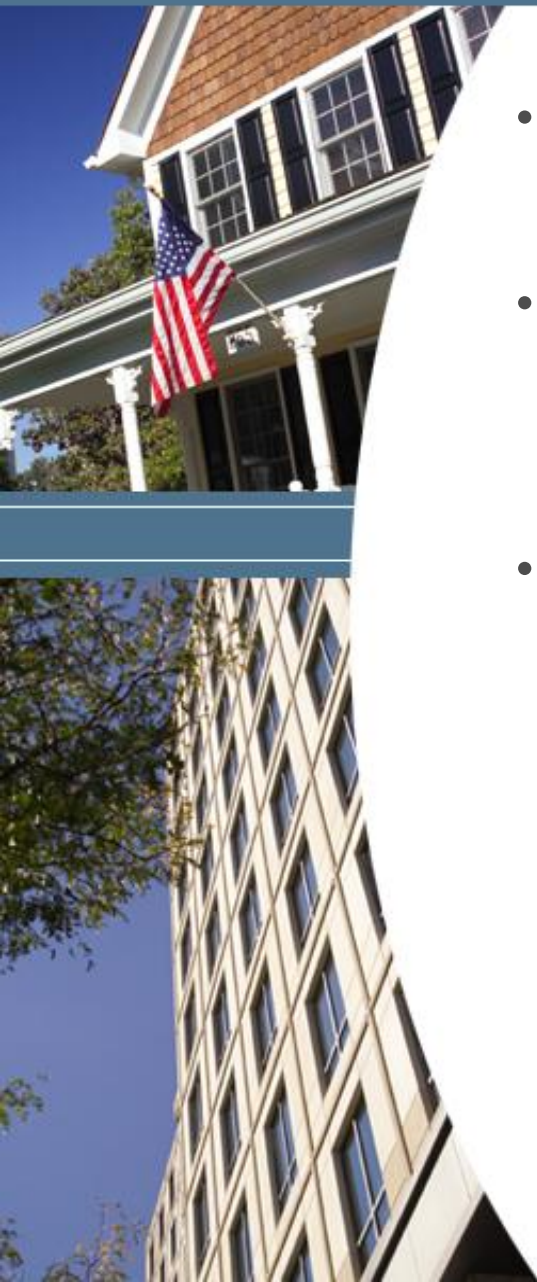




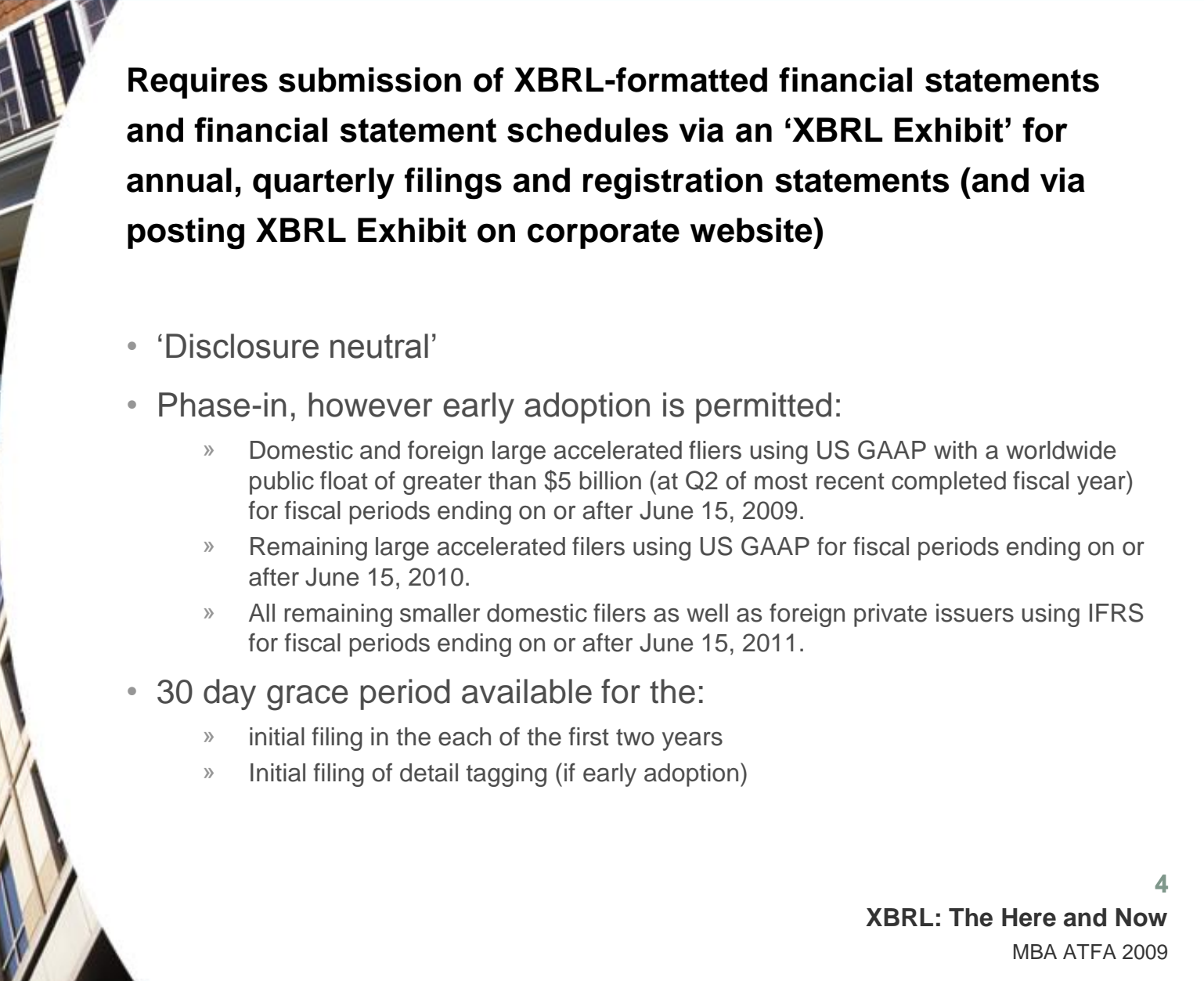
XBRL: The Here and Now

MBA ATFA, November 2009

- 
- Integration of XBRL into financial reporting process
 - Implementation process, including considerations, risks and timeline
 - Using XBRL outside of SEC reporting requirements

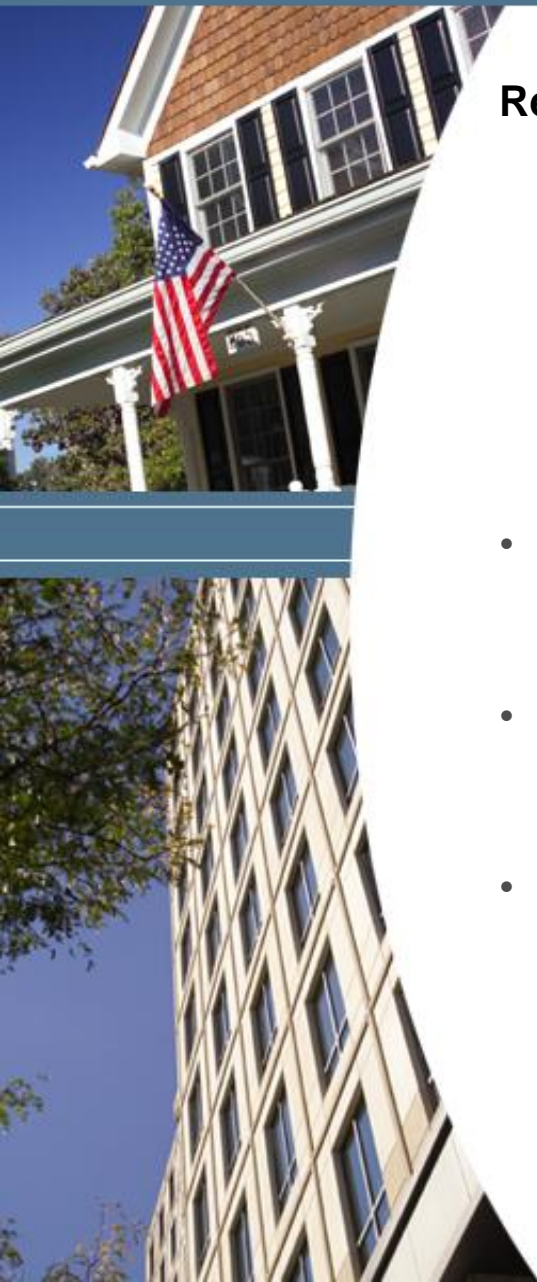
Integration of XBRL into financial reporting process

- SEC mandate
- Potential adoption alternatives
- Outsourcing considerations



Requires submission of XBRL-formatted financial statements and financial statement schedules via an 'XBRL Exhibit' for annual, quarterly filings and registration statements (and via posting XBRL Exhibit on corporate website)

- 'Disclosure neutral'
- Phase-in, however early adoption is permitted:
 - » Domestic and foreign large accelerated filers using US GAAP with a worldwide public float of greater than \$5 billion (at Q2 of most recent completed fiscal year) for fiscal periods ending on or after June 15, 2009.
 - » Remaining large accelerated filers using US GAAP for fiscal periods ending on or after June 15, 2010.
 - » All remaining smaller domestic filers as well as foreign private issuers using IFRS for fiscal periods ending on or after June 15, 2011.
- 30 day grace period available for the:
 - » initial filing in the each of the first two years
 - » Initial filing of detail tagging (if early adoption)

