homes

WITH A

heartbeat

The step-by-step process to achieving
a highly functional and smart home

SAM BUCKBY

INTRODUCTION

Picture yourself walking up the garden path to the front door of your home. You've just driven home, parked in the driveway, stepped out of your car, and locked it behind you. It's the end of a wintry day and, as the sky darkens, the temperature has plummeted to near freezing and you're looking forward to getting indoors.

Every time you approach your front door, particularly at night, you do so with a little trepidation. The idea of walking into an empty house makes you feel a little insecure, and maybe even a little lonely. Nothing bad has ever happened to you, or anyone else you know for that matter, but it's just always been an uncomfortable feeling. For most people, the next step would be to open the door and enter a building that is dim, cool, and somewhat unwelcoming. Not for you.

You pull the keys out of your pocket and find the little key chain security pendant, similar to your electronic car key. You press the 'UNLOCK' button and look towards your home in anticipation. A faint click of the door lock, the lights on the veranda come to life, and through the windows you can see the entry, hall, and kitchen lights gradually ramping up to your desired level.

Before you even step inside, you know that it's going to be nice and warm. It's a Friday and you would normally get home sometime between 6:00 and 6:30pm. Thankfully, your home knows this, and the heating has come on 30 minutes or so before you pulled in your driveway.

You're not worried about your safety or security either. There have been no alerts on your smart phone to indicate that anyone has entered the house. Being the over-analyser that you are, you decide to double-check anyway. You pull out your smart phone and find the app for your home. You quickly view the log of each of the movement sensors as you progress up the path. As expected, nothing all day. No doors have been unlocked, windows opened, or passages walked. In the words of a famous 19th Century poem: "*Not a creature was stirring, not even a mouse*".

You push the front door open and you can hear that song you love so much coming down the hall. For a second you wonder who turned that on … Oh, that's right – your 'Most played' tracks always greet you in the evenings.

You enter and stroll into the main hub of your home. Here in the corner of the kitchen you have a table where you place your keys and your bag, and empty your pockets of a day's worth of general debris. As you do each night, you glance up at the interactive panel on the wall above the table and scroll down through the information on display.

First you look at the natural elements: date, time, temperature, and rainfall. Further down you check today's operating levels: electricity used, solar power generated, and water tank levels. Finally, the status of your home: climate mode, security history, lighting scene, and music playlist. Perfect. Everything is not only how you expect it, but also how you've designed it.

With that said, you seldom take all the information in, but what you do notice is that nothing stands out. This is a great result. You don't consider yourself a 'hippie', but you care enough to make sure you don't waste energy and water. You are reassured that the climate is comfortable; that the security system has monitored any action for the day; that the light levels are just right; and that there are some rocking tracks coming through the speakers. The important factors have been ticked off and you're ready to begin the night.

Unfortunately, you can't sit and relax just yet, as there are always a few items to undertake when you get home from work. Tonight, nothing is more pressing than getting dinner prepared as you have guests due in an hour. You press 'Evening' on your interactive touch screen, move towards the kitchen, and do a quick scan of your surroundings. The entry lights dim as the kitchen lights and the lamp beside the sofa come on. The blinds throughout the living area roll down and the volume of the music increases ever so slightly, so you can bop around as you cook. Your partner is due home in 20 minutes or so, but it won't bother you if they are slightly delayed. You feel safe, comfortable and inspired. You love coming home.

WELCOME TO THE AGE OF THE SMART HOME

Welcome to the 21st Century. If you're in need of information you can find it. If it's a solution you're after, it can be researched, engineered, and developed. If you're ready to make your life easier, there has never been a better time to do so.

This is the age of the Smart Home, and we are at the forefront of a building revolution.

What do I mean by this?

Everyone knows that a home needs to be designed. You cannot build a house without drawings or plans, so obviously an architect or draftsman is required. You go through the thorough process of designing the size of your home, how it will look and where the kitchen sink will go (all very important decisions).

