# Accessible Publishing Fundamentals webinar transcript

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<https://daisy.org/news-events/articles/accessible-publishing-fundamentals-w>

- Hello everyone, and welcome to this DAISY Consortium Webinar. My name is James Taylor. I'm from the International Publishers Association. And I'm your guest host for this session. Over the next hour, we will take a look at accessible publishing fundamentals, hearing from publishing and accessibility specialists about the importance of accessibility and the beneficiaries of this work. Our panel of speakers is perfectly-placed to take us through these issues and to answer questions you may put to them. We have lots to cover, so I'll hand over to our panel and ask them to introduce themselves.

- Hi, everyone. My name is Brianna Walker and I'm the head of content management at Taylor and Francis Group. I am an accessibility champion, specifically focused on the quality of our ebook content. I also helped launch and develop Taylor and Francis' Accessibility Working Group.

- Hello, everyone. My name is Prashant Ranjan Verma. I'm working as accessibility specialist with DAISY Consortium. I'm based in New Delhi, India.

- Bonjour. My name is Gautier Chomel. I live South of France and work for EDRlab, an international non-profit development laboratory working on the deployment of an open interoperable and accessible digital publishing ecosystem worldwide. So let's start by a quick overview of what we'll cover in this session. First, we'll have an introduction to accessible publishing and about print disabilities. Then we'll define how could people read your publication? And accessible digital publishing practises. We'll see a case for accessible publishing and get some advices about where to start. At the end, we'll have time for a question and answer session. So let us begin then with our journey to our accessible publishing. In many countries, digital publishing is big business and has been for some time. In the UK, last year, sales income in the education sector grows by 1% for print, but a massive 28% for digital. Conversion of publication into digital format contributed to a change in learning method, from traditional print textbook and expanding to digital modes such as e-readers, smartphones, and tablets. For instance, in 2020, due to COVID lockdown across the globe, the sales of physical books has gone down as most of the publishing houses and bookstore were closed, and readers spent most of their time reading ebooks. An example, in India, the sale of physical book went down by 80% and sales of ebooks had almost doubled during the lockdown. Pre COVID-19, ebooks or online newspaper and journals were popular among younger people, but during COVID-19, older people too got aligned to this. Therefore, this trend is expected to be continued post COVID-19 also, so is driving the market for digital publishing during this period. Among the people benefiting from this trend are people with disabilities who find it difficult to read print book, but can read digital book if they are produced using accessible publishing principles. US and other markets are already subject to legislation, applying for content distributed in schools and university. And as you must know, Europe has a strong legislation coming in force in a few years. From publisher's perspectives, there are many more powerful reasons. Later, Brianna will teach us more about the change triggered while onboarding with accessible publishing, but let's first learn more about print disabilities. Prashant will start this journey and drive us to understanding what problems some readers face.   
-Yeah thanks, Gautier. So let us have a look at the definition of print disability, a person who cannot effectively read print because of a visual, physical, perceptual, developmental, cognitive, or learning disability is a person with print disability. People with print disabilities includes those who cannot see and read the text, people who cannot read the text due to a learning difference such as dyslexia. It also includes people who cannot hold a book or cannot turn pages due to a physical disability. Person with print disabilities use different technologies to read print materials. I'll briefly talk about two print disabilities, blindness and low vision. Persons with low vision tend to increase the text size, they also like to change the foreground and background colour so to reduce glare. According to World Health Organization's recent report, there are 284 million persons with visual impairment in the world, out of which around 240 (M) are people with low vision and the rest are people with blindness. So it's a very large population that is affected with low vision. And it's important to consider their accessibility requirements in publishing. Here, you can see how people with low vision like to read the print materials. On screen is, what you see is, how an ebook will be displayed on a smartphone screen. The text is small, and the background is white, and text is black. If the book is accessible, then it's possible to increase the text size. Now the text is bigger. It's also possible to further magnify the text size and even the foreground and the background colour combination can also be adjusted. So one can choose a larger font, depending upon the degree of the visual impairment, but this is possible only when the ebook is adaptable. It provides the ability to the readers to change the text size. Persons with blindness use a programme, which is called screen reader, to have the text read aloud to them. Screen readers are nowadays available for computers, smartphones and even some other digital devices. These applications make use of text-to-speech engines, and read out the text in a computer voice. The voice can be changed. There are many options available for different languages. The reading speed can also be changed as per one's liking. We can actually even see a demo as to how the screen reader sounds.   
