

Infographics and Data Visualization as a Communications Tool: Part Two

Presenters:
Hiram Henriquez

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ASHLEY CLARK-PURNELL: So hi, everyone. And welcome to part two of our Infographics and Data Visualization as a Communication Tool webcast. My name is Ashley Clark-Purnell, and I am the technical assistance training lead for the Center on Knowledge Translation for Disability and Rehabilitation Research which is sponsoring this webcast.

I'm a Black woman with curly, shoulder-length brown hair. And I'm wearing a white blazer and a green dress. So just to cover a few things, we will be archiving this event. So no worries if you have colleagues who weren't able to make it or if you have to drop off early. It will be on the KTDRR website in a few weeks.

At the end of this session, we will have an evaluation. So if you have any ideas about future sessions around infographics or any other topics, go ahead, and fill it out, and let us know. And even if you don't have any ideas, please fill out our evaluation because your thoughts are welcome. We will be dropping in some language and some hashtags for social media. We welcome you to post on any social media accounts about the event either during the event or after.

All right, so for those of you who are at the first webcast, you've already met Hiram. But for those of you who are just attending part two, I want you to meet our presenter, Hiram Henriquez. He is the creative director and lead graphic designer for H2 Graphics and Design. He specializes in 3D illustrations, informational graphics, animation, brand identity, and web design. He's been at the Miami Herald, South Florida Sun Sentinel, The National Geographic. He has a great resume. And Hiram's also won two Pulitzer prizes.

So without further ado, I'm going to pass the mic over to you, Hiram. Welcome, and we're very excited about today's presentation.

HIRAM HENRIQUEZ: Thank you. So today, we're going to go over the basics of creating illustrations, excuse me, graphics in Illustrator. And then we're going to not only go through creating them, but also stylizing them in terms of changing color, and typography, and size. We will talk a little bit about how to save the file so that when you create a version that's going to be 508 compliant, how that process works.

And it goes hand in hand with creating the graphics in Illustrator, and then bringing them into InDesign. In order to make them 508 compliant. So let me end the show here, so I can go into Illustrator.

The first thing I want to do is I'm going to pull up an Excel file. Just to talk a little bit about how data needs to be input into Illustrator. So you'll notice in this Excel page here that I have two different sets of data. The first one covers five years-- 1980, 1990, 2000, 2010, 2020. And we have two sets of numbers for those years for item 1 and item 2.

You will notice that in those numbers there are no commas, or dollar signs, or percentage marks. You could use decimals. But if you're going to get information from an outside source, you're going to have to go in and strip out all the commas and any symbols like dollar signs or percentage amounts, in order for Illustrator to read the graphic. If you don't do that, if you leave commas in, it will actually just leave a blank spot in that chart where the number is supposed to go. So you want to make sure that you get rid of all those elements in there.

Decimals are OK, as you can see on the second data set. So this top data set, the item 1, item 2 one is going to be to show you how to do bar charts and line charts. And the bottom one where we have a list of six items mentioned and then numbers for those, that's what we're going to use for the pie chart. Because the way that that works is a little bit different than all the other kinds of graphics.

So I'm actually going to have this file off to the side. But one of the first things I'm going to do is just scroll over the three columns of the first set of data and copy that. Right? So I'm just going to scroll over that, and go up to File, go up to Edit, and Copy. And then later on, I'm going to use this other one as well. So I'm going to move that off the screen now. And we're going to open Illustrator.

So I'm going to go down here to my screen. And what I'm going to do is File, New. And I get the dialog box that appears with all the different formats you can use. I'm going to select Print at the top, letter size is fine. In terms of my measurements, I can leave it at points, I could click on that tab and change it to picas or inches, however I want. I'm going to hold down and go down to inches, because I'm going to size my graphic to a specific size. So I'm going to go to inches there.

And I only have one page. And that's fine. You'll see that it says CMYK color, which is for printing, and high resolution at 300. If you're not going to print it, you can always change that CMYK color to RGB for the web so that the colors are a lot more vibrant. For in this case, I'm just going to leave it in CMYK. And I'm going to hit the Create button on the lower right. And it's going to create a page for me.

Now, there's a toolbar that I'm bringing over. And you can see that there are two sets, two columns of tools in there. If you only see one column of tools, that is probably that you are in the basic tools. So under window at the top, I'm going to pull down to Toolbars, and make sure that is the advanced toolbar. So if you ever get to it and it's a really simple toolbar and you can't even find the chart tool in there, you're probably in Basic and you want to select Advanced.

So again, that's under Windows, Window, Toolbars and Advanced. OK? And there you go. I clicked it off. So that's why it's disappeared. The other thing you want to have as well is under Window, you want to

make sure that Control is checked because if you don't have Control checked, like I just did, all the control items at the top related to lines, and color, and text disappear.

