SDA SERVICES

AN OVERVIEW OF OUR SERVICES FOR
SPECIALIST DISABILITY ACCOMMODATION

Content

1. Introduction

The purpose of this booklet is to give an overview of the SDA services offered by Techsmax - the technologies, equipment and systems that we employ and the cost estimate. The build in this booklet is based on the structure of 10 tenant apartments, which have 24/7 shared support to 1 support apartment, all in the same building.

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Home automated solutions can give those living with disabilities a more independent way of life, improved security, lower cost of care and better communication tools. The objective of this concept is to provide people with disabilities with **quality housing** and **an easy way to control their environment**, thus where appropriate, reduce the need for 24/7 one-on-one care. The collaboration would extend beyond the individuals and include family members, architects, builders, carers, medical staff and more.

All the features will be centralised into one custom app, with one interface for the tenants and one interface for the support staff. There are extra customisation options for the tenants' specific demands. Voice integration and motion sensors are also offered for added flexibility and ease of control.

A key focus of our SDA services is reliability and functionality, utilising enterprise-grade mainstream home automation and communication technologies to help tenants deal with their unique needs and provide them with security features and emergency alerts. Each tenant apartment is designed to operate independently within the primary system to minimise a cascading failure event, with the addition of at least 2 hours battery backup run time per apartment. The nurse-call system is built with dual redundancy to ensure all communication from tenants is received by support staff.

This type of technology is life changing for many. Not only does it provide a better standard of living, it also **reduces the number of younger people living with disabilities from having to relocate to nursing homes**, which are traditionally designed for the elderly. This will encourage those with disabilities to choose where they live, who they live with and how they receive care and support.

With the NDIS rolling out steadily across Australia, many housing developers are starting to recognise the importance of **the inclusion of disability-friendly technology in new housing projects**. It is critical to get the build process and smart technology specifications in at the design phase of the building, rather than as a very expensive afterthought.

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We hope to meet and work with those involved in the SDA, to deliver cost-effective and feature-rich technical solutions.

2. Techsmax

> To put people at the centre of technologies
> and create better everyday life.

Techsmax is an **Australian home technology business** specialising in **building automation and assistive technologies**.

As a full-service **registered NDIS provider**, Techsmax will guide you through the complete process for Specialist Disability Accommodation (SDA) build, from consultation and design to implementation.

We are **constantly looking for new and better technologies** to enhance quality of life. Our vision is to put people at the centre of technologies and create a better everyday life – for people with disability, and for their family, the carers, our co-workers, and our partners.

An overview of Techsmax demonstrates our sound business ethos and practices, built on our experiences gained over the last 6 years as Australia's pioneering software and home technology company.

- Our specialised knowledge of the construction industry and electrical engineering.

- Dedication to the tenants' needs with an understanding of NDIS requirements.

- Expansive research and in-depth knowledge of various assistive technologies and how to incorporate them into a centralised system and control platform, providing tenants with a simple way to control their living environment.

- Our prospering partnerships with leading technology and emergency support systems has resulted in a seamless solution utilising quality components best suited to each scenario.

- Australian owned and operated, providing services to our diverse group of clients across the public, private, and NGO sectors.

- The development of custom user interface app that is consistently upgraded to meet clients' needs and service delivery requirements.

- Dedicated in-house UX/UI designers to assist the programmers in constantly improving our custom app on its functionality, usability, and accessibility.

- Our bespoke developed suite of resources is not a collection of disparate systems. You will find the code, configuration data, equipment and other facets to be closely aligned.

3. SDA Services

3.1. Overview

The key in achieving a functional SDA build is knowing the requirements of the NDIS and the needs of the tenants.

Techsmax provides comprehensive services for SDA build. Our staff will guide you through the complete process from consultation and design to implementation.

- **Build consultation -** ensuring correct base build items are installed at the time of construction.

- **System integration -** ensuring all SDA Design categories meet the desired level.

- **Training -** providing manual documentation and face-to-face training.

