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Building the Business Case

Open up the Honey Corp Business Case Excel file that I have given you. We are going to start on calculating the staff costs. What you see here is the way that it has been laid out is following best practice. We have all of our assumptions at the back. We've got our calculations in the middle and our outputs are at the front. The P&L or the cash flow; what we are wanting to communicate with our scenarios, is at the very front of our model. We are going to be working from right to left.

At the very back, you will notice that there is a problem page. Normally you wouldn't have that but just so that you've got all of the details and the assumptions, just to save you a little bit of typing.

Let's start with our staff costs. We are going to pull this through eventually to our P&L page. Staff costs are usually the biggest expense in a lot of projects and so this is what we are going to spend the majority of our time on. We have got a list of the people that we want to work on the project. We've got the cost here, the start here and the end date. You wouldn't necessarily have their names but you probably have a pretty good idea of the kinds of people that you want to work. We've gone to the HR Department and we can pull up all of their rates. This is on the problem page. If you go to your assumptions, you can see here at the bottom the staff charge out rates. I've put a section there for you to put that in. To save you a bit of typing, if you can go to your problem page and down the bottom here I have given you a list of the charge out rates. Grab that here, copy and paste it onto your assumptions page. We got this from the HR Department. That is not necessarily what they get paid but it's their total charge out rate. It is everything that it costs them to put a person into a position. It includes all of their extra costs, their pension, payroll tax, work stations

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and everything that costs to put a headcount on board. We're going to document that as an assumption. We will say Source HR Department and remember best practice tells us that we need to document our assumptions. If there is any possible misinterpretation about what we put into our model, why or how we've calculated it, as we're building this model we are going to be documenting it. Put in the text Source HR Department nb: fully costed charge out rate i.e. includes all on costs; list those out. In your region that would mean different costs. You may have WorkCover, worker's compensation, relocation charges depending on what region you are in. Let's say we have got payroll tax, WorkCover, pensions, etc. "Etc." is not a very technical term but what I mean by that is everything is included. So somebody coming along isn't going to say you've forgotten to put this or that in. We can show that we have included everything in our business case.

So \$240,000 - that is a lot of money. Is that a month, or a year or a day; it's not very clear. We need to make sure that the documentation of our model shows exactly the time frame that it covers. So, it's an annual salary but that wasn't very clear was it. We will put in Annual Cost and put that in the top there to make it very clear.

Now we've got all of our assumptions. We have everything on our assumptions page and we are going to link back through that. Go to your staff page now and we're going to link that through and we are going to follow best practice. We will say Tester is equal to \$136,800. Project Manager we are going to link that through. Am I following best practice? I'm linking through aren't I? What have I done wrong?

Technically it's not incorrect because if something changes it will automatically calculate but I'm not using the best formula for what I'm trying to do. It would be a much faster, much better solution if I were to use a VLOOKUP formula and that is what I'm going to do instead. Let's say VLOOKUP. Actually let's go back and I'm going to use a named range. You don't have to use named ranges in this model but if you want your formulas to look exactly as they do in the PDF notes then make sure that you use exactly the same named ranges as I do in here. Highlight the whole lot and call that Charge Out and I will go back and use that now in my VLOOKUP formula. Criteria is a Tester. My array is Charge Out. I can type it out or pick it up from the assumptions page or I can use F3. I can see there that I picked up the

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right thing. Column index number; there were two columns so it is a 2 and now it is an exact match so I put zero at the end. Hit okay and copy that down. That's populated them all the way down to the bottom.

Now what we are going to do is to forecast this out over the next ten years. We are going to use the start dates and the end dates. This is going to be quite a long and complicated formula because we do need to worry about the start date and we do need to add the end date. We also need to add some inflation and we need to make that inflation compounding. It is going to end up being quite a complicated looking formula. The technique that I am going to use is to create a very simple formula, use mixed referencing, copy it across and down, check it, test it, make sure it's right and then I will add to it. Check it, test it, make sure it's right and then I will add to it and so by the end we are going to have a fairly long formula but if I go wrong somewhere along the way it's going to be a lot easier if I use that step by step methodology.

Let's start by putting in our costings. I'm not going to worry about the end date just yet. I am only going to worry about the start date. I am also not going to worry about any inflation. Let's start here by saying IF, this date here (use your referencing), is greater than or equal to the start date (use your referencing), the value of True is going to be the cost at \$136,800 (fix your referencing) otherwise zero. I can copy this all the way across and down.

Let's do a sense check to make sure it's okay. I can see it's picking up the right amount there in 2020 and that looks right. Always sense checking as you go. I am following best practice by having exactly the same formula all the way across and down.

Once I have got my start date working, let's then worry about my end date. I started out by saying IF it's greater than or equal to the start date. Unfortunately, there isn't a between function so I am going to use an AND formula to say IF it's greater than AND less than or equal to the end date. I'm going to add that to my formula here. Let's say IF, open bracket, AND, open bracket, comma, this one here is less than or equal to the end date, close bracket. Get that right and then I am going to go back in and check my dollar signs. I am going to put a dollar sign here and I am going to need a dollar sign here as well. Sometimes it takes a few goes. I've used a Ctrl C, Shift Ctrl right arrow, Shift Ctrl down arrow, let go of

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the Ctrl, hold down the Shift and go back up one, hit enter. That is my shortcut for copying across and down. You can't use it if there aren't already some formulas in the block of data. But if you already have something and you are just copying over, Ctrl C, Shift Ctrl right arrow, Shift Ctrl down arrow and enter and that will paste in the block of data. That is the fastest way of copying across and down.

