



Leprino Foods rolls out Winshuttle automated dashboard reports in 1 week

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Session ID #82280

About the Speaker

Mark Teller

- Associate Director, IT Applications at Leprino Foods Company
- I'm a former Controller who "jumped the fence" to IT a decade ago. I've been working with SAP for 11 years and with Winshuttle for over 5 years.
- FUN FACT: Have you seen ever the movie Rocky? My parents are in it.

Key Outcomes/Objectives

1. Near real time dashboard reporting from SAP can be easy and inexpensive
2. No programming skills are required
3. With some basic Excel skills, you can completely automate the process

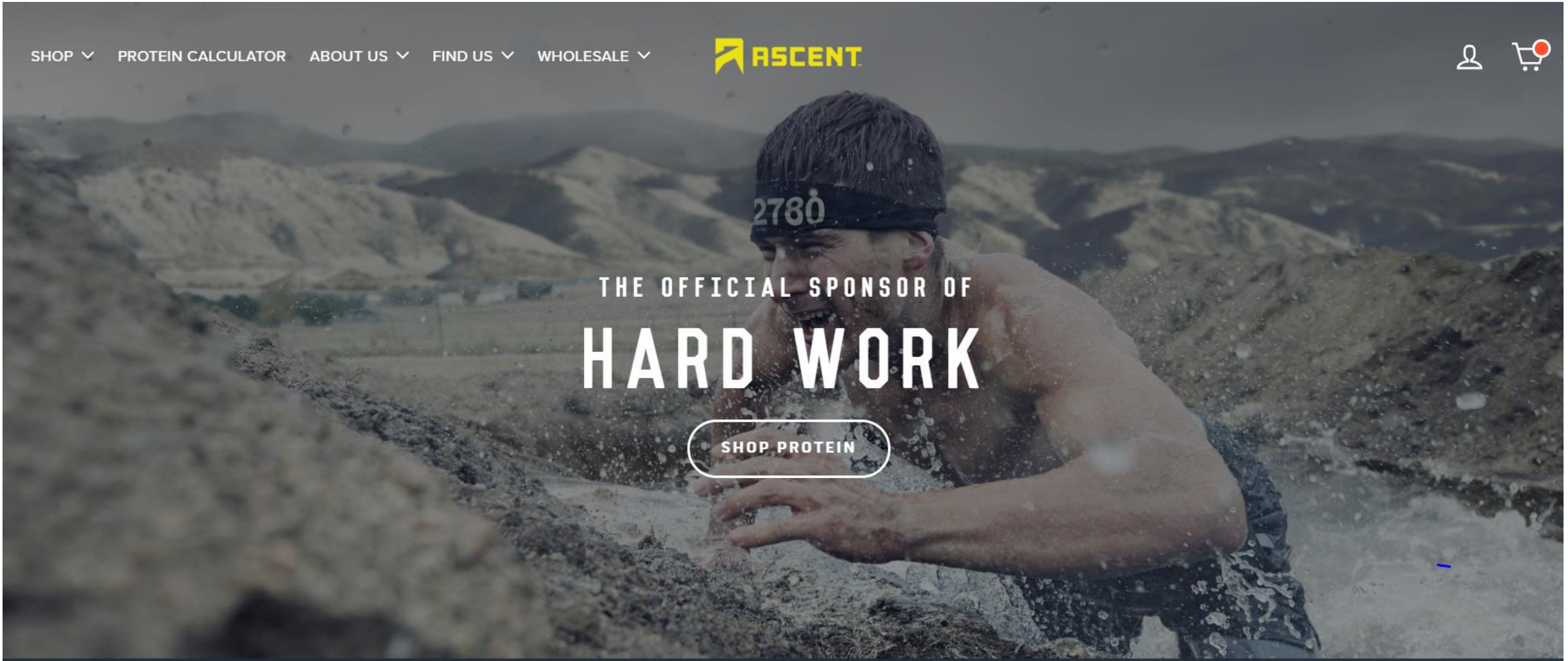
Agenda

- Our new company's reporting dilemma
- How we used Winshuttle to solve it
- Easy steps you can follow to create a similar reporting dashboard

What is Leprino Foods?

