

Actionable and Dynamic BI Reporting with Winshuttle Query

Kentner Cottingham | Recreational Equipment Inc. (REI)



Overview & Context

- Context for presentation
- Why Query?
- Query for development
- Solution examples
- Questions & Open Mic



directly leading to an action or result

evolving scope/scale or churning values

Actionable and Dynamic BI Reporting with Winshuttle Query

Kentner Cottingham | Recreational Equipment Inc. (REI)

ERP enabling software

A fun guy

Purveyor of fun

Also fun guys/gals

Fun times



Happy face?

Actionable and Dynamic BI Reporting with Winshuttle Query

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REI, SAP, & Winshuttle

- REI founded 1938
- SAP R3 in 2010
(with Winshuttle)
- Business development:
 - Transaction 2011
 - Query 2012
- WUG since 2011



Using Winshuttle Query for Reporting

WHAT QUERY IS**

- Simple & powerful data acquisition
- Easily configurable
- Rapidly deployable
- A 'Switchblade'

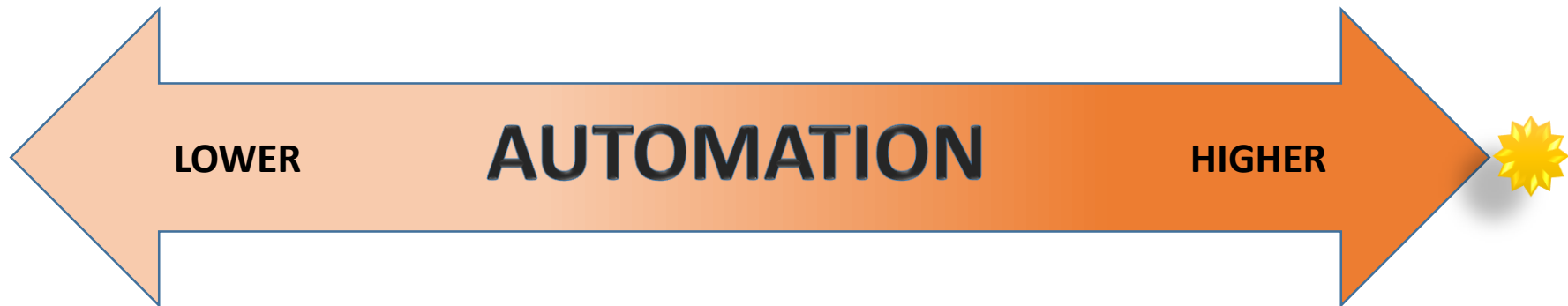
WHAT QUERY IS NOT**

- Complex SQL engine
- SAP Resource intensive
- The only final solution*

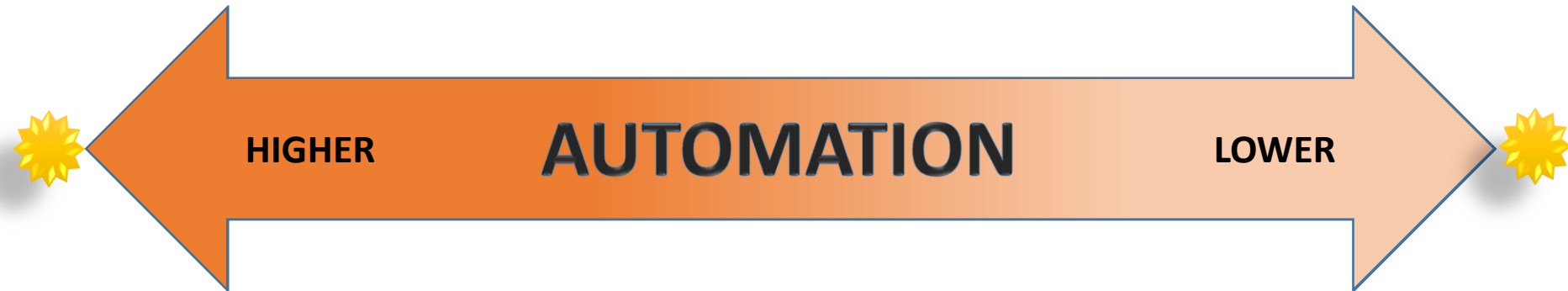
**these are my opinions alone! – perhaps shared by others...