Everyone knows that they need an engineer to examine the drawings and ensure the design is structurally sound. You'll also need a building inspector to look over the drawings to ensure all the minimum building codes are met and, upon approval, a permit to build will be issued.

Now what most people do is relax with a cup of coffee, flick through home magazines, and take clippings of door handles, taps, light fittings, and paint colours. You have completed the design stage and can hand it over to the professionals to build your dream home, which you will be able to enjoy in a matter of months.

This is the way things have been done for a long time. What we don't realise is that we're forgetting a very important factor. We know how big the home will be and we know how it is going to look. We know it is structurally sound and we know it meets the building codes. Heck, you've even decided how it will be furnished! But just hang on …

What about how it will work, perform, and function?

Imagine going to a car showroom and buying the biggest, best-looking car, the one that is made out of the strongest steel available, and only *then* realising you need to push it all the way home …

At this very point in the building industry, how a house *works* or the *functional design* is almost always overshadowed by the size and appearance. Granted, reality TV shows on building and renovation thrive on aesthetics. Home magazines are focused on colours and décor. Estate agents get all too excited about size and magnitude. But this will not last – these are yesterday's houses. These are houses where everything is 'pushed', micro-managed and, sometimes, neglected.

We are at the forefront of a revolution in the building industry. We are experiencing a shift in priorities as our time and resources are further absorbed by modern-day life. We don't only *want* to design better buildings, we *have* to. If we don't get it right from the design stage, there will be an unavoidable requirement to build, upgrade and retrofit functional designs into our homes and our lives.

What does this look like in practice? Functional or *smart* buildings can automate your chores, react to the weather, save energy, control the lighting, and even monitor your beloved pets while you're at work. Better yet, this can all be done from a central platform and monitored from your smart phone, just in case you want to check in and make sure everything's running smoothly.

But where do you start? Creating a Smart Home is a process, and the more thorough the process, the better the result. But the time involved in the planning and design stage, and the abundance of different products and systems on the market, can leave a lot of us feeling like it's just too much work.

However, the result is actually the opposite – the right design will make life easier, more rewarding, and give time back to your increasingly busy and complicated life.

Think back to the automotive industry in the 1970s. Very few cars had electric windows, power steering, electric seats, and cruise control. These features were considered super-advanced, unobtainable and, frankly, not required.

You can imagine their thinking:

- *Why would I pay a premium for a button to lower a window down when I can simply turn the crank?*

- *What's the point of introducing* another *small motor to turn the steering wheel when I can just use my hands?*

- *What is the point of a complex computer to control the speed I'm travelling when I have an accelerator?*

Electronic windows had already been in use in other industries for 50 years, but the general public did not see the value in these applications for their cars. At the time, they feared that these applications would just make their cars more complex and more difficult to manage. However, history has shown us the exact opposite. Rather than making cars more complex, these innovations made driving easier, simpler, and more enjoyable.

Similarly, the implementation of safety features was also met with protest. While advances such as seatbelts, anti-lock brakes and air bags had been developed in the 1960s and 1970s, they were not considered mandatory requirements until the 1980s, after many fatal accidents had proven the value of these items.

Cars in the 1970s weren't focused on fuel economy either. Prior to this, gas and fuel had been so cheap that no one cared, and there was a preference for high-powered 'gas guzzlers'. The catalyst behind this particular shift was the Arab gas crisis in

1973, which saw the price of oil rise by over 400 per cent to $12 a barrel by March 1974. Forty years on, gas and fuel are still expensive, with the current price of oil fluctuating between $90 and $110 a barrel (about 75 per cent higher than inflation is telling us it should be).

Now, can you imagine walking into a showroom to buy a new car for your family? You see a smart-looking black wagon and get the salesman to give you a better look. On closer inspection, you notice that it doesn't have electric windows or seats. It lacks cruise control and power steering. Also, this particular model does not come with seatbelts, ABS, or air bags. The salesman pipes up, "This bad-boy has plenty of power and chews through the fuel like a demon! What do you think?"

