



EagleEye Analytics

Communicating Predictive Modeling Results

CAS Ratemaking & Product Management Seminar - March 10 2009
Marlowe Leibensperger





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Critical success factors of predictive analytics initiatives

Back to basics...

- ✓ Must take action – “a model without implementation is useless”

- ✓ Must have end user buy-in (internal and distribution)

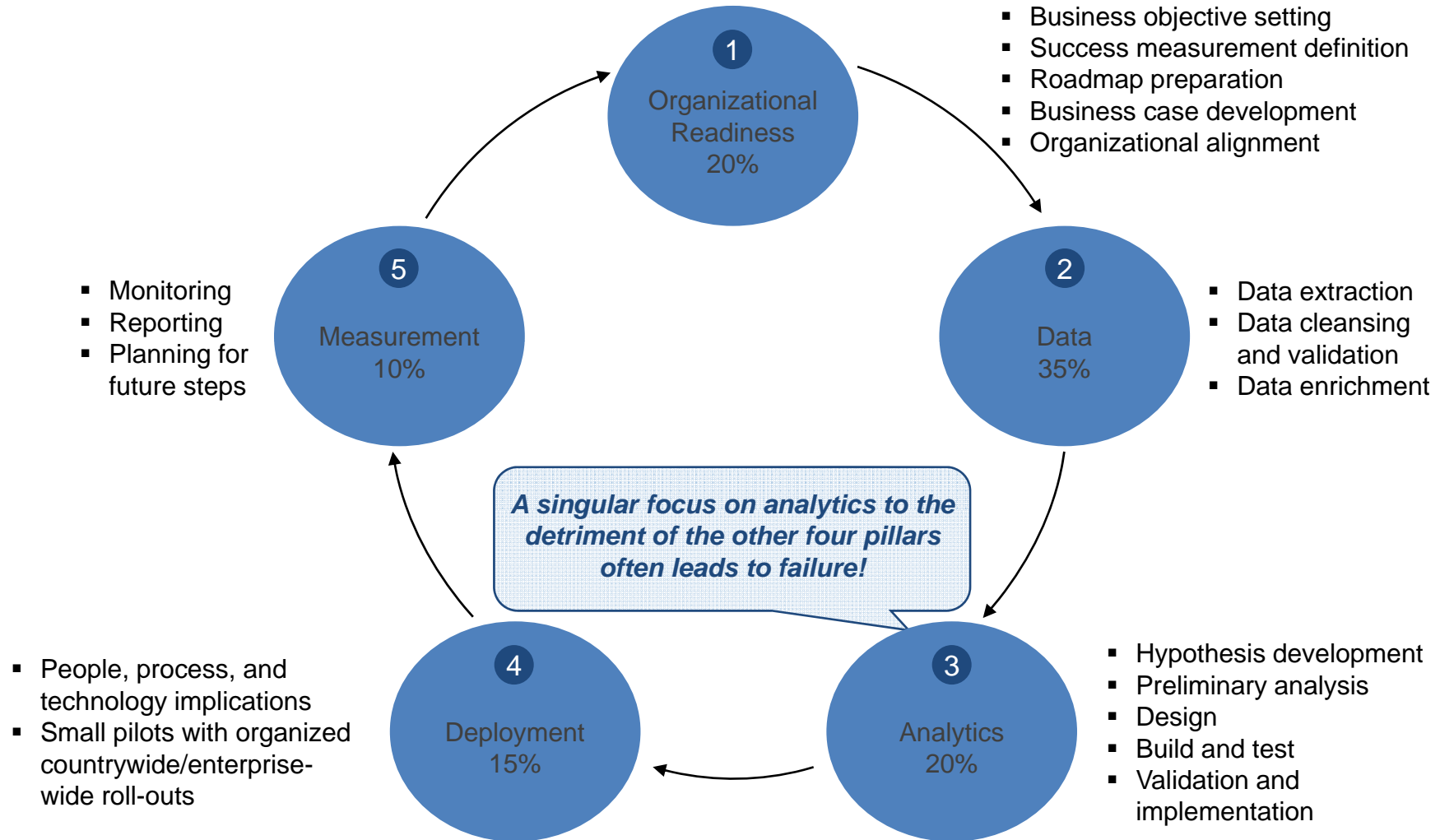
- ✓ Must be able to communicate the analytics result throughout the organization
 - Requires collaboration throughout the model development process
 - Collaborative business project vs. pure statistical exercise

The communications challenge...