- **A family business started by Mike Leprino Sr. in 1950 at the family's corner grocery store in Denver, CO**
- **Today we're the world's largest mozzarella cheese maker**
- **Our products are found in over 55+ countries**
- **We've been a trusted B2B partner to top food and nutrition brands for over 70 years**
- ***Then... we started a B2C (e-commerce) business***

Our New eCommerce Site: ascentprotein.com



ASUG

Challenge - Reporting Requirements

What we knew...

- Management required real or near real time reporting
- Reporting requirements would be frequently changing
- Management requested easy to read, on-demand reports
- SAP is the system of record
- We had limited resources (start-up business)

What we didn't know...

- How to easily and quickly build reporting that satisfied all of the above

Our Preference - A Series of Dashboards



Options Considered

We identified of 5 possible options:

- **Custom ABAP solutions**
- **A purchased solution**
- **Manual Excel downloads with VLOOKUPS, etc.**
- **Standard SAP reporting**
- **Leverage Winshuttle**

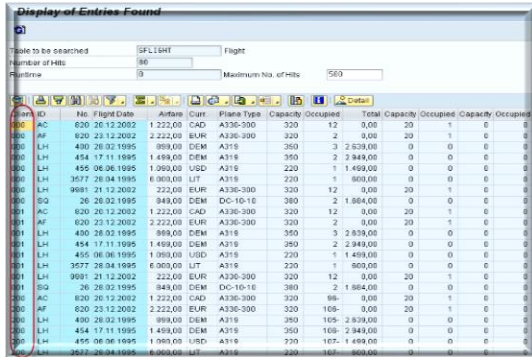
Winshuttle Was Already Being Used In Other Areas

Other Leprino Foods applications using Winshuttle :

- **Budget updates for hundreds of bills of material and routings**
- **Material master updates**
- **Customer master updates**
- **Fixed asset updates**
- **Manufacturing material consumption activity extracts**

High Level Process Overview: 1 - 2 - 3

1. Identify SAP tables



The screenshot shows the 'Display of Entries Found' window in SAP. The search criteria are: Table to be searched: 'FLIGHT', Flight: '86', Number of Hits: '56', and Maximum No. of Hits: '560'. The table below lists flight details with columns for Item ID, No., Flight Date, Airline, Curt., Plane Type, Capacity, Occupied, Total Capacity, Occupied, Capacity, and Occupied.

Item ID	No.	Flight Date	Airline	Curt.	Plane Type	Capacity	Occupied	Total Capacity	Occupied	Capacity	Occupied
AC	620	26.12.2002	CAD	A330-300	320	12	0,00	20	1	0	0
AF	620	23.12.2002	EUR	A330-300	320	2	0,00	20	1	0	0
LH	490	28.02.1995	DEU	A316	350	3	2.939,00	0	0	0	0
LH	454	17.11.1995	DEU	A316	350	2	2.949,00	0	0	0	0
LH	455	06.06.1995	LUX	A316	220	1	1.499,00	0	0	0	0
LH	3577	28.04.1995	LIT	A316	220	1	600,00	0	0	0	0
LH	9881	21.12.2002	EUR	A330-300	320	12	0,00	20	1	0	0
SG	26	28.02.1995	DEU	DC-10-16	380	2	1.884,00	0	0	0	0
AC	620	26.12.2002	CAD	A330-300	320	12	0,00	20	1	0	0
AF	620	23.12.2002	EUR	A330-300	320	2	0,00	20	1	0	0
LH	490	28.02.1995	DEU	A316	350	3	2.939,00	0	0	0	0
LH	454	17.11.1995	DEU	A316	350	2	2.949,00	0	0	0	0
LH	455	06.06.1995	LUX	A316	220	1	1.499,00	0	0	0	0
LH	3577	28.04.1995	LIT	A316	220	1	600,00	0	0	0	0
LH	9881	21.12.2002	EUR	A330-300	320	12	0,00	20	1	0	0
SG	26	28.02.1995	DEU	DC-10-16	380	2	1.884,00	0	0	0	0
AC	620	26.12.2002	CAD	A330-300	320	12	0,00	20	1	0	0
AF	620	23.12.2002	EUR	A330-300	320	106	0,00	20	1	0	0
LH	490	28.02.1995	DEU	A316	350	105	2.939,00	0	0	0	0
LH	454	17.11.1995	DEU	A316	350	105	2.949,00	0	0	0	0
LH	455	06.06.1995	LUX	A316	220	105	1.499,00	0	0	0	0
LH	3577	28.04.1995	LIT	A316	220	105	600,00	0	0	0	0

