

# **Strategic Data Analysis Using**



**By**

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# What is Strategic Data Analysis?

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**WIKIPEDIA**  
*The Free Encyclopedia*

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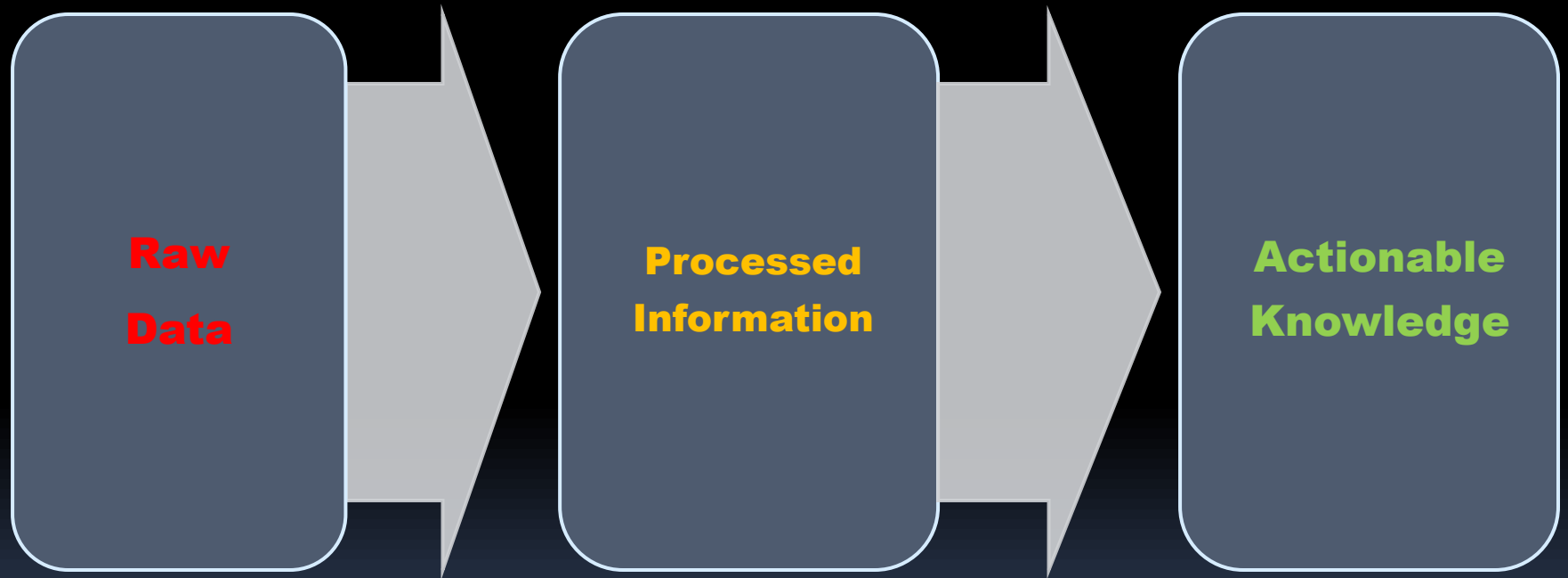
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# Big Picture



# Why Use ACL?



***FAST***



***Relatively  
Inexpensive***



***Easy to Use***

# Step 1

**Collect Data**

# **Data Sources (Internal)**

**Sales & Marketing**

**Operations**

**Finance**

# (External)



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[www.motech.de/pdfs/APS\\_appnote\\_fitnessclub\\_0909C.pdf](#)[\[PDF\] Price Comparison to 24 hour and Lifetime Fitness](#)File Format: PDF/Adobe Acrobat - [Quick View](#)

District. Adult \$5. Household \$12. Non District. Adult \$7 ...

[www.aprd.org/.../Price%20Comparison%20to%2024%20hour%20and%20Lifetime%... - Similar](#)

recreation Center.

