

# Case Study: How National Vision Implemented a Dynamic Forecast Process with SAP BusinessObjects Planning and Consolidation

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#### In This Session

- We will walk through the design, development, and execution of a new forecasting process utilizing the resources of SAP's BusinessObjects Planning and Consolidation that National Vision, Inc. (NVI) undertook
  - Understand the unique challenges NVI faced in its forecasting capabilities
  - The goals that NVI hoped to achieve in the project
  - A live presentation of the tool that NVI developed
    - On-demand Q&A, throughout presentation, of what we developed, why we went in this direction, and what the model is capable of producing for a dynamic and growing firm in a challenging market



- Understanding the unique challenges that NVI faced in its forecasting capabilities
- Designing and developing a new "Current Year" forecasting process
- Demonstrating the "Current Year" forecasting model built in BPC
- Designing and developing a new "Next Year" forecasting process
- Demonstrating the "Next Year" forecasting model built in BPC
- Designing and developing a new "Corporate Overhead" forecasting process
- Demonstrating the "Corporate Overhead" forecasting model built in BPC
- Wrap-up



# Who Is National Vision, Inc. (NVI)?



One of North America's largest optical retail chains

**Currently operating over 900 retail locations under 5 different brands** 

- Growing firm, both in store count and markets
- Challenging operations involving state-by-state rules and regulations for operating within the healthcare field

Manufacturing arm, running three domestic eyeglass laboratories in the U.S.

**Expanding ecommerce footprint** 



#### **Challenges Facing National Vision**



#### Historically, forecasting was done through a series of linked Excel files

- Not friendly for scenario analysis or changes
- Time consuming to aggregate data
- Less time spending on true analysis



# Former reporting and planning software not capable of dynamic forecasting model development

- Significant time constraints on amount of data NVI maintains
- Report and model development was not user-friendly



### **Challenges Facing National Vision (cont.)**

- January 2015, NVI migrated to SAP BusinessObjects Planning and Consolidation (BPC) for all financial reporting and planning
- First phase of migration was to develop all key management reporting templates
- Once first phase was complete, NVI made the decision to develop a dynamic forecasting model
- Key project goal was to leverage existing reporting already developed in BPC
  - Time savings on overall project
  - More importantly, maintain report formatting for presentations to upper management





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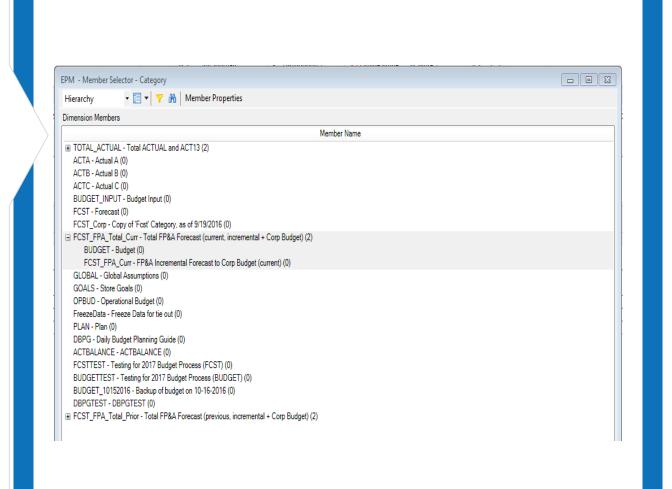
# **Design of Forecasting Model**

- Key design of NVI's forecast model was to load forecast data to BPC server that would allow the data to flow into already existing reports
- Existing reporting used comparisons of "Categories" Actual vs. Budget
- NVI wanted our forecast model to allow for data analysis in differing ways:
  - Fully populated forecast figures
  - Incremental changes to existing Budget "Category"
    - This allows NVI to query, on demand, where the good guys and pain points are across our company in the forecast



# **Design of Forecasting Model (cont.)**

- NVI developed a new structure within the "Category" dimension of BPC to achieve the data visibility goal
  - Developed new "Category"
    - FCST\_FPA\_Curr
    - Rolled up with existing BUDGET
    - This allows NVI to query on our existing BUDGET, our new incremental forecast, or the combination of the two for a fully-loaded forecast "Category"





