

National Conference 2019 – Design and Technology

TOM WORSNOP

Welcome everybody to the afternoon session of this great conference we're at. I'm Tom Worsnop from the Summer Foundation and it's my privilege to introduce the session today on design and technology, innovations in housing and independence.

So first of all, I just wanted to introduce our two speakers, Rob from Aginic and Jeff who are both speakers around our topic of innovation and technology.

Hopefully, you'll find some very interesting information from both of them today and as I said, think about your own questions for this topic as well.

So first of all, Rob Mackay from Aginic, a Brisbane-based data and technology business.

Rob has overall accountability for the groups, people, technology, partnerships and new market segments.

Rob also leads Aginic's venture business, which supports a portfolio of start-ups to rapidly transform from early stage ideas to successful market-leading businesses, so could you put your hands together for Rob for me?

(Applause):

ROB MACKAY

Cheers, thank you very much, thanks very much for having me. So, I'm here to talk to you about home automation and the Internet of things or IOT and how that relates in the SDA context. So, home automation is not a new concept.

It's been around for 30 years, we would know it as anything that's hard wired in to a house, so a lighting system, we can control the lights through a switch, we can turn them up and down.

IOT stuff is more recent, right, it more relates to a single component such as a light bulb or a Google Home or something that is easy to set up and needs to connect to the Internet and gives us some smarts around what we need to do. So it's come along way over the last 5 years.

I'm seeing some amazing things happening currently in the SDA space. I'll share some of those things with you and then I'll also share where I see the future opportunities and possibilities.

So yeah, apologies, my colleague Sam Kosky is not able to be here today, so any questions that are deeply technical, please just reserve them, please. So, he's our senior software engineer, and then my two ratbag kids and I've got a story about those coming up, so Aginic is a technology business.

One of the products that we built is called Opal, which is a home automation platform which was initially designed for luxury residential sector. But it's been repurposed for the disability sector, so that's why I'll be coming from there. So, I think I'm really passionate about this space and I've just got a short video to start with that best captures why.

VIDEO BEGINS

I am thirty-three years old and have motor neuron disease for two and a half years.

I live in Sheffield with my wife, Sarah and two sons, Charlie and Maxwell.

I have been unable to use my fingers to type since around November 2013.

I have used PI Gaze systems since then.

The communication software has been the biggest improvement.

It is quite slick and fast.

The free keyboard is so quick, I find I have to really know what I want to say, it is sometimes quicker than my mind.

The device has been integral in helping me remain at work.

Also, I have set up a microbrewery.

We have made around fifteen brews so far.

I was even able to design some pump lifts.

I don't think you can underestimate the effects that being able to communicate can have.

It is critically important to me to be able to communicate with my sons, plus Daddy can turn the cartoons on which they appreciate.

It is so important to my family that I am able to communicate with my sons and wife.

It has made a massive difference to our lives.

You don't have to live without a voice.

VIDEO ENDS

Yeah, very powerful stuff, a really powerful video, so that's just an example of kind of what emotional OT space is in. The impact that it's having, we've spoken, we've heard a lot about freedom to gaining independence and that's kind of what best depicts it, but that's one small element of it, right. So that's what you saw there, is augmentative and alternative communications, that's one piece of the puzzle and I'll cover, I'll cover some other things along the way, so currently, there's a lot of stuff out there.

It generally ranges from DIY stuff, so stuff that I spoke about earlier, your Google Homes and your light bulbs, they're single independent devices, they need to be connected to the Internet to function. They typically come with their own apps that you can kind of use to control, whether it be air conditioners or Google Home, like I said. And then on the other end, you have your fully integrated solutions like your, people might have heard of, Control Four or Clipsal Cbus. So great at what they do. Typically proprietary, typically fairly inflexible and expensive, hard to kind of maintain and support. So, what we've been working on essentially is to find something that sits in between that.

It sits in between the DIY stuff and the proprietary stuff, but still delivers the functionality that people need.

So in terms of limitations with those current solutions, there are compatibility themes, so different operating systems, being able to interface and interact across multiple things.

There's consumer awareness, so understanding what's out there and how that can best sort of support people's journeys, and then product overload. Like I said, all these different DIY products or whatnot, they come with their own apps, their own interface that people use. It's not a fully packaged up, or integrated solution, and with that sort of translates to in the SDA space is this.