- VBAK: Sales Doc Header
- VBAP: Sales Doc Item
- KONV: Price Conditions

2. Create Query

WINSHUTTLE®

- Select tables and fields
- Build selection criteria
- Map fields to Excel columns
- Add calculated fields
- Add scheduling

3. Build & Automate the Report



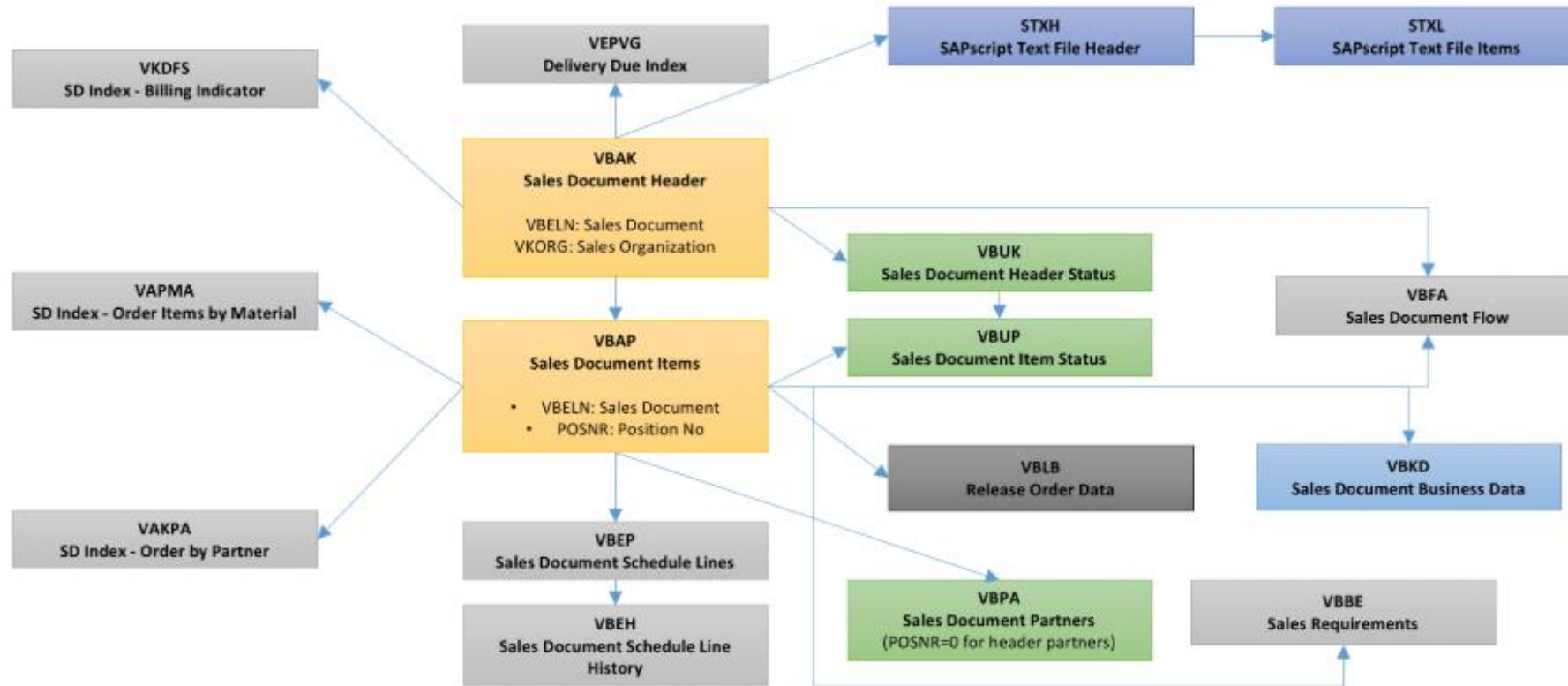
- Create the pivot table
- Adjust for "X" weeks
- Build the "timer" macro