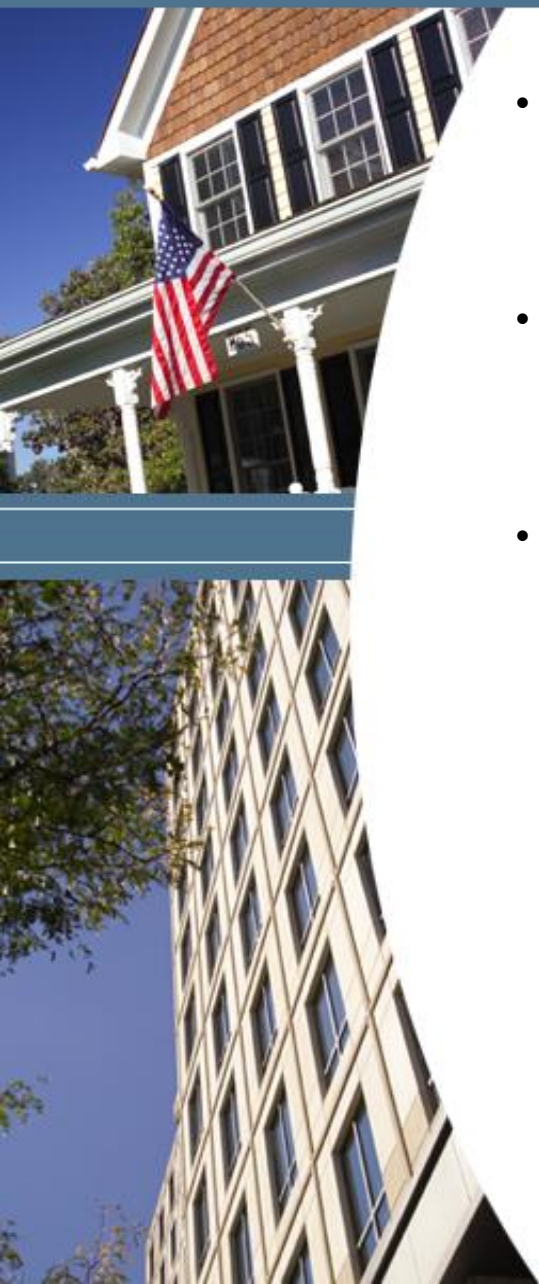


Requires submission of XBRL-formatted financial statements via an Interactive Data Exhibit (E-101) for annual reports, quarterly filings and registration statements

- » 1st Year of filing in XBRL format, issuers are required to tag face of financial statements and “block” tag footnotes and financial statement schedules
 - » More detailed/granular tagging of additional narrative footnote disclosures or statement details permitted but not required
 - » MD&A, executive compensation, auditor’s reports or other financial, statistical or narrative disclosure outside the financials is not permitted to be tagged
- **Timing**
 - » Exhibit would be required to be filed concurrently except for the initial report which would be due no later than 30 days subsequently
 - » Early adoption permitted
 - **Corporate Website Posting Requirements**
 - » Required to be posted on company’s corporate website by end of the calendar day submitted or required to be submitted to the SEC
 - » Required to remain on website for at least 12 months
 - **Other**
 - » Legal liability provisions limited over a 2 year period
 - » No ‘required’ auditor involvement

Requires submission of XBRL-formatted financial statements via an Interactive Data Exhibit (E-101) for annual reports, quarterly filings and registration statements

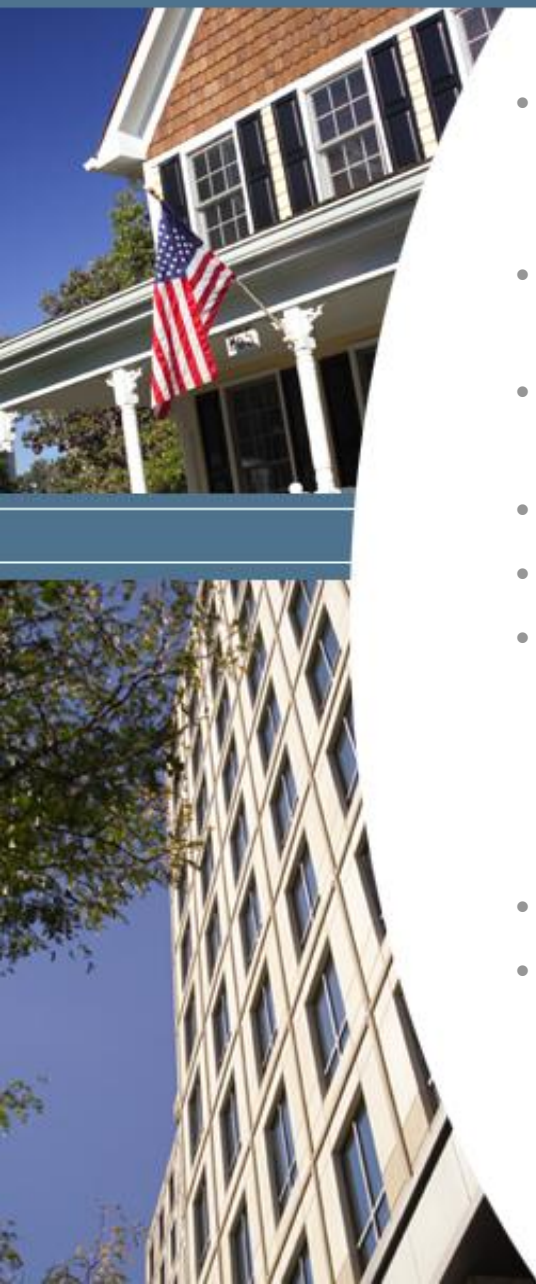
- » 2nd year of filing in XBRL format, issuers would be required to tag face of financial statements and individually tag each significant accounting policy, table within a footnote, and each quantitative amount within a footnote.
- Timing, Corporate Website Requirements, Legal Liability, and Auditor Involvement
 - » Same as first year
- The second year tagging requirement exponentially increases the scope of company disclosure elements required to be mapped to the US GAAP Taxonomy
 - » 1st year – number of individual disclosure elements approx 300
 - » 2nd year – number of individual disclosure elements approx 3,500+
- Planned Approach
 - » The 2nd year mapping requirements may have a significant impact on company adoption approaches



- **Bolt-on via Outsourcing or Consultation**
 - Printers and other third party service providers provide outsourced solution for mapping the disclosure elements on the financial statements and note disclosures (in block text) to the US GAAP Taxonomy
- **Bolt-on via Internal Process**
 - XBRL can be adopted by companies at the “highest” reporting level (i.e. consolidated) solely for purposes of complying with regulatory requirements. However, potential XBRL process enhancement benefits for are not fully realized.
- **Embedded Processes**
 - Enables automation of currently manual assembly and review processes
 - Requires companies to assess information needs and provides an opportunity to eliminate inefficiencies in current compliance and reporting processes.
 - Enables process enhancements that lead to more timely higher quality data for decision making purposes
 - Maximizes benefits of XBRL to preparers and internal users of financial and non-financial information.

- Bolt-on via Outsourcing or Consultation
 - Printers – Bowne, Merrill, RR Donnelley
 - Third party service providers – BusinessWire, EDGARFilings, EDGAR-Online, and others¹.
- Bolt-on via Internal Process
 - Software vendors – Corefilings, EDGARFilings, Fujitsu, Rivet Software, UBMatrix and others¹.
- Embedded Processes
 - Software vendors – Clarity Software, Trintech, and others¹.

¹ More vendors listed at <http://www.xbrl.org/tools> and <http://xbrl.us/Learn/Pages/ToolsAndServices.aspx>



- Responsibility for Exhibit 101 CANNOT be delegated even if work is delegated to a third party. Management is responsible for compliance w/ SEC rules & regulations
- Control of processing – challenges of coordinating changes, turn-around time and exchanges of various draft versions
- Financial reporting expertise and specific knowledge of company specific disclosures relevant to company-specific extensions
- XBRL expertise and instance document preparation experience
- Confidentiality of draft data during transmissions with vendor
- Quality control implications related to:
 - Validations assessments
 - Compliance with EDGAR Filer Manual
 - Service Level Agreements
 - Issuer review and approval process
- Process implications, including detailed tagging in ‘Year 2’
- Ownership of mapping IP and extension taxonomies

Implementation process, including considerations, risks and timeline

- Key lessons learned from initial XBRL submissions
- Adoption alternatives pros and cons
- Process enhancements



Compliance with the Edgar Filer Manual

- 200+ fairly complex technical rules; some require financial reporting judgments
- some validation rules are included within the SEC filing processes

