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Pennine House, Denton Lane, Chadderton, OLDHAM OL9 8PU
T: +44 845 456 3104 E: info@pastel.co.uk W: www.pastel.co.uk

What is the Business Intelligence Centre?

- For decision makers in all companies
- Who must have instant access to relevant information to remain competitive
- **The BIC** is the “Intelligent Choice”
- Delivering formatted information directly into Excel at the click of a button
- Unlike other proprietary reporting solutions and Excel links
- **BIC** delivers a suite of pre-formatted Excel report templates for your Pastel data
- Offering ready boxed reports immediately

Excel is the most familiar reporting platform worldwide, so it makes sense to use this as the standard, but it also makes sense to empower people to benefit from the vast functionality available in Excel as a reporting front-end.

BIC value proposition

The BIC is not something that a company must have to transact or capture information resulting from the daily operations of a business, however it is essential to businesses that must be more competitive and profitable. The tool eliminates inefficiencies, and delivers a single and trusted version of the truth to relevant decision makers at the right time.

It has occurred that prospects question the price that they may have to pay for such a solution, however this can easily be justified when you quantify not only the time savings that result from automation and elimination of repetitive tasks, but more importantly the decisions that leaders of the business can no make because they have relevant information they can trust.

Consider a buyer who needs to replenish stocks for a business based on consumption trends. If this person has access to all the relevant information, then a single intelligent buying decision can result in a saving in Excess of R100 000, or \$ 15 000. This by far exceeds a modest investment in a solution like the BIC.

These are the scenarios that should be considered when handling pricing objections. It does not make sense to compare the investment with that of other software that does not offer similar benefits.

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The Excel Audit

Would you be shocked, or relieved to know how efficiently people in organisations use Excel as a platform to manipulate, share and present critical information that drives decisions?

SHOCKED is what most people are.

It was initially a challenge to convince the Financial Director of a reasonable manufacturing concern that there was benefit in investigating how Excel was being used in the organisation as part of their BI initiative, and that there was a possibility that there were better ways to do things than export data into Excel and then manually manipulate the data to produce results. He felt that he had streamlined the processes as best he could and there was not a lot more that could be done.

We agreed to an interview to identify all Business Intelligence initiatives that were performed on a regular basis as part of delivering information to various parts of the organisation, and the time it took to consolidate and deliver this information to the business. We then agreed on the time savings alone that could be achieved by automating these tasks, and applied a monetary value to this to establish a measurable return on investment.

The results are listed in the table below at a rate of R200 per hour. The Return on Investment for the year resulted in over R100 000, against a modest investment of R20 000. This is even before you look at the less tangible returns like data integrity and integration, standardization, and putting a wrapper around loose Excel spreadsheet use.

Quite staggering – share this true story with your customers!

Report Description	Times per month	Ave. minutes to prepare report	Minutes per Month	Days per Month	£ value per Month	Days per Annum	Value per annum
Monthly Pack - London	1	180	180	0.38	38	4.5	171
Monthly Pack - Manchester	1	180	180	0.38	38	4.5	171
Monthly Pack - Newcastle	1	180	180	0.38	38	4.5	171
Monthly Pack - Edinburgh	1	180	180	0.38	38	4.5	171
Monthly pack consolidate	1	180	180	0.38	38	4.5	171
Daily Sales Report	22	30	660	1.38	138	16.5	2,277
YTD Sales Report	1	60	60	0.13	13	1.5	20
Trial balance	1	60	60	0.13	13	1.5	20
Ledger Drill down	200	2	400	0.83	83	10	830
Commission Calc	22	30	660	1.38	138	16.5	2,277
Total				5.71	575	68.5	6,278

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BIC Standard

This provides ready-boxed intelligent Excel reporting on your standard Pastel data. The following key functionality is supported in the Standard Module.

- a) Auto connection to the company you currently have open in your accounting application.
- b) Comes with a set of standard reports for Management Packs, Dashboards, Sales, Inventory, Purchasing and GL.
- c) You can create your own reports on existing containers.
- d) You can import reports from other sources or that may have been specially developed.
- e) You can copy standard reports and change them to suite your needs
- f) You can use the Dynamic Drill Down functionality in any report
- g) You can launch reports directly from your Pastel Menus
- h) You can create run-time versions of your reports and run them from your desktop
- i) You can create your own filters and parameters to control what data is extracted at the time of running a report.

BIC Advanced

The Advanced Edition adds additional tools for skilled users and/or consultants. This powerful and cost effective report writing solution allows you to deliver Excel reports from any ODBC compliant data source. The following key functionality is supported in the Advanced Module in addition to that supported by the Standard edition.

- a) You can consolidate information from multiple disparate sources
- b) You can consolidate information across multiple companies on the same system
- c) You can create your own containers incorporating user define fields
- d) You can use the graphical join tool to create relationships between various entities like tables and views in your database
- e) You can create your own fields on the fly that are not stored in the data source
- f) You can take advantage of advanced query language syntax to do complex data interrogation
- g) You can take advantage of stored procedures or views that have been created in the source database