- Audience composite - broad consumer group
 - Potentially multiple perspectives and personal agendas
- Often times much or some of the audience is less technical
 - This presents a knowledge gap, large or small, worth addressing
- Users do not necessarily care to have it explained to them
 - What's in it for them?
- No pressure, but the next time you can get a free hour from key audience members is 3 months from now!

Foundation pillars of predictive analytics initiatives

Successful initiatives are broader than analytics and span the project lifecycle



Process considerations...

- Organizational readiness
 - Establish clear business objectives (the problem, benefit levers, key players, etc.)
 - Understand flexibility and limitations (systems, regulations, strategic, etc.)
 - Define path and secure stakeholder buy-in (plan, business case, executive sponsorship, stakeholder engagement, etc.)
- Data
 - Perform reconciliation and receive sign-off
 - Obtain intimate knowledge of challenges - no surprises
- Approach & activities
 - Be clear on what work was done and rationale for approach (keeping in mind audience)
 - Less is generally more - do not speak to every rock you looked under (have details in your back pocket)

Setting up the punch line...

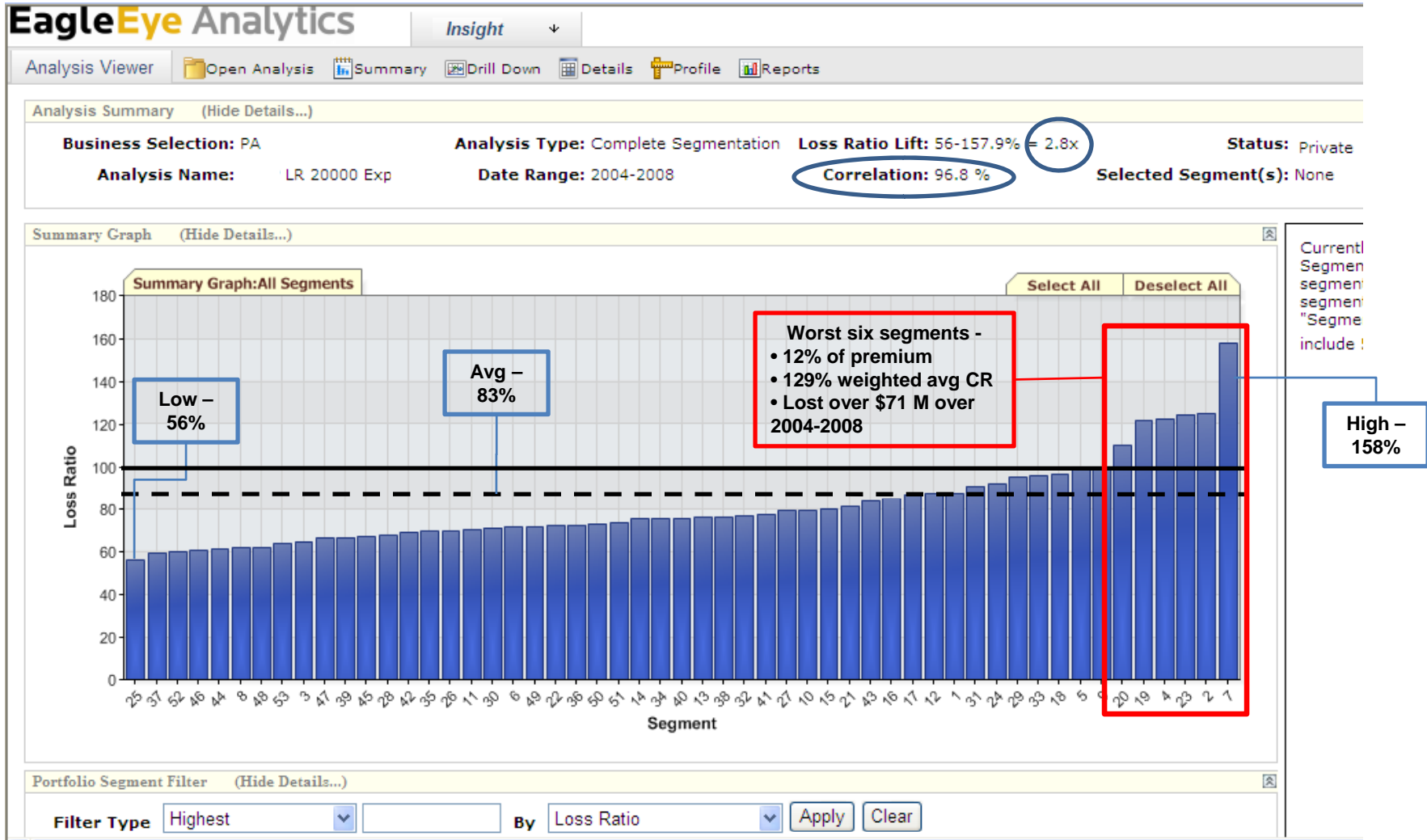
- Presentation of results

- Ensure it is clear, concise and relevant
- Offer caveats at the outset
- Provide overview and hit key guiding principles
 - Actuarial credibility
 - Model validation
- Evaluate achievements versus objectives
 - Focus on action and results
- Pay particular attention to key
- Measure financial impact – top/bottom line
- Indicate impact on key dimensions (e.g., distributors)
- Present in terms of ‘what would have happened’ -> retro analysis

- Seek questions along the way – provides lens into what your audience is thinking
- Manage to conclusion