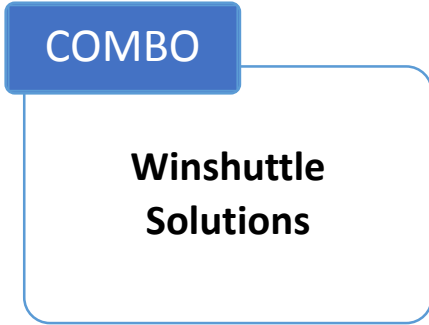
Why Query?



Why Query?



Why Query?



Query for Report Development

Development:



Query for Report Development

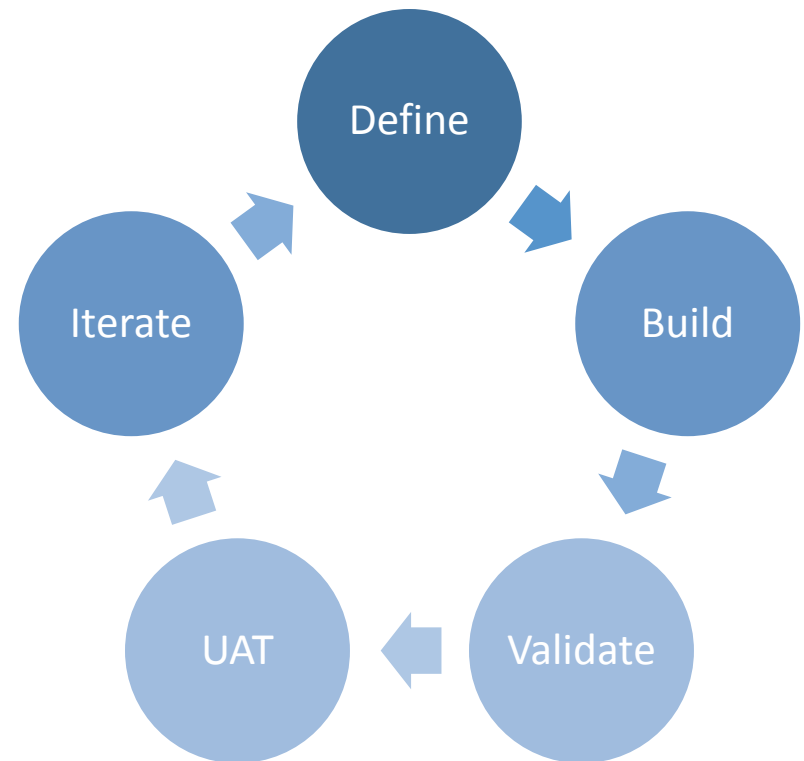
- Rapid iterations
- Simple testing
- Low impact to ERP
- End product can vary

