCE**

**Dr Fan Zhang** is a research associate and associate lecturer who works in the IEQ Lab at the University of Sydney, and is researching the correlations between the various IEQ parameters and office workers’ health, wellbeing and productivity.

She says the indoor environment of buildings is a key contributor to performance.

“Improved IEQ can result in reduced respiratory illnesses, reduced allergies and asthma, and reduce sick building syndrome symptoms among office workers,” she says. “So it can significantly reduce health-related absenteeism in the workplace.”

**ABSENTEEISM AND PRESENTEEISM**

A 2014 Absence Management Survey, produced by Direct Health Solutions, found that absenteeism was costing Australian businesses $33 billion a year, or about eight per cent of payroll. The average employee took 9.5 days of sick leave a year – a figure that has been on the rise. And presenteeism – when a worker comes to the office but doesn’t perform effectively due to illness, stress or just disengagement – is also skyrocketing.

**DESIGNING BETTER INDOOR ENVIRONMENTS**

CBRE’s Wellness in the Workplace report found that almost half the wellness features staff look for come down to workplace design.
Dr Zhang says building and facility designers need to put effort into improving indoor environment quality during the design stage rather than addressing poor indoor spaces once buildings are built.

She says companies should consider creating general guidelines and strategies in order to improve IEQ performance, for example, providing windows with shading and glare control in all occupied spaces and a relatively good exterior view.

“Our studies show that buildings with a good quality view will promote IEQ and satisfaction of the occupants,” she says.

A building design with natural ventilation or mixed-mode ventilation will promote thermal comfort significantly. Designers also need to limit the use of the building materials or products that produce noxious or irritating odours and avoid those containing volatile organic compounds or formaldehyde.

Good-quality HVAC systems will reduce airborne particles while well-considered acoustics will minimise noise through the use of sound-absorbing materials.

**GOOD IEQ CAN MAKE YOU SMARTER**

Good IEQ can help create an innovative work environment so that staff can attain higher cognitive performance with a lower investment of mental effort.

“Good IEQ can also enhance the psychological wellbeing of staff workers, promoting the reduction of work-related stress, increase job satisfaction and organisational maintenance. So good IEQ is really beneficial for the staff in that working environment,” Zhang says.

“Cognitive function scores doubled in green buildings with enhanced ventilation compared with a conventional building.”

The Impact of Green Buildings on Cognitive Function study, otherwise known as the COGfx Study, found that cognitive function scores doubled in green buildings with enhanced ventilation compared with a conventional building. The study – conducted by the Harvard TH Chan School of Public Health’s Center for Health and the Global Environment, SUNY Upstate Medical University and Syracuse University – looked at the decision-making abilities of 24 participants, including architects, designers, programmers, engineers, creative marketing professionals and managers, in a variety of conditions.

The largest improvements were in crisis response, strategy and information usage. “These results suggest that even modest improvements to indoor environmental quality may have a profound impact on the decision-making performance of workers,” lead study author Dr Joseph Allen said.

**MEDIBANK PLACE SHOWS WHAT GOOD BONES CAN DO**

The HASSELL-designed Medibank Place at 720 Bourke Street Melbourne is a perfect example of what can be achieved when a building is designed for health from the outset.

The 16-storey A grade building features a living facade, landscaped parklands for tenants, and a full height central atrium providing high levels of natural daylight and interfloor stair connectivity. It also has a HVAC system that provides a large increase in outside fresh air, and a multi-purpose outdoor sports court.

As a health organisation, Medibank wanted its new office to be a case of “practising what it preached”. Mental and physical health have been at the core of the process, and has led to what is being termed “health-based working”, a play on activity-based working.

The staff of the building have 26 different working environments to select from, including quiet indoor spaces, collaborative hubs and wi-fi enabled outdoor balconies, and spaces with standing or sitting desks.

Circadian lighting has been installed in some environments to better mimic natural daylight patterns in an effort to raise productivity. There are 2300 plants in the buildings and 520 in modular planter boxes on the facade.

