Building Effective Relationships with Internal Customers
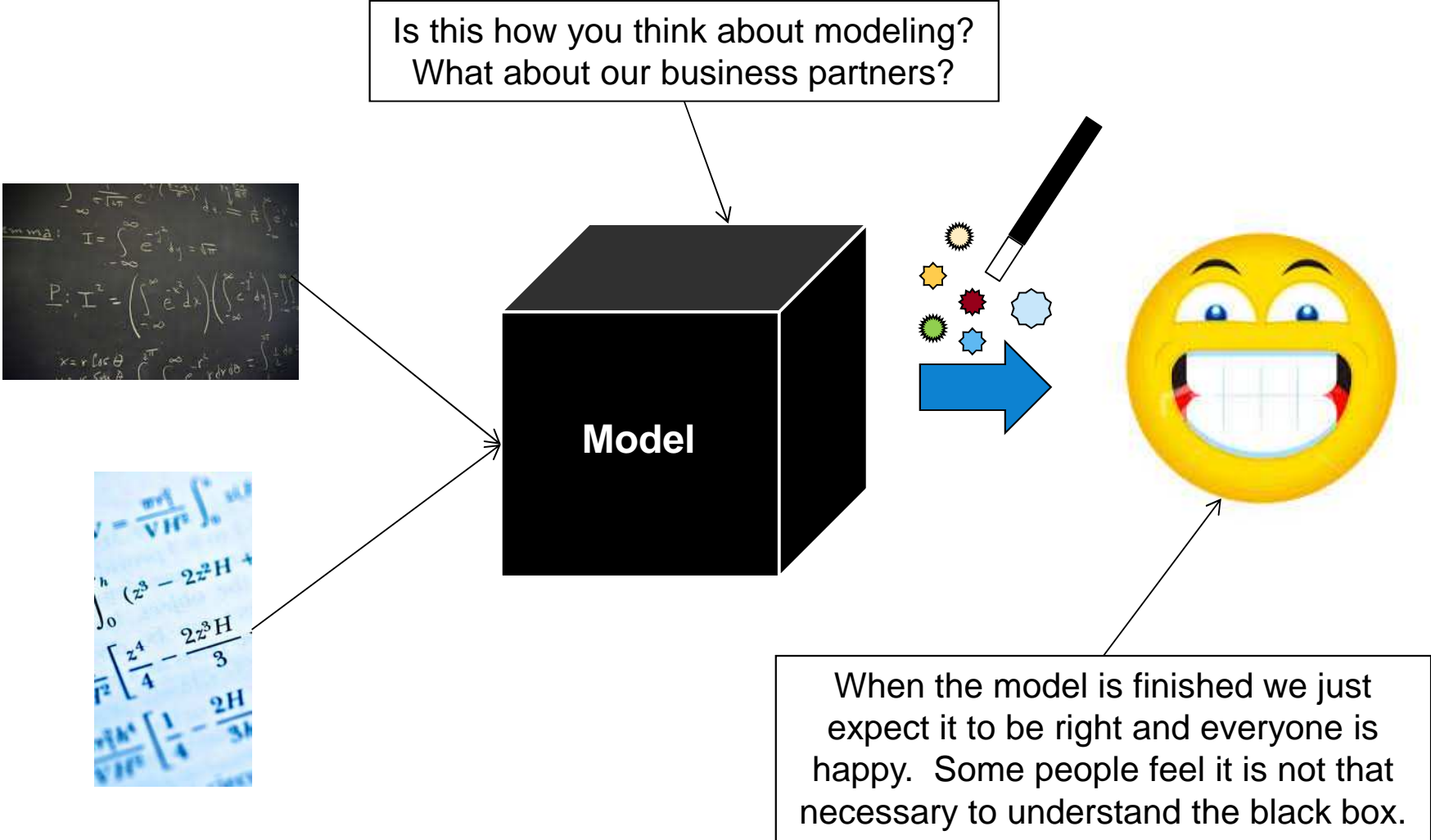