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# Using Data to Manage Costs

From Raw Data to Ultimate Procurement Clarity

# Data is Important



**“Without data, you are blind and deaf in the middle of a freeway.”**

– Geoffrey Moore, author and consultant

# Desired Results

## Fuel Costs

Average price per gallon paid

Cost savings compared to retail pricing and Platts trends

Operational costs per trip

Ramp fees

Catering

Flight training

Hangar

Internet charges



Visibility

Insight

Understanding

Control Costs

# How to Build an Aviation Data System



1. Capture transactional and invoice data
2. Estimate fuel cost
3. Connect trip data from Scheduling System
4. Integrate ITPS data and costs
5. Home-based fuel and tanks
6. VAT-recovered estimate refund
7. eInvoice into ERP

# Capturing Transactional and Invoice Data

**Big Co.**  
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## Need

Understand spend and lower operating cost

## Aircraft



## Challenges Before

- No Visibility in extra cost
- Not sure if was getting handling cost
- Matching Data to Trips

## Transaction

is the best place to start building your data warehouse to understand cost

- Fuel invoice data
- Non-fuel handling
- Retail card data with line item detail

*Tip: Use a card that provides detail*

## Consolidate

- Spending - summarized based on tail and ICAO
- Single data source for ad-hoc analysis

## Data required from vendors

- Date
- Location (ICAO)
- Tail number
- Line item
- Volume
- Quantity
- Transaction type

## Format

Get everything in CSV or Excel format

## Weekly vs. Monthly

- Weekly can improve processing
- Monthly helps with understanding and trends

# Report Example

Row Labels	Fuel Item	Non-Fuel	Tax
	SPEND_USD	QTY_USG	SPEND_USD SPEND_USD
<b>[-] N00WF</b>			
<b>[-] KSMF</b>			
Airport Tax			\$620
Concession Fee			\$501
Jet Fuel	\$5,059	2,503	
Landing Fees			\$1,199
Parking			\$440
Security			\$510
User Fee			\$150
Ground Handling			\$2,175
Into Plane Fee	\$8,875	0	
<b>[+] KLAS</b>			<b>\$2,148</b>
<b>[-] KWFS</b>			
Concession Fee			\$45
Fed Excise Tax			\$165
Jet Fuel	\$4,483	752	
Parking			\$282
Sales Tax			\$251
User Fee			\$50
Ground Handling			\$570
Fuel Discount	-\$1,128	0	
Supervision Fees			\$75

# Capture Sources of Data to Consider

## Private Transaction Data



Fees and Mins from FBOs



Invoice Data from Suppliers



Scheduling Software Trips

## Public Reference Data



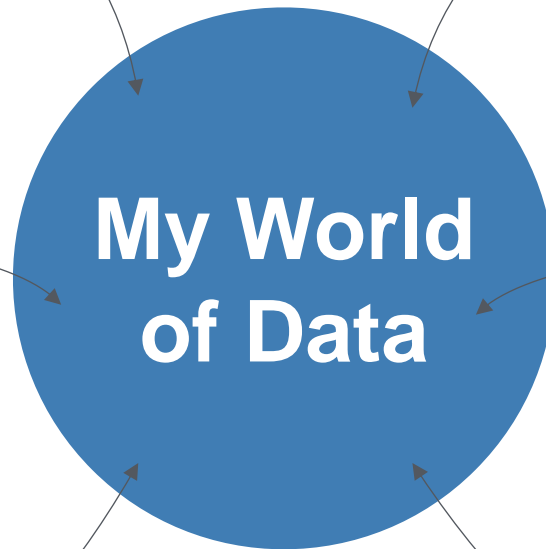
External Sources  
Industry Volume



AirNav/FlightAware  
Retail Rates



Platts Index Data



# Capturing Transactional and Invoice Data

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**Need**  
Fuel cost



## Challenges Before

- Need to understand if price change was warranted
- General ability to analyze

## Understand Categories of Costs

- Fuel
- Handling
- Taxes
- Training
- Internet

## Reference External Trends

- Understand retail price at time of purchase
- Compare transactions to Platts to identify

