Hyperion Focus 16

Using Essbase for non-statutory operational reporting; examples and experiences from the client base

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About the speaker

- Analytics Team lead at AMOSCA
- Started writing costing systems and ETL processes in the chemical industry using spreadsheets
- First encountered Essbase when it was at version 3
- Since then I have worked on BI and EPM projects in a variety of industries.

Agenda

- Client Use Cases
- Outgrowing Spreadsheets
- Why Essbase?
- Considerations
- Conclusions

Hyperion Essbase/Planning Clients

Client Use Cases

- Profitability Cost Allocations
- Flash Reporting
- Market Risk Reporting
- Bonus Calculations
- Sales/Revenue Reporting
- Production Planning
- Building Plot Status Reporting
- Airline Route Yield Reporting

Outgrowing Excel

- Common theme: replaced spreadsheet models.
- Most tactical solutions and models start as an Excel spreadsheet.
- A spreadsheet is ideal for this:
  - » Quick for an end user to create.
  - » Provides results quickly.
  - » Good for prototyping.
- The “Pringles” of finance.
- However…
- Most Spreadsheet models contain errors
- A study of studies by Raymond Panko of the University of Hawaii found that 88% of spreadsheets contained errors.

Outgrowing Excel

Authors	Year	Number Audited	Average Size (Cells)	Percent with Errors	Cell Error Rate	Comment
Davies & Ikin	1987	19		21%		Only serious errors
Cragg & King	1992	20	50 to 10,000 cells	25%		
Butler	1992	273		11%		Only errors large enough to require additional tax payments
Dent	1994	Unknown		30%		Errors caused by users hard-wiring numbers in formula cells. Henceforth, all future computations would be wrong.
Hicks	1995	1	3,856	100%	1.20%	One omission error would have caused an error of more than a billion dollars.
Coopers & Lybrand	1997	23	More than 150 rows	91%		Off by at least 5%
KPMG	1998	22		91%		Only significant errors
Lukasic	1998	2	2,270 & 7,027	100%	2.2%, 2.5%	In Model 2, the investment's value was overstated by 16%. Quite serious.
Butler	2000	7		86%	0.4%**	Only errors large enough to require additional tax payments**
Clermont, Hanin, & Mittermeier	2002	3		100%	1.3%, 6.7%, 0.1%	Computed on the basis of non-empty cells
Interview I*	2003	~36 / yr		100%		Approximately 5% had extremely serious errors
Interview II*	2003	~36 / yr		100%		Approximately 5% had extremely serious errors
Lawrence and Lee	2004	30	2,182 unique formulas	100%	6.9%***	30 most financially significant SSs audited by Mercer Finance & Risk Consulting in previous year.
Powell, Lawson, and Baker	2007	25		64%		11 of 25 spreadsheets contained errors with non-zero impacts. Among the ten spreadsheets with non-zero impacts for which error size was reported, all 10 had an error that exceeded $100,000, 6 had errors exceeding $10 million, and 1 had an error exceeding $100 million.
Total since 1995		**113**		**88%**		

Panko Raymond R. (1998, Spring) What We Know About Spreadsheet Errors *Journal of End User Computing (10/2)* 15-21. Revised May 2008.

*In 2003, the author spoke independently with experienced spreadsheet auditors in two different companies in the United Kingdom, where certain spreadsheets must be audited by law. Each audited about three dozen spreadsheets per year. Both said that they had never seen a major spreadsheet that was free of errors. Both also indicated that about five percent of the spreadsheets they audited have very serious errors that would have had major ramifications had they not been caught. Audits were done by single auditors, so from the research on spreadsheet and software auditing, it is likely that half or few of the errors had been caught. In addition, virtually all of the spreadsheets had standard formats required for their specific legal purposes, so error rates may have been lower than they would be for purpose-built spreadsheet designs.

**The low cell error rate probably reflects the fact that the methodology did not inspect all formulas in the spreadsheet but focused on higher-risk formulas. However, error has a strong random component, so not checking all formulas is likely to miss many errors.

***Unlike other authors, Lawrence and Lee (2004) measured "issues" rather than only quantitative errors. This explains why the average "error rate" is higher than those seen in other studies.

Outgrowing Excel

- Time to consider moving to a more robust solution when:
  - » Data becomes business critical
  - » Data Volumes grow
    - Numbers of calculated cells
    - Size of grid
    - Volume of data required to prepare the analysis
  - » Data availability becomes important
  - » When Excel becomes a “cottage industry” producing multiple similar reports
- Other potential Spreadsheet problems include:
  - » They are uncontrolled.
  - » They are not versioned.
  - » They might not be backed up.

Why Essbase?

- Essbase = **E**xtended **S**preads**s**heet Data**base**
- Server based
  - » Data Integrity
  - » Managed Backups
  - » Automated Maintenance
- Multidimensionality allows multiple spreadsheets to be collapsed into single Essbase application
- Model can support more dimensions (within limits)
- Opportunity to eliminate/reduce spreadsheet errors
  - » Peer Review
  - » Design

Why Essbase?

- Familiar spreadsheet frontend available (SmartView / Excel Add-In)
- Spreadsheet-like calculation commands
  - » @SUM() - (Lotus 123/Essbase)
  - » =SUM() - (Excel)
- Aggregation functionality
  - » BSO
  - » ASO
  - » Hybrid BSO/ASO from 11.1.2.3.500 onwards
  - » Parallel calculations
- “One version of the truth”

Considerations

- Licensing
  - » Planning users will need full Essbase license if using Essbase for applications other than Planning/Budgeting related.
- Design effort important in eliminating errors.
- Start small and expand.
- Design to answer a defined question; do not try to answer all questions at once.

Conclusions

- Essbase can be used to solve a wide variety of Business analysis and reporting requirements and replace Spreadsheets.
- Provides “one version of the truth” and brings improved data security and traceability.
- One application can support multiple reports.
- Security ensures that users only see the data and metadata that they should.
- Consider Essbase before your spreadsheet use gets out of hand.

Q&A

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Thank you