The screenshot displays the SAP Query Builder interface. On the left, a list of tables is available for selection, including [RESB (Reservation/depende...), [MAKT (Article Descriptions), [T023T (Merchandise Categor...), [WRF_BRANDS_T (Brand Nam...), [RKPF (Reservat...), and [MARA (General Article Data)]. The main workspace shows a query structure with several tables and their fields. A cartoon character with a blue top and a white body with a smile is overlaid on the [RKPF] table. The character has the text 'WINSHUTTLE' on its chest. The query structure includes fields like RSNUM, RSPOS, XLOEK, KZEAR, MATNR, WERKS, BDTER, BWART, BDART, RSSTA, XWAOK, LGORT, PRVBE, CHARG, PLPLA, SOBKZ, BDMNG, MEINS, SHKZG, FMENG, ENMNG, ENWRT, WAERS, ERFMG, ERFME, PLNUM, BANFN, BNFPD, AUFNR, BAUGR, SERNR, BOM explic, KDAUF, KDPOS, KDEIN, PROJN, SAKJR, G/L Accou, GSBER, UMWKR, UMLGO, NAFKZ, NOMAT, NOMNG, POSTP, POSNR, ROMS1, ROMS2, and ROMS3. The [MAKT] table includes fields like MATNR, SPRAS, MAKTG, and MAKTX. The [T023T] table includes SPRAS, MATKL, WGBEZ, and WGBEZ60. The [WRF_BRANDS_T] table includes BRAND_ID, LANGUAGE, and BRAND_DESCR. The [RKPF] table includes RSNUM, XCA, RSD, USN, BV, W, KR, PR, A, K, U, U, PARBU, PARGB, IMKEY, KSTRG, PAOBJNR, PRCTR, PS_PSP_PNR, NPLNR, AUFPL, APLZL, VPTNR, FIPOS, and BSCD. The [MARA] table includes MATNR, MTART, MATKL, BISMT, VHART, SATNR, PMATA, MFRPN, MFRNR, BMATN, ERSDA, ERNAM, LAEDA, AENAM, VPSTA, PSTAT, LVORM, MBRSH, MEINS, BSTME, ZEINR, ZEIAR, ZEIVR, ZEIFO, AESZN, BLATT, BLANZ, FERTH, FORMT, GROES, WRKST, NORMT, LABOR, EKWSL, BRGEW, NTGEW, GEWEI, VOLUM, VOLEH, BEHVO, RAUBE, and TEMPR.



Query for Report Development

- Explore requirements
- Prototype datasets
- Validate with business
- Iterate results



Query for Report Development

Find fields and tables from
F1 help, GUI recording*, and/or by searching for joins

Purchasing Group

Key for a buyer or a group of buyers, who is responsible for certain purchasing activities.

Use

- Internally, the purchasing group is responsible for procurement of a material or a class of materials.
- Externally, it is the medium through which purchase orders from vendor are maintained.

Technical Information

Screen Data

Program Name: SAPLMEGUI
Screen Number: 1221

GUI Data

Program Name: SAPLMEGUI
Status: NORMAL

Field Data

Table Name: MEPO1222
Table category: Struct.
Field Name: EKGRP
Data Element: EKGRP
Parameter ID: EKG

Field Description for Batch Input

Screen Field: MEPO1222-EKGRP
Program Name: SAPLMEGUI
Screen Number: 0014

Query Builder

Event Direct Sales Reservation report

File Name: MOSE_EventReserve-Reserves.qiq

Data Source: Table

Auto Join Tables

Selection	Table Name	Table Description	Field Name	Field Description
<input type="checkbox"/>	MAKT	Article Descriptions	MAKTG	Article description in upper case for mat...
<input type="checkbox"/>	MVKT	Article descriptions	MAKTG	Article description in upper case for mat...
<input type="checkbox"/>	/SRMER/CCS_M	Generierte Tabelle zu einem ...	MAKTG	Article description in upper case for mat...
<input type="checkbox"/>	JPV_MAT_IMPRINT	Generierte Tabelle zu einem ...	MAKTG	Article description in upper case for mat...
<input type="checkbox"/>	JPV_MAT_ORIG	Generierte Tabelle zu einem ...	MAKTG	Article description in upper case for mat...
<input type="checkbox"/>	JPV_MAT_RESP	Generierte Tabelle zu einem ...	MAKTG	Article description in upper case for mat...
<input type="checkbox"/>	JVMEDIAISSUE	Generierte Tabelle zu einem ...	MAKTG	Article description in upper case for mat...
<input type="checkbox"/>	JVMEDIAPRODUCT	Generierte Tabelle zu einem ...	MAKTG	Article description in upper case for mat...
<input type="checkbox"/>	J_TLIM_V	Generierte Tabelle zu einem ...	MAKTG	Article description in upper case for mat...

Define

Iterate

Build

Validate



Query for Report Development

sort & select data

&

easily map outputs

The image displays two screenshots of the SAP Query tool interface. The left screenshot shows the 'Where Clause Builder' dialog box with a table of field expressions. A red arrow points from the 'Condition' column to the 'Iterate' callout. The right screenshot shows the 'AutoMap' dialog box with a table of mappings and a 'Validate' callout pointing to the 'Validate' button.