So, we work really closely with Youngcare. So, we're obviously a Brisbane-based organisation. So, these things are observations, based on a dwelling, a multi-resident dwelling in the Brisbane area. So, this might resonate with a few people in the room. So, don't get me wrong, there's some great stuff happening, so there are some really awesome things that are out there that individuals are using and accessing to make their lives better.

However, there are some limitations. So currently, there are residents or individuals using multiple tablets to kind of control multiple functions.

You saw Steve's story, that's a TobiDynavox tablet, which has eye-tracking control in it. Then they might be using another interface or tablet to control air conditioning or TVs, or lighting. Yet there's a lack of integration between products.

It's basically a universal remote, so it turns things on and off, but in the end, you sort of really want something that's a little bit more kind of integrated, and is that single interface.

The other big theme, which I think is important in the SDA discussion, is these types of solutions are quite difficult to scale. So, it's typically a manual deployment, so when things are required to be fixed or updated or reprovisioned or recommissioned, it's typically a manual kind of intervention that's required to kind of get those updates and get those new themes on to those interfaces.

In the new world or where we're seeing things go, I'll only touch on a few of these 'what's possible' points.

The concept of machine learning, there's a lot of buzz around artificial intelligence in the technology space at the moment.

Machine learning is essentially a component of that and all it is just the ability to gather a hell of a lot of data, identify patterns and then make sort of predictions or support sort of predictions in what's going on and what's important about that in an SDA space. Is that for a resident, for an individual who goes in to a room at a certain time of day, pulls his blinds down or his or her blinds down, turns on the TV, that then over time, these solutions and these systems can essentially create scenes for that individual, so that when they're doing that on a day to day basis, things just happen. Those scenes transition automatically, there's no intervention required from the individual, the solution has learnt what is important to the individual.

The other thing around machine learning is pre-emptive maintenance. So, knowing when things are going to fail, knowing when hardware components of devices are going to fail and being proactive with when you change those things.

I don't want to get too techy on you today, I'll try and keep it pretty high level, but the new world is kind of enabled by two main things.

The first thing is this IOT gateway concept. So essentially, the gateway, it's smaller than a Wi-Fi router if people know what those are and it sits sort of in your switchboard, very small.

What it does is it basically connects all to your brain, it connects all of these devices to get together to be able to enable you to do some of these things.

There's no replacement required, you can do over the air updates, you can do remote monitoring, you can do all kinds of things. But the big thing that I think is relevant in the SDA context is, you can do everything offline, so you don't need to be connected to the Internet to control crucial functions that an individual or people within a bit of accommodation need to be able to do.

Then the other thing is this cloud platform. So, Cloud, it's other bit of buzz in technology world. But essentially, it's storing the data not on a physical server or in a physical box, it's, Opal uses Google Cloud to massive, massive scale; really responsive, really quick to do things. And what that enables, is remote device management, it enables greater connectivity as well, so if friends and family want to communicate with residents or check in on them in a way, then that can be enabled. There's a big thing around alerts and notifications, so say in the context of emergency assistance, we can push alerts and notifications to friends, family, emergency, that's all enabled via this cloud platform.

So, some of the big benefits I suppose, so there are certainly cost savings around reduced energy bills, reduced insulation and commissioning. The support and maintenance is a completely different model to what's currently happening. And I can't talk for every SDA provider or development, but the ones that I've seen still rely on that kind of call out fee, so if something's wrong, they call someone out, they come and they fix something and send you a bill for 5 to 10 grand. As in a new world, the ability to manage things remotely and deploy updates and that's kind of where it needs to get to.

There's a single interface, which is really important.

It enables a lot of research and I suppose the most important thing is around the safety and security comfort, freedom, choice and independence of these residents.

So where are things going? There are a lot of really awesome things that I would have loved to have shown you, but I'm getting the two minute signal here, so bides the name in colliding, there's a lot of research around out there around occupancy detection, so if you know where a resident's going or where an individual's going, updating the interface and updating those scenes to control lighting.

There are huge, huge links to health and wellbeing around that.

Access control's a big one, security's a massive one and you saw Steve's story earlier around the augmentative and assistive technology side of things.

I'll just skip over the next video and I'll just leave you with a few thoughts.

Basically, a few key considerations when implementing or looking to design some of these things in an SDA context.