So you always want to make sure that you go to Window, and that Control is marked. And you'll see it at the top here if it is indeed already there. If there's nothing there at the top, then you definitely want to check for that. Those are two of the things that you definitely need in order to create anything in Illustrator here in a speedy delivery.

You'll see two arrows at the top of the toolbar. One is black, filled in black, and one is white. The black one is when you just want to move the graphics around. That's the selection tool. And the white one is the direct selection tool, which means that any item that is grouped, you can still go in with the white arrow and select specific parts of it. And you're going to see me do that in just a bit where I go in and create a graphic, but then also go in and change different items in it.

In the toolbar, about 3/4 of the way down on the right side, you're going to see some bars that actually look like this right here, where they go up and down. So if you click and hold that down, you will see that you get all the different kinds of charts that are available to you-- column graph, stacked column graph, bar graph, stacked bar, line, area, scatter, pie, and radar. For today's class, we're going to go mostly with column, and show you line and show you pie. But I'm going to touch on these a little bit as well.

Now the difference between a column graph or a stacked column graph where the bars go straight up and down, that's when you are comparing some item over time, or multiple items over time. So that you can go from left to right, showing the years which is what we're going to do with that text that I copied from the Excel file. If you are comparing different things and you're not doing it by year, you're going to want the bar graph and stacked bar graph tools, so that you have the text on the left and your bars will go on the right. And you'll see in a moment why that is important.

We'll have line graphs. We have area graphs which is much like a line graph. But it has shading underneath it. And we'll go into pie graph and donut graphs as well. So when you're going to create any of these graphics, you're going to select the one you want by going to the toolbar, and clicking on the tool that you want. And there are two ways that you can create a graphic to begin with.

One is you can just click down and drag. And then you will see a chart, a really basic big black box for one bar show up, and a little tab box that appears that looks a lot like an Excel file. All right, so that is where you're going to input your information for the graphics. So one way is to click and drag. The other way is select the type of tool graphic that you want. If you're on a Mac it's Option, if you're on a PC it's Alt. And click down, and it'll give you a little dialog box that asks you what size you want it to be.

So I'm going to set it to 2.5 in for inches, and then under height I'm going to do 4 in, and hit OK. And now it gives me a graphic about the size of that. And I also have that little Excel looking tab bar, tab chart set up, where I can put my information. So before I had copied from Excel, so I'm just going to go to this first item here and do Edit, Paste.

And it should automatically put all the information from your Excel file in the columns as it appears. If you're having issues with that, sometimes Illustrator will give a little bit of an error and it might not do it for you. What you can do is quit the program. Restart your computer, and then try it again. And if it's still not working, there might be a bug going on. So you might have to input the data manually. But for the most part, it usually does work pretty well.

So the information is here, but we have a little situation that's not going to let our graphic work the way it's supposed to. And that is that the information that we pasted in here is trying to show the years as numbers. So you'll see in that first column that the 1980 through 2020, now has a .00 at the end. It is trying to convert that to numbers. So if I check mark on the right side of this box, it's going to try and put that information in here. And you can see that it is now little bars down here because the items in 1 and 2 are in the thousands, high thousands.

So that is incorrect in terms of what we want. So what you need to do is go into each year, and then click in the little box above, hold the Shift, and add quote marks to the back of each one. And you will see as I'm doing that that the number loses its decimal points. What this quote mark will do is it will change it to words, meaning that the 1980 to 2020 now actually just become words and not data, not numbers to plot on a bar. And those quote marks will not appear in the file they will be invisible. So you don't have to worry about having to delete those later.

So now that I did that, I'm going to check mark it, and you'll see that now it works correctly. And I've got the bars side by side, two rows. One is in black, one is in gray for every year. And we also have a little color key on the upper right for item 1 and item 2. Now, if you're doing a graphic that doesn't have more than one set of bars, so you're just going to do one set of bars, you don't have to worry about giving it a key. Because it's only one set of bars that you're going to color.

So you can come in here, and for example I'm going to delete all this, and even this little guy right here so you can see what that looks like. And if I check mark it, there it goes. All right.

You'll see that there's a gap. That's because I didn't put all the information to the top. So I'm going to command x or Control x which is cut, get to the first little box in that tab, and then paste it. And now when I check mark it, it goes all the way over.

When you are doing a version that has more than one bar, then you're going to leave that little space, because you need the item to label each row. So I'm going to go back and to my Excel file, and copy that information again. So I can put the right information in there.