S.No	SAP Field Name	Expression	SAP Field Description	Field Size	Mapped to column	Excel Expression	Expression Evaluation	
1	SGTXT	RESB_SGTX	Purchasing Group	C	C	=trim(C1)	AC11	
2	WERKS	RESB_WERKS	Site	I	I			
3	MATNR	RESB_MATNR	Article Number	H	H	=int(H1)	AH11	
1	MAKTX	MAKT_MAKTX	Article Description	G	G	=trim(G1)	AG11	
3	ERFMG	RESB_ERFMG	Quantity in Unit of Entry	J	J	=int(J1)	AJ11	
6	ERFME	RESB_ERFME	Unit of Entry	K	K			
7	KZPF	RESB_KZPF	Final Issue for This Reservation	String	3			
1	RESB_RSPOS	RESB_RSPOS	Item Number of Reservation/Dependent Requirement	String	1	O	=int(P1)&int(H1)&int(I1)	AO11
8	RESB_RSPOS	RESB_RSPOS	Item Number of Reservation/Dependent Requirement	String	10	M	=int(M1)	AM11
9	RESB_RSPOS	RESB_RSPOS	Item Number of Reservation/Dependent Requirement	String	4	N	=int(N1)	AN11

Iterate

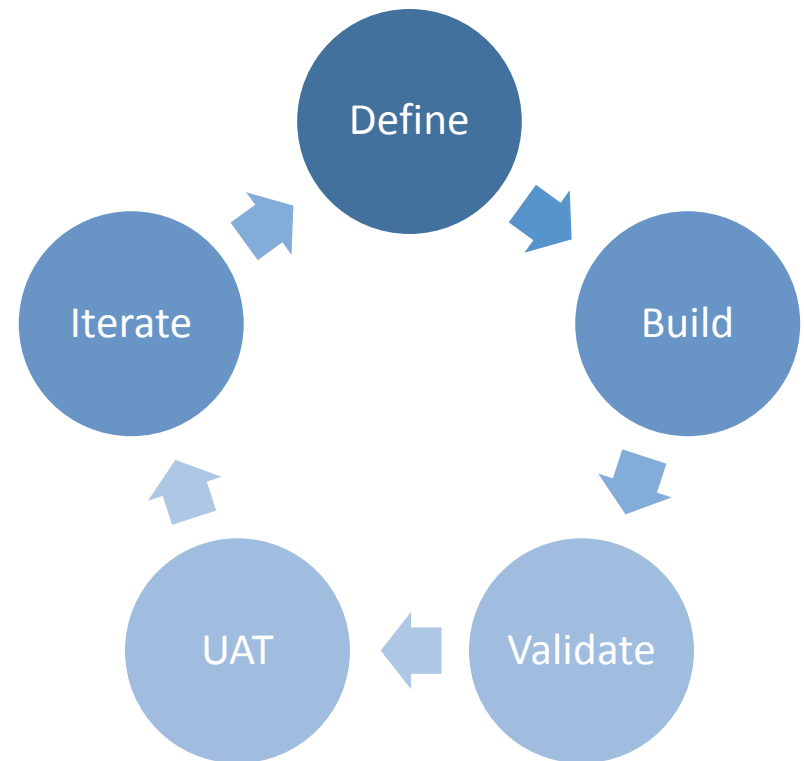
UAT

Validate



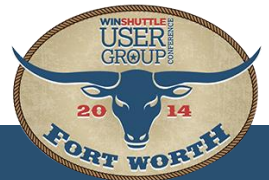
Query for Report Development

- Explore requirements
- Prototype datasets
- Validate with business
- Iterate results



