THE COMPLETE GUIDE TO THE SMART HOME

ANDREWLUCAS
LONDON

The smart home is a simple term that encompasses a wide umbrella of ideas and concepts about intelligent living. The phrase is used to describe all kinds of technology – some smarter than others – that are integrated into residential spaces of all shapes and sizes.

While there is no such thing as a 'one size fits all' smart home, there are several commonalities that can help homeowners and prospective buyers when they are planning their ideal homes.

In our Complete Guide to the Smart Home, we set out to explore what makes a smart home intelligent, what to look for in a home technology installer and how to plan and budget for a smart home project.

What is smart home technology?

Simply put, a smart home is a property that includes one or more connected systems, such as entertainment, lighting, heating, shades or security. This is underpinned by a robust IT network and an easy means of control, allowing the user to securely manage their home from wherever they are.

Advanced automation is a key feature of most modern smart homes. This makes it easier for occupants by, for example, turning on the lights when someone walks into a room or turning down the thermostat when there's nobody home.

New smart homes are becoming even smarter, with intelligent learning being built in so that your home can discover your preferences and adapt its behaviour accordingly.

As well as home technology that integrates neatly into kitchens, living areas, bedrooms and bathrooms, many smart homes now feature dedicated entertainment spaces that make spending time at home even more pleasurable. These include home cinemas and brand new spaces such as virtual reality rooms.

What smart home technology can I put in my home?

The technology found in a typical smart home can be divided into three main areas: security, comfort and entertainment. These can exist either as stand-alone systems, or as a unified set-up managed by a smart control platform.

Entertainment Rooms

As well as home technology that integrates neatly into kitchens, living areas, bedrooms and bathrooms, many smart homes now feature dedicated areas that make spending time at home even more pleasurable. These include home cinemas and brand new spaces such as virtual reality rooms.

Security

A property with a home security system is five times less likely to be burgled than one without. While a conventional burglar alarm will help to deter intruders, a smart home security system goes one step further by warning you about environmental threats such as fire, flooding or high carbon monoxide levels.

A smart home security system can also make it easier to keep an eye on your property, with live security camera feeds, instant notifications and the ability to see and grant remote access to guests when you're not at home.
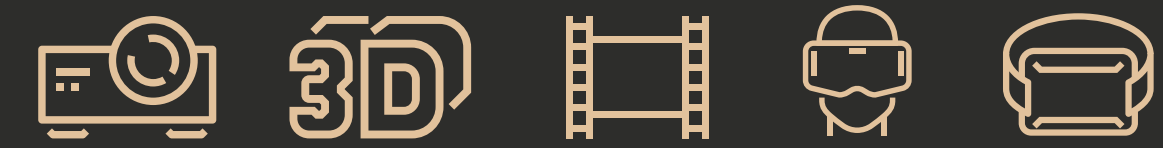
Comfort

Your lights, shades and heating all play a crucial part in the enjoyment of your home. By adding a layer of intelligence, much of this can be automated, saving you time and effort when it comes to creating the perfect environment to relax in.

Multi-room functionality allows you to quickly turn lights across the house on and off remotely, so you don't need to worry about leaving the hall light on when you go to work. Additionally, personalised pre-set scenes can be configured, letting you change a room's ambience at the push of a button.
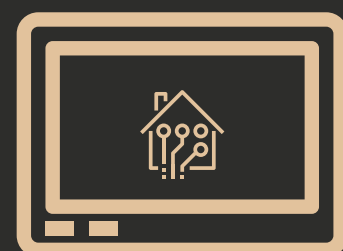
Home Entertainment

Making your home entertainment systems smarter allows you to watch or listen to any type of content, when and where you want it.

Adding multi-room capabilities to your music and TV set-ups means that certain sources are no longer limited to a single room. This also makes it easy to stream content from a number of different sources through a single screen.

From 4K screens to surround-sound and premium hi-fi systems, integrating the latest AV technology into your home will take your home entertainment to the next level.

How can a smart home be controlled?

There are a number of ways in which a smart home can be managed, each with their own
unique benefits and abilities to make operating an intelligent system more intuitive.

Touchpanel

For several years the touch panel has
been a ubiquitous mainstay of the
smart home. Either as a dedicated
screen affixed to a wall or as part of an
iPad interface, this is one of the easi-
est ways to see and manage all of your
home's systems in one place.