-Heading level three case study four. Nairobi, Kenya. Nairobi, the capital city of Kenya was founded in 1899 and is now home to circa 4.4 million residents. R-E-S-I-D-E-N-T-S dot.   
-So the screen reader allows the user full control. The user can read the text paragraph by paragraph, line by line, or can even spell out any word. It is not a play or pause kind of a tool. The screen readers provide the users the ability to navigate throughout the book. Read it the way you like, and then even when required, they can even navigate by words and even by characters. So here we are having a look at the refreshable braille devices. It's also possible to read digital content in braille, on the fly, on the go. The refreshable braille devices can be connected to the computers or the smartphones. And the information that is displayed on the screen is then displayed on the refreshable braille display. A visually impaired user who knows braille can touch the dots on the braille display and can read the text. On screen now, you will see close up of the refreshable braille display devices. This one is Orbit. It has plastic pins that go up and down to form braille patterns that can be touched with fingertips and those braille patterns form different braille characters, and this way it's possible to read the information in braille. In recent years, these electronic refreshable braille devices has reached many users, even in Africa and Asia, as the cost of the refreshable braille devices has gone down. However, these refreshable braille devices will work only when the digital content is accessible and it can be accessed with the screen reader. Okay, I hand over to go Gautier now to, who will tell you more about learning disabilities.   
-Thanks, Prashant. So there are disabilities less visible and recognised as disabilities since not so long. Dyslexia is now mainly known even if not so much understood yet. Person with dyslexia or has learning disabilities find it difficult to decode the text in a book into words. They can find it much easier with an accessible book where they can customise the text layout and use Read Aloud. The image on the slide show, boy in India enjoying his book on a tablet computer with convened picture, text, and sound. Let's see in video how is his reading experience.   
-The senses of smell and taste are closely linked. If you've ever temporarily lost your sense of smell because of a bad cold, you've probably noticed that your sense of taste was also disrupted. Even a hot fudge sundae tastes bland.   
-In addition to Read Aloud, adjusting the display of the publication can greatly assist someone with a learning disability to comprehend the text. Typical changes are to make texts a little larger, sets the colours to a lower contrast with the colour of the background, making the line length shorter, and selecting a comfortable font. As we will see in the seconds of image on the slideshow, visual adjustments make text a little larger, lower contrast, shorter line length, and changing fonts. Even people with severe physical disabilities can read accessible books. Some people with physical disabilities are able to control the smartphone using their voice. On this slide is a picture of a man who is paralysed from the neck down. He is unable to hold the print book or turn the pages, instead, he reads his accessible digital book on a computer using a switch in his mouth. So now we have met several people with different print disabilities. Let's review how they could read your publication. Persons with low vision could increase the text size and adjust colours. Person who are blind use screen readers, speech synthesis, and refreshable braille. Person with dyslexia or other learning disabilities may customise text layout and use Read Aloud. Person with physical disability may use switch or voice control technology. The great news is that by making your digital accessible, they are all able to read your publication. The same book can be read by people without disabilities and those with disabilities. No need to produce a special version for people with disabilities. The same book can be read through vision, listening, and touch. Now, Brianna will tell us about how is it possible and how is it going in practise.   