Step 1

Identify the SAP Tables

Finding the Tables... A Browser Search Away

SAP SD Tables - Sales



Step 2

Build the Winshuttle Query

Select SAP Tables and Fields in Winshuttle

The screenshot displays the Winshuttle software interface with three panels open, each showing a list of SAP tables and fields. The panels are:

- VBAK (Sales Document: Header Data)**: Shows 11 selected fields.
- VBAP (Sales Document: Item Data)**: Shows 13 selected fields.
- KONV (Conditions (Transaction Data))**: Shows 2 selected fields.

The interface includes a menu bar (File, View, Workspace, Criteria, Map, Run, Foundation) and a toolbar with icons for Workspace, Criteria, Map, Full Screen, Lists, Table Search, Properties, Data Preview, Search Results, Query Text, Data Set, Data Dictionary, and Show Panels. The Workspace panel is active, showing the three data panels.

Key	Output	Criteria	Name: Description	Type	Length
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	VBELN Sales Document	String	10
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	ERDAT Date on Which Record	Date	10
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ERNAM Name of Person who Cr	String	12
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	AUDAT Document Date (Date R	Date	10
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	AUART Sales Document Type	String	4
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	VKORG Sales Organization	String	4
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	BSTNK Customer purchase ord	String	20
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	KUNNR Sold-to party	String	10
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ERZET Entry time	Time	8
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ANGDT Quotation/Inquiry is val	Date	10

Key	Output	Criteria	Name: Description	Type	Length
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	VBELN Sales Document	String	10
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	POSNR Sales Document Item	String	6
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	MATNR Material Number	String	18
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	VBEL Document number of the re	String	10
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	VGPOS Item number of the referenc	String	10
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WERKS Plant (Own or External)	String	3
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	LGORT Storage Location	String	3
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	STLNR Bill of material	String	10
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	PS_PSP_PNR Work Breakdown Structure	String	10
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	AUFNR Order Number	String	10

Key	Output	Criteria	Name: Description	Type	Length
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	KNUMV Number of the docur	String	10
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	KPOSN Condition item numt	String	6
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	STUNR Step number	String	3
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ZAEHK Condition counter	String	2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	KAPPL Application	String	2
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	KSCHL Condition Type	String	4
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	KDATU Condition pricing da	Date	10
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	KRECH Calculation type for c	String	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	KAWRT Condition base value	Decimal	21

Create Data Selection Criteria

The screenshot displays the SAP Criteria Builder interface. The top menu bar includes File, View, Workspace, Criteria, Map, Run, and Foundation. The Criteria Builder toolbar contains icons for Add Condition, Remove Condition, Request Data, None, No Padding, Fixed Value, Lookup Values, Preview Run, and Number of Entries. The workspace shows three criteria:

- Reason for rejection of quotations and sales orders - ABGRU**
Field: VBAP.ABGRU | Operator: Is Null
- Condition Type - KSCHL**
Field: KONV.KSCHL | Operator: In | Value: ZPR4,ZLB1,ZLB2,ZLD1,ZLD2,ZL PD,ZLD3,ZLD4,ZLD5,ZLD6,ZLD7
- Rate (condition amount or percentage) - KBETR**
Field: KONV.KBETR | Operator: <> | Value: 0

The bottom criterion, **KONV.KBETR** with operator **Is Not Null**, is highlighted in yellow.