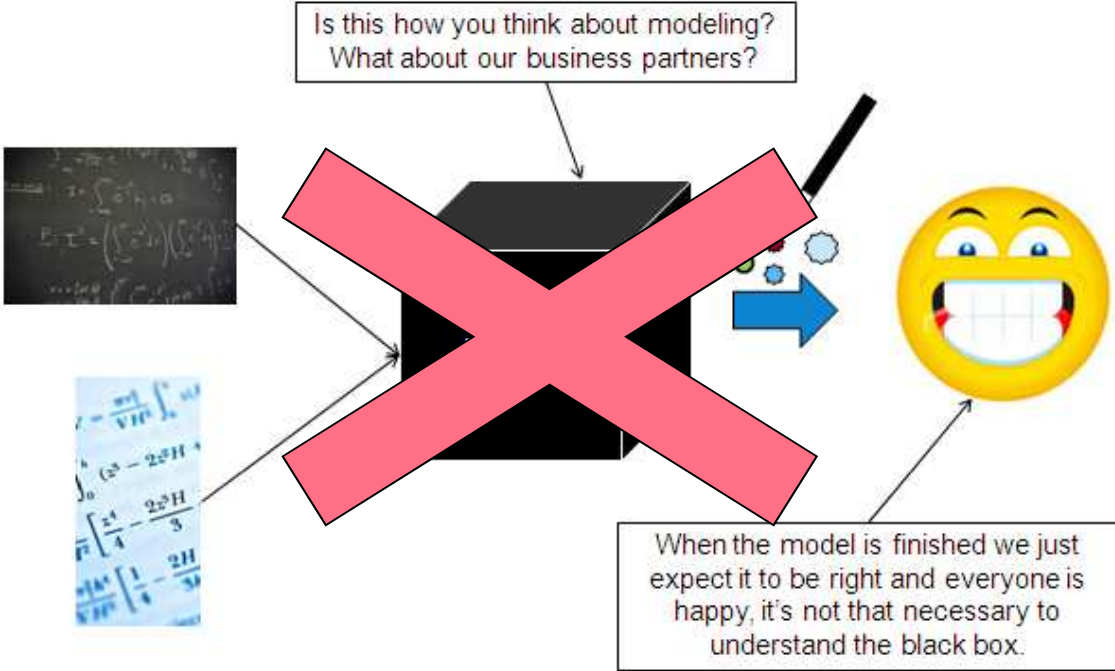
Shane Barnes, FCAS
November 5th, 2013