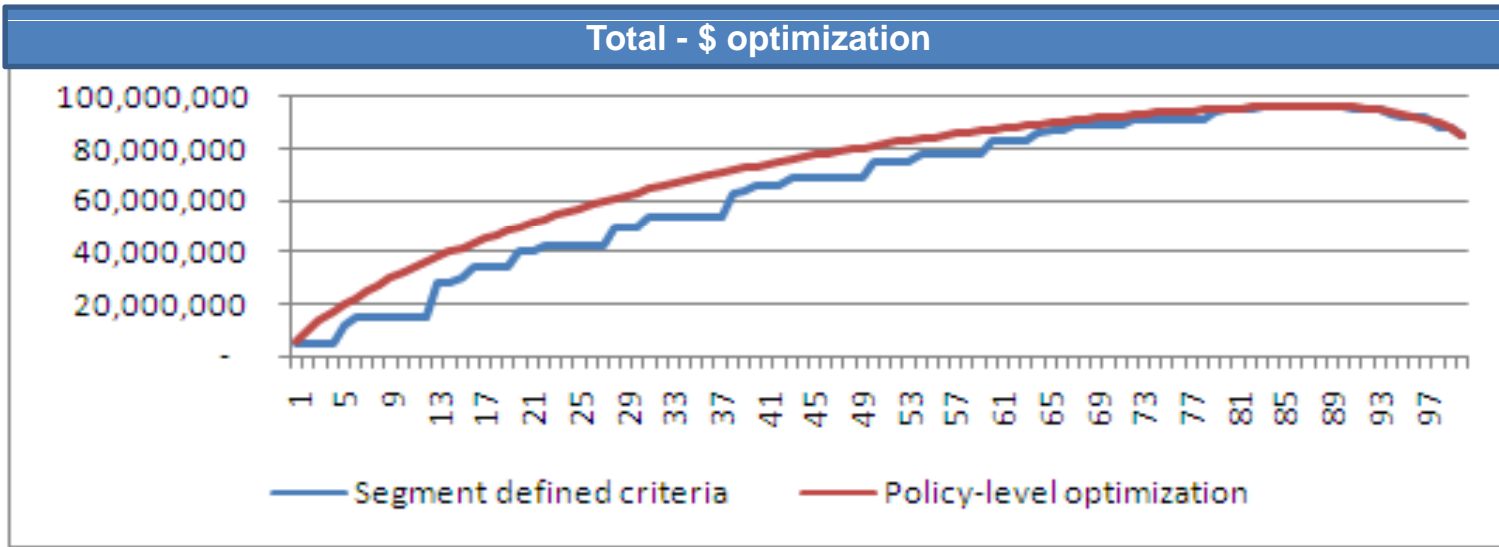
Make it relative – the lift curve

Illustrative – ABC Company



Link to financial impact – top & bottom line

Illustrative – ABC Company



Scenario 1 - \$ optimization

	Direct	ABC model retain	ABC model 2 retain	ABC model change	EEA run change
Premium	\$432.9 M	\$407.1 M	\$378.0 M	(\$25.8 M)	(\$54.9 M)
UW gain	\$85.8 M	\$82.7 M	\$96.6 M	(\$3.1 M)	\$10.8 M
Return on premium	19.8%	20.3%	25.6%	0.5%	5.8%



How are my distributors impacted?

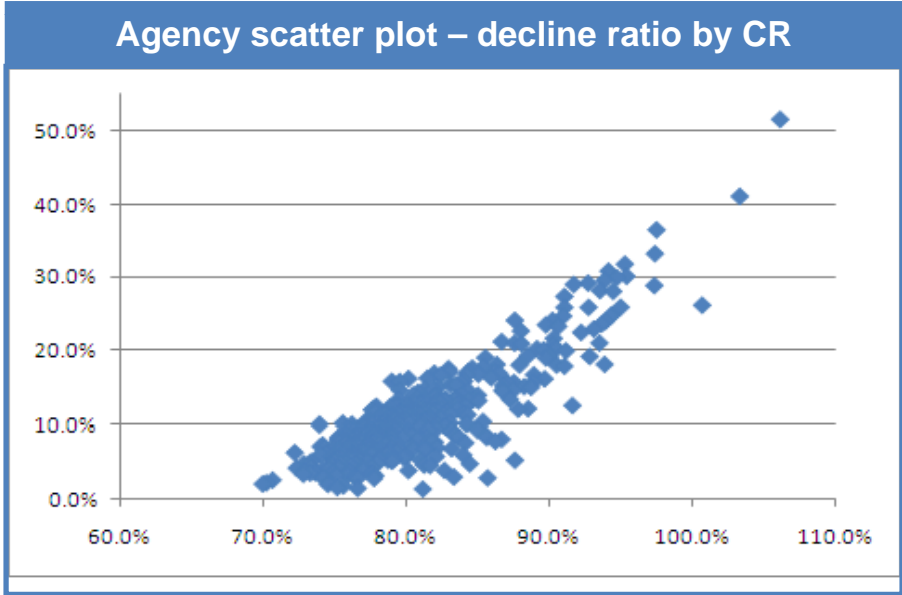
Illustrative – ABC Company

Agency sort - decline ratio

	Agency	Sum of prem	Sum of inc	Expected CR	Carveout ratio
1	Confidential	249,065	264,338	106%	51.4%
2		53,117	54,876	103%	41.0%
3		865,549	844,011	98%	36.3%
4		1,878,653	1,829,694	97%	33.1%
5		662,823	631,627	95%	31.6%
6		127,880	120,414	94%	30.7%
7		289,172	275,932	95%	30.0%
8		188,525	178,607	95%	29.8%
9		434,680	408,112	94%	29.4%
10		82,695	76,685	93%	29.1%
11		986,721	905,187	92%	28.9%
12		92,343	89,896	97%	28.8%
13		1,583,908	1,481,872	94%	28.1%
14		234,666	221,712	94%	28.0%
15		386,623	352,131	91%	27.3%
16		57,316	57,708	101%	26.1%
17		533,217	506,574	95%	25.8%
18		550,093	510,325	93%	25.8%
19		246,505	224,538	91%	25.8%
20		391,101	369,231	94%	24.8%