Query for Systems Integration

Systems Integration: Vendor & Sourcing Data



Query for Systems Integration

- Vendors & Goods Suppliers
- Transit Tables



Excel & Tribal Knowledge

- Consolidation Data
- Scheduling Requirements
- Other Business Rules/Data



SQL Server



Query for Systems Integration



Access

The screenshot shows the Winshuttle Query interface. On the left is a tree view of tables. The main area is a query builder with several tables selected: [1] EBELE Purchasing Document, [2] EBELE Purchasing Document, [3] EBELE Purchasing Document, [4] EBELE Purchasing Document, [5] EBELE Purchasing Document, [6] EBELE Purchasing Document, [7] EBELE Purchasing Document, [8] EBELE Purchasing Document, [9] EBELE Purchasing Document, [10] EBELE Purchasing Document, [11] EBELE Purchasing Document, [12] EBELE Purchasing Document, [13] EBELE Purchasing Document, [14] EBELE Purchasing Document, [15] EBELE Purchasing Document, [16] EBELE Purchasing Document, [17] EBELE Purchasing Document, [18] EBELE Purchasing Document, [19] EBELE Purchasing Document, [20] EBELE Purchasing Document, [21] EBELE Purchasing Document, [22] EBELE Purchasing Document, [23] EBELE Purchasing Document, [24] EBELE Purchasing Document, [25] EBELE Purchasing Document, [26] EBELE Purchasing Document, [27] EBELE Purchasing Document, [28] EBELE Purchasing Document, [29] EBELE Purchasing Document, [30] EBELE Purchasing Document, [31] EBELE Purchasing Document, [32] EBELE Purchasing Document, [33] EBELE Purchasing Document, [34] EBELE Purchasing Document, [35] EBELE Purchasing Document, [36] EBELE Purchasing Document, [37] EBELE Purchasing Document, [38] EBELE Purchasing Document, [39] EBELE Purchasing Document, [40] EBELE Purchasing Document, [41] EBELE Purchasing Document, [42] EBELE Purchasing Document, [43] EBELE Purchasing Document, [44] EBELE Purchasing Document, [45] EBELE Purchasing Document, [46] EBELE Purchasing Document, [47] EBELE Purchasing Document, [48] EBELE Purchasing Document, [49] EBELE Purchasing Document, [50] EBELE Purchasing Document, [51] EBELE Purchasing Document, [52] EBELE Purchasing Document, [53] EBELE Purchasing Document, [54] EBELE Purchasing Document, [55] EBELE Purchasing Document, [56] EBELE Purchasing Document, [57] EBELE Purchasing Document, [58] EBELE Purchasing Document, [59] EBELE Purchasing Document, [60] EBELE Purchasing Document, [61] EBELE Purchasing Document, [62] EBELE Purchasing Document, [63] EBELE Purchasing Document, [64] EBELE Purchasing Document, [65] EBELE Purchasing Document, [66] EBELE Purchasing Document, [67] EBELE Purchasing Document, [68] EBELE Purchasing Document, [69] EBELE Purchasing Document, [70] EBELE Purchasing Document, [71] EBELE Purchasing Document, [72] EBELE Purchasing Document, [73] EBELE Purchasing Document, [74] EBELE Purchasing Document, [75] EBELE Purchasing Document, [76] EBELE Purchasing Document, [77] EBELE Purchasing Document, [78] EBELE Purchasing Document, [79] EBELE Purchasing Document, [80] EBELE Purchasing Document, [81] EBELE Purchasing Document, [82] EBELE Purchasing Document, [83] EBELE Purchasing Document, [84] EBELE Purchasing Document, [85] EBELE Purchasing Document, [86] EBELE Purchasing Document, [87] EBELE Purchasing Document, [88] EBELE Purchasing Document, [89] EBELE Purchasing Document, [90] EBELE Purchasing Document, [91] EBELE Purchasing Document, [92] EBELE Purchasing Document, [93] EBELE Purchasing Document, [94] EBELE Purchasing Document, [95] EBELE Purchasing Document, [96] EBELE Purchasing Document, [97] EBELE Purchasing Document, [98] EBELE Purchasing Document, [99] EBELE Purchasing Document, [100] EBELE Purchasing Document.