It needs to be designed by the people who are going to be using the software or the interface. That is crucial, and you're not going to be able to cater for every single use case, but it needs to be designed by those individuals.

We need to make sure that we can create something that's scalable. You saw the number of, or the demand for places, it needs to be able to get to those 10,000 odd places that need to be done over the next little while.

Big questions also around if you're looking to achieve platinum level SDA accommodation, what's my base package of accommodation versus what are we expecting individual to come in with and be able to use automatically. So, I'm really excited about the space, thanks very much for having me, looking forward to answering some questions a bit later. Cheers.

(Applause):

TOM WORSNOP: Thanks, Rob, it's always good to have somebody who can actually talk tech and who can say it simply, so good for you.

There will be question time later, so keep thinking about questions you may want to raise, as I said earlier, we'll have some roving mikes, so we'll be using the usual microphone technique to try and get questions up here. But I also just wanted to remind you, Slido is still active, if there are bigger questions you still want to get answered in a later panel as well, so Slido is active even though we're not using it actually in this session.

Our second guest is Geoff Barber.

Geoff's a specialist in disability housing and inclusive technology.

He'll share with you some of his experience with Stretchy Tech, a social enterprise established to provide leading technology.

He has led reforms to separate housing and the support function so you probably aware under SDA, there is this big move to separate the concept of a housing provider and a support provider, empowering people to live with disability and take up regular housing options, live ordinary lives.

He has direct experience in developing and understanding supply and demand of SDA housing and technology.

Thanks, Geoff.

(Applause):

GEOFF BARBER

Great, thanks.

I'm going to talk just about technology in this session, so we'll focus on Stretchy Tech. So, Stretchy Tech is a social enterprise, so when we created the name, we wanted something, we wanted a name that resonated with people living with a disability, and that people could remember. So, for us, Stretchy Tech, with the tagline underneath, "nothing out of reach", has that dual meaning for it. Because often, our experiences in helping people in to really great

houses, there were still aspects that were out of reach for them. And we think technology is really key to opening people up in terms of connection in to community and to families.

So, I said before that we've created a social enterprise to do, I actually didn't want to create the enterprise, I didn't want to do it. I wanted to give it to other providers of the sector and I couldn't get anybody to do it.

I couldn't, people either a didn't understand what we were asking or couldn't come on the journey with us to the cutting edge where we wanted to be. So, we said, no, well, we're going to do it ourselves. So, we've created a separate entity to do it. So Stretchy Tech's not an invention of technology, we're not a big tech company, we're not in to design or creations of tech platforms. What we are is an application. So, to look in to our community and say, what's the best and latest and greatest technology that is being used by everybody every day and in high end homes, in community, all that sort of stuff. And what's its application for people living with disability?

So, it's a completely different model than what you might find in an aged care home or a nursing home or a hospital. It's about saying, hey, there's some great technology out there, it can change the lives of individuals for that.

So, to give you a quick example of that, so we've worked with a young man who experienced an acquired brain injury and for him to connect to community, what he needed was some prompts and reminders.

He was receiving those from his family or support workers to attend appointments, to help him when he was driving his car, all that sort of stuff.

He didn't need a huge technology solution. What he needed was something as simple as an Apple watch, so when he was driving his car, just like you guys drive your car, he could receive discreet prompts and reminders on his Apple watch, a little vibration that says, hey, there's a corner here.

So, when he's driving, his family doesn't know that he's getting prompts that gives him confidence to do that. So, we've got other guys who live with intellectual disability, when they're walking down to go to work, or to go to a day options program, or go out to visit family and friends, they can get a prompt and reminder when they get to bus stop 43.

"Hey, remember, John, you're getting on bus stop 43 and you're going to see Fred."

He just needs a prompt and reminder for those sorts of things. So, from right out there, in terms of connection to community through to what needs to happen in people's homes. So that was our passion, and what we wanted to do.

We didn't want to just do home automations, there's a whole range of really great home automation solutions out there.

Our sense and belief was that we not only wanted to empower people in their homes, but we wanted to bring them in to community. So, we need to think really carefully about what systems we're funding and putting in to people's homes, because there's no point giving everybody power and control in their home, if when they leave the home, they've got nothing. So that was our driver and what we wanted to do. So, I'll talk a little bit about that and share some experiences.