Map SAP Columns to Excel

The screenshot shows the SAP Data Services Mapper interface. The 'Mapper' tab is active, displaying a table with the following columns: Output, Field description, Field name, Type & Length, Map Direction, and Mapped to column. The table lists 12 SAP fields mapped to Excel columns Z1 through L. The 'Unlock Headers' button is highlighted in yellow.

Output	Field description	Field name	Type & Length	Map Direction	Mapped to column
<input checked="" type="checkbox"/>	Log cell	Log cell		↓	Z1
<input checked="" type="checkbox"/>	Sales Document	VBAK .VBELN	String 10	↓	A
<input checked="" type="checkbox"/>	Date on Which Record Was Created	VBAK .ERDAT	Date 10	↓	C
<input checked="" type="checkbox"/>	Name of Person who Created the Object	VBAK .ERNAM	String 12	↓	I
<input checked="" type="checkbox"/>	Document Date (Date Received/Sent)	VBAK .AUDAT	Date 10	↓	
<input checked="" type="checkbox"/>	Sales Document Type	VBAK .AUART	String 4	↓	F
<input checked="" type="checkbox"/>	Sales Organization	VBAK .VKORG	String 4	↓	G
<input checked="" type="checkbox"/>	Customer purchase order number	VBAK .BSTNK	String 20	↓	H
<input checked="" type="checkbox"/>	Sold-to party	VBAK .KUNNR	String 10	↓	D
<input checked="" type="checkbox"/>	Material entered	VBAP .MATWA	String 18	↓	J
<input checked="" type="checkbox"/>	Order Number	VBAP .AUFNR	String 12	↓	
<input checked="" type="checkbox"/>	Cumulative Order Quantity in Sales Units	VBAP .KWMEN	Decimal 19	↓	L

Add Excel Formulas for Extracted Data

Transform Rule

ERNAM
Name of Person who Created the Object
String, 12

Clear Validate

Transform Rule:

```
=IF(OR(LEFT(D2,9)="ASCENT_AF",RIGHT(D2,6)="101129"),"Gyms",IF(OR(LEFT(D2,9)  
="ASCENT_CN",RIGHT(D2,6)="101079",RIGHT(D2,6)="101069"),"eCommerce",IF(LEFT  
(D2,9)="Ascent_CO","Corporate",IF(OR(RIGHT(D2,6)="101106",RIGHT(D2,6)  
="101165"),"International","Other"))))
```

i Type or copy and paste an Excel formula from your data sheet, using individual cell references. For example, type =SUM(A2,B2) to upload the sum of columns A and B to this field. The formula will be automatically applied to the complete column during the run.

Add the transformed value to the data file:

Cell: AF2

Transform Original Mapping

OK Cancel

Automate (schedule) the Winshuttle Query

The screenshot shows the 'Winshuttle Scheduler' dialog box with the following settings:

- Settings:**
 - One time
 - Daily
 - Weekly
 - Monthly
- Start:** 9/1/2018 12:00 AM
- Recur every:** 1 day(s)
- Advanced Settings:**
 - Task recurs every: 30 Minutes for a duration of: Indefinitely
 - Expires on: 8/9/2018 11:54 AM
 - System-generated file name: None

Buttons at the bottom: Back, Finish, Cancel

Step 3

Build and Automate the Report (Dashboard)