Agenda

- How do we think about models? How do our business partners think about models?
- How should we think about modeling.
- Steps to build a successful model with internal customer buy-in
  1. Know your customer
  2. Clear and frequent communication
  3. Build the model together
  4. Share the results (the sooner the better)
  5. Monitor the results

How do you think about predictive modeling? Is it actuarial voodoo?
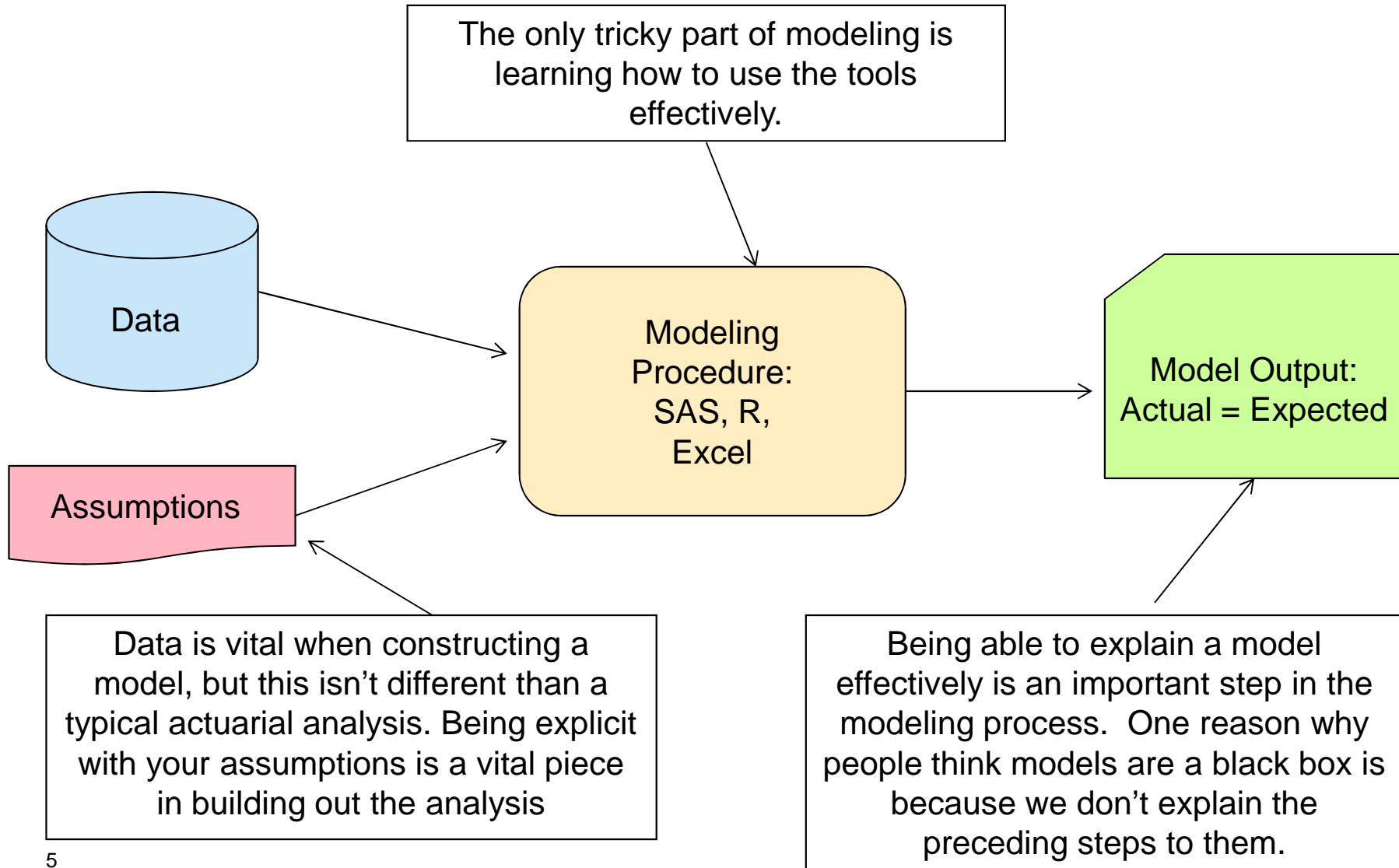

Is this how you think about modeling? What about our business partners?

Model

When the model is finished we just expect it to be right and everyone is happy. Some people feel it is not that necessary to understand the black box.

What was on the previous slide is not predictive modeling. What is the definition of predictive modeling?

Is this how you think about modeling? What about our business partners?