So, one of the things that we started doing is looking around what really works out there and the sense of what's coming through. Some of the large technology providers like Samsung, Apple, Google, all that sort of stuff, it's incredible, it really is.

There's a lot of power, both in the computers that you have in your phones and your PCs at home, that just isn't being used. And if individuals know of it, often people living with disability don't have the help and resources that they need to tap in to that, and to know how to use it.

So, we've worked very closely with providers like Apple, to become one of a small group of people across Australia who are Apple accessibility consultants. So, we're not wedded to Apple. We think Apple's really cool and does a whole range of great things for people living with disability, we're really focused on what are the needs of an individual, so what system do they use?

So, if they're already an Apple person, we can build a system based on Apple products and connecting in to Apple. So, if they're a Samsung, or if they're an Android user, really cool stuff that you can do for them in their home.

What I'd like to do is show a little clip, but in the introduction to that clip, what we wanted to do was to work and showcase an apartment to show what's possible.

We've set it up with young Jess. So, Jess lives with multiple sclerosis. He's a young man, he's moved away from home. He lives with a reasonable level of disability and he lives in an apartment that's probably a 1960s older style apartment. And what we wanted to do was go and do a tech fit in his house, to show what you can do with a retro fit. Because a retro fit, you can't put cables in walls, it's just way too expensive, too hard. So, the solution that you see today is available to most people today if they can access it. So, if we can show the clip, that'd be great, thank you.

VIDEO BEGINS

I knew this technology was going to make things easier for me, but I didn't realise it would change the game for me, really.

Before I had this renovation, I wasn't able to open the door by myself, it was extremely hard to open the blinds, to turn on the air conditioner, even to turn on the TV or the radio.

I guess one of the scariest things like if I'm going to have to go in to a nursing home because I can't do all these things by myself.

But now I can literally speak to my house and do these things for me.

Turn off lights.

Voice: Okay.

Turn on TV.

Turn on black out.

Spending time with family and friends is a huge thing for me.

I feel more comfortable inviting people around now because I can open doors for them and throw on lights for them and put the air conditioning on for them.

I think the whole point of this technology in the design of this house is to even the playing field.

The technology that should take users, it's either behind the walls or it's just in my phone or iPad, things that everyone has already.

So when you come in to this house, you don't think someone in a wheelchair lives here.

You think, this is a cool house and this technology is what I want in my house as well.

It's made a difference to me psychologically and being in a beautiful that you were wanting to do is a place that I want people to come and visit.

VIDEO ENDS

So, a sense in terms of what we're talking about here today is a different approach. So it's about focusing on the needs of an individual living with disability. And you'll see a range of technology solutions out there. And I've certainly experienced them myself over time that are as focused or are even more focused on the needs of support workers or the needs of others in the dwelling. So, my sense is what's available now to people living with disabilities, technology which focuses specifically on their needs, and their individual needs.

So, the nature of Stretchy Tech is a vertically integrated enterprise. So, we work and have on our staff, a specialist occupational therapist who is cutting edge on inclusive technology.

If there are any OTs in the room or people in the allied health sector, you'll know how hard it is to keep up with OT more broadly, let alone to be a specialist in this field. It is moving really, really fast, so I'm not sure how an OT knows what's happening, how to keep up with what's happening, but then also understand what's the best application of technology in an individual's life, in a way that doesn't cost a whole heap of money.

So, if you're going to put a device in a switching device, that'll be \$700. How do you know it will work for that individual? How will they access that unless you've trialled and tested it and seen it in operation? So, it's really quite clunky and difficult. So, that's what we think and so just like there have been reforms in the medical practice and the easiest one I can give to you is probably GP practice.

What we do is a specialist service.

We don't replace a normal OT, we're not interested in broader OT work, we're interested in that specialisation, so for us, it's like a GP practice.

When you go and see a doctor, your doctor doesn't do your blood tests any more, he sends you down to Gribbles. He doesn't do x-rays any more, you go out and get your x-rays.

If you've got something wrong with your brain, he doesn't operate on your brain, you go and see a brain surgeon.

So just like what's reform for GPs, my expectation is that's going to happen in the OT sector and that OTs will increasingly make referrals to specialist OTs. And specialists in the fields

who will come in and do a takeout or a sub-element of a person's plan to support what they want to do, or they'll come in and deliver a particular service.

