



FINANCIAL MODELLING - AUTOMATING MONTH END

26 February 2015

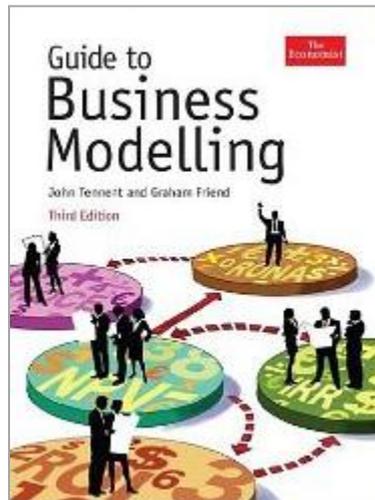
John Tennent | Corporate Edge

John Tennent

- Chartered Accountant
- Corporate Edge
- Economist Books

john-tennent@corporateedge.co.uk

 +44 (0) 7767 497864



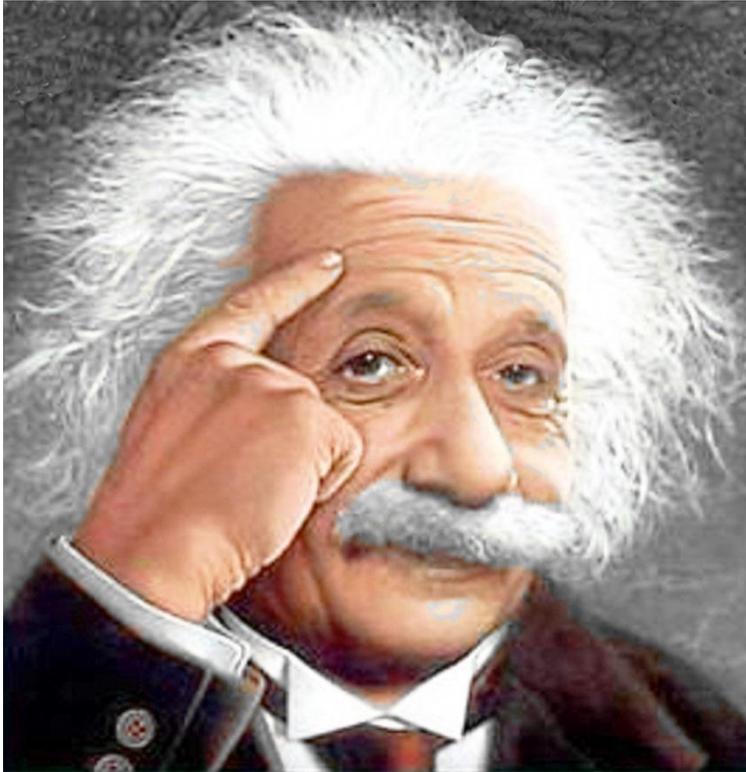
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Albert Einstein



Definition of **Insanity**:

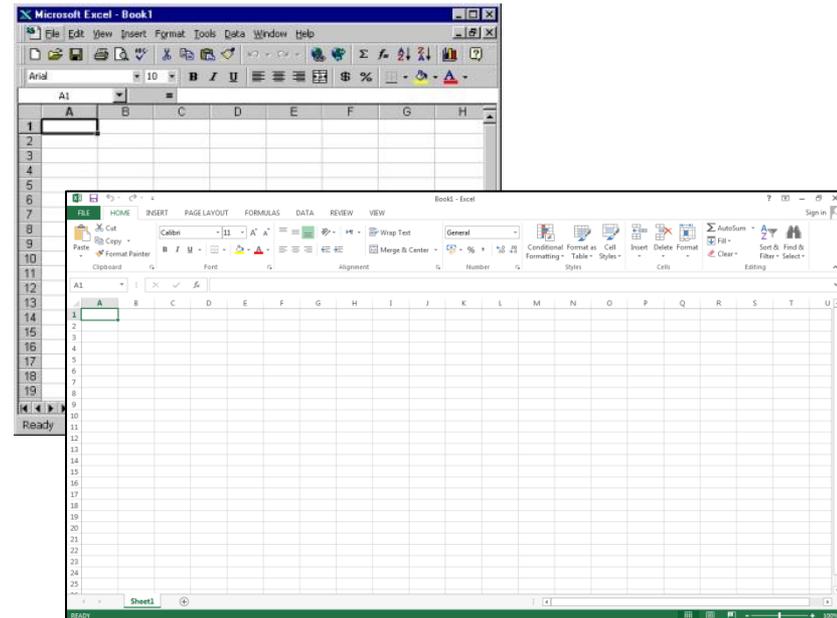
‘Doing the same thing over and over again and expecting different results’ ...