Voice recognition

By embedding a voice control platform
such as Amazon's Alexa into your
home, you can control your devices
seamlessly using nothing more that
your voice, meaning you can manage
your music, dim the lights or even
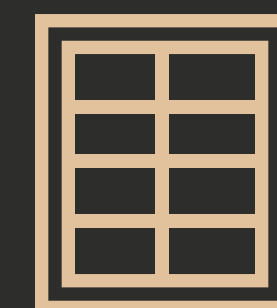order a pizza via voice commands.

Mobile app

The most common way of controlling
smart technology – whether for a
single device or for a whole-home
system – is using a dedicated phone or
iPad app. Having a smart home app in
your pocket means you can control
your home both inside and out,
ensuring you're always up to date with
what's going on inside your property.

Universal remote

A universal remote does far more
than simply change the channel. It
allows you to quickly switch
between different video sources –
from Sky Q to Apple TV to a movie
server – but also control the
lighting, shades and other systems
directly from your sofa.

Keypads

A keypad might look little more than a
fancy switch, but these simple
button-based panels can mask a whole
load of functionality if configured
properly. As well as controlling lighting
and shades from a single keypad, scenes
can be set with a single button press.

Why do you need a smart home technology installer for your property?

When you decide to buy a new three-piece suite, you expect it to grace your living room for a number of years to come. It's the same with almost any investment in the home – a new fridge, a kitchen renovation, or even a new coat of wallpaper – these products are built to last, and sold accordingly. If your sofa or your fridge fell apart or stopped working a few months after buying it, you would quite rightly be outraged.

Yet many product manufacturers in the smart home space have been sucked into the Silicon Valley ethos of always needing to have 'the next big thing', and are either pursuing fast replacement cycles or using built-in obsolescence to guarantee a more reliable revenue stream.

If installed properly, smart home technology is fundamental to the operation of the home, integrating with systems as diverse as heating and lighting, home entertainment and even security systems. Treating a smart home as if it were a commodity could lead to a badly configured system with security weaknesses and a poor user experience.

When a smart home is handled by a professional installation company, they will usually offer a support and monitoring service. This ensures that equipment is maintained regularly, system errors can be fixed by a trained engineer and malfunctioning hardware can quickly be replaced.

With buying home technology off the shelf, a product warranty will still exist, but once this expires you are left on your own if any problems subsequently occur.

Considering the scare stories out there, consumers are justified in having reservations about investing heavily in residential technology – but such fears do not take the larger picture into account. Not all technology is made equal and, despite there being an abundance of hardware based on the fast replacement cycle ethos, there are also manufacturers that create residential technology with a longer useful lifetime in mind.

A smart home installer worth their salt will be able to advise you on which products have a proven track record of performance and manufacturer support, and which will work best in combination. These systems might not always be as simple or quick to implement as an off-the-shelf, IoT-based solution, yet they bring with them a number of assurances: superior performance, increased device longevity and a long-term product roadmap. This often includes regular software updates and occasional field upgrades for your existing device, extending the useful lifetime of your initial investment.

How do you choose a smart home installer?

No one wants a poor installation performed by an unqualified cowboy, but how do you differentiate between the good, the bad and the ugly when it comes to picking your smart home technology provider?

Is your installer qualified?

Membership to CEDIA – the smart home trade association – is important to establish. There are roughly 350 installers in the UK and this can usually – but not always – be taken as an indication of basic competency. It is also worth asking after other accreditations, such as ISO9001:2015 – a quality management standard that indicates that the company is capable of consistently delivering an excellent level of service.

There are also several industry awards awarded annually that recognise the very best in smart home design and installation, both from CEDIA and other industry bodies such as the Consumer Technology Association, as well as individual product manufacturers such as Lutron. A decent trophy cabinet lends weight to an installer's reputation, indicating that their work ranks highly amongst their peers and suppliers.

Do they have the right experience?

The technology that underpins the smart home is not a unified, monolithic entity. Instead, a patchwork of systems, platforms and protocols are tied together in different ways to meet the incredibly varied needs of properties encompassing all shapes and sizes. Make sure that your installer is experienced in the technology they are planning to implement – particularly if it is an upgrade of an existing legacy system. Although a sole trader might do an adequate job for a small project, they might not have the in-house expertise needed to support various systems. If you are unsure, ask to see examples of a company's previous work and ask for client testimonials.

At the same time – it is important to try and chose a solution that is supported by several companies. Choosing a solution that only one or very few installers can support means that you may end up in a situation where you end up without long-term support (should the installer go out of business) or with fewer options in terms of maintenance and support providers.

Do they have the right staff?