Four months after moving in, 79 per cent of staff said they were working more collaboratively, while 70 per cent said they felt healthier. Further, 66 per cent of staff said they were more productive, and there was a five per cent decrease in absenteeism in the call centre.

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**DESIGN FOR HEALTH**

Interior architecture practice Futurespace is responsible for the fitouts of some of the biggest tech companies in the country, such as Google and Microsoft, as well as big consultancy firms such as Deloitte, pwc and KPMG.

AstraZeneca, a biopharmaceutical company with an office in Macquarie Park, Sydney, is a good example of a company that has integrated health and wellbeing into its building, Futurespace design director Gavin Harris says.

The old building was plagued by poor lighting conditions and had poor connections throughout, particularly because most travel between floors was done via elevator.

“If you worked on level three you probably didn’t know who worked on level 2 or level 4.”

It also was a traditional office format where everyone had a set place.

The new 3000 sq m space has moved to an activity-based working format, though Harris prefers the term agile working, because it speaks to the idea of better utilisation of space and flexibility.

“With agile working, they’re looking for connectivity, promotion of people, movement and utilisation of space.”

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**GET INTO THE MOVE GROOVE**

From a health perspective agile working promotes movement and incidental exercise, and from a mental health perspective Harris says the idea of freedom is quite important in choosing where and how to work, though the right sort of design infrastructure needs to be in place so people can get around easily and find the people they need (see The ABW Debate for a counterpoint).

Stairs have been a key strategy in promoting wellness and connection, and form the centre of the workplace, rather than being hidden.

“It’s about promoting connectivity and stronger ties. It brings people together.”

He says it’s important to foster better relationships and stronger ties, as workers are spending significant amounts of time in the office.

“Australians are some of the most hard working people in the world, because about 65 per cent of people working spend more than 40 hours a week in the office.”

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**LIGHT IT UP**

Light is another big thing. At AstraZeneca, the building is glazed all around and has very good light. Rooms and computer stations have been moved to the core, while workstations have been pushed to the perimeter.

“We also removed the ceiling and left half the building with an exposed slab. What

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**TRICKS OF THE TRADE**

There’s some little tricks Futurespace has implemented to get people moving.

For a fitout at JLL, the company put the best coffee machine on the middle floor to help move people around.

“It’s about ‘up and about’. Sitting for humans is not a great thing.”

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Harris says most new buildings and retrofits are including end-of-trip facilities, as these are now seen as non-negotiable by staff.

“With most new buildings and retrofits, end-of-trip facilities are a big thing. And they’re multiplying in scale. Normally they used to be three showers and a couple of lockers. Now they are massive. They’ll look after half the building, and there’s proper drying rooms for clothes and towels. They’re like a high-end gym.”
that does is actually give you more space and better light utilisation."

Harris says it’s not just the building characteristics that will determine how good the lighting is; it’s how you plan the internal space.

**WORKSPACE DOMESTICATION**

Materials are very important too.

“Timbers, warmth, texture – moving away from the minimalist kind of feel.”

One trend Harris is noticing is the increasing “domestication” of the workplace.

“So that’s kind of saying we’re trying to make the workplace feel more like a home. It’s got more of the comforts of a home, which then links back to working with your ‘working family’.”

So meetings might occur around furniture akin to a dining table with comfortable wood chairs.

Exposed ceilings, break out spaces, timber floors are other features that help to increase psychological comfort and ease.

To sum it up, he says it’s a more “honest” environment, moving away from the typical impersonal office towards something a bit “softer”.

**THE ABW DEBATE**

The format of an office can have a major impact on health and wellness outcomes, as we’ve discussed, however there is still much contention over what is best for staff.

The rise of activity-based working (ABW) is a major issue. A recent Conversation piece by Bond University lecturer Libby Sander pointed to research that found shared desk offices had a number of negative outcomes on mental and emotional health, including increased distrust, distractions, uncooperative behaviour and negative relationships.

Another study found it led to employee marginalisation, indifference and inattention to co-workers, loss of identity and decreased organisational commitment.