Financial Modelling - Automating Month End

How to apply best practice Excel techniques to automate month end
Primarily for SMEs – Small and Medium Enterprises

All techniques can be applied in Excel
2003 (version 11) through to 2013
(version 15) – except Sparklines

No Macros will be used so procedures
can be easily replicated by anyone
with a reasonable knowledge of Excel

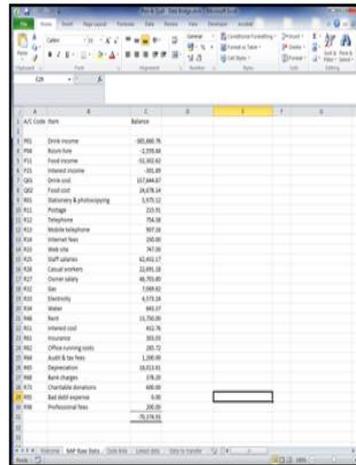


The Structure of the Process

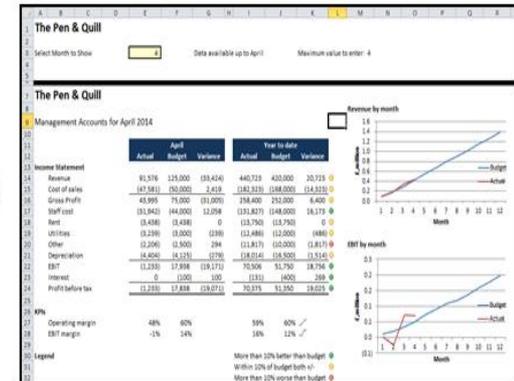
Accounting Database



Data Bridge



Management Accounts



Summarise and cleanse bulk data

Store historic and budget data to produce instant accounts

Example Model

A simple model to look at Excel principles (not operating complexities)

Scenario: A pub restaurant

'The Pen & Quill'



Lets take the tour....

Data Bridge – 6 sheets

Welcome	SAP Raw Data	Cleansed Data	Code Links	Linked Data	Transfer Data
---------	--------------	---------------	------------	-------------	---------------

The Pen & Quill			
Model Description	Data Bridge to consolidate system ledger		
Instructions for use	Output the ledger report ABC 1 from SAP Copy and paste onto Sheet 'SAP Raw Data'		
Input Sources	SAP report ABC 1		
Audit checks	Total of input data = total of output data	<input type="checkbox"/> Agrees	
Recalculation Status	Automatic		
Model designed to run on	Excel 2010 (version 14)	Version you are using:	14.0
Author	John Tennent		
Change Log	Date	Who	Development
	5/1/2014	JT	Created

User information

=INFO(.....)

-  "DIRECTORY" - Current directory or folder
-  "NUMFILE" - Active worksheets
-  "ORIGIN" - Top and leftmost visible cell
-  "OSVERSION" - Operating system version
-  "RECALC" - Recalculation mode
-  "RELEASE" - Version of Microsoft Excel
-  "SYSTEM" - Operating Environment

Data Bridge – 6 sheets



System YTD data

	A	B	C
1	A/C Code	Item	Balance
2			
15	R25	Staff salaries	62,432.17
16	R26	Casual workers	22,691.18
17	R27	Owner salary	46,703.80
18	R32	Gas	7,069.62
19	R33	Electricity	4,573.24
20	R34	Water	843.37
21	R48	Rent	13,750.00
22	R51	Interest cost	432.76
23	R61	Insurance	303.03
24	R62	Office running costs	285.72

How to cleanse data

=**TRIM**(Text) – Removes spaces

=**LEFT**(Text, Number of Letters)

