Teach yourself how to build a Business Case for a Social Enterprise

2c. Hands On Modelling

Why Colour Coding is used in Business Models

Building a business case has three stages: -

Step 1: Build a business model in Excel

Step 2: Use the model to evaluate the project

Step 3: Make decisions

Spend only a few seconds on each page

It may contain errors so always check your own work

and have it audited by a competent person

Building a business case has three stages: -

Step 1: Build a business model in Excel

Step 2: Use the model to evaluate the project

Step 3: Make decisions

This module explains why **colour coding** makes your model

1. easier to build
2. less prone to errors and
3. much easier for others to understand

Spend only a few seconds on each page

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Here is the same part of a business model presented in two ways …

Months -->	units	Total	Apr 2020	May 2020	Jun 2020	Jul 2020	Aug 2020
A. Sales of ABC's							
From the 'Sales&Revenue' worksheet							
sales of organic fertiliser	kilograms	2,529,537	0	0	0	0	0
B. Net Cash Flow before project funding							
From the four worksheets: -							
Cashstream 1: Revenue	$ Real	556,498	0	0	0	0	0
Cashstream 2: Capital Costs	$ Real	81,000	0	5,000	9,000	13,000	6,000
Cashstream 3: Operating Costs	$ Real	384,190	1,210	1,210	1,210	1,210	1,210
Cashstream 4: Taxes	$ Real	39,445	-110	-565	-928	-1,292	-655
Net Cash Flow - Real	$ Real	51,863	-1,100	-5,645	-9,282	-12,918	-6,555
C. Converting Net Cash Flow before project funding into Nominal							
2018 08 09 P Carr: @2% annual inflation is 0.17% per month							
Inflation - $			0.17%	0.17%	0.17%	0.17%	0.17%
Inflator - $			1.001	1.003	1.004	1.006	1.008
Net Cash Flow before project funding - Nominal	$ Nominal	57,912	-1,101	-5,660	-9,321	-12,994	-6,604
D. Cash Injections Needed							
Cash injections needed	$ Nominal	-63,211	-1,101	-5,660	-9,321	-12,994	-6,604

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← Black on White

This is a very common style where: -

- Everything is in black font on white
- At first it is just a field of numbers
- You cannot immediately see what are data inputs, what are referenced across from another worksheet, what are computations.
- You must put your cursor on a cell to find out where it comes from and what it does.
- You cannot immediately see if logic changes across a row of numbers.

"it's like feeling your way along a poorly lit cave"

All unnecessarily slow and tedious!

(This can be because the person creating the model is in a rush or because that person has little consideration for other people trying to use the model.)

It is not 'customer' focussed. *(It is 20th Century Style)*

Here is the same part of a business model presented in two ways …

colour coding →

Conversely, this style brings immediate understanding.
It is simply:

- **Red** fonts head each block of work
- **Green** means the data is referenced across from another worksheet in this business model
- **Blue** means fresh data is inputted here
- **Black** means a computation ('algorithm') is done here

It is "current best practice" business modelling

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Here is the same part of a business model presented in two ways …

colour coding is …

- Fast to understand
- Fast to modify
- Fast to audit

It breeds confidence

It is customer focussed and 'team-centric'

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No shaded backgrounds …

Some people creating business models might find all this colour a bit confronting.
Crusty modellers, used to working on their own for financial institutions may be especially horrified.

So, if you prefer it is perfectly OK to work without the background colours

and have only the numbers and words in colour like this … →

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Italics

There is a common practice of using

- vertical font for real dollars.
- *italics for nominal dollars,* and

State Royalty	A$ 000 Real	**234**	**723**	**666**
State Royalty	*A$ 000 Nominal*	***241***	***774***	***739***

A few more tips on colour coding …

Blue = fresh data inputs …

1. **Every piece of fresh data input is visually exposed** and obvious in blue font before being used in any formula in a cell (i.e. in an algorithm) .
2. This means that **fresh data is never found hidden in a formula** in a cell.
   - For example, the formula in a cell might be " = C5*D8" and will never be " = C5*50%"
   - Instead the "50%" will be previously entered in a cell coloured cell.

The descriptor in Column A and the units in Column B **will be comprehensive** not abbreviations.