OK, so I'm check marking that again. So every time you have a set of bars, it's going to give you that bar in a gray color. And no matter how many bars you put in there or how many columns of text you put in there, it's going to keep giving you gray bars one after another. That is the way that it's going to measure what's data. Right? So that is a graphic there with all the elements that we need.

Now once you're done putting the information in and you've checked marked it to make sure it looks OK, you can go ahead and hit the little red button on the upper top. And that goes away. Now if you want to

change data or you want to change the type of chart that you're doing, what you're going to do is select with the black arrow, select the chart by touching on it. Go up to your top menu under Object, pull down all the way to Graph, and you're going to see type, data, and design. And the two that we're going to worry about the most are type and data.

So if I want to change data, I will go to the data. And that box that looks like Excel is going to come up again. And now you can go in and change the numbers. So I'm going to change in the 2010 one from 52,000 to 50,000. And when I check mark it, you'll see the bar change. Right? It just dipped a little bit there. So that's where you go and change the data.

All right, now one thing you don't want to ever do with these graphics is to ungroup it. If I go up to Object and ungroup it'll tell me in the little dialog box that says the selection contains a graph. After a graph is ungrouped, you will no longer be able to access its graph style, its data, or change its graph designs. And we do not want to do that. So I'm just going to hit No. I don't want to ungroup it. And that's where this white arrow here, direct selection tool, comes in handy.

Because now I can come in, and click on any of these elements, and change them. All right, so I can click independently through everything here. Oops, I moved it by mistake. Command z to undo. So I can touch any of these things and change them. But if I go back to my black arrow and click it, it's still all grouped. So once you create a graphic, don't ungroup it because you will lose the ability to change it.

Now, I can also change the style of the graphic as well. So by selecting it, I'm going to go to Object, and again at the top and then Graph, and then type. And you'll see that all those different styles that were in my toolbar actually appear in this dialog box that comes up. So I'm going to hit the graphic right here, that's the stacked bar one, and I'm going to hit OK. And let's see what happens. And it stacks it, and it rearranges the left axis for those numbers according to how those numbers are now represented. It automatically does that for you.

All right? So you can change that back and forth. We can also change this to a line chart. I can come back to Object, Graph, and Type, and change it to a line chart. Click on the line chart, and hit OK. And it does it for me.

Now you will notice when you do line charts, as I zoom in, that instead of starting at 0 like a bar chart will it starts at whatever number is the highest based on the lowest number in your chart, meaning that my lowest number in this graphic, in this data, was at about 25,000. And so it is starting the graphic at 20,000, as opposed to 0. There is a way to change that, and I'm going to show you that later. But just want you to know that it automatically does that.

And the reason for it is that when you are doing a bar chart, you are trying to compare different things. Well, you want to start at the 0 baseline to compare the heights from where it started. When you do line charts you're trying to show a trend. So starting at 0 is not as important as what happens after your first plotted data. You want to see what happens after that. So that's why it starts not at 0, but at a different number.

I'm going to leave that up for right now. And I'm going to go to my Excel file. And I want to show you. So we've been doing a column chart, which the bars go up and down. And we have years across the bottom. I'm going to grab this one here, this bottom one for my Excel file, which is only comparing things. So I'm going to do the same thing. I'm going to Edit and Copy, and then I'm going to come into Illustrator.

I'm using the spacebar to move around a little bit, and we'll move down here. And I'm going to select the bar graph tool, which is the bars that go sideways. OK? And I'm going to just click, and drag, and paste that information, and hit the check mark. And then I'm just going to close the little button, so we can see the graphic.

So you'll see that when you are comparing things, this does this really neat thing where it puts the information off to the side for you there. OK? We can change this to a stacked bar as well. I would go up to Object, Graph, and Type, change it to the stacked bar icon that I'm clicking on right next to it. Hit OK. And you will notice nothing happens. OK? The reason for that is, is that the way the information has been input into the chart is in the wrong format.

So I'm going to go back to Object, Graph and Data. And what I'm going to do is right here on the upper right side, there's a series of buttons. The second one over is called the transpose row column. So what that does is, is instead of having the numbers going downwards, they're going to go across. So I'm going to hit that. And now you see that the numbers go across on this Excel file looking tab. And I'm going to check mark it. And now I get a stacked bar.

So you can see now that I've got keys, and the colors in the bar are relative to the key in there as well. So that means that if you're doing one set of stacked bars, then you're going to have to transpose that row in order to get it to work correctly.

Now why don't we do this as a column chart that goes up and down? Well, let's go do that. Let's go to Object, Graph, and Type. Let's change it to straight up and down column chart. And we're getting a key. And that's because I did the transpose row column. So let's go back to the data and undo that. So I'm going to hit transpose row again, so that the chart actually appears the way I originally input it.