A smart home company should have thoroughly vetted its staff before letting them on site, including CRB checks and both financial and employment history. Ideally, the majority of critical staff should be in-house rather than outsourced, and there should be clear evidence that the company invests in its staff to increase their skills (i.e. training such as CEDIA certifications).

Do they have insurance in place?

A reputable company should have a number of insurance policies in place, including legal requirements such as employer's liability and public and third party liability.

Professional indemnity is a particularly important thing to check, as it covers any errors on the installer's side in terms of design. Incorrect installation, badly laid cables or failures due to negligence could end up requiring a substantial amount to rectify later on.

Do they offer good value?

Price can be a false economy when it comes to the smart home, as it is often worth paying a bit more for quality equipment to avoid problems in the long term. If a company is offering their services at a price that seems too good to be true, it could be a sign that they are cutting costs elsewhere – i.e. using cheaper materials or cutting corners on the installation – or that their business model isn't sustainable.
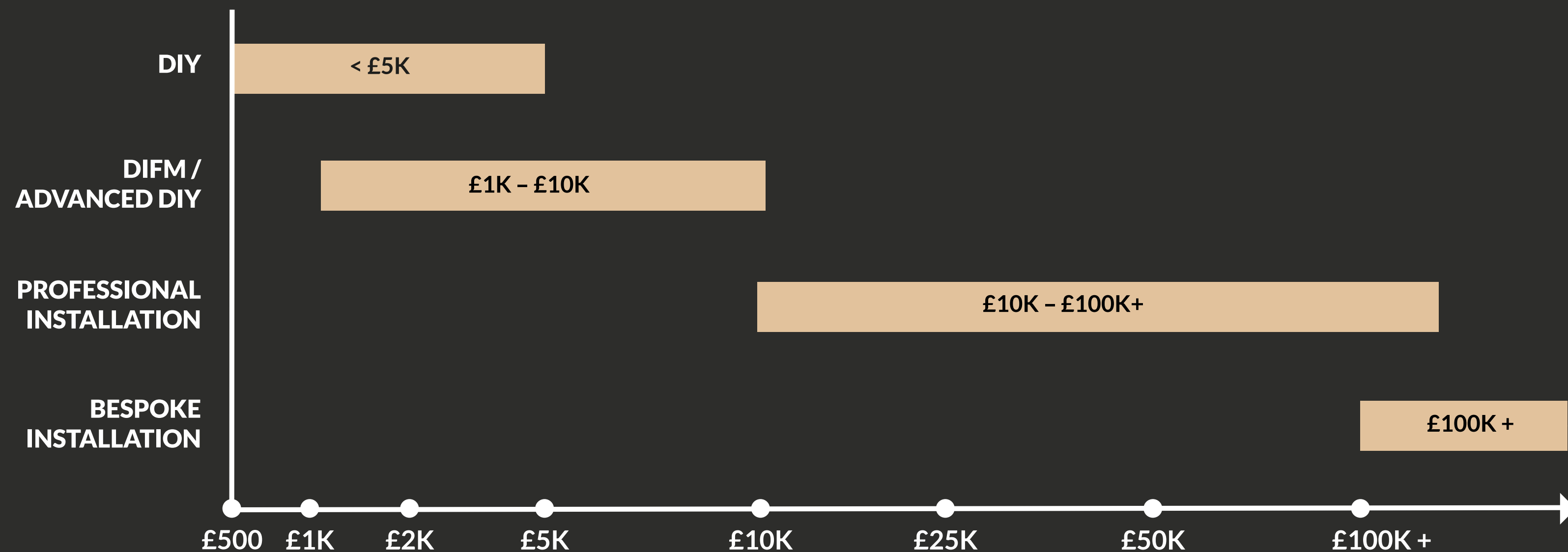
Quality over quantity

Smart home technology is coming along in leaps and bounds but, like a fitted kitchen or a loft extension, doing it properly remains a substantial investment. Considering that your smart home systems will need to perform for a number of years after installation, it is definitely worth spending a bit more on quality equipment with solid warranty guarantees, ensuring cables are run correctly and that everything is health and safety compliant throughout the property.

Taking the time to dig a little deeper will tell you whether a company is likely to deliver value for money. Take a look at their project portfolio, see if any clients have provided testimonials and check out exactly how extensive their maintenance and support packages are. Typically, getting to know more about the smart home installer you're intending to use before making a final decision about whether to hire them will give you a better idea as to whether their costs are justified or whether they're taking shortcuts simply to win business.

How much will your smart home project cost?

The first question you need to ask when trying to work out the cost of your smart home is what approach you're wanting to take – essentially, a trade-off between cost and convenience.

