How to Transition a Conference from Face-to-Face to Zoom: The Story of The 4th International Bee and Hive Monitoring Conference

Frank Linton, Jerry Bromenshenk, Breanna Niekamp, Christopher Totzauer, Charlotte Nickel, Avianna Soto, Gabby Adams

Jerry Bromenshenk & I had put together several previous versions of this conference, as workshops, by Eastern Apicultural Society (EAS) meetings in 2012 and 2018, and by the Western Apicultural Society (WAS) in 2014. This conference, too, was initially planned to be held in conjunction with WAS 2020. Then, suddenly, WAS 2020 and many such events were canceled, owing to the outbreak of COVID-19.

When WAS 2020 was canceled, we also canceled our 4th event. Then, almost as an afterthought, we realized it might be possible to hold the Zoom conference. With a bit of further thought, Jerry realized that, through his long association with the University of Montana and its resources, including their recently acquired experience with online learning and his own experience with a very successful online beekeeping course, he could bring to bear a lot of resources for putting this conference online. As for me, I have, for many years, run the website colonymonitoring.com, which pulls together all the products one can find on the web that provide colony monitoring devices.

A conference needs speakers, attendees, and an organization to plan, prepare for, and run the event itself. Of these, we had only a list of potential speakers. The organization for the face to face version was irrelevant to the needs of a Zoom-based conference. And the previous list of attendees, members of WAS, now seemed somewhat limited.

So, Jerry & I put our virtual heads together to figure out what we might do, given an unknown set of speakers, an unknown need for a conference management organization, an unknown number of attendees, and no budget.

One change taking place in colony monitoring technology is the development of products aimed at professional beekeepers. To reach those beekeepers, the conference had to be scheduled when they were not super busy (or busy supering) in the field. Thus the date was set for early October. And with a date, we could make a schedule.

We also knew that presenters would not be Zoom experts; at that time, no one was. And we knew that Zoom attendees were not going to tolerate either long presentations or long sessions. Based on these factors, we decided to require short, pre-recorded presentations and to schedule the conference in half-day sessions.

Then there was the time difference issue; with presenters and attendees from the entire world, some folks would be presenting and attending in the middle of the night. Australia and New Zealand got the short straw. Note: Even though the presentations were pre-recorded, we expected the presenters to be online to respond to typed-in Chat questions and for the Question and Answer sessions at the end of each day.

A conference consisting of several days of half-day sessions held at, for some people, inconvenient hours meant that providing access to the presentations after the meeting would also be a requirement. A host site for the presentations was needed. Furthermore, if the conference successfully presented state of the art in colony monitoring technology, the videos themselves would be valuable resources to the

beekeeping public. They would be sure to be accessed for years after the conference. So, the capability of providing a host site became another requirement.

We began soliciting videos from presenters. We also asked for a nominal $20 fee to cover potential, but as yet unknown, expenses. As the videos began to trickle in, we had something we could advertise to potential attendees. Still, given the program's vagueness, we decided to ask attendees for only $20 as well. To handle the incoming payments, I added the capability to accept PayPal to my colony monitoring website. Note: my website is solely an information resource. I do not sell anything on it.

We distributed announcements of the conference as broadly as possible. Still, I feel that, given more time, we could have reached, and perhaps pulled in, a much larger audience.

Jerry compiled a list of monitoring technology providers, i.e., potential presenters, from multiple sources. He contacted these potential presenters, requesting a pre-recorded video with a maximum length of 15 minutes, and an abstract. Jerry also made arrangements with a beekeeping magazine, Bee Culture, to publish the abstracts to make its readers aware of the videos and view them.

Jerry also sent out detailed instructions on recording a video using Zoom, a requirement for Zoom to flawlessly playback videos. The few glitches we encountered mostly came from presenters failing to follow these instructions, especially asking everyone to record and submit presentations as MP4 video files. For the most part, presenters followed guidelines for submitting videos. Those who conspicuously ignored the 15-minute time limit were asked to shorten and re-submit their videos.