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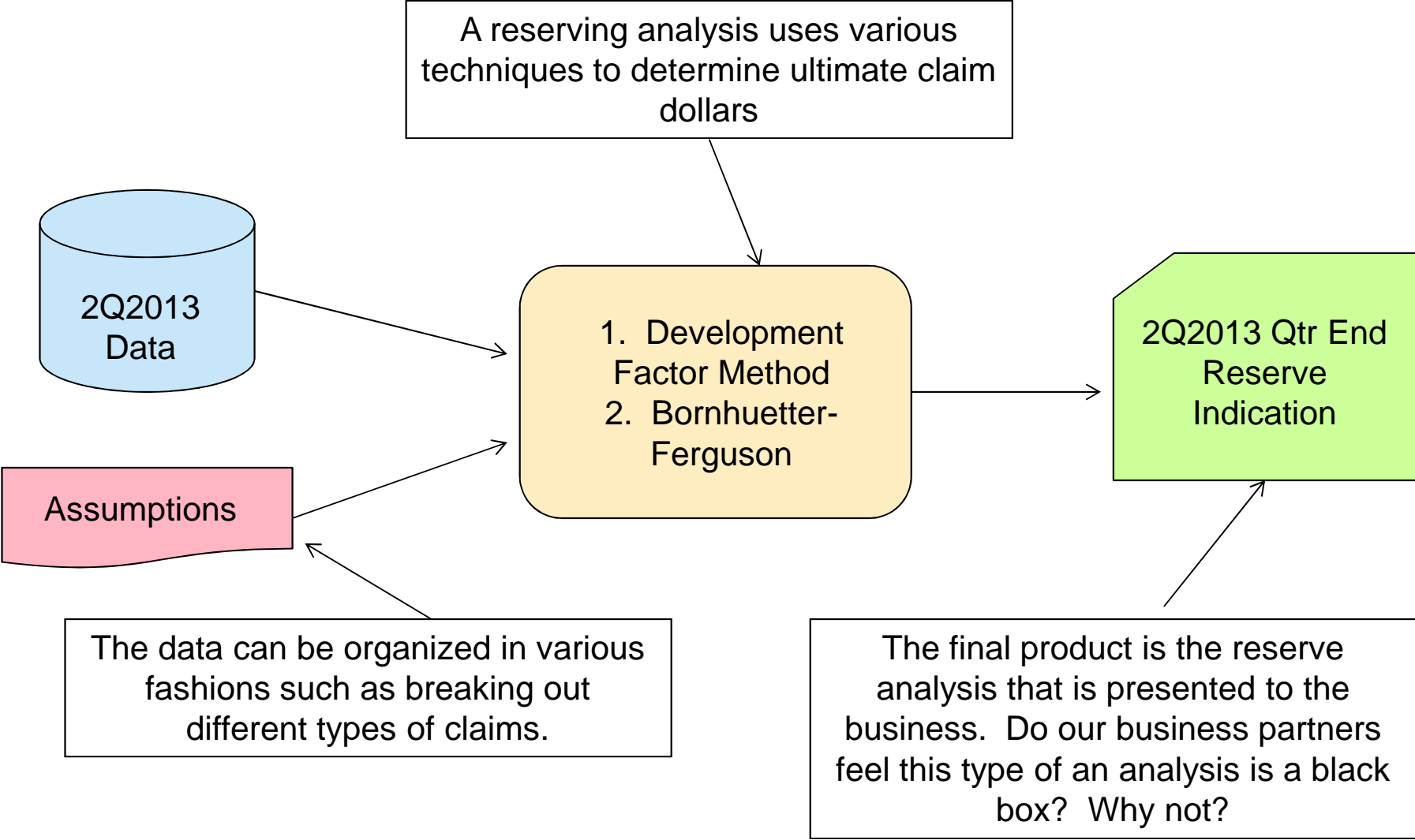
Predictive modeling is the ability to predict future outcomes using various statistical techniques.

Wait a second, haven't actuaries always done predictive modeling? Wouldn't a rate indication or a loss reserve indication be a predictive model?