-Thanks, Gautier. Now that we've covered so many great examples of how accessible content can benefit readers, I'd like to explain from a publisher perspective, how you can integrate accessibility into your products and how we've achieved this within Taylor and Francis. To make accessible digital ebooks or journals, you need to use the recommended software and file formats that are used as standard within the publishing industry. These standards have been developed to support accessibility for people with disabilities, and the most obvious file format publishers should be using is EPUB 3. I won't go into a lot of detail here because EPUB has been covered by several previous DAISY webinars, but EPUB is a digital native format, which is specifically designed to be read on screen, unlike PDF, which was originally intended for print. EPUB files provide an optimal experience for users across all devices, because text size and page layouts are adjustable, and this allows users to personalise their reading experience to suit their preferences. But EPUB works best when it follows best practise guidelines for accessibility. Some key examples of this include ensuring text is text. For example, a table containing data should not be captured as an image because a screen reader will not be able to read the text within the table. If you are using ebook PDFs, then you also need to ensure that the text is not scanned or flattened. The screen reading technology needs to identify real text within your files. You also need to ensure your ebooks contain good structure. The main advantage of EPUB over PDF is that it uses structured markup of titles, headings, links, notes, tables, and more, which allows digital speech and screen reading software to function effectively so that users can navigate your product easily using the table of contents, index, and so on. Image descriptions are also a key requirement for accessible products and you can integrate both short alt text and long descriptions. Alt text is a short text description that can be digitally attached to figures or images to convey to readers the nature or contents of the image. It is used by screen reading technology to make the object accessible to people that cannot read or see the object due to a visual impairment or print disability. And finally, you should capture accessibility metadata about your products. This data can be delivered to product platforms and ebook sales channels so that customers can make informed decisions when purchasing your products. Accessibility metadata could contain the inclusion of all texts within a product, the existence of MathML, flashing hazards, sound, and so on. This is normally accompanied by an accessibility summary too. From a publisher perspective, these accessibility practises are key to what we do, and we rely on both our authors and vendors to help us achieve our goals with accessible content. We have developed and maintained our own ebook standards, which are influenced by the Web Content Accessibility Guidelines 2.1 and the EPUB 3.2 specification from the World Wide Web Consortium. More recently, Taylor and Francis become global certified accessible through Benetech. And that experience helped us revise our ebook standard significantly. I would encourage all publishers to consider becoming GCA-certified as this is a great opportunity to learn about best practise within EPUB content and integrate it at the same time. The example supplied throughout this presentation really highlight the publisher case for accessibility and all this evidence supports the message that publishers have both an obligation and a desire to make our content fully accessible. At Taylor and Francis, our goal is to ensure all our customers can access the knowledge they need in order to achieve their highest potential. There is seven major reasons why accessibility should be on your agenda and I'll talk through those now. The first reason is that you can reach more readers. According to the World Health Organisation, more than 1 billion people in the world live with a disability, and anyone can join that group at any time. If your publications are not accessible, you are limiting your market and excluding a significant amount of people who may benefit from the content you publish, especially those who wish to further their education or enter the workforce. As a global academic publisher, reaching more readers is one of our top priorities. Accessibility also allows you to comply with the law. Legally, you will find that many markets require digital content to be accessible, and this is becoming more important with new legislation such as the European Accessibility Act, which becomes law in June 2025, and sets standard accessibility requirements for certain products and services, which are for sale in the European Union. The products and services that apply to publishers are usually ebook services and the platforms that contain ebooks. Creating accessible products upfront at the point of publication reduces the risk of legal issues in the future, and means that you as a publisher will need less retrospective cleanup across your products. I can speak to this directly because Taylor and Francis are upgrading more than 65,000 EPUB 2 products into EPUB 3 in advance of the European Accessibility Act, to ensure the majority of our back list titles pass accessibility requirements. You can also meet purchasing requirements. Many government contracts and educational institutions require accessibility implementation before a deal can complete. We've certainly seen this with higher