Jerry also sent out an abstract template asking for a plain-text based Title, Association, Name of Presenter, a Narrative text of no more than 250 words, and Acknowledgements. Surprisingly, receiving all of the abstracts in the stipulated format was far more complicated than getting videos on time and in the specified form. Many of the abstracts were submitted in hard-to edit file formats. Some sent brochures and even posters. A few blatantly exceeded the word count limit, offering multi-paragraph, 500+ word tomes! In desperation, Jerry resorted to threatening the submitters – trim to no more than 250 words, or he would cut them off at the 250th word.

Jerry arranged for representatives of commercial beekeeping organizations to attend and describe what was needed in the way of technology from their perspective.

Jerry pulled together a team of people, each of whom played a vital role in the conference. The following sections of this document contain descriptions of their tasks in their own (lightly edited) words.

Name	Role
Jerry Bromenshenk	Conference co-chairs
Breanna Niekamp	Marketing and Conference Coordination
Christopher Totzauer	IT Support
Charlotte Nickel	Conference Videography & Lead Editor
Avianna Soto	Graphic Design
Gabby Adams:	Organize Conference information

Jerry Bromenshenk: Co-Chair

I have little to add to Frank's comments. It was a pleasure working with a professional. This whole conference more or less evolved daily, after the complete shut-down of air travel and loss of many of our planned speakers for the face-to-face meeting. Given that there is no current association for bee-technology innovators and providers, we both had to search for new investigators and companies entering the field and track those who had either merged with other groups or who no longer were active.

I expected that getting usable videos would be the most challenging part of the process. Overall, this went far better than anticipated. The most common issue was low volume recordings, probably because many speakers were not wearing microphones. Lessons learned to pass on to presenters:

- Sit or stand close to the microphone or use a hand-held or lavalier microphone, especially if recording outside.
- Listen to the video before submitting, checking for low or distorted volumes.
- Submit in the specified format – in our case, MP4 files recorded using Zoom or a video camera. Do not send videos in a variety of other PC and Mac formats.
- Zoom did not play nice with PowerPoint audio recordings or video formats other than MP4.

As per abstracts, I work with colleagues who can knock-out an abstract in a standard format in minutes. I failed to recognize that some of our technology innovators and businesses have little or no publishing experience in technical journals.

Having a skilled team made the difference between a successful, week-long, virtual conference, and a potential failure. Everyone did their part. Using a UM drop box for all presentations enabled everyone to submit their videos and abstracts without a problem, even large video files sent from slow internet connections. That same box then allowed our team members immediate access to everything as soon as it was submitted.

The week of the conference underscored the value of an experienced IT technician. Frank and I were able to pay attention to the presentations, not worry about loading videos, dealing with technical problems, and having a backup system. That became a real issue on Thursday morning when I found that all internet service to most western Montana was off-line! In Hawaii, Chris discovered the same, and he was using a server in Missoula, MT. He did some scrambling to re-route everything. The only thing that the speakers and audience noticed was that he asked for a short delay before we started the day's presentations – and by short, I mean less than five minutes!

For the zoom webinar itself, I have a few recommendations:

- Have one or more 'spotters' whose job is to monitor Chat and Q&A. Trying to present, maintain a train of thought, and read or respond to text questions is difficult, if not impossible, for many of us.
- In Zoom, use Chat or Q&A, but not both. It is too confusing to attendees and speakers.
- Have someone to monitor and respond to emails and another to monitor phone calls.
- Ask every speaker to have and watch their specified email account, and clear out their voice mailbox to be reached immediately if there is a problem.

Chris did a masterful job as the IT specialist, even responding to speakers and attendees while running everything. However, he had to prioritize the streaming of the conference.