# Web

<http://nypl.org>

[www.theiia.org](http://www.theiia.org)

[www.mckinsey.com](http://www.mckinsey.com)

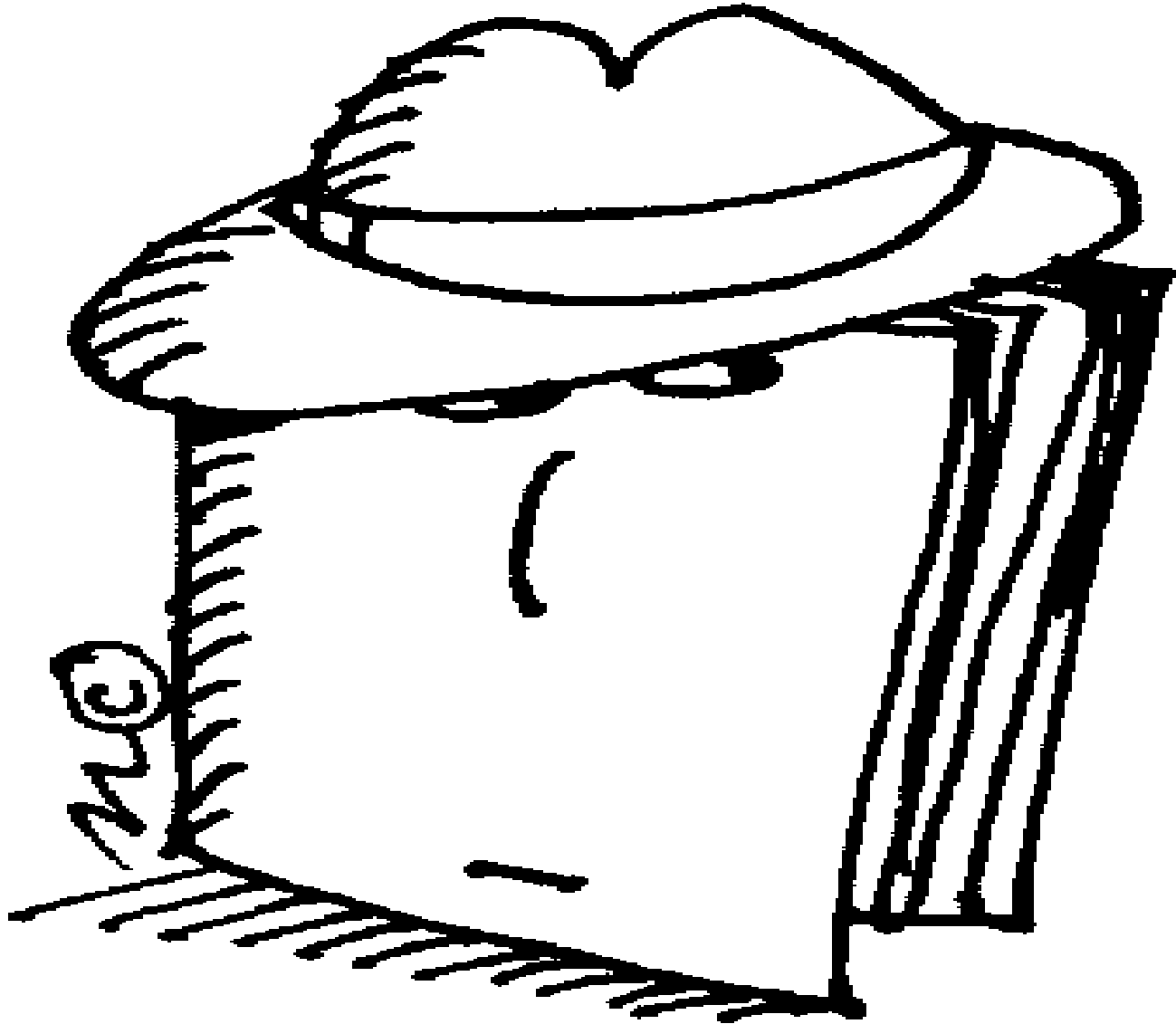
[www.sec.gov](http://www.sec.gov)

[www.gmail.com](http://www.gmail.com)

[www.bcg.com](http://www.bcg.com)

# Favs?

# Mystery



# Mystery

**One flight attendant collected 300% more drink coupons than all others.**

# Facts

- **The employee worked about the same number of flights as others.**

# Facts

- The employee worked about the same number of flights as others.
- **All drink coupons turned in were authentic.**

# Facts

- The employee worked about the same number of flights as others.
- All drink coupons turned in were authentic.
- Sales were reported timely.