The screenshot shows the Microsoft Access interface. The table structure view for 'Vendor GS Tables' is displayed. The table has the following fields:

VENDOR ID	VENDOR NA	GS ID	GS NAME	GS COUNTRY	GS CITY	GS STATE	GS ZIP	INCO 1
000000357	COLEMAN	0000000110	THE COLEMAN	US	NEW BRAUNFEU	TX	78130	UC1
000000357	COLEMAN	0000000094	THE COLEMAN	CN	BONGGLU SHU	190		FCB
000000386	COLORADO MT	0000000386	COLORADO MT	US	Franklin	WV	26807	UC1
000000414	DUOFOLD INC/	0000000414	DUOFOLD INC/	US	TAMAQUA	PA	18252	UC1
000000447	BACKPACKERS	0000000447	BACKPACKERS	US	BOULDER	CO	80301	UC1
000000447	BACKPACKERS	0000000411	BACKPACKERS	US	BOULDER	CO	80301	UC1
000000472	DIAMOND BIRA	0000000472	DIAMOND BIRA	US	NAPLES	NC	28760	UC1
000000474	J.L. DARLING CI	0000000474	J.L. DARLING CI	US	TACOMA	WA	98424	UC1
000000480	EVERNEW INC.	0000000480	EVERNEW INC.	JP	TOKYO	13	1366075	DDP
000000480	EVERNEW INC.	0000000422	EVERNEW WAF	JP	NODA-CITY	12	2780022	DDP
000000501	EDELMAANN + R	000000501	EDELMAANN + R	DE	GERMANY			UC1
000000512	EUREKA	0000000512	EUREKA	US	RACINE	WI	53403	UC1
000000513	EASTMAN KOD	0000000513	EASTMAN KOD	US	WHITTIER	CA	90606	UC1
000000526	EXTRASPORT IF	0000000526	EXTRASPORT IF	US	OLD TOWN	ME	04468	UC1
000000542	EASTON TECH	0000000542	EASTON TECH	US	SALT LAKE CITY	UT	84116	UC1
000000571	MANZELLA PRC	0000000571	MANZELLA PRC	US	Buffalo	NY	14225	UC1
000000571	MANZELLA PRC	0000000112	MANZELLA PRC	US	BUFFALO	NY	14225	UC1
000000572	STRIKE 2 INDUS	0000000572	STRIKE 2 INDUS	US	SPOKANE	WA	99208	UC1
000000584	PERFORMANCI	0000000584	PERFORMANCI	US	READING	PA	19605	UC1
000000590	GRANITE GEAR	0000000590	GRANITE GEAR	US	TWO Harbors	MN	55616	UC1
000000592	SIMOND LUDDI	0000000592	SIMOND LUDDI	FR	FRANCE			UC1
000000594	T-MOS, INC.	0000000594	T-MOS, INC.	US	REDWOOD CT	CA	94064	UC1
000000603	FRANK TEDIAH	0000000603	FRANK TEDIAH	US	BERKELEY	CA	94710	UC1
000000623	C C FILSON	0000000623	C C FILSON	US	SEATTLE	WA	98124	UC1
000000633	FOX RIVER MIL	0000000633	FOX RIVER MIL	US	OSAGE	IA	50461	UC1
000000633	FOX RIVER MIL	0000000114	FOX RIVER MIL	US	OSAGE	IA	50461	UC1