education institutions in the United States who want to know which ebooks and services are fully accessible. This is meant that we at Taylor and Francis are revising or creating Voluntary Product Accessibility Templates or VPATs for our web platforms, and we are working to improve the metadata that sits alongside our products so that both retail and institutional customers can make informed decisions about what we offer. It makes good business sense to ensure you can meet procurement terms and support your customers commercially. You can also enhance your image. Accessibility is here to stay, and it must be integrated throughout your business, across all products and services. Companies that are actively working to better support all potential customers are seeing a positive improvement to their business reputation. Both ethically and commercially, accessibility is the right thing to do. Accessibility allows you to make better digital content. Accessible publications offer enhanced functionality like we discussed in the previous slide. High quality files also create a richer digital archive and legacy of published works, which make any future transformations into new formats less costly and less difficult, with greater possibility for automation. The inclusion of accessibility features within your content will enhance the user experience for everyone leading to more sales and improved reputation. You can also impact the supply chain positively. Well-structured digital files can be validated in a more streamlined and automated way, allowing for digital certifications, such as Benetech's Global Certified Accessible. Validated files that meet certification standards are much less likely to be rejected in the marketplace. And the more publishers that supply accessible digital content and related accessibility metadata the better. It may inspire more ebook sales channels to alter their reading platforms and devices to better serve customers with the disability, thereby improving the marketplace for everyone. And finally, successful initiatives and projects can help promote your good work. There are several ways to do this such as publishing a company accessibility statement and using metadata to declare the accessibility conformance of your products. Metadata and the inclusion of alternative text can also give your company a competitive edge by enhancing search engine discoverability to attract new users to your content. When I began my own accessibility journey within Taylor and Francis, I had very little knowledge or experience. My first job at Taylor and Francis more than 10 years ago, was working on our alternative format request programme, supplying digital book content to students with a disability so that those students could complete their studies and have access to digital formats that would work with assistive technology. I know many publishers have similar request programmes, and it may be easy to assume this work fulfils customer needs. But I think the examples we've seen throughout this presentation prove that this is not always the case and publishers must take the initiative to improve our outputs. In 2019, a few colleagues and I began discussing how to improve our ebook specifications in response to the European Accessibility Act. This initial group became the company's earliest accessibility champions, organising cross departmental meetings and agenda topics and making the case for accessibility at all levels throughout the company. If you're new to accessibility and want to begin implementing this around your products, then my best advice is to consider a holistic approach. We decided very early on that we would not focus solely on ebooks, although ebooks were the catalyst to our decisions, instead, we brought together key stakeholders from around the business, which enabled a broader conversation and sharing of ideas and knowledge. We now have four key focus areas externally, which are ebooks, journals, websites, and products platforms. Internally, we're also focused on improving our company news site and educating colleagues about how to create accessible PowerPoints and videos, for example. This cross-departmental but centralised approach enables Taylor and Francis to share knowledge across different products and workflows while maintaining momentum and increasing our activity in each area. For example, we're working with our authors to create alternative texts for images, for both ebooks and journal articles upfront, so that those products are accessible from the time of publication. This joint approach means we can learn from both workflows, simultaneously, and provide a more stable experience for users of both books and journals product types. Since 2020, we've published close to 1500 titles that contain alt text, and we even have more than 100 journals containing alt text too. One of the first major steps we took was to publish our corporate accessibility statement, which we then followed with specific website and product platform statements. We decided that it was better to tell customers something rather than nothing, even if that something meant we were admitting the lack of accessibility in our products. Communication really is key, especially when you consider the customer first and realise that without an accessibility statement, your customers will struggle to engage with your content. It's also important to document your decisions and key priorities, and then make those available to all colleagues. Within Taylor and Francis, we've spent the last three years working to change our culture through