# **Example of Data Visibility Using New "Category"**

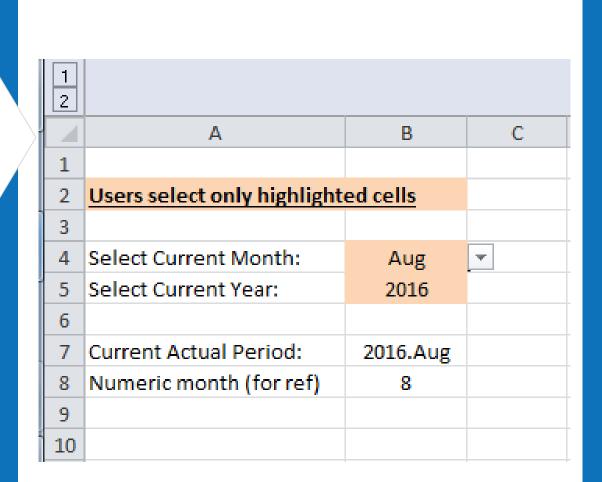
- With the design of the "Category" dimension in BPC, NVI can now dynamically query:
  - Our existing BUDGET
  - Our new incremental forecast
  - The combined roll up to our fully loaded forecast in BPC

Total_DS				
NVI_Legal				
Periodic				
		2016.TOTAL		
		BUDGET	FCST_FPA_Curr	FCST_FPA_Total_Curr
Store	Revenue_E	464,300,999.09	(2,365,638.56)	461,935,360.52



#### **Additional Requirements for National Vision's Forecast Model**

- NVI completes two "deep-dive" companywide forecasts per fiscal year
  - Post 1Q close (after NVI's busiest quarter)
  - Post August close (as we prepare for the upcoming fiscal year planning)
- NVI required a dynamic model that would be sensitive to the most recent fiscal period close
- Using a simple "Set the time" selection, our model allows any user a simple method to set the model for any time period chosen to forecast based upon





# Additional Requirements for National Vision's Forecast Model (cont.)

- Based upon the selection of the most recent fiscal period closed, the entire model resets itself to an Actual + Budget baseline, including the assumptions tabs
  - This is the foundation of our "Current Year" forecast, simply adding the months that we have closed to the original corporate budget for the remaining periods of the years

America's Best - Base (acquired locations)							/							
OPERATING RESULTS - EBITDA-BASIS REVENUE MEASUREN	RESULTS - EBITDA-BASIS REVENUE MEASUREMENT													
_	2016 - Current Year Base Forecast (Actual + Corp. Budget)													
_	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2016	
(thousands of dollars)	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Budget	Budget	Budget	Budget	8A - 48	
_	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
Net revenue managed:														
Eyeglasses & sunglasses	4,002	6,357	4,701	3,978	4,147	3,381	3,599	4,956	3,548	3,363	3,888	3,134	49,05	
Contact lens	1,205	1,754	1,350	1,249	1,515	1,280	1,234	1,580	1,204	1,208	1,411	1,095	16,08	
Accessories	27	40	32	29	28	21	23	35	31	30	31	23	35	
Warranties	356	552	415	341	353	284	302	439	334	398	378	294	4,44	
Club memberships	416	689	501	443	527	427	424	556	455	452	515	383	5,79	
Eye exams	521	822	617	546	593	483	514	699	453	453	535	421	6,65	
Solution revenue	1	1	1	1	1	1	1	1	1	1	1	1	1	
Shipping	3	4	3	3	4	4	3	4	0	0	0	0	<b>7</b> 3	
Shipping Total cash-basis optical revenue	6,532	10,219	7,620	6,590	7,169	5,880	6,099	8,271	6,027	5,906	6,760	5,350	7	



# **Development of Assumption-Based Forecasting**



#### National Vison operates 5 distinct retail brands with unique business models

 Within our growth brands, management reporting breaks out the overall brands by class/vintage to highlight the maturation of growth years



Each brand, as well as each vintage within our growth brands have unique drivers and assumption requirements