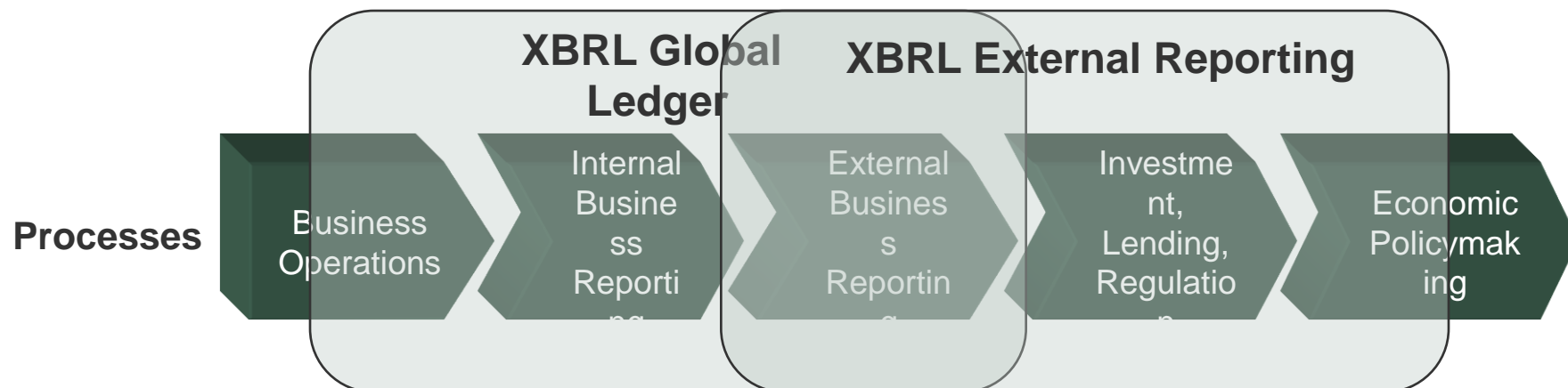
Preparation and review processes and controls

- Start early and consider a 'test' run submission
- Knowledge of company fin statements more relevant than XBRL
- Adjust reporting timeline to accommodate XBRL submission process
- Focus early on company specific taxonomy extension(s) to USGT
- Consider assessment of EDGAR Filer Manual rule compliance
- Internal reporting validation and analytical rules and controls

Consider SEC test filing to assess 'some' validation rules

Consider SEC Previewer to assess presentation views

Implementation Options	Year 1 Mapping of 300 Disclosure Elements	Year 2 Mapping of 3,000+ Disclosure Elements
<p>“Bolt-On” - mapping done subsequent to report completion and repeated for each report.</p>	<p>Pros</p> <ul style="list-style-type: none"> • Convenient mapping • Low impact implementation <p>Cons</p> <ul style="list-style-type: none"> • Incremental Cost & Time • Manual Controls • Compresses reporting timeline 	<p>Pros</p> <ul style="list-style-type: none"> • Limited impact on existing process <p>Cons</p> <ul style="list-style-type: none"> • Repetitive mapping • Incremental Cost & Time • Manual Controls • Compresses reporting timeline
<p>“Embedded” - mapping done within reporting application and available for all subsequent reports.</p>	<p>Pros</p> <ul style="list-style-type: none"> • Lower Cost & Time • Automates Controls • Streamlines assembly & review processes <p>Cons</p> <ul style="list-style-type: none"> • One-time implementation effort 	<p>Pros</p> <ul style="list-style-type: none"> • Lower Cost & Time • Automates Controls • Streamlines assembly & review processes • Platform for enhanced BI <p>Cons</p> <ul style="list-style-type: none"> • n/a

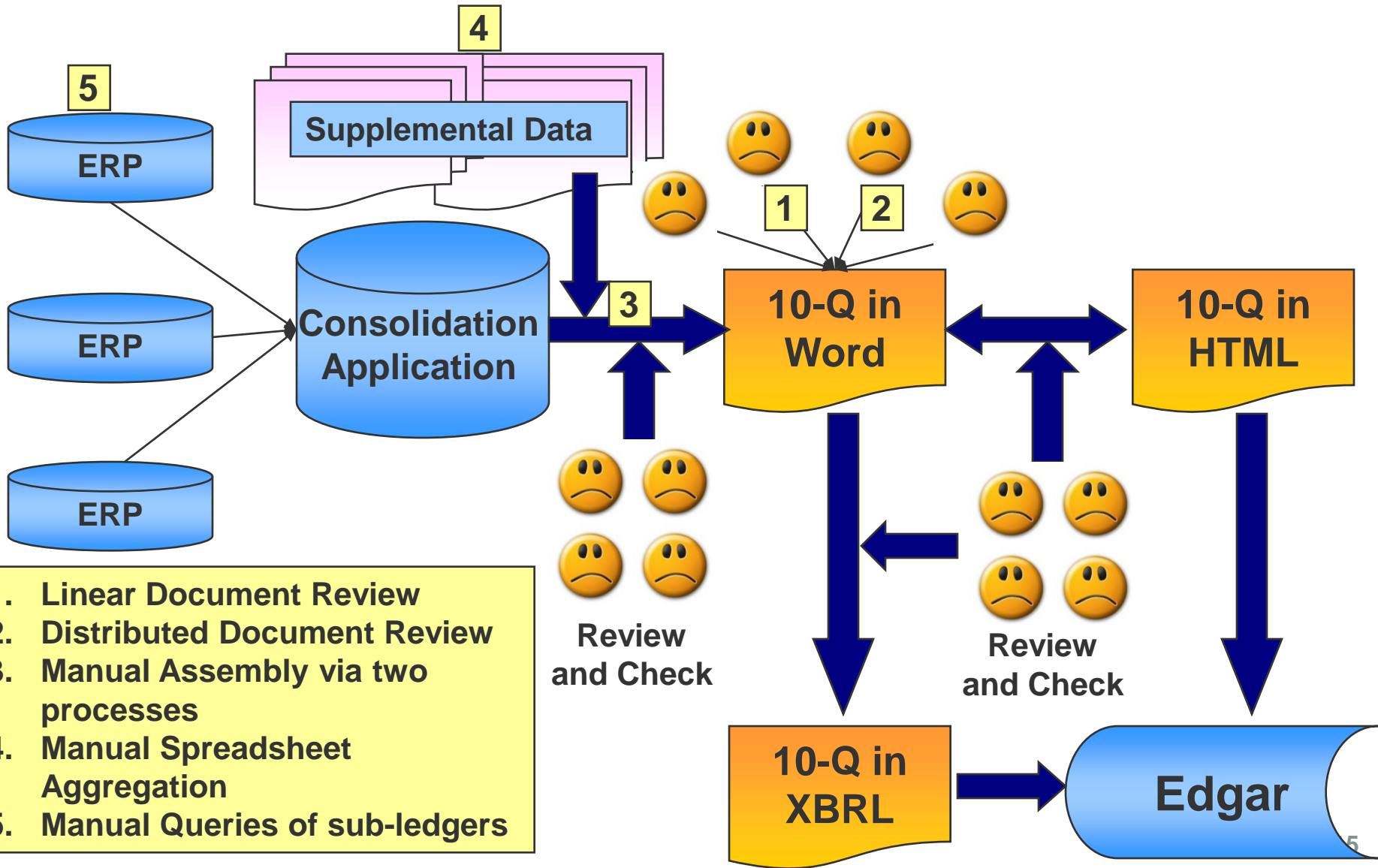


- **As a supply chain standardization effort. XBRL is applicable to both external and internal business information processes.**
- **The XBRL Global Ledger Taxonomy:**
 - is useful in standardizing ledgers, sub-ledgers
 - can be linked to external reporting taxonomies creating a seamless audit trail
- **Early adoption in supply chain allows downstream processes to leverage the standardization for effectiveness and efficiency improvements.**

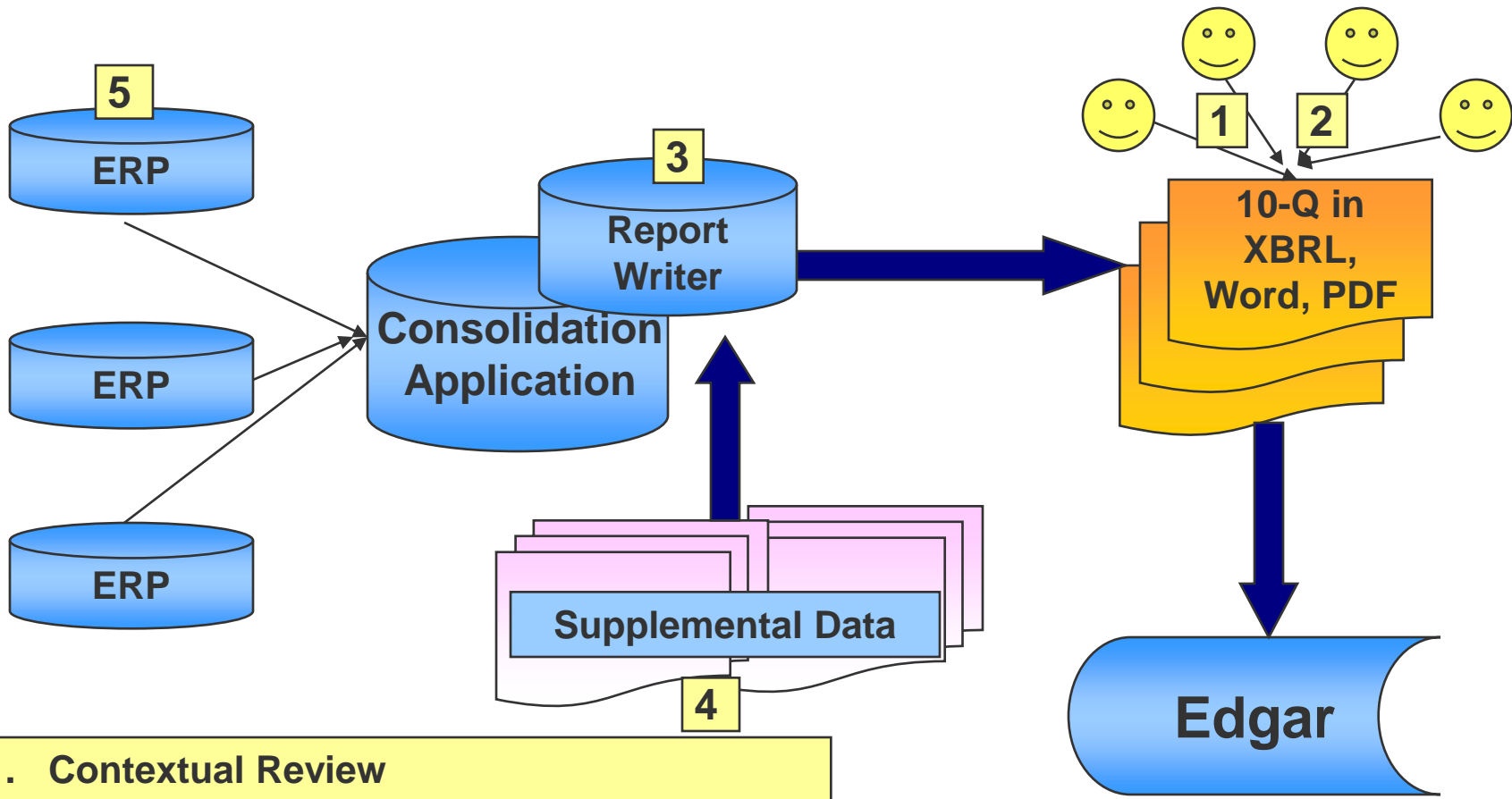
Common Business Reporting process areas specifically targeted by XBRL include:

- Manual Assembly & Review targets:
 - Manual aggregation processes
 - Data silo oriented review processes
 - Manual access (cut & paste) and reuse
 - Manual assembly processes
 - Implicit knowledge required (e.g. policies)
- Compliance Infrastructure targets:
 - Lack of 'standard chart of accounts' implementation
 - Embedded and/or opaque analytics/business rules (not shared)
 - Sourcing information from wide range of internal disparate sources
 - Multiple ledgers accessed within common processes
 - Common controls implemented differently for individual proprietary software applications
 - International operations & processes using different languages
 - Lack of enterprise information architecture and agile processes
 - Data or source driven reporting and analytical solutions

Sample reporting process = Manual assembly/review



- 1. Linear Document Review
- 2. Distributed Document Review
- 3. Manual Assembly via two processes
- 4. Manual Spreadsheet Aggregation
- 5. Manual Queries of sub-ledgers

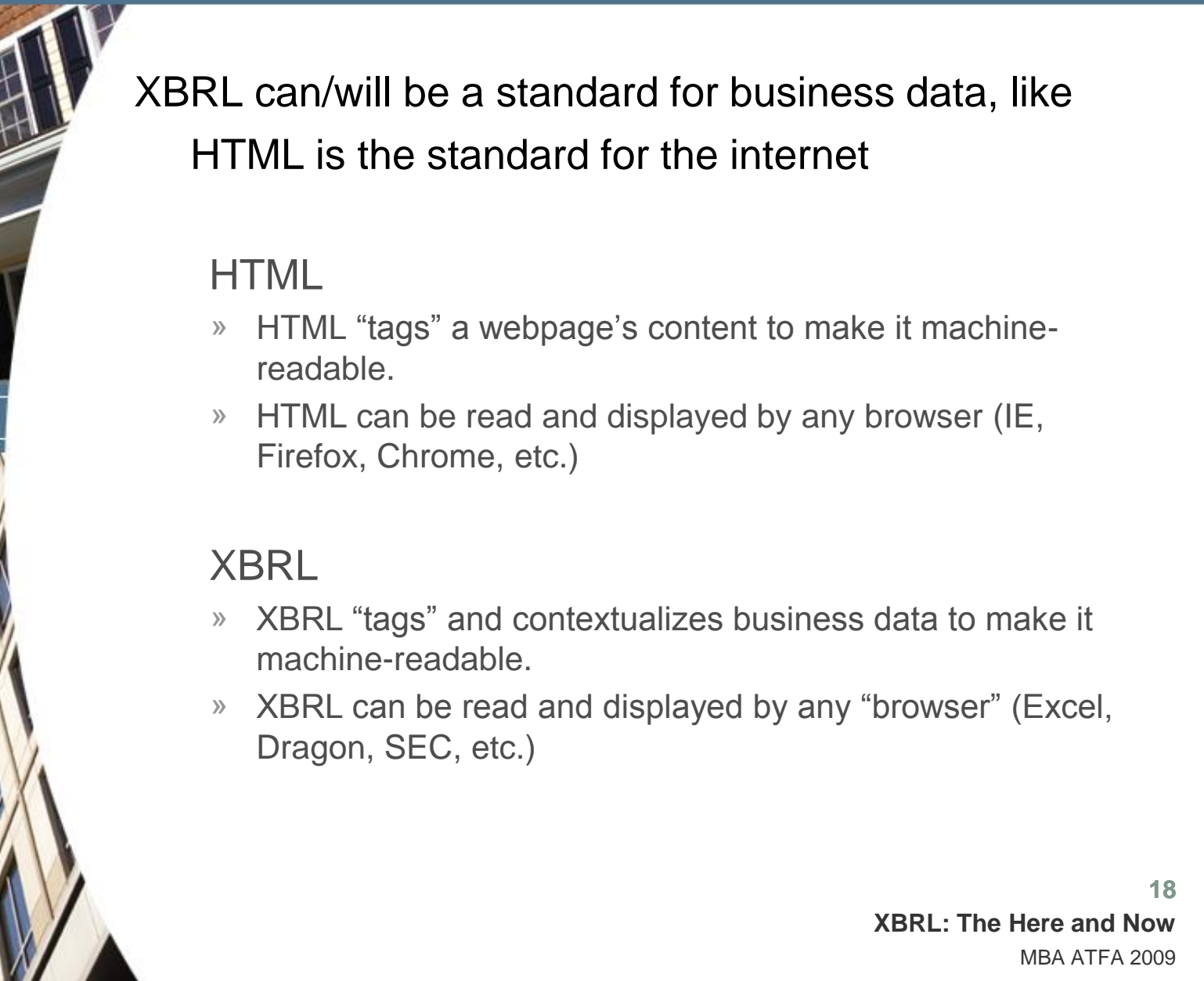


- 1. Contextual Review
- 2. Collaborative Review
- 3. Automated Assembly via a single process
- 4. Automated Aggregation
- 5. Automated Queries of sub-ledgers

Using XBRL outside of SEC reporting requirements

Within your company

- Using (and enabling) a standard
- Enhancing the traditional data warehouse concept
- Social, consumer-driven reporting



XBRL can/will be a standard for business data, like
HTML is the standard for the internet

HTML

- » HTML “tags” a webpage’s content to make it machine-readable.
- » HTML can be read and displayed by any browser (IE, Firefox, Chrome, etc.)

XBRL

- » XBRL “tags” and contextualizes business data to make it machine-readable.
- » XBRL can be read and displayed by any “browser” (Excel, Dragon, SEC, etc.)

How do I conceptualize XBRL? How would it look?

- » What software does your company use for consolidating the GL?
- » What software runs your Google or Yahoo! personalized homepage?
 - Weather widget (pulls data from weather website)
 - Sports widget (pulls sports scores from sports website)
 - News widget (pulls news from many sources)
- » What if your company's internal reporting framework was a view that pulls and consolidates data from different sources like that?

Why might I consider the use of XBRL at my company?

Issues

- » Inconsistent data across disparate systems
- » Manual aggregation or mapping process (system-to-system)
- » Bottleneck at data warehouse and business intelligence

Creates a need for a standard “library”:

- » Standard data
- » Standard formulas
- » Standard presentation concepts



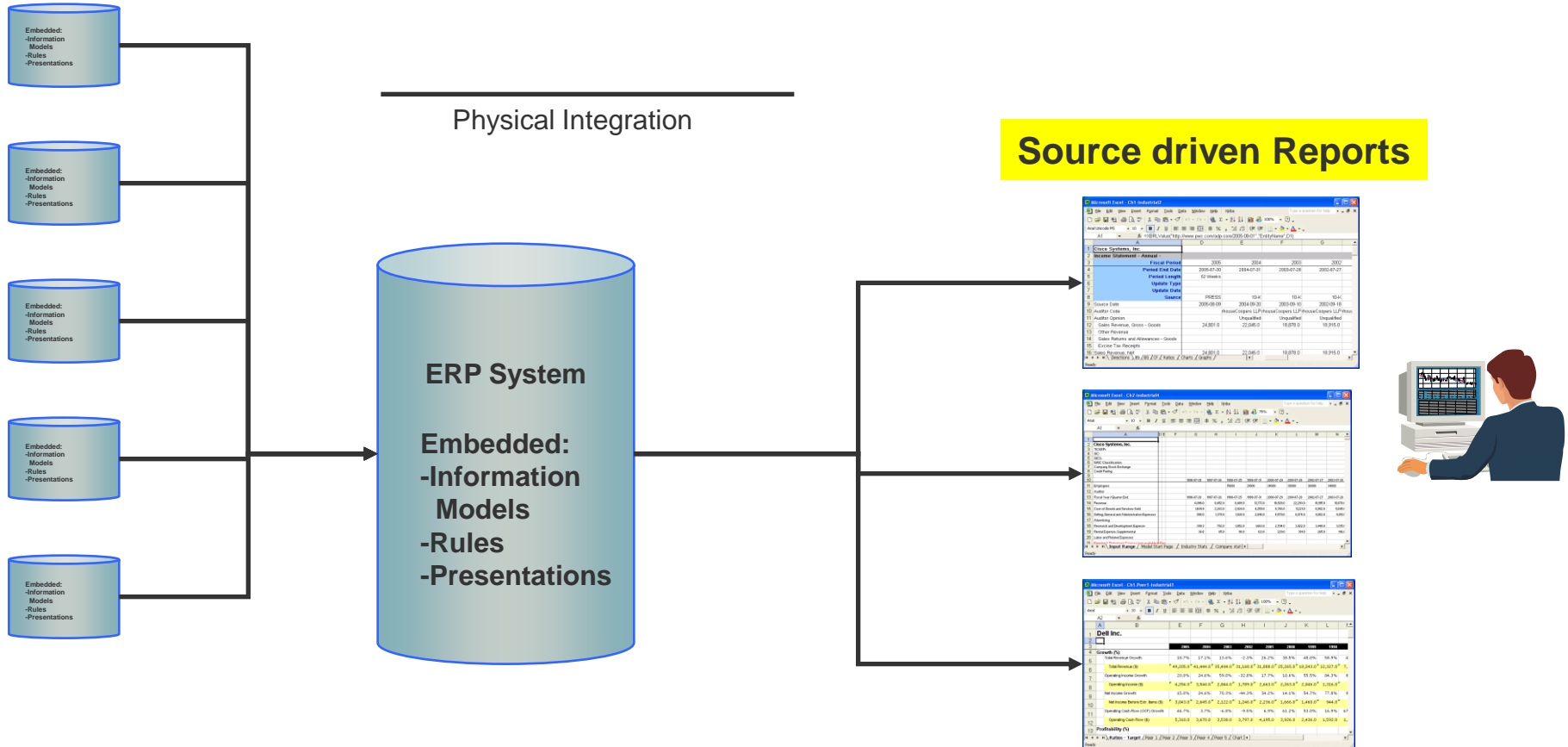
Traditional data warehouse (DW) concept

- » Many sources, many mappings from source to data warehouse
- » New data sources require significant effort to map data, and build import processes
- » Pre-import: Some fields calculated at source (same calculations at each source)
- » Import: Data scrubbed by DW during pre-processing prior to import
- » Processing: Calculations performed on data prior to insert into DW
- » Output: Reports developed in business intelligence software using DW data



Issues with traditional DW model

- » Data sources and data warehouses can be many-to-many, each relationship requires a mapping (“n-squared mapping”)
- » Definitions can vary across sources and warehouses leading to issues with high-level reporting where data needs to be aggregated
- » Data warehouse performing all pre-processing and processing is inefficient
- » Significant training required for developers to become familiar with disparate aspects of DW





Data warehouse concept with XBRL

- » Standardized information model with singular definitions
- » Mapping to the XBRL taxonomy, not system-to-system (n^2 is now an n-mapping)
- » Control environment preserved despite system changes
- » Import: Data must conform to taxonomy, import process is standardized
- » Processing: Calculations between fields are part of the XBRL taxonomy
- » Output: Reports can be consumer-driven and built in virtually any tool/software. “Mash-up” reporting possible (like modules on Yahoo! Homepage) where sections of a report can pull different XBRL URLs

Executing on XBRL

- » Upfront investment required to develop taxonomy, which is then managed “socially”, like Wikipedia
- » ROI of implementing with XBRL includes increased cost efficiency, data transparency, data and reporting quality, timeliness of data/report availability

Enhancing the traditional data warehouse concept

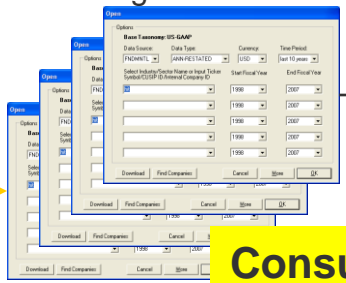
XBRL enabled IP:

- Information models
- Rules
- Presentations
- Relationships
- Others

-Information Models
-Rules
-Presentations

XBRL Taxonomy based:
-Information Models
-Rules
-Presentations

Widgets

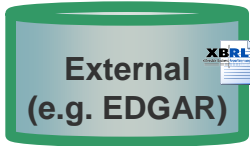


Consumer driven reports

Line	Account	Period	Amount	Unit
1	Income Statement - Annual	2000-01-01	2000-01-01	2000
2	Income Statement - Annual	2000-01-01	2000-01-01	2000
3	Income Statement - Annual	2000-01-01	2000-01-01	2000
4	Income Statement - Annual	2000-01-01	2000-01-01	2000
5	Income Statement - Annual	2000-01-01	2000-01-01	2000
6	Income Statement - Annual	2000-01-01	2000-01-01	2000
7	Income Statement - Annual	2000-01-01	2000-01-01	2000
8	Income Statement - Annual	2000-01-01	2000-01-01	2000
9	Income Statement - Annual	2000-01-01	2000-01-01	2000
10	Income Statement - Annual	2000-01-01	2000-01-01	2000
11	Income Statement - Annual	2000-01-01	2000-01-01	2000
12	Income Statement - Annual	2000-01-01	2000-01-01	2000
13	Income Statement - Annual	2000-01-01	2000-01-01	2000
14	Income Statement - Annual	2000-01-01	2000-01-01	2000
15	Income Statement - Annual	2000-01-01	2000-01-01	2000
16	Income Statement - Annual	2000-01-01	2000-01-01	2000
17	Income Statement - Annual	2000-01-01	2000-01-01	2000
18	Income Statement - Annual	2000-01-01	2000-01-01	2000
19	Income Statement - Annual	2000-01-01	2000-01-01	2000
20	Income Statement - Annual	2000-01-01	2000-01-01	2000
21	Income Statement - Annual	2000-01-01	2000-01-01	2000
22	Income Statement - Annual	2000-01-01	2000-01-01	2000
23	Income Statement - Annual	2000-01-01	2000-01-01	2000
24	Income Statement - Annual	2000-01-01	2000-01-01	2000
25	Income Statement - Annual	2000-01-01	2000-01-01	2000
26	Income Statement - Annual	2000-01-01	2000-01-01	2000
27	Income Statement - Annual	2000-01-01	2000-01-01	2000
28	Income Statement - Annual	2000-01-01	2000-01-01	2000
29	Income Statement - Annual	2000-01-01	2000-01-01	2000
30	Income Statement - Annual	2000-01-01	2000-01-01	2000
31	Income Statement - Annual	2000-01-01	2000-01-01	2000
32	Income Statement - Annual	2000-01-01	2000-01-01	2000
33	Income Statement - Annual	2000-01-01	2000-01-01	2000
34	Income Statement - Annual	2000-01-01	2000-01-01	2000
35	Income Statement - Annual	2000-01-01	2000-01-01	2000
36	Income Statement - Annual	2000-01-01	2000-01-01	2000
37	Income Statement - Annual	2000-01-01	2000-01-01	2000
38	Income Statement - Annual	2000-01-01	2000-01-01	2000
39	Income Statement - Annual	2000-01-01	2000-01-01	2000
40	Income Statement - Annual	2000-01-01	2000-01-01	2000
41	Income Statement - Annual	2000-01-01	2000-01-01	2000
42	Income Statement - Annual	2000-01-01	2000-01-01	2000
43	Income Statement - Annual	2000-01-01	2000-01-01	2000
44	Income Statement - Annual	2000-01-01	2000-01-01	2000
45	Income Statement - Annual	2000-01-01	2000-01-01	2000
46	Income Statement - Annual	2000-01-01	2000-01-01	2000
47	Income Statement - Annual	2000-01-01	2000-01-01	2000
48	Income Statement - Annual	2000-01-01	2000-01-01	2000
49	Income Statement - Annual	2000-01-01	2000-01-01	2000
50	Income Statement - Annual	2000-01-01	2000-01-01	2000



Web services





With a standardized data set which can be read by a generic viewer:

- » Control over the content and presentation is in the hands of the consumer, not the producer
- » With a standardized supply chain (all data supplied in XBRL)
 - Consumers drive demand
 - Consumers can collaborate on reports, customize, and SHARE
 - Consumers can train each other (social training/networking concept)
 - If taxonomy used is the same **standard** as external XBRL data (e.g. EDGAR), consumers can retrieve external and internal data to the same view
- » As tools/systems change, taxonomy remains the same: cost-effective



PricewaterhouseCoopers! iDataPlatform (iDP) on the PwC internal website

- » Financial statements from EDGAR wrapped in XBRL for 85,000 public companies
- » Platform to analyze metrics, financials, and trends for one or more companies
- » Users see widgets on a website, and can export to Excel



How was it rolled out? Who uses it?