regular communication and company-wide updates. I feel very proud to work at a company where the culture has shifted from a lack of awareness to colleagues actively reaching out with questions or suggestions. Change does not happen overnight, but through regular business updates, both internal and external, you can create an open and engaging space where accessibility can be addressed at all levels. And you're really asking a lot of your authors, vendors, and internal staff so you must have very clear documentation and reasoning as to why they need to participate with this. Without that clarity, you may struggle to achieve the level of engagement needed to make accessibility a success. And you won't get there instantly either, but starting the journey is an instant win. As I mentioned, Taylor and Francis spent the last three years doing research, evaluation, and adjustment to get where we are today. It sounds like a long time, but even the first few steps and attempts were met with encouragement from the community. There are many organisations like DAISY, Benetech, the Accessible Books Consortium, and the Publishers' Association who are ready to help publishers on this journey. So it's worth taking the time to educate yourself so you can educate others within your business. Attending this webinar, and the upcoming two DAISY webinars are great steps to developing your own knowledge. Taylor and Francis is still moving forward within our accessibility journey. And this is something I want to stress to those who are new to the topic, accessibility is not a project you can complete, it requires ongoing investment in your colleagues, your technologies, your vendors, and of course your customers and users of your content. Accessibility is for everyone and it's up to publishers like Taylor and Francis to ensure our content meets that potential, removing barriers, sharing knowledge, and providing the best user experience possible. So I'll now hand back over to James for discussion and Q and A.   
-Well, that is the end of the presentations, so thank you, Brianna, Gautier, and Prashant. You have covered quite a lot of ground there. And now I'd like to invite our audience to ask their questions, maybe to help clarify anything or explore a topic in more detail. Please keep your questions coming in, and we will cover as many as possible in the remaining time. I can come in with a first question. So Brianna, maybe I could just ask you, what were the biggest challenges to setting up the accessibility work at Taylor and Francis?   
-I think the biggest challenge is really finding someone to act as a champion. Within Taylor and Francis, our approach was very ground up with a small group of colleagues voluntarily organising meetings and reaching out to different departments, but you really need at least one person driving the conversation. It's better if there's more. But often I think publishers wait for someone to be appointed into that position for it to be maybe added to someone's objectives, and, you know, formalised in a way. But at Taylor and Francis, we didn't do that. We believed in what we were doing. We thought accessibility was, you know, incredibly important across our ebooks and we wanted to see that spread throughout the business. So it really was kind of a volunteer effort. And now it's become something that's embedded into the culture at Taylor and Francis. So I think finding someone or a group of people who can voluntarily push forward that conversation is really one of the biggest challenges. The other thing is that everyone is really busy and they have their own objectives and priorities. So when you're first trying to launch any kind of accessibility group, it's going to be hard to pin people down. You'll need to consider the best way to approach colleagues, to convince them of the importance of the work. And it's easier if you bring colleagues onto your side as allies. So once you've convinced enough people to engage with the topic, you can work with them to convince others, and so you rely on them to keep accessibility on the agenda within their own departments. So the more conversations that are had about it, the more it becomes part of the company culture, and it's easier to develop projects, obtain budget, and so on. The other thing I just want to encourage other publishers to think about is that there's so much work that could be done within the accessibility framework. It can often feel very overwhelming when you first get started. But it's important to decide as a group or a department what immediate changes you can make. The easiest thing that we found was publishing the accessibility statement because by writing that we actually learned a lot about what we wanted to focus on and it helped us to define more clear objectives, which then enabled us to get more into specific workflow developments and improvements and automation, you know, a few years down the line. So really it's all about just having the conversation, just taking those first steps, and seeing where they lead, and trying to convince people, you know, to get involved and to put some time and effort into making accessibility a reality within your company.   
-Thank you, Brianna. That's really interesting. I'm glad you spoke about the beginning. Do you remember how, 'cause it feel it can, I know from talking to other publishers that it can feel like a lot. Do you remember how you felt at the outset? Did it look like a mountain or, I mean, you spoke just now about focusing on the statement, but can you remember how you felt back at the beginning?   
