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RI World Congress**25 October 2016****Parallel A Tinto****Information Communication Technology and other adjustments for disabled people**

>> Good afternoon, ladies and gentlemen. First of all, welcome to this session, session A around information communication technology. We have a brilliant group of speakers ranging from USA, Scotland, England, and kind of a mix in terms of the offer to you as an audience. To me, it's interesting stuff.

I saw the order. We can run through five sessions. They run 15 minutes each. They will be 15 minutes each. Questions and answers right to the end so we can get through the sessions because my instructions were, we have a drink session with the guest back in the main auditorium at 5:30 so for you to have time to get to that session, we need to make sure we finish about 25 past and ready for the next session. Is that right?

Great, thanks! So the first speaker, it's been a while since we had a conversation so I'll introduce him. Thanks!

>> Good afternoon, everyone! I'm from Korea, south Korea. I'm the general secretary of the Korea secretary for disability with presence. I'm very delighted to meet you here today. What I am here to present is the global ICT challenge project, a compass building project to address the inequalities that the people with disabilities face. The global world that we are living today is marked by problems such as poverty, limited employment and education opportunities.

According to the UNDP, more than 80 percent of persons with disabilities in the world lives in developing countries that have low ICPT low index. One common problem they share is supporting inequality and poverty. So isolated in society due to the disability divide. You may see the 2015 data. Through a numerous association of data, we are able to conform that these divide remains as one of the major cause of poverty and inequalities that passes on to generations to come.

Yet, it's mostly profound to know that no government, for the development. Using ICT as the way to eradicate poverty. I would like to remind you that it's indeed the time to see the work on the idea of a sustained development by stressing ICT. The answer is to approach for sustainable development and the action is to have the challenge of ICT, hence our global ICT challenge project. The global ICT challenge project is all about comprehensive sustainable development project and the most efficient

strategy to support the sustainable develop goals, number one, poverty. Number four, education, and number eight, employment. It's indeed a future global project. This is ongoing, not just one project targeted to you.

In this project, I would like to get your attention to the following stages, education, evaluation and application. Firstly, the stage of education needs to provide an opportunity for you, those with disabilities to learn through e- learning as instruction and mastered to facilitate this growing process, we will make disabilities, education, and materials for use are provided with materials and two of three of them are matched with a professional mentor who monitors progress.

Secondary, the evaluation stage is to monitor the performance over the education and build the ICT network. To monitor, we hold an ICT process in developing countries since 2011. It's a form of an ongoing assessment so that youngsters can demonstrate their ICT knowledge and skills they have acquired through the program. Governments of respective countries hold preliminary national competitions to select the participants for the international ICT paths.

We usually invite around 200 public officials and ICT professionals from 15 to 20 countries which means for use in, two professionals in a country. It fully supports all of the financial supports from the developing countries and participants from the developed countries, we fully help with their transportation and other expenses except for the flight.

We are on an invitational basis but we hope to see more countries who are willing to afford their flight costs. Is this a picture of ICT held in the UNS. We plan to hold this competition in November in China. The competition had four major areas, a design challenge, a creative challenge. Though these are individual competitions. They are on a team basis. Although the competition we hold the ICT parliament to establish a partisan network with ICT experts and government officials.

Along during the ICT forum, we host the country for the next ICT area. Every country has the facilities to accommodate up to 200 participants and has ICT improve for the competition can be eligible to host it.

The third is the application stages. At this stage, we establish ICT centres for training in three months, adventure project. In each country, it was had. In most cases, it was a project per company and ICT centres have four steps.

First, there's a step to build on ICT environments. We don't build new buildings but we do work to establish a dedicated education environment in preexisting institutions such as our training centre under the government's special schools and disability organisations.

When the right for the accessible environment is established, it offers educational opportunity that are provided for individuals with disabilities for finished education. We also provide vocational rehabilitation and establish social areas to expand the employment opportunities.

In the last step, we focus on the established exit strategy. What can we do as government to improve vocational rehabilitation for people with disabilities and invite the local organisations to continue to service our direct support. This is one of the most important component of our project. We established aid in 2014. This year, we extended it to Indonesia. Also, we have finished this for extending to Bangladesh in 2017. We have centres in Indonesia and here's a picture. Lastly, here's our achievement over this project, for government and Asia Pacific region are now leading the way to divide the presence of those with disabilities. Countries are holding the path on their own and encouraging ICT education by supplying them with guarantees, agreement opportunities or scholarships for use that can help with the competition its.

Second, we're affirming the potential as you recognise in the ICT events. Therefore, we plan to work with RI in the immediate feature. We commit to hold a discussion that we hope that many nations will take an interest in the ICT paralleling path.

Third, it has a functioning - - to fight properties while creating education and employment opportunities. Through the ICT group, most of the developing countries already recognise that ICT is the way to overcome their barriers of disability, basic environments and level opportunities and a break through means to contain social participation for people with disabilities.

We aim to continue this project for at least a decade. Although this project is limited to Asia Pacific regions, only for now we plan to extend the projects to Africa from 2021. This project, we work alone. Korea and host countries government and Korea ICT companies are all working together.

All of the financial resources will be met by the companies. We have a yearly project of nearly 1.3 billion U.S. dollars. Now, the world is heading to artificial intelligence society. According to many scholars and experts, artificial intelligence technology has been developed in 2000 already and the change of our lives by those technology has been moving fast.

