

Commissioned and overseen by: Department of Health















## TRIPS:

A whole new way of fudging figures

Chumley-Warner Entertainments



## **OVERVIEW**

#### The TRIPS Philosophy



- TRIPS should encourage/support the use of management information for the purposes of making cost effective decisions locally in-year.
- Especially now, with up to 40% reductions in some areas of public expenditure on the table, it essential that financial data be linked to activity and other non-financial data
- The PSS EX1, and other returns, should ultimately be a by-product of in-year use of such information

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#### Influences on the shape of TRIPS



Role of technology in supporting transformation

#### Guidance e.g.

Decommissioning

EU Regulation

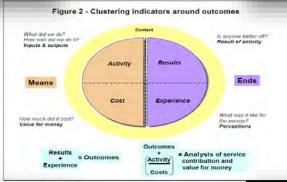


Internal vs External Toolkit 22 January, 2014



Commissioning and Contracting for Outcomes

 Now being rolled out to 600 LD service users





T ransforming

R aw

I nformation in

P ublic

**S** ervices



## Streamlining Procurement

 Objective quality and performance framework National Government
 Opportunities (GO)
 Collaborative Procurement
 Initiative of the Year finalist (2010/11)





#### The TRIPS Concept

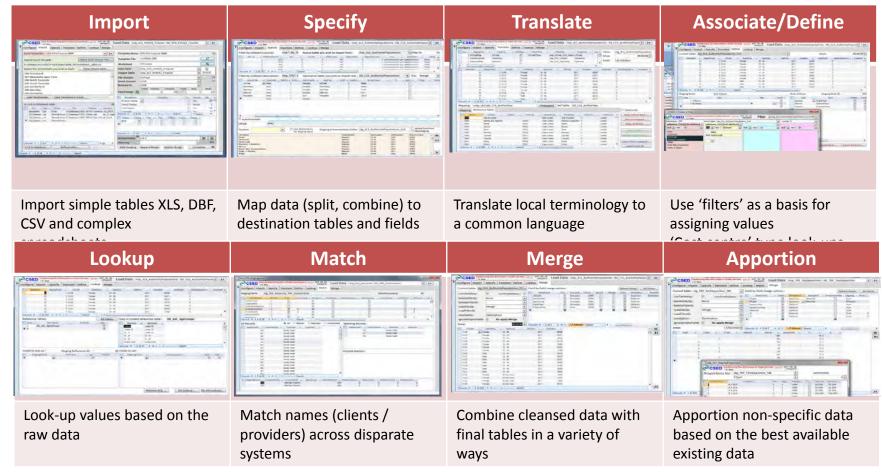


	Collating activity, finance and other data in a new way	Providing an extended dictionary / common language	Supporting councils with software based enabling tool-kit
Currently	<ul> <li>Activity done by the performance team</li> <li>Finance done via cost centres</li> <li>Difficult to match up</li> </ul>	<ul> <li>High level definitions (client / service group)</li> <li>Limited ability to segment by client (age, gender, etc)</li> </ul>	<ul> <li>Bespoke solutions (usually Excel based)</li> <li>No in-year visibility</li> <li>Limited automation – not repeatable</li> </ul>
The TRIPS Concept	<ul> <li>Aggregate client level data (from multiple sources)</li> <li>Assign direct costs where available</li> <li>Apportion remaining costs based on best available information</li> <li>Split out direct from indirect costs</li> </ul>	<ul> <li>More detailed definitions</li> <li>POPPI/PANSI style         breakdowns</li> <li>Full segmentation by age,         ethnicity, gender, etc.</li> <li>Additional dimensions such         as geography, provider         types, etc.</li> </ul>	<ul> <li>Data loading tools from any source</li> <li>Data transformation tools</li> <li>Matching, merging and apportionment tools</li> <li>Presentation and reporting tools</li> <li>Training / how-to videos</li> </ul>

#### The TRIPS Tool-kit

#### Staging: transforming raw information

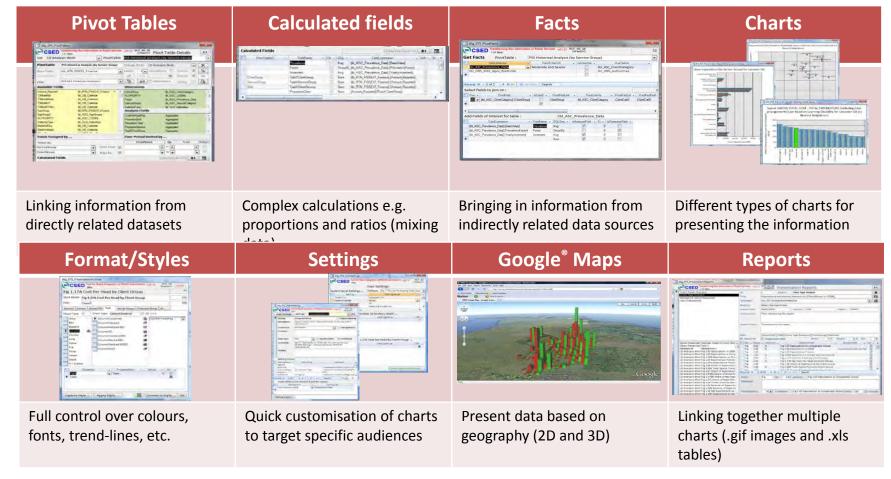




#### The TRIPS toolkit

#### Presentation: getting the data out





# The TRIPS toolkit Pre-configured Reports





- Readily customisable
  - By CSSR, by comparator group, by finance heading, by client category, by service group
- Datasets included
  - 5 years of PSS EX1 activity and finance
  - 4 years of RAP activity data
  - ONS 2001 population data
  - POPPI/PANSI Prevalence factors
  - CQC PAF indicators (2007/8)
  - DCLG Indices of deprivation
  - OS Postcode level longitude and latitude
- More to come ....



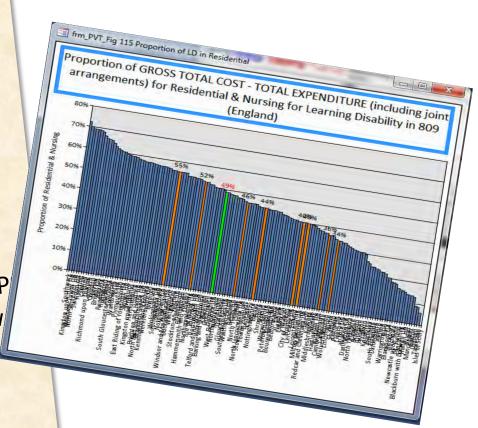
# TRIPS: Examples and Benefits (1)



Derbyshire are starting to actively use TRIPS to manage in-year unit costs.

They are configuring TRIPS to provide on-going PSS EX1 style analysis to track progress on new initiatives.

Already, pre-configured 'Use of Resources' style reports from TRIP have helped them formulate new strategies to reduce their costs



# TRIPS: Examples and Benefits (2)



Councils across the country are now gaining benefit from our preconfigured 'client group'analysis.

Bringing together ONS population data, RAP data, PAF indicators and PSS EX1 finance and activity data, this analysis provides a useful insight into where opportunities may lie.

Colleagues in CSED support councils with this analysis



# TRIPS: Examples and Benefits (3)



Lincolnshire have a number of complex operational spread from which they would like management informativ In one example, on re took them one-and manually analyse 26 With TRIPS they were tau do this for 100% of records in



30 minutes

# TRIPS: Examples and Benefits (4)



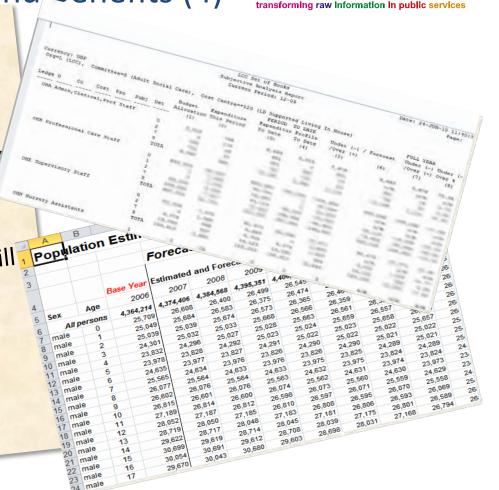
We are working with Leicestershire to combine local (district level) population forecasts with detailed ledger information, activity data and POPPI/PANSI prevalence factor to create a financial and strategic planning suite of analysis.

We are doing this in a way that will Population Estimates and it will be available for all councils

Sex Age 4,364,21

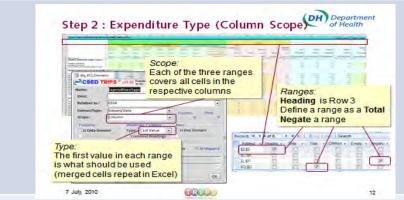
All persons 25,0

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#### Materials to support roll-out





Over 170 training slides



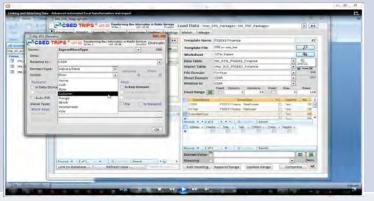
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1) Confident servicitive help and double-clicking

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50 pages of technical manual so far\*



Over 200 minutes of how-to video



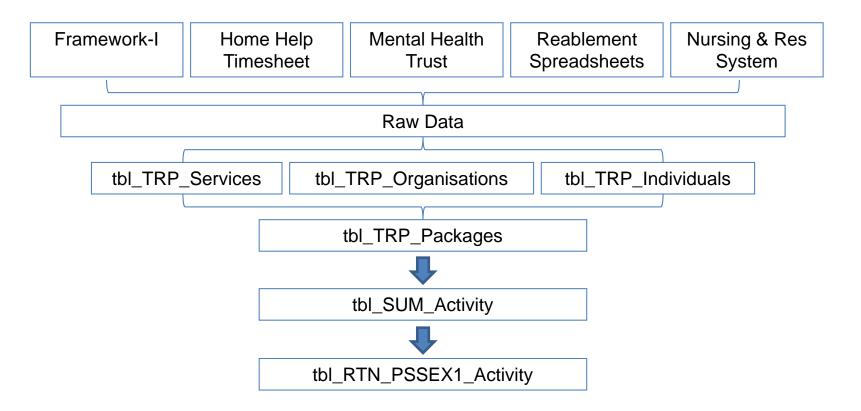
www.trips.uk.net



## **PSS EX1 AND IN-YEAR DATA**

#### Derbyshire PSSEX1 Activity







#### Raw Data



- Framework-I: Host Database;
- Home Help Timesheet: Text .csv from a Host Database;
- **Mental Health Trust:** Spreadsheets (.xls) from 2 different Trusts (different formatting);
- Reablement Spreadsheets: Collated by area Staff each month (same formatting);
- Nursing & Residential System: Text .csv from Host Database;
- Ledger Dump: Host Database;

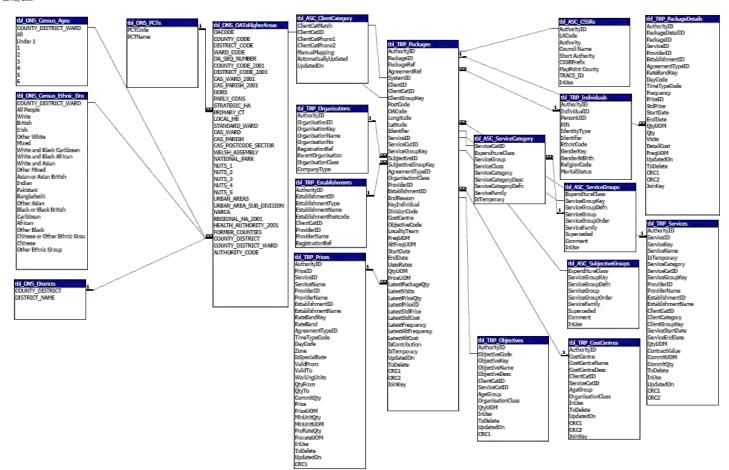
With more time, TRIPS could be used to gather and cleanse the data from the various ad-hoc Host Databases – cutting down on the extra work required each month, and negating the need for stand-alone disparate databases holding duplicate information.



#### ERD for Packages : An Example

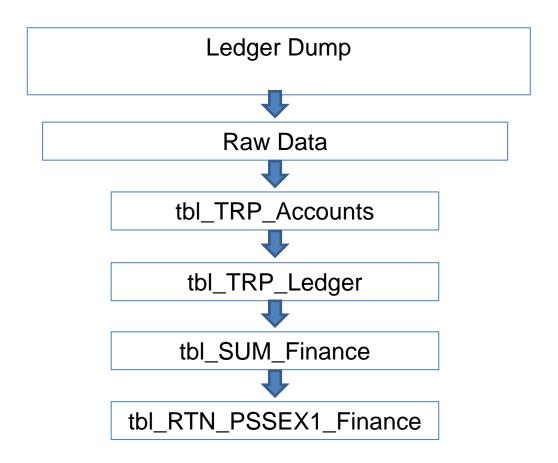


telationships for TRIPS Staging : 'Package' (Service User Level) Datacube



#### Derbyshire PSSEX1 Finance



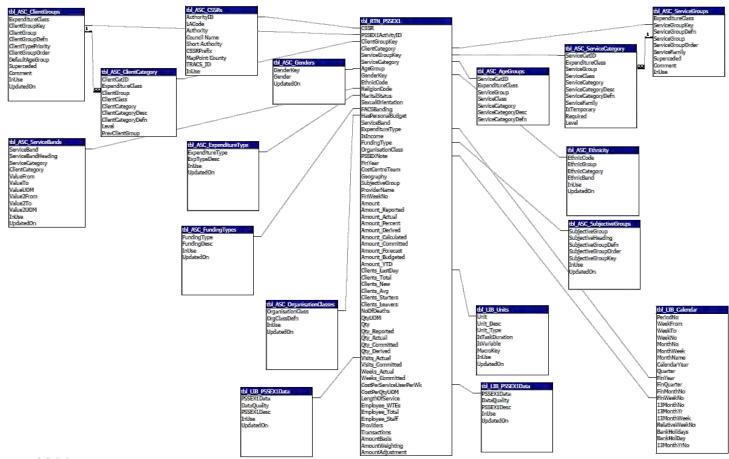




#### ERD for PSS EX1: An example



Relationships for TRIPS Staging : PSS EX+ Data cube 21 May 2009



## Tbl\_SUM\_Finance



Field Name	Data Type	Description
inanceID	AutoNumber	Automatic: Unique row reference for the purposes of referring back to the individual record in the case of any queries
PeriodNo	Number	Required: Reference to the reporting period
inYear	Number	Desirable: Which financial year the data relates to
ClientCatID	Number	Desirable: Reference to the client category (as a number)
ServiceCatID	Number	Desirable: Reference to the Service Category (as a number)
AgeGroup	Text	Desirable: The high level age group for aggregate reporting purposes
GenderKey	Text	Desirable: The gender in internal format
EthnicCode	Text	Desirable : The ethnicity (in ONS code form)
ExpenditureType	Text	Desirable : The high level type of expenditure (e.g. Capital or Revenue)
FundingType	Text	Desirable : Reference to the funding type e.g. Grant, Joint Arrangmnt, Fee/Charge, In-house, etc)
OrganisationClass	Text	Desirable: The high level organisation class (e.g. within PSS EX1)
Providers	Number	Optional: The number of providers providing services over the period
Transactions	Number	Optional : The number of transactions over the period
Clients_LastDay	Number	Required : The number of clients who were receiving a service on the last day of the period (RAP P2)
Clients_Total	Number	Required: The total number of clients who received services over the period (RAP P1) (this will include both starters and leavers and so will be higher than the average)
Clients_New	Number	Required: The number of 'new' clients (RAP P1) defined as clients who wasn't otherwise recorded as receiving a service during the calendar month (versus immediately) prior to
Clients_Avg	Number	Desirable: The average number of clients who received services over the period (this is a better number to use to derive unit cost per client information)
Clients_Starters	Number	Optional: The number of clients who joined the particular service during the period
Clients_Leavers	Number	Optional : The number of clients who left the service during the period
Employee_WTEs	Number	Optional: Working time Equivalents (includes all sources of labour)
Employee_Total	Number	Optional: The number of heads, regardless of whether full time or part time, full employee or agency / contract
Employee_Staff	Number	Optional: The number of direct employees, excluding agency / contract staff (ignores whether full time or part time)
Amount	Number	Required: The best available amount over the period. If Actual is available it will use this, otherwise either the Derived or best of Calculated or Planned
Amount_Reported	Number	Required: The best available amount over the period. If Actual is available it will use this, otherwise either the Derived or best of Calculated or Planned
Amount_Actual	Number	Automatic: The amount as provided by the financial system (in the case of Accounts payable, the actual amount paid over the period)
Amount_Percent	Number	Automatic: The amount as a percentage of the total amount (allows for things like the Cost Weighted index)
Amount_Derived	Number	Conditional: The amount as derived from whatever derivation rules have been put in place
Amount_Calculated	Number	Optional: The amount as calculated using a formula such as Actual Qty * Price
Amount_Committed	Number	Optional: The committed amount (e.g. as extracted from the care plans within the care management system)
Amount_Forecast	Number	Optional: The amount forecast for the total financial year (as provided - potentially calculated in the future)
Amount_Budgeted	Number	Optional: The amount as budgeted at the start of the financial period
Amount_YTD	Number	Optional : The amount spent in the financial Year To Date
CostPerServiceUserPerWk	Number	Optional: Reported cost per service user per week
CostPerQtyUOM	Number	Optional: Reported cost per quantity unit of measure

#### Tbl\_SUM\_Activity

22 January, 2014



22

tbl_SUM_Activity	Data T	Postation
Field Name	Data Type	Description
ctivityID	AutoNumber	Automatic: Unique reference to this Activity entry
eriodNo	Number	Required : Reference to the period
inYear	Number	Desirable: Which financial year the data relates to
lientCatID	Number	Desirable: Reference to the client category (as a number)
erviceCatID	Number	Desirable : Reference to the Service Category (as a number)
xpenditureType	Text	Desirable : The high level type of expenditure (e.g. Capital or Revenue)
undingType	Text	Desirable: Reference to the funding type e.g. Grant, Joint Arrangmnt, Fee/Charge, In-house, etc)
OrganisationClass	Text	Desirable: The high level organisation class (e.g. within PSS EX1)
AgeGroup	Text	Desirable: The high level age group for aggregate reporting purposes
GenderKey	Text	Desirable: The gender in internal format
EthnicCode	Text	Desirable : The ethnicity (in ONS code form)
ReligionCode	Text	Optional: Often captured, the individual's religion - not used for any returns but may be useful for local purposes
ActivityMeasure	Text	Desirable : The measure of activity
QtyUOM	Text	Desirable: The unit of measure for the service (e.g. hours)
DateFrom	Date/Time	Conditional : The date (from) for the respective activity
DateTo	Date/Time	Conditional : The date (to) for the respective activity
Clients	Number	Conditional: The number of clients for the period
Clients_LastDay	Number	Required: The number of clients who were receiving a service on the last day of the period (RAP P2)
Clients_Total	Number	Required: The total number of clients who received services over the period (RAP P1) (this will include both starters and leavers and so will be higher than the average)
Clients_New	Number	Required: The number of 'new' clients (RAP P1) defined as clients who wasn't otherwise recorded as receiving a service during the calendar month (versus immediately) prior to
Clients_Avg	Number	Desirable: The average number of clients who received services over the period (this is a better number to use to derive unit cost per client information)
Clients_Starters	Number	Optional: The number of clients who joined the particular service during the period
Clients_Leavers	Number	Optional: The number of clients who left the service during the period
NoOfDeaths	Number	Optional: The number of deaths over the reported period
Qty	Number	Conditional: The quantity for the period
Qty_Actual	Number	Optional: The actual quantity (e.g. as extracted from the time sheeting system)
Qty_Committed	Number	Optional: The committed quantity (e.g. as extracted from the care management system)
Qty_Derived	Number	Conditional: The derived quantity (as calculated using the derivation rules)
Visits	Number	Conditional: The number of visits for the period
Visits_Actual	Number	Optional: The actual number of visits (e.g. as extracted from the time sheeting system)
Visits_Committed	Number	Optional: The committed number of visits (e.g. as extracted from the care management system)
Weeks	Number	Conditional: The number of weeks for the period
Weeks_Actual	Number	Optional: The actual number of weeks (e.g. as extracted from the time sheeting system)
Weeks_Committed	Number	Optional: The committed number of weeks (e.g. as extracted from the care management system)
LengthOfService	Number	Optional: The total length of a given service (at ServiceGroup level) for all of the service users within the grouping over the period (used to calculate length of stay)
Employee_WTEs	Number	Optional: Working time Equivalents (includes all sources of labour)
Employee_Total	Number	Optional: The number of heads, regardless of whether full time or part time, full employee or agency / contract
Employee_Staff	Number	Optional: The number of direct employees, excluding agency / contract staff (ignores whether full time or part time)
Providers	Number	Optional: The number of providers providing services over the period
IsAverage	Yes/No	Desirable: Indicates if the data is an average (versus on the last day of the period)
IsAdjusted	Yes/No	Desirable: Indicates if the data has been adjusted

#### A more useful in-year cut



 The following illustrates a reconciliation between the PSS EX1 and the RO/RA details – the latter are more useful

								PSS E	X1 RETURN	2009-10											
	0	GROSS TOTA	L COST				INCOME	Ş		1	*			M	EMORANDU	M					
Curre	ent expenditu	ure including ca	pital charge	TOTAL	Client								Capital	charges		Gross 9					
Owi	n provision		Grants	PENDITURE	ontributions				INCOME				Own	Provision		Own provision	Provision by others and				
	(including		to	(including	(Sales,		Income		(including	NET	GROSS		Provision	by others	NET	and joint arrangements.	grants to vol				
	joint	Provision	Voluntary	joint	Fees and	Joint	from	Other	joint	TOTAL	TOTAL		included in	included in	CURRENT		orgs. Included	1			
am	rangements)	by others	rganisations	rrangements)	Charges)	arrangements	NHS	income	arrangements)	PENDITURE	PENDITURE		col C	cols D and E	ENDITURE	С	in col D and E				
	col C	col D	col E	I F = (C to E)	col G	col H	col I	col J	ol K = (G to J)	col L = (F - K)	M = F - H - I	J	col O	col P	Q = (L - O - P)	col R	col S				-
							RO3 Retu	rn													
					Total	THE STREET				_	Net Total Cost										
			Employees	Running	Expenditur e	Sales, Fees & Charges	Other Income	Total Income	Net Current Expenditure	Capital Charges	(excl. spec grants)										
			(1)	(2)	(3) = (1) + (2)	(4)	(5)	(6) = (4) + (5)	(7) = (3) - (6)	(8)	(9) = (7) + (8)										
			Pay										CHANGES TO F	SS EX1							
-1			FRS17 Adjust	tments																	
			Other Pay Re	lated Costs									For own provis	ion split out E	mployees, Prer	mises and Trans	port (clearer	than current n	nemorandum i	tems)	
			2a	Managemen	t and Suppor	t Services							* Add Wholly paid for services to reconcile historical PSS EX 1 where wholly paid for services were netted out								
			2b	Premises Ex	penses								* Split out Provision by others into the three parts of the running costs (makes it much easier to compare direct costs)				()				
			2c	Transport Ex	penses								Convert Grant								
				Supplies and									Add sales to of						roach		
				Third Party F									Combine curre								
			2f	Transfer Pay	ments								Combine SSMS	S into the one	Management	and Support Ser	rvices column	per RO3 (doe	sn't make sens	e to split out)	
	1																				
						GROSS TO	OTAL COST								INCO	OME			TOTAL	(inc MEMOR	ANDUM)
Emp	ployees (1)				F	Running Expenses	s (2)					(3) = (1) + (2)	Sales, Fees 8	Charges (4)		Other Income (5	3)	(6) = (4) + (5)	(7) = (3) - (6)	Capital Charges	(9) = (7) +
		Own Pro	vision (col C	*)																	
exc	luding capita	l charges, inclu	fing wholly p	aid services			Provision b	y others		of which											
		Management and Support	Premises	Transport	Wholly paid	Own provision	Supplies and		Transfer	Grants to Voluntary	Provision by others	TOTAL	Client	Sales to other	Joint	Income from	Other	TOTAL	NET CURRENT	Capital	NET TOTA
En	mployees	Services	Expenses	Expenses	for services	subtotal	Services	Payments	Payments	Organisations	subtotal	EXPENDITURE	Contributions	organisations	arrangements	NHS	income	INCOME	EXPENDITURE	Charges	COST
	C1a	C2a	C2b	C2c	C2x	C1a + C2a + C2b + C2c - C2x - 4b	D2d	D2e	D2f	E2y	D2d + D2e + D2f - E2y		G4a	4b	H5a	I5b	J5c	K6	L7	OP8	M9
EX1		col R and col S				col C				col E	col D	col F*	col G	see col C	col H	coll	coll	col K (G to J)	col L (F - K)		col M (F-H-

