



**THE
POWER
TO KNOW®**

Si tu aimes les maths...

Coralie Van Bever
Senior Consultant
SAS Institute Belgium-Luxembourg
5 Mars 2010

Agenda

- Parcours académique
- Parcours professionnel
- About SAS
- Project Stories
- Summer of SAS

Parcours académique

- Etudes secondaires au Lycée Daschbeck (Ville de Bruxelles), section Latin-Mathématiques
- Licence en sciences mathématiques, orientation statistiques, probabilités et recherche opérationnelle
 - Mémoire “Analyse des données fonctionnelles et équations différentielles ordinaires”.
 - Directeur de mémoire: Davy Paindaveine.
 - ULB, 1999-2003
- Diplôme d'Etudes Spécialisées en Santé Publique, spécialisation Méthodes statistiques et épidémiologiques
 - ULB, 2003-2004

Parcours professionnel

- Enseignement
 - Intérim de 3 mois dans l'enseignement
 - Avril-Juin 2004
 - Athénée Royal d'Uccle 1, 5ème primaire

- SAS Institute
 - Depuis Juin 2005
 - Consultante senior, spécialisée en data mining et credit scoring
 - Activités: Consultance post-sales, pre-sales et formations

SAS

Qui sommes nous...?

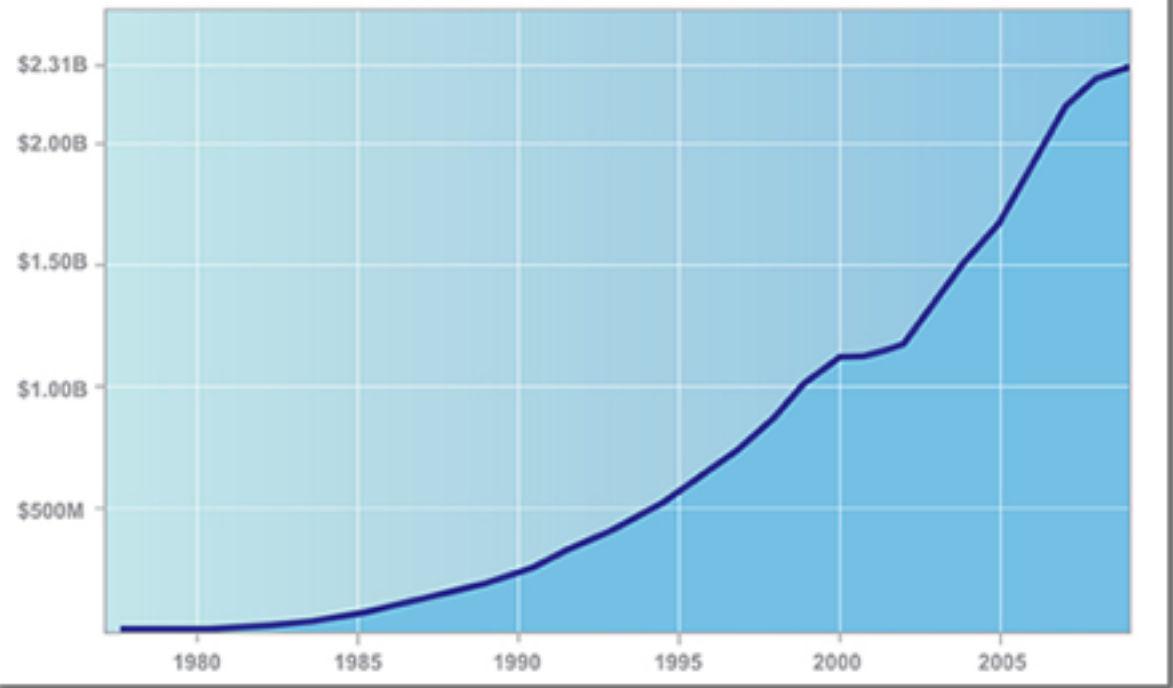
SAS est le leader en “business analytics software and services”, et le plus grand vendeur indépendant dans le marché de la business intelligence. Grâce à des solutions innovantes, SAS aide ses clients à accroître leur performance et à améliorer leurs capacités décisionnelles . SAS gives you THE POWER TO KNOW®.