-Oh yeah, I was completely overwhelmed to be honest. And I've heard that from other publishers, you know. I have several friends at various publishers and they're kind of on the first steps of their journey as well, feeling very overwhelmed with the amount of work that needs to be done. But I think, you know, with that overwhelming kind of sense of work that needs to happen, there was also a lot of positivity and a lot of opportunities, so all of the people who got involved in the accessibility working group were really keen on making sure that it was a success. And so, you know, when you're building something completely new and trying to identify gaps in your processes, and you know, learn more about it, it is exciting because you're developing your own skills, you're supporting your customers, you're supporting colleagues as well, you know, the more people that know how to create accessible videos, you know, and write internal news articles for your company, you know, you'll be supporting internal colleagues as well. So yeah, I think it's a mixture of, you know, excitement and opportunity alongside, some apprehension maybe, but it does get better. You know, if you can sit down with a group of people and think about what needs to happen and plan it out, then, you know, you will start to find successes over time. And that's certainly what happened at Taylor and Francis.   
-We have a question maybe for Prashant. You mentioned braille displays can provide access for blind people who use braille, but do these documents need to be transcribed to braille first to make that work?   
-Not really. The braille displays mostly work in conjunction with screen readers, so the screen reader sends the information to the braille display. The screen reader will do the conversion of the print text to braille codes, and that way it works, the user doesn't really need to do any conversion or instal any additional software. So just the device needs to be connected using either Bluetooth or a cable with the smartphone or the computer. It's also possible to, in many braille displays, are like also note takers and they also have an internal operating system and a file manager and some other applications. So they can also, some of them can also open the ebook directly on the device if it's possible to open the ebook, particularly like in HTML format, Word format, and it contains that braille translation within it. So, on the device, it will work in braille, and if the user wants to transfer something, type something and transfer it to some other device like a computer, then it's displayed in the regular print.   
-Great. Thank you, Prashant. So maybe, Gautier. What about complex content textbooks, academics, those sorts of things? How does accessibility work in those situations?   
-Yes, there actually, many publisher, principally in Europe that feel it will be difficult to make complex content accessible, but the truth is that we have everything that is needed in the technologies. An electronic book, a digital book in an EPUB format is based on basic web technologies, it's HTML, it's CSS, and we share the years of experiences of the web. So we have everything needed, but we have surely to think about how we are making our digital books. Often, what happen is that intermediaries tool, I mean, position tools are not fitting well, the need for including such complex content as math, as physics, and as long description for images or graphics. So actually, a publisher may have an internal tool that allows him to auto edit and publish such content, but what often happens is that if you don't have this tool into your organisation, it will be quite difficult and you will have to make manual edits into the files. So we have everything needed, but we still lack of open source tool for publishing allowing us to, to create, edit, and publish such content in an easy way.   
-Yeah, just to add to what Gautier said. So there's no technological gap. So mathematical and science books, which contains these expressions, they're the coding may need to be done using MathML. So that is one different thing or additional thing that the publishers might need to do to make those expressions totally accessible. And then, these complicated images, they may require longer descriptions, which is not like suitable for the alt text field, the longer descriptions. So different publishers are adopting different practises. Sometimes the description can be provided at the end of the book with the link from the image, or the description can be embedded below the image, like in an expandable and collapsible details element. So there are different, these techniques are there, and gradually they are being also adopted by publishers.   
-Great, thank you both. So the tools are out there, but it sometimes means changing the practises within our publishing house. Okay. We have a question regarding size and resources. So is accessible publishing achievable for small publishers that don't have the resources of a large company like Taylor and Francis? Well, I guess, Brianna that's maybe one for you, but I'm sure Gautier and Prashant, maybe you can chip in with that as well.   