So we then back that up with a specialist technician who understands the needs of people living with disability, the attitudes, the approaches and the enthusiasm to get it right for an individual. Because it's great to have it on a plan and anybody who's seen something on a plan and trying to deliver it on the ground, it's a completely different thing. It's hard enough in the built form when you're building houses, let alone when you're trying to do technology. So, by having it vertically integrated, you have an OT who speaks the language and who can do a scope from which the technician can then deliver on, and install and then modify and adapt it with the individual to work.

So if you've got somebody with very limited mobility, they might be using a single switch button to control their phone and then that's connected in to a whole range of other aspects of the house.

By doing that, by working on the access features, you then open their world up, so why would we use a piece of technology that only restricts them to doing one or two functions?

I'd much prefer them connecting to their phone and then have an integrated way for them to do a whole range of things because then, we looked at safety stuff, some of the basic old school call bell stuff.

Well, you're lucky if an individual can push a button on a wall to do a call bell, and who are they calling? They're calling this passive response at the end where somebody's sitting and monitoring.

We can connect them in to their phone, somebody living with significant disability can use their phone, they can call the support worker, they can call Mum and Dad, they can call a pizza, they can. It just opens up their world. So, that's where we'll start and the focus is on access. So, whether it'd be physical access through switches or through voice access. So, there's a whole heap of really cool stuff that you saw Jess doing, and there's the stuff well beyond that, that you can do through voice control.

We worked with a young gentleman, he's probably a middle-aged man, he'd like me to refer to him as a young gentleman, who experienced catastrophic burns and amputations as part of a motor vehicle accident.

For him, he needed to get support and assistance to get up in the morning and then to shower him and then to dry him and dress him and he also because of his burns, he lived with a significant visual impairment.

So we went in as part of a trial and fitted out voice operated shower for him so he could get up in the morning, walk in to his shower, just put the shower on, the shower will start and he can shower himself, he'll then say, shower off, the water stops and he can say, body dryer on, and the body dryer will start and he gets warm air that blows him because he can't dry himself with a towel, he doesn't have the capacity to do that, so we get nice warm air drying him and he can say, body dryer off, and he's washed and showered himself.

He then needs some assistance to get dressed, but even if we stop his day just there, what a huge move in terms of personal independence and dignity. And we haven't even got him out

of his bed yet, out of his bedroom, so because he lives with a visual impairment, he's got a range of what I would call more medically-based devices that have been around for years.

He doesn't use those any more, what he uses is an iPad which he can open up via voice control. He can read, he really wanted to get back to reading his newspaper is what he really wanted to do, that's what he was grieving, that was his habit every morning, that was his goal.

He can access the paper on his iPad; he can invert the colours so he can change it from black on white to white on black, which helps him read.

If he's tired, he can get the iPad to read it to him.

If he's more tired or wants to read it more, what he can do is project it up on to a big screen TV installed in his house, and he'll stand up there and read it on the TV or he could get it to voice control and that's just what he's doing for his newspaper, so then because he can control all the systems, he can call up anything he likes and see and control it.

He's not using his medical devices any more for that.

When his grandkids come, he is the coolest grandfather ever because he has devices which have social capital in our lives which is incredibly important for him. This is not a device that sets him apart as different, this is a device which is recognised in community which places him at the forefront of connecting in, so he's got stuff to do with the grandkids for that.

So what I want to do is just, on the screen's a couple of little examples of different types of things just to get you thinking. We actually don't do any fixed packages, but it helps people who don't live with disability to conceptualise what's possible by looking at some packages, again, way beyond home automation.

We actually don't work from a package perspective, we work from a goal perspective. So what does the individual want to do in their lives and then focusing on achieving those goals because if we just apply technology for the sake of technology, the risk is that it's going to be abandoned and discarded and I'm not sure that's good for anybody who's putting money in to the system and it's certainly not good for the individual living with disability.

So people living with disability, just like everybody else have different attitudes and approaches to technology, some people are really in to it and just grab it and go.

Others are really resistant and scared of what it will mean. So, to give you an example, we'll start with technology with somebody with significant mobility limitations. They might be interested in gardening, so we could start with technology about how they water their garden, how they control their irrigation system, how they get on and connect to other people who are interested in gardening. So that gets them using devices and moving in devices and then there's a journey for them to take up technology over time, and that journey is different for every person.