## Fuel Spend

- Look at fuel spend in gallons by chain



# Fuel Savings Report Examples

Row Labels	Spend	Fuel Volume (GAL)	Actual Price / Gal	Retail Price / Gal	Cost Saving
⊕ N001WF	\$46,584	11,072	\$4.21	\$6.68	\$27,378.90
⊕ N002WF	\$37,830	8,622	\$4.39	\$5.61	\$10,499.95
⊕ N003WF	\$43,384	11,324	\$3.83	\$6.36	\$28,658.09
⊕ N004WF	\$79,152	17,564	\$4.51	\$5.73	\$21,565.21
⊖ N005WF					
⊖ Trip 138396					
⊖ KBDL					
06/02/2017	\$2,266	400	\$5.66	\$5.66	\$0.00
⊖ Trip 139651					
⊖ KMEM					
06/07/2017	\$3,717	1,100	\$3.38	\$6.17	\$3,070.00
⊖ Trip 139850					
⊖ KBED					
06/30/2017	\$3,842	1,101	\$3.49	\$6.67	\$3,501.18
⊖ KUES					
06/30/2017	\$2,408	700	\$3.44	\$4.54	\$770.00
⊖ Trip 139925					
⊕ N006WF	\$19,685	4,951	\$3.98	\$6.77	\$13,848.57
⊕ N007WF	\$23,894	6,059	\$3.94	\$6.49	\$15,426.19
⊕ N008WF	\$34,240	7,702	\$4.45	\$5.68	\$9,513.53
<b>Grand Total</b>	<b>\$365,647</b>	<b>96,045</b>	<b>\$3.81</b>	<b>\$6.17</b>	<b>\$227,350.34</b>

# Direct and ICAO Analysis | Volume

ICAO	Fuel Deal?	Fuel Volume (Gal)
<input type="checkbox"/> KSWF	Yes	96,340
<input type="checkbox"/> KBED	Yes	80,370
	No	170
<input type="checkbox"/> KBOS	Yes	61,916
<input type="checkbox"/> KLUK	Yes	39,388
<input type="checkbox"/> KHPN	Yes	24,468
<input type="checkbox"/> KPDK	Yes	18,944
<input type="checkbox"/> KPBI	Yes	13,876
<input type="checkbox"/> PANC	No	13,343
<input type="checkbox"/> KMDW	Yes	12,187
<input type="checkbox"/> KJZI	Yes	11,878
<input type="checkbox"/> KBCT	Yes	9,990

# Direct and ICAO Analysis

## Compare to existing direct deals

- Network Deals
- CAA
- FBO Chain Deals

IATA	FBO	Deal Name
BOS	SIGNATURE FLIGHT SUPPORT-A	Avcard Direct
HOU	ATLANTIC AVIATION-A	Atlantic Avcard
PBI	ATLANTIC AVIATION-A	Atlantic Avcard
PDK	ATLANTIC AVIATION-A	Atlantic Avcard
LUK	SIGNATURE FLIGHT SUPPORT-A	Avcard Direct
MDW	ATLANTIC AVIATION-A	Atlantic Avcard
HPN	ROSS AVIATION-A	Avcard Direct BSA
SWF	ATLANTIC AVIATION-A	Atlantic Avcard BSA
BCT	ATLANTIC AVIATION-A	Atlantic Avcard

# Merging in Trip Numbers to Get to Total Cost

Most operators have Fleet Management or scheduling dispatch systems

- FOS | PFM | SchedAero | FMS

Difficult to match trips to spending

- FMS looks at everything on a trip basis
- Most cost data comes in ICAO and Tail format

Allows you to see the life cycle of spending and attached to management system

Improves internal and external billing  
Provides more accurate cost distribution



# Bulk Purchase

## Home-based Fuel and Tanks

- Include home-based and local storage costs
- Estimating tankage
- Make attribution easier at trip