Predictive modeling is not a black box, but rather a more sophisticated way to do our analytics. This is how we should look at models.
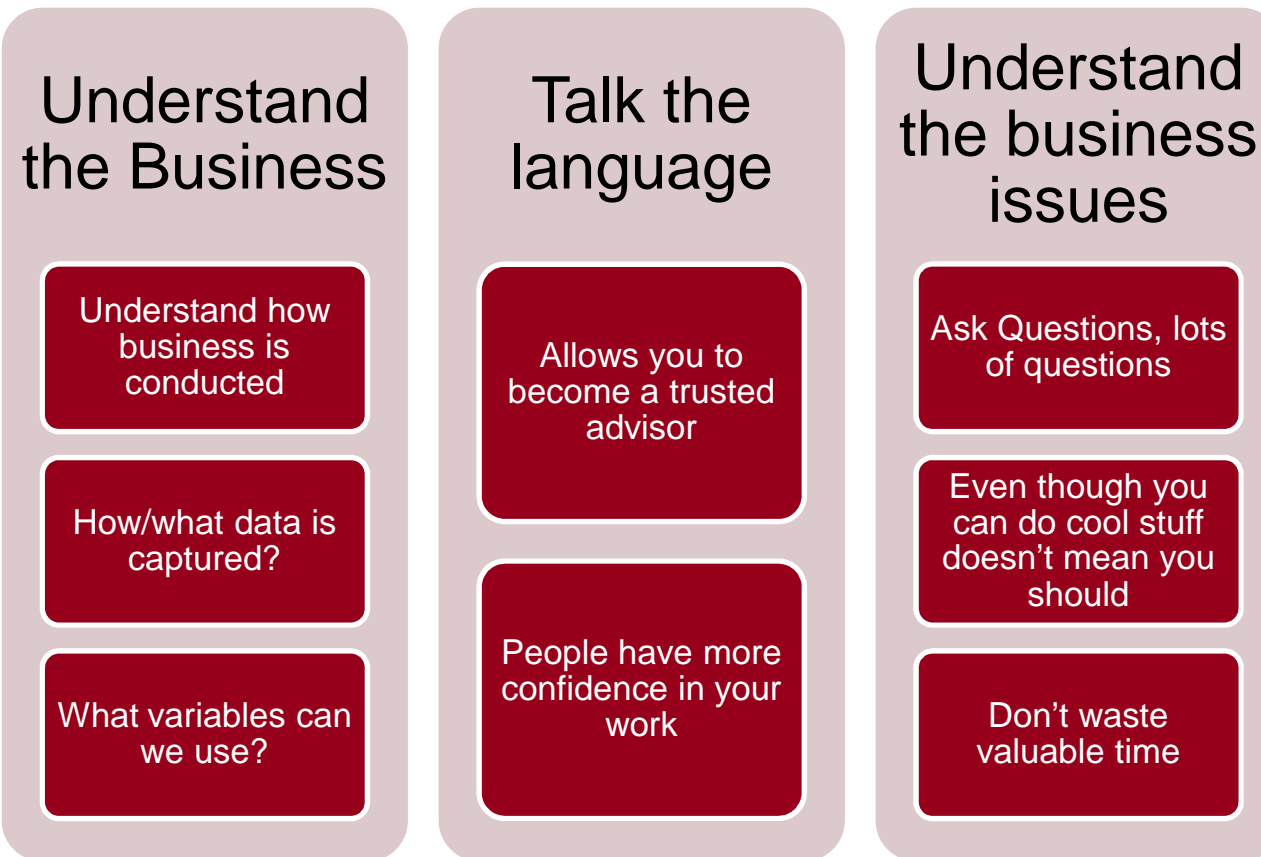
THE HARTFORD

The only tricky part of modeling is learning how to use the tools effectively.

Data

Modeling Procedure: SAS, R, Excel

Model Output: Actual = Expected

Assumptions

Data is vital when constructing a model, but this isn't different than a typical actuarial analysis. Being explicit with your assumptions is a vital piece in building out the analysis

Being able to explain a model effectively is an important step in the modeling process. One reason why people think models are a black box is because we don't explain the preceding steps to them.

Let's break this down into a model we all know: Quarter End Reserve Analysis for General Liability

A reserving analysis uses various techniques to determine ultimate claim dollars

2Q2013 Data

1. Development Factor Method
2. Bornhuetter-Ferguson

2Q2013 Qtr End Reserve Indication

Assumptions

The data can be organized in various fashions such as breaking out different types of claims.

The final product is the reserve analysis that is presented to the business. Do our business partners feel this type of an analysis is a black box? Why not?

Business Interface: Know your customer

Understand the Business

- Understand how business is conducted
- How/what data is captured?
- What variables can we use?

Talk the language

- Allows you to become a trusted advisor
- People have more confidence in your work

Understand the business issues

- Ask Questions, lots of questions
- Even though you can do cool stuff doesn't mean you should
- Don't waste valuable time

Business Interface: Clear and frequent communication!

Err on the side of too much information, they will let you know when they are good.

