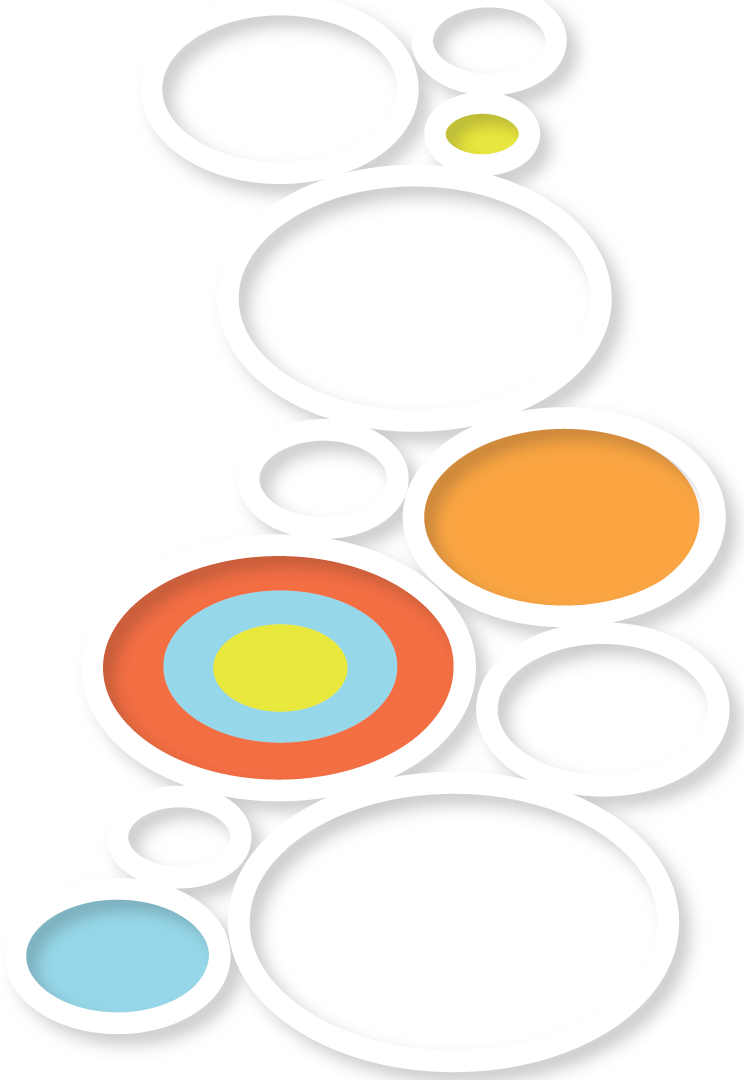
sas forum
NEDERLAND 2012

make connections • share ideas • be inspired

The Analytical Lifecycle At Work

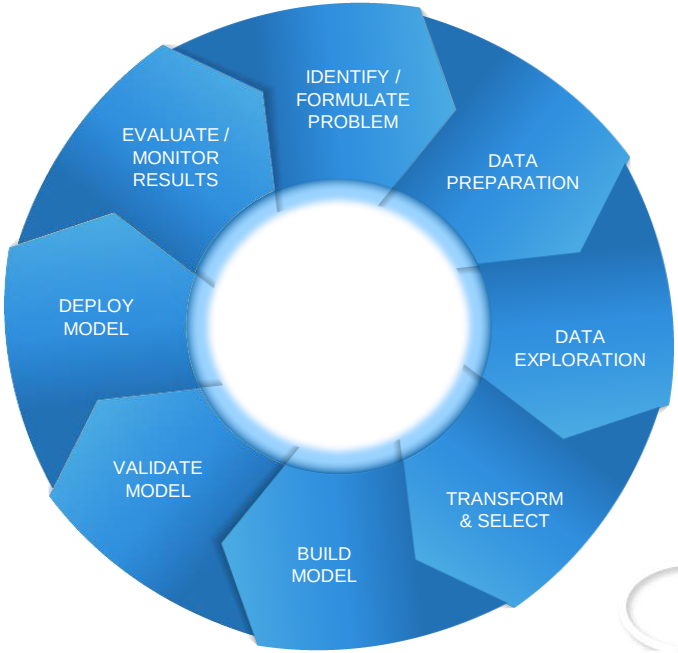
Mark Torr
Director – EMEA & AP Centre of Excellence



sas THE POWER TO KNOW.