#### A better set of activity data



- Quantity in purchased units (weeks, hours, meals, etc)
- Best available quantities (at invoice level) from finance
- Numbers of service users:
  - Over period, at end of period, entering service, leaving service
- Length of service (end/current date start date)
- Number of weeks in service within period
- Commitment cost (if available)

#### A more useful breakdown of actual costs

- By ledger codes (cost centre, subjective heading)
- By provider by service (invoice/payment level) for transactions
  - Only if available, e.g. electronic homecare monitoring, by client



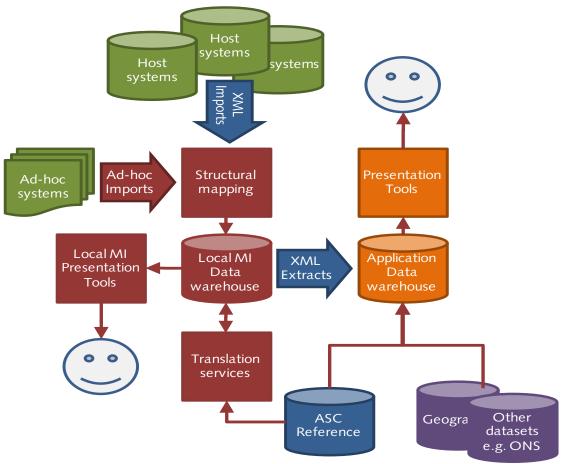
# CORE CONCEPTS AND STAGING SCREEN ORIENTATION



## **ADAPTIVE DICTIONARY**

# Concepts: TRIPS Architecture





#### Kinds of database

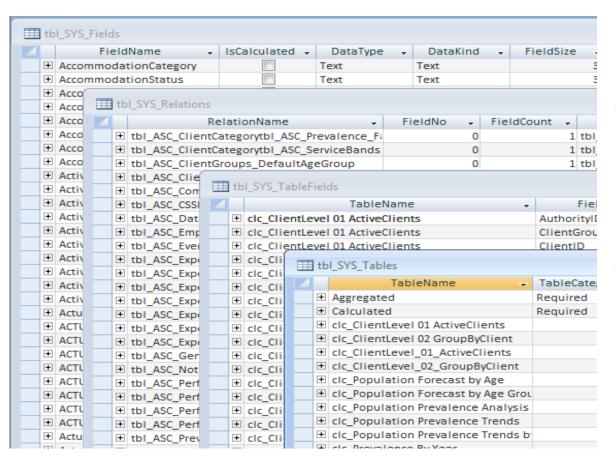


Data 🕶	DatabaseTemplate 🔻	DatabaseSubdir 🕶	DatabaseName 🔻	DatabaseDesc →	DatabaseKind2
ASC		[ReferencePath]	TRIPS ASC Ref	Adult Social Care Reference database	
CLG		[ReferencePath]	TRIPS CLG Ref	Communities and Local Government da	
CQC		[ReferencePath]	TRIPS CQC Ref	Care Quality Commission database	
GEO		[ReferencePath]	TRIPS GEO Ref	TRIPS Geography, postcode mapping ar	
HLP		[HelpPath]	TRIPS Help	FastHelp database for context sensitiv	
IMP	.\Templates\TRIPS IMP Templat	[CSSRPrefix]	TRIPS IMP [CSSRPrefix] Import	TRIPS organisation specific import data	[CSSRPrefix]
LGA		[ReferencePath]	TRIPS LGA Ref	Local Government reference data (e.g.	
LIB		[ReferencePath]	TRIPS Library	TRIPS Library database	
MAP		[CSSRPrefix]	TRIPS MAP [CSSRPrefix] Mapping	TRIPS mapping table database	[CSSRPrefix]
ONS		[ReferencePath]	TRIPS ONS Ref	Office of National Statistics database	
PVT		[CSSRPrefix]	TRIPS PVT [CSSRPrefix] Present	TRIPS presentation table database	[CSSRPrefix]
RTN		[ReferencePath]	TRIPS RTN Data	Returns (NHS Information Centre) data	
STG	.\Templates\TRIPS STG Templat	[CSSRPrefix]	TRIPS STG [CSSRPrefix] Staging	TRIPS staging table database	[CSSRPrefix]
SYS			TRIPS Staging	TRIPS Staging application database	
TRP	.\Templates\TRIPS TRP Templat	[CSSRPrefix]	TRIPS TRP [CSSRPrefix] Data	TRIPS organisation specific data wareh	[CSSRPrefix]

- New sources of data can easily be added
- Some databases are copied from templates when a user configures
   TRIPS to a new authority
- TRIPS has intelligence to look for and link to databases

# Concepts: The TRIPS MetaData Dictionary





When a table is 'made known' to TRIPS, it's details are automatically populated in four system metadata dictionary tables

#### MetaData: tbl\_SYS\_Tables

22 January, 2014



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Field Name	Data Type	Description
TableName	Text	The name of the table
TableCategory	Text	Reference to the table category (data requirements)
TableDesc	Text	The description associated with the table
TableNotes	Text	Notes about the table
TableFamily	Text	The table family (excluding any prefixes added to differentiate between imports, temporaries, etc)
MapTable	Text	The name of the map (translation) associated with this table
InPickList	Yes/No	Indicates if the table meets the criteria for it (and its fields) appearing in a picklist
IsSystem	Yes/No	Indicates if the table meets the criteria for being a system table
IsReference	Yes/No	Indicates if this table is a reference table
NotForMapping	Yes/No	Indicates if this table should not be included when creating mapping tables
IsWorking	Yes/No	Indicates if this table is a working table
IsTemporary	Yes/No	Indicates if this table is a temporary table (in which case there will be no associated field records)
IsRaw	Yes/No	Indicates if this table is a raw data file (which will not be overwritten with defaults from the dictionary)
IsStandard	Yes/No	Indicates if this table is a standard table defined by the system
IsTimescale	Yes/No	Indicates if this table is one used for timescale purposes
IsMultiAuthority	Yes/No	Indicates if this table is multi-authority (in which case certain logic which automatically applies AuthorityIDs will be overwritten
DictionaryPriority	Number	The priority with respect to updating the dictionary
IsLinked	Yes/No	Indicates if this table is linked or not
Standardised	Yes/No	Indicates if this table is for publication as a candidate for standardisation
InPSSEX	Yes/No	Indicates if this table is used for the core PSS EX1 dataset
IsLocked	Yes/No	Indicates if this definition is locked (and should not be updated via the automatic defintions logic)
HasAnalysisFields	Yes/No	Indicates if this table holds analysis fields
RecsUpdatedOn	Date/Time	The date/time when this field was last updated on
Records	Number	The number of records currently in the table (sometimes not available directly via the table)
InUse	Yes/No	Indicates if the table is in use
InUseUpdatedOn	Date/Time	The date/time when the InUse/HasNulls flags were last udpated on
InUseSecs	Number	The number of seconds taken to run the InUse check on the table
MaxUpdatedOn	Date/Time	The maximum date for the UpdatedOn field within the table (used to determine if operations should be carried out or not)
ToDelete	Yes/No	Indicates if the table should be deleted
UpdatedOn	Date/Time	Date / time this record was last updated on
TableID	AutoNumber	Unique Identifier the for the table
DateField	Text	The name of the date field for the table (Null if it doesn't exist)

#### MetaData: tbl\_SYS\_TableTypes

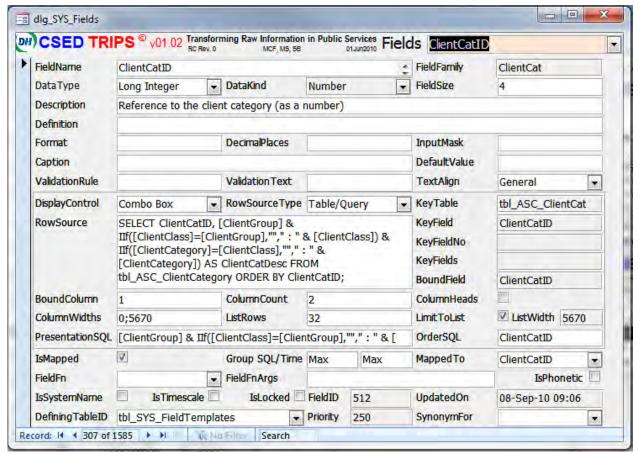


DatabaseKin∢ →	TableType →	TypeDesc +	InPickList 🔻	IsSystem -	IsReferenc -	NotForMap -	IsWorking -	IsTempora →	IsRaw	<ul> <li>IsStandard -</li> </ul>	IsTimescal -	IsMultiAut -	UseCSSRPri -	Dict →
MAP	als_*	Aliases (used in matching		<b>V</b>		<b>V</b>	<b>▽</b>						<b>✓</b>	042
1AP	asn_*	Associations (used in Ass		<b>V</b>		<b>▽</b>	<b>▽</b>						<b>▽</b>	043
VT	clc_*	Calculated tables : used f	<b>√</b>			<b>V</b>								020
MP	imp_*	Used for user defined imp				<b>▽</b>			<b>V</b>				<b>✓</b>	060
MP	imp_STG*		<b>√</b>			<b>▽</b>			<b>V</b>	<b>√</b>				062
MP	imp_XLS*		<b>V</b>			<b>▽</b>			<b>V</b>					061
PVT	kml_*	Calculated tables : used f				<b>V</b>								015
ЛАР	map_*					<b>V</b>	<b>V</b>							040
TG	mat_*			<b>√</b>		<b>▽</b>	<b>✓</b>	<b>✓</b>						002
VT	pvt_*			<b>▽</b>		<b>▽</b>	<b>▽</b>							010
TG	scr_*			V		<b>√</b>	<b>√</b>	<b>✓</b>						001
TG	stg_*			<b>V</b>		<b>▽</b>	<b>▽</b>							030
ASC	tbl_ASC*		<b>V</b>		<b>V</b>					<b>V</b>		<b>√</b>		139
LG	tbl_CLG*		<b>V</b>		<b>J</b>					V		<b>▽</b>		149
CLG	tbl_CLG_Authorities		<b>V</b>		<b>J</b>					<b>▽</b>		<b>V</b>		140
QC	tbl_CQC*		<b>V</b>							<b>√</b>		<b>V</b>		159
CQC	tbl_CQC_PAFIndicators		<b>V</b>		<b>J</b>					<b>✓</b>		<b>✓</b>		150
CQC	tbl_CQC_SASS_Questions		<b>V</b>							<b>▽</b>		<b>V</b>		151
GEO	tbl_GEO*		<b>V</b>		<b>J</b>	<b>✓</b>				<b>✓</b>		<b>▽</b>		199
GEO	tbl_GEO_PostcodeLongLat		<b>V</b>		<b>V</b>	<b>V</b>				<b>√</b>				190
HLP	tbl_HLP*			<b>✓</b>	<b>V</b>	<b>▽</b>				<b>√</b>				080
SYS	tbl_KML_*			<b>V</b>		<b>▽</b>				<b>√</b>				095
.DA	tbI_LDA*		<b>V</b>							<b>J</b>				110
.GA	tbl_LGA*		<b>V</b>		<b>V</b>					<b>V</b>		<b>V</b>		160
.IB	tbl_LIB*		<b>V</b>	<b>▽</b>	<b>V</b>					V				209
.IB	tbl LIB Calendar		V		<b>V</b>	<b>V</b>				<b>V</b>	V			200

- The features of different types of table are controlled via another metadata table
- TRIPS is currently partially split up, but tables have been categorised with the future split in mind

#### MetaData: tbl\_SYS\_Fields





There is enough information in these tables to re-create fields and tables

If a field has the same name as one in the dictionary it inherits its' features



## MetaData: tbl\_SYS\_TableFields



Field Name	Data Type	Description
TableName	Text	The name of the table
FieldName	Text	The name of the field
Caption	Text	The caption associated with the field (will default to the caption in the field definition first and the field name secondly)
DataType	Number	The type of data
DataKind	Number	The kind of data (numeric, date, etc)
AutoIncrField	Yes/No	Indicates if the field is automatically incremented
FieldSize	Number	The field size
IsConsistent	Yes/No	Indicates if the basic field properties are consistent with the FieldID with which it is associated
FieldCategory	Text	The category of field
FieldNo	Number	The order of the field within the table
PresentationOrder	Number	The order in which to present the fields for reporting purposes (if left Null it can be automatically updated, therefore set negative if no wish to print)
Dimension	Text	Reference to the dimension (for OLAP cube based objects such as the PSSEX1 dataset)
Required	Yes/No	Indicates if data is required for the field
AllowZeroLen	Yes/No	Indicates if a zero length string ("") is permitted
PrimaryKeyOrd	Number	The order in which the field appears in the primary key index
PrimaryKeyFields	Number	The number of fields in the primary key
JoinPriority	Number	In the case where there may be multiple routes to the same table this priority key will determine which will be picked first (the InUse flag is also taken into account to the same table this priority key will determine which will be picked first (the InUse flag is also taken into account to the same table this priority key will determine which will be picked first (the InUse flag is also taken into account to the same table this priority key will determine which will be picked first (the InUse flag is also taken into account to the same table this priority key will determine which will be picked first (the InUse flag is also taken into account to the same table this priority key will determine which will be picked first (the InUse flag is also taken into account to the same table this priority key will determine which will be picked first (the InUse flag is also taken into account to the same table this priority key will determine which will be picked first (the InUse flag is also taken the same table this priority key will determine which will be picked first (the InUse flag is also taken the same table table the same table table the same table tab
IsIndexed	Yes/No	Indicates if the field is otherwise indexed
IsUniqueIndex	Yes/No	Indicates if the index is unique
InPickList	Yes/No	Indicates if the field should appear in picklists
InAnalysis	Yes/No	Indicates those fields which will be used for analysis (must be numeric and will not be used for grouping purposes)
InSelection	Yes/No	Indicates if this field can be used for selection purposes (only exclude internal key fields from this)
IsTimescale	Yes/No	Indicates those fields which will be used as part of a timescale criteria
IsMappedKey	Yes/No	Indicates if this field is a key used for mapping purposes (i.e. text and a Unique index)
ExcludeFromAutoJoins	Yes/No	Indicates if this field should be excluded from auto joins (e.g. fields which are there to set defaults but which use picklists)
UsePhonetics	Yes/No	Indicates if this mapped key is long enough to warrent the use of phonetics
JoinTblFldID	Number	The TableFieldID to which this field joins (based on the mappings defined in the Fields table)
IsLocked	Yes/No	Indicates if the record should be locked
NullRecords	Number	The number of records with a Null entry in for this field (-1 if all Null)
PercentComplete	Number	Indicates the degree of completeness (percent of non-Null records for this field)
MaxTextLen	Number	The maximum length of text within the field (if text) (based on a maximum of the first 1,000 records)
RecsUpdatedOn	Date/Time	The date/time when this field was last updated on
NullsUpdatedOn	Date/Time	The date/time when the InUse/HasNulls flags were last udpated on
ToDelete	Yes/No	Indicates if the field should be deleted
TableID	Number	Reference to the table in the tables table
FieldID	Number	Reference to the field in the dictionary   Property Sheet

#### MetaData: tbl\_SYS\_Relations



Field Name	Data Type	Description
Connect	Text	The connect string used to connect to relations which are not in the current database
RelationName	Text	The name of the relation (if via a field lookup this will be in the form TableName_FieldName)
FieldNo	Number	The index for the field in the relation
FieldCount	Number	The number of fields in the relation
TableName	Text	The name of the main (key) table in the relationships
FieldName	Text	The name of the main (key) field in the relationships
TableFieldID	Number	Reference to the TableFieldID for the main (key) field - improves join performance
ForeignTable	Text	The name of the foreign (current) table being documented
ForeignName	Text	The name of the foreign (current) field being documented
ForeignFieldID	Number	Reference to the TableFieldID for the foreign (current) field
DataType	Number	The data type of the foreign field
Attributes	Number	Holds the attributes for the relationship
PartialReplica	Yes/No	Indicates if the relation is a partial replica
IsSystem	Yes/No	Indicates it the relation is defined by the system (referential integrity)
OneToOne	Yes/No	Indicates if the relationship is a One-To-One relationship
LinkedTable	Yes/No	Indicates if either of the tables is linked
Enforce	Yes/No	Indicates if the relationship is (or should be) enforced
CascadeUpdate	Yes/No	Indicates if the relationship does (or should) cascade update
CascadeDelete	Yes/No	Indicates if the relationship does (or should) cascade delete
HasLookup	Yes/No	Indicates if the relationship was determined via Lookup (versus a hard Relationship)
KeyUnique	Yes/No	Indicates if the main (key) field is unique
JoinPriority	Number	In the case where there may be multiple routes to the same table this priority key will determine which will be picked first (the InUse flag is also taken into accoun
ToDelete	Yes/No	Used to mark if this record should be considered for deletion
RelationId	AutoNumber	Unique reference to this relationship

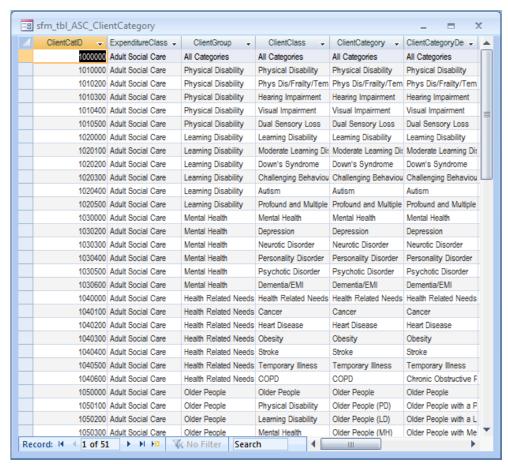
- This table stores implied, as well as enforced, relationships (anything with a look-up is implied)
- Relationships can be re-built from this table



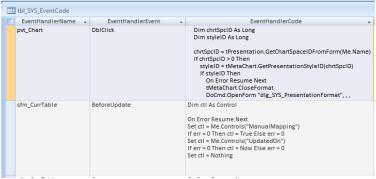
## **ADAPTIVE USER INTERFACE**

#### **AutoForms**





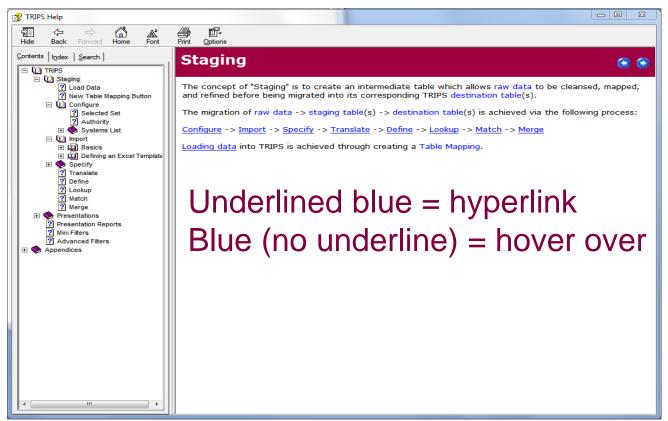
- The system creates simple forms (and reports) as needed
- Columns inherit things like lookup lists from the dictionary
- Functionality is added via metadata based code snippets



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### Concepts: Context sensitive help (F1)





We have used FastHelp to develop context sensitive help.

Linkage to help text is automated

- code scans forms and controls and populates metadata tables
- The help text is linked to this
- Code then updates the forms using these tables



Reporting the guts of TRIPS

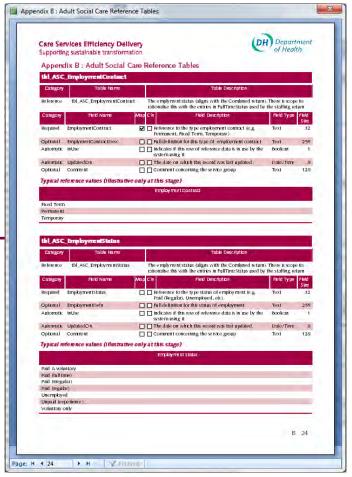
#### **DOCUMENT SERVICES**

#### Documentation – Self Generating



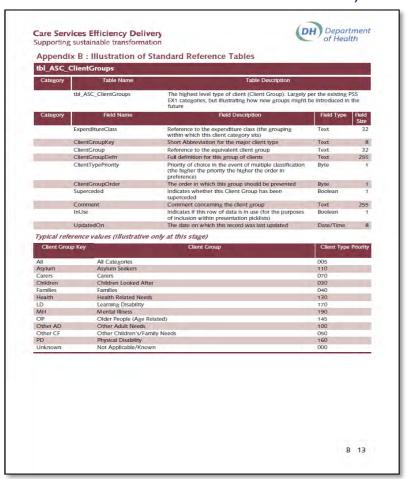
39

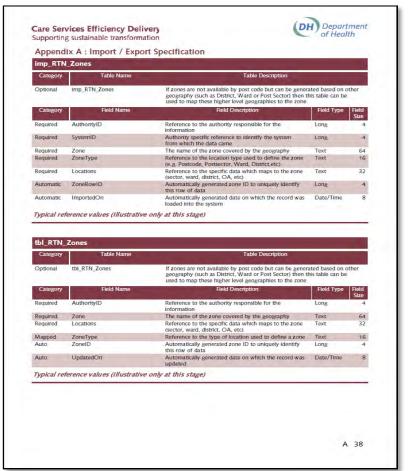
dlg_SYS_Reports	RIPS © v01.02 Transformin	g Raw Information in	Public Services	Preview
Reports	B. ASC References	MCF, MO, 36	013012010	Tieview
ReportName	B. ASC References			
ReportTitle	Appendix B : Adult Socia	l Care Reference	ce Tables	
ReportDesc	Adult Social Care Refere	nce Tables		
TablePattern	tbl_ASC_*			
PagePrefix	В		StartPage	1
ReportTemplate	Table Details with Conte	nts		
WhereCondition				
OrderBy:				
ReportTemplate	Table Details with Conter	nts		
SystemReport	rpt_SYS_Tables			
InitialisationFn	ReportTableDefsInitialise [ReportName])	("spt_SYS_Tab	leData",	
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ReportWidth	21.00cm LeftMa	rgin 1.50cm	RightMargin	1.25cm
FontName	Syntax	HdrFontName	Syntax	
FontSize	9 Bold Italic	HdrFontSize	9 Bold	
ForeColor	RGB(0,0,0)	HdrForeColor	RGB(255,25	5,255)
BackColor	RGB(255,255,255)	HdrBackColor	RGB(164,0,7	70)
AltBackColor	RGB(233,197,200)			
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BorderColor	RGR(255 255 255)	HdrBorderColor	DCD/255 25	