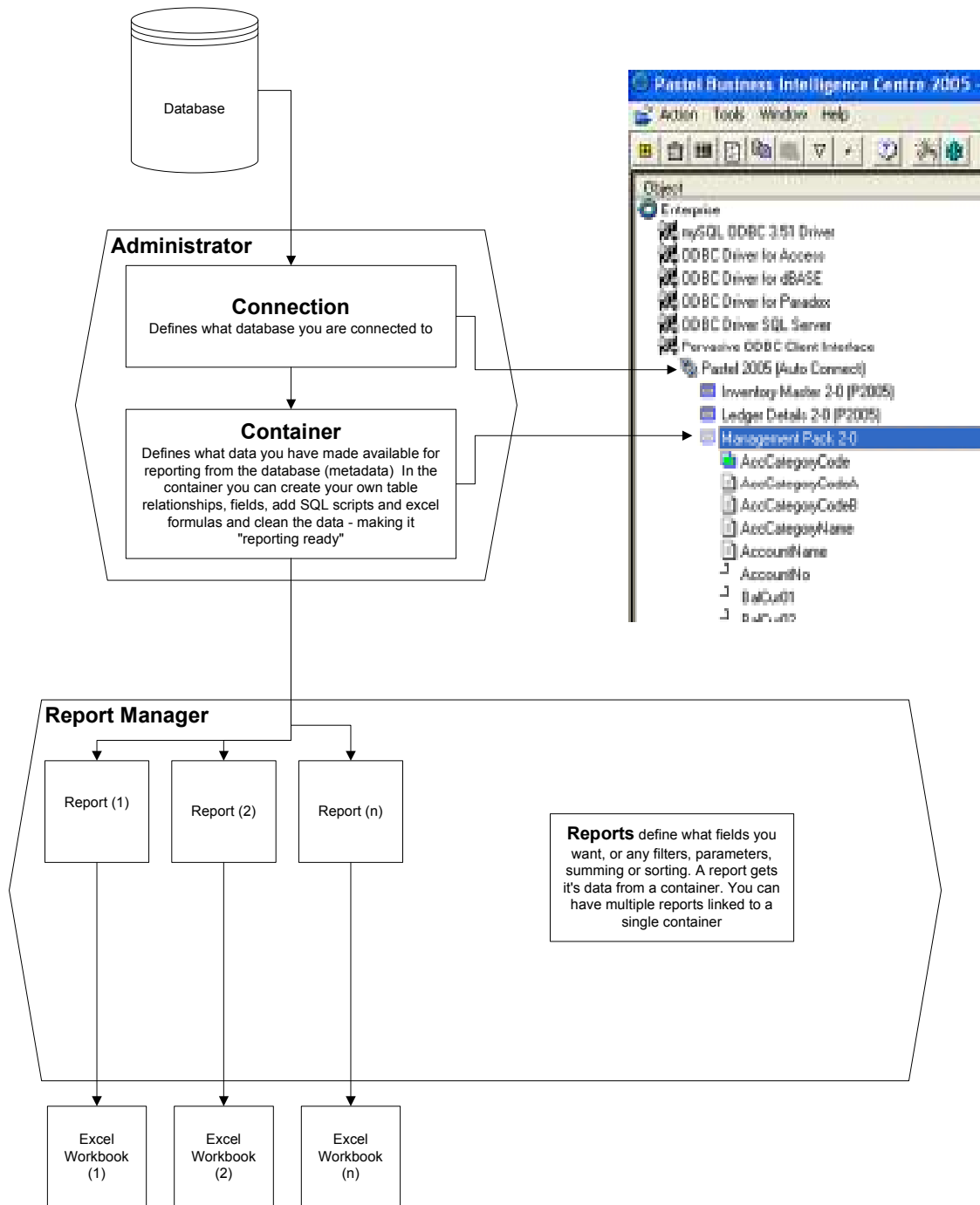
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The BIC in a nutshell



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Standard Reports

These form the basis of simple reporting and consist of the following parts

1. a container which defines what data you are reporting from (these are housed in the Administrator (Advanced Edition))
2. a report is linked to this container (you can have more than 1 report per container, and reports are housed in the Report Manager (standard edition) – a report defines what fields you want in the report and any filters or parameters you'd like to apply to the data at the time you run the report.
3. an Excel workbook that is linked to a report which defines how you want the data displayed. The first time you create a new report, there will be no template attached to the report, and a new Excel workbook will be opened, and the data will be dumped into the first sheet of the new workbook. At this point you can create your new report using the new "fast track reporting tool that transforms raw data into meaningful reports.

Union Reports

A Union report is a very simple concept, yet very powerful. All it is, is a group of standard reports running together in a specified order, but with the control to deliver all the sub reports data into one workbook. This is critical as it eliminates all the "loose Excel spreadsheet use" that takes place when trying to consolidate information from multiple sources into a single workbook.

Although union reports are a series of sub-reports, they are treated as a single entity. This means they can be exported as a single report, and all of the sub reports are automatically packed into one. The same applies to when a union report is imported, one import, and all the sub reports will be automatically imported.

What are examples of Union reports

The Management Pack is a union report which runs 2 sub reports. The one sub report extracts all the detailed ledger transactions from the source data, and the other sub report extracts all the ledger balances for the current and prior year along with budgeting information where appropriate.

The Management Dashboard report is also a union report. It extracts information from various areas of the source data so that it can be presented in one workbook, and most importantly, so that the user experience is a single click.