The Analytics Lifecycle

- Repeatable steps for obtaining the most value from all styles of analytics
- Leading companies often recognise the need for a process, standardize it and then continuously focus on speeding up the cycle



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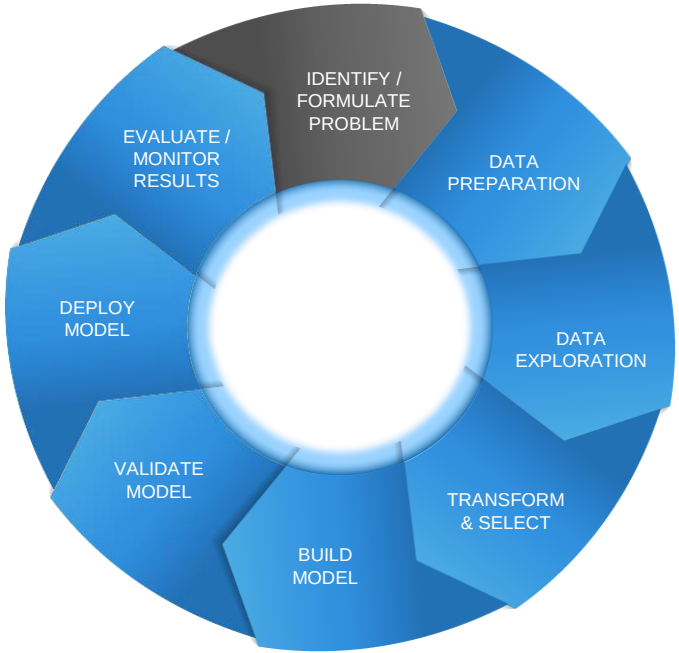

- Determine the business issue you think you want to address. i.e. Customer Churn in Telco, Parts failure in Oil and gas.
- Map business issue to possible solutions and start the process of solving it.

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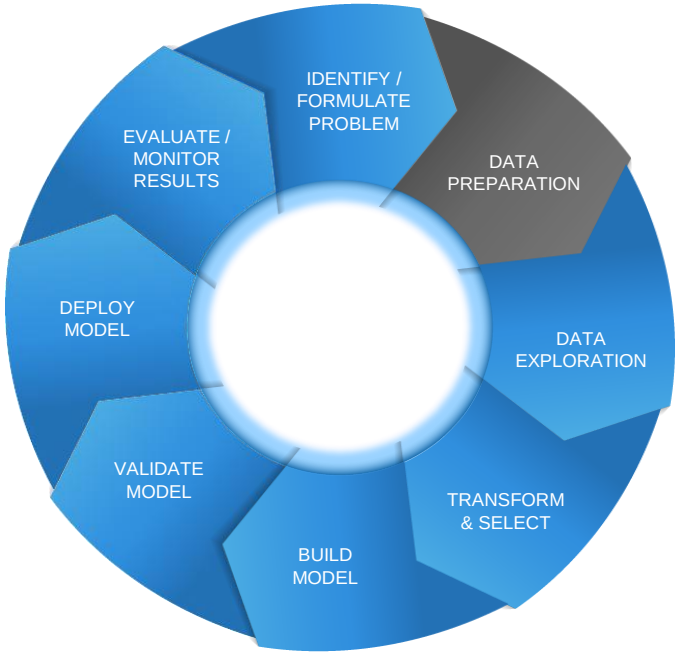

- First step is to get the raw materials, the data, you think you need to solve the problem.
- Often up to 80% of the effort when executing the analytics lifecycle… comes not just from the time IT spends but the time others spend when IT is “finished” getting “their” data.
- In this phase we generally, today, extract data from source systems to create reporting and analytical data marts and models and provision it in a suitable way for Analysts or Report writers.