I spent a good part of the five-day conference swamped by message to my two email accounts and phone calls from speakers and even some attendees, plus getting text messages on my phone while trying to keep an eye on the Chat and Q&A. Since I handled pre-conference interaction with panelists, they all had one or more of my email addresses and cell phone numbers. Any problem, any question, even positive comments, all rolled in continuously.

Next time, if I am coordinating the actual Zoom session, I will prioritize being able to reach speakers if there is a problem with their presentation. Nothing like having a video that does not correctly play and not being able to contact the speaker via email, text, or voice mail – all of which were 'full.' And find someone with a calm temperament to address the Chat, Q&A, and Emails from trolls and others, who may have a legitimate problem, but no patience. The most memorable one that I saw was a person who tried to log into the presentation, got to a webinar page that looks different from the standard zoom page, failed to see the buttons at the bottom of the page, and sent a nasty comment about worst conference ever, can't log in, I only see a black page – when 111 people worldwide were logged in and following the presentation.

Breanna Niekamp: Marketing and Conference Coordination

Advertising:

- Social media posts on Twitter, Facebook, and LinkedIn.
- A blog post for hyping the conference, shared and featured by UM Today.
- Uploaded all presentations to YouTube, wrote copy for description, adjusted titles, and title cards to represent videos.
- SEO (search engine optimization) research for a blog post and YouTube videos.
- Edited an article and hosted a follow up article on UM Online website.

Coordination:

- Management of the Box folder allowed presenters to upload their presentations and abstracts in one central location via a link without viewing other presentations.
- Coordinating with Jerry and Frank to determine dates and conference platforms.
- Coordinating with the tech team to ensure appropriately trained with assistance from Alex.
- Standby tech support as needed, but it was not needed.
- Arranging and publishing all of the videos on YouTube and the Conference Program and Abstracts on UM's Beekeeping page.

Before the conference, there was quite a bit to do. I was brought on board to assist with the coordination of the meeting, in collaboration with Frank and Jerry, and the Marketing of the conference itself. In the beginning, we had an original date that was going to take place at the end of July or early August. As presenters provided feedback on their time constraints to Jerry and Frank, it was determined that we were going to set a new date for October. When all was decided, we had to act fast.

Presentations and Recordings

We needed a place for presentation videos and abstracts to be submitted, so I created a Box folder with an outbound submission link. This means that presenters could submit their videos and abstracts via the Box link without reviewing or seeing other presenter's submissions.

From there on, presentations began to trickle into the Box folder where Jerry, Frank, and I could review them. We were able to add Charlotte, Avianna, and Gabby to the team for video managing, editing, and graphic design.

While videos were being edited and organized for the duration, I assisted with finding the right platform to host the actual conference. We met to discuss which platforms would be best suited to host the meeting. YouTube and Zoom were the original preferences; however, we decided that instead of premiering them on YouTube, we would host a Zoom Webinar, providing exclusivity to the conference. Chris was then added to the team as the tech coordinator for the conference days.

Once the videos were edited and organized, I began to download them from the Box folder and upload them to YouTube. Here, they were organized chronologically and matched with the correct title cards. To finish up this portion of the work, I updated each video's description and the keywords associated with each video. Credits were also added to the description to recognize the team that worked to put on

the conference. Once finished with YouTube updates, an "unlisted" Link was provided to conference attendees for October 2020 with a notification that the playlist would be changing from unlisted to the public after November 1. Presenters had until November 1 to notify the team if they wanted their video to remain private or not.

MARKETING

The main aspect of marketing the conference was getting the word out to a limited audience. A few tactics were effective and received a good-sized audience for the first time "virtual" event. The first was the blog post to express excitement for the upcoming conference. This is currently hosted on the UMOnline blog, where it will stay. The blog post was distributed to UM Today, a week-day publication that goes out to all campus staff, faculty, and subscribers. A second blog post was written after the conference to showcase the success of the meeting and to get attendees ready for the next conference next year. This blog post will be published after November 1, 2020. The follow-up post is intended to express that the conference went well, share that another is planned for next year, and let people know that the conference recordings are available on YouTube for review if they did not attend the conference.