Right, so when I do that, look at what happens here. All of these words at the bottom here related to each bar are bouncing into each other. And that's a situation where sometimes you will see a graphic like this, and people will actually rotate the words, and place them like this, or maybe place them all at an angle, and not only does it look ugly but it takes up a lot of space.

So in order to avoid that, we will do a graphic like this, where the text is on the left and the bars go off to the right. So that's the other type. And I showed you how to do stacked bars there. So what we're going to do is we're going to actually use this information here to do a pie chart as well. So I'm going to hold Alt option, which in the PC is Alt, just to make a duplicate, drag over a duplicate of that file over there.

And this one we're going to change to a pie chart. Now, much like that stacked bar chart, I need to transpose a row of columns of text as well. So I'm going to go to Object and Graph. But first, I'm just going to do Type, and show you what happens if I don't do that. So I'm just going to select the pie chart that

appears here on my graph type dialog box, and hit OK. And you'll see that instead of giving me a pie chart. It's giving me a circle that's sized representative of the number that was in that chart.

This is useful if you are trying to compare values of different items or, for example, if you want to put this over a map. You want to have different sized circles that represent value over different locations in the map. That might be useful. But we're actually trying to use it a pie chart. So I'm going to select it, and go to Object, Graph, and Data. And again, we're going to hit that transpose row column.

So for bar charts, and line charts, and even column charts or bar charts that go sideways, as long as you're comparing one thing or comparing one set of things, it's OK if your numbers go down. But for a stacked bar comparing different things, it needs to go sideways. And for a pie chart, it needs to go sideways as well.

So now, when I hit the check mark, it creates that pie chart for me. One of the things that you want to take into account when you're creating a pie chart is you don't want it to be more than six wedges, because it gets really hard to figure out colors, and really put the text labels around it. That takes up a lot of time. So if you're creating a pie chart, try to keep it to six or less.

Which means that if you've got some really small slivers or wedges at the end, maybe you can combine those numbers into an other category. Right now here, I've got about six. So I'm going to leave it there. The other thing you're going to notice is that it starts from largest to smallest from the 12 o'clock point on the upper centered portion of that pie chart. So you should always place your numbers starting with the largest and go to smallest. So that way your first wedge will be the largest and they get small as they go all the way around.

If at the end you combine a few into an other category, and it's a little bit larger than anything that came before that, that's OK, because you really do want that other category to always be at the end, regardless of how big it is. So that's all right if you leave it there. But in general, in terms of putting numbers, you should always go from largest to smallest. So I'm going to go ahead and close that. Because so that way you can see what it is. And you can see that you've got keys in here.

So I'm going to try quickly to stylize a bar chart, and then hopefully have enough time to show you how to stylize the donut chart, and then we'll get into the 508. So I'm going to select my line graphic and go to Object, Graph, and Type. And let's change that back to my bar charts, and hit OK. And those are there.

The other thing I want to do too, hold on just a second, is show you how to change the measurements on the left side of your fever lines, in case you ever do want to start at 0. So this is a line chart here. And it's starting at the bottom at 20,000. So we're going to reset this, so it starts at 0.

So I'm going to go up to the upper left here, Object, Graph, and Type. And you'll notice that the upper left of the dialog box that appears there's a graph options button. I'm going to click on that, and there's a dropdown with two other categories. I'm going to go to Value Axis. I'm going to click on that, and where it says Tick Values, there's a little box underneath that says Override Calculated Values. I'm going to click

on that, and then the boxes below that let me change the minimum and the maximum that I want the chart to go to, and also how many divisions do I want.

So the minimum is going to be 0. We're changing that to 0. The high is 60,000, so that means I want every 10, I would do 6. If you want every 20, I would do 3. So you with 6, you get 10,000, 20,000, 30,000, and so forth. With 3 you only get 20,000, 40,000 and 60,000. So let's say I decided to do it that way. So now I have it at 0, 60,000, and 3 divisions. And I hit OK. And you see that it automatically does that for you.

Now the problem with this is that when you go create another separate graphic, it's going to be remembering that label, that actual setup that you did there. So what you're going to have to do is that when you put in an information in here, and let me just copy something from before. Hold on a second. Let me go to my Excel file, and just copy this from before.

So I'm going to paste that information in there. Check mark it. OK? And you'll see it's doing the same 0 to 60,000. It's not giving me the option of starting at the lowest number. I also have the years incorrect. So let's go ahead and change those.