SAS' 2008 Worldwide Results

22% Reinvestment in R&D

- Consistent revenue growth & profitability
- Investment in domain expertise
- Commitment to innovation

SAS Annual Revenue 1976 - 2009



SAS : Global Reach & Local Presence

Connecting with Customers for 30+ Years

- More than 400 offices globally in 54 countries
- SAS has customers in 119 countries.
- More than 45,000 business, government and university sites
- 92 of the top 100 companies on the 2009 FORTUNE Global 500[®] list
- 11,043 total employees



SAS Belgium-Luxembourg

Fondé en 1989

www.sas.com/belux



Belgium (2009)	
Revenue	+33 million €
Growth	+7%
Staff	110



Business Analytics Framework

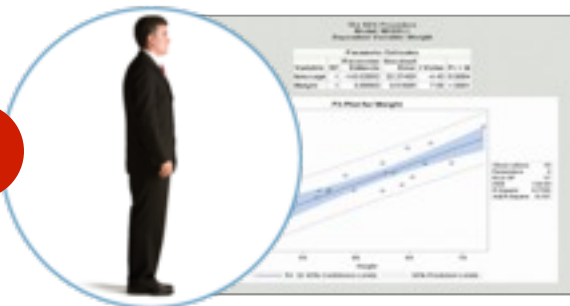
Essential steps





EIGHT LEVELS OF ANALYTICS

5



STATISTICAL ANALYSIS

Answer the questions: Why is it 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



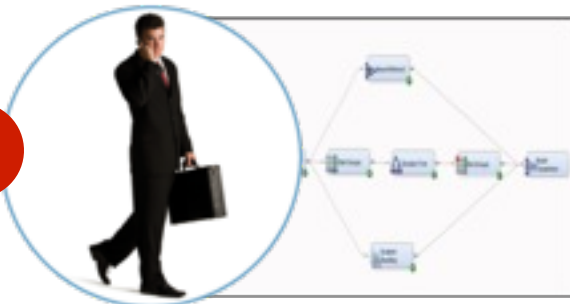
FORECASTING

Answer 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

Answer 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

Answer the questions: 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.

Analytics

A range of capability



Project Stories

- AXA Bank
- Eurocontrol
- Sanoma



The European Organisation
for the Safety of Air Navigation



AXA Bank

Banking

Business issue

Turn Basel II constraints into opportunities. Accurately evaluate the risk of potential credit losses and calculate the equity necessary to cover the risk.

Solution

SAS® Credit Risk Management optimizes workflow and provides better overall knowledge of customers and portfolios.

Benefits

"We wanted to make these necessary investments as profitable as possible by also generating information more rapidly to benefit the customer and the business. Hence the need for an efficient data analysis tool to help us turn Basel II constraints into opportunities."
- **Philippe Colpin, Manager of Basel II and IAS/IFRS Credit Retail Issues**

[Read the success story](#)

Eurocontrol: Business Challenge

- 31/12/2007 – Le ciel européen a accueilli 10 millions de vols en 2007.
- 65.89€ - Coût moyen par minute de retard pour un avion
- +/- 40 minutes de retard en moyenne par vol



Eurocontrol Website

- **658.900.000€** coût annuel total pour les compagnies aériennes, par minute de retard
- **26.356.000.000€** coût annuel total pour les compagnies aériennes
- De meilleures prédictions n'aident pas seulement à réduire les retards, mais également à réduire significativement les coûts.