The UM Beekeeping program has a newsletter that is used to notify future, past, and present students of class registration and other industry news. We also advertised in that newsletter leading up to the conference and included a registration link. Our advertisement was a call out for participation and presentations if any students were interested in presenting during the meeting. For the newsletter, we received a total of 314 clicks on the beekeeping registration link, which was approximately 64% of the audience. 1,163 subscribers opened the email, which included the headline: "Bee Conference and Registration Reminder."

The third aspect of marketing for the conference involved social media posting. We shared the announcements, blog posts, and information about the conference on LinkedIn, Twitter, and Facebook. LinkedIn and Twitter showed the most support for the information and conference. We received a few shares from others interested in the conference.

Though it is best practice to begin marketing months in advance, we had only a short time to pull off the conference in its entirety. It was a decently attended conference considering the short time to market and moving of dates.

IT Support

Christopher Totzauer

Part 1 of 2

We used Zoom Video Webinar, which is able to handle over 300 attendees. It is one of their enterprise-level options that the university subscribes to. Most of the features we used during the conference are unique to this service, including the roles management (attendees, panelists and moderators), the Q&A and chat functionality, and all the backend features we used for sending out invites, etc.

I thought the webinar went well overall and think Zoom is generally a suitable medium for conferences. We had some trouble with video optimization and playback, but those issues can be avoided in the future now that we know to look for them. Specifically, when anyone streams a video, they need to optimize Zoom for video playback in the settings. We should advise panelists not to record their presentation's audio in PowerPoint, as Zoom really cannot handle that. In normal playback, videos recorded using PowerPoint looked ok. When played via Zoom, the audio separated from the slide text and pictures resulting in sound bites with no image and images with no sound.

The only other technical thing I would do differently next time is to have the host computer on a better internet connection. It didn't come up (other than that major outage that affected the region). Still, I was dreading my home internet connection suddenly reverting to dial-up speeds for some reason at any point and would have felt better if the host computer for the videos was somewhere like the UM campus.

Other than the technical issues, I had a few general observations that you most likely already know, but I'll include them here just in case.

I know we discussed this a bit, so I know it's something you're already working on, but a website with pertinent information for the webinar would be a great addition. We could refer attendees there for panelist info, abstracts, conference instructions, and eventually, when the presentations go public, we could put links to them there as well.

I can't remember if you included the conference program with the automated emails sent out to attendees, but I think that might be a good idea for next time. I noticed we had some attendees request it at various points in the week.

Having a practice session for panelists the day before the conference started helped a lot, especially for the moderator and panelists getting acquainted with the format for that first day. After that, I think people generally got the hang of it from watching how that went the first day or two.

Using the chat window for panelists and the Q&A window for attendees ended up working pretty well in the end, but it took a while for people to get used to it. I don't know the best alternative to that system, though, given Zoom's limitations in this area. I like Zoom's Q&A window, but by the end of the conference, attendees were using it as a chat window anyway, so I'd recommend at least exploring other options for this next time. I don't know if having the questions submitted via another program (Slack, or maybe something through your future webpage, etc.) would be worth it, but something like that might simplify things overall.

Oh, and I realized this morning that I hadn't uploaded the last couple of Q&A recordings I'd made. I had them converting on another computer and didn't take that with me when I left to decompress for the weekend, but they're good to go now, so I'll do so as soon as the internet here is back to normal speeds.

Other than those technical issues and a few general ideas, I think this was a pretty successful first attempt! While it was a lot of work, it was an enjoyable challenge and wonderful learning experience for me, and I'd do it all over again if given a choice – crazy schedule and all.