So the only time that you use these little shift quote marks is when you're putting in the actual years. And they're supposed to be representational of words. There we go. So you see there, it's wrong. So in order to fix that, you have to go back and undo it. So you would have to go back to Object, Graph, Type, pull the graph options to value axis again, and click off the override calculated values, and hit OK. And once you do that, any other graphic that you do, any other fever line that you do, will start at whatever the lowest number is, as opposed to starting at 0. So that's how you change that.

You never would change that for a bar chart. You never really do want to start bar chart at a higher number. For example, if I were to start this bar graph here, at the 20,000 mark, this little bar for 20,000 will look really, really small compared to its actual depth. So that's why we want to keep it at 0, as it starts.

So as I mentioned before, we don't want to ungroup it. So we're going to go in and use the white arrow in my toolbar to go in and change certain things. So I'm just going to stylize this based on a style that I like, but you can do it however you want.

So we're not deleting anything that we don't want to be seen. We're just going to remove its line, or its fill color, or change it if we need to. But nothing is actually going to be deleted. So for example, this little line right here on the left side of the axis that goes from 0 vertically all the way to 60,000, I can just select that line with a white arrow, and down here in my toolbar I'm going to hit the line tool which is the one with an opening in the middle, and I'm going to hit this little box on the lower side of it in the toolbar that has a red line going through it, which is none.

Now you can change colors here on the toolbar at the bottom, or on the upper left on your menu here you're going to see the fill and line colors as well. So I can actually go up here, hit this little arrow, and say none. And that line disappears, right? It's not there. But if I do a command y or on a PC it's control y, and we do the key line view, we can see that the line is still there. It's just hidden. It has no color.

And then the same thing with these little tick marks. I might not like these little tick marks showing here. So what I'm going to do is I'm going to hold the Alt for PC, Option for Macs. I'm going to click on that once and then click on it a second time. And it'll select all those lines for me. Now if I keep clicking while holding Alt or Option, it'll just keep selecting more parts of the graphic. And this is going to come in handy later when we want to change all the bar colors as well.

So again, I'm going to hold for the Mac Option for the PC is Alt. I'm going to hit the one little tick mark at the bottom here, and click on it a second time. And then in the toolbar, I can change it to none as well. If you want your access lines to come across the back of the graphic, you can click and drag with the white arrow out here, and then I'm going to select only the points, only one side of the points, not the whole line but just the one side of the points.

You will notice that I've selected that bar as well, which is a problem. So I'm going to hold Option Shift and the PC will be Alt Shift, and click and drag over that to deselect it. All right? Once I've deselected that, now I can grab those points, come all the way across. And then when I get towards the end, I'm going to hold Shift so that they're nice and straight. Don't hold Shift at the beginning because then you will deselect one of the lines. So I'm going to do that again.

Scroll over, select all those points, hold Option and shift or Alt and shift, deselect that bar right from the top here. Grab the top point. And then as I come across, I'm going to hold shift.

Now we can change what that looks like as well. Right here on the upper left, you're going to see the Stroke word and then how big it is, which is a 1 point. And there's also a little arrow to the right for stroke weight, which I'm going to click on and change that to 0.5. And I can also hit Stroke here, and I can create a dashed line as well. So when I hit Stroke, that little dialog box that appears, right in the middle there's a little square with the words Dashed Line next to it. I'm going to click on that. And what you want to do is change your first box for a dash to a 2, and the second one to a 1.

And don't worry about the rest, because it will continue doing the same shape, the same setup, two and one, two and one, all the way through. And you can see now that it has, if I scroll in with my magnifying tool, you'll see that now there's a dotted line in there. You can also change the color of that line, if you don't want it to be black. Down here in the toolbar, I'm going to double click on that tool, and the color picker box appears.

And on the lower right, I can change that 100% K for black, to 50, and just hit OK. And now I'm going to click off here to see how the graphic is looking like. Now, one thing you will notice too is that the numbers on the axis here on the left do not have commas in them for 10,000, 20,000, and so forth. So I can go in with my text tool, which is in my toolbar on the upper left part of my toolbar, there's a T.

I'm going to click on that. Click where the comma is supposed to be and add it to each one. So just click in that spot and hit the comma for the 40,000, 30,000-- 20,000, and 10,000. And if you want to add a symbol, so for example, if now you want to add dollar sign, a dollar mark, you can hold Shift and put your dollar sign in there in the top one. You don't have to do it for all of them. Or if it's percentages, you can do them at the end. You can put percentages at the end. So I'm going to leave the dollar sign at the top here.

Now, some people might not like all these zeros appearing in these numbers. Right? Especially because they take a lot of space. And if we're dealing with millions, this could be a problem. So this is where you can go in and change that. So let's say that we were talking about billions here. This would be a lot of zeros showing up. So what I can do is just use my T, and take out all the zeros. And then click off, and then a new T just up here, I'm going to say in billions.