Last September the Korean government also set up a comprehensive for artificial intelligence society. Some people say there, the biggest beneficiary of the artificial intelligence technology would be persons with a disabilities.

Today, I would like to emphasise for the one last time the global ICT challenge project for bridging the information gap. To help with persons with disabilities, open up a bright future and thank you very much for your attention.

>> Thank you very much! Very interesting concept and I think that we were charged as moderators to think about things - - speakers. One of the things we need to stop doing more of, and start doing in the future, and after this conference, every moderator's session, pick up those things and we'll be able to look in a way going forward. So I think there's some really interesting points brought up there.

The next session is going to be from the Department of Education in UK so they're going to

work about the access of work and providing financial support for disabled people and employment.

Thanks!

>> Great, thank you very much. I'm stew who works for the department of working pensions and I'm head of strategy for access to work. Access to work is British's government to help disabled people who have a job offer, to start work or maybe if they're in employment and they acquire an impairment, to continue working. This is a little bit of an overview of that scheme and what it does for the direction they're taking it in.

So if I can just start. I'll go through a few of the basic principles that sort of underpin the scheme. Firstly, and I will explain about it briefly because it is important many the UK context is we have the equality act in Britain. You may have heard of it. One of the functions of the equality act is it means that employers are legally obliged to make reasonable adjustment for disabled people. It may be customers, people coming to your shop, whatever, or your employees.

One element of reasonable adjustments that they're legally required to make is it doesn't actually say what is reasonable. It varies, amongst many things, the size of the employer may have different ones. It may be reasonable for a large employer to install a lift but probably not for a corner shop. So this is where access to work is helpful in levelling the playing field for all employers and for all disabled people so they can be employed by a range of employers.

So one key principle is the support we give is above and beyond what the law says that companies must already do. It's a contribution from government that it doesn't reflect or subsidise the employer's legal duty.

It's also by the additional cost. It's about the additional cost of over and above that which it would cost to employ a non disabled person so it's intended to level the playing field and not address broader issues like poverty. It's just intended to neutralise it. It's about meeting minimal needs.

Many people will want to sit in this provision but it's ultimately putting in place what works and doing so in the way that provides the best value for the money for the taxpayer. I'll just go on to how we administer this. So yes, we have recently had a reorganisation of the scheme. It is delivered by civil servants, government employees. They were previously spread all over the country and we have brought them into three specialist sites.

It's a lot easier to manage the business by doing that. We can now train or people more consistently and improve the disability awareness training they receive. We can have specialist teams so that different groups of people with - - everybody's needs are different and we recognise that but people with common needs can be dealt with by teams that better understand the conditions. With have a deaf and hearing loss team, we have a service for employers who have - - like, the HR have a large employers team and there's a plan for self- employee disabled people as well.

So one thing we are, well, have recently done, all by it we have come late, but we have last month, launched our apply online facility so people can apply at the moment of their choosing, you know, day or night and we will do those, rather than them phoning in during business hours. Of course, phoning a scheme to make an application is not ideal, if for example, you are deaf or have a hearing loss.

One thing I would also say that it is a very flexible scheme. It delivers individualised support but in order to make it even more flexible, we are currently trying personal budgets where people have greater choice in control and can pool their money more effectively and make better decisions on how that over all amount of money is deployed by them.

So how does it deliver in terms of what it does? So it is very flexible. Grants can pay for anything from taxis to British sign language interpreters. We do have some contracted provision as well as we just refer people to the provision rather than giving them a grant where they source the support.

For example, assessments, where an accessible comes into the employer and have a conversation with them and the disabled person and one interesting feature here is that 20 percent of the 2 thousand or so, 12 thousand or so people who had assessments last year, didn't need a further grant.

Employers had a conversation and based on that conversation, they were able to make adjustments to accommodate the person's needs without any further support.

Over time things have shifted. Things have shifted away from bits of things. Desks and chairs. We think employers have considered that as part of the reasonable and the bits of support that remains quite expensive. Support work is taxis to work for people who have visual impairments or social anxiety or mobility issues and British sign language translation grows in volume and sort of the amount we spend on them.

It is interesting. In the first slide show, one of the precursor schemes for access to work is the blind home reader scheme. The impact of technology is quite illustrated there in the sense we don't generally employ people to read to blind people so we have screen readers to do so. That's an example of the increasing technology that saves us a lot of money to help other individuals in other ways.

The things we're looking at doing is actually expanding, you know, increasing the amount of stuff we spend on kit. We are looking at apps to help people manage mental health conditions. We look at extra software. We're looking at video relay services. So all of these things promote independence, are cost effective and keep control for the user.

It's interesting to see if we're having had in ten year's time, to see if there's an impact on the driverless cars. Are people using that to get to work? Will there be 3-D translators with British sign languages, who knows. These are all things that may disrupt the business model.

One thing that we're looking at, we're looking at - - I'll come to it in a minute but there's a range of kind of people at all stages in their careers will need help. We are recently looking - - have looked

at apprentices. We have looked at apprentices for a couple of reasons. One of them is our department has a target to have an employment gap and that shows getting the further million disabled people to get to work. They have a target to achieve 3 million apprentices in the market and it's easy to see how they can help together.

This summer, both departments commissioned the minister of transport to lead a review into how people with learning disabilities can access apprenticeships and that made some recommendations which both departments are working through now.