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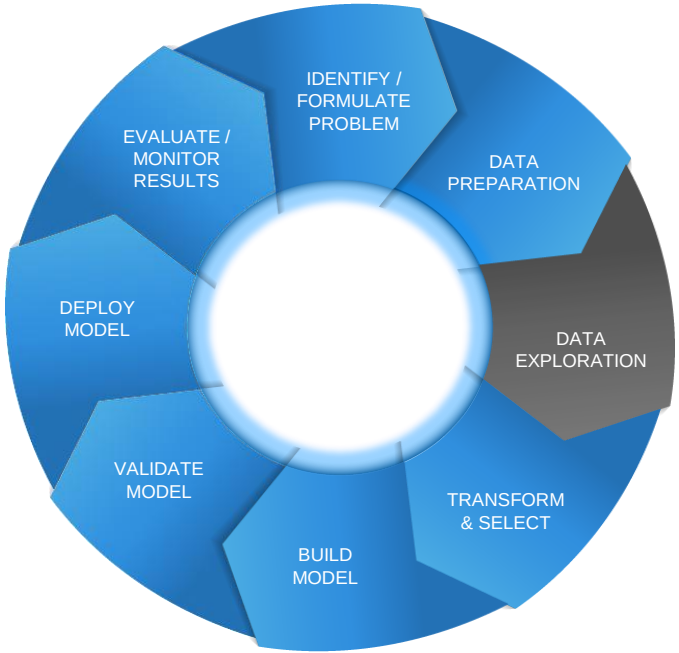

- Before building reports or models you need to look at the data to make sure it meets your needs.
- Identify clusters you might want to focus on, look for outliers, understand the data and check your solving the right problems.
- Key is you want to look to do this visually and interactively.

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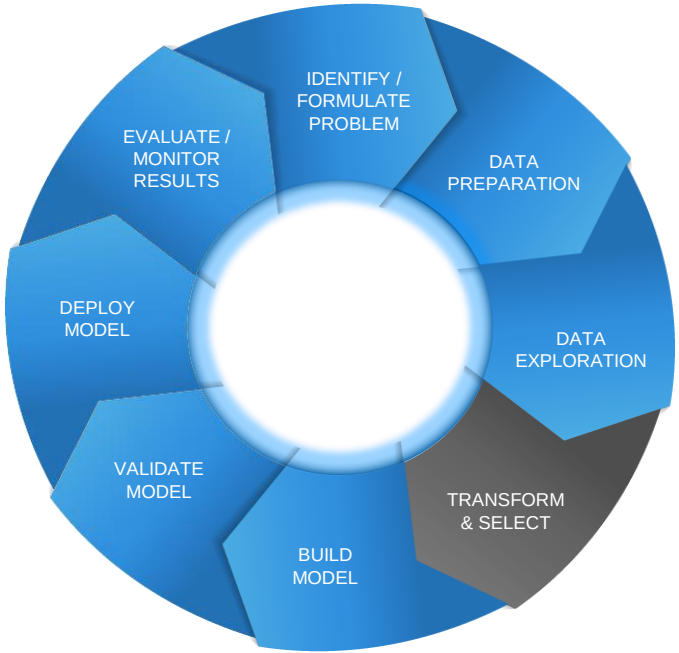

- The next step is to build the table(s) or select the appropriate data from existing tables needed for analytics or reporting.
- The selected data often needs some transformation especially for analytics (impute missing values, transpose tables etc.).
- Once the data is prepared analytics and/or reporting can proceed.

