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# EIGHT LEVELS OF ANALYTICS



THE  
POWER  
TO KNOW.

# 8

# LEVELS OF ANALYTICS



Not all analytics are created equal. Like most software solutions, you'll find a range of capabilities with analytics, from the simplest to the most advanced. In the spectrum shown here, your competitive advantage increases with the degree of intelligence.

1



Report Number	Report Date	Expenditures
US389085	25-Oct-06	\$739.55
US385995	10-Oct-06	\$449.59
US383968	29-Sep-06	\$1,031.96
US383967	22-Sep-06	\$485.09
1076	13-Sep-06	\$170.80
548	23-Aug-06	\$1,009.03
76	21-Aug-06	\$154.96
2	17-Aug-06	\$812.91
53	27-Jun-06	\$510.75
445	24-Jun-06	\$529.14
1959	25-May-06	\$951.20
32277	3-May-06	\$994.25
5332328	23-Feb-06	\$789.63
US332380	24-Jan-06	\$375.00
US332327	19-Dec-05	\$84.00
	15-Dec-05	\$590.11
	24-Nov-05	\$1,333.94
	22-Nov-05	\$200.10
	19-Nov-05	\$15.00
	13-Nov-05	\$495.00
grand Total		\$11,902.09

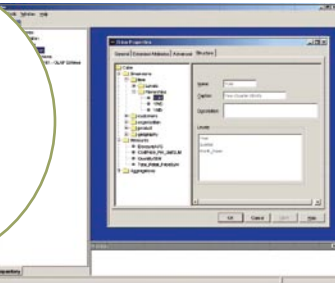
## STANDARD REPORTS

**Answer the questions:** What happened? When did it happen?

**Example:** Monthly or quarterly financial reports.

We all know about these. They're generated on a regular basis and describe just "what happened" in a particular area. They're useful to some extent, but not for making long-term decisions.

2



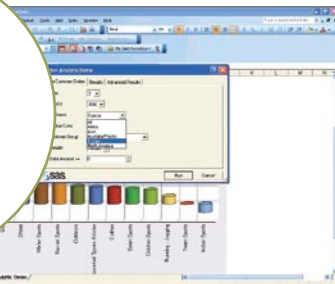
## AD HOC REPORTS

**Answer the questions:** How many? How often? Where?

**Example:** Custom reports that describe the number of hospital patients for every diagnosis code for each day of the week.

At their best, ad hoc reports let you ask the questions and request a couple of custom reports to find the answers.

3



## QUERY DRILLDOWN (OR OLAP)

**Answers the questions:** Where exactly is the problem? How do I find the answers?

**Example:** Sort and explore data about different types of cell phone users and their calling behaviors.

Query drilldown allows for a little bit of discovery. OLAP lets you manipulate the data yourself to find out how many, what color and where.

4



## ALERTS

**Answer the questions:** When should I react? What actions are needed now?

**Example:** Sales executives receive alerts when sales targets are falling behind.

With alerts, you can learn when you have a problem and be notified when something similar happens again in the future. Alerts can appear via e-mail, RSS feeds or as red dials on a scorecard or dashboard.

**5**

Variable	DF	Estimate	Error t Value	Pr >  t
Intercept	1	-143.03002	32.27420	< .0001
Height	1	3.88603	0.61829	7.66 < .0001

## STATISTICAL ANALYSIS

**Answers the questions:** Why is this happening? What opportunities am I missing?

**Example:** Banks can discover why an increasing number of customers are refinancing their homes.

Here we can begin to run some complex analytics, like frequency models and regression analysis. We can begin to look at why things are happening using the stored data and then begin to answer questions based on the data.

**6**

## FORECASTING

**Answers the questions:** What if these trends continue? How much is needed? When will it be needed?

**Example:** Retailers can predict how demand for individual products will vary from store to store.

Forecasting is one of the hottest markets – and hottest analytical applications – right now. It applies everywhere. In particular, forecasting demand helps supply just enough inventory, so you don't run out or have too much.

**7**

## PREDICTIVE MODELING

**Answers the questions:** What will happen next? How will it affect my business?

**Example:** Hotels and casinos can predict which VIP customers will be more interested in particular vacation packages.

If you have 10 million customers and want to do a marketing campaign, who's most likely to respond? How do you segment that group? And how do you determine who's most likely to leave your organization? Predictive modeling provides the answers.

**8**

## OPTIMIZATION

**Answers the question:** How do we do things better? What is the best decision for a complex problem?

**Example:** Given business priorities, resource constraints and available technology, determine the best way to optimize your IT platform to satisfy the needs of every user.

Optimization supports innovation. It takes your resources and needs into consideration and helps you find the best possible way to accomplish your goals.

## The best analytics for your business problem

The majority of analytic offerings available today fall into one of the first four areas, which report historical data on what happened in the past but no insight about the future. For simple business problems, these analytic solutions will be all you need. But if you're asking more complex questions or looking for predictive insight, you need to look at the second half of the spectrum. Even better, if you can learn to use these technologies together and identify what type of analytics to use for every individual situation, you'll really be increasing your chances for true business intelligence. ■

online

SAS Analytics:

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