Chris Totzauer: Part 2: How I set up the video hosting on my end

I recommend having two instances of zoom running on two separate computers for hosting duties. The first system is the host computer I'll describe below, and the second is simply for logging in as a co-host to monitor the zoom session and communicate with folks as needed. In my case, I was located in another state at the time and so was remoting into my host computer while logged into the zoom session as a co-host on my local machine. If I needed to speak, I'd do so with the local co-host account. This co-host computer also allows the webinar to continue even if the primary host machine drops for some reason, as hosting duties will automatically switch over to the co-host. If you'd like, you can even have this second machine set up as a backup, with all the same settings, as I'll detail below. To set up the co-host user in Zoom, just log in with an email other than the one used for the primary host. It can be as a panelist or attendee; it doesn't matter. Then, on the host side, hover your cursor over that user in the participants' window, go to More, and then set them as co-host. If that user is logged in as an attendee, you'll first need to put them as a presenter, then set them as co-host. The host's ability to temporarily change a user's role in that Zoom session is convenient, as you may end up with panelists using the wrong link or otherwise finding themselves logged in as attendees, and this is a great way to fix it on the spot.

I used a desktop computer in my home office in Missoula that I've set aside as a home media server for the host system. It runs Windows 10, and crucially, it has two monitors. Before each day's presentations, I would restart the computer to be safe, make sure there's nothing extraneous running in the background (I shut off everything I could think of in windows startup settings), and made sure that my secondary monitor was clear of any desktop icons. I would then open the folder containing all of that day's videos along with the title cards we'd need and set the "Welcome to the Webinar" title card as my desktop background. The cards that were made for this conference were perfect for this use. Still, suppose this is the route taken for the next meeting. In that case, I recommend making sure the image's resolution is suitable for this purpose (i.e., isn't going to end up stretching excessively if fitting to a widescreen monitor, etc.)

I would then open my chosen video player (in this case, I went with VLC, a free and robust player available on most platforms) and made sure it was set to full screen on the secondary desktop. I would test playing the first video of the day to make sure it worked ok, and the volume was set correctly. My goal was to double-click the next video on the list and automatically start playing in full screen on the secondary desktop and click on the video player's icon in the taskbar to minimize it when necessary. This takes a tiny bit of practice and required a few minutes before each day's start time to ensure it was working correctly. I would minimize the player before starting zoom so that the welcome message background was visible.

Next, I would start Zoom, logging in with the hosting account. When I was ready, I'd start the webinar (it is an option at the top of your Zoom window) and start sharing my screen. Zoom allows you to specify whether you want to share a specific application window or one of your desktops. I would choose to share my secondary desktop (the one I'd cleared of icons and was not the desktop with my videos folder and zoom controls). I'd open Zoom's chat, participants, and Q&A windows and organize them on my primary desktop so that each is readily visible and easy to access throughout the webinar. In the Zoom control panel that you will get after starting screen sharing, hover over More and turn on Share Computer Sound and Optimize for Sharing Video Clip. It's imperative that both of these settings be turned on before you start sharing any videos – the former will allow the video's audio to come through Zoom, and the latter will ensure smooth video for your viewers.

I also make sure that my mic is muted and set any necessary chat settings. For this webinar, this meant restricting attendees from using the chat window (in the chat window settings, a little gear icon), setting panelists to automatically muted when they arrive (in the participant's window settings) – selecting this option will prompt Zoom to ask if you want panelists to unmute themselves when needed, should be set to yes. This prevents someone from hopping into the webinar with an accidentally hot mic, interrupting the current presentation.

One idea that came up part-way through the webinar was to have a timer on-screen during breaks so that people would know how much time was remaining before the next round of videos or Q&A starts. I downloaded a free countdown clock app and would have it open but minimized prior to the day's session as a quick solution. I'd ensure that when maximized, the window was position correctly on the shared desktop, and I could quickly adjust the time on it at the start of each break.

When the time comes, I will double-click on the first video to begin playing and show up ok on the co-host machine. This is important as it will allow you to instantly catch any playback issues and diagnose problems other users may be having. With large numbers of attendees, you will inevitably have individuals running into issues. This monitoring from another machine allows you to eliminate the host due to the problems if your stream on that computer is working fine.