Agency decline ratio

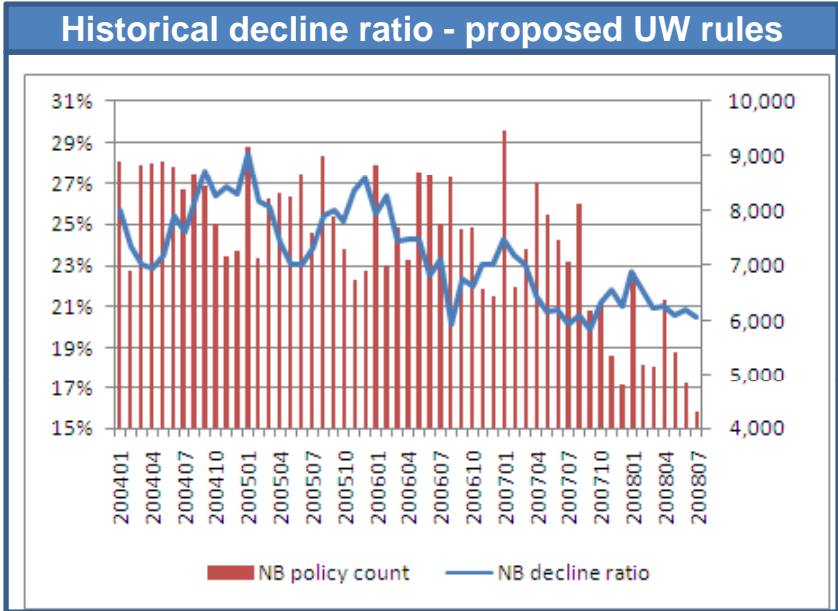


Agency expected combined ratio

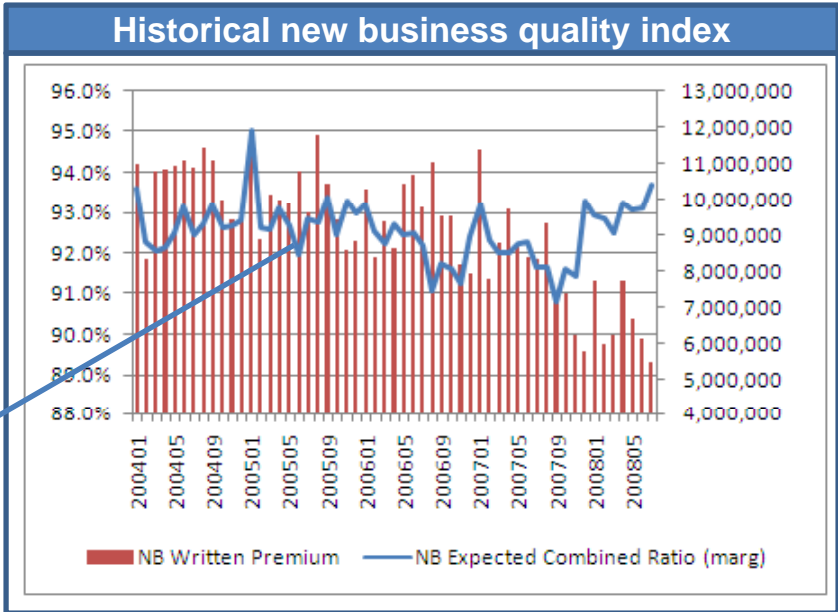


Put it in perspective, what would have happened?

Illustrative – ABC Company



Quality index: weighted average expected combined ratio (marg) based on distribution of monthly segmentation



Drawing to close...

- Always have a proposed path forward
 - List of outstanding activities
 - Levers available to enhance your model results (and a perspective on whether it is worth it or not)
 - Ties to implementation
- Keep in mind your path forward may change based on meeting feedback (be flexible)
- Proactively obtain feedback – it will only help you in the future