### The TRIPS Dictionary (self-documenting) Standard Reference tables, Data warehouse templates



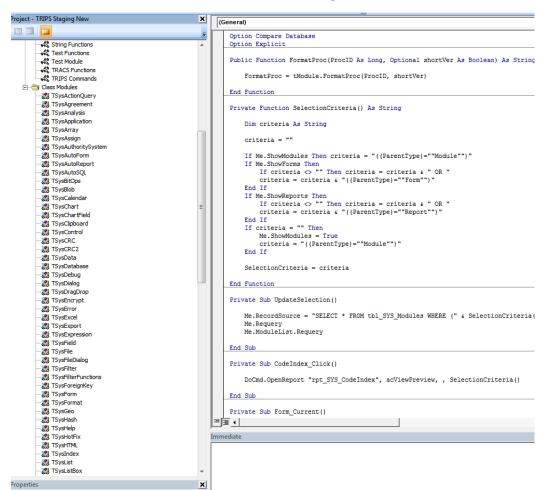






#### Code: Pseudo Object Oriented



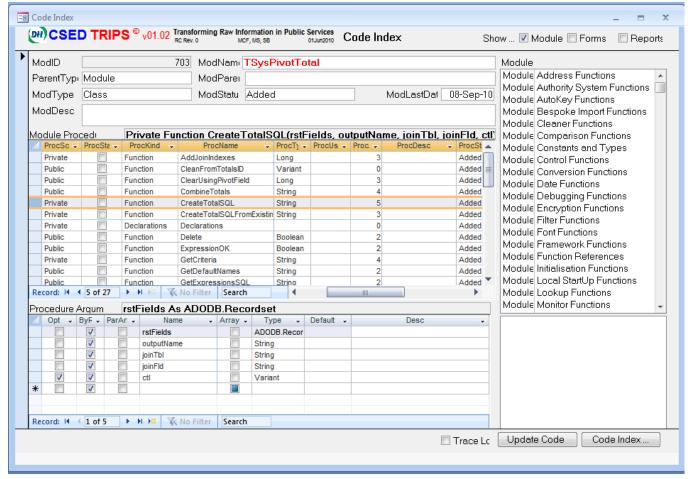


 Code is heavily modularised into related functionality using classes

Weak on in-line documentation

#### Metadata: Code documentation





Whilst we have not added documentation to it yet, the system automatically indexes all modules, functions and arguments ready for a detailed function reference manual

#### MetaData:

#### Report of Functions

 We can report at a high level on when a piece of code was last changed



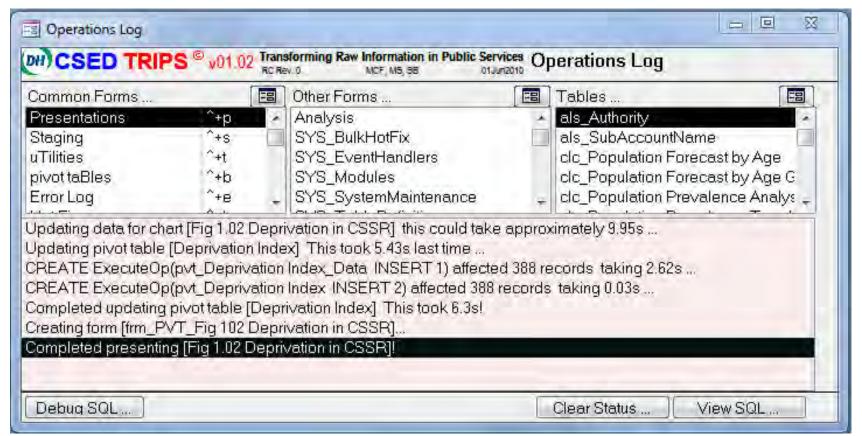
43

Standard Modu	ıle Cleaner Functions		
C			
CleanDate	Public Function Clean Date(value As Variant) As Variant	Changed	08-
CleanEndDates	Public Function CleanEndDates(TableName As String, groupBY As String, startField As String, _ endField As String, Optional Condition As String = = "") As Long	Changed	08-
CleanFilePath	Public Function Clean FilePath (File Path As String) As String	Added	12-
CleanFirstName	Public Function Clean FirstName(varName As Variant, Optional isReversed As Boolean = False) As String	Added	14-
CleanGenericNamePart	5 Private Function Clean GenericNameParts(Origina Name As String) As String	Changed	12-
CleanLastName	Public Function Clean LastName (varName As Variant, Optional isReversed As Boolean = False) As String	Added	14-
CleanName	Public Function Clean Name(ByVal nameTxl As Variant, Optional allowNumbers As Boolean = = False, _ Optional use UpperCase As Boolean = = False, Optional excludeS paces As Boolean = = False)	Changed	27-
	AsVariant		
CleanObjectName	Public Function Clean ObjectName(ByVal in putName As Variant, Optional white SpaceRep is coment As String = = "-", -	Added	12-
CleanPostCode	Optional otherLen As Integer = = 0) As Variant		0.0
	Public Function Clean PostCode (PostCode As Variant) As Variant	Changed	08-
CleanProvider	Public Function Clean Provider(ProviderName As Variant) As Variant	Changed	12-
Clean String	Public Function Clean String (var String As Variant) As Variant	Changed	08-
CleanYesNo P	Public Function CleanYesNo(value As Variant, Optional DefaultValue As Boolean == False) As Boolean	Changed	08-
PreProcessIndividuals	Public Function Pre Processind ividuals(staging Tbl As Variant) As Long	Changed	08-
TrimWhiteSpace	Public Function TrimWhiteSpace(bt As String) As String	Added	12-
Standard Modu	ule Comparison Functions		
C			
•	Marie Marie Announce Marie Marie Marie Announce Announce Announce Announce Announce Announce Announce Announce	****	
CompareInitials CreateMultiLike	Public Function CompareInitials(initials1 As Variant, initials2 As Variant) As Variant	Added	27-
	Public Function Create MultiLike (FieldName As String, multiwild card As String) As String	Changed	21-
G	Public Function GetCharDistance(bd1 As Variant, bd2 As Variant, Optional ByVal maxDistance As Integer = = -1,_		
GetCharDistance	Public Function GetCharDistance(bt1 As Variant, bt2 As Variant, Optional ByVa I maxDistance As Integer = =-1, _ Optional use Percent As Boolean = = False) As Integer	Added	21-1
GetCharDistance		Added	21-1
	Optional use Percent As Boole an = = Palse) As Integer	Added	
  s SameA uthority			
ı	Optional use Percant As Societin = = Passe) Ast integer  Public Fundion IsSameAuthority(sucht As Variant, such 2 As Variant) As Societan  Public Fundion Multinist(sextToSeach As Variant, search.List As Variant, Optional delim As String == "		27-1
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   Is SameA uthority   M   MultiInstr   MultiLike	Optional use Percant As Boole ain = False) As Integer  Public Fundion IsSame Authority (aucht As Variant), aucht As Variant) As Boolean  Public Fundion Nuthinsty text To Search As Variant, aucht List As Variant, Optional defin As Shing = = ",	Add ed Changed	27-1 27-1 12- 08-
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#### **Basics: The Operations Log**





#### Document : The Error Log



	CSED (.0) Beta	7.15 5.11.00.0	Error Log	SelectedDate 28-May-20					
	ErrorID	DbjName		Context					
	Error Code	Module			Ш				
-	Error Time	ErrMsg			Ш				
-	5350 frm SYS Present	ation	IIIIIIInvt PSS FX1 Fina	ancial Analysis].[AUTHORITY]] = (([pvt. PSS EX1	+				
F	2001 TSysMetaChart.A		Financial Analysis].[AUTHORITY]])])						
F	28-May-10 You canceled the	- A	And (([pvt_PS\$ EX1 Financial Analysis].[ClientGroup]) In('Learning Disability'))) And (([pvt_PS\$ EX1 Financial Analysis].[FinanceHeadin						
ŀ	12:42:33	provious operation.							
	5351 sfm SYS PivotTa	hla	DELETE Itbl SYS Piv		÷				
H	-2147467259 TSysPresentation.		FROM [tbl SYS_PivotFields] LEFT JOIN [tmp_tbl_SYS_PivotFields]  ON [[tbl SYS PivotFields],[TableName] =						
F		t be deleted or changed because table							
F	12:43:06 "tbl_SYS_PivotTal	bles' includes related records.	AND (Dbf SYS PivotFie	[tmp_tbl_SYS_PivotFields].[TableName]) AND [[tbl SYS_PivotFields].[PivotTableID] = [tmp_tbl_SYS_PivotFields].[					
	5352 frm SYS Present	ation		ancial Analysis].[AUTHORITY]] = [([pvt PSS EX1	Ť				
F	2001 TSysMetaChart.Ar		Financial Analysis].[AU	Financial Analysis].[AUTHORITY]])))					
F	28-May-10 You canceled the		And (([pvt_PSS EX1 Financial Analysis], [ClientGroup]) In('Learning Disability'))) And (([pvt_PSS EX1 Financial Analysis], [FinanceHeadin						
	12:53:41	providence of the control of the con							
Ī	5353 frm SYS Present	ation	((((((([pvt_PSS EX1 Financial Analysis].[AUTHORITY]) = (([pvt_PSS EX1 Financial Analysis].[AUTHORITY]))))  And (([pvt_PSS EX1 Financial Analysis].[ClientGroup]) In('Learning Disability'))						
f	2001 TSvsMetaChart.Ar	pplvFilter()							
ľ	28-May-10 You canceled the	previous operation.							
	12:55:48	San Landson San Land		1 Financial Analysis].[FinanceHeadin					
Ī	5354 sfm_SYS_PivotTa	ible	Attempting to delete table [pvt_PSS EX1 Financial Analysis]						
Ī	2008 TSysTable.Delete	0							
		IO You can't delete the database object 'pvt_PSS EX1 Financial Analysis'							
	13:28:05 while it's open.	to an also also de de de de la coma l'andre							
	5355 frm_SYS_Present	ation							
	2001 TSysMetaChart.Ap		Financial Analysis].[AU						
	28-May-10 You canceled the			1 Financia[Analysis].[ClientGroup]) In('Older People'))] 1 Financial Analysis].[FinanceHeading]] In(					
	14:27:06		Wild (ffb4/7), 23 FV	Litteriorat Original Indiana regardly tof					
	5356 sfm_SYS_PivotTa	ible	Attempting to delete ta	ble [clc_PSS EX1 Financial Analysis]	T				
Ε	rd: 14 1 of 7 ) H l	Search		The state of the s					

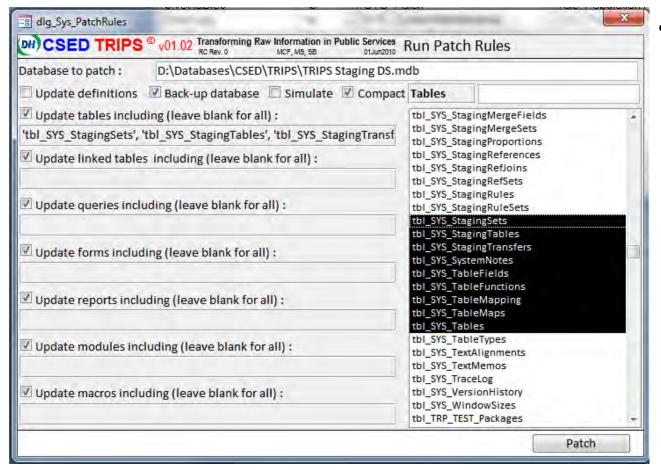


Maintaining TRIPS

### PATCH / HOTFIX

#### Simple Patch logic





 The simple patch logic allows for selective updating of a local database to match a provided master

#### Patch Rules

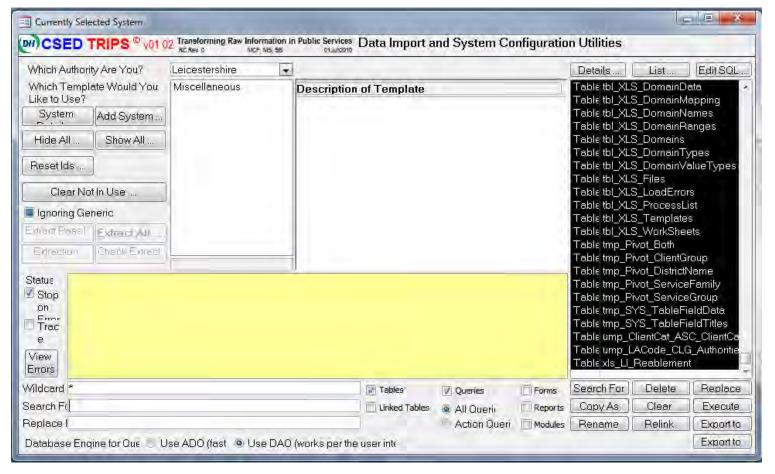


ObjectTyp →	ProcessOrder →	ObjectPattern +	ObjectGroup 🚽	ToRepla →	ToCopy[ -	ToCopy1 →	ToClear →	ToPopul 🕶	Commai 🕶	Execute 🕶	Execute -	ObjectCount 🗸	Pass1RunOn
Module	100	•	System (General)	<b>V</b>									
Table	14,100	als_*	Mapping									2	
Macro	100	Auto*	System (General)	<b>√</b>									
Form	500	dlg_*	System (Core)	<b>✓</b>									
Report	300	ERD*	System (Core)	<b>V</b>									
Form	400	frm_STG_*	System (Core)	<b>V</b>									
Form	300	frm_SYS_*	System (Core)	<b>V</b>									
Link	100	imp_TRP_*	Import			<b>V</b>							
Table	11,000	imp_TRP_*	Import		<b>✓</b>							1	
Table	8,110	kml_MarkerGroupSelections	MetaData (Presentation)		<b>✓</b>		<b>V</b>	<b>V</b>				1	
Table	8,120	kml_PolyGroupSelections	MetaData (Presentation)		<b>✓</b>		<b>▽</b>	<b>V</b>				1	
Table	14,200	map_*	Mapping									31	
Query	200	qry_HLP*	System (Core)	<b>V</b>									
Query	100	qry_SYS*	System (Core)	<b>V</b>									
Report	200	rpt_SYS*	System (Presentation)	<b>V</b>									
Form	100	sfm_SYS_*	System (Core)	<b>V</b>									
Form	230	sfm_XLS_DefineTemplate	System (Staging)	<b>√</b>									
Form	212	sfm_XLS_DomainRanges	System (Staging)	<b>V</b>									
Form	213	sfm_XLS_Domains	System (Staging)	<b>√</b>									
Form	211	sfm_XLS_DomainValues	System (Staging)	<b>V</b>									
Form	221	sfm_XLS_Files	System (Staging)	<b>√</b>									
Form	222	sfm_XLS_Sheets	System (Staging)	<b>V</b>									
Form	223	sfm_XLS_Template_File	System (Staging)	<b>V</b>									
Form	224	sfm_XLS_Template_Worksheet	System (Staging)	<b>V</b>									
Report	100	spt_SYS*	System (Presentation)	<b>V</b>									
Table	13,100	stg *	Staging									31	

- Patch logic is controlled via a control table
- Table changes involve a five stage update process
- There are other hotfix / patch tools inherited from TRACS

#### Maintenance : Bulk Operations



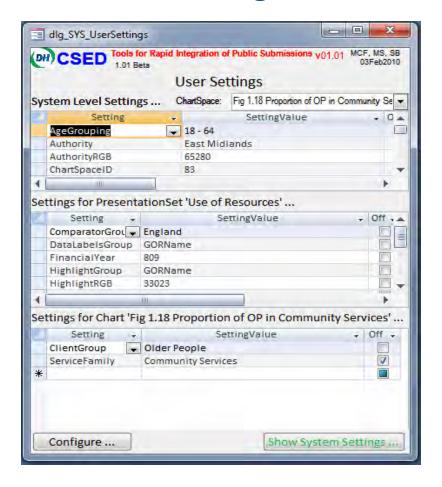




#### **USER SETTINGS**

#### **Settings**: User Settings





Three levels of setting:

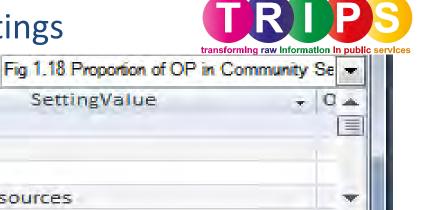
- System level
- Set level; and
- Chart level

Chart level over-ride set level, which over-ride system level

Most settings operate on pick lists

Because of this hierarchy, settings are context sensitive

#### **Settings: System Settings**



#### System settings control various aspects of the system:

ChartSpace:

1005

Yes

.\Help

Use of Resources

Where you were last time you used TRIPS;

Settings for PresentationSet 'Use of Resources' ...

Location of key files (e.g. Help, etc);

System Level Settings ...

AuthorityID

AutoSwitch

PresentationSet

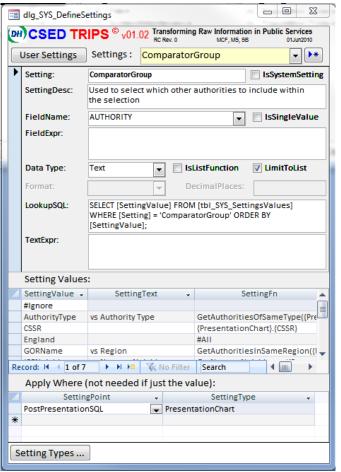
HelpPath

Setting

- Which Authority you are for loading purposes
- etc

#### Settings: Advanced





You can create your own settings for use within charts, etc. You can:

- link them to a field for selection purposes;
- Calculate values based on complex expressions;
- Format the result;
- Create pick-lists for users to select from;
- Provide a list of options for the user; &
- Use nested settings



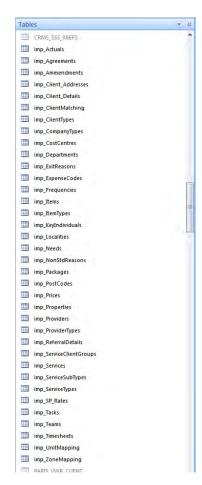


TRACS logic for extracting data from care management systems

#### **EXTRACT**

#### TRACS: Import database

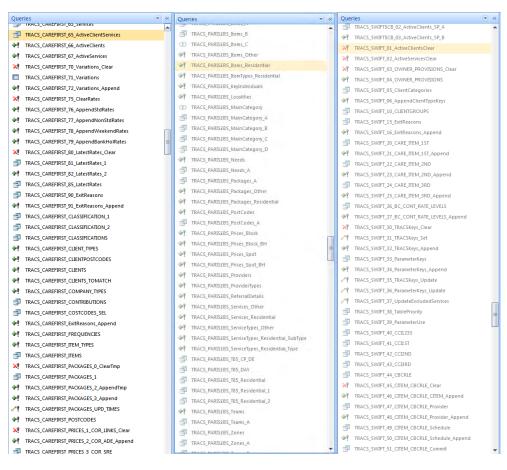




- Standard set of import (staging) tables used to extract care management data into
- Raw systems linked in via ODBC
- Set of bespoke (to each system, not each council) written to load in data
- Configuration differences handled via key mapping (see later)

#### **TRACS Extraction Logic**



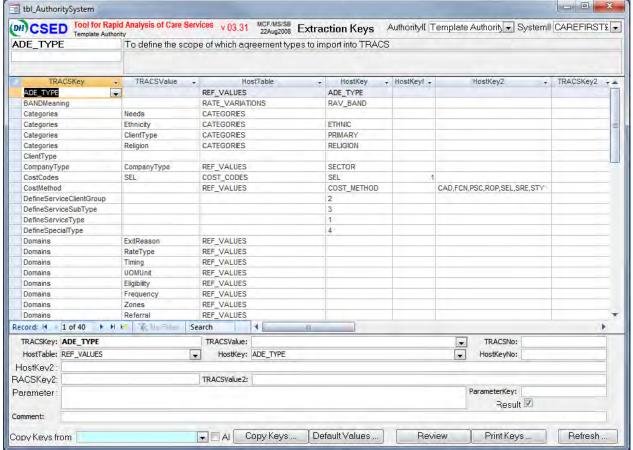


#### Extraction logic for

- SWIFT
- CareFirst
- Paris
- Framework-I
- RAISE
- Various bespokes
- Typically 60+ queries per system

## Configuration differences handled via 'Key mapping'



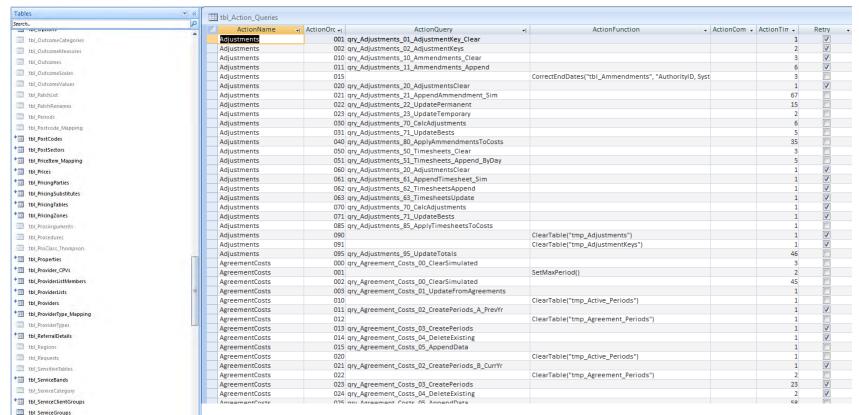


- Every implementation of major system is configured differently
- TRIPS
   functionality
   much more
   flexible in this
   area

#### Creating the TRACS data warehouse



58

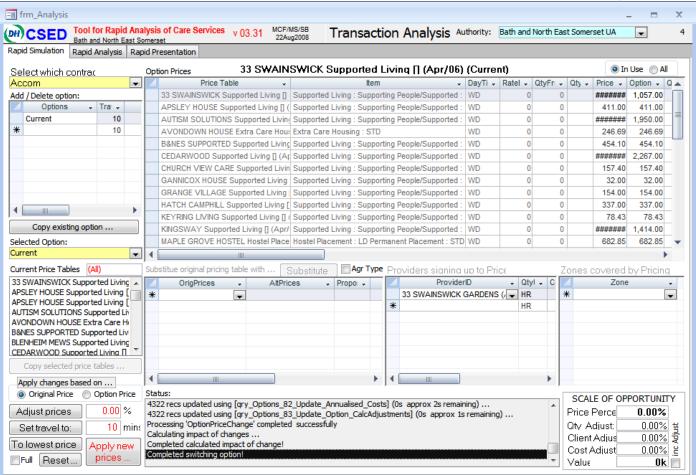


500 bits of logic to transform standard import tables and load the standard TRACS data warehouse

tbl\_ServiceOptions
tbl\_ServiceSettings
tbl\_ServiceSutTypes

#### **TRACS USP: Simulation Functionality**



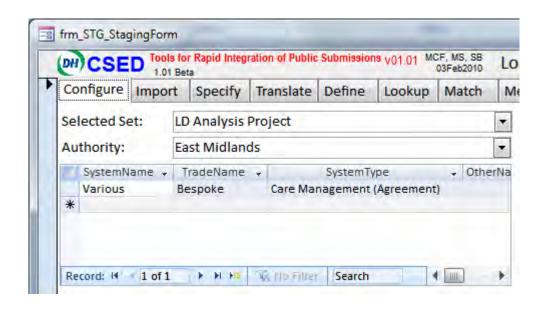




#### **LINKING SIMPLE TABLES**

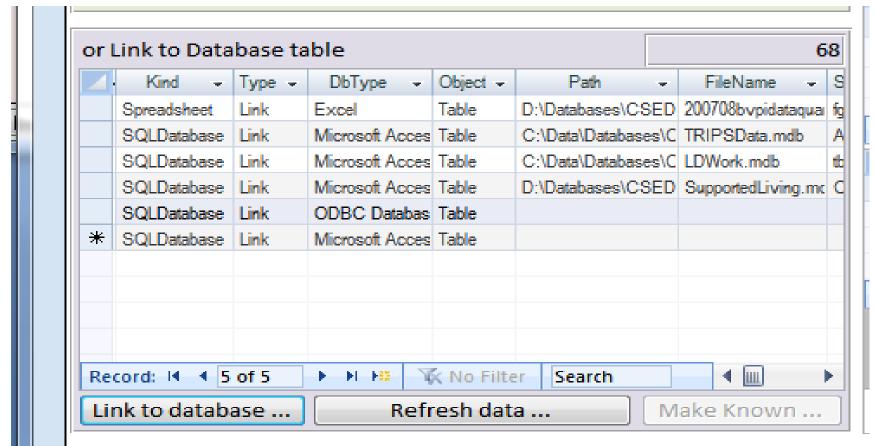
#### Staging : Configure





#### Staging: Load (Simple Tables)







# IMPORT: LOADING SIMPLE SPREADSHEETS

#### Import : Simple spread-sheets



Formatting means that row 1 is not a heading

-inancial

2009/10

2009/10

2009/10

2009/10

2009/10

2009/10

2009/10

2009/10

2009/10

2009/10

2009/10

2009/10

2009/10

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2009/10

2009/10

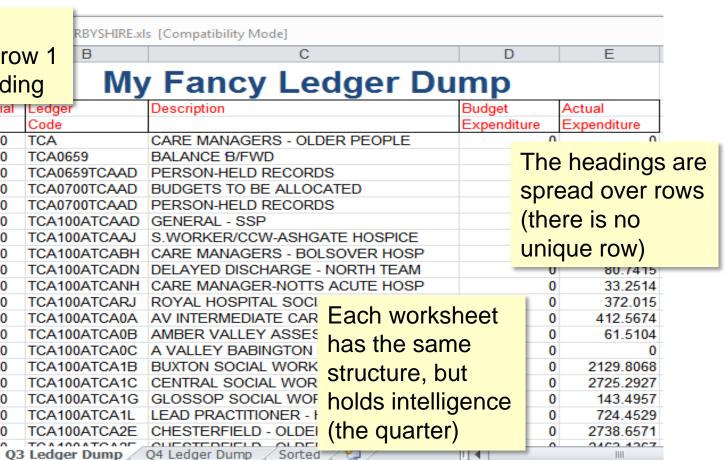
2009/10

22 2000/40

11

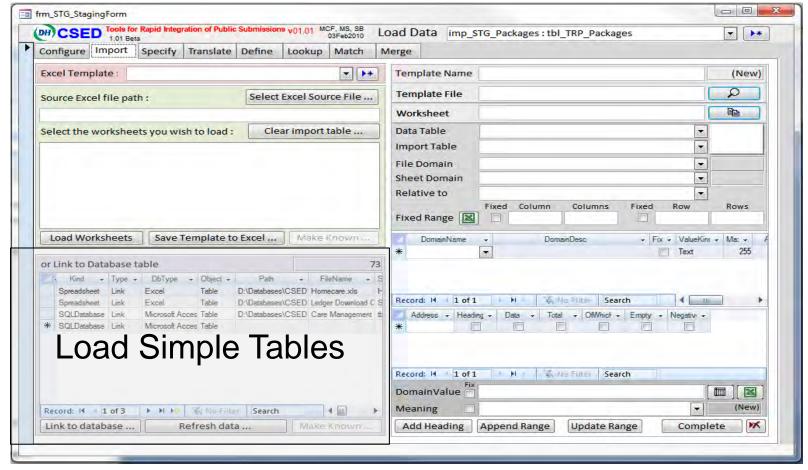
17

Year



#### Import: The Excel loader

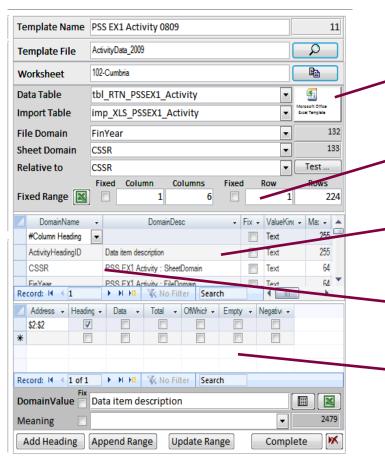




#### Import:







- Each part of the spread-sheet has a domain defined by its scope
  - The domain of the workbook is all the worksheets,
  - The domain of a row are the cells with data in the row ...
- Each domain relates to a field in a table (which has a field name and data type)
- The scope of domain may not be continuous (it is made up of ranges)
- Usually, a domain contains:
  - ranges which are headings (used to define field names)
  - Ranges which hold the data
- The data may be the same across all sheets (fixed meaning) or vary