In the case of this webinar, we went straight from one video to the next, taking a 5-minute break approximately every 45 minutes. One of the nice things about setting the title cards as the desktop background is that you can switch them over without interfering with the video streaming. Just select the next card as the background on your primary desktop. It'll be there when you minimize the player. This is why I made sure that simply clicking the player icon in the taskbar would minimize the player before each day's session began – when a break would begin, I wanted to minimize the player to show the 5-minute break card seamlessly. Then simply repeat the process for the next round of videos – double click the next video to start playing and go back to monitoring the stream, checking the chat, panelist, and Q&A windows for issues, and getting ready for the next transition in the schedule.

When the last video of the day was playing, I'd put up the "Q&A coming soon" as the background, and after the pre-Q&A break, I would stop sharing the host's screen so that the Q&A panelists could get started. I would leave the host computer up and running and ready to take over again if necessary, though, just in case a video needed to be referenced or something like that.

I strongly recommend having a checklist going into this as the host, as if you follow the strategy outlined above, there are many steps that can trip you up if forgotten. Assuming everything goes well, half an

hour of set up time should be plenty to get things going before that day's start time. Of course, making that kind of assumption regarding anything tech-related is a big gamble, so give yourself some extra time and save yourself a headache down the road.

Bandwidth is a crucial issue here, as well. To ensure full HD streaming, the host computer needs at least 1.8 Mb/s upload speeds, and It needs to be reliable and consistent. Don't trust a simple one-shot bandwidth test site like speedtest.net for this kind of thing, as it'll only give you a snapshot and maximum values, not averages. There are tools you can use to test this and online solutions as well. I used Star Trinity's continuous bandwidth test, for example. If your host connection's upload speed is averaging below 1.8 Mb/s, you may run into problems when streaming videos. Of course, this 1.8 Mb/s minimum is for full 1080p playback; if your max video resolution is 720p, then your upload minimum will need to be 1.2 Mb/s and 600 kb/s for non HD videos.

Another issue we discovered was that Zoom doesn't seem to handle streaming videos that have their audio recorded in PowerPoint, with the playback audio cutting out horribly. I strongly recommend advising your presenters against this practice, instead of recording their presentation audio in Zoom or another program besides PowerPoint. It would also be a good idea to take some time before the webinar to practice all of this, not just for the host but for your panelists as well. We ran a test session the day before our webinar was set to start that was geared towards prepping our first day's moderator, and it paid off quite well when things got going. I would also recommend testing all of these steps for hosting videos with at least one other account logged in as a panelist or attendee to ensure that playback is working properly ahead of time.

Make sure that your host computer will not spring any unexpected restarts on you. If running Windows, pause updates for the webinar duration, and make sure that other programs will not suddenly pop up to install their updates. You'll want this computer focused entirely on the webinar.

We decided to host the videos for this webinar on a computer rather than having the host share a view of them streaming from an online repository for bandwidth considerations. Hosting them on a local machine eliminates a step in the broadcast process; otherwise, we would have to be concerned with the host's upload speed and their download speed. You could probably get away with this, but we wanted one less thing to worry about, and I think it worked very well. It was also great having the video selection and player on separate screens, so viewers only saw the videos and title cards.

A few things I would like to do differently next time:

- A better timer. As I noted above, I just grabbed a free one from online at the last minute, but I would look for or build one specifically for the webinar if I'd thought of it sooner. Maybe a dedicated video or animation with the clock counting down?
- More thorough tests of the streaming process with other people or myself watching from another account. This would have caught the PowerPoint audio issue ahead of time.
- Have your backup host computer ready to go each day in parallel with your primary. We had a significant internet outage one of the mornings of the webinar, and I had to scramble to prep my local machine to handle the video streaming. This should be ready to go as standard procedure just in case the unexpected happens.