Our experience is people can't handle a whole heap of technology and change all at once, they need to be able to feel accustomed and grow in to it and that journey is different for everybody, depending on their, what they want to do.

The key for us is to keep it goal focused because if it's focused on what they want to do, they're motivated to use it.

No point me coming and saying, I think you should have remote access to your irrigation system.

They'll probably say, no, Geoff, sod off, what I want to be able to do is turn my TV on, I'm sick of when my support worker leaves during the day, they have to leave it on Channel 9 and I have to watch it all day until I see my program at the end of the day. If I have to watch one more Days of Our Lives that has a young, what would he be, eighteen, nineteen year old bloke, he's going, nah, so that was his life. That was his lot in life because he wanted to see his program towards the end of the day.

Now he can control his TV, turn it on, he can change the channels, all that sort of stuff and this gentleman lives with significant disability.

He'd be lucky if he can move two fingers for that and he's now got full control of his TV, his phone, all those types of things, so technology is coming this way.

So in conclusion, where am I up to?

I've talked about refer, push too many buttons and it gets excited, doesn't it?

I've talked about referral systems, we're based in South Australia, so we cannot easily work across Australia, we are too small to do that, but what I wanted to come today and talk to you about what's possible, to give you a context and an environment to think about technology.

I'm happy to have conversations about that, we prefer to work directly with individuals living with disability, but we'll take referrals from service providers. We'll take referrals from housing providers and we'll take referrals from government in that context for that, so I'm happy to leave it there for today. Thank you.

(Applause):

TOM WORSNOP: Great, thanks, Geoff, I think I particularly liked that concept of social capital because people with disabilities often find that social capital is one of the things they lack and being able to use devices like everybody else is part of that new world that we're living in, isn't it?

There are now ten minutes of time for questions, I'd like to get through as many questions as possible, so we've got 2 people walking around with microphones, Helen and Di, but I just thought I just want to ask one quick question of you to start off with.

In the work that we've been doing in the SDA space, one of the questions that keeps coming up is when something goes wrong, who do you call? Do you call the technology expert? Do you expect your support worker to fix it? Do you expect your housing provider to fix it?

I was just wondering if you've got any comments about what happens when things go wrong.

GB: I'm happy to start and then you can, sorry, have I got, yep, thank you, in our model, we base the relationship on the individuals. So my preference is that it's the individual who's initiating the contact and often that'll be the support worker on their behalf who's echoing their needs, but the model that we're looking to do is to empower individuals living with

disability. So again, it depends what the technology is and what's sitting in the house, so clearly, something like a door opener is a fixture within the house, it's probably been provided by the SDA provider. It's certainly how we provide our SDA stuff and that's going to be a built form solution. So it's just about being clear about the difference in the arrangements, but if you move to controlling the TV, well, my sense is that's not appropriate for the SDA provider to be doing that and an individual needs inclusive technology, assistive technology in their NDIS plan to fund, so there's a scale of stuff that says that's based on individual and a scale of stuff that's based on abilities.

ROB: Yeah, Geoff's probably more experienced to be able to answer that question to me, so I'll leave it at that.

TOM WORSNOP: All right, audience questions, put up your hand if you have a question.

Q: I want to know have you got a way of taking your dog for a walk and picking up dog poo without a person in a wheelchair bending down and picking it up and bagging it.

GB: Fantastic, that is just the challenge Stretchy Tech likes. The answer is no, no, I haven't, but we'd love to be working on those sorts of problems. So that's the sort of, so clearly, that's your goal, that's something that you're really interested in doing. They're the kind of problems, so there's got to be technology out there that's going to do it, how do we find those solutions and what does it do? We had a similar woman who was really in to her horses and while we weren't picking up horse poo, her issue was that she couldn't. She was concerned about the horse during the night and because she lived with paraplegia, she needed to get out of bed, it was a complex arrangement for her, get in to a chair and go out and see the horses in the middle of the night, so quite easily using very basic technologies, she could be able to see the horses, she should be able to talk to the horses and if you get a little bit clever, you can actually put a little monitor on the horse rug so she could actually monitor the horse's condition and what's going on. And that technology's already out there, we just need to apply it for people living with disability.