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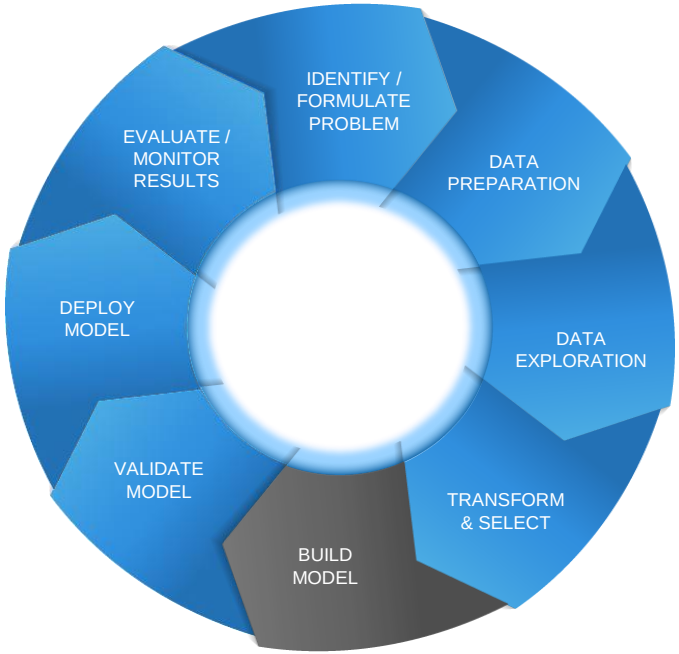

- Using the tables created in the previous step the Model development activity can begin.
- Statisticians / Analysts utilize historical data to create models that will score the data.
- The more data is available the more accurate the model will likely be.

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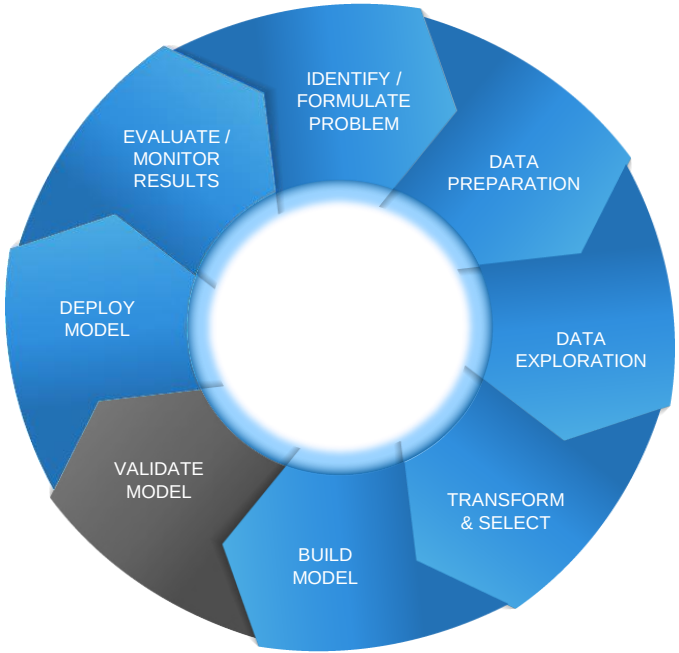

- Model validated by both the analysts and the IT function.
- Analysts determine the likely uplift of the model versus the current model or approach and confirm that the model indeed makes business sense to implement.
- The IT function determine how the model will impact the production system in terms of its deployment.