Have one person who you trust and who can be your "go-to" person and support your cause

Model Champion

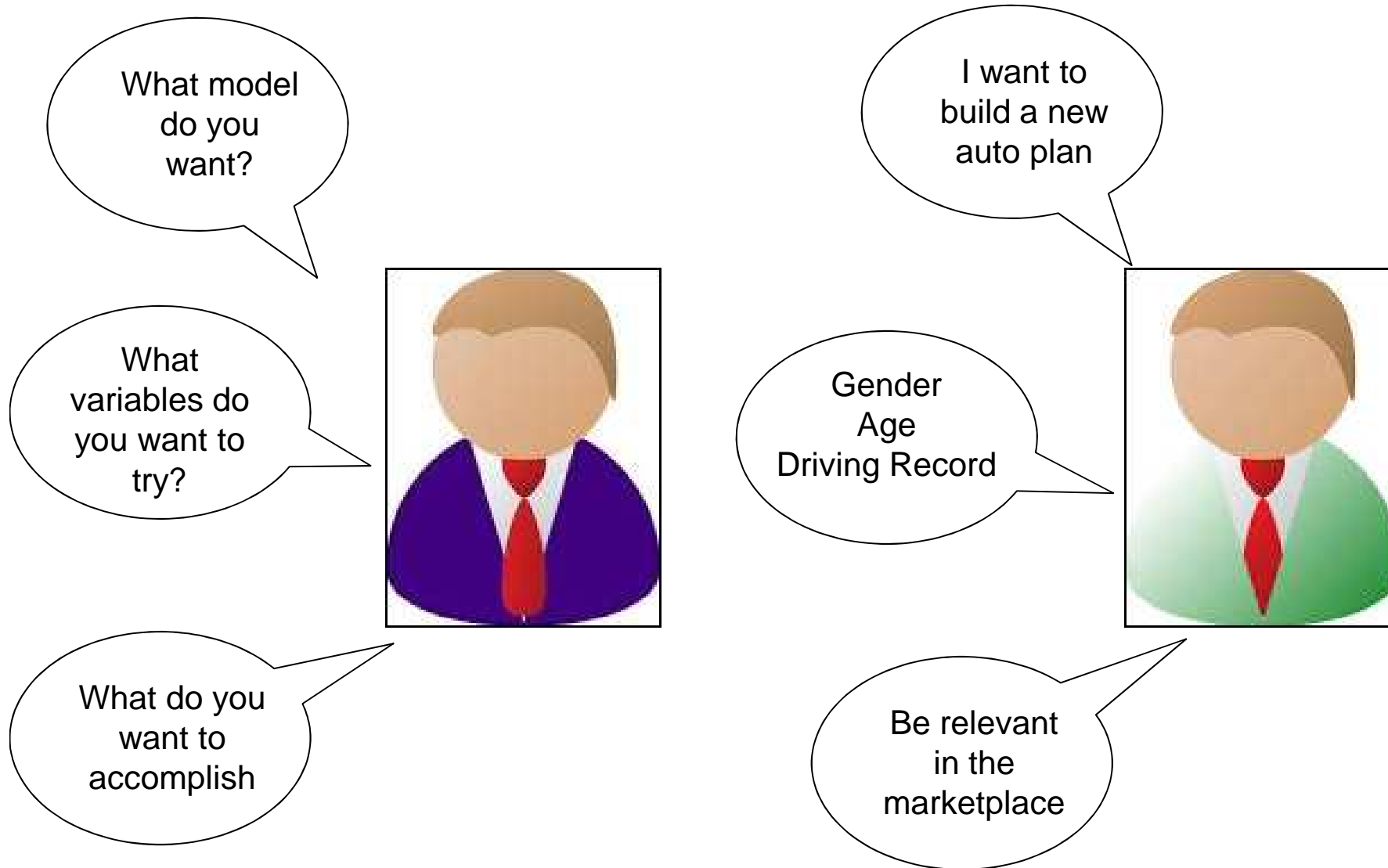Over-Communicate

Communication

Transparency
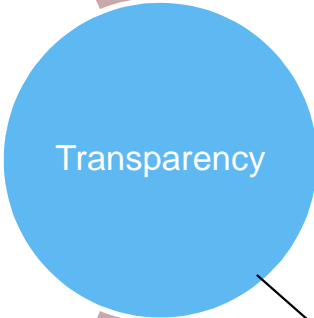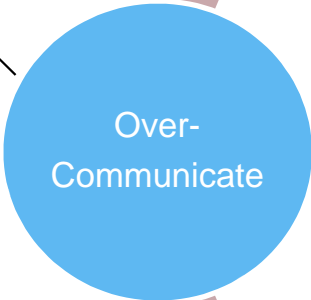
Regular Meetings

Having regular meetings with your key constituent will present clarity in your work.