The University of Sydney’s IEQ Lab, however, has research that points to positive outcomes. It conducted a post-occupancy evaluation of 70-plus buildings across Australia, including samples of buildings with different workplace layouts including private offices, open-plan offices and ABW offices.

The study formed the framework of the BOSSA project. The study analysed the satisfaction of office workers in regards to nine major IEQ dimensions. It also looked at the overall performance indexes across the different office layouts.

“The general results show that the occupants of the ABW offices presented higher mean satisfaction scores in six out of nine IEQ dimensions than those who were working in open-plan offices and private offices,” Fan Zhang says.

These six dimensions were spatial comfort, indoor air quality, thermal comfort, visual comfort, connection to indoor environment, and building image and maintenance.

“We found that the ABW offices outperformed the other two types in all of the four indexes – the overall satisfaction with the building, the overall satisfaction with the work area, and self-perceived health and self-perceived productivity.”

There were five ABW office buildings in the study:

- National Australia Bank, 700 & 800 Bourke Street in Melbourne
- National Australia Bank, 105 Miller Street, Sydney
- South East Water, 101 Wells Street, Frankston
- WT Consultancy, 45 Clarence Street, Sydney

Zhang acknowledges that it’s too early to draw more definite conclusions about workspace layouts given there was just a small sample of ABW buildings.

“But we hope that in the future we can do more in-depth research on the ABW buildings in order to understand their advantages and disadvantages in terms of the IEQ, occupant satisfaction, health and productivity.”
The concept of biophilia is one that is driving many design outcomes in relation to healthy buildings. The idea is that humans have an innate need for connection to nature – a need that has to be met in order for us to thrive. In a workplace setting the theory is that this translates to better moods, less stress, greater creativity and consequent higher productivity and lower rates of absenteeism and presenteeism.

"Planting is a very big thing. Not just for the wellbeing for air quality, but it’s the colour it brings inside – bringing inside outside," Gavin Harris says.

“There's a lot of furniture products being made now with the inclusion of planting able to be added to the middle of a table or a lounge setting. So it’s becoming a part of furniture-based solutions, not just 'let's stick some pots around the corner'. It needs to be integral, not just an add-on.”

A recent fitout for MYOB wasn't your typical office, rather a converted warehouse that did not have much in the way of windows, but did have large skylights and light that filtered down.

Taking advantage of the set-up, Futurespace brought in trees to provide that natural connection (see front cover).

"Not just little plants, but seven foot high trees, that can be looked after by the light."

Stations inspired by park benches and the use of raw materials also gave that natural feel.

"We were blending the whole concept of indoor/outdoor."

One company that's really bring the outdoors indoors is Sydney-based Junglefy, whose “breathing wall” is being used in a number of high-profile offices.

Junglefy executive director Suzie Barnett says there is a number of benefits of having a breathing wall in the office, including reduction of CO2, removal of volatile organic compounds, particulate matter filtration, noise reduction, a biophilic response that reduces stress, and a reduction in the need for HVAC.

The system actively moves air over the plants, which Barnett says is “supercharging what plants do biologically, using technology to get them to do it faster and more efficiently”.

Australian Ethical’s Jacqueline Lapensée says it was seeing what NGO organisations were doing in their offices around plants that made Australian Ethical decide to include “as much greenery in the office as possible”.

The main benefits she sees is in “air quality improvements, aesthetics, energy efficiency and that biophilic response in terms of reducing stress”.

Their breathing wall is located in the middle of the office, so even if staff are not near windows “you still feel like you’re in a nice beneficial environment”.

There are 720 plants in the breathing wall and about 250 additional plants around the office.

“Not just little plants, but seven foot high trees, that can be looked after by the light."

Stations inspired by park benches and the use of raw materials also gave that natural feel.
LIFTING THE PERFORMANCE OF EXISTING BUILDINGS IS ALL ABOUT GOOD MANAGEMENT

The indoor environment performance of existing office buildings can be enhanced with effort and persistence.

One of ISPT’s Perth properties, 100 St Georges Terrace, was awarded the first 6 star NABERS Indoor Environment rating for an Australian commercial tower.