# Raw Data

**Drink Coupons (Operations)**

**Sales Reports (Sales & Marketing)**

**Onboard Sales Account (Finance)**

# Step 2

**Process Data**

# Process Data

**Drink Coupons**

**Sales Reports**

**Inflight Sales Account**

# Process Data

## Drink Coupons

**Drink Coupons/Per Flight**

**Drink Coupon Control #**

## Sales Reports

**Onboard Sales per Employee**

## Inflight Sales Account

**Sales \$ Reported**

# **Compile Statistics and Ratios**

## **Drink Coupons**

**Drink Coupons/Per Flight**

**Histogram by Flight Attendant**

## **Sales Reports**

**Sales/Employee Comparison Table**

## **Inflight Sales Account**

**Sales Trend Report**

# Step 3

**Analyze Data**

# Possible Explanations

***Employee could have obtained used drink coupons from source?***

# Possible Explanations

***Employee might have turned in coupons on behalf of other flight attendants?***

# Possible Explanations

*A large group might have flown on the employee's flights?*

# **Rule Out the Impossible from the Data Analysis**

**Used drink coupons were kept after  
redemption**

# **Rule Out the Impossible from the Data Analysis**

~~**Used drink coupons were kept after  
redemption**~~

# **Rule Out the Impossible from the Data Analysis**

**Only one flight attendant is staffed per flight and no employee consistently reported zero coupons collected during the same time period.**

# **Rule Out the Impossible from the Data Analysis**

**Data analysis showed that a large number of groups was **NOT** reported for the flight segments which were worked by the employee.**

**Now What?**

**Interview the  
Employee**

# Interview Statement

**Employee said that her spouse was a travel agent and often flew with her.**

**He 'comped' the passengers on the flights using drink coupons that he got from his employer.**

**Company**

**You can't do  
that!**

**Employee**

**Says Who?**

# Company

# Inflight Manager Says

*Sorry, but we can't do anything since we don't have a **Policy** to address this.*

# Now What?

**Now What?**

***ACL***

# Company

- **Hired temps to collect all drink coupons and entered drink coupons data into an Access Database.**

# Next...

- **Internal Audit used ACL to SUMMARIZE the drink coupons redeemed by each flight attendant.**

# Next...

- **The information was further analyzed in ACL to compile STATISTICS.**

# Next...

- **Flight operating data was obtained to JOIN each flight number with the flight number on each drink coupon and log the coupon control numbers for all coupons redeemed.**

# Next...

- **Internal Audit provided the Statistics compiled using ACL to the Inflight Department Manager.**

**Q: What about all this Data Analysis and Knowledge?**

**Answer:**

**Gave it to a Statistician  
(Specialist) for Further  
Analysis**

# Opinion

***The likelihood of one flight attendant accepting two drink coupons in sequential order (based on the control number) on two different flights is Extremely Remote.***

# Statistical Likelihood

**$> 1,000,000,000 : 1$**

# Factoid

**The likelihood of being struck by lightning in the US in your lifetime is**

**> 244,000 : 1**

# Factoid

**The likelihood of winning the lottery with 40 balls where 6 are chosen is**

# Factoid

**The likelihood of winning the lottery with 40 balls where 6 are chosen is**

**3,838,380 : 1**

Source: <http://members.cox.net/mathmistakes/rawdata.htm>

**Back to the Employee**

**So What?**

**No Policy...**

**No Problem** 

**Wait a Minute!**

# Wait a Minute!

***“No flight attendant shall serve more than two alcoholic beverages per passenger onboard any single flight segment.”***