=**RIGHT**(Text, Number of Letters)

=**MID**(Text, Start at Letter Number, Number of Letters)

=**CLEAN**(Text) – Removes non printable characters

=**SEARCH**(Find Text, Within Text, [Start at Letter Number])

=**REPLACE**(Text, Start at Letter Number, Number of Letters, New Text) – replace a portion of text

Data Bridge – 6 sheets

Welcome	SAP Raw Data	Cleansed Data	Code Links	Linked Data	Transfer Data
---------	--------------	---------------	-------------------	-------------	---------------

Prepare summary sheet with account codes

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Code Links														
2															
3	Income Statement														
4															
5	Revenue		P01	P04	P11										
6	Cost of sales		Q01	Q02											
7	Staff cost		R25	R26	R27										
8	Rent		R48												
9	Utilities		R32	R33	R34										
10	Other		R01	R11	R12	R13	R14	R15	R61	R62	R64	R68	R73	R95	
11	Depreciation		R65												
12	Interest		P21	R51											
13															

Data Bridge – 6 sheets

Welcome	SAP Raw Data	Cleansed Data	Code Links	Linked Data	Transfer Data
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Look up values to match the codes

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Linked Data													
2														
3	Income Statement	Total												
4														
5	Revenue	(440,722.82)	(385,861)	(2,559)	(52,303)	0	0	0	0	0	0	0	0	0
6	Cost of sales	182,323.01	157,645	24,678	0	0	0	0	0	0	0	0	0	0
7	Staff cost	131,827.15	62,432	22,691	46,704	0	0	0	0	0	0	0	0	0
8	Rent	13,750.00	13,750	0	0	0	0	0	0	0	0	0	0	0
9	Utilities	12,486.23	7,070	4,573	843	0	0	0	0	0	0	0	0	0
10	Other	11,817.02	5,975	216	754	907	250	748	303	286	1,200	378	600	
11	Depreciation	18,013.61	18,014	0	0	0	0	0	0	0	0	0	0	0
12	Interest	130.87	(302)	433	0	0	0	0	0	0	0	0	0	0
13		<u>(70,374.93)</u>												

Data Bridge – 6 sheets

Welcome	SAP Raw Data	Cleansed Data	Code Links	Linked Data	Transfer Data
---------	--------------	---------------	------------	-------------	---------------

Codes are converted to values

=IFERROR(**INDEX**('SAP Raw Data'!\$C\$3:\$C\$30,**MATCH**('Code links'!D5,'SAP Raw Data'!\$A\$3:\$A\$30 ,0)),0)

=IFERROR(Value, Value if error)

=INDEX(Column with Account Balances, **MATCH** (Account Code, Column with all Account Codes, Match Type))

Better than **VLOOKUP** – faster and the account balance can be on the left of the account code

Data Bridge – 6 sheets

Welcome	SAP Raw Data	Cleansed Data	Code Links	Linked Data	Transfer Data
---------	--------------	---------------	------------	-------------	---------------

Summarised data to transfer – Management Accounts links here

	A	B	C
1	Data to Transfer		
2			
3	Income Statement	Total	
4			
5	Revenue	(440,722.82)	
6	Cost of sales	182,323.01	
7	Staff cost	131,827.15	
8	Rent	13,750.00	
9	Utilities	12,486.23	
10	Other	11,817.02	
11	Depreciation	18,013.61	
12	Interest	130.87	
13		<u>(70,374.93)</u>	
14			

Management Accounts – 5 sheets

Welcome	From Data Bridge	Actual YTD	Budget by Month	Management Accounts
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Summarised data linked to Data Bridge – A mirror sheet

	A	B	C
1	Data to Transfer		
2			
3	Income Statement	Total	
4			
5	Revenue	(440,722.82)	
6	Cost of sales	182,323.01	
7	Staff cost	131,827.15	
8	Rent	13,750.00	
9	Utilities	12,486.23	
10	Other	11,817.02	
11	Depreciation	18,013.61	
12	Interest	130.87	
13		<u>(70,374.93)</u>	
14			