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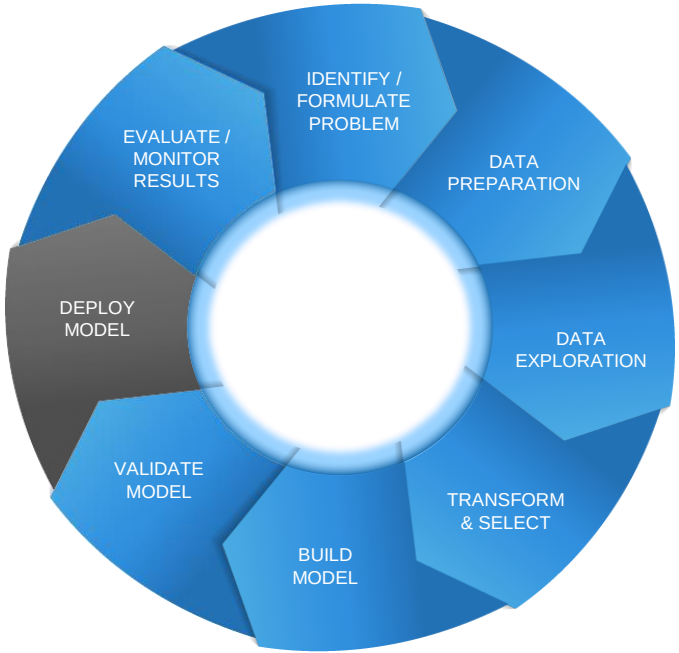

- The Analytical Model is then deployed into the organization to support decision making
- Multiple ways to do that including;
  - Batch
  - In-Database
  - Real-Time Services
- As you get more models you need a more rigorous governance around the model and its deployment

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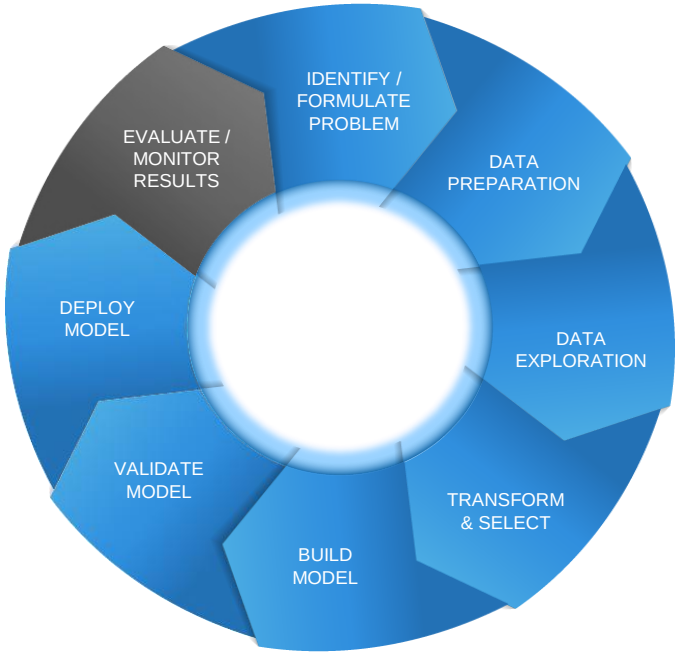


- Models tend to lose their effectiveness over time due to changing market conditions, and changing customer behaviour.
- Once a model falls below a specified threshold an action needs to be taken.
- Models can be retrained, or recreated, leading us to begin the cycle again.
- This step is also where we see reporting on how effective the utilization of the model itself could be through more traditional BI (more on that later).

Examples of a well-oiled Analytics Lifecycle At Work

- Improved efficiency of the process:
  - Model development and deployment (9 months ➔ 4 months)
  - 40% reduction in data preparation time
  - Analysts are 50% more productive
- Faster Predictive Analytics processing:
  - Faster customer segmentation (4.5 hours ➔ 90 Seconds)
  - Faster Portfolio value at risk calculation (18 hours ➔ 3 minutes)
  - Variable selection: 50x performance improvements

Existing environments?