4. Project Funding *(Financing)*					
4 a. Donations					
2018 08 02 Global Friendship offers a donation of $15 000 when the annual project net cashflow-after-tax becomes cash positive.					
Donation possible	*$ Nominal*		***15,000***	***15,000***	***15,000***
4 a. Donations	*$ Nominal*	***15,000***	***0***	***0***	***0***
4a. Net Cash Flow after donations	*$ Nominal*	***77,913***	*-1,101*	*-5,660*	*-9,321*
4 a. Debt					
2018 08 02 Ben James email with attachments: Offers a loan of up to $30 000 during first 12 months. It can be a maximum of 50%					
Loan funds available for drawdown - maximun	*$ Nominal*		***30,000***	***30,000***	***30,000***
max proportion of cash deficit that can be deb	*$ Nominal*		***50%***	***50%***	***50%***
project loan - opening balance	*$ Nominal*		*0*	*550*	*3,380*
funds available for drawdown	*$ Nominal*		*30,000*	*29,450*	*26,620*
max amount of funding deficit that can be deb	*$ Nominal*		*550*	*2,830*	*4,660*
loan - drawdowns	*$ Nominal*	***30,000***	***550***	***2,830***	***4,660***
loan - repayments	*$ Nominal*	***-30,000***	***0***	***0***	***0***

Pink = This data needs checking

If any fresh data input (or formula) is preliminary or dubious then it is highlighted in pink.

You may want to highlight the source in pink too

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loan - repayments	*$ Nominal*	***-30,000***	***0***	***0***	***0***
project loan - closing balance	*$ Nominal*		*550*	*3,380*	*8,041*

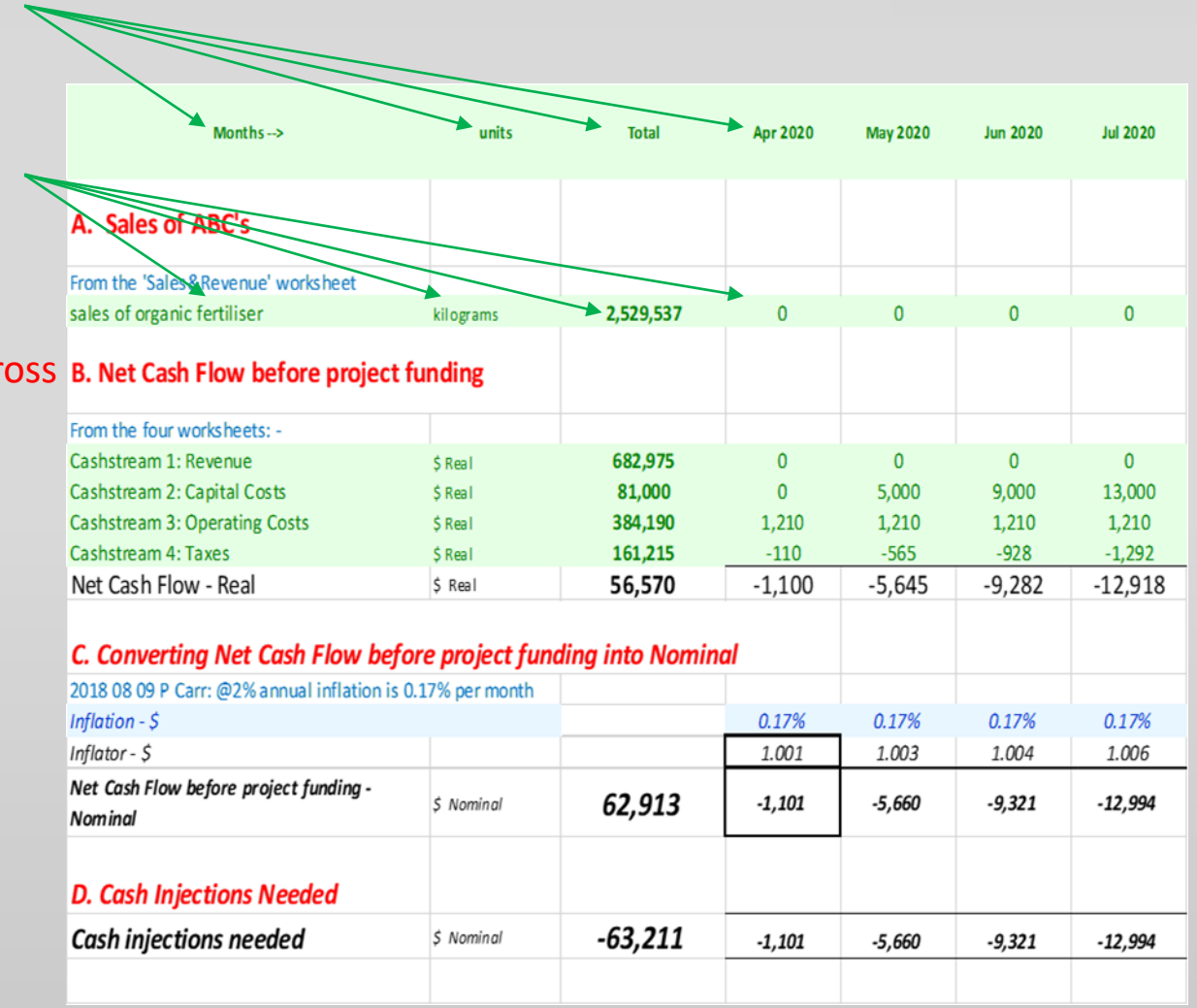
Green = This row is referenced across from another worksheet in this business model.