Alicia Maynard says there isn’t one specific building feature that enabled the eight-year-old property to achieve the rating, but several factors.

“The key to being able to achieve this rating is a combination of having a very active facilities management team, really good quality data that is coming from our building monitoring and control system and engagement with tenants, and getting their feedback on how they’re feeling and if they’re comfortable,” she says.

“Now combining those three sources of information enables us to then undertake preventative maintenance activities or to undertake building tuning across the floor plate so that they are comfortable within their space.”

Another standout property for ISPT is 7 London Circuit (built in 2007) on the south western fringe of the Canberra CBD. In 2014 the building was rated at 4 stars for indoor environment quality and it’s now at 5.5 stars.

“So that’s a 1.5 star improvement in just over two years,” Maynard says. “With 7 London Circuit, it’s exactly the same as 100 Georges Terrace – we’re maintaining that building really well, making sure that air filters are clean, that the airconditioning system is balanced across the tenancy so that there’s no increased air velocity in one area over another. But then overlaying it in terms of the data that we get from our management control system and then also engagement with the tenant on how physically they are feeling in the space.”

ISPT has recorded very high results across its portfolio in general irrespective of each building’s particular HVAC system or the facade type, which can impact indoor environment quality.

The property fund manager first started rating its portfolio for indoor environment quality in 2012. At the time it had one building rated at 4.5 stars, which was quite high considering at the time the NABERS rating framework just went up to 5 stars.

“Now as we’ve built the program, in 2016, we had all of our commercial buildings rated at an average of 4.8 stars – so that is still a market leadership position in terms of the NABERS rating scale,” Maynard says.
The move to wellness is here to stay. With increasing competition for talent, companies that ignore healthy buildings risk missing out on the best and brightest, losing their staff to competitors, or locking in underperformance.

“Certainly I think this is an enduring trend,” Chris Nunn says.

“I think we’ll see more and more interest in health and wellbeing. We all know from our personal experience that we want to be fit and healthy, and we want workplaces to support us in those aspirations, rather than undermine us.”

For Paul Edwards, it’s all about people.

“There’s been a big realisation that, at end of the day, people are the most important part of business,” he says.

“Having an energy efficient building is great, but it isn’t easy to link it to health and people and the community in the building.”

Edwards says society has also become increasingly focused on health and wellbeing.

“What you eat, where you eat, how you train, all those sort of things. [Wellness in buildings is] really capturing the general society,” he says.

“It raises a good question in, ‘Okay, I’m coming to work. What are you going to do to help me be more healthy and improve my wellbeing?’”

CBRE’s Emma McMahon says it’s also partly about a shifting trend of building owners focusing on customer experience rather than just providing bricks and mortar, in order to get that competitive advantage.

“It’s about being a differentiator in the market,” McMahon says.

Wellness is that “what’s next?“. “What else can we do to attract large occupiers to our space in a highly competitive market? What can we do that’s different to the pack?”

She says there’s a sense of “if we don’t do it now maybe we’ll be left behind”.

“If you look at the number of development projects in the pipeline for project completion around 2019-2020, they are being designed with these ‘third spaces’, often with a wellness focus – in some cases, dedicating large amounts of NLA to that space. Because this is what everyone is talking about, the customer experience, and there is a need to future-proof those assets. Because in 3-4 years time, if they haven’t done it, it’s really difficult to do it in retrospect.”

Esther Bailey says healthy buildings are a team effort.

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Esther Bailey says healthy buildings are a team effort.

“Ideally, you need buy-in from your building manager, senior leadership team and staff. But, unlike regular building sustainability, it’s your HR department that should be leading on this. They need to optimise the environment for people and link it to the data in order to embed it as ‘the way we do business around here’.

“CitySwitch believes that NABERS IE is the simplest first step to evaluating your corporate performance that is third-party verified. But if you’re not ready to rate, just start taking small steps like buying some more plants, increasing activity levels for your staff and actively curating your workplace culture – the potential upside is considerable.”

CitySwitch has resources and can help.