If you're anything like me, you're thinking *no way. Why would I spend my money on a vehicle that is going to make my life hard, put my family's safety at risk, and cost me a fortune to run?* You simply wouldn't do it.

In fact, today you not only *want* these basics, but you want the value-added extras to make this new vehicle as efficient, comfortable, and safe as it can be. You request the dual-zone climate control, the Bluetooth-compatible phone system, the 10-speaker sound system, the 12-zone air bags, heated seats, and an electric sunroof. You may not need these things to survive, but you see value, ease, and simplicity in your choices.

Now this is just a car we are talking about. The average Australian adult spends about 1½ hours in their car each day. That's 10½ hours a week, or about 6 per cent of our time. The same Australian spends, again on average, about 125 hours at home every week, or 75 per cent of our available time.

So it begs the question – why are we so content to spend 75 per cent of our time in a domestic environment that is inefficient, inconvenient, and lacking in safety and sustainability? Why do we find the cash to fund items with little value, yet cringe at the thought of spending money on a system that offers such obvious benefits?

THE BENEFITS OF YOUR SMART HOME

Now I know what you're thinking – *while having some extra gadgets might be fun, is it really worth it?*

The first thing I want you to understand is that a Smart Home isn't simply a number of modern gadgets installed in your home. Sure, a whizz-bang video intercom system is cool and can let you see who is at the front door, but if it isn't integrated with your phone or TV screen, is it truly smart? If a security system has alarms to prevent entry while you are away, but doesn't protect you while you are asleep, is that smart?

Smart is the step beyond gadgetry – it's intelligence, intuition and integration. And the real benefit of a Smart Home is that it empowers you to live by your values.

Your values are important. Without you even realising it, they direct and drive you. They help you in those mind-crushing, high-pressure situations when comparing the pros and cons is simply not working.

Your values give answers to the following questions:

1   Why don't you throw your rubbish on the ground as you walk along the street?

2   Why lock the car at work, knowing you've left nothing of any value in there?

3   Why not wash clothes in a tub on the back deck?

4   Why buy an electric kettle instead of using a pot on the stovetop?

5   Why do you need a TV?

I've found the answers to these questions come down to five key values, and these values can be serviced by your Smart Home.

Sustainability

I don't throw rubbish on the ground because I learned at a very young age that this is not an environmentally acceptable practice. It has been drummed into us that there are issues with pollution, non-renewable resources, global warming, and climate change. We know that our Earth will continue to face challenges and, while these very issues may or may not affect how we live, they will affect our grandchildren and their grandchildren.

Whether sustainability is your driving force or just a small factor in the back of your mind, I believe all of us want to do the right thing by our planet. But if we can automate the way our home functions, we address that value, regardless of where you are on the spectrum. This a Smart Home can do.

Security

On a biological level, all of us are naturally tuned in to risk. Using your car in the secure work car park as the example, you know

there are many cars in the facility, and each of these cars carries one, two, or maybe more, people. You are confident you know most of these people, but you don't know them all. Also, you did see a guy walking down one of the corridors yesterday that you had never seen before …

For this reason, you subconsciously decide that there is an element of risk. However, by simply pushing 'lock' on your key-chain, you can give yourself peace of mind for the work day and focus on more important things. While there is no such thing as absolute security, in this case the action required to make you feel comfortable was minimal and, frankly, a 'no-brainer'.

Imagine if your home could give you the same level of security and the same peace of mind, for just as little effort. A Smart Home can.

Time

Now I'm not sure how you spend your time and, more importantly, how you prioritise your time, but if it's anything like the two billion people on the planet that own a washing machine, it's certainly not washing clothes. The first electric washing machine was invented back in the very early 1900s, but it wasn't until the late 1940s, post-World War II, that they became mainstream. A study from around the same time had claimed that the use of washing machines reduced the average time spent washing clothes from four hours to forty minutes. This is nearly an 85 per cent saving in time for the person involved – every load!