Data Management

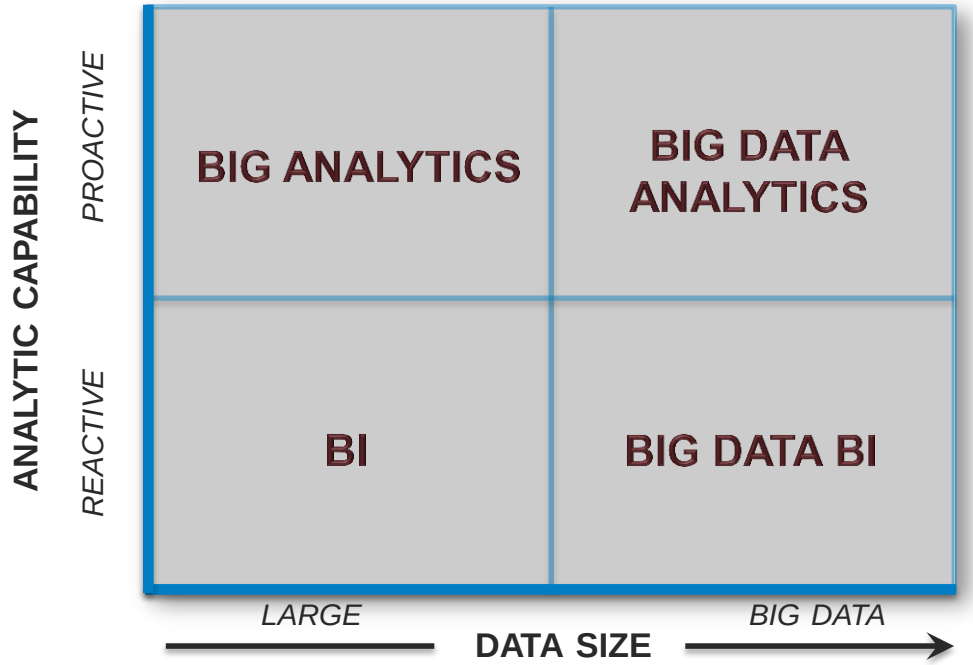
Business Intelligence

Analytics

Increased productivity
Better utilization of underlying technologies and platforms

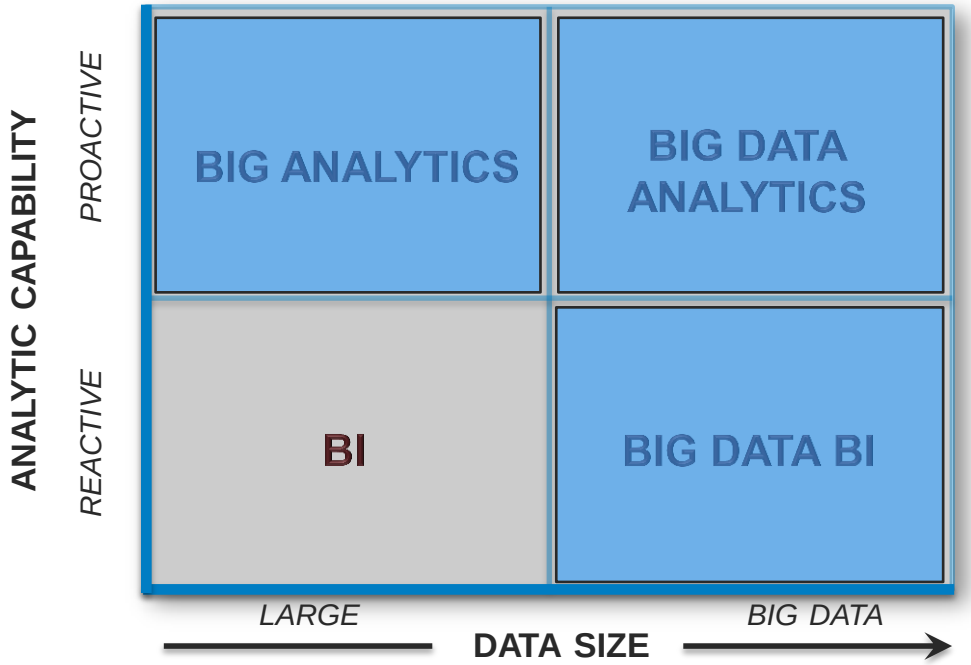
Reminder: Data Size and analytic competence

ANALYTICS	
REACTIVE	PROACTIVE
Alerts	Optimization
OLAP	Predictive Modeling
Ad Hoc Reports	Forecasting
Standard Reports	Statistical Analysis