- » Rolled out to 10 users initially
- » 12 months later, 65,000 users are using it monthly
- » Knowledge spread as people trained each other (training cost is negligible)
- » User-created templates shared through iDP website and re-used

Workspaces
 iDataPlatform

Welcome **Jonathan Liu** | [Set As Start Page](#) | [Add Module](#) | [Log Off](#)

My Workspaces
You are viewing: My Default Page Workspace

Advanced Analysis ? x

SEC Catalog ? x

Factiva Company News ? x

Wells Fargo & Company [Company Profile](#)

▶ **Company News**

▶ **Press Releases**

Watch List ? x

My Watch Lists:

My Watchlist ▼

Create List Delete List

Watch List: My Watchlist

[Add Company](#)

Company ▾ | Select & Reorder ⬇ ⬆ ⬇ ⬆

Wells Fargo & Company	P
<input type="checkbox"/> Bank of America Corporation	●
<input type="checkbox"/> Citigroup Inc.	●
<input type="checkbox"/> JPMorgan Chase & Co.	●

Delete Selected

P - Primary Company
● - Click to select new Primary

Closest Peers ? x

Wells Fargo & Company

Ticker: WFC
 Exchange: NYSE
 Sector: Financial
 Industry: Regional Banks
 SIC: 6021 ,National Commercial Banks
 Repno: 6539N

▶ **Fiscal Year**

▶ **Closest Peers Worldwide**

▶ **Industry Peer**

▶ **Market Peer**

Factiva Stock Quotes ? x



Wells Fargo & Company [Company Profile](#)

Symbol	Price	Change	Volume
WFC.N	29.05	-0.21	9,592,100
Currency	Exchange	Year High	Year Low
USD	NYS	35.25	7.8

Reuters Investor

▼ Fundamentals
? x

Annual
 US Quarterly

▼ Wells Fargo & Company

 Ticker: WFC
 Exchange: NYSE
 Sector: Financial
 Industry: Regional Banks
 SIC: 6021 National Commercial Banks
 RepNo: 6539N

*Note: Amounts displayed are in millions

Fiscal Year	2009	2008	2007	2006	2005	2004
Document Type		10-K	10-K	10-K	10-K	10-K
Last Revision		Feb 27 2009	Feb 29 2008	Feb 29 2008	Mar 9 2006	Mar 10 2005
Period End Date		Dec 31 2008	Dec 31 2007	Dec 31 2006	Dec 31 2005	Dec 31 2004
Report-to Display Currency		USD to USD	USD to USD	USD to USD	USD to USD	USD to USD
FOREX Conversion		1.000	1.000	1.000	1.000	1.000

▶ Income Statement

▶ Balance Sheet

▶ Statement of Cash Flows

▶ Bank of America Corporation
 ▶ Citigroup Inc.
 ▶ JPMorgan Chase & Co.

	A	B	C	D	E
1	PwC iDataPlatform Fundamental Data Report for 10/08/2009 07:48:49 PM				
2	Annual Fundamentals Data - AS AMENDED and RESTATED				
3					
4	Ticker	WFC	BAC	C	JPM
5	Exchange	NYSE	NYSE	NYSE	NYSE
6	Sector	Financial	Financial	Financial	Financial
7	Industry	Regional Banks	Money Center Banks	Money Center Banks	Investment Services
8	SEC	0000072971	0000070858	0000831001	0000019617
9	SIC	6021,National Commercial B	6021,National Commercial B	6021,National Commercial B	6021,National Commercial B
10	RepNo	6539N	A1CD8	A1CB9	A2827
11					
12		Fiscal Year 2008			
13	Document Type	10-K	10-K	10-K	10-K
14	Last Revision	Feb 27 2009	Feb 27 2009	Feb 27 2009	Mar 2 2009
15	Period End Date	Dec 31 2008	Dec 31 2008	Dec 31 2008	Dec 31 2008
16	Report-to Display Currency	USD to USD	USD to USD	USD to USD	USD to USD
17	FOREX Conversion	1.000	1.000	1.000	1.000
18					
19	Balance Sheet	2008			
20		Wells Fargo & Company	Bank of America Corporation	Citigroup Inc.	JPMorgan Chase & Co.
21	Cash & Due from Banks	23763.00	32857.00	29253.00	26895.00
22	Interest-earning Deposits	39890.00	9570.00	170331.00	138139.00
23	FedFundsSold/Scrtypurch UnderResaleAgrmt	8439.00	82478.00	184133.00	203115.00
24	Trading Account Assets	54884.00	159522.00	377635.00	509983.00
25	Other Short Term Investments	1104.00			
26	Securities Held	20088.00	685.00	80831.00	
27	Securities for Sale	151569.00	276904.00	175189.00	124000.00
28	Total Investment Securities	171657.00	277589.00	256020.00	329943.00
29	Loans Held for Sale	6228.00	31454.00		
30	Other Earning Assets		62252.00		
31	Other Earning Assets - Total	282202.00	622865.00	988119.00	1181180.00
32	Total Gross Loans	864830.00	931446.00	698138.00	744898.00

Address: http://uxanpr01:8001/flex/visualization/visualization.html?wpid=IDPPortlet_197%24C%24IDF Go Links Customize Links Dictionary myKcurve Rediscover AOL

File Edit View Favorites Tools Help

Setting

Select Chart Type

How to create chart
 Single Company Timeline is a line chart to show multiple elements of a selected company. To add elements, drag and drop elements from the XBRL View to the

Chart Name

Chart Description

XBRL Element Selector (Primary Company Value is shown) - International Business Machines Corp.

	Balance Sheet		CashFlow Statement			Income Statement	
ITEM	2003	2004	2005	2006	2007	2008	
Income Statement							
Sales Revenue, Net	89,131,000,000	96,225,000,000	91,134,000,000	91,423,000,000	98,785,000,000	103,630,000,000	
Sales Revenue, Gross - Goods	89,131,000,000	96,225,000,000	91,134,000,000	91,423,000,000	98,785,000,000	103,630,000,000	
Other Revenue		68,000,000			1,000,000		
Other Operating Revenue		68,000,000			1,000,000		
Revenue	89,131,000,000	96,293,000,000	91,134,000,000	91,423,000,000	98,786,000,000	103,630,000,000	
Cost of Revenue	56,584,000,000	60,724,000,000	54,602,000,000	53,129,000,000	57,057,000,000	57,969,000,000	
Cost of Goods and Services Sold	56,584,000,000	60,724,000,000	54,602,000,000	53,129,000,000	57,057,000,000	57,969,000,000	
Gross Profit	32,547,000,000	35,501,000,000	36,532,000,000	38,294,000,000	41,728,000,000	45,661,000,000	

Timeline (Single Company) - Microsoft Corporation

Legend: Sales Revenue, Net (orange), Cost of Goods and Services Sold (green)

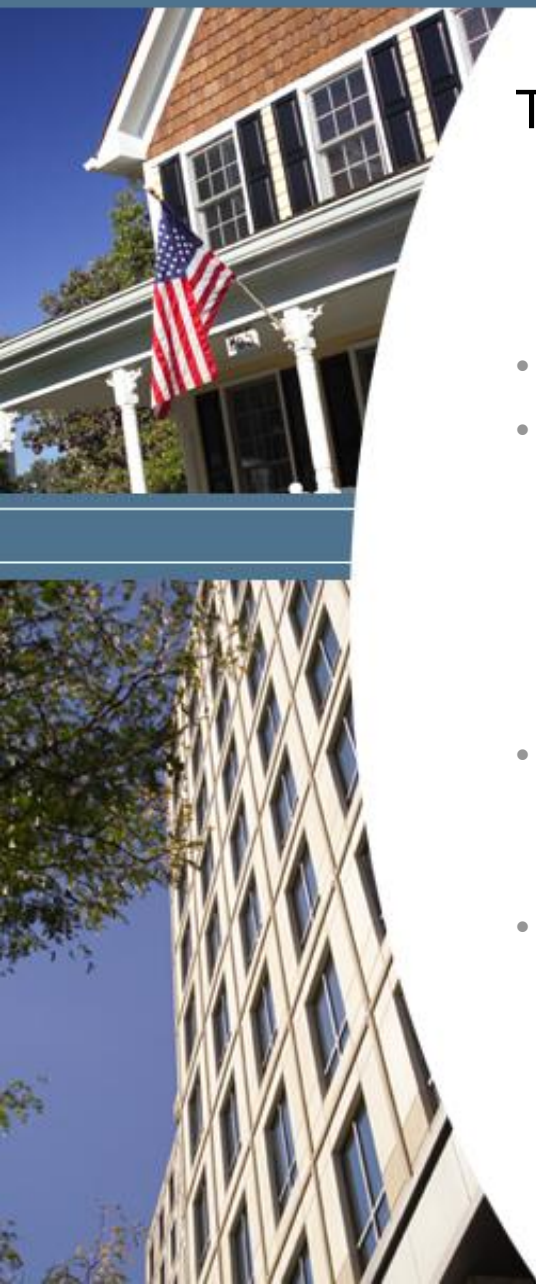
Microsoft Corporation

C	D	E	F	G	H	I	J	K	L
Industry Annual Peer Rank Trend Summary									
Fiscal year ending December 2008									
			2008	2007	2006	2005	2004	5 yr. avg.	
Profitability Metrics									
	Return on Invested Capital		Q1	Q3	Q3	Q3	Q3	Q3	
	NOPAT Margin		Q3	Q3	Q3	Q3	Q3	Q3	
	Capital Velocity		Q1	Q1	Q1	Q1	Q2	Q1	
	Operating (EBIT) Margin		Q3	Q3	Q3	Q3	Q3	Q3	
	Gross Margin		Q4	Q4	Q4	Q4	Q4	Q4	
	SG&A as a % of Sales		Q2	Q2	Q2	Q2	Q2	Q2	
	Effective Tax Rate		Q1	Q1	Q1	Q2	Q1	Q1	
	Cash Tax Rate		Q4	Q4	Q4	Q4	Q4	Q4	
	Return on Assets		Q2	Q3	Q3	Q3	Q3	Q3	
Growth Metrics									
	Net Sales Growth		Q4	Q4	Q4	Q4	Q3	Q4	
	EBIT Growth		Q2	Q3	Q2	Q4	Q3	Q3	
Efficiency Metrics									
	Sales per Employee		Q4	Q4	Q4	Q3	Q2	Q3	
	Sales per Employee Growth		Q4	Q4	Q2	Q4	Q4	Q4	
	Inventory Turnover		Q3	Q3	Q3	Q3	Q3	Q3	
	Working Capital Turnover		Q1	Q1	Q1	Q1	Q1	Q1	
Liquidity Metrics									
	Current Ratio		Q4	Q4	Q4	Q4	Q4	Q4	
	Cash Conversion Cycle		Q4	Q4	Q4	Q4	Q4	Q4	
	Days Inventory Outstanding		Q3	Q3	Q3	Q3	Q3	Q3	
	Days Payable Outstanding		Q2	Q2	Q2	Q2	Q2	Q2	
	Days Sales Outstanding		Q4	Q4	Q4	Q4	Q4	Q4	
	Free Cash Flow to Sales		Q4	Q4	Q4	Q4	Q4	Q4	
	Operating Cash Flow Ratio		Q4	Q4	Q4	Q4	Q4	Q4	
	Interest Coverage Ratio								
Leverage Metrics									
	Debt to Equity Ratio		Q4	Q4	Q4	Q4	Q4	Q4	
	STD to LTD Ratio		Q4	Q4	Q3	Q3	Q2	Q3	