Q: I have a question for both of you if that's okay. The first one is Geoff and that's probably, it's about the funding, I guess. So I think that what both of you guys are doing is fantastic, but when it comes to reasonable and necessary and getting NDIA funding, how do you go about that process? Is that through an OT and an OT assessment and have you had success doing that as well?

GB: Yeah, thanks for the question, I think, it's complicated and those in the room who have experienced SDA funding, you know that's complicated. This is equally complicated, we've started outside of NDIS in some different environments and it's a lot easier for us to work there. Our challenge is that unless somebody has a plan already, it's quite difficult to charge to do a specialist OT plan, so what we've been busy doing is a whole heap of free stuff for people living with disability in terms of an appraisal so that when they go for their first plan, they've got some assistive technology or inclusive technology in their plan. As NDIS regularises those people who need inclusive technology or assistive technology in their plan, will have an allocation in their plan and an NDIS plan should fund a specialist OT assessment in the area and then assistive technology over the long term to install it and to maintain it.

Q: And using mainstream technologies that can be affordable as well, I assume is what you're doing.

GB: Yeah, so that's, we've got to be really careful here, what we're not doing is rolling out iPads for the sake of iPads or iPhones for the sake of iPhones. We're really clear that there's a specific purpose to this phone and the phone is actually the interface, it's not the phone that we're interested in, it's the interface. So, you can clearly see it's there to improve somebody's communication. Why would you fund a \$20,000 specialist device over here when you could fund with a bit of smarts, a bit of tech time and a bit of switching an individual to use their iPhone or their Samsung phone or something like that. It just makes really good sense. Are we there as a community yet? Nah, there are a lot of conversations to go, but we've just done a cost benefit analysis with a trial on technology to put some rigour in, under what we're doing.

Q: So to Rob, is Opus retro-fittable to existing hardware and existing AT solutions, or do you have to start from scratch?

ROB: No, mate, yeah, so leverage is, so I don't, do you know much about the hardware space in the IT?

Q: No.

ROB: So essentially, it's Phillips Dynalite is what we use is kind of the brain, if that makes sense. And we work with companies, Smart Scape who are lighting experts and Think Box around access and security. And effectively, that partnership, they'll recommend hardware components requirements and we're just literally hooking in to those with existing integrations that we have, mate, yeah.

TOM WORSNOP: Okay, we've got a question over here at the front.

Q: With the group of people that I'm involved with, many of the questions that NDIS ask is can the person brush their hair? Well, if the answer's with prompting. Can they do this? With prompting, what prompting, so my question to you, Geoff is have you considered perhaps developing avatars to do the prompting so that we don't have to have continuous one-on-one support?

GB: Yeah, fantastic question. There is some really cool stuff, so old school OT, but I'm not an OT, so please don't ask me any OT questions. But what I've seen old school OT is hey, let's have a flip book to prompt people, paper-based or let's have people to prompt and remind. I see some nods of heads in the room, if you can see what Apple can do in terms of prompts and reminders, and it's not necessarily Apple, they will take, you can, especially an OT, will stand alongside an individual and take a short media clip of what they're doing in the morning. And you can set it up in about 5 or 10 minutes of them doing their daily activity themselves. So, they're not seeing somebody else, they're not seeing a prompt or reminder, they can see either a step-by-step prompt on "this is how I do it" and then doing it, or they could see a short little media clip of just a reminder, "hey, Fred, you've got up in the morning, remember your daily routine, push the button". Yep, here are some prompts and reminders about how we get dressed, yeah, that's right, "I clean my teeth after I've had breakfast, not before", those sorts of things. "I remember I'm going to the toilet" or "I remember to take my keys with me" or, all that sort of stuff. So, there's some super cool stuff like that that's out there from a media perspective, but then there are also prompts and reminders that you can initiate through your phone. Whether they'd be time-based or location-based. So as I talked about the bus stop before, that's a location base, that these

things will give you a prompt when you get to a particular location, so when you get to work, they'll say, "ding, remember to do this, ding, remember to get on the bus, ding, remember you're getting milk and a paper".

TOM WORSNOP: So no blue people running around just yet in Avatar form?

GB: No, not yet.

TOM WORSNOP: Okay, we've probably got 2 more questions and then we'll have to finish.