When should you be looking to use Union reporting

You should look to use Union reports when you need to

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- a) present data together in one workbook that is unrelated, or comes from various sources
- b) report data together that may be related, but cannot be extracted easily via a standard query statement – for example a combination of sales history data combined with inventory levels used to determine stock replenishment.
- c) Consolidate information from different companies into one workbook
- d) report data together from disparate source on different databases

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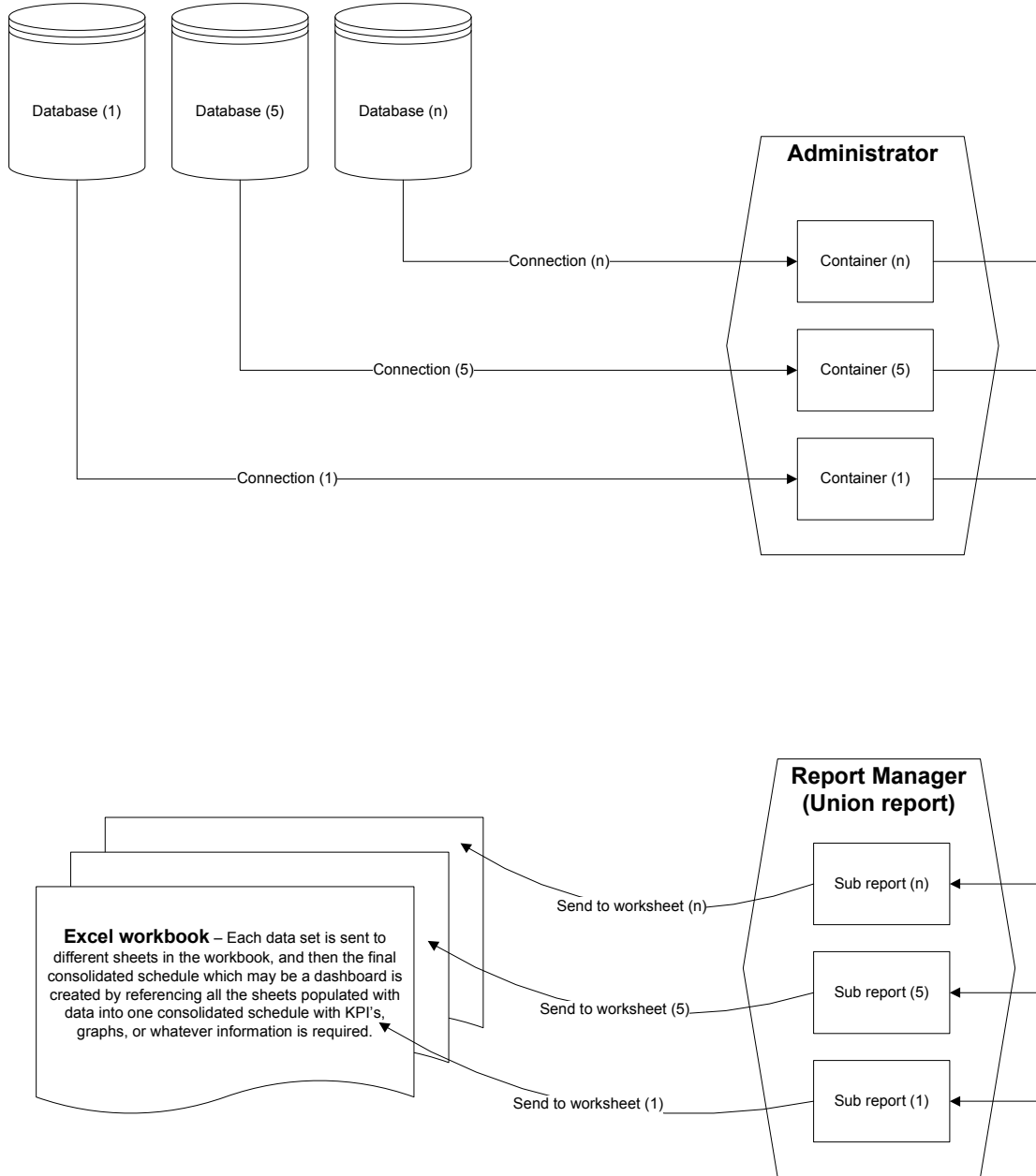
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Consolidations – Union Reporting (dissimilar data)

These databases could be from totally different applications e.g. one Pastel Partner and one Pastel Payroll or different companies within the same application e.g. Pastel Partner Co1 and Pastel Partner Co2



What problems are people solving out there using the BIC

Financial

1. Management Pack Automation with drill down to detailed ledgers
2. Cash flow forecasts
3. Financial ratios
4. Management dashboards
5. Financial Consolidations by Branches, Divisions, Companies
6. Fast and effective pivot style GL transaction tools – eliminating printing reams of paper each time you need to investigate details
7. GL Creditor and debtor referencing
8. Statements and ageing with document drill down
9. Cost Code reports
10. Invoicing and Statements
11. Forecasting and Budgeting
12. Overhead Schedules

Sales

1. Sales analysis by rep, product, customer
2. Commissions on paid invoices
3. Sales history coupled with inventory levels to determine replenishment requirements
4. User defined fields
5. Category sales analysis

Management Dashboards

1. Profit and Loss summary
2. Highlighted expenses
3. Top 5 items
4. Top 5 customers
5. Bottom 5 items
6. Fixed Asset Schedules

Inventory

1. Stock ageing
2. Slow movers
3. Stock master
4. Picking slips
5. Sales history coupled with inventory levels to determine replenishment requirements
6. Aggregate component requirements calculated from the sale of finished goods blown through the Bill of Materials
7. Serial number tracking reports

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Best practices – approaching reporting challenges

Because of the nature of every business, and their unique requirements, it is quite common that service providers are faced with challenges to assist in solving these. So what is the best approach to helping customers get what they want, using a solution like the BIC, and maximising the standard templates that are available.

Fast tracking report development using the standard templates

The BIC ships with a series of standard templates for the various install bases. This is so customers can get up and running as quickly as possible and so that any custom reports can be developed using the existing logic created in the standard reports.

The data flow diagram that follows illustrates the recommended path in developing custom reports for various requirements. The most efficient method is to try and use one of the existing containers as a base to develop bespoke requirements, and only if this is not possible, then one would adopt the approach that follows – building from first principles.