- As host, don't be afraid to regulate panelists' microphones if excessive feedback or other audio issues occur. If necessary, you can mute everyone, hop in quickly to note it for all, asking the offending user to keep themselves muted till the issue is resolved, then let the rest continue.

Charlotte Nickel – Video editor

My role was to make sure all of the incoming videos were playable and, if there were huge issues, to edit them and then re-upload them.

The participants sent their videos and abstracts to an online Box account. We made a spreadsheet of all of the videos and could check to make sure they were there. We then moved the final versions into a folder of "final videos" and matched those with a spreadsheet for the days and times the videos would be played.

The most significant issues with videos were audio (too quiet) and sending files in PowerPoint instead of MP4 video format. Time and computer space are also factors, and downloading and re-uploading takes time and space, so keeping that in mind is crucial.

Also, the organization of the videos was taxing. It was difficult to know if we had all of the presenters' videos, especially since we often received 'updates' of submitted videos. So keeping track in an Excel spreadsheet with video links is key!

Aviana Soto: Graphic Design

I created the conference logo and I made title cards for each of the presenters' videos. I also designed the conference merchandise and selected the supplier whose merchandise, policies, and delivery capabilities were most suitable for our conference.

The Logo

When starting my work for the Bee and Hive Monitoring Conference, I wanted to create a logo that would be eye-catching as well as relevant to the conference. I searched on Google to find different monitoring techniques and decided a camera lens would work well. I downloaded a few images for reference purposes only. I then looked up photos of bees and I decided that I would like to draw a bee that appears to be landing on the camera lens like it would a flower. I looked at the reference photos on my computer while I hand drew them on my iPad Pro using my Apple Pencil using the program called Procreate. I drew each element separately and then Airdropped both the lens and the bee as a PNG to my MacBook Pro. Once those elements were Airdropped, I put them into Adobe Illustrator. I worked with the team to make sure they liked the drawings I had created. I took the time to fix any minor issues such as leg placement on the bee and fine-tuned the colors to make it look clean.

The Title Cards

I then exported those elements as a PNG into Adobe Photoshop and now that I had the final drawings, I selected a few different colors and created a color palette so that I could make clean and professional-looking title cards. I created a document that is 1280 x 720 as that is the standard size for YouTube videos. I played around with different sized boxes using colors from the palette I had created, and I chose the font, Gill Sans, since it is accessible and clear to read font. I individually made and exported each title as a JPG for the YouTube videos and uploaded them to Box where they were later uploaded directly into YouTube using the YouTube Creator Studio. During this whole process, I was sure to collaborate with everyone on the team to get their feedback.

The Merchandise

Once the conference was done, I created merchandise. I created a new Photoshop document that was the corresponding size recommendation for each product. I used the logo I had previously made along with the same font I had used for the title cards and created both a t-shirt design and a sponsor's design and exported them as a PNG. This information can be found on Teespring's website under "Best Practice". I explored different sites such as VistaPrint, Bonfire, Printify, and TeeSpring. After reviewing all the options and getting information on prices and shipping costs, I found that TeeSping was the best choice for this specific conference because of the international shipping, quality of the products based on reviews I had read and how fast the t-shirts were sent out after purchase. TeeSpring does not require you to have an end date to the campaign like other companies which allowed for more freedom to purchase. TeeSpring offered wonderful customer support and it was super easy to use. All you do is upload your design/s and chose what products you want them to go on.

Gabby Adams: Organize conference information

My role in the International Bee and Hive Monitoring virtual conference was to view every video from end-to-end and organize a spreadsheet with all the presentations and any needed corrections. This included presenter and contact information, title, run time, and minor edits to be addressed to ensure the presentations ran smoothly and everyone on the team had access to the same resources.

Tomás Kyling: Attendee

As a recommendation and idea for the future (I study/work in online marketing), the people who participated and paid the 20US dollars is to give them a digital/virtual certificate as recognition. Hence, you create more loyalty and be happy to pay the fee.