This particular scheme is a new scheme which is part of our contracted provision. This provides support, mental health support to apprentices. It's a variation on the contracted support we had before but specifically targeted to this audience. And what it does is, essentially, people can - - who have a mental health condition, they don't have to have a formal diagnosis, can approach the service, receive confidential help, a six month program, have advice on simple adjustments and we can work with the employer to understand what support might work. They will have somebody, should they have a moment of crisis or an escalation, they can go back to. They'll have a relationship that can help manage transition into work or their employment when they're there. So that is the most recent offer for apprentices.

If I show you here, hopefully you can see the small figures on the screen. This again is nearly ten years of growth and you can see how some of the disability groups that we support have changed in profile. I mean, yes our largest single groups are deaf and visually impaired people and if you aggregate all of the physical groups, they are the largest.

But we have seen a large growth in the number of mental health conditions need support. It's still a relatively low number but it's still growing quite fast and there's increasing relevance and how the support can help people in particular from falling to work. So that's something with can devote considerable attention to.

Certainly the changes to the apprenticeship rules means we can support them. So we would expect the learning disability population also to increase.

These are some of the demographics of who we support. So our digital program is helping us get better metric of those individuals and as we expand the scheme and we reach out to the groups, this is very important because we can tell where under representation occurs and where we need to target our marketing.

Over all, you can see if you looked at access to work, all of the working disabled people, you can see that access to work supports a tiny fraction, about 1 percent and that's because like I said, it represents the tip. We expect employers to take the responsibility for reasonable adjustments but most reasonable adjustments cost nothing. A recent support said 97 percent of reasonable supports cost nothing. Allowing people to work flexibly from home. The average cost is 184 pounds which is pretty

reasonable when you put it in context of the wages and certainly the cost of re-recruiting somebody who you failed to retain.

So access to work is designed to help that one percent with the needs that are in the order of magnitude higher. It is interesting that we support significantly more female than male. Less surprising we support older customers. On the one hand, we might expect it to increase with extended working lives and of course, people are acquiring impairments throughout their working lives.

On the other hand, we have had a considerable number of growth in the younger people as they travel from education to employment. So we're doing well there. We don't as of yet, elect ethnicity data although that is something that we will begin to do with our new digital system and the employment sector data is achieved by a sample. That is largely estimates.

So this is kind of the trends of how we have been supporting. We have ambitions for the scheme. We want to increase the reach. We want to make it a better user experience and certainly quicker. We recognise there's complex cases and complex needs that can take time to get in place and it must also represent good value for money and that will increase as we employ more technologies and take over some of those quite expensive forms of provision.

There's one point whether this is statistically invalid or not. I certainly note that the introduction of the disability discrimination act and the equality act were followed by a decline. This is not a bad thing. As I certainly interpret it, it represents employers sort of recognising the posts, you know, the expectations of stepping up to the plate to do so.

Certainly, that is, if you like it, you can change that access to work. It is performing the safety of that function. Sorry, a bit of a cough. So what do we want to do now? As I said, it supports our commitment to the employment rate gap. It's a demand led service so it's not a question that you must apply before the money runs out. It wouldn't achieve one of its aims of derisking but what we have is a real increasing funding to really go out and look for the demand that's out there. That's something that we're doing over what we did this year and as I said, digital is probably first stage of us going out and reaching more people.

We know it has a transformative effect for those comparatively small numbers it helps but for employers, it can have a much broader effect by derisking the retention of disabled people and that in turn, will benefit more disabled people in the labor market.

It's always tricky to imagine what that demand is. It is a demand lead scheme and it can be quite difficult to establish. Digital is certainly helping speed up people's application process. People can claim what they like and instead of us calling them back, we already have all of the information so that can all help.

This is important because as we grow our scheme to about 60 thousand people by the end

of the parliament, we want to do so without increasing our head count so we can do so efficiently and digital provides the savings.

These are a few of the facts and figures behind it. At the moment, we processed 270 thousand manual payments a year. Our next phase of digital is something that we want to do automatically so people can submit claims online and that will benefit the customer and us.

Other things we have done in terms of changes. I have mentioned the personal projects we have done. We are also looking at cost share reform which is the elements that employees do contribute to the scheme and how we support people who work on a self-employed basis. We have made some changes but we want to make sure we support some people who work on a part time basis as well.

So that is our new way to apply. You can apply by the government website. There's various fact sheets that you can download in which we show employers and there we are, thank you!

>> Very interesting! I think already in terms of things we stop doing and start doing in the future in terms of seeing what we'll spend, reducing the spending models is certainly one that we need to stop thinking about doing.

Next, we have Ed Miles who is the director of the disabled foundation providing equipment to support employees and employment.

>> So Ed Miles from this foundation. I'm very pleased to be here to talk to you about the need for and potential of assistive technology. I would like to start my remarks by showing you a picture of a man that some of you might recognise. Anyone? Yeah? There's some recognition. Good, I'm glad!

The name of this man is - - he introduced the first piece of the disability legislation to the UK parliament in 1970. This was the first piece of legislation to recognise and give rights to disabled people and the chronically sick and disabled persons act of 1970 went on to become the boilerplate for similar legislation around the world.

He became the first ever minister for disabled people in the UK and along with Jack, Lord Ashley became synonymous for the struggle.

He is also at the heart of the rehabilitation international Congress which we're all celebrating and participating this week. It has helped shape RI with the key strategic papers and traveled extensively. He was one of the first ministers to visit China, I believe. And he remained active until his passing in 2012. The reason I say this is because it came around the same time as his ground breaking was built and he's a patron.