DIY

Some off-the-shelf elements – such as some wireless smart cameras or Phillips Hue smart bulbs – can be installed piecemeal and controlled by a dedicated app. However, joining these together isn't always easy to achieve and requires further knowledge of home automation.

DIFM (Do-it-for-me)

Products such as Fibaro and Qmotion shades could be installed by homeowners, but often is it is better to bring in someone with specialist knowledge to install the system for you.
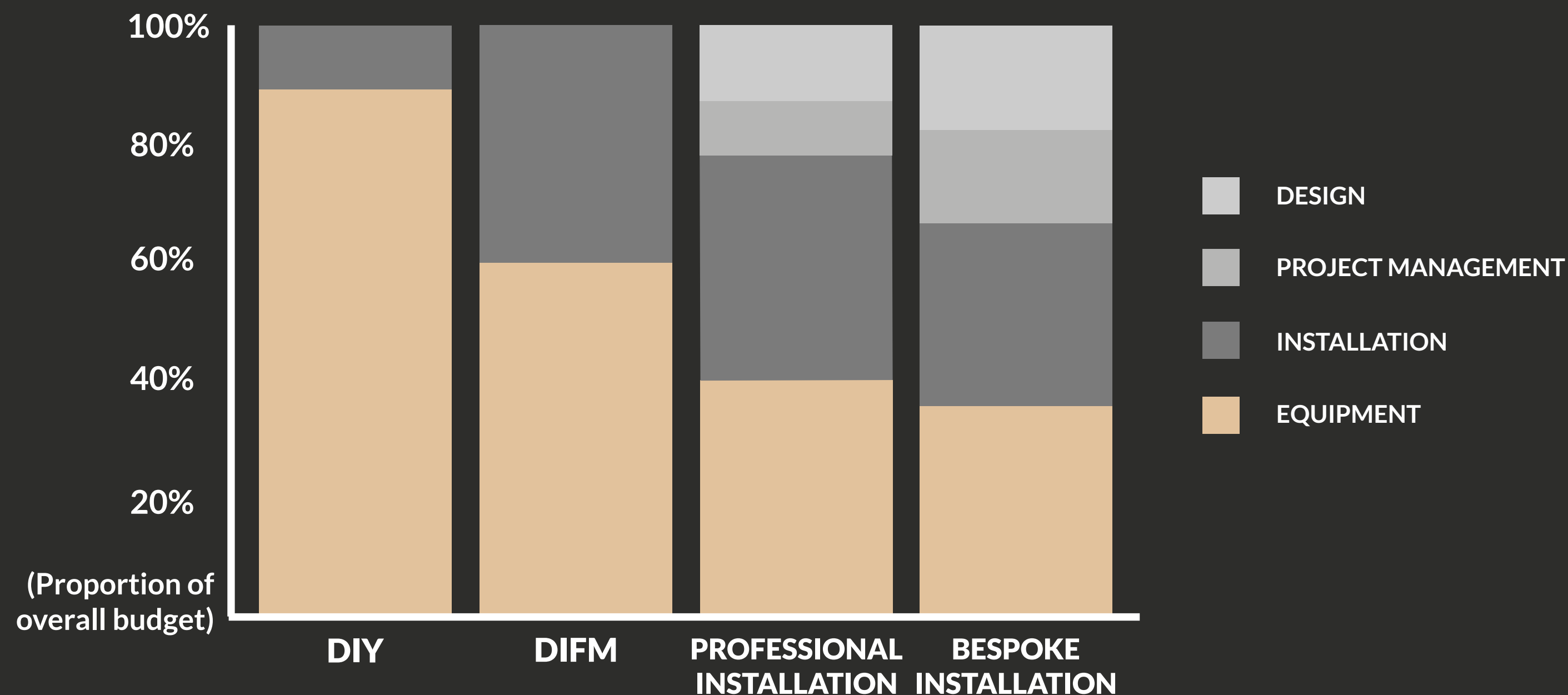
Professional installation

For anything ranging from a fully integrated climate control or a graded smart security system to integrated control of multiple systems, the only feasible option is to bring in a qualified installer to design and install a whole-house system.

Bespoke installation

For properties with unique environmental challenges or specialist technological requirements, choosing a smart home company with extensive experience in crafting unique solutions ensures an installation that remains sensitive to both the construction and interior design.