***ACL***

**STATISTICS On...**

**SUMMARIZE On...**

**HISTOGRAM On...**

# ***ACL***

**Employee X worked on full flights (30 passengers Maximum) and reported more than 60 drink coupons redeemed on 27 flight segments during the period.**

# HR

**Employee X served more than two alcoholic beverages per passenger onboard a single flight segment which IS a violation of Company Policy.**

# Actionable Knowledge

**You're  
Fired!**



**So How Does This Story Relate  
to Strategic Data Analysis using  
ACL?**

# Current Mindset

# Current Mindset

**The basic analysis functions in ACL such as (Summarize, Statistics, Histogram...) are mostly used by Auditors for **Fraud Detection.****

**Unimportant**

# Unimportant -

## Petty; not important

### Similar:

- *inconsequent; inconsequential (lacking worth or importance)*
- *immaterial; indifferent ((often followed by 'to') lacking importance; not mattering one way or the other)*
- *fiddling; footling; lilliputian; little; trivial ((informal) small and of little importance)*
- *nickel-and-dime; small-time (of minor importance)*
- *potty (British informal) trivial)*

# Important

**The basic analysis functions in ACL such as (Summarize, Statistics, Histogram...) are mostly used by Auditors for **Fraud Detection.****

# Important

The basic analysis functions in ACL such as (Summarize, Statistics, Histogram...) are mostly used by Auditors for Fraud Detection.

**The basic Analysis functions in ACL such as (Summarize, Statistics, Histogram...) should be used by Auditors to conduct Strategic Data Analysis and assess the company's strategic (important) risks.**

# Analyzing the Value Killers\*

A Deloitte study found that **Strategic Risk** was most often the cause of a sharp (<25 %) decline in share price.



Source: Deloitte, "*Disarming the Value Killers*"

# Analyzing the Value Killers\*

## Strategic Risk Incidents by Category.

Largest



Source: Deloitte, *"Disarming the Value Killers"*

# Strategic Data Analysis Idea #1

Use **ACL** to Analyze Customer Feedback messages (**Raw Data**) and propose changes for strategic advantage.

The screenshot shows a Windows Internet Explorer browser window with the address bar displaying `https://www.citibank.com/domain/contact/visitor_email/form.htm`. The page title is "Citi.com - Send a Message". The form content is as follows:

## Send a Message

Please use this form only for general comments and questions. If you have specific questions about your account, for your protection, please [sign on](#) first and then create your message.

Be sure to complete the required (\*) fields.

Subject\*

First Name <input type="text"/>	Last Name <input type="text"/>
Email Address* <input type="text"/>	Phone Number <input type="text"/>

Details

Done Internet 200%

# Strategic Data Analysis Idea #2

Get external ([www.sec.gov](http://www.sec.gov)) financial data about your competitors and use **ACL** to prepare a **Comparative Financial Performance Report**.

EDGAR Current Events - Windows Internet Explorer

http://www.sec.gov/cgi-bin/current.pl?q1=0&q2=0&q3=

File Edit View Favorites Tools Help

Results for EDGAR Current Events

The total number of matches for 2010-01-06 is **16**  
The total number of forms for 2010-01-06 is **5965**