I would like to recognise without the right information and advice people cannot make the right choice. I believe there to be no worthier cause, to one which can make such a tangible difference to so many lives. He is very proud to carry on it and honour his legacy with the annual lecture which takes place in London in March 2017.

So it provides experts in partial, information and advice about assistive technology so that people can live independently at home with dignity. We provide this information through a range of resources, through fact sheets, through a number of web sites and also training for health and social care practitioners.

We don't sell equipment. We don't recommend particular products. We provide impartial guidance and we're strictly independent. Currently we reach just over 2 million people. It's our ambition to reach 5 million by the end of, it says 2017 now. 2020 might be - - well, things are changing.

Before we go any further, what is assistive technology? Some people think it's IT based stuff but they propose this simple definition which you'll be able to see there - - well, it's tiny so I'll read it. Any product or service designed to enable independence for older and disabled people and that includes, for example - - oh, sorry, I'll go back. Sorry, I know you can't see it all but it includes someone like sock helpers, putting the socks on, pressure mattresses or IT software or pill dispensers, ceiling, it's the gamma, the whole range.

And of course, assistive technology is not just used at home as the previous speaker commented on. It's used in the workplace and is the basis of many reasonable adjustment and better use of assistive technology improves the employment opportunities of disabled people, helping them to access the workplace and also, sort of retain the independence to stay in work and it also includes the labor market which contains thousands of carers.

The challenge for DLF and for all of us, is an awareness of assistive technology and equipment is limited and the awareness is low. That's despite the fact that we know there's an ageing population that there is a crisis in social care funding and there's really a week that goes by that we don't hear from the media about ticking time bombs of diabetes or dementia or obesity.

We know that health and social care is a critical stage. It's chronically under funded but the demand for support is rising as welfare reforms leave fewer people eligible for help.

The usefulness of assistive technology has not quite penetrated the national consciousness but there's no doubt that in the area of assistive living, we can achieve a market to meet the levels of future demand which will authorise swamp public services.

If people are given criminal of their care, this must be accompanied by impartial information and advice that will give them choice as well. Research by - - University says they're not aware that the products exist. They don't know where to get the information. Consumers in the 50 to 70 age bracket, believe that the products are for someone else, not for them but for the disabled people and I would say, design is an issue.

We'll have some pictures here. Oh. Yeah, look at that. Well, I don't even know that's it but that's on the market now. So things are changing. We probably know someone close to us who use

assistive technology. Most people that use it probably even identify themselves as disabled and I think this is really important for us as change agents and how we present, how we design, include and develop products and services. The preferences of self-funders are influencing the manufacturer of products, however. Design standards are being raised and products are becoming more aspiration. They don't want institutionalised products in their homes and why should they? We believe that the market is best served through products rather than specific items targeted at older and disabled people.

So there's a need for better design of products to make them attractive, to make them functional and simple and easy to use. To meet the aspiration. Everything needs a business case. A business case showing the benefits to have and the well being case of personal dignity is compelling.

assistive technology can be a preferable alternate to most people especially as it maintains dignity in situations, like, for example, toileting. Toilets that can wash and blow dry have been available for 20 years but has not been widely introduced because of their high cost. Assistive technology can be very economical, very cost effective in terms of the nursing care case.

The average cost of a wash and dry toilet is around 2 and a half thousand pounds. This shows a decrease cost of 250 pounds a year. 250 pounds a year by -- that's 64, 50 minute visits. That's just over one visit per week. It makes sense to substitute assistive technology for human effort. The cost savings is clear and the dignity that affords is priceless.

Eventually we believe that accessibility will be built into mainstream technologies and it's by understanding the needs and expectations of customers, particularly the age between 50 and 60 and disabled people and by thinking creatively and inclusively that we can break away from a solely needs base model to actually a consumer driven market that excites and delights.

It may be there's opportunities for more hands on experiences or try before you buy and money back guarantees, a deal that full heartedly supports this introduction of choice. I know this is very very difficult. A lot of us have been working in this area for a long time but the demographic changes are what they are. They can't be held back and solutions are available.

As I mentioned, sorry, I should have pressed out another one. The University's research found information was the key barrier in the uptake of assistive technology. Information is key to the success of this market. As he said, the, it's under controls by price and information. There's a number of information and advice products that meet the needs of older and disabled people, the families and carriers. I hope you get the opportunity to come down to the exhibition hall. We're there for the duration of the conference. Please come down and have a chat and you can see the products in action and work it for yourself.

So for those individuals that have an immediate need and a rough idea of what they're looking for, we have this site, living made easy which offers clear, practical advice. It's very very easy to use.

It's set out in a very easy navigable section. It's been visited by over 1 million people in the last 12 months.

For those that are unsure of what they're looking for but maybe have an issue whether it's getting dressed or bathing or in bedroom or whatever, we have ask SARA which stands for self- assessment rapid access. It's not a real person. It shows the assessment set to identify products that may be useful and helpful and shows it for the individual itself or a member of the family or for an occupational therapist or healthcare.

Around the moment - - there's 25 authorities who are licensing it and we're committed to growing that number. What sits behind living made easy and ASARA is the real life data. This is a subscription website. It's health and social care providers and practitioners that also subscribe to the data. The data houses just over 12 thousand products on there. The information is given to us around 1100 manufacturers and supplies. It's the most comprehensive data we're aware of and I think, maybe in the world. Come and tell us if there's a better data base somewhere else in the world.