#### Import: Converting a simple spread-sheet to a table



Actual Expenditure



The text from both headings rows has been combined to create a field name

Budget Expenditure

The tab name has been used to populate the quarter

TCA100ATCA1G

TCA100ATCA1L

TO A 400 A TO A OF

Id d → M Q3 Ledger Dump / Q4 Ledger

TCA100ATCA2E CHESTE

GLOSSO

20 2009/10

21 2009/10

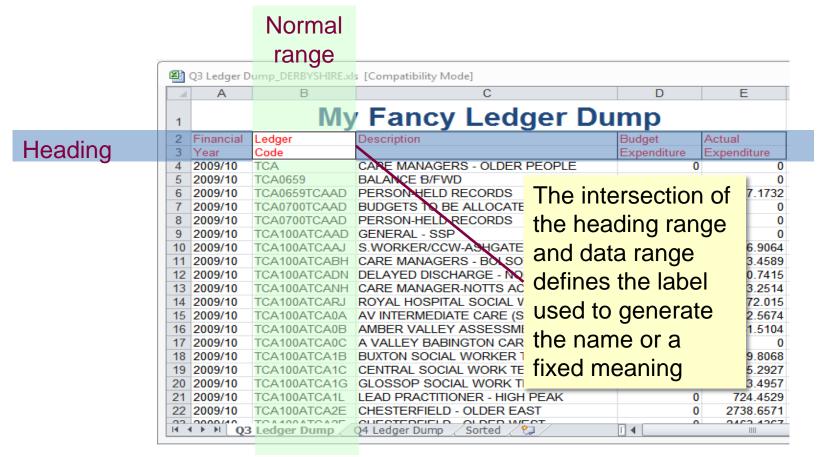
22 2009/10

22 2000/40



### Import : Creating domain meanings / field names





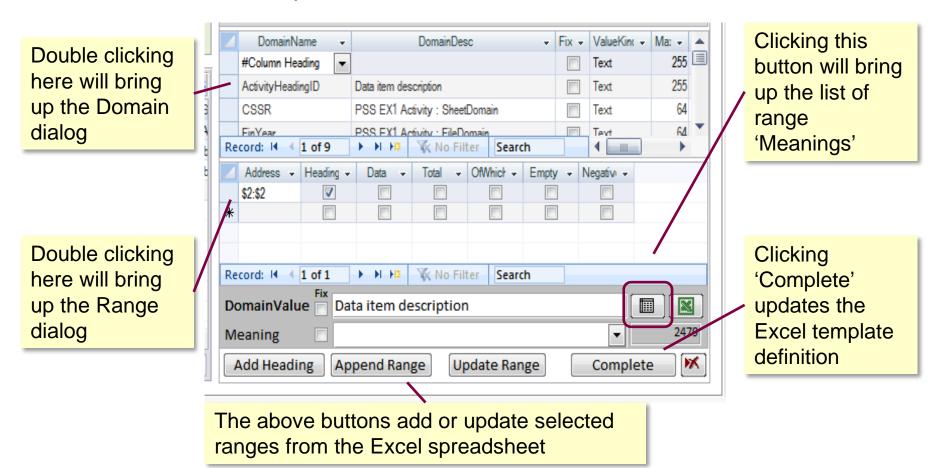
## Import: Excel spread-sheets Selecting which worksheets to load



•	Configure	Import	Specify	Translate	Define	Lookup	Match	М			
	Excel Tem	plate: PS	SS EX1 Fin		▼ ▶*						
	Source Exc	cel file pat	:h :	Select	Excel Soul	Source File					
	D:\Databa	ses\CSED\	Kevins Da	\PSSEX1_	Final\Deta	ailedPSSB	у				
	Select the	workshee	ets you wi	sh to load :	Clea	ar import i	table				
	TOTAL Eng	gland						-			
	106-Gates	head									
	107-Newo	astle upor	n Tyne								
	108-North										
	109-South	Tyneside									
	110-Sunde	erland									
	204-Barns	ley					•	7			
	Load Wo	rksheets	Save 1	Γemplate to	Excel	Make I	Known				

### Import : Excel spreadsheets The important controls





## Import : Substituting labels with meanings



Address	+ Fix +	Ist-Y	IsC -	DomainValue -	DomainMeaning -	Fix\ -	FixMe
\$14:\$18				SERVICE STRATEGY: Adults' services Strategic management Complaints procedures TOTAL SERVICE STRA	All Categories		1
\$20:\$50				OLDER PEOPLE (AGED 65 OR OVER) INCLUDING OLDER MENTALLY ILL Assessment and care manage	Older People		V
\$54:\$57				OLDER PEOPLE (AGED 65 OR OVER) WITH MENTAL HEALTH NEEDS Nursing care placements Resident	Older People		1
\$59:\$62				OLDER PEOPLE (AGED 65 OR OVER) WITH LEARNING DIFFICULTIES Nursing care placements Resider	Older People		V
\$64:\$95				ADULTS AGED UNDER 65 WITH A PHYSICAL DISABILITY OR SENSORY IMPAIRMENT Assessment ar	Physical Disability		V
\$97:\$128				ADULTS AGED UNDER 65 WITH LEARNING DISABILITIES Assessment and care management Nursing care	Learning Disability		V
\$130:\$161				ADULTS AGED UNDER 65 WITH MENTAL HEALTH NEEDS Assessment and care management Nursing car	Mental Health		W
\$163:\$167				ASYLUM SEEKERS Assessment and care management Lone adults TOTAL ASYLUM SEEKERS (LINES H1	Asylum Seekers		V
\$169:\$179				OTHER ADULT SERVICES Assessment and care management HIV/AIDS Substance abuse (addictions) Other	Other Adult Needs		V
\$172:\$172				HIV/AIDS	HIV/AIDS		
\$173:\$173				Substance abuse (addictions)	Other Adult Needs		V

- When you associate a domain with a field which is recognised as meaning something within TRIPS, TRIPS provides you with the opportunity to translate from spread-sheet label to meaning at load time
- If the field has a look-up this will automatically be made available



#### Slightly more complex spread-sheets:

- Transposed data (headings in rows not columns)
- Data in column headings

# IMPORT: LOADING SIMPLE SPREADSHEETS 2

### Transposed spread-sheets



e ng	А	81	7	49	90	90	99	65	52	82	67	28
/ nple adii	В	32	19	35	29	62	82	13	22	61	14	4
M) Sin He	С	17	50	50	91	6	57	14	58	97	78	1

- The previous technique works equally well for spread-sheets where headings are in rows not columns
- The only difference is that the scope of the headings is Row not Column

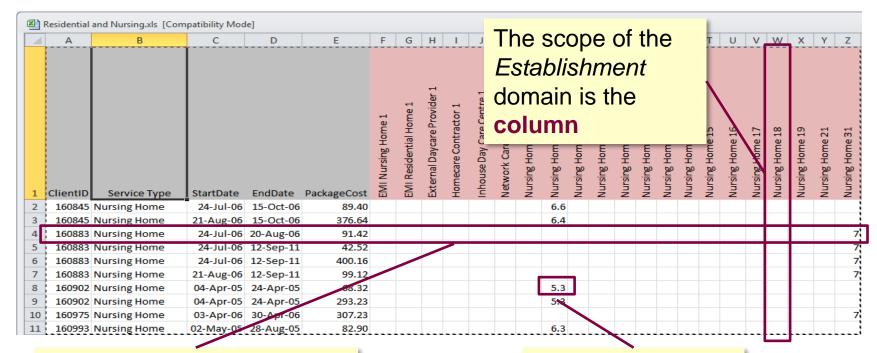
### Import: From spreadsheet pivot (cross-tab) to R database table



4	A	В	С	D	E	F	G	Н	1	J	K	L	M	N	0	Р	Q	R	S	Т	U	V	W	X	Υ	Z
Clic	notil Co	rvice Type	StartDate	EndData	PackageCost	EMI Nursing Home 1	EMI Residential Home 1	External Daycare Provider 1	Homecare Contractor 1	nhouse Day Care Centre 1	Network Care Provider 1	Nursing Home (EMI) Residence 1	Nursing Home (Type A) 1	Nursing Home 01	Nursing Home 10	Nursing Home 11	Nursing Home 12	Nursing Home 13	Nursing Home 14	Nursing Home 15	Nursing Home 16	Nursing Home 17	Nursing Home 18	Nursing Home 19	Nursing Home 21	Nursing Home 31
_	entID Se 50845 Nursi		- 8		89.40	Ш	Ш	ш	I	=	2	2	6.6		2	2	2	2	2	2	2	2	2	2	2	2
	0845 Nursi	_		15-Oct-06	376.64								6.4													
,	0883 Nursi	-	_	20-Aug-06	91.42								0.1													7
	0883 Nursi	_		12-Sep-11	42.52																					7
_	0883 Nursi		24-Jul-06	12-Sep-11	400.16																					7
16	0883 Nursi	ng Home	21-Aug-06	12-Sep-11	99.12																					7
16	50902 Nursi		04 4 05	24 4 05	CO 00																					٠,
_	0902 Nursi		t1																							
	0975 Nursi	Serv	ice Type 🗸	Esta	blishment		- 0	lien	tID .	el .	Sta	rtDa	te	w.	En	ndDa	ate		Pa	cka	ageC	ost	Ţ.	Hou	ırs P	er Da
16	0993 Nursi		ing Home		Home (Type	A)1			16084	-			07/20				/10/	200	_			89				
			ing Home		Home (Type				16084			_	08/20				/10/		_			376				
			ing Home		Home31	,-			16þ8			_	07/20				/08/						.42			
			ing Home	Nursing					16088				07/20				/09/						52			
			ing Home	Nursing					16088			_	07/20	_			/09/		_			400				
			ing Home	_	Home31				1608			_	08/20				/09/		_				.12			
			ing Home	_	Home (Type	A)1			16090	_		_	04/20	_			/04/		_				32			
			ing Home		Home (Type				16090			_	04/20				/04/		_			293				
						,				_		_	-	_					_				_			
		Nurs	ing Home	Nursing	Home31			1	16097	75		03/0	04/20	006		30	/04/	2000	5			307.	.23			

### Import: The scope of a domain

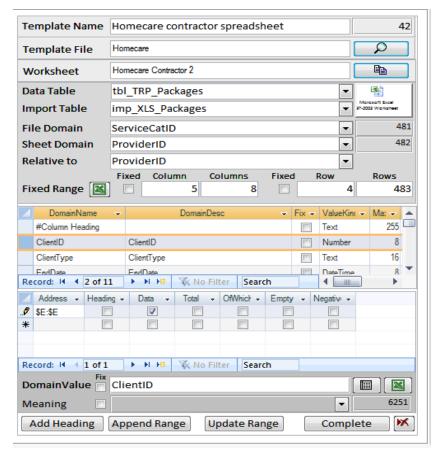




The scope of the ClientID, Service Type, StartDate, EndDate and PackageCost domains is the row The scope of the Hours per Day domain is each cell

### Import : Defining Excel scope 1

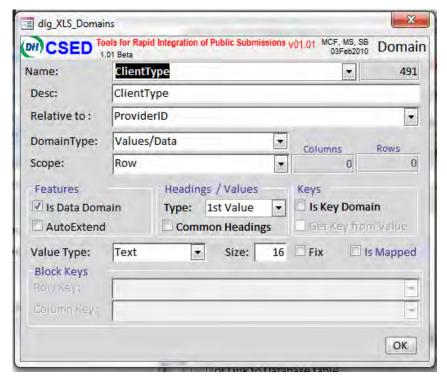




- The scope of the file and sheet is defined against the File and Sheet domains and the domains have been associated with the fields ServiceCatID and ProviderID
  - We will add domains for Folder 1 and Folder 2
  - Relative to allows for repeating blocks (advanced topic)
- TRIPS stores a copy of the template in the database
- We created domains for the other fields we are interested in. In this case it is a simple domain covering the column \$E:\$E

## Import: Complex spread-sheets Options for defining each domain





- There are various types of domain, some of which can automatically pick up repeating the text in the cells and create a fixed meaning
- The values in the domain can be picked up from the first cell in the range which holds data or the value can be picked up from a range (how we handle field names which span multiple cells)
- Keys are used to uniquely identify / validate domains
  - For now limited to worksheets
  - Used to identify repeating blocks

#### Use the F1 help key to find out more ...

## Import : Complex spread-sheets Options for defining each range





TRIPS can handle complexities such as:

- Ranges which show positive numbers but which should be interpreted as negative
- Ranges which are totals
- Ranges which should be treated as an 'Of which'

You can specify that TRIPS should ignore a range even if it holds content (IsEmpty)

**IsKey** is used to validate the domain

• Important for dynamic blocks

### Use the F1 help key to find out more ...



### LOADING COMPLEX SPREAD-SHEETS

### Complex spread-sheets: An example



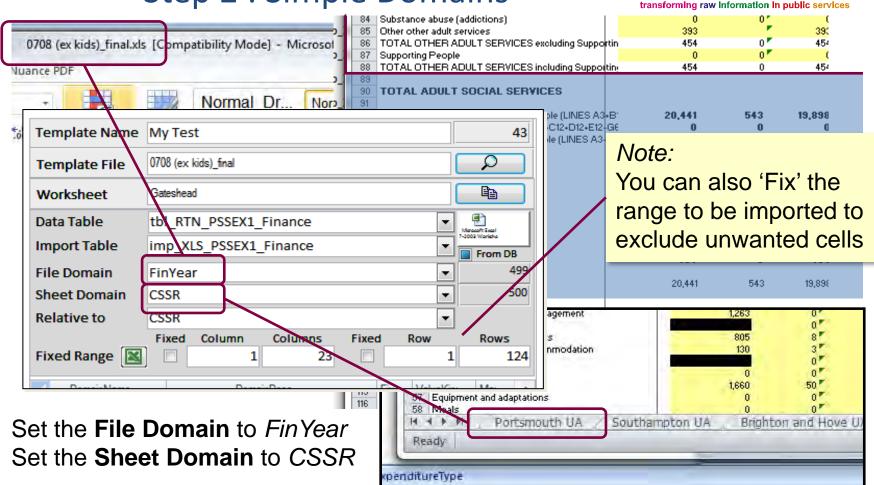
. A B	C	D	E	F	G	Н	1	J	K	L	M	N	0	Р	Q	B	S	T	U
SOCIAL CARE EXPENDITURE IN 2007-08 N	CLUDING SSM:	SS COSTS																NEW for 0708	NEW for 9798
					GROSS TO	TAL COST						INCOME			rt Exp ax Cap Chap(K) - In	ne ve Capital (I) = Incomo (P	me fr NHS(N) - Oth Inc(O)	Income fr NHS (N) - Oth Inc (O)	
	C	wn provisio	n	P	rovision by ot	hers	Tota	l (including join	arrangements)	Clien	t								
	Expenditure including	Capital charges	Expenditure excluding	Expenditure including	Capital charges	Expenditure excluding	Expenditure including	Capital charges	G T EXPENDITURE EX Capital chgs; inc Joint Arrangements) & Grants	contribution (Sale:		Income		INCOME (including		NET	GROSS	GROSS	Grants to
	capital	(council's	capital	capital	(council's	capital	capital	(council's	for VOs (Col V)) DIFF FROM 0607 (NO VO	Fees an	d Join	nt from	Other	r join	CURRENT	TOTAL	CURRENT	TOTAL	¥oluntary
	charges	own assets)	charges	charges	own assets)	charges	charges	own assets)	GRANTS)	Charge:	arrangement	s NHS	income	arrangements	EXPENDITURE	EXPENDITURE	EXPENDITURE	EXPENDITURE	Organisations
	oharges col C	colD	colE = C - D	colF	colG	colH = F - G	Coll = C + F	ColJ = D + G	ColK = E + H	colL	colM	colN	colO	colP = (L to 0)	colQ=K-P	colR=I-P		colS=I-M-N-O	colE
SERVICE STRATEGY: Adults' services														r (	24		248	248	
Strategic management	241		0 24		0 0	<u> </u>	0 24:	3 2	0 248		0	0 0		0 (	24			248	0
Complaints procedures	31			19	0 0	F	0 3:		0 39		0	0 0		0 (	3:			39	0
TOTAL SERVICE STRATEGY (LINES A1 to A2)	28		0 28	17	0 0		0 28	7	0 281		0	0 0	'	0 (	) 28'	7 287	287	287	0
OLDER PEOPLE (AGED 65 OR OVER) INCLU	IDING OLDER F	MENTALLY II	ш																
Assessment and care management	3,281		0 3,28		0 0	·	0 3,28	5	0 3,285		0	0 304		0 304				2,982	0
Nursing care placements				0 7,12		7,12	7,12		0 7,124	1,92		0 13		0 1,935	5 5,18:			7,111	0
Residential care placements	4,29	\$ 30	0 2 3,99	14 7,61		7,60	11,90:	31	00 11,602	3,33	9	0 2		0 3,34			11599	11,899	1
Supported and other accommodation		2	0_	0		3			0		0	0 0		0 (	) 1		0	0	
Direct payments									0 30			0 0		(	30			301	
Home care	781		0 78			8,83	9,98; 0 1,93		9,982					0 1,767			9982	9,982	36
Daycare	1,25	(	5 1,10	si 61	80 0	68		F	75 1,862	7	9	0 24		0 102	1,76		1838	1,913	
Equipment and adaptations Meals			0.5	0 1	40 0	14			0 140		0	0 0			141		140	140	
Other services to older people			0.7	0 2.7:		2,73			0 2,734		7	0 0		0 78				2,663	
TOTAL OLDER PEOPLE excluding Supporting People	9,61	37	5 9,2			27,4	21 37,401	2	75 7 37,030		2	0 414		0 7,527				36,991	36
Supporting People	5,01				0 0	F			0 01,000	1."		0 0		0 1,021			00,000	00,001	50
TOTAL OLDER PEOPLE including Supporting People (	1 9,61	3 37				27,4	21 37,40	5 3	5 37,030	7,11	3	0 414		7,52			36,615	36,991	361
ADULTS AGED UNDER 65 WITH A PHYSICA	L DISABILITY (	OR SENSOR	Y IMPAIRME	NT															
Assessment and care management	781	5	0 78	:5	0 0		0 781		0 785		0	0 0		0 (	781	5 785	785	785	
Nursing care placements				0 1.20	00 0	1.20	0 781 00 1.204	,	0 1200	12	8	0 0		0 128	1.07	1 1.071		1.200	
Residential care placements																			
upported and other accommodation	1		omm																
Direct payments			⊞ imp_X	LS_PSSEX1_	Finance														_
Home care	-																		1.
Daycare	78:			FinYear	*	CSSR	<ul> <li>Expendi</li> </ul>	tureT) 🔻 Org	anisation( 🗸	Fir	nanceHeadi	ngiD	-	ClientCa	tiD 🕶		ServiceCatID		→ Amoun
Equipment and adaptations			07004	ex kids)_fin		eshead		OTAL CO! Ow		400	ncluding cap							learning disat	

From XLS to MDB in less than an hour!