Building a report from first principles (no templates)

It is sometimes the case that no standard template caters for your requirements, and it is often best to start from first principles. Pre-requisites are that

1. you have an excellent understanding of your requirements
2. The data required exists in the source system, or can be derived from data in the source system
3. you have knowledge of how the data is structured and stored
4. you have knowledge to create a container that defines the relationships between the data required

If you have the above, or have access to skills that can assist with the above, then there is a good chance you will be able to deliver on your requirements.

The first major goal is to get the raw data required into an excel work book without manual intervention as this guarantees data integrity – the BIC is the exactly the tool for this.

Follow this data flow diagram to get to a point where you have all the raw data you need in Excel to satisfy the requirements – hence achieving your first goal

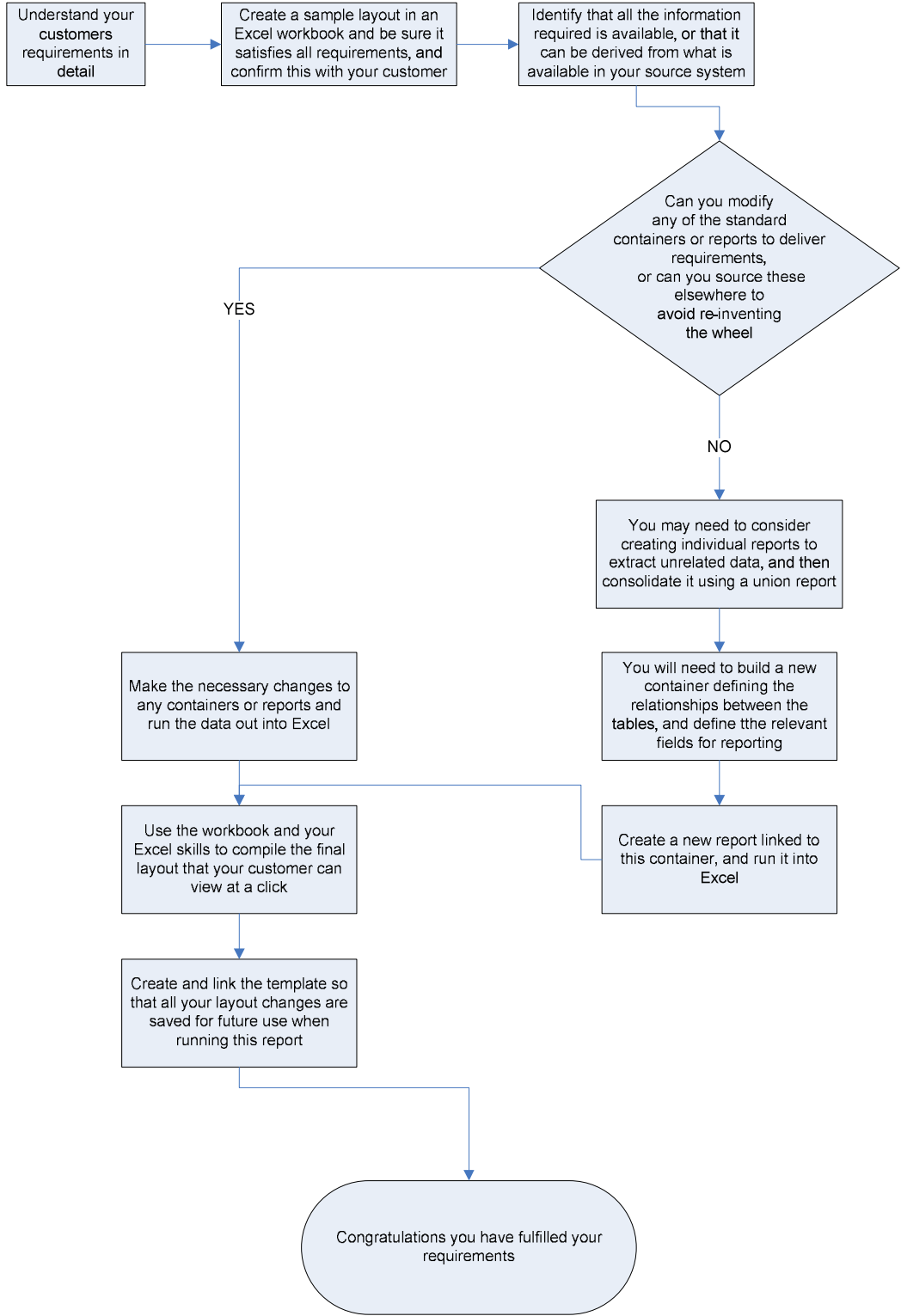
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Recommended BIC development approach



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Transforming raw data into something meaningful

The second major goal is to transform this meaningless data into a powerful report that tells you something about the business. This may be a combination of figures and graphs, but ultimately something that we can create once and re-use by running at the click of a button in future.

Using the "fast track reporting wizard" called the 'Quick Pivot' is an ideal and easy way to do this. So what are the steps...

Assume you have raw data like this...