Define

Iterate

Build

UAT

Validate

Vendor and logistics data

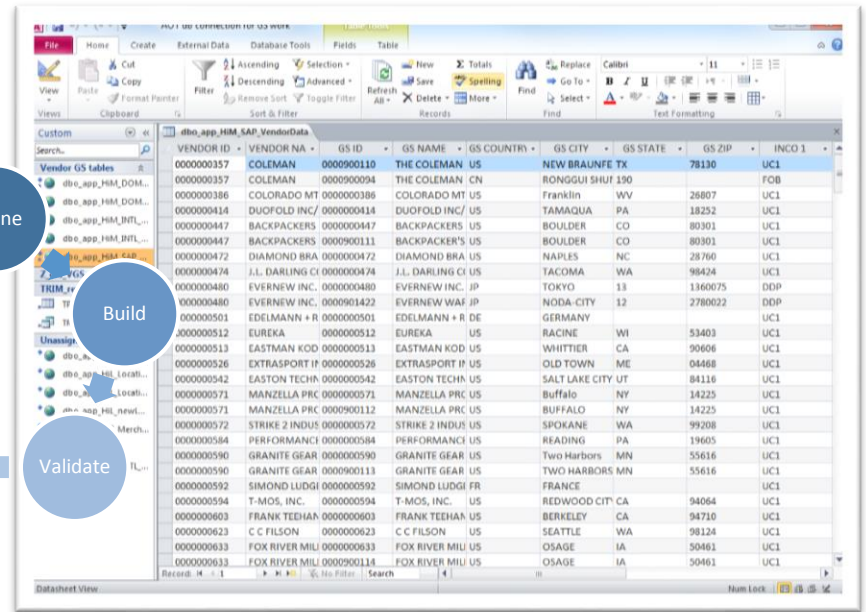
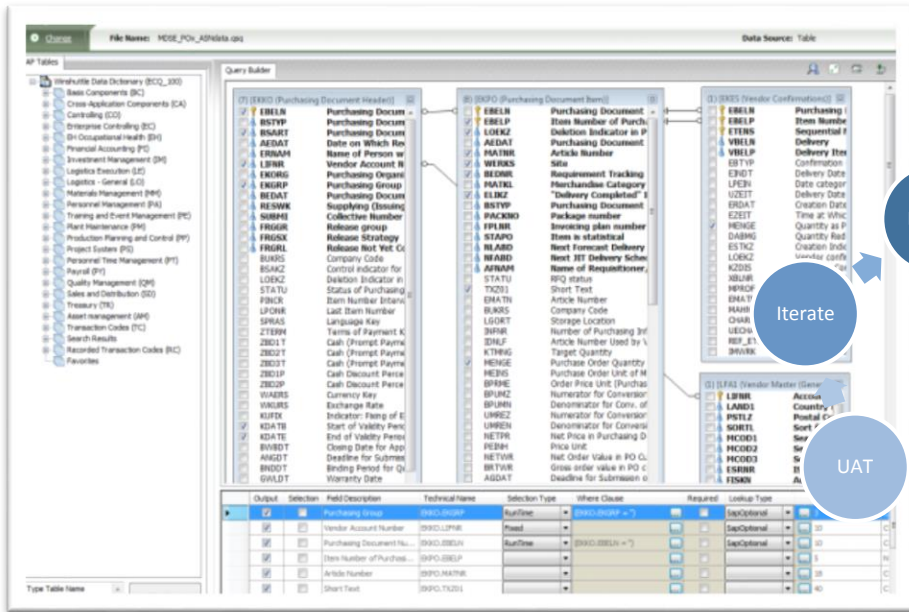
Testing usable table structures



Query for Systems Integration



SQL Server



Define

Iterate

Build

UAT

Validate

scheduled updates

user application connections



Query for Systems Integration

- Vendors & Goods Suppliers
- Transit Tables



Excel & Tribal Knowledge

- Consolidation Data
- Scheduling Requirements
- Other Business Rules/Data



SQL Server



Query for Systems Integration



- Vendors & Goods Suppliers
- Transit Tables
- Consolidation Data
- Scheduling Requirements
- Other Business Rules/Data



SQL Server



Query for Systems Integration

- Embedded ERP data
- Stable and dynamic
- On demand for applications
- 30% to 0% user error



Query Generated Actionable Reporting

Actionable Reporting: Event Product Reserves



Actionable Reporting: Product Reservations



- SAP Transaction is 'basic'
- Poor metadata
- Limited functionality
- Poor user experience
- No configurability (only 'customization')