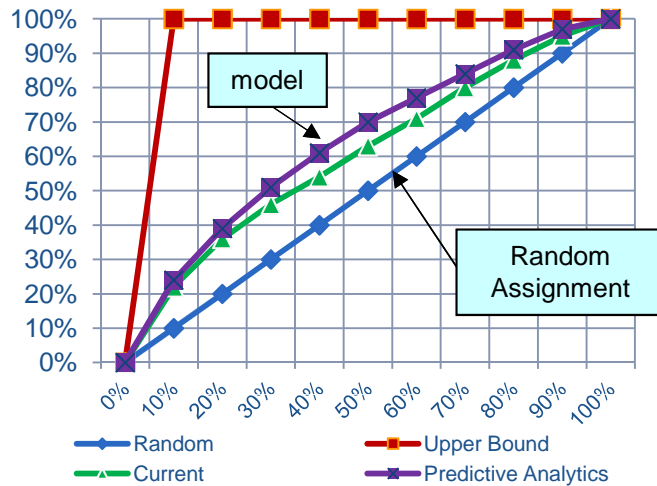This is vital, the more you give them, the better they feel
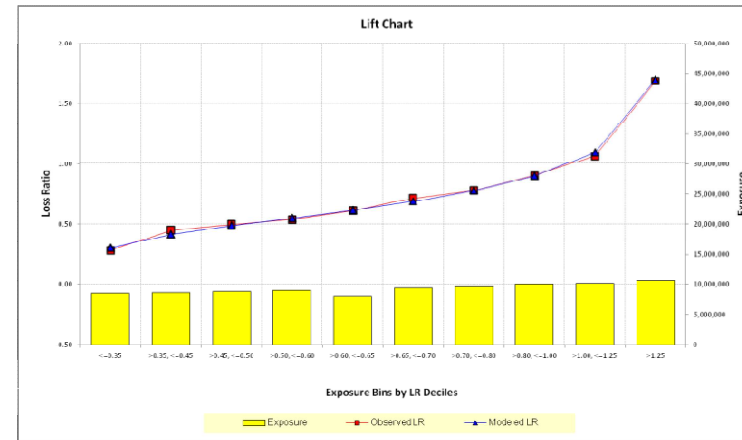
Business Interface: Share the results

Gini Curves

Random	Upper Bound
Current	Predictive Analytics

Lift Chart

Univariate Cuts & Dislocation

Class	Premium	Actual Loss Ratio	Predicted Loss Ratio	Dislocation
Doctors	1,200,000	74%	73%	-1.4%
Lawyers	500,000	68%	69%	1.5%
Dentists	750,000	79%	76%	-3.8%
Chiropractor	300,000	70%	71%	1.4%
Plumber	100,000	68%	70%	2.9%
Florist	150,000	62%	66%	6.5%
Diner	800,000	65%	66%	1.5%
Total	3,800,000	71.4%	71.1%	-0.4%

Business Interface: Monitor the results

Class	Premium	Actual Loss Ratio	Predicted Loss Ratio	Dislocation		Post Implementation Premium	Post Implementation Loss Ratio
Doctors	1,200,000	74%	73%	-1.4%		1,400,000	72%
Lawyers	500,000	68%	69%	1.5%		350,000	68%
Dentists	750,000	79%	76%	-3.8%		600,000	75%
Chiropractor	300,000	70%	71%	1.4%		200,000	70%
Plumber	100,000	68%	70%	2.9%		200,000	71%
Florist	150,000	62%	66%	6.5%		50,000	81%
Diner	800,000	65%	66%	1.5%		1,000,000	72%
Total	3,800,000	71.4%	71.1%	-0.4%		3,800,000	72.1%

Compare results to expectations, are there any unusual classes post implementation? Should we go back to the models? What is causing the change? The ability to explain these results will give business partners confidence in your work, and you must react appropriately, but not too quickly.