So all DLF services are led by advice and guidance. They're not just catalogs or compare the market.com even though that's an interesting outcome in and of itself. It's lead by advice and guidance given by our team and nowhere is this better exemplified, I don't think, than in our online forum which some of you are aware of. This DLF moderates this site. It has about 8 thousand users.

There's probably 4 to 500 users logging on sharing advice and guidance amongst peers. Disabled people giving advice to other disabled people and the quality of that information and advice is absolutely outstanding. Again, another website that could be incredibly useful to millions of more people, so we're working to raise the awareness.

In finishing, we know that assistive technology changes lives for the better. We know that DLS information and advice is transformational and we know that assistive tech nothing can't always replace human interaction but it can enable a better life at home.

When you think about it, it's not about order of disabled people. We all have to think about the solutions. What do we want for ourselves in older age or on acquiring an impairment or health condition. We were lucky enough to meet this morning, princess Ann came out and a colleague explained the difference between disabled and non disabled. Disabled people are not disabled yet. I thought it's a fabulous way to put it. So let's invest in it. Thank you!

>> Thanks, that is another interesting one. Next one up is broaden the access to the digital participation. The chief executive officer from Scotland, digital access and digital participation. Thank you.

>> Thank you very much! I've got four slides and I thought I better tell you that now because I think you have all been incredibly patient and if English isn't your first language, you must be completely exhausted by now because this day is blowing my mind and I lived in - - have I got my four slides? One minute, please. Okay, I'll just tell you briefly about Scotland and we have access for learning disabled

people and caters so we have a vested information in inclusive training and employment. We have front line services in eight areas of Scotland and an advice line and we try to influence policy.

At the heart of it and what I really want to talk about today is that we're working with people, we're working with individuals. So what with do is all for a very personalised service. We meet somebody in the start of their journey and we basically work with them, where they are and they're in control of their learning pathway. So the reason I wanted to talk about broadening access is there's so many tools and there's so many post initiative I have heard today. Who is being left behind? I want to talk about three ways in which we're trying to engage people. The way we address it is formal learn, non formal learning and formal learning.

So I put a picture of two individuals. The left is the coordinator and the learner on the right. Broaden access unlocks potential. One in five people in Scotland lack digital skills. There's so many different types of barriers, financial lack of confidence but also, there might be a fundamental basic barrier like not being able to get out of the house. She has a phobia. She can't get out of the house and she doesn't have a computer and so how is she going to get involved?

So we're trying to engage people on a one to one basis. Now, that's expensive and resource intensive. We involve volunteers but we meet people, you listen to people, well, what is it you want to learn? Maybe they don't know. Maybe you have to have a conversation about what there is. Maybe you have to try different things and inspire somebody to think that maybe we could get involved.

Informal learning is about engagement. It's about the informal learning, achievement of skills and knowledge. We have a pool of volunteers who can go in people's houses and share skills and knowledge. That's really helps the building blocks of encouraging self- belief and building confidence and that's in the heart of somebody thinking, great, what is next for me. Without that, she's not going to get involved. So that is so important and a lot of people think, oh, that's leisure base with no qualification but without that, she's not going to go to the next step.

So our organisation reaches right back into somebody and meets them in their house to actually have a conversation and listen to where they are and what it is they want to do.

In a way you start to demystify the posts of learning. You can see opportunities out there and you can think, how do I get involved in that. So we bridge, we create a bridge. I showed you at one of our approaches which is one- to one learning. Maybe we're getting them out of the house. Maybe we're bringing them to the library and all the time we're engaging people for opportunities out there.

This is another approach, non formal learning. That happens when you get a group of people together to go through a course but there isn't necessarily formal accreditation. It's important to have learners in the centre of this. So this figure up here, statistically, they're disadvantaged because they're older people so they aren't used to be online. Get partners together and say, what is it you want to

do? The group that we worked with, we offered an accommodation and she couldn't access the local internet classes. They couldn't actually get the travel in place and the support staff to get there.

So that's a separate issue which may have to be looked at but that's the reality at that time. So rather than wait, they approached us and said, what can we do. So they gave us a list of what they wanted to learn. They came up with it as a group. We noticed that the staff had wifi in one part of the building but not in the building where the residents live and they didn't have devices.

It's quite simple. You get partners. You get the housing association to help source computers, help source wifi. We go in as an organisation. We design a course based on what people want to learn. We get a grant from the local council to buy devices. Devices which can be left. You do the course, you have volunteer support. You encourage people to support each other. When they're up and running, we come out and it continues without us.

Dead easy and a really easy way to engage people online. I want to say people wanted to learn, ways about which they can get more involved in their communities. How to use Skype to talk to family. So you're building, you know, this is all leading to outcomes where people feel more connected to communities, to families, to learning opportunities. Depending on who you're working with, that can lead on to work or citizenship, volunteering. You connect people and you get them talking and things happen.

Lastly, then, I thought we would go less than 15 minutes, not to be popular but please check the website because I'm going to give you extra time but I know it's a tough day to do a lot of listening. The last approach thing is formal learning and that's where somebody - - people are actually working toward a qualification.