- **Ongoing maintenance -** firmware updates, replacement of batteries and other unscheduled repairs to ensure operational stability.

TENANT APARTMENT

- **Automation control** of lights, doors, blinds, air conditioner, TV, kitchen/bathroom cabinetry, and lifting aids.

- **Voice control** of automated equipment via Amazon Echo Dot.

- **Techsmax's tenant app** that can run on personal phones/tablets.

- **Nurse call** from wall-mounted push buttons.

- **Dual redundancy** for nurse-call system via secured assistive technology network and secured nurse-call network to ensure reliability.

- **Two-way voice communication** between tenant and support unit.

- **Fire alarm system** with visual and audible alarm. Audible alarm can be snoozed via wall-mounted control unit with 10-minute intervals.

- Provision for **med tech integration**.

SUPPORT APARTMENT

- One desktop computer that will run the **Techsmax's support app** for remote monitoring and control.

- Support app provides **remote overview** of tenant apartments, including all alarms and general environmental notifications (e.g. lights, air conditioner, and door, etc.).

- **Event logging** for review.

- Separate support call **annunciator display** to ensure all messages are received.

- **PABX Phone System** with the ability to accept outside phone calls and internal calls (two-way voice communication) from tenants.

- **Comms rack**.

3.2. Tenant apartment

AUTOMATION

Home automation system is a fantastic way to enhance independence and change the way people with disabilities interact with their home environment. These can include:

- Automation control for lights, fans, air-conditioner, TV, blinds and other home fixtures with a tablet or smart phone.
- Height-adjustable kitchen and bathroom cabinets.
- Easy-access automated entrance door.
- Voice control of automation equipment via Amazon Echo Dot from Techsmax custom API.
- Environmental sensor provides the system with the temperature, movement, light level, UV level, tamper, and humidity data of each area that it is installed.
- Apartments can be further automated using assistive technology as needed.

LIGHTING CONTROL

- Relay is installed behind normal light switch.
- Can be used with normal light switch hardware.
- No additional control cabling is required.
- Mesh connection between relays.
- 2-way switching can be retained.

DOOR CONTROL

- Relay will be installed at door control module.
- Relay is installed in parallel with standard door open contact.
- Relay can run off DC supply voltage from door controller if required.

TILE-STYLE BUTTON

- Tile series contains 1/2/4-button panels, 86mm x 86mm in size.
- Both plastic and metal versions are available.
- Laser etching of icon and text is supported.
- Built-in RGB backlight with adjustable colour and brightness level.

AC CONTROL

- Relay will be installed next to head unit.
- Work with any air conditioner that utilises a standard IR remote.

BLIND CONTROL

- Relay can work with any 3-wire blind motor.
- No additional control cabling is required.

TV CONTROL

- Global Cache iTach TCP/IP to IR.
- TCP/IP to IR signal.
- TV control can work with most modern TV on the market.
- Powered via PoE.

TENANT APP

Custom user interface app for tenants will be based on Techsmax standard assistive living app
(see examples below).

A commercial-grade 10" Android panel will be utilised for the wall-mounted tablet in the kitchen/living
area. A high viewing angle IPS panel which is designed for 24/7 usage, and featuring POE will be utilised.