 and you only have to do it once

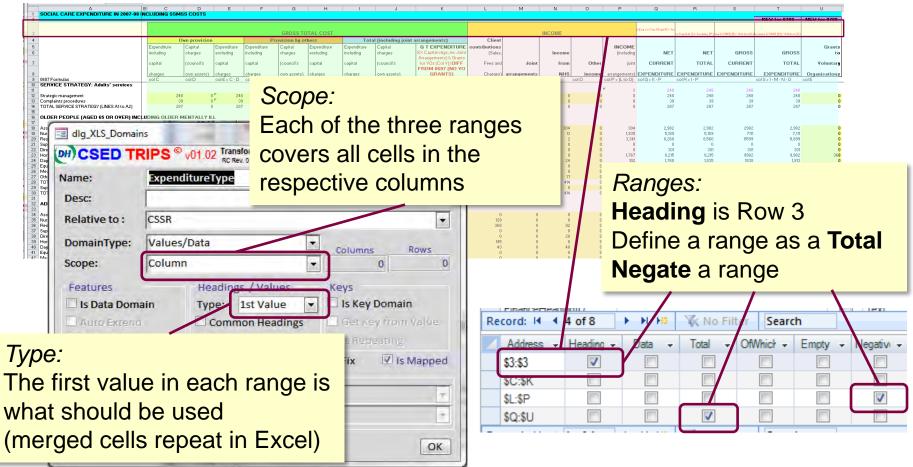
0.	0	1,200	0	1,200	1,200	0	1,200	128 0	0	0	128	1,071	1,071 120	1,200	0	
	imp_XLS_PSSE	X1_Finan	ce												_ =	= >
	FinYear	-	CSSR	-	ExpenditureTy -	Organisation( -	F	inanceHeading	ID	→ Clie	entCatID 🗸		ServiceCatl	D	Amount_Re	ерс 🕶
0	0708 (ex kids)	final	Gateshead	1	GROSS TOTAL COS	Own provision	Expenditure	including capita	al charges col	C Learnin	g Disability	Other service	es to adults wi	h learning disabiliti		1544
	0708 (ex kids)		Gateshead	1	GROSS TOTAL COS	Own provision	Capital chars	es (council's o	vn assets) col	D Learnin	g Disability			h learning disabiliti		0
0	0708 (ex kids)	final	Gateshead	i	GROSS TOTAL COS	Own provision	Expenditure	excluding capita	al charges col	E = Learnin	g Disability	Other service	es to adults wi	h learning disabiliti		1544
	0708 (ex kids)		Gateshead	1	GROSS TOTAL COS	Provision by othe	Expenditure	including capita	al charges col	F Learnin	g Disability	Other service	es to adults wi	h learning disabiliti		688
0	0708 (ex kids)	final	Gateshead	i	GROSS TOTAL COS	Provision by othe	Capital charg	es (council's o	vn assets) col	G Learnin	g Disability	Other service	es to adults wi	h learning disabiliti		0
0	0708 (ex kids)	final	Gateshead	1	GROSS TOTAL COS	Provision by othe	Expenditure	excluding capita	al charges col	H : Learnin	g Disability	Other servic	es to adults wi	h learning disabiliti		688
	0708 (ex kids)		Gateshead	i	GROSS TOTAL COS		Expenditure	including capita	al charges Col	I = Learnin	g Disability	Other service	es to adults wi	h learning disabiliti		2286
0	0708 (ex kids)	final	Gateshead	1	GROSS TOTAL COS		Capital charg	es (council's ov	vn assets) Col	J = Learnin	g Disability	Other servic	es to adults wi	h learning disabiliti		0
	0708 (ex kids)		Gateshead	i	GROSS TOTAL COS		G T EXPENDIT	URE EX Capital	chgs; inc Joint	An Learnin	g Disability	Other service	es to adults wi	h learning disabiliti		2286
0	0708 (ex kids)	final	Gateshead	1	INCOME		contribution	s (Sales, Fees a	nd Charges) co	ol Learnin	g Disability	Other service	es to adults wi	h learning disabiliti		0
0	0708 (ex kids)	final	Gateshead		INCOME		Joint arrange	ements col M		Learnin	g Disability	Other service	es to adults wi	h learning disabiliti		0
0	0708 (ex kids)	final	Gateshead	1	INCOME		Income from	NHS col N		Learnin	g Disability	Other service	es to adults wi	h learning disabiliti		-500
0	0708 (ex kids)	final	Gateshead	1	INCOME		Other income	e col O		Learnin	g Disability	Other service	es to adults wi	h learning disabiliti		-15
0	0708 (ex kids)	final	Gateshead		INCOME		INCOME (incl	uding joint arra	ngements) co	I P Learnin	g Disability	Other service	es to adults wi	h learning disabiliti		-515
0	0708 (ex kids)	final	Gateshead		Gross Tot Exp ex		Gross Tot Exp	ex Cap Chgs(K)	- Income (P) N	IET Learnin	g Disability	Other service	es to adults wi	h learning disabiliti		1771
0	0708 (ex kids)	final	Gateshead		Gross Tot Exp ex		Gross Tot Exp	(inc Capital (I	) - Income (P) I	NE' Learnin	g Disability	Other service	es to adults wi	h learning disabiliti		1771
0	0708 (ex kids)	final	Gateshead	1	Gross Tot Exp ex		Gross Tot Exp	(ex Capital)(K)	- Income Jas(I	M) Learnin	g Disability	Other service	es to adults wi	h learning disabiliti		1771
0	0708 (ex kids)	final	Gateshead		Gross Tot Exp ex		Gross Tot Exp	incCapital (I) -	Income fr JAs	(N Learnin	g Disability	Other service	es to adults wi	h learning disabiliti		1771
0	0708 (ex kids)	final	Gateshead		Gross Tot Exp ex		Grants to Vo	luntary Organis	ations1 col E	Learnin	g Disability	Other service	es to adults wi	h learning disabiliti		54
0	0708 (ex kids)	final	Gateshead	i	GROSS TOTAL COS	Own provision	Expenditure	including capita	al charges col	C Learnin	g Disability	TOTAL ADUL	TS AGED UNDER	65 WITH LEARNING D		7751
0	0708 (ex kids)	final	Gateshead		GROSS TOTAL COS	Own provision	Capital charg	es (council's o	vn assets) col	D Learnin	g Disability	TOTAL ADUL	TS AGED UNDER	65 WITH LEARNING D		123
0	0708 (ex kids)	final	Gateshead		GROSS TOTAL COS	Own provision	Expenditure	excluding capita	al charges col	E = Learnin	g Disability	TOTAL ADUL	TS AGED UNDER	65 WITH LEARNING D		7628
0	0708 (ex kids)	final	Gateshead	i	GROSS TOTAL CO!	Provision by othe	Expenditure	including capita	al charges col	F Learnin	g Disability	TOTAL ADUL	TS AGED UNDER	65 WITH LEARNING D		14497
0	0708 (ex kids)	final	Gateshead	i	GROSS TOTAL CO!	Provision by othe	Capital charg	ges (council's o	vn assets) col	G Learnin	g Disability	TOTAL ADUL	TS AGED UNDER	65 WITH LEARNING D		0
0	0708 (ex kids)	final	Gateshead	i	GROSS TOTAL COS	Provision by othe	Expenditure	excluding capita	al charges col	H : Learnin	g Disability	TOTAL ADUL	TS AGED UNDER	65 WITH LEARNING D		14497





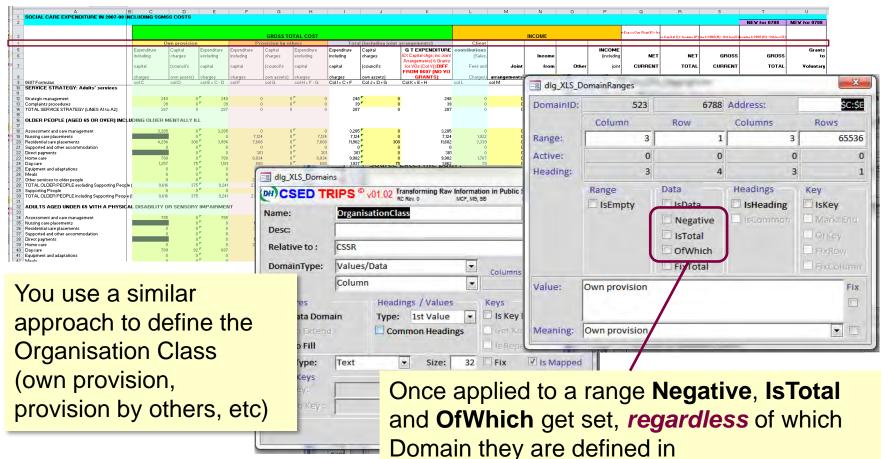
### Step 2: Expenditure Type (Column Scope)





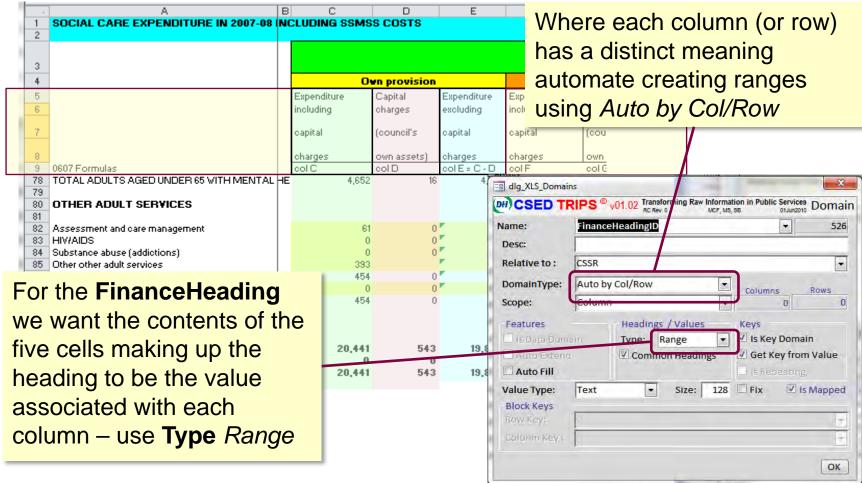
### Step 3 : Organisation Class





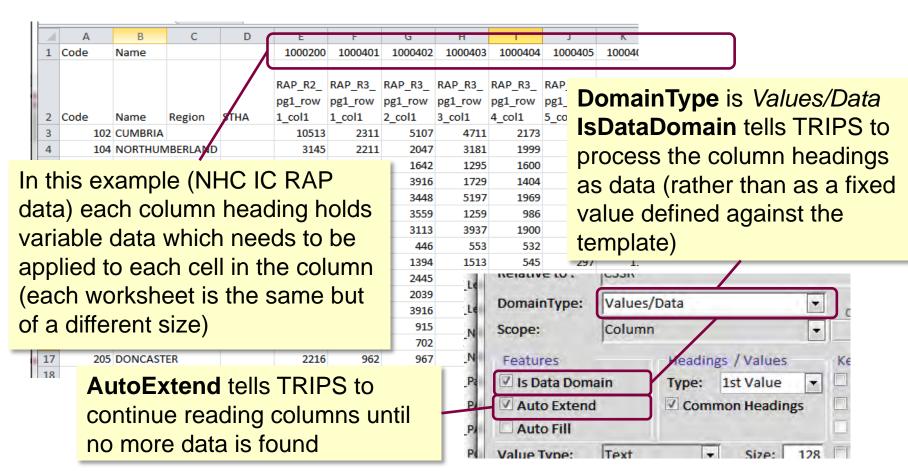
### Step 4 : Finance Heading





## What if each Column heading contains variable data?





### Step 5 : Client Categories (Row Scope)



86

00				
4 5 6		Expenditure including	en provision Capital charges	Expenditure excluding
7		capital charges	(council's own assets)	capital charges
9	0607 Formulas	col C	colD	colE=E-D
10 11 12 13 14 15	SERVICE STRATEGY: Adults' services  Strategic management Complaints procedures TOTAL SERVICE STRATEGY (LINES A1to A2)	248 38 287	i	248 1 38 1 287
16 17 18	OLDER PEOPLE (AGED 65 OR OVER) INC. L Assessment and care management	IDING OLDER N		3,285
19 20 21 22	Nursing care placements Residential care placements Supported and other accommodation Direct payments	4,294 0	300	3,994
23 24 25	Home care Day care Equipment and adaptations	780 1,257	75	780
26 27 28	Meals Other services to older people TOTAL OLDER PEOPLE excluding Supporting People	) ) ) ) )	j	9,24
29 30 31	Supporting People TOTAL OLDER PEOPLE including Supporting People	1	)	
32	ADULTS AGED UNDER 65 WITH A PHYSICA	L DISABILITY O	R SENSORY	IMPAIBME
34 35 36	Assessment and care management Nursing care placements Residential care placements	785	1	785
37 38	Supported and other accommodation Direct payments	i		

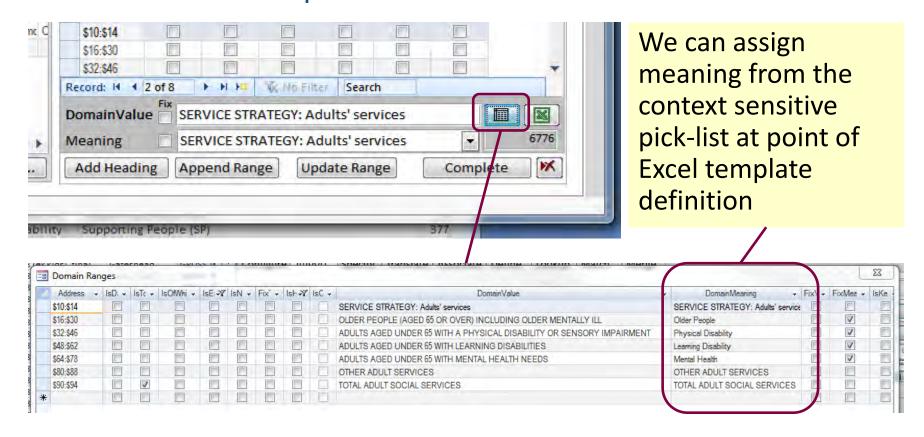
The logic is similar for Client Categories.

We use the 1<sup>st</sup> Value in each range to be applied to each row in the range

Name: Desc:	Client	CatID		•	52
Relative to:	CSSR				
DomainType:	Value	s/Data	-	Columns	Rows
Scope:	Row		•	0	1
☐ Is Data Dom ☐ Auto Extend ☐ Auto Fill		Type: 1st Value  Common Headin	<b>▼</b> ngs	☐ Is Key Dom ☐ Get Key Fro ☐ Is Repeatin	m Value
Value Type: Block Keys Row Key: Column Key:	Text	▼ Size:	128	□ Fix ☑	Is Mapped

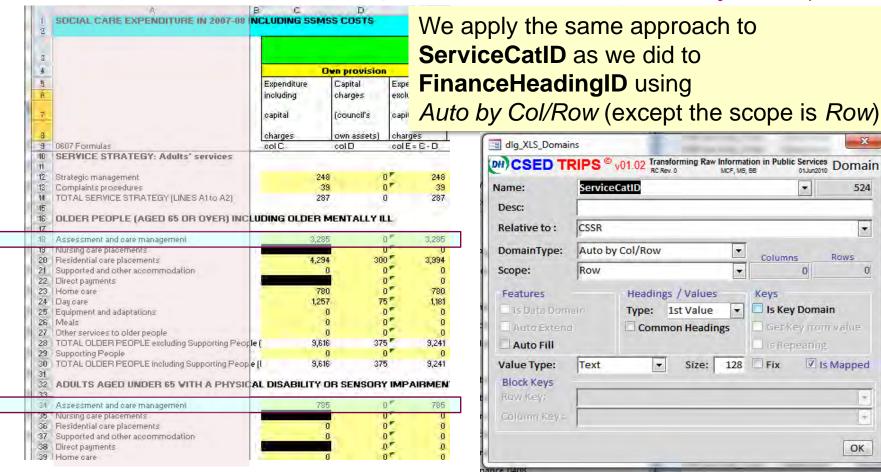
## Converting from text to meaning at point of XLS Template definition





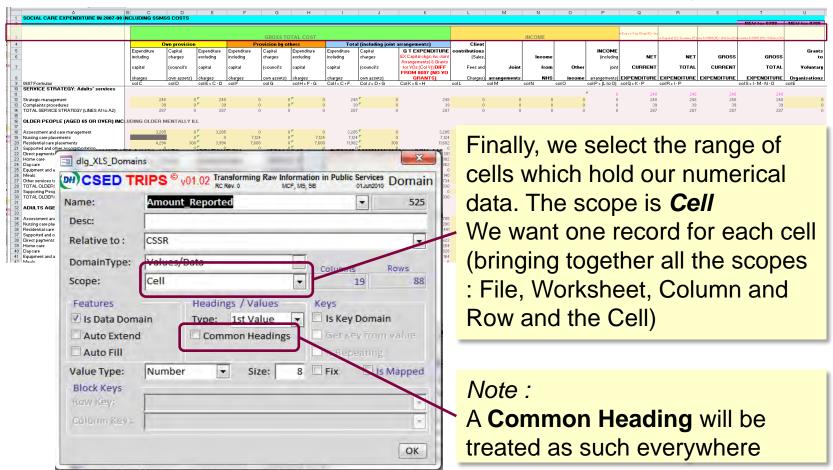
### Step 6 : Service Categories (Row Scope) transformIng raw Information In public services





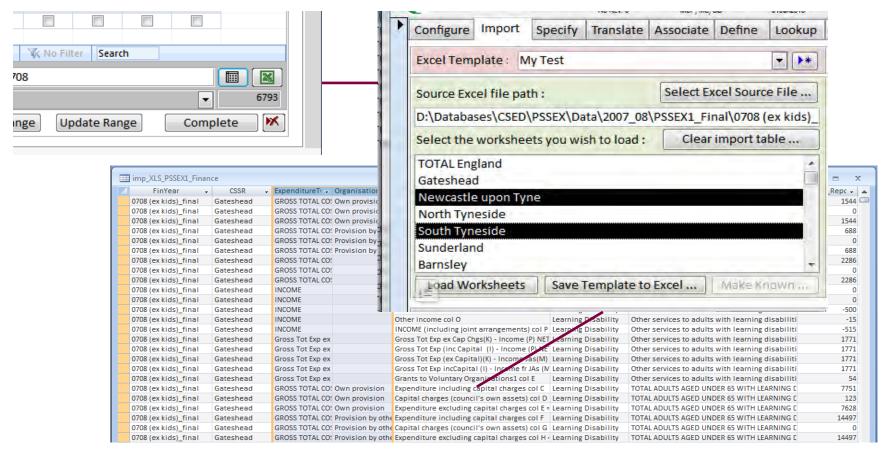
### Step 7 : Amount\_Reported (Cell Scope)





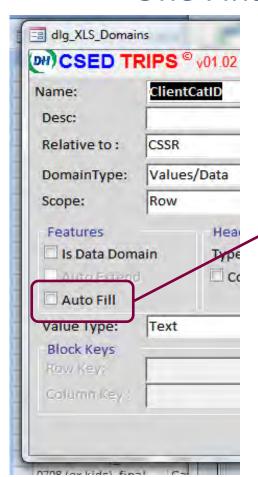
### One hour later: Complete and Load!





### One Final Gem: AutoFill





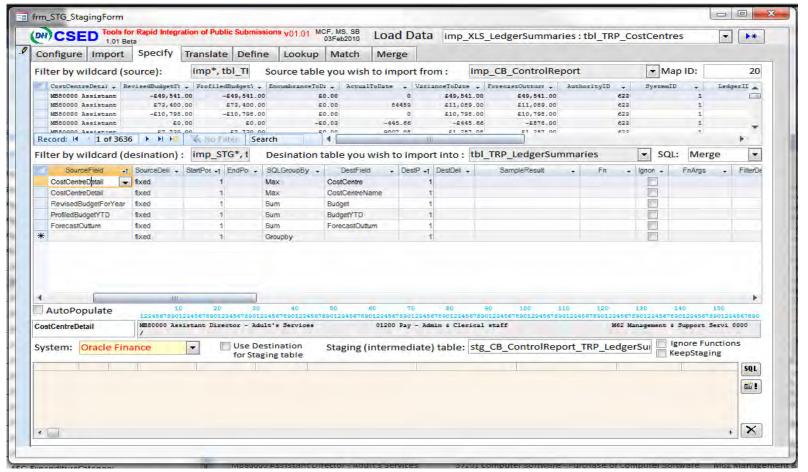
	Α	В	С	D	E
1		ADU	LTS AN	ID COMMU	NITIES DEPARTMENT
2			Adult S	ocial Care	Code List 2010-11
3					
4	PSSEX	COMMITTEE		<b>PROJECT</b>	
5	HEADING	CODE	CODE	CODE	
646			6539	000	General
647					
648	LD	HOME CARE LEARNING DIS	<b>ABILITI</b>	<u>ES</u>	
649					
650			6551	000	NW Leics
651			6552	000	Oadby / Wigston
652			6553	000	Charnwood
653			6554	000	Melton
654			6555	000	Hinckley / Bosworth
655			6556	000	Blaby
656			6557	000	Harborough
657			6558	000	General Grants
658			6559	000	General
659					
660	MH	INDEPENDENT SECTOR HO	ME CAI	RE MH	
661					
662			6561	000	Ind HC - NW Leics
663			6562	000	Ind HC - Oadby & Wigston
			0500	200	



# SPECIFY: MAPPING SOURCE DATA TO THE FINAL DESTINATION

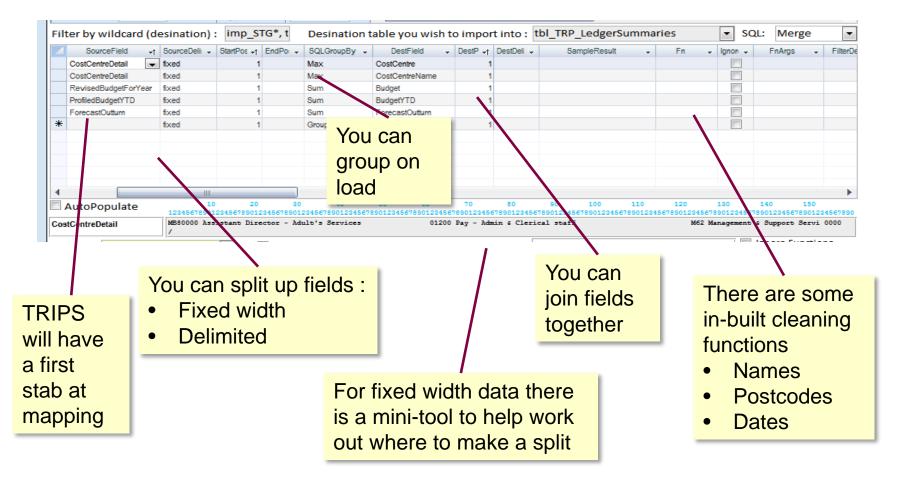
### Specify: Creating a TableMap





### Specify: Parsing original data





### Specify:



### The concept of a staging table

A staging table is an intermediate table between the dirty raw data and the final cleansed destination table

sta T	TRP Or	ganisations_TI	BL									
				Organi: 🕶	Organisation -	Organisation -	rovid 🕶	OrganisationKeyRaw -	ProviderType	→ H	lasMen - MatchM -	MatchFi → Add
	48	2303	Derbyshire								0	0
	48	2304	Derbyshire	2154	APEX NURSING AI	APEX NURSING AI		APEX NURSING AND CARI			0	0
	48	2305	Derbyshire	2155	BIRCHWOOD HO!	BIRCHWOOD HO!		BIRCHWOOD HOMECARII			0	0
	48	2306	Derbyshire	2156	BRADCARE	BRADCARE		BRADCARE			0	0
	48	2307	Derbyshire	2157	CARE REFIEF	CARE REFIEF		CARE REFIEF			0	0
	48	2308	Derbyshire	2158	CARE RELIEF	CARE RELIEF		CARE RELIEF			0	0
	48	2309	Derbyshire	2159	CARE UK HOMECA	CARE UK HOMECA		CARE UK HOMECARE			0	0
	48	2310	Derbyshire	2160	CARERS SITTING S	CARERS SITTING !		CARERS SITTING SERVICE			0	0
	48	2311	Derbyshire	2161	CAREWATCH	CAREWATCH		CAREWATCH			0	0
	48	2312	Derbyshire	2162	CARING HANDS	CARING HANDS		CARING HANDS			0	0
	48	2313	Derbyshire	2163	COMMUNITY CAR	COMMUNITY CAR		COMMUNITY CARE LINE S			0	0
	48	2314	Derbyshire	2164	COTTAGE CARE	COTTAGE CARE		COTTAGE CARE			0	0
	48	2315	Derbyshire	2165	DEAFBLIND UK	DEAFBLIND UK		DEAFBLIND UK			0	0
	48	2316	Derbyshire	2166	DERBYSHIRE TOT.	DERBYSHIRE TOT.		DERBYSHIRE TOTAL CARE			0	0
	48	2317	Derbyshire	2167	DIRECT HEALTH U	DIRECT HEALTH U		DIRECT HEALTH UK LTD			0	0
											-	_

Part 1 : Record identifiers

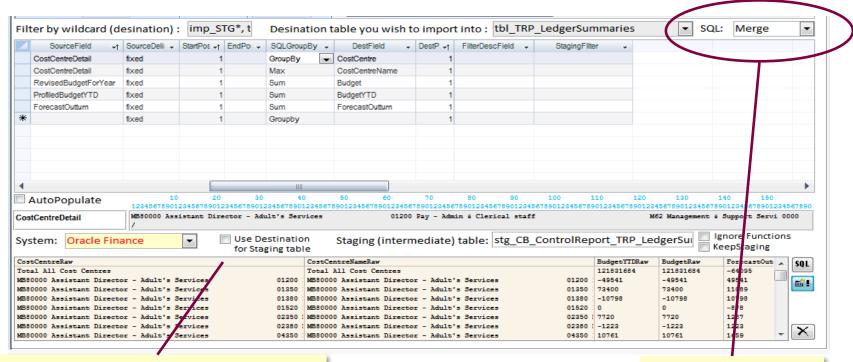
Part 3 : Cleansed and mapped data

Part 2 : The original raw data Part 4 : Staging control fields



## Specify: Loading the staging table





A staging table can be unique to a TableMap or be common (based on the Destination table)