Invoice Number	QTY_USG	FUEL SPEND_USD	FREIGHT SPEND_USD	INVOICE TOTAL_USD	Cost
[-] Customer					
445585	7,998	\$11,901.02	\$373.92	\$12,274.94	\$ 1.53
447108	7,944	\$10,968.76	\$374.01	\$11,342.77	\$ 1.43
<b>Grand Total</b>	<b>15,942</b>	<b>\$22,869.78</b>	<b>\$747.93</b>	<b>\$23,617.71</b>	<b>\$ 1.48</b>

# Adding Trip Support

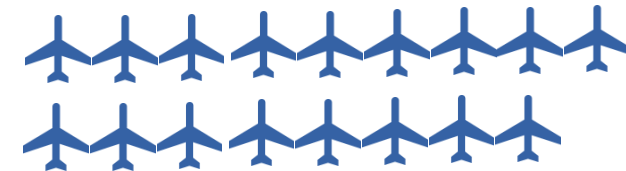
UPLIFT_DATE	(Multiple Items)		
WFS Trip #	(All)		
Sum of SPEND_USD	Column Labels		
Invoice Number / ICAO	N000WF	Grand Total	
[-] 930559-23101			
[-] EGKB			
Admin Fees	\$8.00	\$8.00	
*Overflight Permit-germany	\$53.35	\$53.35	
[-] 105168-21221			
[+] KHOU	\$63.61	\$63.61	
[-] 932031-23101			
[+] EDDM	\$76.50	\$76.50	
[-] 932036-23101			
[-] EGSS			
*Agent Disbursements	\$131.11	\$131.11	
*Airport Fees	\$129.01	\$129.01	
*Approach Fees	\$30.14	\$30.14	
*Catering	\$580.24	\$580.24	
*Catering-coffee	\$15.26	\$15.26	
*Catering-ice	\$30.53	\$30.53	
*Customs & Immigration	\$264.55	\$264.55	
*Departure Fees	\$185.95	\$185.95	
*Ground Handling	\$2,639.18	\$2,639.18	
*Landing Fees	\$248.68	\$248.68	
*Navigation Fees	\$179.99	\$179.99	
Admin Fees	\$855.42	\$855.42	
*Transportation-crew	\$293.81	\$293.81	
*Overtime Fee-sunday Working	\$659.79	\$659.79	
*Parking Fee-airport	\$215.32	\$215.32	
*Aircraft Cleaning	\$99.21	\$99.21	
[-] 466593-22701			
[+] OMDW	\$115.00	\$115.00	

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## Need

Need to understand ITPS spending

## Aircraft



- Secure data cost feed from ITPS vendor
- Adds detail on permits, over flights, HOTEK and other costs

# Vendor Check List

- Do they provide data?
- Are invoices consolidated?
- Can they prepare data to meet your needs?
- Can they Provide invoicing for your accounting system?  
Customer template vs. Customized invoice worksheets
- eInvoicing direct accounting system via XML  
vs Customer manual input

Manpower



Data Power



VS

**LEAN ON YOUR VENDOR**

# True Understanding of Costs

Do I have the data?

Am I integrating it efficiently?

Am I creating business intelligence?

## Business Intelligence = Better Transparency and Granularity

### Enhance

- Improve or maintain volume to retain FBO status or volume requirements
- Understand where to negotiate for best impact

### Provide

- Future budgeting with real historical costs
- Quick answers to management's questions on operational costs

### Negotiate

- Lower ramp and facility fees at high use locations
- With FBO chains based on overall spend and gallons purchases across chains

### Compare

Fuel price paid to:

- Platts trends
- Retail pricing trends



The logo for World Fuel Services. The word "World" is in a white serif font. The word "Fuel" is in a white sans-serif font and is partially enclosed by a white circular arc. Below "Fuel" is the word "Services" in a smaller white sans-serif font, followed by a registered trademark symbol (®).

World Fuel  
Services®

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**Thank You**