OK. And you can make that about 8 point size, and place it right at the top there. So that's one way you could do it. You can also add on the top one to say 6 billion. And then I wouldn't need the in billions. And then what I'm going to do is use my white arrow to select the line, select that left point, hold the Shift, and drag everything over so the numbers line up. All right, so that's another way you can do it as well.

Now all these axis numbers should be about 8 point size. And right now there are about 8.3. So I can hover over all of them to select them and change it to 8 point. And these down here at the bottom, at the top here, I can change it to 8 point as well. So 7 or 8 point is a standard for those elements that are in the axis, left or right of these charts. And one thing to think about is that they look the right size.

So if you set them at 18 point and they look like this where they're really large on the chart, that means that your chart is too small. So your chart needs to be bigger so that your 8 point size doesn't look crazy like this. If you set it at 8 point, and your numbers are really small, that means your graphic is too big. You need to reduce the overall size of the graphic, so that when you set those at 8 point they look pretty good. And this is how they should look, something like this where there's some space between them, and they're still easy to read.

Now one thing you will notice with Illustrator on your graphics is that when you select them, you don't really get handles to reduce the size. And so because of that, you have to use your scale tool. And your scale tool is just a little bit beyond the middle portion of your toolbar. It's a little square going to another little square. And what you can do is you can scale this in two different ways.

Once you've selected the scale tool and your chart is selected, you can click on the left upper left once. And then click on the lower right, hold the Shift, and drag so you can resize it however you want. That's one way to do it.

The other way is you select the chart. You select the scale tool and your toolbar. You hold Option in a Mac, Alt on a PC, you click in the middle and you tell it what size you want it to be when the dialog box comes up. So I can say 75%, hit OK. And then what you do have to understand is you're going to have to go back in here and resize all the numbers so they work right.

These are not too bad, even though I went smaller. And your lines, you're going to need to reset them. They've gone to 0.375. So you're going to have to hold the Option, hit once that line, hit it a second time, and change that to 0.5. So that is back to that 0.5 lines.

So this brings me to a very important point. When you've created your graphic and you've got your data set and it's the way you want it to be, do not stylize right away. Make sure that it is the size that you want it to be. And make sure that the data is final. OK? Because if it's not the size you want it to be and you do

a lot of stylizing, you're going to have to go back in and change the point sizes for the words and the line thickness as well. So you're going to have to do all that over again.

The other thing is if one of these numbers changes. You're going to lose all the stylizing you did. So I'm going to finish stylizing this, and then I'm going to show you what happens when you try and do that. So I don't want my key on the right here. So I'm going to use again the white arrow to select that. And I'm going to move these over. I'm going to scroll over the top points and use my keyboard arrow to come down. Roughly, these keys should look about the same as the bars.

So I've seen some folks do keys where the keys are circles for a bar chart. And that doesn't make sense because you're not using circles on the chart. So whatever you design in the chart that's how the keys should look. And we can see that the black goes first. So I'm going to go ahead and slide that over. So we start with black first. And that's going to be item one. Let's see if that is correct.

I guess it doesn't matter for our purposes here. Here's item 2. And I'm just going to slide them over, making sure that they line up the same there. Now, I'm going to change colors. So I don't want black. So I'm going to hold Option. For PC it's Alt. Hit that black bar once, hit it a second time to select all the bars in the chart, and hit it a third time to select the one in the key. So I'm just holding Alt or Option down and just clicking until I get all three.

Now it's not as easy as changing the color and that's it. Because when I go to, for example, here in my toolbar and double click on the black, and tell it that I wanted to be blue by clicking in the select color area, when I hit OK, it goes back to gray. It's because it still has data in there, and it's trying to connect those. So make sure that you first say no fill by hitting the little box with the red line, then double clicking in here and changing it to the color you want, taking the lines around it off as well.

And then I'm going to do the same thing with the other one. I'll double click three times to select that. Get the line off from the toolbar. Go to my color, say no, no color, and then double click and change it to the color that I want. And hit OK. Right? So the graphic is done there.

Now look what happens if I decide to change data. I'm going to select it. Let me save right now because I've been doing this for a while. So Command s, or file save, and I'm just going to save it as an Illustrator file on my desktop. OK, OK, OK, all the way through.

So if I go to Object, Graph, and Data. And let's say that the last number that's 60,000 I'm going to change it to 59,000. And I check mark it. See what happened? My key boxes went to that big size again. All my commas on my numbers on the left disappeared. The point sizes on those axis numbers back to normal, what it was before. My item 2 and item 1 tags where my key is off to the right where originally it was, and my dotted lines are all askew all over the place.