Validate Output and Add Other Excel Formulas

	A	C	D	E	I	K	L	M	S
	VBAK.VBEL N Sales Document	VBAK.ERDAT Date on Which Record Was Created	VBAK.ERNAM Name of Person who Created the Object	Calculated Week Start Date	VBAK.KUNNR Sold-to party	VBAP.ARKTX Short text for sales order item	VBAP.KWMENG Cumulative Order Quantity in Sales Units	VBAP.ZIEME Target quantity UoM	Calculated Date Group For Presetation
1									
2	200003180	1/15/2017	ASCENT_CN	1/15/2017	eCommerce	WHEY CHOC 4LB	1.000	EA	Prior
3	200003196	1/16/2017	ASCENT_CN	1/15/2017	eCommerce	WHEY VAN 2LB	1.000	EA	Prior
4	200003193	1/16/2017	ASCENT_AF	1/15/2017	Gyms	WHEY CHOC 2LB	1.000	CS	Prior
5	200003193	1/16/2017	ASCENT_AF	1/15/2017	Gyms	WHEY VAN 2LB	1.000	CS	Prior
6	200003195	1/16/2017	ASCENT_AF	1/15/2017	Gyms	WHEY CHOC 2LB	2.000	CS	Prior
7	200003192	1/16/2017	ASCENT_CN	1/15/2017	eCommerce	WHEY CHOC 2LB	1.000	EA	Prior
8	200003192	1/16/2017	ASCENT_CN	1/15/2017	eCommerce	CASEIN VAN 2LB	1.000	EA	Prior
9	200003209	1/16/2017	ASCENT_CN	1/15/2017	eCommerce	WHEY VAN 4LB	1.000	EA	Prior
10	200003213	1/16/2017	ASCENT_CN	1/15/2017	eCommerce	WHEY CHOC 2LB	1.000	EA	Prior
11	200003213	1/16/2017	ASCENT_CN	1/15/2017	eCommerce	CASEIN CHOC 2LB	1.000	EA	Prior
12	200003215	1/16/2017	ASCENT_AF	1/15/2017	Gyms	WHEY CHOC 2LB	1.000	CS	Prior
13	200003215	1/16/2017	ASCENT_AF	1/15/2017	Gyms	WHEY VAN 2LB	1.000	CS	Prior
14	200003224	1/16/2017	ASCENT_CN	1/15/2017	eCommerce	WHEY CHOC 2LB	1.000	EA	Prior



=IF(LEN(A11)>1,C11-(WEEKDAY(C11,1)-1), "")

Use Familiar Excel Pivot Table Functionality

SALES UNITS BY PROMOTION - ROLLING 13 WEEKS (by week start date)														
		5/20	5/27	6/3	6/10	6/17	6/24	7/1	7/8	7/15	7/22	7/29	8/5	8/12
PROMO W-36B		15	50	95	60	75	190	105	120	335	230	165	580	195
eCommerce		10	20	30	40	50	60	70	80	90	100	110	120	130
Gyms		5	10	15	20	25	30	35	40	45	50	55	60	65
Retail				50			100			200			400	
Other			20								80			
PROMO A-87C		150	500	950	600	750	1,900	1,050	1,200	3,350	2,300	1,650	5,800	1,950
eCommerce		100	200	300	400	500	600	700	800	900	1,000	1,100	1,200	1,300
Gyms		50	100	150	200	250	300	350	400	450	500	550	600	650
Retail				500			1,000			2,000			4,000	
Other			200								800			
PROMO I-4		-	-	-	-	-	100	125	156	244	305	381	477	596
eCommerce							100	125	156	195	244	305	381	477
Gyms										49	61	76	95	119
Retail														
Other														
TOTALS		165	550	1,045	660	825	2,190	1,280	1,476	3,929	2,835	2,196	6,857	2,741

PivotTable Fields

Choose fields to add to report:

Search

- Customer Purchase Order Number
- Sold-to Party
- Material Entered
- Cumulative Quantity
- Target Quantity UOM
- Factor for converting sales units to base units
- Factor for converting sales units to base units2
- Cumulative Confirmed quantity in base unit
- Weight Unit
- Net Weight of the Item
- Calculated Date Group for Presentation
- Promo
- Sales Channel
- Months

More Tables...

Drag fields between areas below:

Filters

Columns
Calculated Date Group...

Rows
Promo
Sales Channel

Values
Sum of Net Weight of ...