So offering, if you like, in relation to formal learning is a course called thinking digitally. On the screen, I have a screen dump of people on a course. So there's six people who are - - you can see their faces. They are all on the course together. The bottom one, it shows there's a guest speaker who has come on and everybody can see each other. So we have developed this course. What is different about this course is that it's context free. So people can choose their own subject. The important thing is that people are developing the digital skills. We have originally designed this for disabled people who are unemployed and have been unemployed for a long time. We thought, if we can have people going through a course, by the end of it, we could say, look at a website and that was in a CV. You know, the actual website or the link to the artifact was in the CV and it shows the relevant digital skills. That's why we kind of designed it but actually, a lot of practitioners have said to us, but I don't have the necessary digital skills so we have been delivering it to a lot of practitioners first.

That tells us something else as well. How equipped our practitioners are to develop digital scales is all out there but we need to build people's confidence and competence to use these scales. We keep these groups small. You may have heard of MUKES, a massive online course which brings hundreds of

thousands of people together. We go for six. It's a supported experience. It's paperless, people can log on to their house and they're building artifacts and there's a portfolio. There's no pen and paper and somebody in the plenary this morning asked a question about assessment arrangement for disabled people. We thought it won't. We built it so people will evidence, so many different ways all equally without having to apply for the qualification authority to get a special arrangement for a disabled person. Again, that's something that we can just do, you know?

So every qualification really, if you thought about it, it can be evident in different ways without compromising the integrity of the qualification. So we felt making it paperless, making it accessible, and getting people to then build artifacts and we want people to - - the ambassadors of inclusion by creating something that's accessible as well.

We want people to use the free accessible tools. So when they're creating a website, can everybody use it? So the guest speakers we have on are talking about accessibility in terms of web design or user free tools. Then they will go out, as well and hopefully create inclusive artifacts. That, I guess, as oppose to three offerings that we have. So informal, you're really trying to build their belief and invite people to learn. Make it easy for people to come on board.

No formal learning, you get the social aspect of learning and that builds confidence and people can support each other to keep investigating.

Formal learning, it gives somebody a qualification to get a bit more in- depth and they can push themselves and learn a higher level. So I'm happy to take any questions on these approaches. Please have a look at our website. You can have a conversation with me about digital inclusion. I'm always happy to talk about it.

I wanted to post a question to you. There's never been more free online opportunities across the world. How accessible are they for disabled people? We would like to, in the next phase, talk about how we can widen the access to some of the free online opportunities so if anyone is interested in having that conversation, come and have a chat with me. Just to sum up then, those are three ways by which we meet people where they are, on their journey. We try to get people connected, get them believing in themselves confidentiality participating online and when you do that, good things happen. Thank you very much!

>> Emma promised she would finish early but she was only 1 minute early because she got passionate about it. Very good! So having seen the global accessibility and policy initiative for that, incorporated in the U.S. so off to you.

>> Steven, give me one second to get logged in. Thank you. Thank you. This has been a really interesting group of presentations. I really enjoyed listening to my colleagues up here and one of the things that has really come across in these presentations has been looking at assistive technology as not just

assistive technology but within mainstream products. One of the things that Ed mentioned was moving from assistive technology as single use devices as to how mainstream technology can be used for individuals with special needs.

At Apple, you know, that's something that is incredibly important to us. People have long see us as the leader in creating products that are simple, intuitive and easy to use. What a lot of people don't know is we take the same level of care and consideration into making our products accessible. There we go. We strongly believe that technology can play a role in helping people become more productive, more creative, more collaborative, increasing communication, allowing them to be more independent and empowered in what they do and at the end of the day, able to live out their dreams.

Stewart talked about this from the perspective of employment and that's something that as we look at education, employment, and just becoming a productive member of society technology can be incredibly helpful in all of those different areas. So for Apple, accessibility is really part of our DNA. We look at this as accessibility as a basic human right and want to ensure our products are as accessible as possible across the board.

In order to do that we focus on a couple of different things in the design process. The first of which is making our products accessible at the core. Building accessibility in as part of the design process. Building it into the operating systems so we don't rely on third parties to do it for us and we don't bolt it on as an after thought. It's a part of Apple's DNA that as we design our products, we try to think about how anyone who would want to use them, would have the opportunity to do so.

As an example of this, think about screen readers. When you are putting a screen reader for the blind on to a computer, generally it's a third party product with a fee of maybe a thousand pounds in order to do so. At Apple for ten years now, we have been building a fully featured screen reader into every Mac that we ship. Our view is, why would we want to know that somebody couldn't just buy an Apple product, buy a Mac, take it home and start using it right out of the box.

The other thing we focus on is a holistic environment, meaning that all of our product lines, we try to make them work essentially the same way. Trying to create a holistic eco system so for example, if to use, once again, the example of someone who is blind. If someone's first interaction with an Apple product is using an I pod touch, our goal is that I pod touch has a screen reader in it so it's fully usable by someone who is blind.

Because we're building it into the operating system and not into the I pod touch itself, that means if someone picks up an iPhone and iPad, it's going to work exactly the same way for them. Learn it once and it's available across all.

What gets more interesting is when we realised how much the blind community had adopted IOS as an operating system because of the screen reader we built into it and the easy to use

gestures of a touch screen, we realised that hey, all of our Macs essentially have track pads that are either built into them or come, you know, are available on the side. We can port all that we have learned about IOS over on to the Mac so that same gesture set would work for the Mac.

Then we looked at, okay, we're making wearables, we're making watches. So with the Apple watch, we took that same gesture set and imported it into the Apple watch and then Apple TV and the remote. So what that means is, as someone who is blind, learn that gesture set once and it's available to you across every product that we make.

