Role of Research in Industry
Assurant, Inc
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• Empirical Evidence
• Scientific Method
• Measurement
• Objective Information
• Analysis of Data
Business Decision Making Models

Instinctive
- No Data Required
- Subjective
- Not Scientific (Tradition, Anecdote, Folklore and Legends)
- Confidence Level is not Quantifiable
- More Risk

Information Driven
- Requires Appropriate Data
- Objective
- Scientific (Evidence-Based)
- Confidence Level is Often Quantifiable
- Less Risk
Assurant, Inc. Structure
### Assurant, Inc. Products

#### ASSURANT Solutions
- Credit insurance and debt protection administration
- Warranties and extended service contracts
- Pre-need insurance (funeral/burial)

#### ASSURANT Employee Benefits
- Voluntary dental insurance
- Group life, disability and dental

#### ASSURANT Health
- Individual health insurance
- Short-term health insurance
- Voluntary insurance
- Small employer group health insurance
- Health savings accounts

#### ASSURANT Specialty Property
- **Creditor-placed homeowners insurance**
- Manufactured housing homeowners insurance
- Renter’s Insurance
- Collateral protection watercraft, motorcycle, motor home.
Infrastructure
Reporting and Tool Development
Advanced Analytics
BDI Human Capital

- 25 Staff Members
- PHD, MS, MA, and MBA Trained Analysts
- FSA / ASA Actuaries
SAS Server Hardware

- IBM xSeries 460 Server (Machine Type 88722RU)
- 16 Intel Xeon MP CPUs - 3.0 GHz each
- 9.5 GB RAM Memory
- 4.2 TB Disk
- 2.3 TB Archival Storage in Use
SAS BI Server Software

- Base SAS
- SAS/STAT
- SAS/ETS
- SAS/GRAH
- SAS/IntrNet
- SAS/CONNECT
- SAS/ACCESS Interfaces to
  - Oracle
  - OLE DB (e.g., Microsoft SQL Server)
  - PC Files (Excel, Access, CSV, etc.)
External Data - Big Brother is Watching

- Age
- Income
- Lifestyle
- House
- Mortgage Rate
- Political Party
- Suburb Dweller
- Marital Status
- Gender
- Education Levels
- Occupation
- Height & Weight
- Car You Drive
- Wine Connoisseur
- Mail Orderer
- Fitness Guru
- Language Preference
- Home Square Footage
- Number of Kids
- Cell Phone Usage
- Glasses vs. Contacts
Sample of External Data Sources

- Acxiom Corporation - provider of demographic and lifestyle variables at a household level.
- InfoUsa - business centric data including Credit.net a real time business lookup
- Claritas, Prime Location- US demographics for individuals and businesses with mapping capabilities.
- TransUnion - individual credit data for analysis
- FMG - Detailed listings and contact information of licensed agents
- Discovery - Detailed listings and contact information of licensed agents
- BLS - Bureau of Labor and Statistics
- Census Bureau - National Census Data
Reporting and Tool Development

- Actuarial
  - Loss Ratios
  - Actual to Expected
- Sales
  - Geographic
  - Campaign
- Lapse
  - Geographic
Advanced Analytics

- Intervention Evaluation
- Predictive Modeling
  - Clinical Interventions
  - Marketing Interventions
  - Risk (at multiple levels of aggregation)
- Compensation Systems
- Staffing Models
- Forecasting
- Risk Assessment and early warning
- Web Analytics
BDI Can Help Answer Questions With Objective Information:

- Who is likely to buy (and what are their characteristics)?
- Who should we target?
- Did we meet our goals?
- Are we getting closer to meeting our goals?
- What markets are hot?
- What are the leading indicators for sales trends?
- What processes are and are not working?
- How do we quantify value, risk, and other phenomenon?
- Did the intervention work? If so, how well did it work?
Central Trends

- Data availability (Still 80% of effort)
- Processing power and storage space
- More methods
  - Traditional Stats (Regressions)
  - Web Analytics
  - Advanced Status (PCA, SEM etc)
- Many more consultants (strong and weak)
- Balance between methodological complexity / accuracy and business understanding / acceptance
Common Methods Used

- Linear Regression
- Logistic Regression
- Auto-Regression
- Cluster Analysis
- Factor Analysis
- Discriminant Analysis
- CHAID
- Survival Analysis
- Hypothesis Testing
- Sampling Design
- Actuarial Models
- Cross Validation
Research Results and Capabilities are Not Fully Leveraged

- $$ Cost
- Time Cost
- Confidence of Decision Maker
- Complexity
- Ignorance
- Negative Previous Experience
Analytical Approaches

- Outsource
- Centralize Internally
- Decentralize Internally
Internal or External Resources

- Familiarity with Business
- Familiarity with Data
- Familiarity with Methods
- Investment in Staff
- Time Pressures
- Applicability to Other Projects
- Bench Strength
Analytical Paternalism

- Data and software availability to non-core
- Training
- Increased use
- Increased misuse
Doctor Sangrado curing John Bull of Repletion

with the medical offices of Young Chyfterpoke & Wm. Boney

Courage John Bull
Courage!!!

Courage
Courage
Courage

Courage Johnny!