Each apartment will have a 3-user licence allocated to them to be used on tenants' personal phones and
tablets. These licenses can be managed remotely, with the functionality to lock out a license if a device is
lost or a tenant vacates.
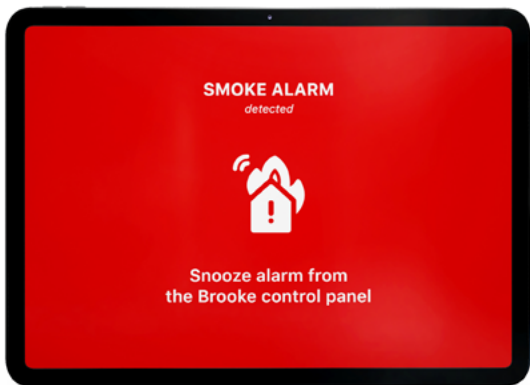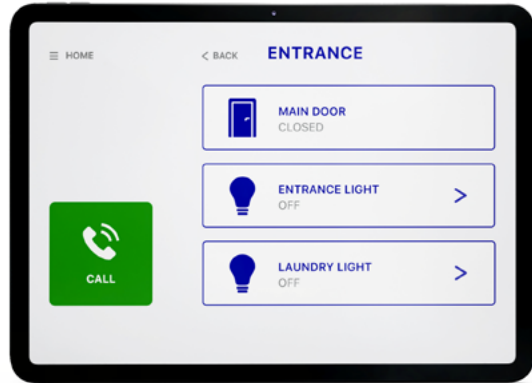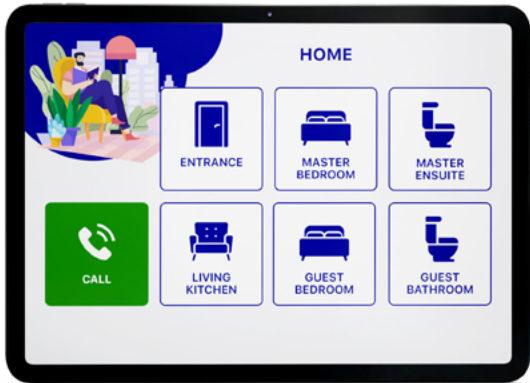
Example of Techsmax tenant app

NURSE CALL

The nurse-call system provides tenants with the means to press a wall-mounted button to call the support apartment and alert the support staff in case of an emergency. 3 call buttons will be installed in each tenant apartment, located in the main bedroom, bathroom and kitchen/living area. Nurse call can also be initiated via the tenant app on tablet/phone or via voice command to Amazon Echo Dot.

The nurse-call function works independently from the automation technology. It runs on a separate communication network so that all critical events are received by the support staff. The nurse-call event is also duplicated within the automation system to provide additional reliability.

ACCESSORIES

Our nurse-call system has a wide range of add-in options, such as duress, pendant cord, waterproof wrist pendant, under mattress sensor, etc.

Bed pad

Wireless pendant

Doors & windows magnetic switch

SMOKE ALARM

2 smoke detectors will be installed in each tenant apartment - 1 in the kitchen/living area and 1 in the main bedroom.

The smoke alarm system comes with a wall-mounted control panel and interface unit. The 2 smoke detectors communicate with each other and the control panel wirelessly, so placement of the panel can be determined depending on the tenants' needs.

Control panel

Smoke detector

Strobe

In the event of smoke detection, the control panel will activate the audible alarm and the strobe, providing visual alarm for tenants with hearing impairment. The audio alarm can be snoozed from the control panel and can report the alarm back to the support apartment.

In addition to the local smoke alarm, the building fire alarm can be configured to trigger the apartment smoke detectors and the audible and visual alarm.

3.3. Support apartment

SUPPORT APP

Custom user interface app for support staff includes one layout design for PC based on Techsmax standard support app (see examples below).

The support app gives the support staff the ability to monitor status of the tenant apartments, including alarms and general environmental notifications (e.g. lights, air conditioner, door).