Management Accounts – 5 sheets

Welcome	From Data Bridge	Actual YTD	Budget by Month	Management Accounts
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A copy and paste to put the data in the right column

	A	B	C	D	E	F	G	H	I
1	Actual YTD								
2									
3	Actual - Year to date								
4				Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14
5	Income Statement								
6	Revenue			(90,235.45)	(167,489.25)	(349,147.25)	(440,722.82)		
7	Cost of sales			43,178.14	94,217.84	134,742.25	182,323.01		
8	Staff cost			32,954.11	68,441.56	99,885.14	131,827.15		
9	Rent			3,437.50	6,875.00	10,312.50	13,750.00		
10	Utilities			3,001.25	6,143.25	9,247.55	12,486.23		
11	Other			2,451.68	5,993.12	9,611.47	11,817.02		
12	Depreciation			4,125.58	9,284.87	13,609.45	18,013.61		
13	Interest			0.00	0.00	130.87	130.87		
14				(1,087.19)	23,466.39	(71,608.02)	(70,374.93)	0.00	0.00
15									
16	Data Loaded	up to April		1	2	3	4		
17									
18	Cumulative revenue			90,235.45	167,489.25	349,147.25	440,722.82	#N/A	#N/A
19	Cumulative margin			47,057.31	73,271.41	214,405.00	258,399.81	#N/A	#N/A
20	Cumulative EBIT			1,087.19	(23,466.39)	71,738.89	70,505.80	#N/A	#N/A

Management Accounts – 5 sheets

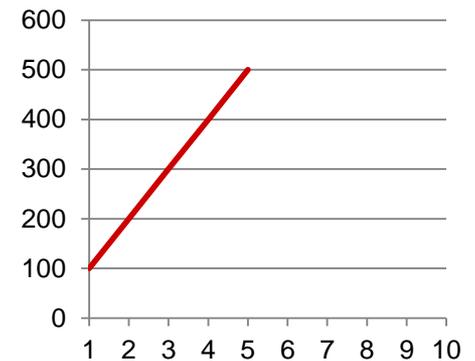
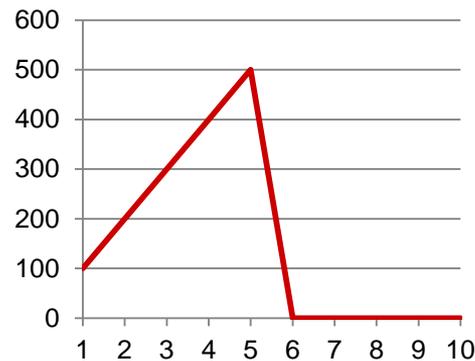
Welcome	From Data Bridge	Actual YTD	Budget by Month	Management Accounts
---------	------------------	-------------------	-----------------	---------------------

Features

Actual YTD						
Actual - Year to date						
	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14
Income Statement						
Revenue	90,235.45	167,488.25	349,147.25	440,722.82		
Cost of sales	43,178.14	94,217.84	134,742.25	182,323.01		
Staff cost	32,954.11	68,441.56	99,683.14	131,627.15		
Rent	3,437.50	6,875.00	10,312.50	13,750.00		
Utilities	3,001.25	6,143.25	9,247.55	12,486.23		
Other	2,451.68	5,993.12	9,611.47	11,817.02		
Depreciation	4,125.58	9,284.87	13,609.45	18,013.61		
Interest	0.00	0.00	130.87	130.87		
	(1,087.15)	23,466.39	(71,668.02)	(70,174.93)	0.00	0.00
Data Loaded up to April	1	2	3	4		
Cumulative revenue	90,235.45	167,488.25	349,147.25	440,722.82	#N/A	#N/A
Cumulative margin	47,057.31	73,271.41	214,465.00	258,599.81	#N/A	#N/A
Cumulative EBIT	1,087.15	(23,466.39)	71,738.89	70,505.90	#N/A	#N/A

Functions

Sparklines – To visualise the trends
=NA() – Test data exists for graphs and use this within an IF statement. Graph lines are blank with =N/A rather than dropping to zero with a 0



Management Accounts – 5 sheets

Welcome	From Data Bridge	Actual YTD	Budget by Month	Management Accounts
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Original budget data (a prior year set can also be added on another sheet)