DIY — < £5K

DIFM / ADVANCED DIY — £1K – £10K

PROFESSIONAL INSTALLATION — £10K – £100K+

BESPOKE INSTALLATION — £100K +

£500   £1K   £2K   £5K   £10K   £25K   £50K   £100K +

(AVERAGE COST OF A TYPICAL SMART HOME PROJECT. NOTE THAT FUNCTIONALITY WILL VARY AS THE BUDGET INCREASES.)

HOW ARE PROJECT COSTS BROKEN DOWN?

Depending on the size of your project and how much third-party input is required, the balance of costs will vary greatly. Below is a rough guide for how you can expect to allocate your budget.

100%
80%
60%
40%
20%

(Proportion of overall budget)

DIY   DIFM   PROFESSIONAL INSTALLATION   BESPOKE INSTALLATION

- DESIGN
- PROJECT MANAGEMENT
- INSTALLATION
- EQUIPMENT

(THE ABOVE IS INTENDED AS AN APPROXIMATE GUIDE
AND MAY NOT BE INDICATIVE OF ALL SMART HOME PROJECTS)

Design

A professionally-installed smart home needs to be carefully planned by an experienced systems designer before the property is fitted out. This is a necessary cost, as it avoids critical problems occurring both during installation and after the project is completed. A more complex project will require a more extensive design process.

Equipment

As the scope of a project grows, the equipment cost becomes the biggest variable. In terms of being able to order equipment such as cabling in bulk, the overall per-unit price decreases as more is ordered, but the overall cost will depend on what equipment is specified and how much functionality is included.

Installation

Labour costs can be significant – generally 20 to 50% of the overall project expenditure – but a professional install will result in a home that is efficient, secure and designed to last for years to come. This not only covers the physical installation itself, but also includes pre-installation work and engineering expenses.

Project management

On professional installations, a project manager is needed to oversee the entire process and ensure that everything progresses smoothly. Larger or more bespoke smart home builds will need more day-to-day involvement from the project manager, particularly if there are a number of external partners to liaise with.

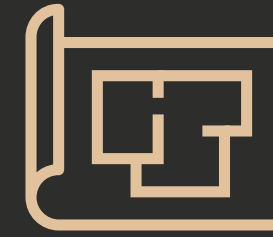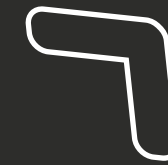# Stages of a smart home project

Free Consultation

A smart home expert visits your home to discuss your needs and provides advice on the options available, along with a virtual reality tour of an Andrew Lucas show house.
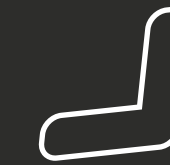
Estimate

From this initial discussion, the entire project is costed up and a comprehensive breakdown of costs – including design, equipment and installation – is presented for your consideration.

Design

Once the basic framework for the smart home is established, the design team fills in the blanks and turns the idea into a reality, ensuring the various systems will work together flawlessly.

Visualisation

For more complex or ambitious projects, a virtual reality experience is created so you can exactly see how your project will look once completed.
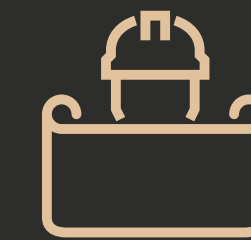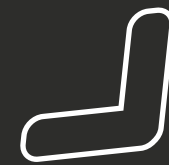
Installation

Once the property has been plastered and the site is dust-free, all equipment, control systems, TVs and keypads will be installed.

Preparation

If the property needs to be wired, all cabling will be prepared, made-off into plugs and sockets and tested. Off-site, all of the equipment will be prepared for installation.

Commissioning and Sign-off

All systems will be programmed and thoroughly tested to ensure they are working perfectly, before the project is signed off and an engineer walks you through how the system works.

Aftercare

A competent smart home specialist will offer support and maintenance contracts for any critical issues, fixes or updates that might be necessary in future.

When should I get a smart home specialist involved in my project?

The earlier you can get a home technology specialist involved in the design process, the easier it will be to incorporate smart technology into your home.

An experienced smart home company will do more than merely specify and install your smart home technology. They will play an active role in the project, working alongside architects, interior designers and other parties to ensure that all systems dovetail neatly with the property's design.

About Andrew Lucas London

Andrew Lucas London believes in enhancing lives through technology. Long-term stalwarts in the custom install industry, the business specialises in highly intelligent smart homes that enhance our clients' lifestyles. All of our projects are based upon five key principles: that the smart homes we create must be green, secure, effortless, beautiful and genuinely intelligent.

Andrew Lucas London also runs a virtual reality design consultancy, Andrew Lucas Studios, which creates photorealistivc animated VR and AR experiences for creative, commercial and residential projects

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