Let's do a bit of a sense check. Use F2 to see here that these totals are picking up the right formulas. I am happy with that. Make sure you are happy with your formula before you move on. Make sure that the totals at the bottom of your table of data match the totals that I have so far. It's going to be a lot easier to fix it now than later on, to try to figure out where you went wrong. Your totals at the bottom should be exactly the same as mine.

Let's worry now about the inflation. You can see here that somebody earning \$136,800 in the first year, we are going to have to give them a little bit more to get them to stick around for the second year and then the year after. The increase that they get every year is based on their current salary unfortunately. We don't give them an increase based on the salary that they had when they first started, it's going to be the increase on the salary that they have in that current year. We need to add compounding inflation. It's going to be inflation times inflation, times inflation.

The first thing that we need to do is put in some assumptions for inflation. Go to your assumptions page. Go to the inflation cell and put in 3%. 3% is the assumption that we are going to make. We will call it Inflation and created a named range. We are going to be referring to that quite a few times throughout our model but we are following best practice by having just a single input cell. Every time we refer to inflation, we are always going to be linking back to the named range Inflation.

Go back to your staff page. In the first year, we don't have any inflation at all because that is the salary that is given to us. In the second year, we are going to have to give them one lot of inflation, in the third year we are going to have to give them two lots of inflation. The formula in year two is going to be the entire formula multiplied by, open bracket, one plus inflation. That is a really common technique we use for escalation; we are always saying one plus inflation. We want to multiply the whole thing by 103% to increase it so we say one

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plus 3% is 103%. The first year is nothing. The second year is going to be one plus inflation. The third year is going to be one plus inflation times inflation. The fourth year is going to be one plus inflation, times inflation, time inflation and so one. Instead of doing that we are going to use to the power of. In the first year, we are going to have one plus inflation to the power of zero. The second year, we have one plus inflation to the power of two, then it will be to the power of three, the power of four and so on and so forth. The power of, if you haven't used that in Excel before is just the little hat symbol (^). It is usually above the six. If you hold down Shift and press 6, it will appear.

Let's go into the first one. This is going to be a zero. In order to use to the power of zero, one thing we could do is put a row across the top and have zero, one, two, three, four as a helper row. A little bit of a more elegant way of doing it though would be to use the years. We could say 18 minus 18 is equal to zero. 19 minus 18 is equal to one and so on. We can use those years within our formulas to calculate to the power of. Let me show you what I mean. We go to the end of that first formula and we say multiplied by one plus inflation, close bracket, to the power of (^) G6 and I going to anchor 6, minus G6 and anchor the whole thing. The dollar signs are really important here. You need to put a dollar sign just above the row for G\$6 minus \$G\$6 so you need both the dollar signs in for the second one. Enter it in and then we are going to have consistent formulas by copying it all the way across and down. Do a sense check. If you have a calculator, make sure it works properly and that it is calculating the right thing before you move on. That's what your formula should look like.

Once you have got that working, we are going to do a summary down below. What we want to know here is how many business analysts have we got, how many call centre staff and so we will do a summary and then here we want to add up how much we are spending on each. Have a bit of think about it and then we will do it together. This one is going to be using a COUNTIF formula and the range is this one here and the criteria is going to be business analyst. I don't need to worry about my dollar signs for this one here and just copy that down. Let's do a sense check and you can see here, it is okay.

For the next one it is going to be a SUMIF formula. The range here; a bit of trick here is it's easier to grab the bottom one and Shift Ctrl up arrow and you can go back down one and

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then use F4 to put in dollar signs. If you are using a MAC, it's Command T. Go to Criteria, pick up business analyst, SUM range and this is where dollar signs are really important in this one. Shift Ctrl up arrow and now we need to get our dollar signs in the row but not in the column because you want to be able to copy it across and the column will change but when you copy it down, you don't want the rows to change. I can't use Shift Ctrl right arrow because it doesn't know where to stop so I need to use my arrow keys for this one. There we go and I've done something wrong. When you've done something wrong, you can use F2 and you can see what happened, I forgot to put the dollar sign in front of my column. I need to go back to my original one, go into my formula and fix that up. Shift Ctrl right arrow, Shift Ctrl down, hold down the Shift key, go back up one and hit enter. That's what your formula should look like.

This is a great opportunity to put in an error check. You can try a couple of different methods for error checks. You can either say one cell minus another. You can use an equals, equals or you can say if the absolute value of the difference between the two is greater than one, give me an error, otherwise give me a zero. I will let you figure out which one you would like to do. I am going to do my favourite one which is the simplest option. This cell here, minus this cell here and I will change my formatting to change it to red and copy that across. That way if somebody makes a mistake, you can see that it comes up with the red number.

Once you are happy with that, we can then pull that through to the summary sheet. Go back to your P&L Summary Sheet, go to Staff Costs equals and link that through. I am going to link to that one there and then copy that across. That is our staff costs.

What we are going to do next is have a look at the revenue.