You can control how to populate the staging table

### Concept: Simple SQL options



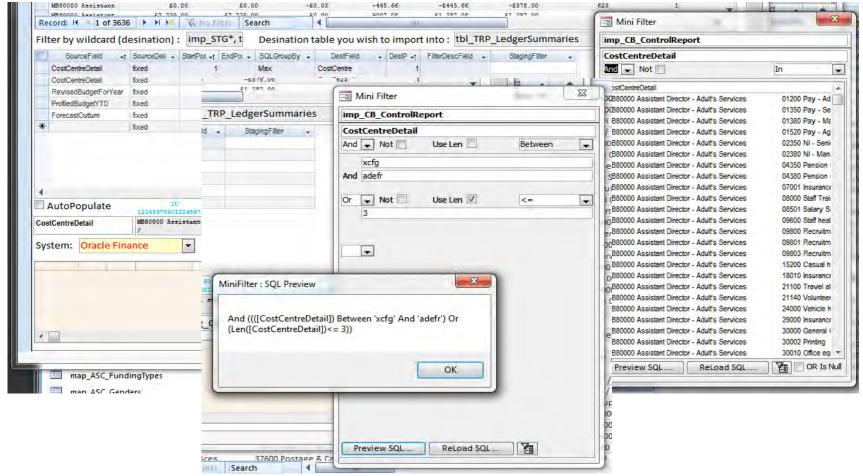
Ex	istiı	ng a	nd N	lew		Ap	pe	nd	Cle	earA	\dd	Merge					Replace				oda	te
K	Υ	Z	K	Z		K	Υ	Z	K	Y	Z	K	Y	Z		K	Υ	Z	l	K	Υ	Z
Α	1	V	А	Р	1	Α	1	V	Α		P	Α	1	Q		A		P		Α	1	Q
Α	1	W	А	Q	1	Α	1	W	А		Q	Α	1	Q		Α		Q		Α	1	Q
В	2	X	В	R	E	В	2	X	В		R	В	2	R		В		R		В	2	R
D	4	Υ	C S C S			С		S	С		S		С		S		D	4	T			
Е	5				D		T	D	4	T		D		T		Е	5	Z				
Ex	Existing New			E	5	Z	Е	5	Z	Е	5	Z										
	•																					
This men Sta	Note: This logic applies to merging into the Staging table. The merge into the final destination table has greater flexibility.			re no ke ac M re	ecor o m ey a dde latc ecor	d ( <b>C</b> hing ds a	ning ::: <b>S</b> )	matoreco clear upda (leav matoreco)	ching rds a red a ated ring r ching	ire ind non	reco upda new adda	ching rds a ated reco	are and		to lo	e is plete tied adin	ely prior g data	1	Exist mato recor upda (note	ted	are	



### **FILTERS AND MINI-FILTERS**

### General: Mini-Filters (single field)





#### **Filters**

Seg +t Ref +



Not - Operator - Parameter1 - Parameter2 - Detail - Prev -

Edit or Create a Filter TRIPS Filters provide (DH) CSED Filter | SEX1 Finance: PSS EX1 Financial Analysis a flexible user interface FilterName: PSS EX1 Financial Analysi Root Table: tbl RTN PSSEX1 Finance Levels: 2 tCategory].[ClientCategory] 1 ServiceHeadings].[IsTotal] | iEX1 Finance].[ServiceCatID] | Headings].[FinanceHeading] -And V Not V Is Null for building and And - Not In And V Not V In ✓ And ✓ Not ─ = GROSS TOTAL COST - Current exper All Categories GROSS TOTAL COST - Current exper displaying complex Physical Disability GROSS TOTAL COST - Current exper Physical Disability: Phys Dis/Frailty/T GROSS TOTAL COST - Current exper Physical Disability: Hearing Impairmer \* **SQL** Where clauses GROSS TOTAL COST - Current exper Physical Disability : Visual Impairment GROSS TOTAL COST - Current exper Physical Disability: Dual Sensory Los-GROSS TOTAL COST - TOTAL EXPE Learning Disability GROSS TOTAL EXPENDITURE Learning Disability: Moderate Learning INCOME - Client contributions (Sales Learning Disability : Down's INCOME - Income from NHS Learning Disability: Challer Filter List (DH) CSED Tools for Rapid Integration of Public Submissions V01.01 OR Is Null MCF, MS, SB Filters ServiceHeadings].[HasFlag] l Finance].[IsMemo F - FilterTr - FilterName -RootTable And V Not == And Not = = ([tbl RTN PSSEX1 FinanceHeadings].[FinanceHeadin 1 242 240 88 Presentativ Spend by Client I tol\_RTN\_PSSEX1\_Fin qID] In(89, 94, 97, 103))) 1 225 229 🔳 89 Presentatio Older People Res thi RTN PSSEX1 Fin AND ( 0 233 233 90 Staging stq RTN PSSEX1 Fil ([tbl\_RTN\_PSSEX1\_ServiceHeadings],[HasFlag] = 0)) 92 Presentativ notts to RTN PSSEX1 Ac 2 243 245 AND ( ([tbl\_ASC\_ClientCategory].[ClientCatID] Not -93 Staging Fin Year 05 06 sta RTN PSSEX1 Fil 0 248 248 In/1050100, 1050200, 1050300, 1050600, 1050700)) \ Fin Year 04 05 stg\_RTN\_PSSEX1\_Fil 0 247 247 AND ( ([tbl\_RTN\_PSSEX1\_Finance],[IsMemorandum] 0 249 249 Fin Year 06 07 stg RTN\_PSSEX1\_Fil AND ( (ftbl RTN PSSEX1 ServiceHeadings].[IsTotal] Fin Year 07 08 stq RTN PSSEX1 Fil 0 250 250 0 251 251 97 Staging Fin Year 08 09 stq RTN PSSEX1 Fil AND ( (Not (ftbl ASC CSSRs1.[AUTHORITY] 2 291 481 Presentatic PSS EX1 Financ tol RTN PSSEX1 Fin Like "Total"))) Record: |4 | 26 of 119 | | | | | AND ( ([tbl\_RTN\_PSSEX1\_Finance].[ServiceCatID] Is

Filters are re-usable components you use anywhere

FilterID:

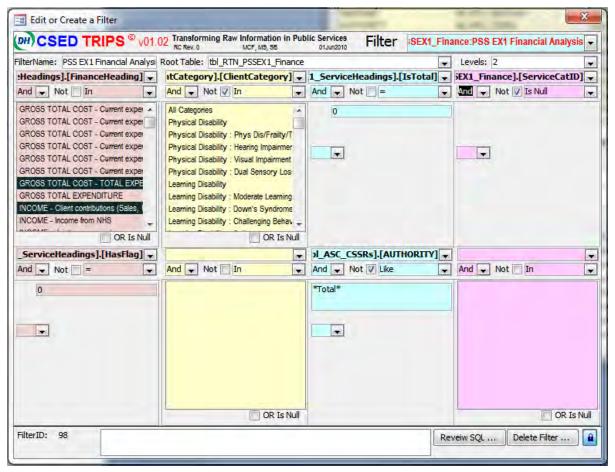
11 A1a And to RTN PSSEX1 Fin FinanceHeading 'GROSS TOTAL CC 291 308 21 A2a to RTN PSSEX1 Se HasFlag V 309 111 B1a tbl ASC ClientCategol ClientCategory In 'Older People (PD)' 294 30 121 B2a to RTN PSSEX1 Fin IsMemorandum 211 C1a And tbl\_RTN\_PSSEX1\_Se IsTotal -292 V "Total" 324 29 221 C2a to ASC CSSRs AUTHORITY V Is Null 481 32 311 D1a And tol RTN PSSEX1 Fin ServiceCatID C. No Filter Search Record: H 1 of 7

FieldName

TableName

### Filters (Multiple field)





Criteria can include:

- Constant values
- Wild-cards (for like)
- Other fields (check)
- Settings
- Expressions

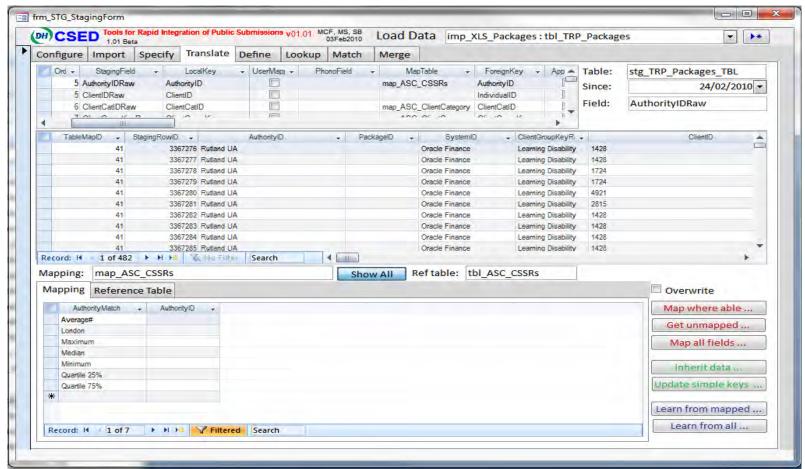
There is implied nesting



# TRANSLATE: CONVERTING YOUR LANGUAGE TO A STANDARD ONE

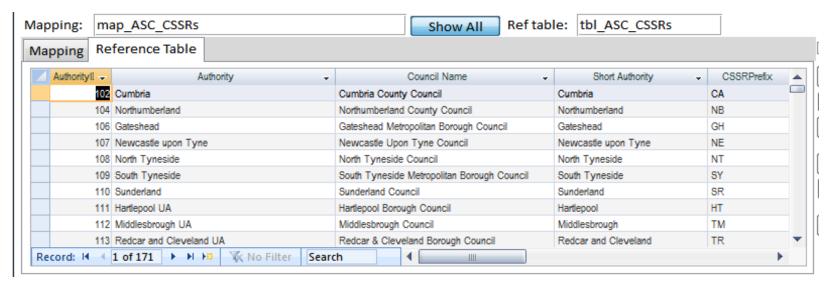
### Translate: The tool





## Translate: Reference tables (from the data dictionary)

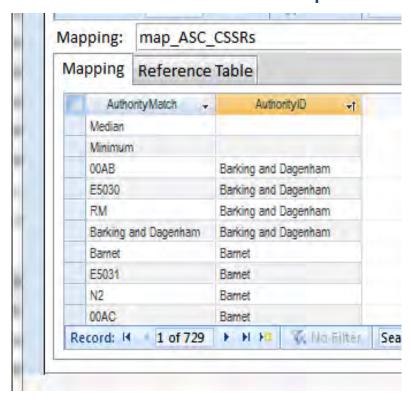




- TRIPS primarily uses pre-loaded reference tables as a basis for translation
- When unique (usually numeric) keys are used in the destination table, TRIPS will correctly handle mapping using the descriptive field (provided it is also unique)

## Translate: The concept of mapping



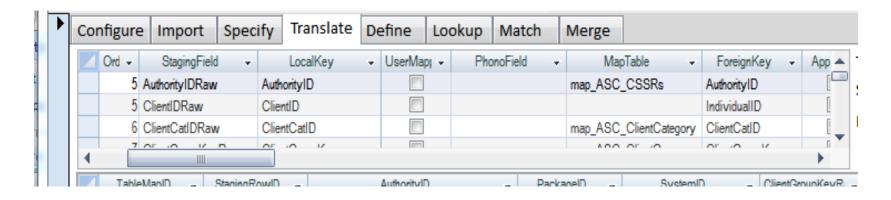


- The mapping table holds:
  - the foreign text which is found in the source data (ending in ...Match); and
  - the standard equivalent (from the underlying Reference Table)
- TRIPS stores the multiple terms used to refer to the standard in the mapping table:
  - Potentially providing the means to compare how different authorities have translated their terms to the standard
- TRIPS uses a sophisticated phonetic matching algorithm to match strings:
  - Crnwl will map to Cornwell
- TRIPS learns as it goes along

Use the F1 help key to find out more ...

## Translate: Defining how to map

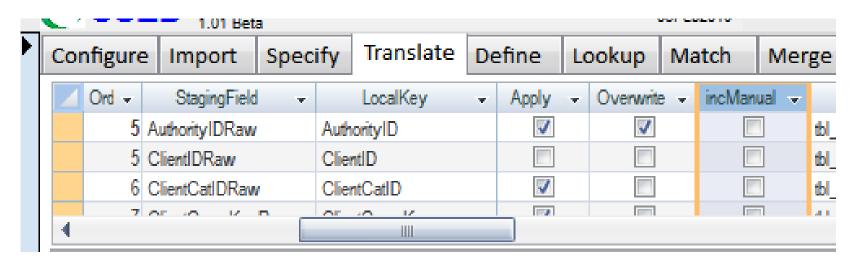




- TRIPS will automatically work out and incorporate mapping if it recognises fields
- TRIPS will automatically create mapping tables when you use them
- If you want you can create your own specific mapping tables

## Translate: Controlling updates

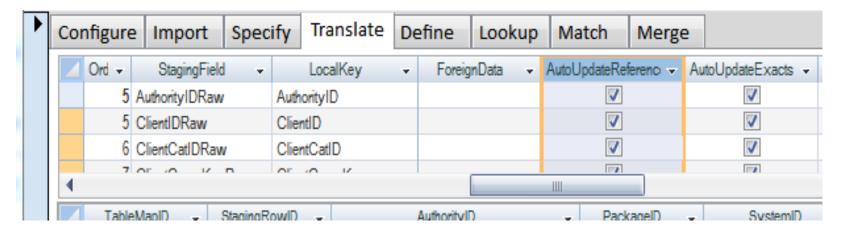




- You can control whether to overwrite existing fields or leave them alone (Overwrite)
- You can manually edit the table (most fields will have look-ups)
  - You can control if you want to overwrite manually updated records (incManual)
     Warning: sometimes TRIPS may have mapped correctly but you cannot see it. This is because TRIPS uses a key internally and automatically displays the description if the description is empty you may not see it (double click the record column and the key will become visible)

## Translate: Automatic population of Reference tables





- For reference tables you create (e.g. a list of providers with a provider code and a provider name) you can request that TRIPS automatically populate the reference table from the source data
  - Whilst slightly more time consuming, the better way to do this is to create multiple TableMaps and first load the reference tables (remember Referential Integrity)

### Translate: Inheritance of related data





- You can also ask TRIPS to automatically 'inherit' related data fields from the Reference Table
  - Suppose, in you source data you have a Provider code which you have loaded into the TRIPS Organisations table
  - In your destination table you want to include the providers post code (held as OrgPostCode in the organisations table)
  - Inheritance allows you to automatically load this post code as part of the process
- You have control over how inheritance works
  - E.g. if there are Nulls in the Postcode, will this overwrite an existing value in your source data



## ASSOCIATE: CREATING SIMPLE RULES

#### The Problem: Lots of simple rules

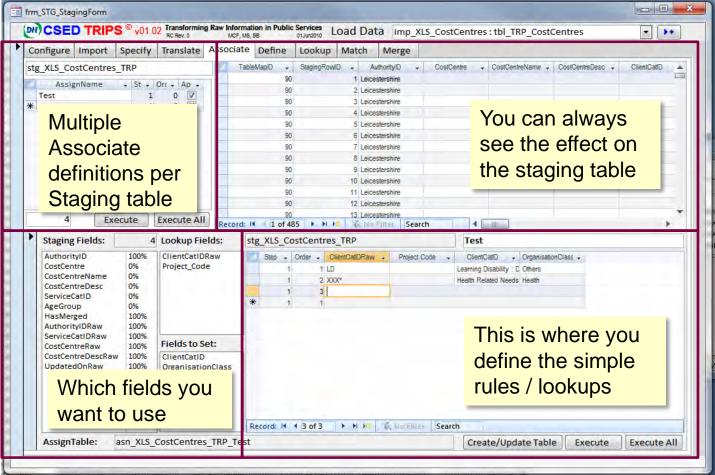


4	A	В	С	D	E
1	2008-09 P	SS EX1 RE	TURN: Origi	inal Details fron	n Period 12 - 09 Tabs
2					
3					
4					RO3 COLUMNS
5					
6	Budget	Cost	Detail	PSSEX1	
7	Block	Centre	Codes	Line No	
8	DIOCK	Contro	Coucs	LIIIC NO	
9					
_					
10	-				
11					
12					
13					
14				<u> </u>	
35					
36	515*			SSMSSG	Planning & Performance
37					
38	517*			SSMSSG	IT & Information
39					ii d iii diiidiidii
40	520*			F4	LD Supported Living In-House
41	520			1 7	ED Supported Eiving in-riouse
42	523*			SSMSSLD/Gen	Adult Protection
43	J23			JJIIIJJEDIJGII	Addit Protection
44	530*			F3	Res'l Learning Disabilities
45	550			13	Res I Leal Hilly Disabilities
46	532*			F6	Day Care Learning Disabilities
47	332			10	Day Care Learning Disabilities
48	534*			F6	Breaking the Barriers
49	334			10	breaking the barriers
43 50	536*	5362		F6	Day Care (modernising Day Service
50 51	536*	5362		SSMSSLD/Gen	Valuing People
52	536	3301		SSMSSLD/GEII	Valuity People
52 53	537*			F6	D.C.I./D. Tradition Asses
53 54	53/-			го	D C L/D, Trading Accs
55	539*			F1	I.D. Commissionine Tooms
56	238-			гі	LD Commissioning Teams
	F 400			50	W-1-1 01-11 181-18-1
57	540*			F6	Workstep Sheltered Plct Scheme
58	F 4F+			COMCODE	Direct Bernerate Information 1
59	545*			SSMSSDP	Direct Payments Infrastructure
60	570a			B.4	014 91-
61	572*			B1	Older People
	572*			E1	Physical Disability
63	572*			F1	Learning Disability
64	572*			G1	Mental Health
65					
66	590*			SSMSSLD/Gen	LD Service Mgs
67					
68	591*		SSMSS/SP	SP Team	Supporting People Team
20				1	1

- The **Define** tool (described next) allows for complex conditions to be defined and multiple values to be set based on complex conditions
- We have learnt from experience that codifying things like Cost Centres only involves simple conditions (wildcards)

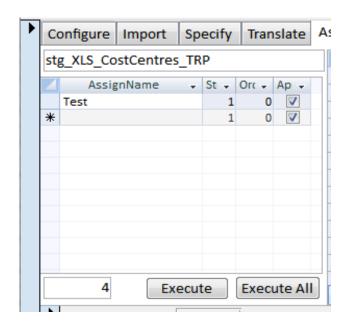
#### Associate: Simple Lookups/Rules





#### **Associate: Creation and Execution**

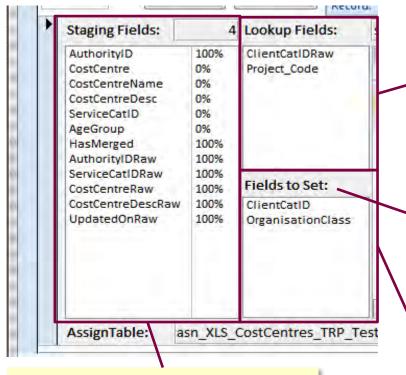




- Each Staging Table can use multiple Association definitions
- In addition to Order, we have introduced Steps
  - Allows multiple operations to be grouped together
  - Applies everywhere
  - Targeted at full automation. E.g.
    - Associate Step 1, followed by;
    - Lookup Step 3, followed by;
    - Associate Step 2

#### Creating your Associate definition





The fields used as a basis for the pattern matching or simple condition (a dynamic **MiniFilter** will be accessible from each of these fields)

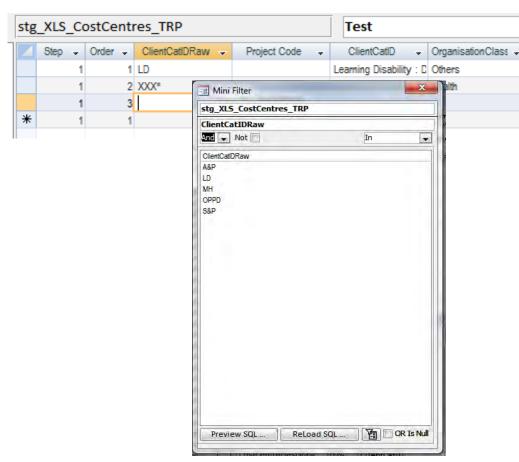
Double clicking on the Title forces a field to go to the none-default area

The fields available within the Staging Table (which haven't been picked)

The fields which are to be set by the simple rule/lookup

#### Associate: Creating Rules/Lookups





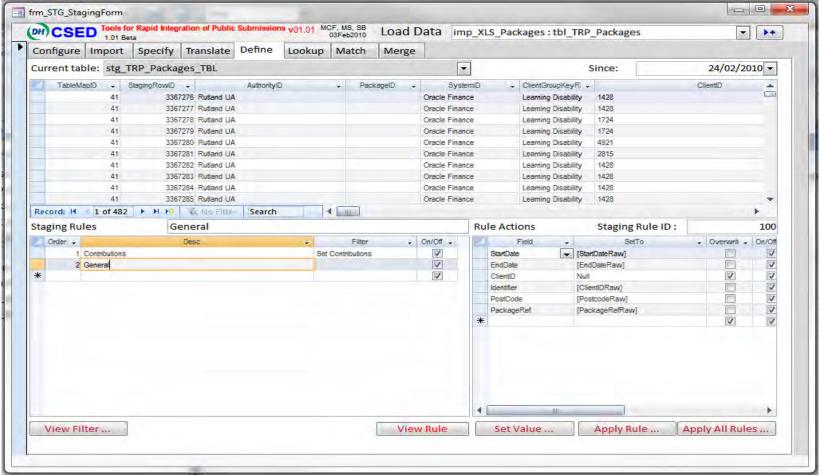
- TRIPS supports the full scope of wildcards (e.g. \*, ?, [], etc)
- Double clicking a Lookup field will bring up the MiniFilter
- Picklists are automatically created for lookup fields
- We have added Double Click functionality wherever such pick-lists are used to show the raw data



## DEFINE: CREATING COMPLEX RULES

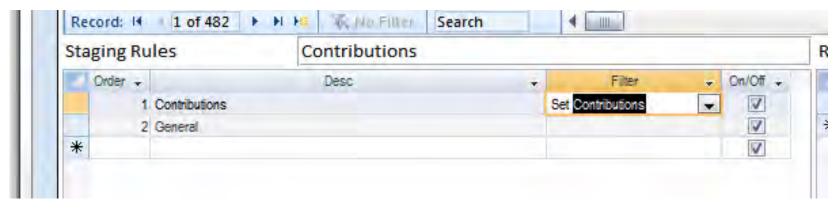
#### Define: Overview





## Define: Creating a rule and its scope

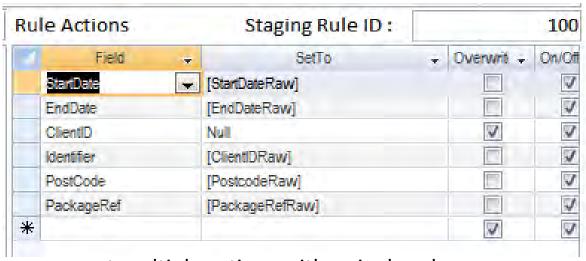




- TRIPS uses Filters to define the scope of a rule (equivalent to a complex If statement)
- The ordering of rules is important:
  - You create more generic rules first and them make subsequent rules more specific, e.g.
    - 1. Codes 1000 to 1500 are Residential
    - 2. except Codes 1350 and 1423 which are Nursing
  - All you have to do is renumber the rule you are interested in (TRIPS will automatically renumber any subsequent rules)