Using XBRL outside of SEC reporting requirements

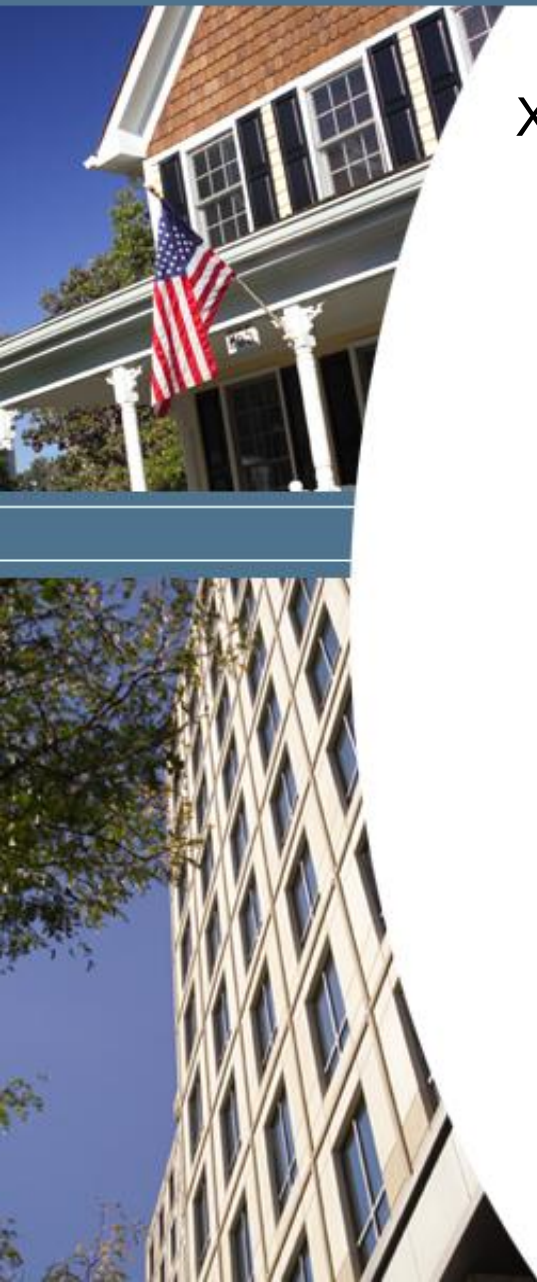
Across all companies

- MBS disclosures



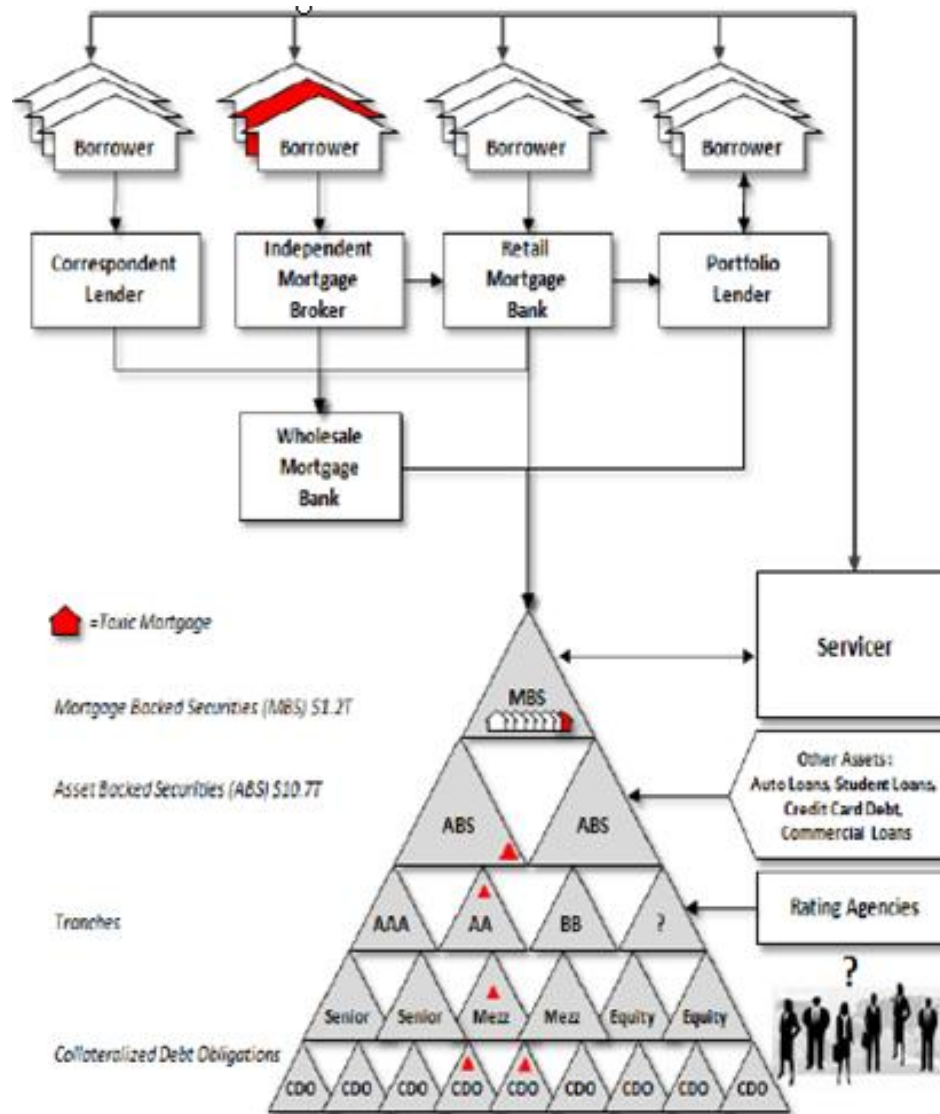
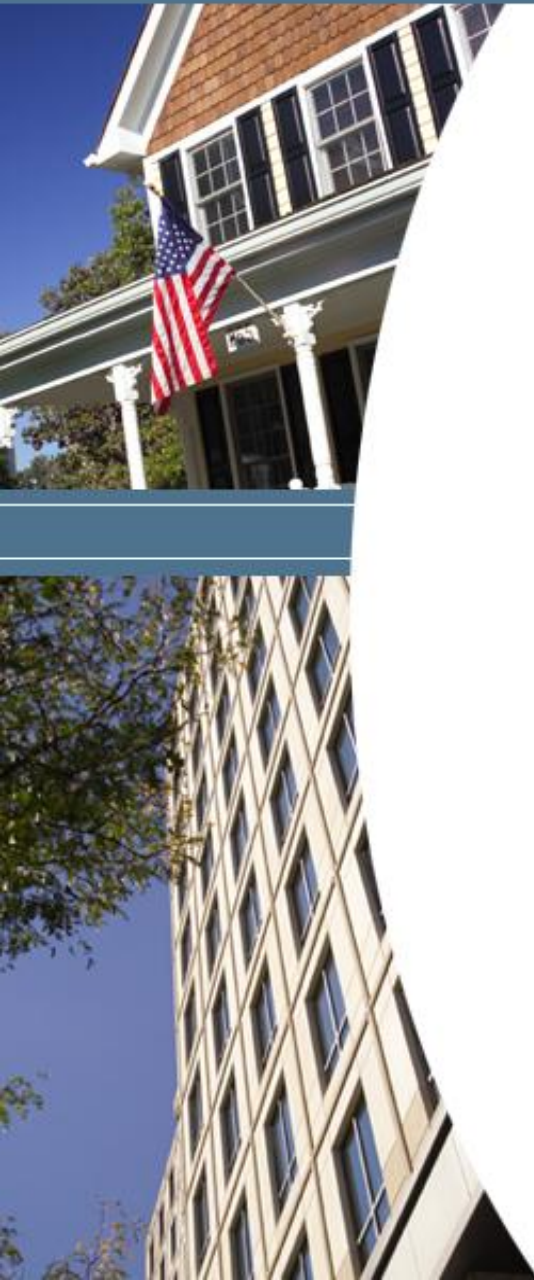
The current process is like buying a barrel of apples with little to no visibility as to the quality of the barrel's contents