As someone who is an aid to someone or a teacher in this community, you teach it once and you know that student, that individual will be able to use this across everything that we do because we don't have, you know, a watch division in Switzerland and a television division in Korea or wherever it might be. We have one central accessibility team that builds across all that we do. It's more than walking from one person's office to around the corner and saying, how can you make this intuitive and be simple for all of the individuals that we can.

So I think one of the areas where this really becomes very much a great part of the operating system is IOS and looking at a tool like the iPhone. When you think about the iPhone, it's the most popular phone on the planet. There's millions and millions of iPhones out in the world and our goal is to make that really accessible and so the iPhone was the first phone to have a full screen reader built into it. It was the first phone to have full switch access built into it.

We have a different feature that's built in to support every possible arena to make sure this is a device that becomes fully accessible to the users who need available and available in multiple languages.

So when you look at this, we have approximately 30 international braille tables. We are looking at this on a global level and it becomes an incredibly accessible tool because we know that this drives community. This is something where the same device that you have is the same device that your caregiver has and the same device that your family has and you can, therefore, really cut down on the need of additional support if everyone is using the same product that they walk into the store and buy like everyone else.

So when we think about accessibility in Apple, we think about it in broad reaching terms. We support blind and low vision, deaf and hard of hearing, a wide range of physical and motor limitations ranging from someone who may just - - down to just having a short term disable of breaking an arm and using the technology in a different way all the way to, you know, those who need full switch access.

We also support kind of a bucket of learning and literacy that says a little bit broader in terms of everything from neurodiversity with looking at autism and dyslexia to learning disabilities like ADHD and those arenas, all the way to looking at things like vestibular. If you are looking at someone

whose motion is problematic, we say, how do we ensure when you're using the operating system, that it works to your needs as well.

Really focusing on all of the different areas which then gets to a wide range of accessibility features that are built into the products. If you have not gone under in an iPhone or iPad, go into the general settings area. Accessibility is right towards the top. Go in and look. There's a wealth of accessibility features that we have built in to support all of these different types of needs. So lots of things in here to really be available to everyone.

Based on the work that we have done, we have actually won 12 awards in the last 7 years from many of the major accessibility organisations around the globe, both U.S. based and here in the UK. There's the national institution of the blind and vision Australia and all of the other different groups. One of the things that has been really wonderful from our perspective of support from the community is it's not just one area. So we have a lot of support not just from the blind community but from physical, motor and those who are deaf and hard of hearing.

So the other key realm with this for us is that it's not just about foundational assistive technology like switch access or a screen reader and just stopping there. We also look at accessibility across everything that we do. So when you start looking at the apps that we make. We make them to be accessible. We take the time to try and ensure that they have the features that are built in.

We also look at some of our apps that may not be thought about around accessibility and our team finds ways to percolate things up.

So for example, think about an app like, find my friends. If someone is unfamiliar with it, it's basically an app where you can locate individuals who both have iPhones or IOS devices wherever they may be. So for me, my two brothers have me in their system so with my crazy travel schedule, they just kind of know they can look me up and figure out where I am anywhere in the world.

So great convenience for many people to know where your spouse is, where your children are, things like that. You can also create geo fencing in find my friends. So you can imagine if you are the caregiver for someone who wants independent living but may have some struggles. Maybe this is someone who is ageing and has dementia.

So they may wander out of their house. You can set it up, so as long as they have their iPhone in their hand, they walk out the door, you can get an alert that says this person just left the building and be able to track them from where they are. That could be used in that situation but it may also be that it's someone that you know, every morning you go to work and you want to make sure they get to work so you can have that geo fence for, oh, they left the house, it takes approximately 20 minutes for them to get to work, 20 minutes later, you get another one that says they have now entered, wherever they are employed.

So giving someone the independence and power they want, and being able to support them in a non intrusive way. So we look at all of our apps and all of the ways that we build our technology in ways, like, how do we be supportive of the individuals who have the additional needs and what are the ways that technology can give them that additional boost.

Once again, we're doing this really holistically across our entire eco system. So as we look at apps that other people develop, we work to make the tools to build apps, incredibly both accessible to work with and to help developers to understand what accessibility is all about. We understand that the eco system is more than just what we build. It's what everyone else is building.

It's someone who is out in whatever community you're in, you still want to be banking. You still want to be traveling. You still want to be reading the news and so it's important for all of the apps to be made accessible and we work hard with developers to help them make their apps as accessible as possible.

We also try to percolate upgrade accessibility apps. It may be anything from apps that are built specifically for a community. So imagine a light detector, a money reader, tools that can support someone who is blind. Video relay service apps in certain countries to support someone who is deaf to be able to communicate with others.

All the way to just, what are these sort of popular apps that everyone is using that are great and accessible as well. And then it's about the content that we have too. We look at the movies and the content we deliver in iTunes. Delivering them in a manner that has closed captions. That have audio descriptions where they are available. Really trying to make sure the entire eco system and the entire - - every piece of this has accessibility built in so it supports you regardless of what, you know, what specific desire or need you may have.

So for us, that's really just building an entire Apple experience to be accessible across the board. With our short amount of time here, and I think I'm coming in at just about my 15 minutes as well, I wanted to end with a couple of resources too.