	A	B	C	D	E	F	G	H	I
1	Budget by Month								
2									
3	Budget data - Year to date								
4				Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14
5	Income Statement								
6	Revenue			(95,000.00)	(90,000.00)	(110,000.00)	(125,000.00)	(130,000.00)	(125,000.00)
7	Cost of sales			38,000.00	36,000.00	44,000.00	50,000.00	52,000.00	50,000.00
8	Staff cost			32,000.00	32,000.00	40,000.00	44,000.00	44,000.00	44,000.00
9	Rent			3,437.50	3,437.50	3,437.50	3,437.50	3,437.50	3,437.50
10	Utilities			3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00
11	Other			2,500.00	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00
12	Depreciation			4,125.00	4,125.00	4,125.00	4,125.00	4,125.00	4,125.00
13	Interest			100.00	100.00	100.00	100.00	100.00	100.00
14				(11,837.50)	(8,837.50)	(12,837.50)	(17,837.50)	(20,837.50)	(17,837.50)
15									
16									
17	Cumulative revenue			95,000.00	185,000.00	295,000.00	420,000.00	550,000.00	675,000.00
18	Cumulative EBIT			11,937.50	20,875.00	33,812.50	51,750.00	72,687.50	90,625.00

Management Accounts – 5 sheets

Welcome	From Data Bridge	Actual YTD	Budget by Month	Management Accounts
---------	------------------	------------	-----------------	---------------------

1 **The Pen & Quill**

2

3 Select Month to Show Data available up to April Maximum value to enter: 4

4

5

7 **The Pen & Quill**

8

9 Management Accounts for April 2014

10

	April			Year to date			
	Actual	Budget	Variance	Actual	Budget	Variance	
13 Income Statement							
14 Revenue	91,576	125,000	(33,424)	440,723	420,000	20,723	🟡
15 Cost of sales	(47,581)	(50,000)	2,419	(182,323)	(168,000)	(14,323)	🟡
16 Gross Profit	43,995	75,000	(31,005)	258,400	252,000	6,400	🟡
17 Staff cost	(31,942)	(44,000)	12,058	(131,827)	(148,000)	16,173	🟢
18 Rent	(3,438)	(3,438)	0	(13,750)	(13,750)	0	🟡
19 Utilities	(3,239)	(3,000)	(239)	(12,486)	(12,000)	(486)	🟡
20 Other	(2,206)	(2,500)	294	(11,817)	(10,000)	(1,817)	🟢
21 Depreciation	(4,404)	(4,125)	(279)	(18,014)	(16,500)	(1,514)	🟡
22 EBIT	(1,233)	17,938	(19,171)	70,506	51,750	18,756	🟢
23 Interest	0	(100)	100	(131)	(400)	269	🟢
24 Profit before tax	(1,233)	17,838	(19,071)	70,375	51,350	19,025	🟢
25							
26 KPIs							
27 Operating margin	48%	60%		59%	60%	✓	
28 EBIT margin	-1%	14%		16%	12%	✓	
29							
30 Legend							
31							
32							

More than 10% better than budget 🟢
 Within 10% of budget both +/- 🟡
 More than 10% worse than budget 🟢

Revenue by month

EBIT by month

Management Accounts – 5 sheets

Welcome	From Data Bridge	Actual YTD	Budget by Month	Management Accounts
---------	------------------	------------	-----------------	---------------------

1 The Pen & Quill
 2
 3 Select Month to Show Data available up to April Maximum value to enter: 4
 4
 5

7 The Pen & Quill
 8
 9 Management Accounts for April 2014

	April	Variance	Actual	Budget	Variance
13 Income Statement					
14 Revenue					
15 Cost of sales					
16 Gross Profit					
17 Staff cost					
18 Rent					
19 Utilities					
20 Other					
21 Depreciation					
22 EBIT					
23 Interest					
24 Profit before					
25					
26 KPIs					
27 Operating m					
28 EBIT margin					
29					
30 Legend					
31					
32					