## Define: Telling TRIPS what to do





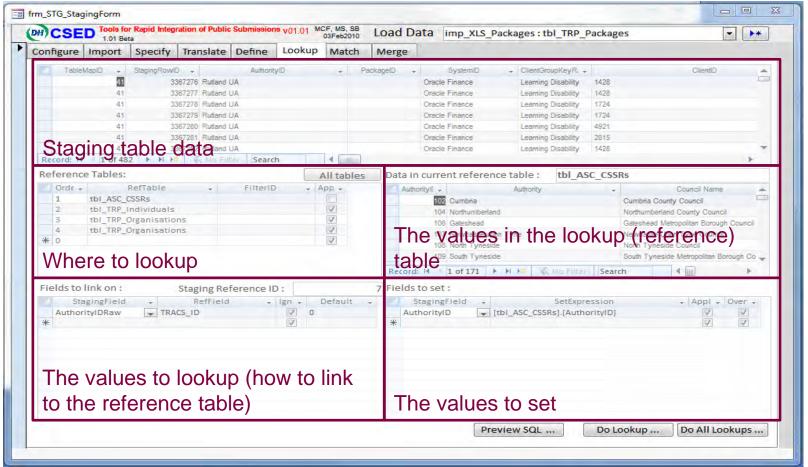
- You can carry out multiple actions with a single rule
- You can set values to other values in the table
  - The above rules are transferring the raw data to final fields
- You can set values to constants (with automatic look-ups)
- You can set values using complex expressions (including look-ups)
- You can set values using settings



# LOOKUP: LOOKING UP VALUES BASED ON OTHER VALUES

#### Lookup: Overview





#### Lookup: Creating lookups



Re	ference	Tables:			All tables
4	Ord€ →	RefTable	-	FilterID	→ App →
	1	tbl_ASC_CSSRs			
	2	tbl_TRP_Individuals			<b>✓</b>
	3	tbl_TRP_Organisations			<b>✓</b>
	4	tbl_TRP_Organisations			<b>▽</b>
*	0				<b>✓</b>

- You can use as many lookups as you want
- As with define (rules) the order of lookup matters
- You can confine the application of the lookup to a subset of the data (using a Filter)
- You can temporarily switch a lookup off
- You can use your own tables to do the lookup

## Lookup: What fields to use for the lookup



Fie	lds to link on :	Staging Reference ID :					
1	StagingField	~	RefField	~	Ign +	Default	Ψ.
	AuthorityID	_	AuthorityID		V	0	
	ProviderIDRaw		OrganisationName		V	**	
*					V		

- Provided you know there is some form of match you can use any value in the staging table to link to any value in the lookup table
- TRIPS will even link if the fields are not of the same type (e.g. a number with text)
- You can use multiple fields as a basis for the lookup (unlike HLookup/VLookup in Excel)
- You can control what happens if a field is empty

#### Lookup: Setting values



#### Fields to set:

1	StagingField +	SetExpression	~	Appl +	Over -	
	ClientCatID 🔻	[tbl_TRP_Individuals].[ClientCatID]		V		
	ClientGroupKey	[tbl_TRP_Individuals].[ClientGroupKey]		<b>V</b>		
	ClientID	[tbl_TRP_Individuals].[IndividualID]		V	<b>V</b>	
*				V	<b>V</b>	

- As with define you can perform multiple actions based on a lookup
- You can set the value based upon a simple field or a complex expression involving one or more fields
- You can instruct TRIPS to ignore fields which already have values in them

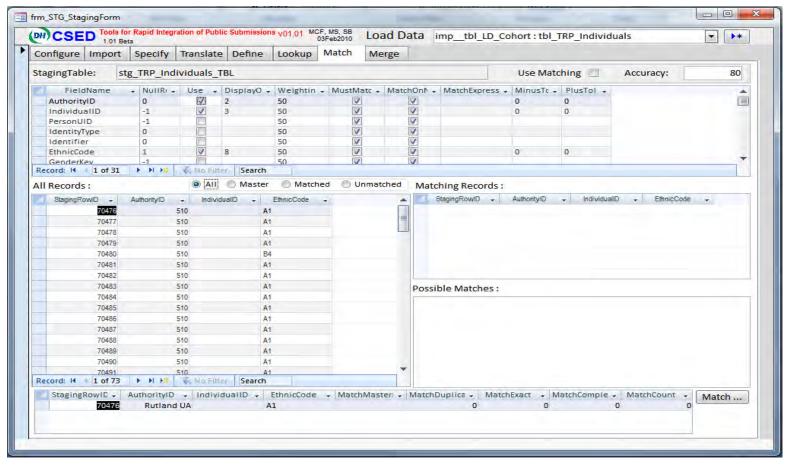


Yet to be fully completed

#### **MATCH**

## Advanced : Name Matching Overview





## Advanced : Name Matching Options



- Provides a very flexible basis for determining matches
- Provides a very flexible way for scoring a match

r returnative	Dutu Type	Description
tbl_SYS_StagingFields		
Field Name	Data Type	Description
UseForMatching	Yes/No	Indicates if this field should be used for matching purposes
MustMatch	Yes/No	Indicates if this field must match (a definite match failure occurs when the match fails to meet the
MatchOnNulls	Yes/No	Indicates if fields with Null values also match when MustMatch is set
MatchDisplayOrder	Number	The order in which to display the matching field (this will default to the FieldNo but can be overwi
MatchWeighting	Number	The weighting associated with this field in the match. The scores (including any negative Fail Score
MatchAlias	Yes/No	Inidcates if an alias table will be used to provide a match (see MatchAliasTable below)
MatchAliasTable	Text	Reference to the table to use for aliases/pseudonyms used to set this value (e.g. first name equive
MatchPhonetically	Yes/No	Indicates if phonetics will be used to match the data (or whether simple text matching should be u
MatchInitials	Yes/No	Indicates if initials will be used to match (if one side less initials than the other then a match will be
MatchDistance	Yes/No	Indicates if the Levenshtein distance algorithm will be used for the purposes of scoring
MatchExpression	Text	User expression returning a negative number to fail, or a number between 0 and 100 to indicate %
MatchPercentTol	Yes/No	Indicates if the tolerance should be treated as a percent [e.g. percent of characters] (True) or an ab
MatchMinusTol	Number	Provides a minus tolerance level associated with the match (e.g. minus months on a date of birth)
MatchPlusTol	Number	Provides a plus tolerance level associated with the match (e.g. plus 6 months on a date of birth)or
MatchDateUOM	Text	The unit of measure associated with date/time based tolerances (e.g. months if the tolerance is in
MatchFailureScore	Number	The score to be subtracted if there is clearly no match. For example a gender match may be a posit
MatchCharScore	Number	Provides a multiplier to increase the score of longer length matches (e.g. a long surname counts for
MatchCharMinLen	Number	The minimum number of characters before which CharScore starts being added (recommended mi
MatchInitialScore	Number	The score to give when an initial matches (either another initial or the first character of one or mor
MatchMinTolScore	Number	An exact match will deliver a score of 100. The min tolerance score is the minimum score if the ma
MatchMaxTolScore	Number	An exact match will deliver a score of 100. The max tolerance score is the maximum score if the ma



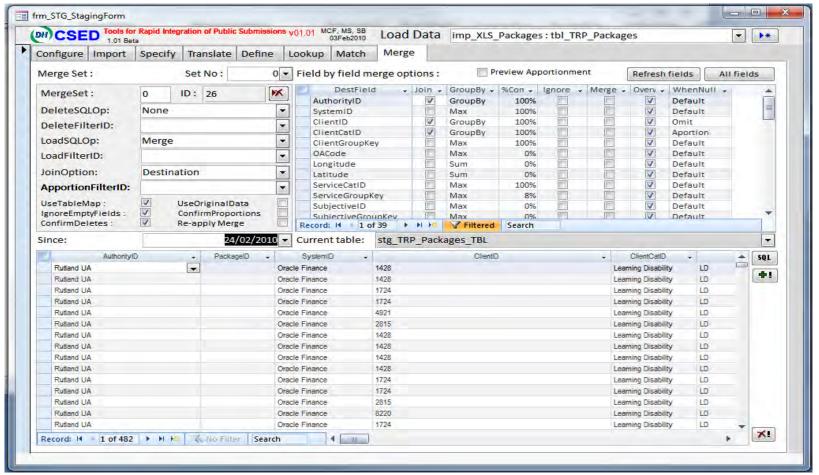
**Including Apportionment** 

## MERGE:

## MERGING CLEANSED DATA WITH THE FINAL DESTINATION

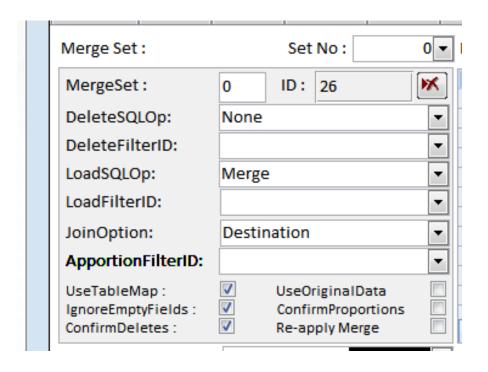
#### Merge: Overview





#### Merge: Table level controls





- You can create different merge options for different subsets of staging data (using a combination of Merge Sets and LoadFilters
- You can control what gets deleted prior to merging and the default basis for merging
- You can control various aspects of the merge operation
- You can control what data is used as a basis for apportionment

#### Merge: Field level controls



Fie	eld by field merge opt	Pr	eview Ap	Refresh fields Al				
	DestField +	Join →	GroupBy +	%Con →	Ignore 🗸	Merge +	Overv 🗸	WhenNull +
	AuthorityID	<b>V</b>	GroupBy	100%			<b>V</b>	Default
	SystemID		Max	100%			<b>V</b>	Default
	ClientID	<b>V</b>	GroupBy	100%			<b>V</b>	Omit
	ClientCatID	<b>V</b>	GroupBy	100%			<b>V</b>	Aportion
	ClientGroupKey		Max	100%			<b>V</b>	Default
	OACode		Max	0%			<b>V</b>	Default
	Longitude		Sum	0%			<b>V</b>	Default
	Latitude		Sum	0%			<b>V</b>	Default
	ServiceCatID		Max	100%			<b>V</b>	Default
	ServiceGroupKey		Max	8%			<b>V</b>	Default
	SubjectiveID		Max	0%			<b>V</b>	Default
	SubjectiveGroupKev		Max	0%			V	Default
Re	cord: I	►I HE	√ Filtered	Search				

- You can control how the staging table links with the destination
- You can control how data is aggregated
- You can choose to overwrite or merge at field level

#### Merge: Apportionment

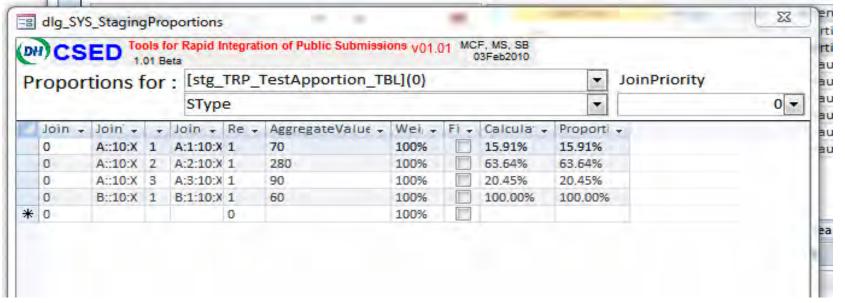


Field by field merge options :				ions:	F	review Apporti	ionment	Refresh fields All fields		
		DestField → Merg			Overv +	WhenNull +	BasedOn →	ProportionMa →	Aggreg: 🗸	Priori
		СТуре			<b>√</b>	Aportion	NewVal		Sum	
		SType			<b>V</b>	Aportion	NewVal		Sum	
		DefaultVal			<b>V</b>	Default			Sum	
		ApportionVal			<b>√</b>	Default			Sum	
		NewVal			V	Default			Sum	
		J1			<b>√</b>	Default			Sum	
		J2			<b>V</b>	Default			Sum	
	*				.7	Default			Sum	

- You can chose what basis to use apportionment
- You can prioritise the order in which apportionment is applied
- You can choose how to aggregate
- You can choose which fields are affected by apportionment and how the data is combined

## Merge: Apportionment Setting manual proportions



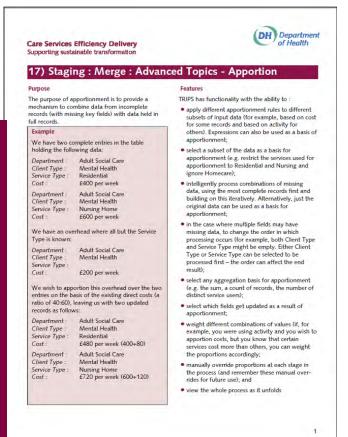


- You can see the calculated proportions at each stage in apportionment
- You can apply different weightings to different values used to calculate proportions
- You can manually override calculated proportions

# Video and Hands On

## Merge: Apportionment Using the Reference Manual





#### Hands-on

- 1. Set **Staging:Configure:Selected Set** to : *LD Analysis Project*
- 2. Select **Load Data** (top right) to: imp TRP TestApportion:tbl TRP TestApportion
- 3. Tick the Merge:Preview Apportionment tick box
- Review (but do not change) the various
   Merge Set and Field by field merge options
- Make sure Current table is set to : stg\_TRP\_TestApportion\_TBL
- 5. Focus on records with **J1** set to 10 (**LoadFilterID** restricts the operation to only these records)
- 7. Hit the Append ( 📑 uttor
- 8. Follow the worked example at the back of the section on Apportionment (hitting the Close button at each stage in the process )

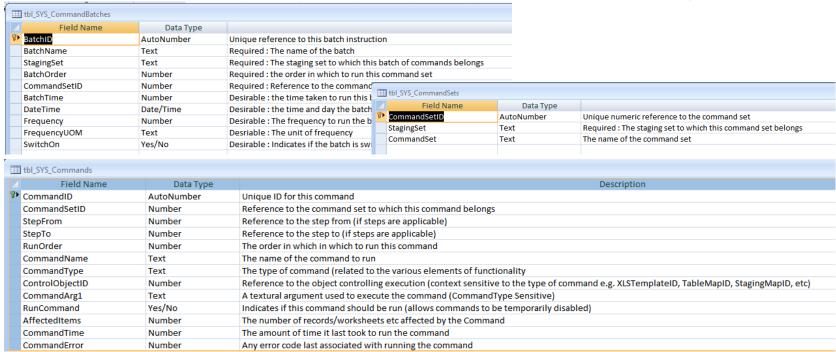


Batch operation : In development

#### **COMMANDSETS**

#### **Command Sets**





#### **Command sets** will allow you to fully automate every step of the staging process:

- Elect which staging tools to apply to which TableMaps
- Control the sequencing of each step of the staging process
- Totally automate the staging process (for batch processing purposes)



## PIVOT TABLES: CREATING SIMPLE SETS OF DATA

#### PivotTables: Simple data



all dlg SYS PivotTables CSED TRIPS VO1.02 Transforming Raw Information in Public Services
RC Rev. 0 MCF. MS. SB 01JUN2010 Pivot Table Details \* LD Analysis Work PivotTable PSS Historical Analysis (by Service Family) PivotTable PSS Historical Analysis (by Service Family) Change Set to LD Analysis Work × 4 - Levels 3 UsesAQuery Confirm Base Table tbl\_RTN\_PSSEX1\_Finance Refresh SQL Last stage PSS EX1 Financial Analysis a IsDirty **Available Fields** Dimensions Amount Reported tbl RTN PSSEX1 Finance Y ClientGroup tbl ASC ClientCategory 13MonthNo tbl LIB Calendar AUTHORITY tol ASC CSSRs 13MonthWeek tbl LIB Calendar BaseYear tbl ASC Prevalence Data 13MonthYr tbl LIB Calendar ServiceFamily tbl ASC ServiceCategory 13MonthYrNo tbl LIB Calendar th CLG Authorities AuthorityType. AgeGroup tbl\_RTN\_PSSEX1\_Finance **Analysis Fields** AgeGroup2 tbl\_ASC\_AgeGroups **PropClientGroup** Aggregated AUTHORITY tol ASC CSSRs **PropClientService** Aggregated tbl\_CLG\_Authorities AuthorityType PropServiceFamily Aggregated BankHolDay tbl LIB Calendar SpendPerPopHead Aggregated BankHolidavs tbl LIB Calendar TotalXClientGroup Aggregated Totals Grouped by ... Time Period limited by ... PivotTotalName FieldName OrNull Op ClientGroup Time From ServiceFamily ₩ <= ₩ -Both ▼ Time To Calculated Fields FromTotalsID FieldName - OnAggn - SQL -CalcExpression - IsAr - -ClientGroup otalXClientGroup [tbl RTN PSSEX1 Finance].[Amount Reported] ServiceFamily TotalXServiceFamily [tbl RTN PSSEX1 Finance].[Amount Reported] V TotalXClientService [tbl\_RTN\_PSSEX1\_Finance].[Amount\_Reported] PropClientGroup Sum [Amount Reported]/[TotalXClientGroup] **PropServiceFamily** [Amount Reported]/[TotalXServiceFamily] Sum **PropClientService** Sumi [Amount Reported]/[TotalXClientService] Round([Amount Reported]\*1000/[18to64s],0) SpendPerPooHead

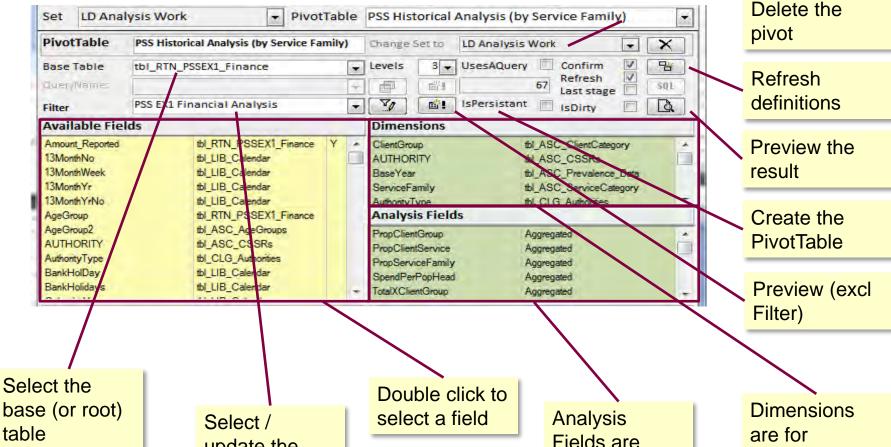
Simple pivots are controlled by the highlighted area on the form

#### **Pivot Tables: Simple data**

update the

main Filter





numerical

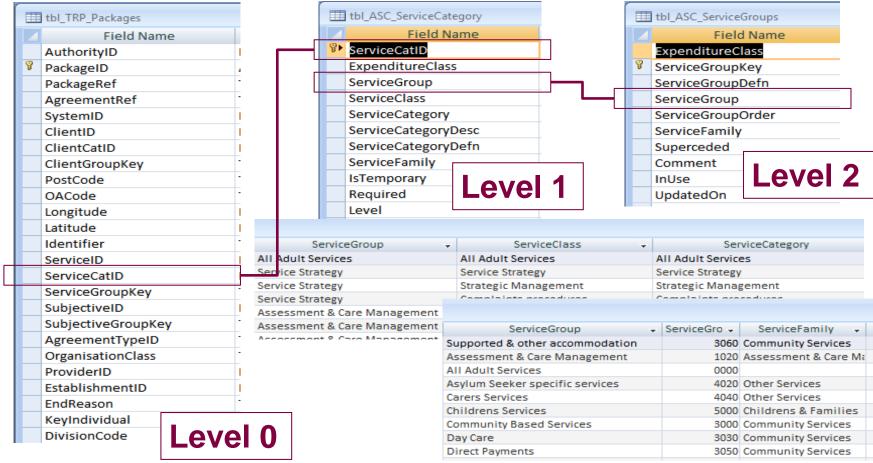
22 January, 2014

139

grouping

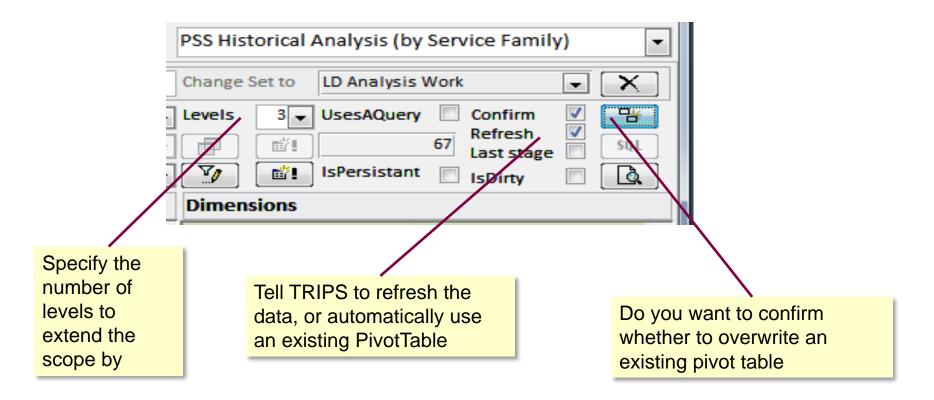
#### Pivot Tables : Concept Direct relationships and levels





## Pivot Tables : Simple data Control options







## CALCULATED FIELDS: TOTALS BY AND CUSTOMISING

January, 2014

#### Calculated fields



dlq SYS PivotTables CSED TRIPS OV1.02 Transforming Raw Information in Public Services Pivot Table Details \* LD Analysis Work PivotTable PSS Historical Analysis (by Service Family) PivotTable PSS Historical Analysis (by Service Family) Change Set to LD Analysis Work × 먐 UsesAQuery Confirm Base Table tbl\_RTN\_PSSEX1\_Finance IsPersistant IsDirty Da PSS EX1 Financial Analysis Filter **Available Fields** Dimensions Amount Reported tbl\_RTN\_PSSEX1\_Finance ClientGroup tbl ASC ClientCategory 13MonthNo tbl LIB Calendar AUTHORITY tol ASC CSSRs 13MonthWeek tbl LIB Calendar BaseYear tbl ASC Prevalence Data 13MonthYr tbl LIB Calendar ServiceFamily tbl ASC ServiceCategory 13MonthYrNo tbl LIB Calendar AuthorityType. th CLG Authorities AgeGroup tbl\_RTN\_PSSEX1\_Finance **Analysis Fields** AgeGroup2 tbl\_ASC\_AgeGroups PropClientGroup Aggregated **AUTHORITY** tol ASC CSSRs PropClientService Aggregated tbl CLG Authorities AuthorityType **PropServiceFamily** Aggregated BankHolDav tbl LIB Calendar SpendPerPopHead Aggregated BankHolidavs tbl\_LIB\_Calendar TotalXClientGroup Aggregated Time Period limited by ... Totals Grouped by ... PivotTotalName FieldName Op OrNull From ClientGroup - >= -Time From ServiceFamily ₩ <= ₩ . ▼ Time To Calculated Fields 15/04/2010 07:56:06 41 === FromTotalsID FieldName → OnAggn → SQL -CalcExpression - IsAr -V ClientGroup TotalXClientGroup Sum [tbl RTN PSSEX1 Finance].[Amount Reported] ServiceFamily TotalXServiceFamily 1 Sum [tbl RTN PSSEX1 Finance].[Amount Reported] TotalXClientService [tbl\_RTN\_PSSEX1\_Finance].[Amount\_Reported] Sum V PropClientGroup Sum [Amount Reported]/[TotalXClientGroup] **PropServiceFamily** 1 Sum [Amount Reported]/[TotalXServiceFamily] **PropClientService** Sum [Amount\_Reported]/[TotalXClientService]

Sum

SpendPerPopHead

We are now going to focus on the bottom half of the form

Round([Amount Reported]\*1000/[18to64s].0)

#### Calculated Fields



PivotTotalName OrNull FieldName Op From ClientGroup Time From **→** >= **→** • ServiceFamily **▼** <= **▼** V Time To Both Calculated Fie ds 41 15/04/2010 07:56:06 二日 FromTo alsID - OnAggn - SQL -- IsAr - -FieldName CalcExpression 1 ClientGroup TotalXClientGroup Sum [tbl RTN PSSEX1 Finance].[Amount Reported] 1 ServiceFamily TotalXServiceFamily Sum [tbl RTN PSSEX1 Finance].[Amount Reported] 1 TotalXClientService [tbl\_RTN\_PSSEX1\_Finance].[Amount\_Reported] Both Sum 1 Sum [Amount Reported]/[TotalXClientGroup] PropClientGroup 1 PropServiceFamily [Amount Reported]/[TotalXServiceFamily] Sum 1 PropClientService Sum [Amount\_Reported]/[YotalXClientService] Round([Amount\_Reported]\*1000/[18to64s],0) SpendPerPopHead Sum

Used to control the time dimension (can also use filters)

The calculated field.
Calculated fields can be based on other calculated fields
Hint: use

Shift+F2

How you want to aggregate the data

Used to create the TotalsFor fields

Totals Grouped by ...