	A	B	C	D	E	F	G
1	cp	CustomerCategory	CustomerCode/Name	CustomerName	CustSupplID	Date	Description
2	1055.22093	Durban	FRU01-FRUITY JOES	FRUITY JOES	FRU01	2003/10/30	Archies Red Apples
3	105.9583023	Durban	TROT01-TROTTERS CC	TROTTERS CC	TROT01	2003/11/03	Bohemian Grapey Tea
4	786.2209302	Durban	KENS01-KENS TAVERN	KENS TAVERN	KENS01	2003/10/28	B & X Wholenuts
5	75.98937209	Durban	BRON01-BRONNIES CC	BRONNIES CC	BRON01	2003/10/25	Captain Vital Signs Ci
6	73.81976744	Durban	KENS01-KENS TAVERN	KENS TAVERN	KENS01	2003/10/19	Ricky Liquors - Brand
7	73.81976744	Durban	BRON01-BRONNIES CC	BRONNIES CC	BRON01	2003/10/19	Ricky Liquors - Brand
8	140.2325581	Durban	BRON01-BRONNIES CC	BRONNIES CC	BRON01	2003/10/19	Rosy Blade Peaches
9	141.8604651	Durban	BRON01-BRONNIES CC	BRONNIES CC	BRON01	2003/10/25	Woodridge Red Cheek
10	265.9302326	Durban	KENS01-KENS TAVERN	KENS TAVERN	KENS01	2003/10/19	Yardville Health Ale
11	138.1453488	Durban	BOTT01-BOTTLE SHOP	BOTTLE SHOP	BOTT01	2003/09/01	Crystal Puddle Ranba
12	1055.215116	Durban	ALLS01-ALL SORTS STOP SHOP	ALL SORTS STOP SHOP	ALLS01	2003/12/22	Archies Red Apples
13	1055.215116	Durban	FRU01-FRUITY JOES	FRUITY JOES	FRU01	2003/12/19	Archies Red Apples
14	1055.215116	Durban	ALLS01-ALL SORTS STOP SHOP	ALL SORTS STOP SHOP	ALLS01	2003/12/07	Archies Red Apples
15	1055.215116	Durban	CIND01-CINDEES BAR	CINDEES BAR	CIND01	2003/12/06	Archies Red Apples
16	1055.215116	Durban	ALLS01-ALL SORTS STOP SHOP	ALL SORTS STOP SHOP	ALLS01	2003/12/02	Archies Red Apples
17	1055.22093	Durban	FRU01-FRUITY JOES	FRUITY JOES	FRU01	2003/10/30	Archies Red Apples
18	1055.232558	Durban	ALLS01-ALL SORTS STOP SHOP	ALL SORTS STOP SHOP	ALLS01	2003/10/28	Archies Red Apples
19	1055.22093	Durban	FRU01-FRUITY JOES	FRUITY JOES	FRU01	2003/10/13	Archies Red Apples
20	1055.215116	Durban	ALLS01-ALL SORTS STOP SHOP	ALL SORTS STOP SHOP	ALLS01	2003/10/06	Archies Red Apples
21	1055.215116	Durban	ALLS01-ALL SORTS STOP SHOP	ALL SORTS STOP SHOP	ALLS01	2003/09/07	Archies Red Apples
22	105.2034894	Durban	HIGG01-HIGGINS THINGS	HIGGINS THINGS	HIGG01	2003/11/06	Archies Red Chillies

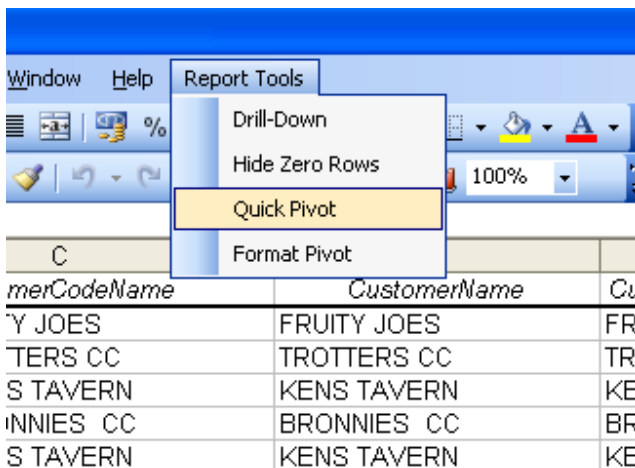
And you want to transform this into a meaningful sales report like this...

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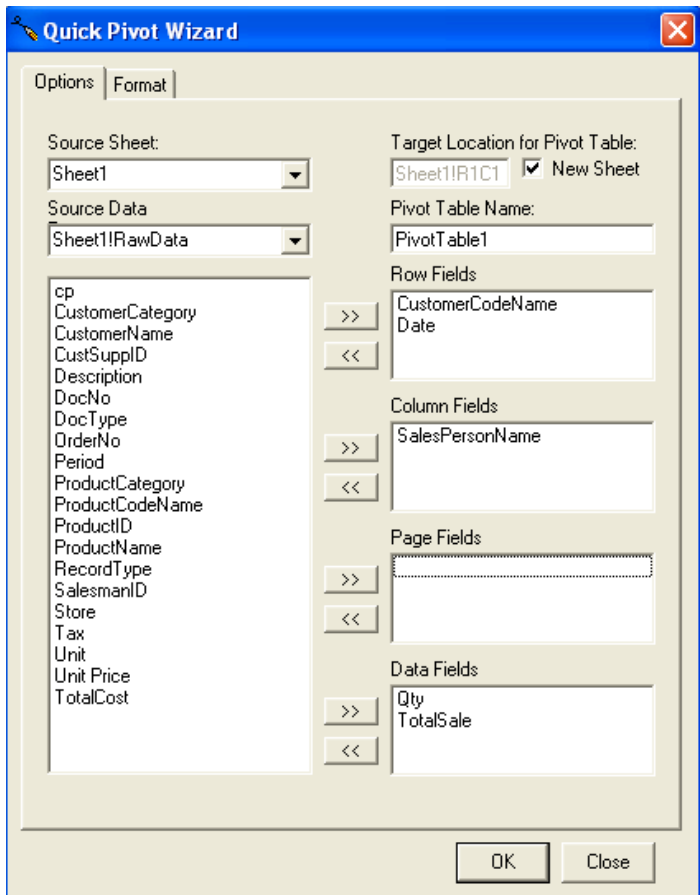
A	B	C	D	E	F	G	H	
1	SALES REPORT							
2	FOR THE PERIOD TO DATE FROM 01 SEP 2003							
3								
4	SalesPersonName	(All)						
5	Store	(All)						
6	Period	(All)						
7	CustomerCategory	(All)						
8								
9				Data				
10	CustomerCodeName	ProductCategory	ProductCodeName	Qty	Total Cost	Total Sale	GP	GP%
11	ALLS01-ALL SORTS STOP SHOP			33	23,639.44	30,819.35	7,179.92	23.30%
12		FRESH PRODUCE		24	22,560.05	29,341.94	6,781.88	23.11%
13			ARCH01-Archies Red Apples	21	22,159.59	28,858.06	6,698.48	23.21%
14			ROSY04-Rosy Blade Peaches	3	400.47	483.87	83.41	17.24%
15								
16		OTHER		9	1,079.38	1,477.42	398.04	26.94%
17			BX0008-B & X Sesames	4	470.95	670.97	200.01	29.81%
18			RONA01-Ronalds Dried Basil	5	608.43	806.45	198.02	24.55%
19								
20	ARCH01-ARCH'S BAKER			25	3,091.60	4,432.26	1,340.66	30.25%
21		BEVERAGES		3	414.51	600.00	185.49	30.92%
22			CRYS03-Crystal Puddle Ranbe	3	414.51	600.00	185.49	30.92%
23								
24		OTHER		22	2,677.09	3,832.26	1,155.17	30.14%
25			RONA01-Ronalds Dried Basil	22	2,677.09	3,832.26	1,155.17	30.14%