Revenue by month

by month

=CONCATENATE("Management Accounts for ",TEXT(DATE(YEAR(NOW()),E3,1),"mmm"),",",YEAR(NOW()))

Within 10% of budget both +/- ●
 More than 10% worse than budget ●

Using OFFSET

Indirect cell referencing to enable data changes

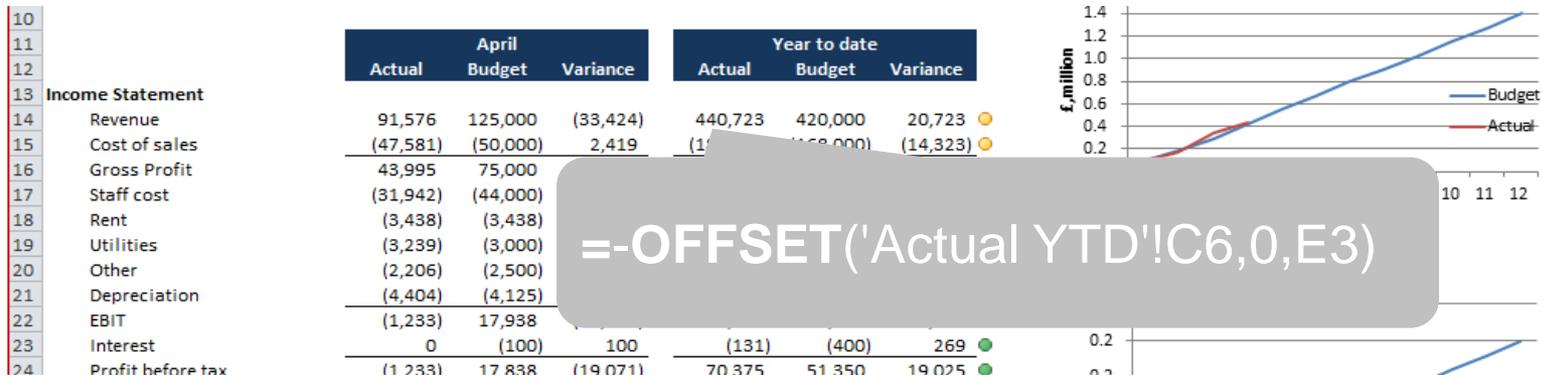
= **OFFSET** (Anchor cell, Rows Away, Columns Away)

	A	B	C	D	E	F	G
1		2					
2		22	→	11	22	33	

=Offset(C2,0,B1)

Management Accounts – 5 sheets

Welcome	From Data Bridge	Actual YTD	Budget by Month	Management Accounts
---------	------------------	------------	-----------------	---------------------



	A	B	C	D	E	F	G	H	I
1	Actual YTD								
2									
3	Actual - Year to date								
4				Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14
5	Income Statement								
6		Revenue		(90,235.45)	(167,489.25)	(349,147.25)	(440,722.82)		
7		Cost of sales		43,178.14	94,217.84	134,742.25	182,323.01		
8		Staff cost		32,954.11	68,441.56	99,885.14	131,827.15		
9		Rent		3,437.50	6,875.00	10,312.50	13,750.00		
10		Utilities		3,001.25	6,143.25	9,247.55	12,486.23		

Management Accounts – 5 sheets

Welcome	From Data Bridge	Actual YTD	Budget by Month	Management Accounts
---------	------------------	------------	-----------------	---------------------

Add conditional formatting

Edit Formatting Rule

Select a Rule Type:

- Format all cells based on their values
- Format only cells that contain
- Format only top or bottom ranked values
- Format only values that are above or below average
- Format only unique or duplicate values
- Use a formula to determine which cells to format

Edit the Rule Description:

Format all cells based on their values:

Format Style: Icon Sets Reverse Icon Order

Icon Style: Show Icon Only

Display each icon according to these rules:

Icon	Condition	Value	Type
	when value is	>= 10	Number
	when < 10 and	>= -10	Number
	when < -10		

Year to date

	Budget	Variance
2020	20,723	
2019	6,400	
2018	16,173	
2017	0	
2016	(12,000)	(486)
2015	(10,000)	(1,817)
2014	(16,500)	(1,514)
2013	51,750	18,756
2012	(400)	269
2011	51,350	19,025

