trends in data warehousing for insurance companies

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Who here uses a data warehouse?
Data Warehouse

About 50% of survey respondents use a DW

But 85% of these users responded that their DW was not easy to use
trends in data warehousing

future trends
- technology: mobile, cloud, in-memory computing
- business: experience studies, earnings-by-source, privacy

1980’s
- Niche vendors, fragmented tool sets

1990’s
- 1990 – Cognos launch first desktop BI tool
- 1997 – IBM, Oracle, Microsoft launch BI products

2000’s
- Emergence of mainstream, web based products
The future is already here - it just not very evenly distributed

storage trend

- Data Extract(s)
- Operational Data Store
- Data Warehouse
Why not stop at Operational Data Store?

storage approach

Mel’s filing system  Kevin’s filing system

row-based  column-based
Mel’s row-based filing system

- Efficient – fast “write”
- Efficient “transaction” retrieval (by date)
- But not good for analysis

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<tr>
<td><img src="image" alt="row-based filing" /></td>
<td>Mel’s row-based filing system</td>
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Kevin’s column-based filing system

- Initially slower to store information
- But faster for analysis

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<tr>
<td><img src="image" alt="column-based filing" /></td>
<td>Kevin’s column-based filing system</td>
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data warehousing enables analysis

insurance companies do a lot of analysis

analytical apps in insurance

valuation analysis
valuation data extracts
experience studies
earnings-by-source

retention analysis
informe demographics
underwriting analysis

claim analysis
salesforce analysis
sales reporting

analysis frequency
actuarial involvement
Opportunities for Actuaries in Business Analytics

As part of the SOA's strategic objective to create and promote new areas of practice, this initiative will determine whether significant opportunities exist for actuaries in business analytics and, if so, identify projects the SOA should undertake to explore and develop these opportunities.
analytical competitors
Senior executives strongly advocate analytics and fact-based decision making.

Widespread use of descriptive statistics, predictive modeling, and complex optimization techniques.
analytics used across multiple business functions

enterprise-wide approach to analytical tools, data, and process
Tom’s Analytical Companies

Example from closer to home
Universal American
Data Warehouse

actuarial driven project

specific goals

specific decision makers

Universal American - 5 years since DW implementation
correlation

I USED TO THINK CORRELATION IMPLIED CAUSATION.

THEN I TOOK A STATISTICS CLASS. NOW I DON'T.

SOUNDS LIKE THE CLASS HELPED. WELL, MAYBE.

HTTP://IMGS.XKCD.COM/COMICS/CORRELATION.PNG
Tom’s Analytical Companies

UPS
what’s happened?

remember Universal American

actuarial driven project

specific goals

specific decision makers
analytics leads to decisions
or
decisions drive analytics

actuaries in business analytics

valuation analysis
valuation data extracts
experience studies
earnings-by-source
retention analysis
inforce demographics
customer analysis
underwriting analysis
accounts
claim analysis
salesforce analysis
sales reporting
trends in data warehousing

future trends
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- technology: mobile, cloud, in-memory computing opportunities for actuaries

thank you

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