Select the Quick Pivot menu option from the Report Tools menu in Excel



Drag and drop the fields from the left hand box below into the relevant areas that you want on the right hand side boxes. Row fields are the fields you will see on the left side of you report, and column fields will be across the top. Page fields are at the top of your report, outside the main reporting area, and allow you to toggle certain values to be on or off at certain time. All your Quantity or value related data should go to the Data field area.

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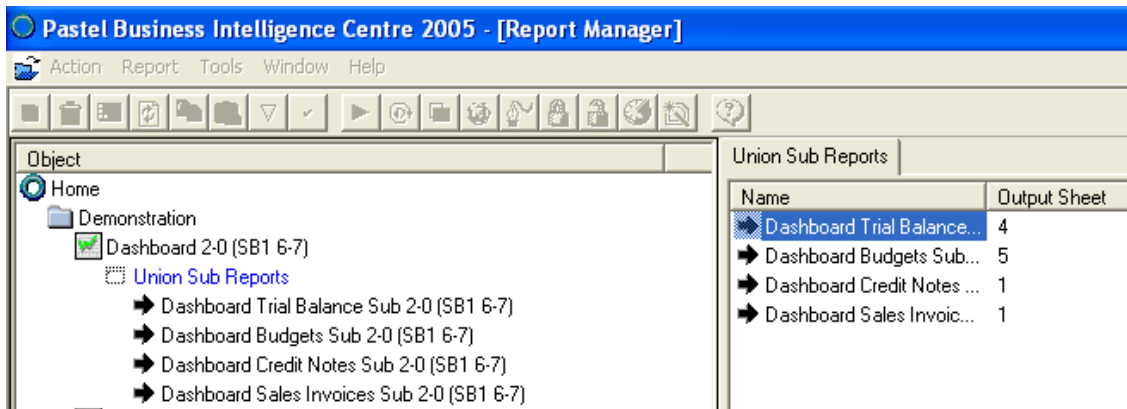
Click OK and you get an instant Pivot table transforming your raw data into something meaningful, and relevant.

Consolidation options

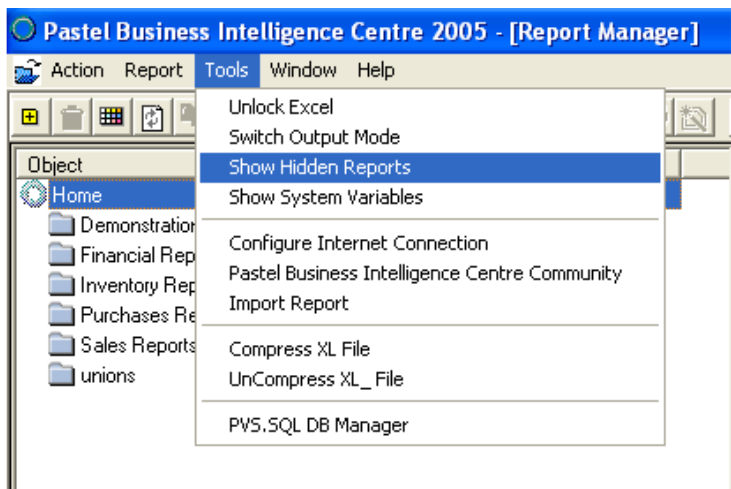
Consolidations take various forms and are critical to management information today. At the same time, they are one of the most time consuming and cumbersome tasks. The BIC is designed to cater for a variety of consolidation options, placing a wrapper around loose Excel spreadsheet use and guaranteeing data integrity and one version of the truth.

The first takes the form of general consolidations revolving around reporting data from multiple disparate sources. The structure of such a report is shown in the diagram under **union reporting**. The insert below shows how this structure is built in the BIC – in this example it is the construct of a dashboard.

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See how the main report has four sub reports that are executed automatically when you run the parent report. On the right side of the insert you will see the different sheets in the workbook that will receiving the various data sets. To see what sub reports make up a union report, double click on the report to drill down to its sub reports. These sub reports are standard reports in their own right, and by default are hidden in the report manager. If you need to make changes to any of these sub reports, you need to unhide them first, and then treat them like any other standard report. Select the home folder first, then choose from the tools menu "Show Hidden Reports".