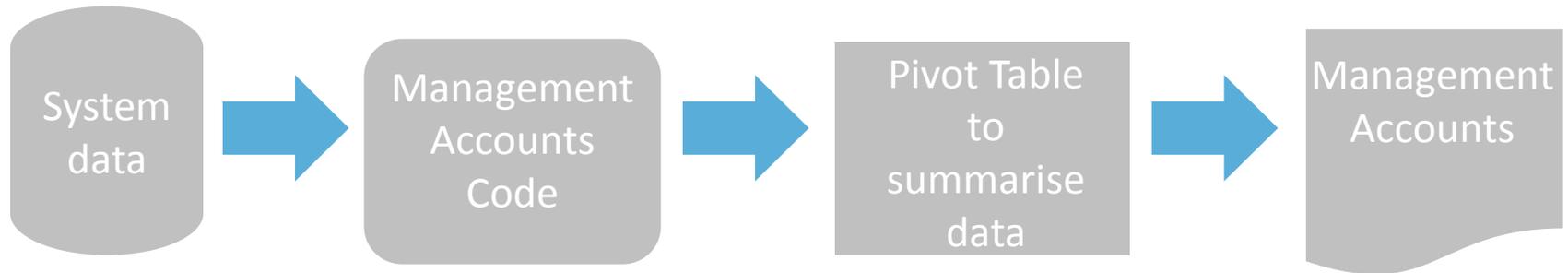
Revenue by month

EBIT by month

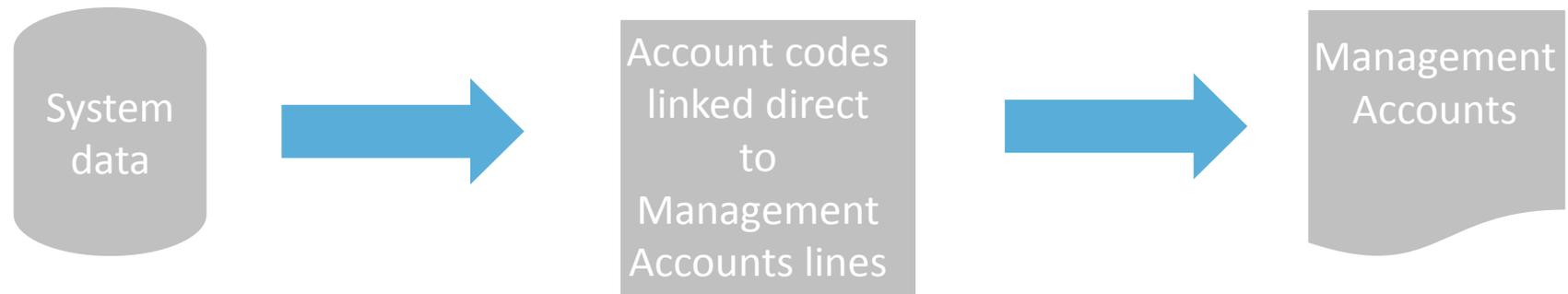
Legend

- More than 10% better than budget
- Within 10% of budget both +/-
- More than 10% worse than budget

Automating Management Accounts Production In Excel: A Simple Approach By Glen Feechan



Automating Management Accounts described in this webinar



Financial Modelling - Automating Month End



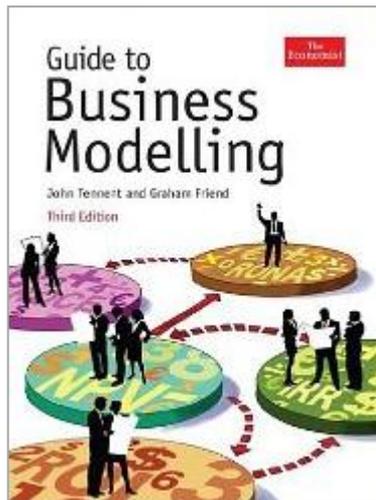
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John Tennent

- Chartered Accountant
- Corporate Edge
- Economist Books

john-tennent@corporateedge.co.uk

 +44 (0) 7767 497864



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