That being said, a washing machine doesn't wash clothes any better than a scrubbing board: it uses a similar amount of water,

it certainly uses more electricity, and the upfront cost is higher – but we wouldn't go without it because it gives us something we all want – time.

Now wouldn't it be nice to find a way to save that kind of time on a few more of your daily tasks? A Smart Home will.

Simplicity

Why own an electric kettle when a pot on the stovetop can boil water? I can think of plenty of reasons! How about the simple fact that all you need to do is flick a switch, you need not to worry about turning it off, and the water will stay hot for longer. We won't even mention the safety benefits.

We are always seeking simplicity. Simplicity in tasks, decisions, outcomes, everything. Humans are inherently lazy. Well, perhaps 'lazy' is not absolutely correct, but we will strive to complete a task with the least amount of hassle, with what is available to us.

If you need to dig a hole, you will make a decision about the method – to use your hands, a shovel, or an excavator? To dig a hole at the beach for kids to play in, do you get a shovel out of the shed, into the car, and lug it down to the beach? Probably not. Using your hands would be far simpler. But what if you decided to put a pool in the backyard? Do you take four weeks off work and prepare yourself for a multitude of blisters as you think it will be simple to dig with a shovel? Again, no.

We want to keep things simple. A Smart Home makes them simple.

Feeling good

Why do we want to spend our time with friends and family? Why do we long for happiness, kinship, and to simply feel good?

Sometimes in life we need to indulge. There is nothing wrong with wanting to feel good. We deserve to reward ourselves for all our hard work. Otherwise, what's the point in working so hard? We deserve to have things that we simply enjoy, that make us proud and that help us relax.

Alternately, why do we want to reduce stress, anxiety, or that feeling we get when we have to deal with the 'bad stuff'?

As a general rule, we want to feel good more of the time, and we try to spend our time, money, and energy on things that do make us feel good. If you've really enjoyed something in the past, you will impulsively make similar choices to create a similar experience. If you've had a bad experience, you'll make choices to avoid that same situation.

Now what if your home could create more of those good experiences by generating environments that your friends and family will love? By making you feel good about your impact on the environment, by keeping you safe at night, by removing the stress of having to remember every little chore or item on your 'to do' list and losing time on the things that aren't important to you? You guessed it – a Smart Home can.

This is where the finer aspects of life can be enjoyed. If you want a stereo system that plays to every room of the house, including the toilet, that's a decision you are allowed to make. Whatever lifestyle you desire, you can create it through your Smart Home.

BUT WHAT ABOUT …

If you're raring to go then feel free to skip forward to Step 1 (page 19) where I'll outline exactly how we're going to create your Smart Home.

If you're still not convinced, keep reading.

But I don't know enough

A lot of us think that, in order to make a good decision, we must research and learn everything. This is incorrect.

You don't need to know it all. A willingness to learn or gain knowledge can be just as powerful as the knowledge itself. Can you remember many major purchases you've made in recent history where you knew it all? I'm guessing not. Think about your smart phone – how much do you know about the phone itself? What is it physically made out of? What technology has been used to connect it to the closest telecommunications tower? What is the signal that worries airlines enough to ban us from using them on a plane?

You probably don't know this information. (If you do, let me know, though, as I'd love to have a really rock solid argument next time the flight attendant instructs me otherwise!)

Why should this be any different for your Smart Home?

For the majority of us, there is a really valid reason we don't know …

We don't need to know! Why would we fill up the valuable space in our brains with things that we simply don't need to think about, and push out the knowledge we *do* need to know? I've

always been a fan of the motto "I'm on a need-to-know basis and I don't need to know". Save that brain space for the stuff that matters.

You might say, "But Sam – knowledge is power." I agree whole-heartedly, knowledge *is* power, but the power comes when the knowledge is *useful*. Knowing the ins and outs of the technology behind your smart phone (or your Smart Home) isn't.