Date Filed	Form	CIK Code	Company Name
01-06-2010	<a href="#">10-K</a>	<a href="#">1368961</a>	Allegiant Professional Business Services, Inc.
01-06-2010	<a href="#">10-K/A</a>	<a href="#">1356371</a>	American Lithium Minerals, Inc.
01-06-2010	<a href="#">10-K/A</a>	<a href="#">1401273</a>	Amiworld, Inc.
01-06-2010	<a href="#">10-K</a>	<a href="#">1419260</a>	Andina Group Inc.
01-06-2010	<a href="#">10-K/A</a>	<a href="#">1394638</a>	B2 HEALTH, INC.
01-06-2010	<a href="#">10-K</a>	<a href="#">1310313</a>	Brooklyn Federal Bancorp, Inc.
01-06-2010	<a href="#">10-K/A</a>	<a href="#">1081944</a>	CHINA SXAN BIOTECH, INC.
01-06-2010	<a href="#">10-K/A</a>	<a href="#">352955</a>	CKX Lands Inc
01-06-2010	<a href="#">10-K</a>	<a href="#">1345913</a>	Deltron, Inc.
01-06-2010	<a href="#">10-K/A</a>	<a href="#">769207</a>	FIDELITY BANCORP INC
07-15-2009	<a href="#">10-K/A</a>	<a href="#">1081369</a>	Metabolic Research, Inc.
01-06-2010	<a href="#">10-K/A</a>	<a href="#">1272906</a>	PORTALTOCHINA COM
01-06-2010	<a href="#">10-K/A</a>	<a href="#">1402281</a>	Pacific Asia Petroleum Inc
01-06-2010	<a href="#">10-K</a>	<a href="#">1377889</a>	Tia IV, Inc
01-06-2010	<a href="#">10-K</a>	<a href="#">1379725</a>	V2K International Inc
01-06-2010	<a href="#">10-K/A</a>	<a href="#">1343601</a>	WEST CANYON ENERGY CORP.

[Perform another current events analysis?](#)

Internet 200%

# Strategic Data Analysis Idea #3

Obtain internal data periodically from Sales, Operations and Finance to create a data warehouse and use **ACL** to identify strategic information.

Source: Sales



Source: Operations

	AL	AM	AN	AO
<b>Weekly Ops Report</b>				
	W/E	W/E	W/E	W/E
	1/15/2009	1/22/2009	1/29/2009	2/6/2009
<b>I. Order Management</b>				
Beginning Order Backlog	1,311,389.08	1,291,519.02	1,350,517.22	1,020,134.79
+ Orders Received	43,691.57	102,722.82	61,744.05	66,141.14
- Orders Shipped	(63,561.63)	(43,719.02)	(379,003.48)	(38,498.50)
- Canceled Orders	0.00	(5.60)	(13,123.00)	0.00
<b>Ending Order Backlog</b>	<b>1,291,519.02</b>	<b>1,350,517.22</b>	<b>1,020,134.79</b>	<b>1,047,777.43</b>
Current Month Order Backlog	342,731.00	319,951.00	10,601.00	585,234.00
Next Month Order Backlog	546,989.00	589,174.00	554,689.00	202,244.00
Future Months Order Backlog	401,799.00	441,392.00	454,903.00	260,299.00
% of Order Backlog due to Stockouts-Cur. Mo.	0.12%	0.12%	0.23%	0.41%
Customer Orders Beyond Due Date - Goal =10%	39,731.63	8,603.86	10,924.78	26,595.83
% of Orders Beyond Due Date-by Dollars	3.08%	0.64%	1.07%	2.54%
% of Orders Beyond Due Date-by No. of Orders	4.30%	2.70%	5.10%	4.50%
<b>Calls Received</b>				
Customer		37	52	51
Sales Rep		29	32	35
Office		205	253	224
<b>Total</b>	<b>0</b>	<b>271</b>	<b>337</b>	<b>310</b>
Number of Orders Entered	87	95	61	59
Number of New Custom Projects	0	0	0	0

# Strategic Data Analysis Projects

**Obtain economic data from [www.bea.gov](http://www.bea.gov) and use ACL to project the financial impact for a decrease in demand or pricing pressure for your company (Use Expression Builder function)**

**Use ACL to analyze operating margins [www.sec.gov](http://www.sec.gov) reported by the competitors in your industry and prepare periodic trend reports.**

**Identify inventory or receivables increases by obtaining financial information from [www.sec.gov](http://www.sec.gov) and comparing the ratios at your company.**

# Key Takeaways

- ✓ **Follow the 3 Basic Steps.**

# Key Takeaways

- ✓ **Use Internal and External Data.**

# Key Takeaways

- ✓ **Adopt a new mindset that ACL can and should be used for Strategic Data Analysis.**

# Key Takeaways

- ✓ **Follow the 3 Basic Steps.**
- ✓ **Use Internal and External Data.**
- ✓ **Adopt the mindset that **ACL** can and should be used for Strategic Data Analysis.**

**Thank You**