So I'm going to Command z undo that. So that is why you don't want to stylize anything until you have, number one, the size you want the graphic to be, and then number two the data is final. OK? Then you can go in and do all the stylizing you like, so that you don't have to repeat all that work again. You've done it once.

I'm going to go over the 508 compliant portion of this, so that we don't run out of time. If I have a little bit of time at the end, I'll go over charts. But it works the same way with charts. If you hold Alt or Option and you click twice, you can say no fill, change it to the color that you want by double clicking on the color, removing the line. And you're going to do that for each one of them.

And once you're done doing that, then you're going to grab the different wording that goes with each, and put them next to each one in the order that they appear. And you can change the point size to 9 point and so forth.

Now, I'm not sure what's going on in here. Now the thing is that when you create your pie charts, notice that it doesn't tell me the number associated with it. You have to tell a person what these wedges represent. Illustrator doesn't do it for you. So you're basically going to have to go in and put in the number yourself, using the T. So you would go in here, hit Return, and type in the number, whatever the number is. And you would do that for each one in order for the person to be able to understand what it is.

But before I go into that, I want to go into the 508 compliant portion, so we don't run out of time. So first thing first with 508 compliance is your text needs to be readable. So it could be a situation where 8 point might be a little bit too small. You might have to go to 9 or 10. But the way that graphics work is that we're not having the machine that reads the design, we're not having it read the graphic. We're having it read the text.

So we're going to eventually create alt text for all of this. So what we want to do is we want to make sure that at least the colors are contrast enough. So you want to create enough contrast between these. If I look at this blue and this green, there probably really isn't enough contrast in there. So one of these colors needs to be either lighter or darker. And I like the green, so I'm going to change the blue. So I'm going to hold the Alt or Option, click three times, double click here, and just pick a really dark blue color, and that will work. Those two will work.

Same thing with a pie chart. If I went in here and used the eyedropper tool and made all of these just slightly lighter than the next one, this is not going to work for 508 compliance. Someone who might be colorblind or have issues with color are not going to be able to see the differences here. So you have several choices to make. Either you create different colors all around so that there's an obvious separation with each, or you've got to create more contrast.

Or you go in here. I'm going to hold Alt, and select all of these, and you're going to either add a thick 2 point white line to separate them, or you're going to go in and change it to, let's say, 100% and then you can do 1 point black line to separate them as well. So it's either going to be one of those choices. But you've got to create enough contrast for the person to be able to distinguish the different wedges, or distinguish different bars from each other, or even if you have multiple lines you have to create enough distinction in those colors to do that. OK?

So I'm going to copy this graphic here. I'm going to copy that to a brand new file, just to show you how to save graphics. So here is the graphic that I have. And what I'm going to do is I need to place the graphic right on the edge of the box. And I'm going to change the size of the document around it. And that is this

little page here that, this little icon here that looks like a page towards the bottom left of the toolbar that says Artboard.

So I'm going to click on that, and you will see handles appear around the page. So I'm going to grab the one on the bottom right, and just get in really close to the graphic like this. OK? So I want to save this, which is File, Command, s, so this is chart.ai. Let's see if it does that-- no, don't want to replace it. Chart1.ai.

And I'm going to create a JPEG or EPS of this. OK? So when you bring the graphic into InDesign, it needs to either be a JPEG or an EPS. So you can either File, Export as, so you go to the top file, pull down to Export, then Export as. And then down here, you're going to pull this to JPEG, and you're going to hit use Artboards, the little box, so that it selects everything that's within there.

So in case you have anything floating out here, it won't select that. And you're going to hit Export, CMYK 300. That's fine that's one way you can do it. Or you can do a Save as, File, Save As, and where it says Adobe Illustrator, change it to Adobe Illustrator EPS by pulling down on the format drop button, says use Artboards as well. And now it's called an EPS. That's the only way that you're going to be able to include alternate text data in your InDesign file, either as a JPEG or as an EPS, not as an Illustrator file.

All right, so let me quickly do this. So I'm going to go into InDesign. Command n for new file. And let's say that you already had a page design. I'm going to say File, Place, and I'm going to go find that JPEG, Chart1 JPEG, hit open, and place it. OK, so there's my graphic. Now with that graphic selected, I'm going to go up to Object, Object Export Options, and you're going to get this box right here.

Where it says Alt Text, I'm going to click on that and then where it says Alt Text Source I'm going to say custom. And what I'm going to be writing in here is I'm going to say bar chart showing the following data, semicolon, and then what I'm actually going to go through is I'm going to go back to my Excel file, let me copy that information. And come back in here. Let me close up out just a second. There we go. Hit return.