Build A Basic Excel Macro to Automate the Refresh

```
Sub Update()
```

```
' STEP 1: Refresh the pivot table and format the cells
```

```
Range("C8").Select
```

```
ActiveSheet.PivotTables("PivotTableA").PivotCache.Refresh
```

```
Range("B7:T7").Select
```

```
Selection.NumberFormat = "m/d;@"
```

```
With Selection
```

```
    .HorizontalAlignment = xlCenter
```

```
    .VerticalAlignment = xlBottom
```

```
    .Orientation = 45
```

```
End With
```


```
' STEP 2: Set the timer to repeat the pivot table refresh
```

```
Windows("Ascent Presentation.xlsm").Activate
```

```
Range("A1").Select
```

```
Application.OnTime Now + TimeValue("01:00:00"), "Update"
```

```
End Sub
```



Refresh
and
Format



Set the
Timer

The Final Product, As Seen Throughout our Facility on a Near Real Time Basis

SALES UNITS BY PROMOTION - ROLLING 13 WEEKS (by week start date)													
	5/20	5/27	6/3	6/10	6/17	6/24	7/1	7/8	7/15	7/22	7/29	8/5	8/12
PROMO W-36B	15	50	95	60	75	190	105	120	335	230	165	580	195
eCommerce	10	20	30	40	50	60	70	80	90	100	110	120	130
Gyms	5	10	15	20	25	30	35	40	45	50	55	60	65
Retail			50			100			200			400	
Other		20								80			
PROMO A-87C	150	500	950	600	750	1,900	1,050	1,200	3,350	2,300	1,650	5,800	1,950
eCommerce	100	200	300	400	500	600	700	800	900	1,000	1,100	1,200	1,300
Gyms	50	100	150	200	250	300	350	400	450	500	550	600	650
Retail			500			1,000			2,000			4,000	
Other		200								800			
PROMO I-4	-	-	-	-	-	100	125	156	244	305	381	477	596
eCommerce						100	125	156	244	305	381	477	
Gyms									49	61	76	95	119
Retail													
Other													
TOTALS	165	550	1,045	660	825	2,190	1,280	1,476	3,929	2,835	2,196	6,857	2,741

Or... On a Mobile Device

	5/20	5/27	6/3	6/10	6/17	6/24	7/1	7/8	7/15	7/22	7/29	8/5	8/12
PROMO W-36B	15	50	95	60	75	190	105	120	335	230	165	580	195
eCommerce	10	20	30	40	50	60	70	80	90	100	110	120	130
Gyms	5	10	15	20	25	30	35	40	45	50	55	60	65
Retail			50			100			200			400	
Other		20								80			
PROMO A-87C	150	500	950	600	750	1,900	1,050	1,200	3,350	2,300	1,650	5,800	1,950
eCommerce	100	200	300	400	500	600	700	800	900	1,000	1,100	1,200	1,300
Gyms	50	100	150	200	250	300	350	400	450	500	550	600	650
Retail			500			1,000			2,000			4,000	
Other		200								800			
PROMO I-4	-	-	-	-	-	100	125	156	244	305	381	477	596
eCommerce						100	125	156	195	244	305	381	477
Gyms									49	61	76	95	119
Retail													
Other													
TOTALS	165	550	1,045	660	825	2,190	1,280	1,476	3,929	2,835	2,196	6,857	2,741

Key Learnings

- **There are report creation alternatives to traditional development**
- **Plan on reporting requirements for new products / divisions / companies to change several times**
- **Providing users with near-real time reporting is easy with Winshuttle**
- **Always make sure you have proper governance processes in place**
- **There are many, many creative ways to create value-added reporting using Winshuttle-Excel (talk to other users, join the Winshuttle community at Winshuttle.com)**

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Presentation Materials

Access the slides from 2019 ASUG Annual Conference here:

<http://info.asug.com/2019-ac-slides>

Q&A

For questions after this session, contact me at mteller@leprinofoods.com.

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