Instead, you just need to find people who already have this knowledge, who can give you the confidence to make an informed decision.

I don't have the time

We all crave more time. Yet time is the one constant in the world we really can't do much about. It doesn't matter who you are, we all get the same amount of time: 24 hours in a day, seven days in a week, 52 weeks in a year and, hopefully, plenty of years.

If you've built a new home in the past or undertaken some major renovations, whether it was an inexpensive and rewarding experience, or you are still trying to pick up the pieces from the long drawn-out process, it took up plenty of your valuable time.

The fact of the matter is that you don't have to figure it all out yourself, or do it all single-handedly. We live in a society where professional time can be purchased, and is an acceptable invest-ment toward achieving the result you want. Your investment in someone else's time will allow you to continue to do what you love doing each day. In many cases, the result will be a product that will *continue* to reduce the amount of time you need to spend on mundane tasks, so you can spend more time doing what you

love – being with your family, doing a job you love, volunteering, or enjoying your community.

Outsourcing is a word that has been around forever. The myth, particularly in the housing industry, is that outsourcing = expense. But if a magic fairy offered to sell you a tangible amount of time, the very same time you've been craving, you'd make a very considered decision wouldn't you?

Getting someone else to do the work is not a cop-out – it's a smart decision. Not only will it save you time during the project itself, but it will continue to give you time back once you're done.

What do I mean? You do the research, then the design, and then complete the works. Then something stops working. Who is responsible? Who has to fix this inconvenience? In this case, it's you! More time wasted.

If you invest in getting things done right the first time, it will never stop paying you back.

But what will it cost?

There's a reason you don't get a chef in each night to cook your dinner at home. Even though it'd be great fun, there'd be awesome food, and you wouldn't need to lift a finger, most of us can't afford it! Having someone, or someone's business, catering to your needs is a fantastic and, to the right person, valuable service. In fact, expert culinary services are one of the oldest and most respected industries around. But, as with most great services, it comes with a price tag.

While 'smart' homes have been around for a while (I'm using the term very loosely), with the first commercial applications

being rolled out over 20 years ago, automation has been wrongly accepted as only being available at a premium price. And the thought of paying a premium price in an attempt to save money has always been a bit counter-intuitive.

However, investing in a Smart Home will benefit you for a long time, as you save money with increased efficiencies, upgrades, and maintenance and, if done right, it will be a one-time purchase too.

As well as saving money on the running costs of your home, there are also a couple of ways to *make* money with your Smart Home. Yep, you heard me – *make* money. More on that later.

You'll learn more about this in *Step 3: What are the options?*

SO HOW DO YOU DO IT?

So how do you design a Smart Home that will simplify your life; improve your lifestyle; save you money; help the environment; save you time; and keep your family safe?

It comes down to seven steps, or answering seven questions, which are outlined in this book.

Step 1: Where are you now?

Before you can set a course for your destination, you need to know your starting point. Here you'll learn about the environmental and construction elements that you already have to work with, to ensure we both leverage and compensate for these in the design of your Smart Home.

Step 2: What do you want?

Now we move onto the dream – if your home could do anything for you, what would it do? In this chapter you will create and prioritise a wish list based on your values, which will guide the rest of the design and construction process.

Step 3: What are the options?

While you might now know what you want, you won't yet know how to do it. Here we'll take a high-level look at some of the products that can help your home support your values, whether you value sustainability, simplicity, time, security, cutting costs, or simply feeling good.

Step 4: Where to start?

So when you have a long list of products and ideas, where do you start? Remember that your home is a long-term commitment, which means you can continue developing it over the years to come. Rather than doing everything now, this chapter will give you some guidance about where to start, and what can wait.

Step 5: What to choose?

Now you have a starting point and you've begun mapping out a plan, but with the continually growing range of systems on the market, what do you choose? Here you'll consider the benefits of a holistic system versus standalone products, as well as the right choice for your personality type.

PURCHASE HOMES WITH A HEARTBEAT