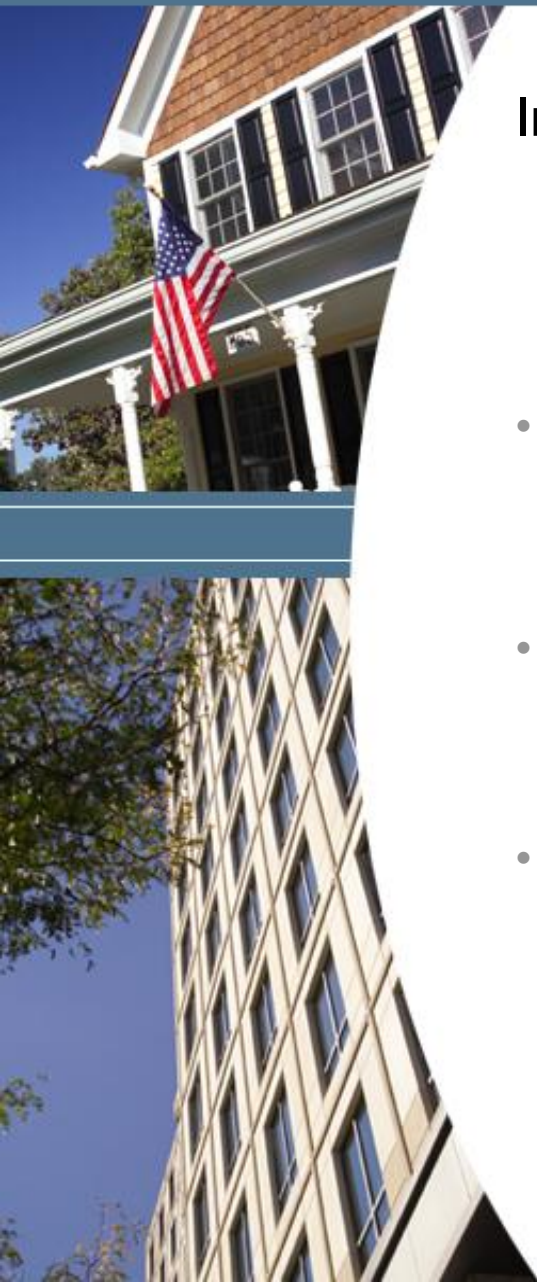
- Determining loan quality within a securitization is a science
- Comparing securitizations is even more challenging as issuers are only required to publish a “Free Writing Prospectus” (FWP) which is not a standardized document
 - » Inconsistent data formats
 - » Inconsistent data fields
 - » Inconsistent granularity of data
- Loan-level cash flow modeling is so onerous, that reliance is often placed on other valuation techniques that make broad assumptions
- Rating agencies do not validate data and trust that data provided is free of issues



XBRL can be the standard for the secondary mortgage market for all functions: originators, sellers, servicers, investors, rating agencies, and regulators

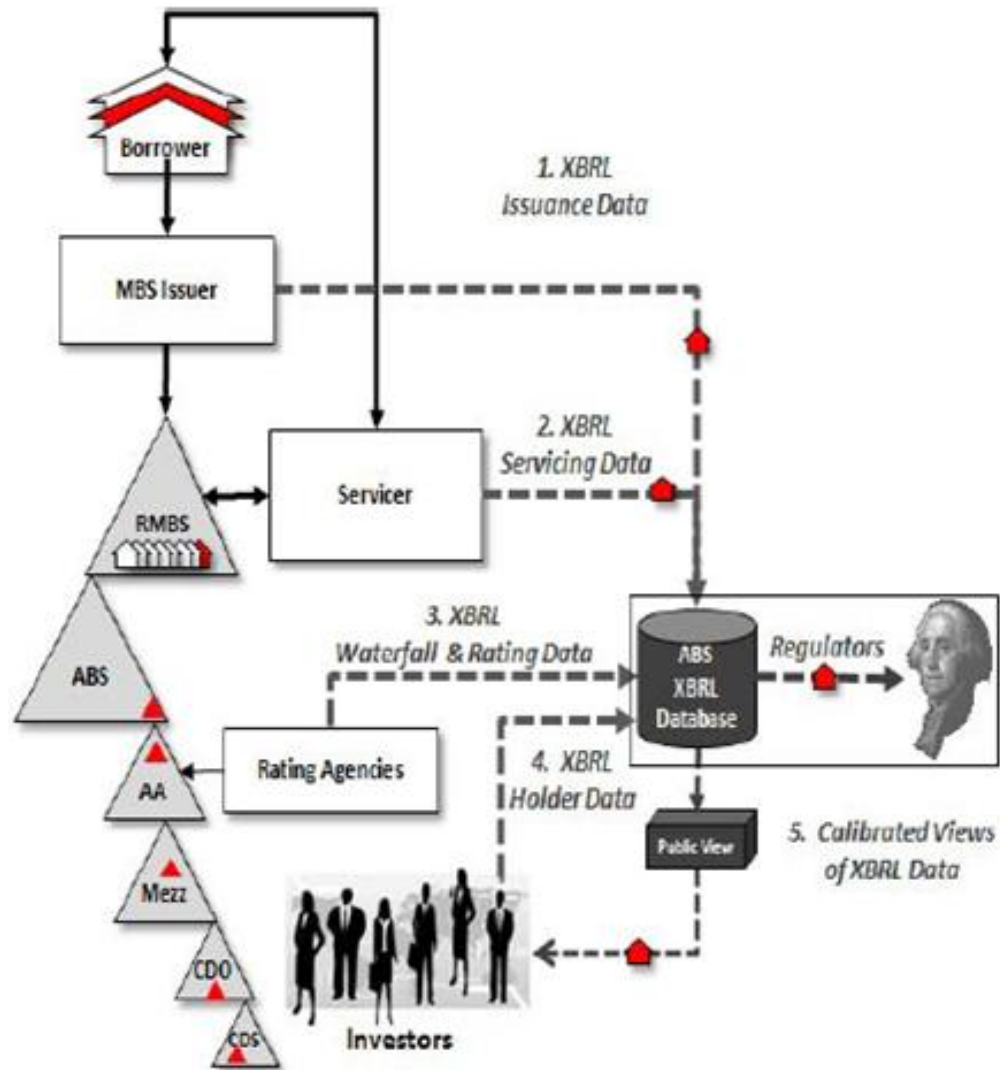
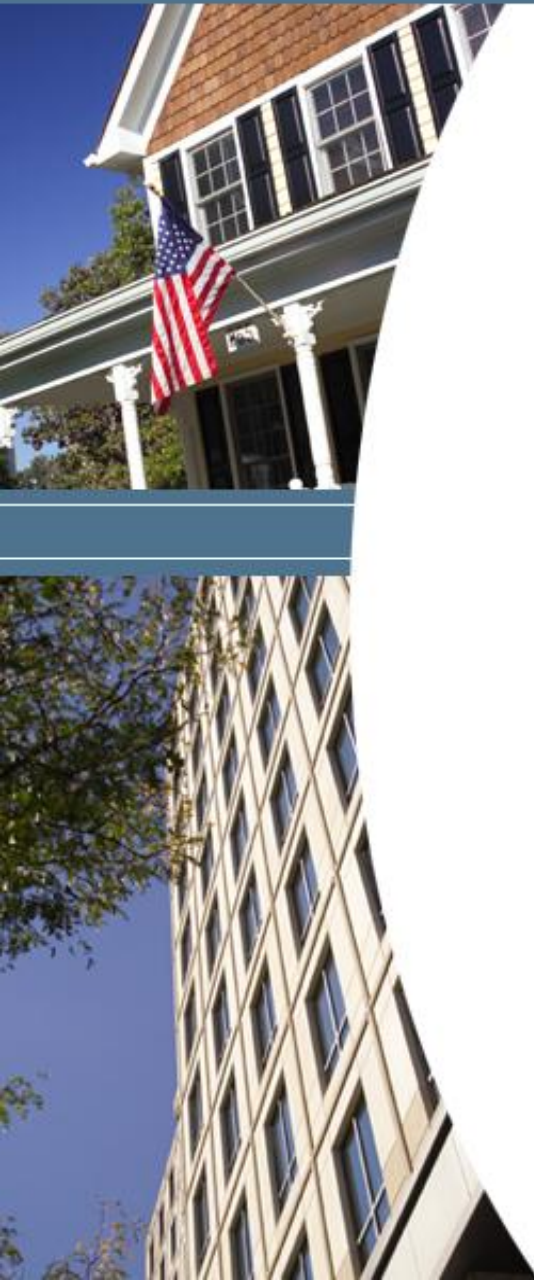
- » Increased data quality across industry
- » XBRL is compatible and easily integrated with a wide range of software
- » Reduced reporting, analysis, and on-going data processing costs
- » All data in XBRL is contextualized (e.g. currency), therefore, can perform analyses in any currency without extra effort





Instead of a barrel of apples, imagine a box of apples laid out so that each apple can be inspected: A repository for universally accessible, loan-level data

- Define required and common disclosures
 - » Common deal-level fields and definitions
 - » Common loan-level fields and definitions
- Define the XBRL taxonomy (format)
 - » Socially created taxonomy to define the submission format
- Create the repository
 - » EDGAR-like repository where interactive XBRL data is sent too and consumed from



Next steps

- Industry buy-in and support
- Phased-in approach beginning with security issuers
 - » FWP (issuer submission) required fields and definitions
 - » MBS Taxonomy at XBRL-US website
 - » Agreement on transparency and exposure standards



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