So please, on our website, on Apple.com we have a section for accessibility. I have actually put up the UK one given where we are. So [Apple.com/UK/accessibility](https://apple.com/UK/accessibility). At that resource or page, we go into depth on all of the accessible features that are built into all four of our product lines. You can read a lot of information about those and also, really getting into the details around things like what are the braille displays that we support, the languages that we support, models that are made for iPhone, hearing aids for those who are in the hard of hearing community, all things that we do. Also, an e- mail address, [accessibility @ Apple.com](mailto:accessibility@Apple.com). This is a customer facing e- mail address. We get a lot of e- mail everyday from customers who provide feedback, ask questions, find bugs for us and tell us they're there so we can fix them and improve our products.

So if anyone has further questions and you're looking to reach us at Apple, try to use this e-mail address as a way to communicate with us. We would love to start a dialogue. Thank you very much!

>> Wow! I think that was quite an interesting session to encompass it all. As I said to you, after the first speaker, I tried to capture the things that came out of the five speakers in terms of where we have to start or where we need to continue and we need to start doing more.

I think from the stop perspective, stop thinking about traditional models that are resource intensive because I think that's what people are telling us. Things are moving at quite a pace, accessible and apps and every other part of technology are putting us in a different direction.

What we need to continue doing, I figured from what I listened to, is we need to keep driving the key factors around poverty, education, and primary support, especially around the disabled community. And in terms of starting, it's almost like starting an IT revolution. So to a disabled community, at least in some pockets, some areas, and some parts are certainly different than others, but using competition, targeting people, targeting people with disabilities and creating an infrastructure that it can also provide an excellent employment pathway for people in the IT world per se.

I think what we have seen even from the government perspective, we're constantly asked to be doing more with less irrespective of that. There's great dialogue in terms of policy but we are great to carry it upon us. I think IT is driving that ease of access, do more with less. I think that IT is the answer to the problem.

So I'm conscious of the fact that we have just gone past it. I know with the next session, it's kicking off at half past and I know the last session starts on time so I'm only going to take one or two questions. If you ask the question, can you target to the person you want to answer for the person who presented. Yes, go ahead, the first one.

>> Thank you very much! I'm from Bangladesh. I'm very happy and enthusiastic to learn about the accessibility of iPhone. This is a great phone for visually impaired people, deaf people, hard of hearing people and we own that. We have a dream to have one of these iPhones but many developing countries, people know that our lowest available - - is less than one hundred dollars per month. So I wonder, how do disabled people go and get these facilities and I want to ask you a question, do you have any strategies for people with disabilities about these issues? Otherwise, the developing country people are not able to use this great opportunities in their life. Thank you.

>> I would be happy to pass it on to you.

>> I think part of the issue is reframing how you look at that. When you look at assistive technology and its history which is single use devices, the difference between having a 15 thousand dollar AAC device versus a 250 dollar Ipad touch with a 200 dollar app on it, I think people look at this from a perspective of,

like the cost in a way that, in this day and age, I think you need to look at what the history was versus what it is today. Apple has put a lot of money in the R & D around accessibility in order to level the playing field.

>> I think it's almost like grouping together in communities, if it adds value to that society. Yes. Any other questions guys? Go on, please.

>> I'm Paul, I'm from here in Scotland. It's not a question, it's just an observation which is very exciting to me. I just love the idea that people are starting to talking about product and services and mainstreaming access. I love the Apple story and the idea. Particularly, I'm a fan of it because I can go into the shop just like anybody else, take it off the shelf. I can make this device listen to me because I can't interact with the keyboard and it works. It's this whole notion of suddenly the world is changing. Things are becoming for everyone and that's kind of the message I think is coming out of this.

>> Great! Any other questions? Last one guys, last one. Last one.

>> Hi, thanks! I'm Frank from London. As a visually impaired person and as a person who is employed in a high level graduate entry position, I feel that access to work is a fantastic thing that the government provides. However, I feel more companies would be happy to employ a person if the access to work process didn't take too long.

From actually being able to enter the job that I got employed to do was 3 months. Are you aiming to lower that time range because I feel that if a company employs an enabled body person, that person could potential start, well, the next day if possible. Whereas, someone who needs accessible equipment, it can potentially take a couple of days to order that equipment and for that to come in. However, I have three months, for me is kind of a long period. I have friends where it's taken 8 weeks. I have friends who have waited 4 or 5 months to get that job, to the accessible equipment.

>> Can I move that on?

>> Yes, thanks! I do recognise what you're saying there. I think one of the continual things is virtually everybody is on board with the principle of it, the execution does need to get quicker in the majority of cases.

Our basic targets, we have lost five days for the data to gather, and 15 days to did an assessment and then make the award. I know it kind of takes a long period. You know, if we know if the start is that eminent. That said, these are published figures but to give you a rough sense of it, the digital system we have now shaves two days off it. We're looking to see if the ten day assessment could be contracted and our decision making could be made a bit quicker as well. That would - - I mean, we have been looking into this. The industry, this sort of minimal standard this general from sort of a job offer, a job start is about two weeks. So we want to try to bring it closer to that.

You know, some people with really complex solutions because bear in mind, we don't put in place the solution, we just pay for it. It's up to the individual of that company to sort out that solution. If

they have a special need that needs to be manufactured somewhere else, that is not something that we deal with.

What I would say is we do attach real importance to this customer journey, the feedback that we get the most thing on and it's probably the thing we're looking at the most.

>> Great answer! Thank you! I need to wrap up because I know we need to move on to the main hall for the drinks and the guest speakers. So can I thank the house speakers! For me, it was an excellent session! There's a lot of food for thought in terms of the future for society and not just disabled people. Thanks a lot!