Change Reservation 0002605191 : Collective Processing

Change Reservation 0002605191 : Collective Processing

Movement Type 983 Promo

Goods recipient 4462

Cost Center

F	Item	Article	Quantity in	Unit	Site	SLoc	Batch	M	F	Ia	D
	1	8699830006	12	EA	0001	1000					
	2	8699830009	46	EA	0001	1000					
	3	8699830007	58	EA	0001	1000					
	4	8699830008	85	EA	0001	1000					
	5	8699830003	106	EA	0001	1000					
	6	8699830001	15	EA	0001	1000					
	7	8699830004	57	EA	0001	1000					
	8	8699830002	72	EA	0001	1000					
	9	8700360004	11	EA	0001	1000					
	10	8700360002	41	EA	0001	1000					
	11	8700360003	38	EA	0001	1000					
	12	8700360001	8	EA	0001	1000					
	13	8700360005	1	EA	0001	1000					
	14	8174110002	29	EA	0001	1000					

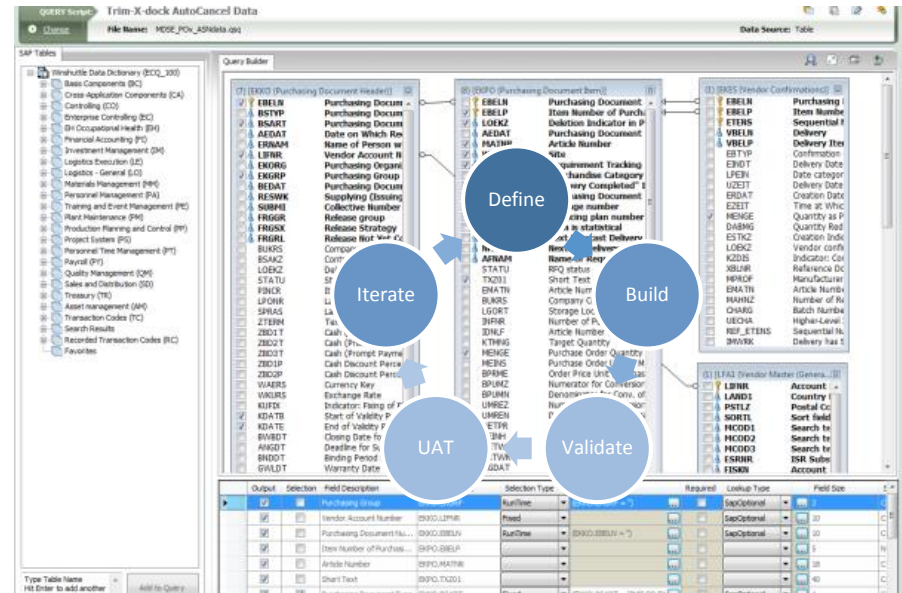
Reqmt	Qty	Unit	Grp	Message text
	12	EA	016	
	46	EA	016	
	58	EA	016	
	85	EA	016	
	106	EA	016	
	15	EA	016	
	57	EA	016	
	72	EA	016	
	11	EA	016	
	41	EA	016	
	38	EA	016	
	8	EA	016	
	1	EA	016	
	29	EA	016	
	18	EA	016	
	20	EA	016	
	21	EA	016	
	22	EA	016	
	23	EA	016	
	24	EA	016	
	25	EA	016	



Actionable Reporting: Product Reservations



- Enhance metadata
- Easily configure
- Optimize UI/UX
- Client schedule*



Access



Actionable Reporting: Product Reservations



Excel UI

- User preferred experience
- Friendly data
- Integrated change/update (VBA & Winshuttle Runner)

The screenshot shows an Excel spreadsheet with a table of reservation data. The table has columns for 'Event Description', 'Partic.', 'Mfg.', 'MKT DESIGN', 'Description', 'Article', 'Inv. Qty.', and 'Reservat. Qty.'. The data rows list various winter sale events for 'Paragonia' and 'Down Sweater' products. Overlaid on the spreadsheet is a circular process diagram with five steps: 'Define', 'Build', 'Validate', 'UAT', and 'Iterate', connected by arrows in a clockwise cycle.



Actionable Reporting: Product Reservations

- SAP transaction replacement
- Outperforms the ERP
- User view configurable
- Sharable data
- Batch change enabled



Recap/Wrap

- ‘Sweet spot’ between usability and automation
- Excellent development tool
- Build into actionable tools
- Implemented as enterprise systems solution
- Check out other training sessions



Thanks y'all!

Questions?

Open Mic...

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