Q: Just a really quick comment, just to follow up that question. There is definitely mainstream technology that exists that can use movement sensing, that can use artificial intelligence to actually provide that sort of cognitive support and it's a really exciting area development. TAC, I'm from Monash University, but we're working with the TAC just to evaluate technology and housing that's purely implemented for cognitive support related to a person's goals and everyday activities. And we're just extending that pilot for 2 years of research to really look at how we evaluate the impact of emerging technologies on the amount of verbal cueing that someone needs because that's often the need that's there beyond that physical assistance as well. So, thanks for that question, I guess I'm just saying there's a lot of technology that exists. TAC is a good place to look at for some of the things they've been testing and certainly I'm happy to email you 2 with some other products that we're testing through a 2-year trial now with TAC.

TOM WORSNOP: Right, thanks for that comment, Libby and one more question at the front here, sorry, 1 more, or 2 more.

Q: Rob, you said you'd installed some of the tech previously, if you could look at what was installed there when the people moved in and how they used it, what went wrong? If you're redoing that today, what are a couple of lessons learnt when it's actually been implemented in recent times?

Rob: Yeah, I think, so it's back to one of my takeaways, was being more user driven. So, I suppose a product like Opal relies heavily on a single interface to kind of create a gateway to multiple actions and controls and one of the big learnings, what we learnt is that it wasn't the interface initially, it wasn't individualised enough. I think we, with Opal, the future of it, we need to create multiple personas that covers more, sort of, and caters for more individuals. That was probably the key thing that we probably learnt out of it, and like I said, you can't cater for every individual, but one of the big things was individuals who aren't able to move or aren't able to use touch screens or aren't able to use voice and tracking, is the only way that they can kind of work. Making sure that that's available and ready to go for them prior to them moving in, so a lot of lessons around individualised interfaces.

TOM WORSNOP: Okay, and one last question here then.

Q: My name's Amy and I'm an occupational therapist and an access consultant and have been spending a lot of time furiously nodding at a lot of things that you've been saying, including it being difficult to keep up with all the technology. So I do work clinically as well as in the assessment of the SDA housing, do you run professional development on either of these topics? I know your company is based in Adelaide, but do you, I guess that's one of the things we always struggle with is where is the single point of access of truth for what's

coming out. And that your recommendations are not superseded as soon as you've made them and whether or not you've got any?

GB: Yeah, it's not the first time we've had that request. Certainly, interested in that space, so we'll contribute to, we provide a specialist OT in to South Australia-based universities to at least introduce new OTs to what's coming. You can't, in that period of time, make them experts or even help them understand the depth of what's possible. All you can do is expose them to say, "hey, this is possible as an outcome", so at least when they're out there working, can go and say, "I don't know how all this works, but I need somebody to come in and do that", that's fundamentally the first step. So, with thinking about that space, understanding the space, we're not doing it at the moment. I'm beyond opening up Jess's home, so we opened up that once a month. Jess shows people through his own home, if you're interested, if you're in Adelaide, book in, come through Jess's home, he's a laugh, he's great. My key thing is if you go and visit Jess's home is to smile when you push the button because he's filming you, all right, that's the secret because he can see that camera, he can access his door wherever he is in the world, so he doesn't give a service provider or his support workers don't have keys to his house. They don't need it, every time they push the button, he wants to let them in, he lets them in.

ROB: I'll flip it a little bit, people like yourself are unbelievably valuable for people like me because I'm in technology. I work with technology, but you know the impact that it can have on the individual and how it should be best used to maximise, and you have the biggest impact. So, I would, in terms of development and I would love more people like yourself talking to people like us because that's when we're going to deliver the best outcome. You're not going to be able to get across all of this technology that's happening, focus more on the user because that's where your expertise is and that's where you're going to have a biggest impact.

TOM WORSNOP: All right, I will have to bring this to a conclusion.

Q: Yeah, I know, I can't, and there's so much expectation on OTs, on all aspects of the NDIA. I think our, we're recognised in lots of ways, but it's so hard to present everything to the NDIA the way they need them to be presented.

TOM WORSNOP: Well, unfortunately, we have come to the end of the session and there are always more questions. Just to remind you, if there is a burning question that you feel you still want to ask, you can use Slido to mount that question and we'll see if we can follow that up afterwards. There is a quick turnover now, but I'd like you to thank both Rob and Jeff for their presentations today.

GB: Thank you.

ROB: Thanks.

(Applause)

END OF TRANSCRIPT