The alternative method for consolidating similar information is to use a pick list. This allows you to access multiple companies at one time through one connection. The advantage of this method is that you can select which companies to report off on the fly.

This method is best suited when consolidating like data. If your data is dissimilar then rather use the union reporting to consolidate.

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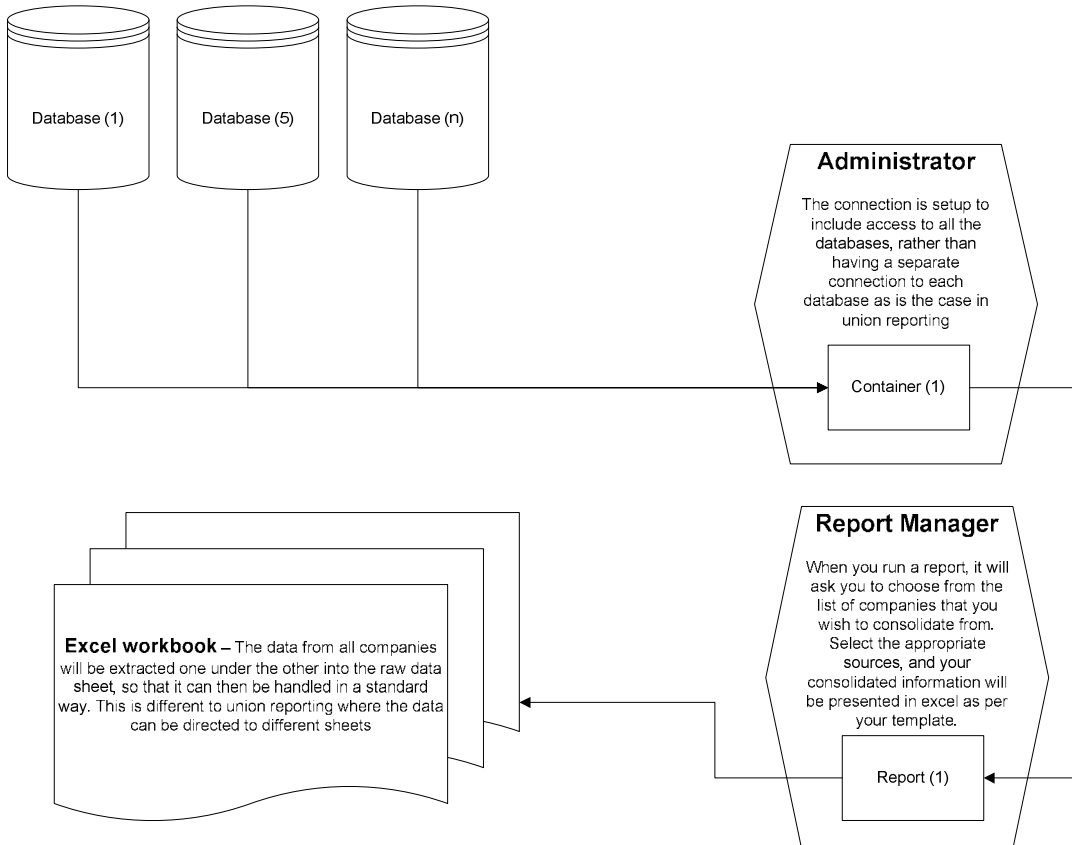
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Consolidations – Pick Lists (similar data)

These databases should contain similar data. E.g. Pastel Partner Co1 and Pastel Partner Co2



Segmentation options

What is segmentation and why do we need to support it for reporting?

Segmentation is an extension to the GL whereby additional fields are defined at an account level that enable you to further classify accounts. This is commonly used to identify an account as belonging to a particular branch and division for example. So typically 2 segments would be setup, one for branch and one for division, and each account in the GL would be allocated to a branch and division accordingly.

The BIC is unable to **automate** segment reporting because it is a customizable entity, and is likely to be different in each company, however it does support segmentation in the management pack templates so that consultants/users can use segmentation for reporting.

The lookup sheet in the management pack drives the automation for generating income statements and balance sheets, and if you make changes to certain columns in the lookup sheet, this will allow you to auto generate and group accounts by a selected segment. This means that for divisional or branch reporting you are able to quickly generate 90% of the required layout, leaving only a handful of calculations to complete the final layout.

By default the GL category Description field in the lookup sheet is what controls the grouping when you auto-generate a new report layout. Changing this will change the way accounts are grouped, but you must auto-generate after each change made to benefit from the new grouping.