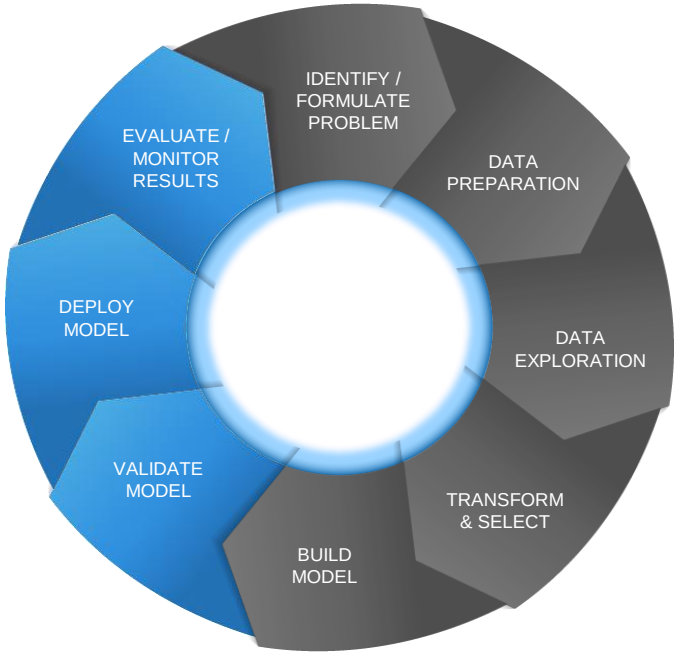
Our focus for this session...

ANALYTICS	
REACTIVE	PROACTIVE
Alerts	Optimization
OLAP	Predictive Modeling
Ad Hoc Reports	Forecasting
Standard Reports	Statistical Analysis



Demonstrations

What we just saw!



Horizontal and Vertical solutions!

Available today: High Performance Risk, High Performance Markdown Optimization & High Performance Marketing Optimization

Demonstration

20 Million Customers

8 „channels“ or offers

How to get the maximum return for our marketing spend?

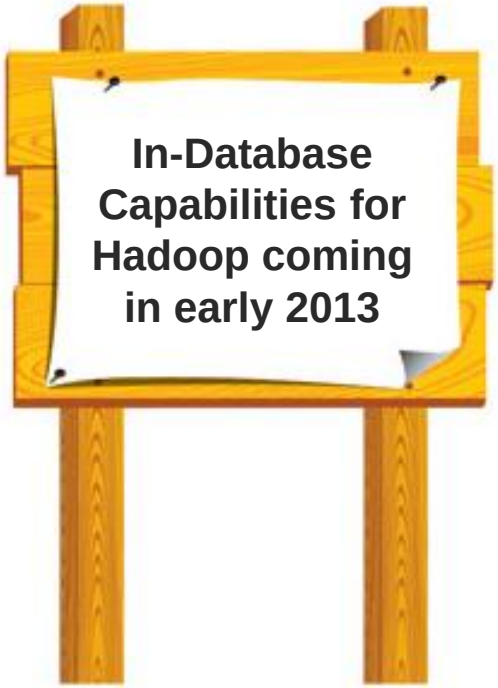
High Performance Marketing Optimization

HPMO changes the way the user interacts with scenarios

- The impact on run-times for a large MO problems is significant - scenarios that used to take hours to run can be completed in only a couple of minutes