Whether the field is created before or after aggregation

Time Period limited by ...

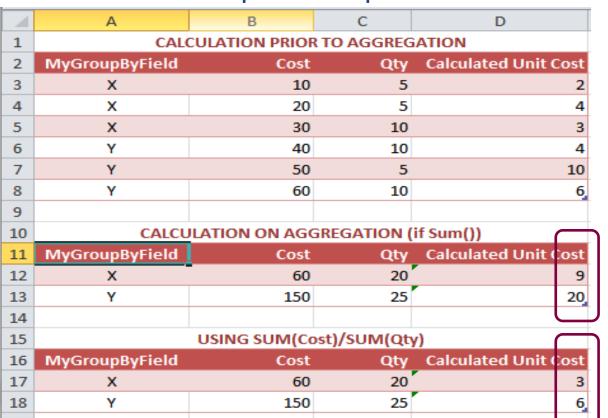
Your name for

the calculated

field

# Calculated Fields Concept – Two passes





You must be aware of the fact that TRIPS does two passes

If a field is only used within a calculation, then it will not be available at the aggregate level

#### **Pivot Tables: Calculated Fields**



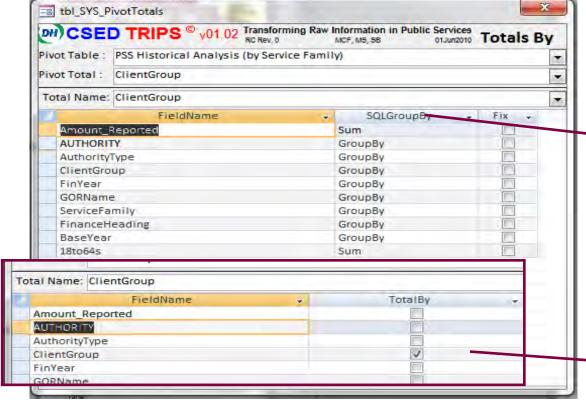
 TRIPS provides access to the underlying Access function set which means you can incorporate the full set of mathematical functions

 You can also create non-numerical calculated fields using string and logical functions.

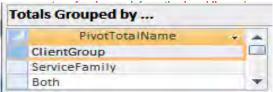
If you do this you must set the IsAnalysisField option to False

## Calculated Fields: TotalBy

Double-click here to get access to the Totals By dialog







For now, you can over-write the default aggregation operation.

For now, be careful with operators such as Count.
Currently TRIPS aggregates without Total By and then reaggregates using Total By.
TO BE FIXED

You can select which grouped fields to Total By (not Group)

# Calculated Fields Concept: Totals By



4	Α	В	С	D	Е	F	G
1							
2			CLIENT TYPE				
3			PD	MH	LD	OP	TOTAL
4	ш	Home Care	25	50	15	0	90
5	TYPE	Residential	37	1	34	73	145
6	SERVICE	Nursing	46	50	32	68	196
7		Day Care	69	24	40	83	216
8		<b>Direct Payments</b>	50	3	28	78	159
9		TOTAL	227	128	149	302	806

This Total is the Total By Client Type (the total for all client types)

This is the total of both

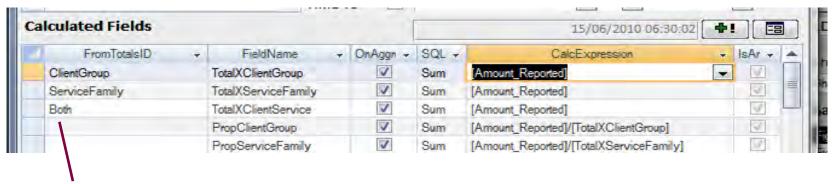
This Total is the Total By Service (the total for all services)

We will rename this to be Total For

Totals are useful for doing things like proportions of total as in Use of Resources

# Calculated Fields: Accessing Totals

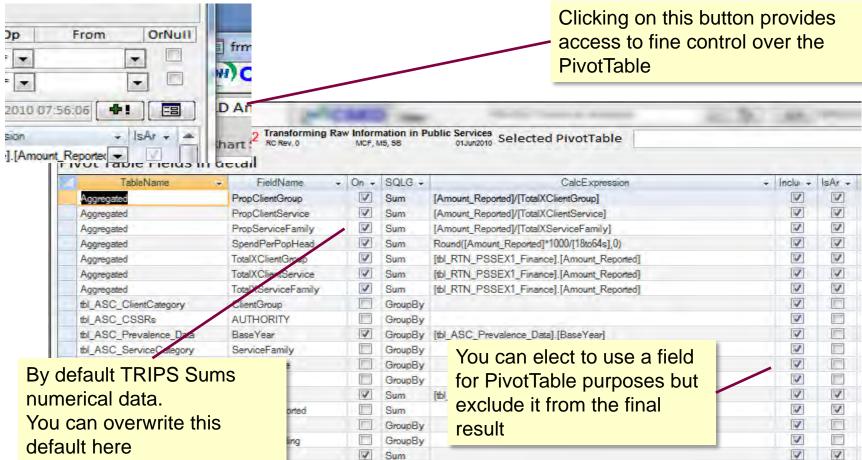




- In order to use a Totals field you must create a calculated field to reference it (telling it which Total to use)
- The CalcExpression will be limited to the available fields
  - Which can include fields from related Fact tables
- Once referenced you can use Total fields in calculations
  - However, because they are not linked until after aggregation any calculations MUST be
     OnAggregate

### PivotTables: Customising



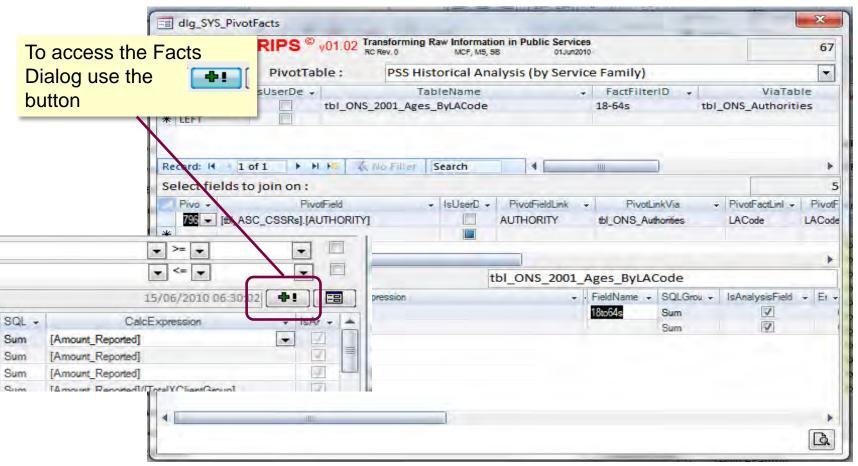




# FACTS: LINKING INDIRECTLY RELATED DATA SETS

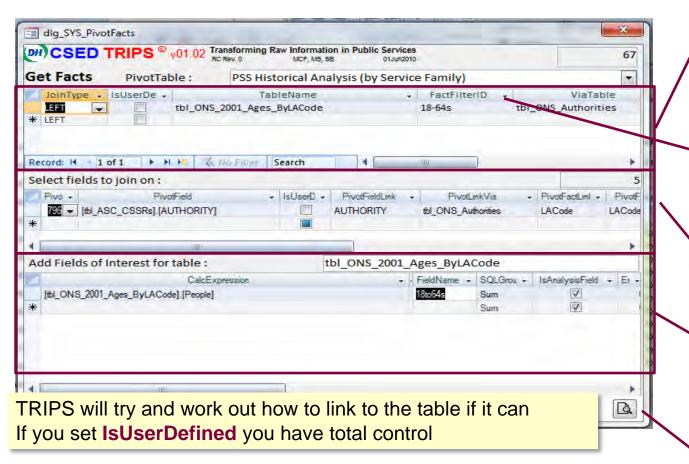
## Facts: Adding / editing facts





#### Facts: Linking to indirectly related tables





Which tables to link to (and if the link is **via** another table)

A filter to restrict which records

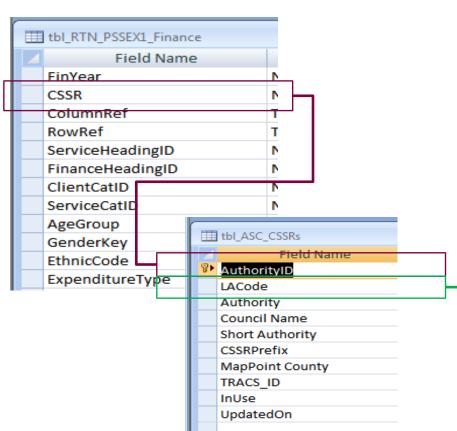
How to link the tables together

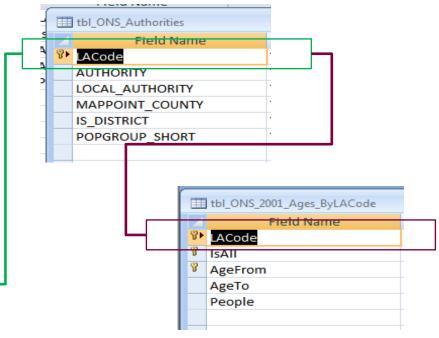
Which fields you want to bring in (and what you want to call them)

Previewing the result

# Facts: Concept – Via a bridging table







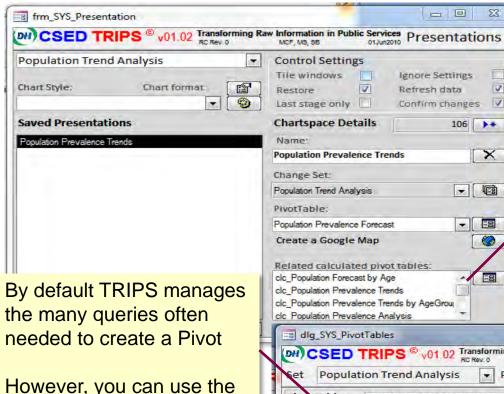
 The relationship is indirect – hence the use of a bridging table



# PERSISTENT PIVOTS : AND MICROSOFT QUERIES

#### Persistent Pivots & MS Queries



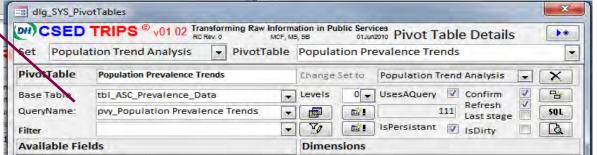


Microsoft Query interface

By default TRIPS treats PivotTables as temporary tables

However, you can add a PivotTable to the dictionary (make it persistent)

PivotTables can then be based on other **PivotTables** 



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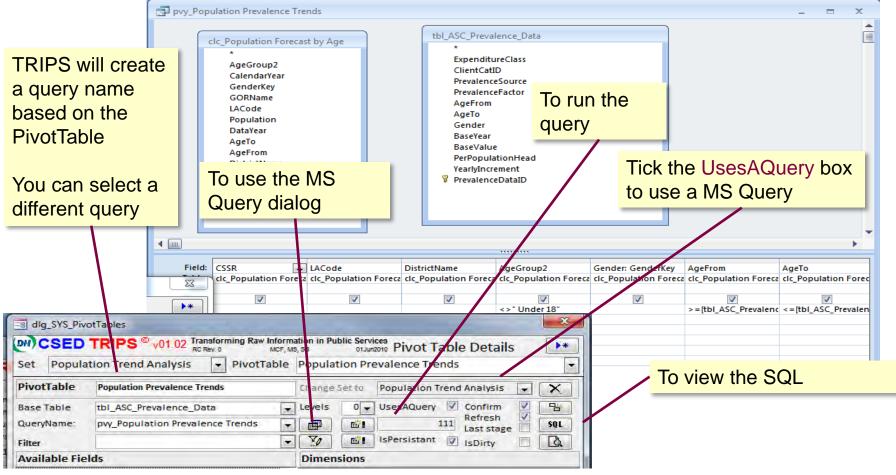
Ignore Settings

Confirm changes

Refresh data

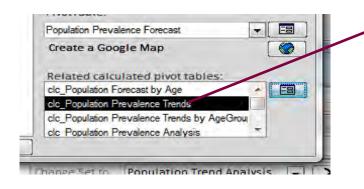
#### **Microsoft Queries**





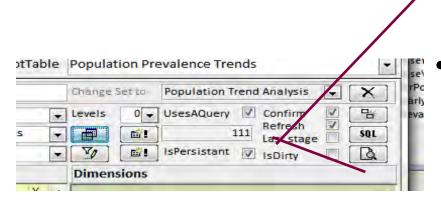
# Persistent Pivots : Control over operation





 TRIPS will work out dependencies and how to automatically create the tree in the right order

 You can convert any PivotTable to a persistent one by ticking the IsPersistent tickbox



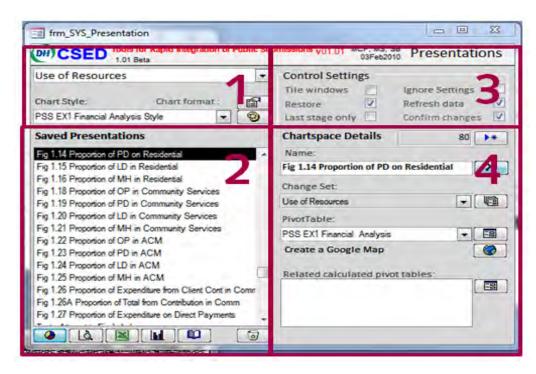
 For testing purposes you can tell TRIPS only to refresh the current PivotTable



# **BUILDING A SIMPLE CHART**

### Present – Charts: Entry Form





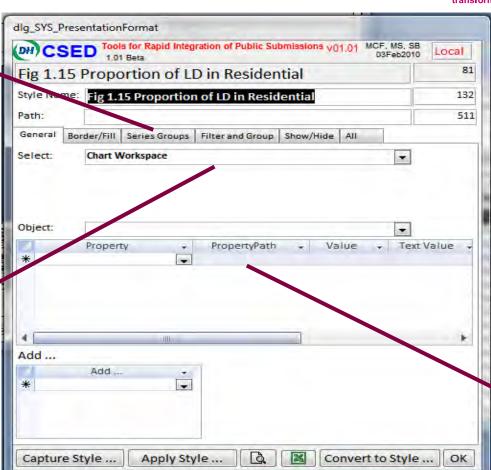
- Selecting a Presentation Set
  - Formatting and chart styles
- Selecting which charts and what you can do
- Controlling execution
- 4. AccessingPivotTables andGoogle maps

## Present – Format & Styles



The various formatting tabs

Selecting which part of the chart to modify



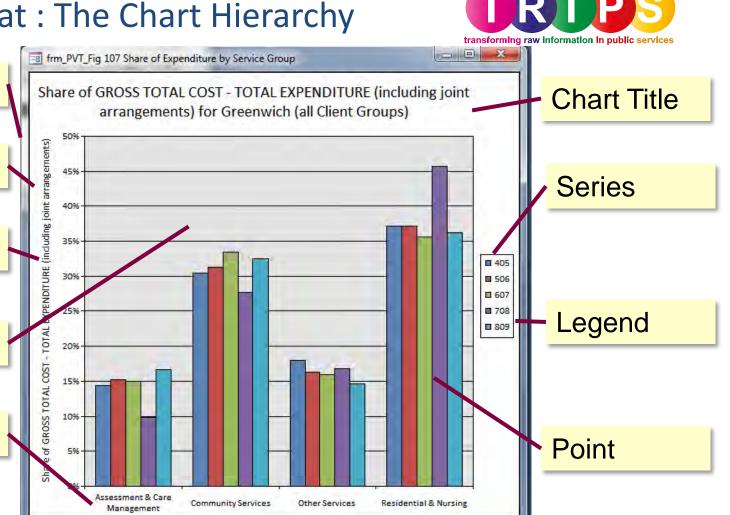
Use the Format button



or, once created, double click on the chart

Changing the properties of this part of the chart

## Format: The Chart Hierarchy



22 January, 2014

**Category Axis** 

ChartSpace

Chart

Data Axis

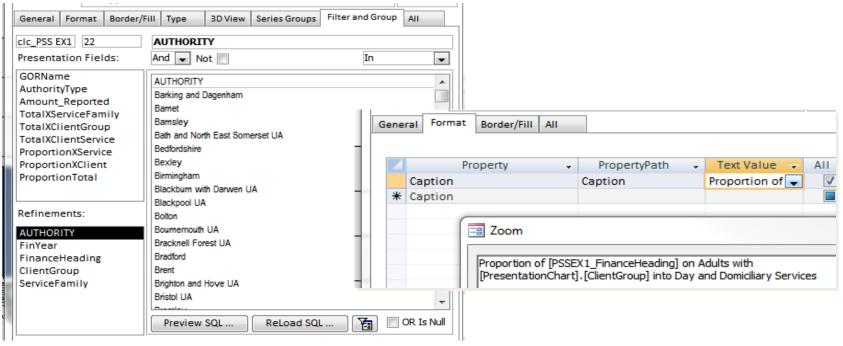
Plot Area



#### Chart – Advanced features



- You can select subsets of the data using the Filter and Group tab in combination with Settings
- Labels and titles can contain Settings



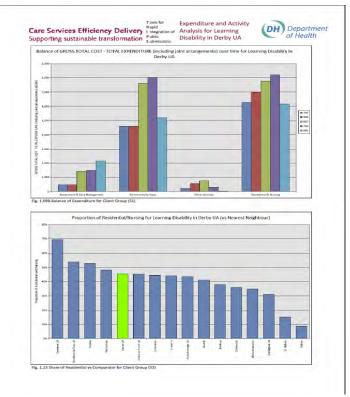


## **USING PRECONFIGURED CHARTS**

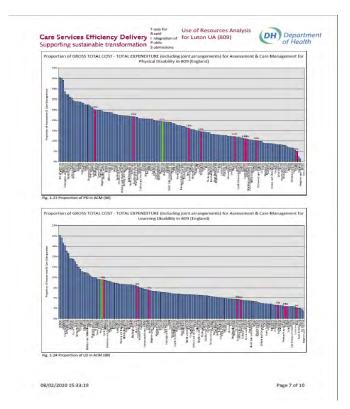


#### **Charts: Main Sets**





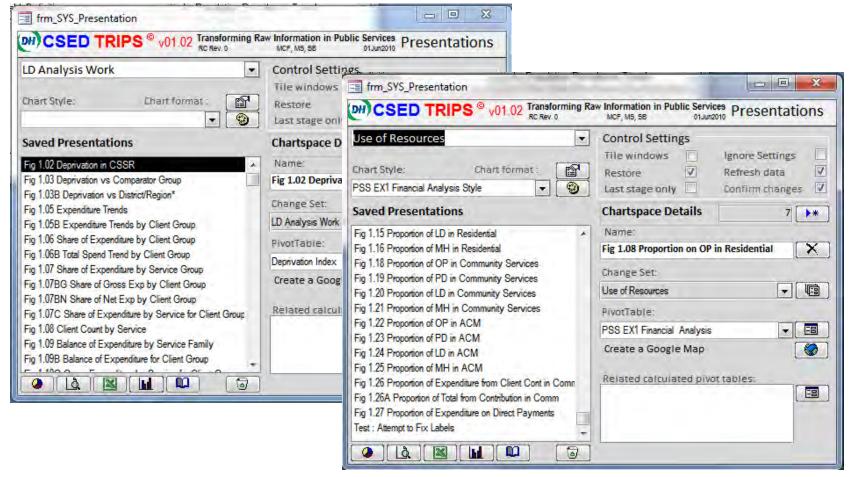
• 'LD' Analysis



Use of Resources

## Using the Existing charts



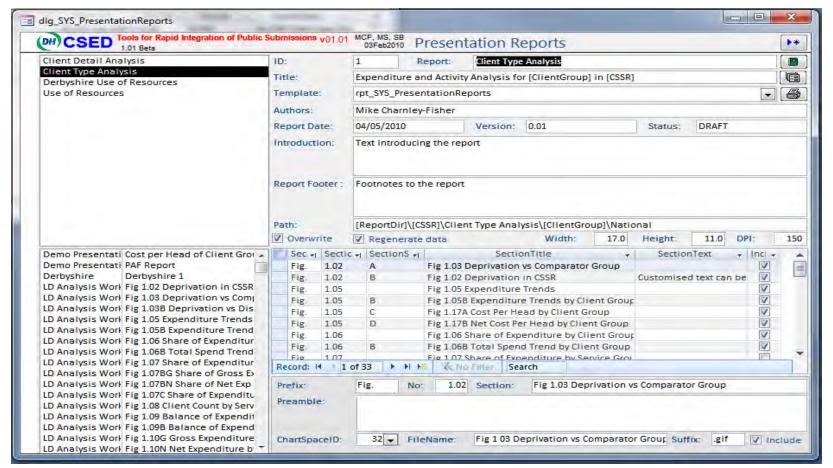




# **USING AND CREATING REPORTS**

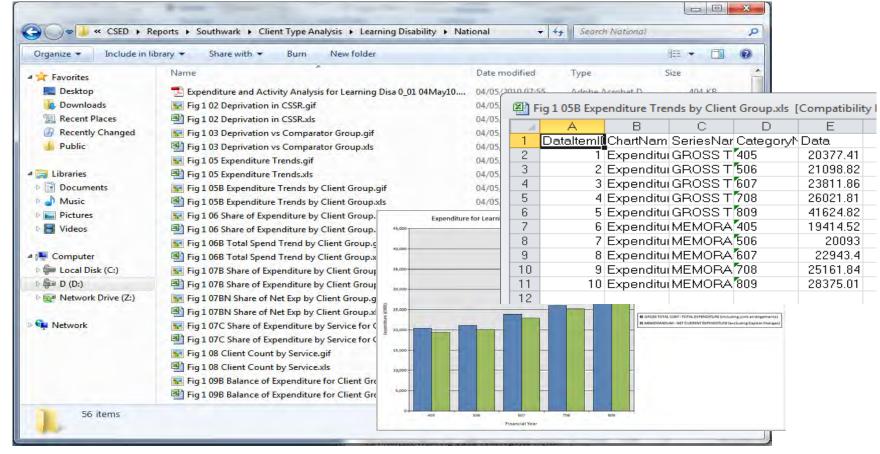
## Reports: The main dialog





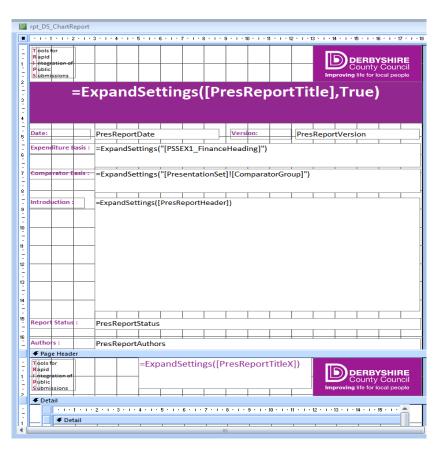
# Reports: What happens when you run one





# Reports: Creating your own templates





If you know how to operate Access you can create your own templates:

- Add your own branding;
- Refer to settings;
- Change the layout

## Reports: Others on the way



# Prevalence based forecasts combining:

- Latest regional population forecasts by gender and age and district
- Complete set of POPPI / PANSI Prevalence data
- RAP Client data

#### **PSS EX1 Output**

 Completely compatible with the existing return

Others as requested

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# GOOGLE® MAPPING: SENDING DATA TO MAPS

# Mapping: Configuring a map



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DH) CSED TRIPS ®	v01.02 Transforming Raw Information in Public Services RC Rev. 0 MCF, MS, SB 01,Jun2010	Geographical Presentation		
Selected Dataset	Base Colour			
Test Geography	<b>▼</b> #FF0000			
Available Plot Selections Local_Authority   Each record	increase the value of the Local Authority shape	Silder Elem		
		Min	Mid	Max
Height Qualifier (Single F tbl_RTN_PSSEX1_ Amount_Re				
COLLAND SERVE ANIOUNICATE	porteu			
			KML Bypass	reate Map