-Sure, yeah. I think absolutely. I think accessibility is achievable for any size publisher, and really, you just need to think about how you can integrate what you want to do into your existing workflows or develop new workflows. So you probably wanna start with reviewing some of your existing workflows, thinking about your type setting practises, you know, learn a little bit more about the different standards that exist like the Web Content Accessibility Guidelines, learn a little bit more about creating EPUBs if you do that in-house, you know, try and work with your vendors, if you do have vendors, just to get them, you know, learn from them and then get on board with creating fully accessible EPUB. I mean, Taylor and Francis is a very, very large publisher, but, you know, we do a lot of what we do through existing workflows and we've done a lot of work trying to change, again, like I said, the culture, but working with other departments who maybe aren't as technical as some of the production or ebooks teams might be, just to see what we could implement. So the author alt text workflow, I think is a great example of this. You know, we're not expending any extra money, you know, we're not talking about building anything that's too significant, but we are really just reaching out to our authors and saying, we've written these guidelines, we would like you to supply alt text with your books. You know, it's really important, here's the reasons why. And then trying to get that integrated as the alt text comes back through our existing kind of production workflows. So I think, you know, there's absolutely steps you can take to make accessibility a reality, whether you're a large publisher or a small publisher, you just have to think outside the box. I think, Taylor and Francis are one of the first publishers to really be successful with author-generated alt text, but it's because we worked together so much, you know, we shared knowledge we learned from people in other departments, and we worked together to create kind of a really good case for accessibility. And I think, you know, it really is about that. Just getting the right people together in the same room, brainstorming what needs to happen and then making it a reality.   
-I could just add that, sometime, it's maybe easier for a small publisher because it's a smaller team and sometime it allows quick moves, but again, it's all about the tools you are using, the practises you have, and the competencies you have. For me, it's definitely achievable. It's not about the size of the publisher, but you have to really engage and think about how you are doing things and what is your workflow?   
-Yeah, I can also add that like few years earlier, DAISY Consortium released this tool named WordToEPUB. So this is free of cost. This converts formatted Word documents to EPUB and accessible EPUB. And we have learned that many small publishers around the world and self-publishing authors, they are using this tool to create accessible EPUB files, and they are like selling those EPUB files through various online platforms. In fact, like this tool enable them to go digital, these small publishers were basically, dealing in print books, but then as they came across this free of cost tool, which was easy to learn and easy to use, so they have been able to publish digitally. And the good thing is that it also includes all the accessibility features.   
-Thanks all. That's interesting, again, that it's a good business decision as well, as a good decision for increasing the number of possible readers. One thing that I don't think really came up other than the mention maybe of tools, but you didn't speak about cost. Is it much more expensive to make accessible digital publications?   
-Well, maybe Brianna may like to say something. On our part, what we have seen is like we have been conducting trainings for publishers. So the only additional thing that needs to be done is image descriptions. Apart from that, everything that we ask publishers to do is actually just adopting the best coding practises, which actually reduces their time and improve the overall quality of the book. And Brianna may know like how much additional cost is involved.   
-Yeah, I completely agree with what Prashant just said. And really, if you're integrating the best type setting practises and conversion practises, then your product should be accessible already. And that's why I was suggesting, you know, if publishers can, to go through the Global Certified Accessible Accreditation process, because that will, you know, kind of help you understand what you need to do to your content at the point of creation, to make sure that it's fully accessible. Where the costs come in are on retrospective accessibility. So Taylor and Francis has more than 160,000 ebooks in our back list, and to make all of those titles fully accessible is going to take a lot of time and a lot of money. And we are, you know, I already mentioned we're starting to work on that, in advance of the European Accessibility Act, we're upgrading 65,000 EPUB 2 files into EPUB 3 so that our entire back catalogue is EPUB 3. That is where the cost really comes in. Creating good quality content upfront for new titles is actually relatively easy, I would say, once you know what the standards are that you're trying to meet. And then, of course, there are the image descriptions or the alt text, which Prashant mentioned. That can also be a significant cost, but it depends how you approach it. So we, like I mentioned, are working with our authors. It's part of the manuscript creation process that they write the alt text, at the same time they're writing captions. And then we seamlessly integrate that into the files while they're being type set and exported in the XML and EPUB formats. So, you know, you can make it very expensive or you can try and do it upfront and think about keeping the costs low, but it really is just about those best practises upfront to prevent having to retrospectively go back and create alt text for your back list, convert formats for your back list, and do any of those kinds of transformations, because that is much, much more difficult.   