Must be:

- the complete row.
- exactly how it is in the source worksheet.

Must not:

- overtype the descriptor with a new name
- omit the units
- multiply, divide, or change the cells on their way across
- be a 'link' to another separate business model
  - 'links' are banned by many professionals because they have caused too many disasters



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Green = This row is referenced across from another worksheet in this business model.

The whole row is referenced across and is not altered!

- Do not reference across just a selected cell or two
- This greatly reduces errors and makes understanding by others fast.

The data referenced from another worksheet is never changed on its way across

- It is never multiplied, divided or overwritten
- This is a common bad error

Instead the words and numbers must visually appear in the new worksheet exactly as they do in the source worksheet except their colours are green.

- So the descriptor in Column A will have exactly the same words, the units will be the same and whatever number is in Column H in the source will be the same in Column H in the receiving worksheet.

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Black = Computations

The formula in any cell (algorithm) must use cells <u>already showing on this same</u> worksheet

- It cannot directly reference a cell from another worksheet.
- It cannot have fresh data entered directly into that cell.

If your formula needs data from another worksheet then you must first reference that complete row across.

- It will appear somewhere above as a complete row in green
- with the descriptor in Column A and the units in Column B.

It needs to be positioned above the algorithm.

- in its logical position in the calculation sequence.

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Colour coding: **Most Important:**

Colour coding will make your evaluation work faster, less prone to mistakes and its understanding by others much faster,
but it must be done with 100% compliance.

You must adhere strictly to the rules above
or revert to your own ‘anything goes’ with black on white modelling.

Glossary 1	
Business Model or 'Economic Model'	A forecast of the social enterprise's physical operations, deliveries of benefits, sales, costs, taxes and net cashflow. It usually is over several years and computed in monthly intervals or in years. It gives a 'helicopter view' of the underlying economic health of the enterprise showing how much funding it will require and when it is likely to 'stand on its own legs' to be self-supporting. . (It uses cash rather than accounting concepts.) Funding and ownership can be added when the project looks promising
Project Funding	Getting investors, donors and lenders to provide cash to fund the project
Accounting	An internationally regulated way of assessing or forecasting the performance of the project over a specified period – past or future - given its recent results, past inputs and future liabilities. (Uses non-cash concepts so may be difficult for some non-accounting people to quickly understand.)
Tax	Extracting money from the project as entirely defined by government legislation - and like accounting uses non-cash concepts.
Real terms	Before applying inflation – example $2.50 today and still $2.50 in 5 years (Usually employed in business case modelling.)
Nominal terms or Dollars of the Day	*After applying inflation – example $2.50 today becomes $3.97 in 5 years* (Used in accounting, tax and funding.)

Glossary 2	
Four Cashstreams	The business of any social enterprise (or any industry) can be shown in just four cash streams
Cashstream1: Revenue	The cash that will be received from sales of products and delivery of benefits
Cashstream 2: Capital Costs 'capex'	The cash that will be paid out to start-up the project and when up and running, on purchases of things that will last more than one year – 'sustaining capital' to keep it going
Cashstream 3: Operating Costs 'opex'	The cash that will actually be paid out to run the project and make the sales. Typically some will be 'fixed' or 'overheads' that are constant whether many units or few units are being made/sold and 'variable costs' that vary directly with the number of units made/sold.
Cashstream 4: Taxes	The cash that is paid out to meet the expectations of the governments and community - usually as income tax
Net Cashflow	Cash from revenue minus cash paid out as capital costs, operating costs and taxes.
Cumulative cashflow & payback	The running total of cash paid out/received from the beginning. Usually this becomes increasingly negative during construction and 'ramp up'. It improves when sales revenue exceeds all costs. When it improves back up to zero this is called "Payback". Then hopefully becomes strongly positive.

end