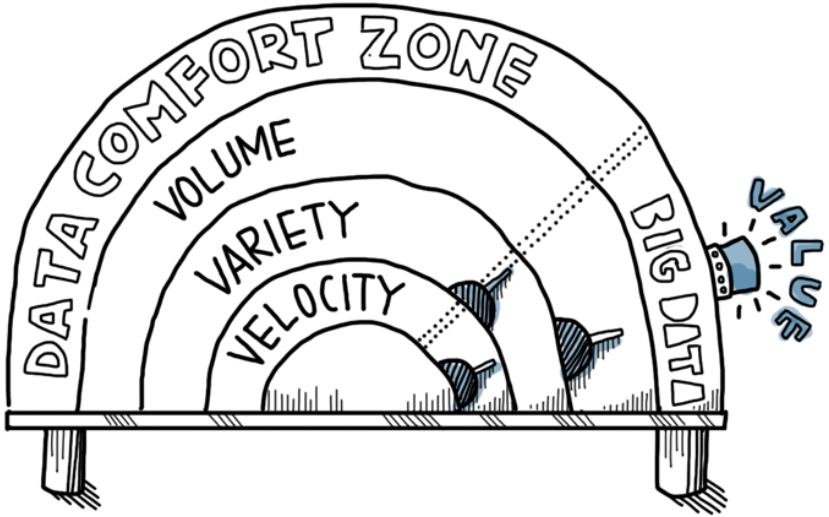
- Primary benefits
  - You can run what-if analyses on the full problem rather than using sampling
  - You can solve problems that were not possible before
  - You can do all this in real-time!

Some announcements



To realize big ambitions you need to believe you can do it and have the right technology...

Don’t be afraid to think BIG around your future!



High Performance Analytics from SAS helps you turn ambitions into reality

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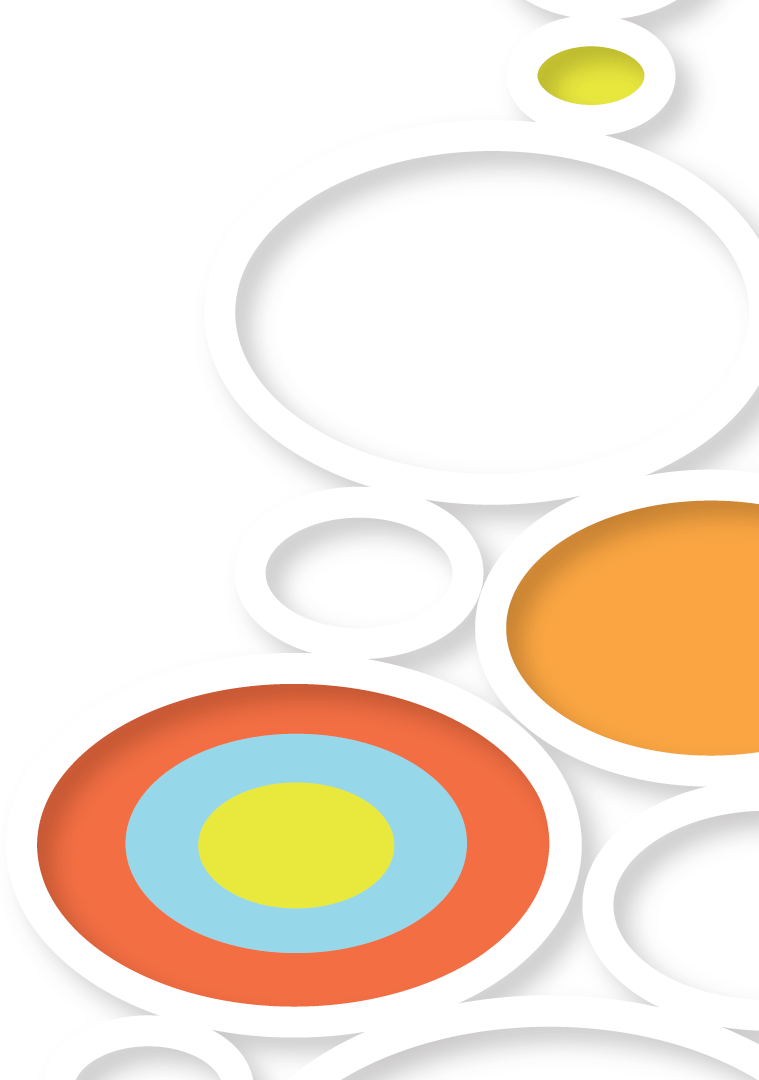

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