System has built-in logging database to record all events on the system and can be password protected for increased security.
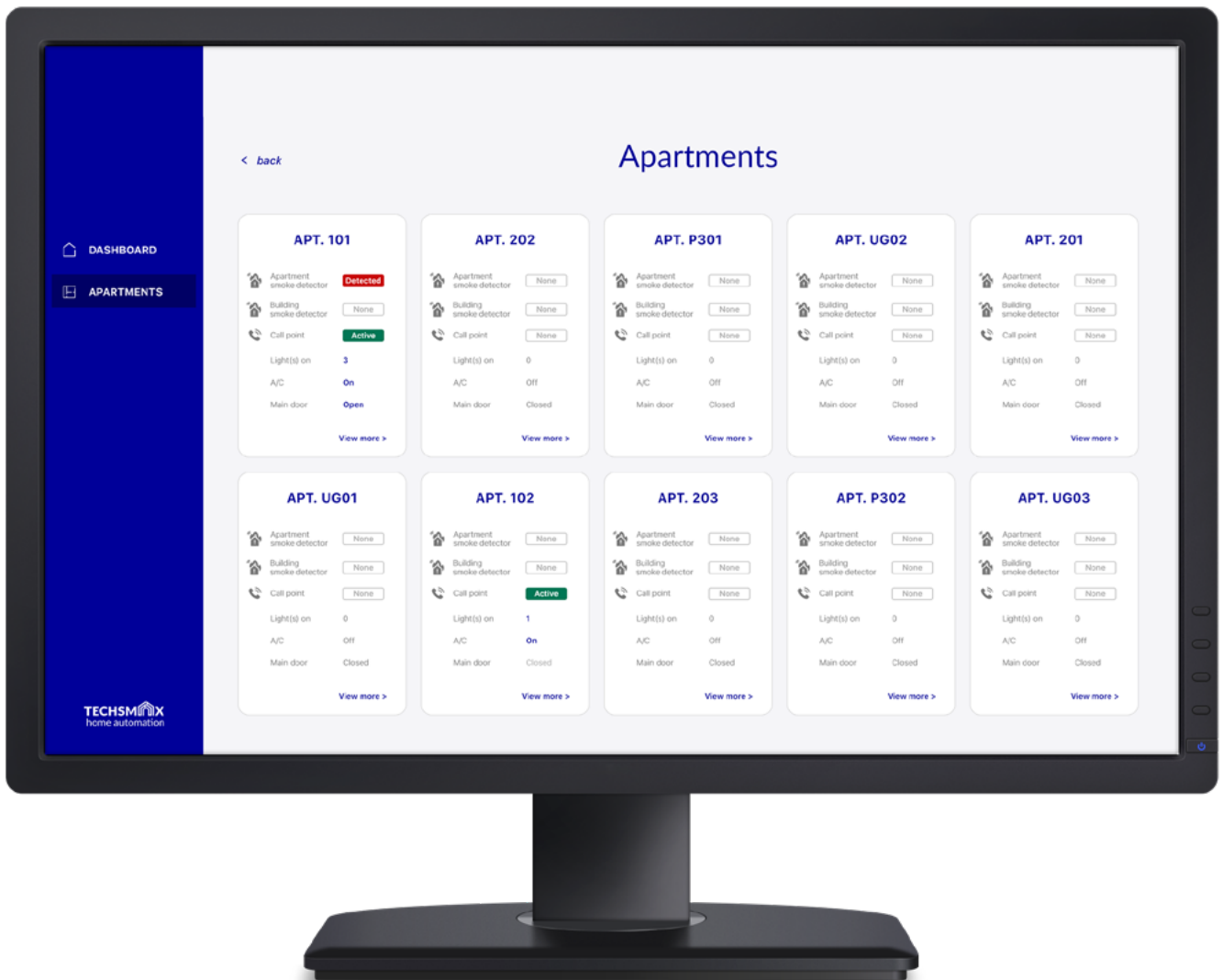
Example of Techsmax support app

NURSE CALL

Our nurse-call system generates alarm and also has the facility to open communication between tenants and support staff. This feature can be disabled if preferred. In the event of a call, the support apartment PC and annunciator bar will display the apartment details; in conjunction with visual alarm, the 2-way communication will start.

Our system allows for cascading event calling. This allows for a follow-me call system. If the first phone is not actioned or picked up, the call will be transfer to the next number/phone.

ALARM DISPLAY

In addition to the desk phone on the support staff work station, a separate annunciator panel displays alarms/calls from tenant apartments to ensure all messages are received. Smoke alarms and nurse calls can also be monitored through the support app on PC.

ADDITIONAL OPTION

If cellular connection is poor within the premises, we are able to provide an on-site paging system.