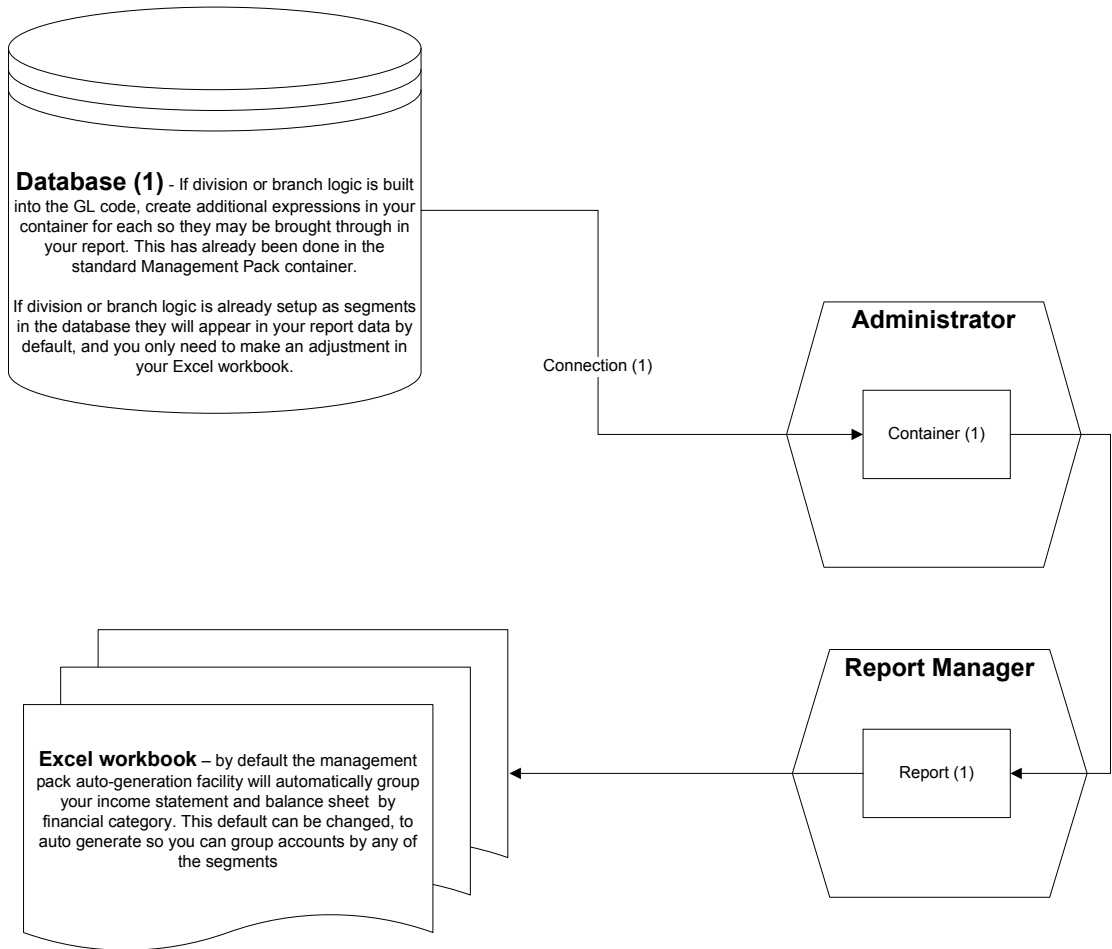
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Segmentation in GL structures



Account Name	GL Cat Desc	GL Cat Code	Type
1 Sales	Revenue	F	1:1
2 Cost Variance	Cost of Sales	F	2:1
3 Cost of Sales	Cost of Sales	F	2:1
4 Inventory Adjustment	Cost of Sales	F	2:1
5 Fixed Costs	Overheads	F	3:1
6 Leases	Overheads	F	3:1
7 Salaries and Wages	Overheads	F	3:1
8 Skills Levies	Overheads	F	3:1
9 Employee Training	Overheads	F	3:1

This is the "lookup" sheet in the management pack template that drives all the automation.

The GL cat Desc column (E in this case) defines how accounts will be grouped via the auto-generation process. By default this is the GL Cat Desc which is in column 3 of sheet1.

if you want to group by a different segment , which may be in col 8 of sheet 1 say, then change the 3 to an 8, and this segment data will be pulled through to the lookup sheet, and then auto-generate your required schedule and 80% of the work is done for you

Drill down options

There are 2 methods used. The one is unique to the Management Pack, and the other is totally generic, and can be used in any report, to drill down to any source that makes logical sense. The dynamic drill down (DDD) is also not limited to drilling down to the database that originally provided the data.

The Management Pack Drill Down

This is designed to be resident within the Pack so that the drill down functionality can be used in isolation of the database. This means that managers who whoever is viewing their Packs, can be removed from the data source and still have access to detailed ledger transactions from their income statement or balance sheet.

Dynamic Drill Down

This can be used in any report. It was designed to query details on the fly, so that efficient reports can be constructed bringing through only the relevant details for analyses, but to have the flexibility to access details too. This is a powerful tool in overcoming the 65 000 row limit that the existing versions of Excel have. This limit will be extended significantly in the new release of Excel.

The construct of the DDD is effectively running a standard report in the background, but passing it the contents of an Excel cell, or range of Excel cells as parameters to the report. This means that the report that is doing the drill down process, must be setup to accept the relevant parameters.

The following method would be recommended when setting up a DDD.

- a) you would obviously have a master report that contains information that you want to drill down on – a good example would be drilling down on a customer to see what products they have bought. Your existing report only has a customer code – and this is the cell you will use to drill down on.
- b) The second step is to create a report (standard report) that brings through the product information that you want to see (there is a good chance you can use a standard container for this).
- c) Add a parameter to your new report that will accept a customer code
- d) Remove any template that may be attached to this report
- e) Run the report on its own to make sure it prompts you for customer code, and check that you are happy with the results – you should get a list of products and relevant information dumped neatly into sheet 1 of a workbook.

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- f) In the original report that has the customer listing you will need to select the Drill Down option from the Report Tools menu and follow the wizard to create your drill down.
- g) Once the DDD has been create and is working, you will need to "create and link" your template so that the DDD is saved as part of your report. Now it will be available from here on.
- h) Some of the standard reports (like the Management Dashboards) come standard with DDD functions built in. It may be worth seeing how this is setup.

Dynamic Drill Down

Pastel UK & Ireland

Pennine House, Denton Lane, Chadderton, OLDHAM OL9 8PU
T: +44 845 456 3104 E: info@pastel.co.uk W: www.pastel.co.uk

BIC Enablement Program