And I'm going to have to set this what? So it's going to be 1980. It will be the first number, semicolon, and then I might say item 1, and put in that number. And I might even do it with a dash. And then I'm going to need to leave a space to do item 2, and it wouldn't say item 2, it would have the actual number, and put that in there. I'm going to have to put in the commas. And you need to do that for every year.

So you're basically trying to set it as if the person was going to read the graphic as opposed to look at the graphic. So you would say bar chart showing the following data, 1980. Item 1 is 25,000. Item 2 is 32,000. Then I would go 1990, again semicolon, then item 1, dash, and then what that would be. And just basically go down to the list of everything that's in there.

If you have a headline or intro that's been added to the graphic image, as opposed to being part of your design InDesign file, then you're going to want to put that in here as well. So it might say bar chart, and then it will be the headline, the text or the introduction. And then once you list all your information, you will have your sources listed as well, and graphic by whoever did the graphics.

Everything that's part of that image should be listed in text like this. Right? So I'm going to hit Done. Let me save this as a file. And you'll see when I go to File and Export, and we do Adobe PDF Interactive for 508, we're going to hit Export. When that file comes up and I hover over it, that text should appear in a little gray box. And that text tells you that you did it correctly.

If you hover over it and no text box appear in the PDF, that means that you've done something wrong. You have to go back in and check it. Because that is the text that the automatic reader is going to read. All right. I'm going to stop there, and answer some of these questions, as we have very little time. Let's go down the list here. Let's see if there's any questions. Yes?

ASHLEY CLARK-PURNELL: We do have one question. It says, do you ever include a summary of the key shape at the beginning, such as the graph goes from 1980 to 2020, and the numbers increase steadily?

HIRAM HENRIQUEZ: Yes. So that is what we call a headline and an intro. So this is how you would do it. So there's two ways to put text in a Illustrator file. For headlines, I just click down and the dummy type appears, and that would be the headline that I use right. So headline, I'm just doing dummy text here. But headline goes here. I might say that it's going to be bold by clicking up here at the top. And I might tell it that's going to be 12 point size. So that is my headline. OK?

When I'm going to do body copy, for example, an intro, I'm wanting to click and drag. OK? And we're going to change that to regular, and let's go to 10. Why do I do one or the other? Well for headlines, you just want to click and let the text come out, because I can hold the Shift, and grab one of these handles and change the size of it pretty easily. Right? That's just one set of words or one line of words.

But for the intro, I don't want to do that. I want to be able to reflow it. So by clicking and dragging, I create a box. And it puts dummy type in there for me that I can reset. I can reflow however I want. So yes, usually for graphics, just about every time, I'm going to have a headline, I'm going to have an introduction that's going to-- basically introduction is supposed to tell you what the main point of the graphic is.

So if you have a hard time understanding what the graphic is, it'll tell you that the numbers steadily increased, or if there's one number that popped up higher than the other. It'll make a reference to of that in the year 2000 the number spiked to whatever the number that was. You definitely want something like that. So the headline is usually 10 or 12 point and usually bold, so it pops. And you can go all caps.

So if you write it, you can come up here to the top to type, change to uppercase, and you can do all caps. And then your text is usually 9 or 10 point, maybe even 10.5, regular, and would end in a period.

And then sometimes with graphics you have even another little item, sub item below it. So for example, maybe I want to say that this is fiscal year 2022. So you can put that there. That would be the same 10 point as this. But maybe you're going to do bold all caps, or maybe you can go back to Type, Change Sentence Case, so you get just all upper and lower like that. Or you can also do Type, Change, Title Case, so that the first letter of each word is capitalized. That you can do as well.

For sources and credit at the bottom, those should be 7 point. So your sources, and when I say sources it means where you got the information from. Don't put in this gigantic long URL. Just put in the name of the organization or the company, and that's it. You don't have to put the specific link to where you got the information from. And then the credit, graphic by whoever it would be.

ASHLEY CLARK-PURNELL: OK. Thank you, Hiram.

HIRAM HENRIQUEZ: Yeah, you're welcome.

ASHLEY CLARK-PURNELL: I think we have time for one more question. Tracy, I see your hand is raised.

HIRAM HENRIQUEZ: Yes, ask away.

ASHLEY CLARK-PURNELL: OK. So Tracy, if you still have a question, just go ahead and put it in the chat. But with that being said, I think we're just about out of time. So if we don't have any additional questions, well thank you so much, Hiram, for this wonderful presentation. You shared a lot of information. If anyone has any questions, Hiram's contact information is available on the KTDRR website.

Please remember to complete the evaluation. Thank you, Shoshana, for putting the link in the chat. And with that, thank you, everyone, for attending.