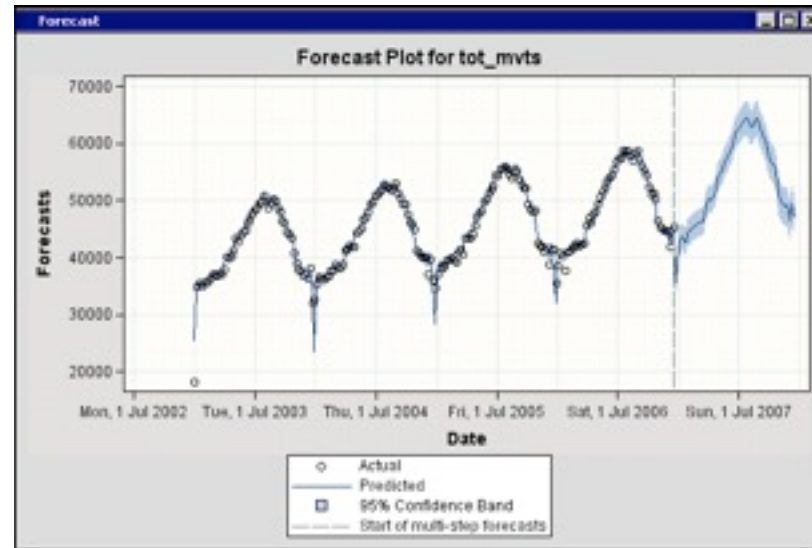
SAS Solution: Forecast Server

- 20% accuracy gains in short-term forecasts
- Highly conservative estimate of resulting delay improvement:
5% = 2 minutes =
1.317.800.000€ saved by airlines annually
- Les analystes peuvent maintenant raffiner les prédictions à court, moyen et long terme (important pour les infrastructures and la planification des ressources) au lieu de maintenir les modèles existants



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Sanoma is Belgian Media...



Sanoma: Business Challenge

- Prédiction des ventes de magazines au niveau des points de vente
- Minimisation des 'stockouts' = Opportunités de ventes manquées
- Minimisation des surplus = Coûts supplémentaires pour les chaînes de distributions et gaspillage
- Optimisation de la distribution des magazines à travers les chaînes de distribution



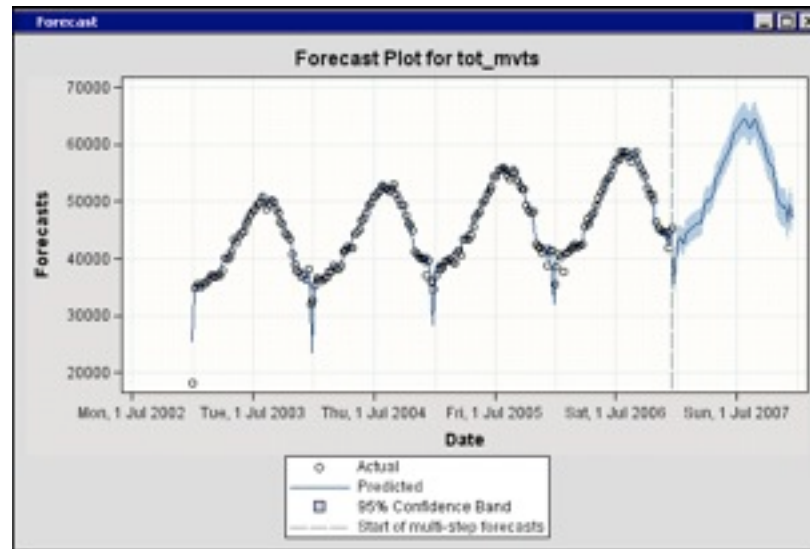
SAS Solution: Forecast Server and OR

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- Distribution optimale de la circulation des magazines
- Meilleure satisfaction des clients
- Moins de magazines invendus
- Réduction du coût total des chaînes de distribution
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- Become a SAS expert in 1 month (August 2010)
- Paid holiday job
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"Become a SAS expert in
just 1 month."

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& join the 30 lucky ones