-So a couple more questions. Maybe Brianna, just picking up on something you said earlier was that you'd started by delivering formats to students, roughly how many disability requests are made a year?   
-So Taylor and Francis used to get about 5,000 requests a year directly. We're down to below 1,000 now, and that is because we've increased our partnerships. So there's a lot of really great charities and partnerships that you can work with who will provide content to students on your behalf. So in the UK, we have the RNIB, which is the Royal National Institute of Blind People. In the US, there's Benetech's Bookshare Programme and we also use AccessText Network now, which we only signed on to using them a couple of years ago. But through these partnerships, we've been able to really increase the amount of content we supply to each one and the amount of content that is therefore available to students. So the direct requests we get at Taylor and Francis are declining, but the requests that we get through those partnerships are definitely increasing. And I can't remember off the top of my head what the number is, but it's something like 55 to 65,000 requests across all three partnerships in one year. So it's a significant amount.   
-Wow, okay. Yes those are big numbers. And you started answering another question that we've received there, which is how do people with print disabilities find out whether a title will be accessible to them, so I think you've mentioned Benetech, RNIB.   
-Yeah, those are both, I mean, the partnerships are great places to go. There are some, you know, there's some requirements that you have to do to sometimes to gain access to the content through those, but a really key element, you know, for publishers to consider is the metadata, which I mentioned earlier. We want to make sure that people who are looking at our content, whether it's on our own ebook platform, our e-commerce site, any of the channels that we distribute to, that they know exactly how that title's gonna function, and, you know, that they're gonna have an accessibility summary, they're gonna know whether it contains alt text, whether it has any other accessibility modes within it. And so we use different metadata to help describe that. But the one that we're kind of focused on using is the schema.org accessibility metadata, which you can integrate into on Onix feeds. So we are currently developing that. Like I said, accessibility is a journey. We're not able to supply all of that information yet for all of our titles, but we've developed some automation, which will help us do that. Hopefully by the end of this year, we'll start being able to send out more of that metadata. Right now, the only thing we can really supply is the alt text, because we've developed a lot more, kind of strict requirements around our alt text workflows, but all of the other metadata will be distributed within the next few months. And, you know, we're hoping that that means that customers will be able to make more informed decisions about the content they're using. And obviously, then on whichever platform they're looking at, they'll be able to see exactly what functionality that particular title offers. So metadata is really key, and it's also part of the European Accessibility Act requirements, so it's something that publishers do need to consider, not just the content.   
-Once again, a big thank you to Brianna, Gautier, and Prashant for sharing here their expertise. These accessible publishing and reading webinars are brought to you by the DAISY Consortium, a global non-profit organisation. Their expert team and members work on innovative and impactful initiatives to further their mission to develop global solutions for accessible publishing and reading. Before we close, I want to tell you about the next two webinars DAISY will be offering. The first is in two weeks time on September the 28th under the title, "Accessible Publishing Support: a tour of training, tools, and resources", where we'll hear about the latest assets available to help develop skills and content to improve accessibility. Then the second is on October the 12th, "Lessons learned in the journey to accessible publishing", where we'll hear directly from publishers about how they navigate the road to accessibility, including the highs, the lows, and the lessons we can all learn from our own journey. If you have any ideas for other webinar topics in the area of accessible reading and publishing, including any that you might contribute to, DAISY would love to hear from you. Well, that's it for this session. I hope you'll join us again soon. In the meantime, thank you for your time, stay safe and well, and have a wonderful rest of your day. Goodbye.