# Design of a dynamic method to push through forecasted changes to this level of reporting was a key requirement

 Timely processing of changes was crucial to NVI's ability to conduct meaningful scenario and sensitivity analysis



# **Design of Current Year Forecasting Model — Remaining Periods**

- Designed to leverage NVI's Operations group's dynamic revenue forecasting
  - Model automates the forecast all the way through gross margin
    - Calculates the delta between Operations revenue forecast and the original corporate Budget for all revenue accounts and loads these figures to NVI's forecast "Category" (FCST\_FPA\_Curr)
      - By brand, account, period
    - It then calculates all product margins based on the original corporate Budget margins multiplied by the new revenue forecast
    - SG&A is auto forecasted based on specifically designed logic
      - Examples:
        - > Advertising takes any over/under YTD variance to plan and forces the annual forecast figure to hit our original Budget
        - > Certain line items use a YTD variance trend to original Budget
        - > Occupancy costs are lease driven, so they are excluded from any auto-changes to original Budget in the model



# **Design of Current Year Forecasting Model**

- This automation allows the model to auto populate our current year forecast down to our store contribution
  - Key is leveraging our firm's existing Operations revenue forecast, which is already loaded to our BPC database for their team's own requirements





# **Design of Current Year Forecasting Model (cont.)**

- Once the Operations data is loaded to our forecast for the "Current Year," our "CY" global assumptions tab gives us the flexibility to adjust any line item on our P&L, by brand or remaining months
  - Strong flexibility to adjust forecast based on any circumstance
    - Example: New product that has recently been introduced in only one of our brands that we forecast will drive <u>UP</u> eyeglass margin in EGW brand during November

4	A	В	С	D	E	F	G	Н	1	J	K	L	M	N
1	FP&A Assumptions for the cur	rrent year i	n the curre	nt year fo	recast									
2														
3														
4	Current Year:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
5		Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Budget	Budget	Budget	Budget	
16	EyeSun COGS Drivers:				Cu	ırrent Year	ear = Incremental variance to budget							
17														
18		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
19	AB													
20	EGW											-2.000%	$\leftarrow$	
21	NVI													
22	FM													
23	MIL													
24														



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#### **Demonstration of National Vision's Forecast Model**

- We're now going to switch to a live demonstration of NVI's forecasting model in BPC
- Primary focus of this demonstration will be on the current year portion of the forecast model





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#### Inclusion of a "Next Year" in Our Forecast

- Another key requirement in NVI's forecast project was an inclusion of a "Next Year"
  - An initial, directionally correct look at what our upcoming year could look like
  - Heavily assumption-driven
  - Multiple benefits, including:
    - Capital spending planning in our domestic laboratories based on eyeglass units growth
    - Merging this forecast into our ownerships 5-year modeling (future goal)

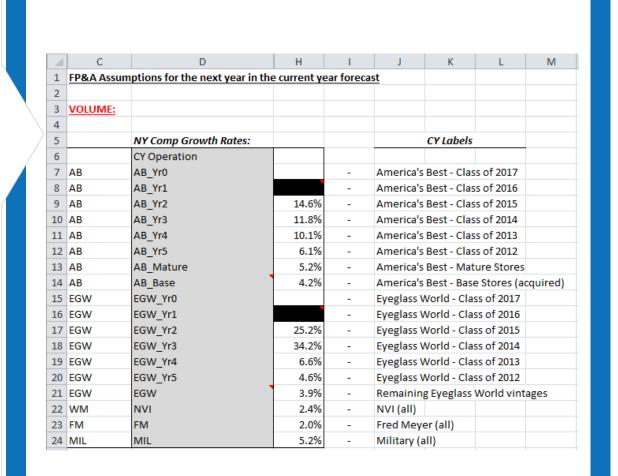




- Primarily driven by assumptions on our "Next Year" assumptions tab in the model
- Drives off of the "Current Year" forecast in our model
- Specific assumptions for "Next Year" that allow us to model new store growth:
  - NVI continues to grow 2 of our Brands
  - Every year requires their own specific assumptions
    - Differing markets with unique challenges
    - Planned new store growth
    - Monthly spread of planned new stores

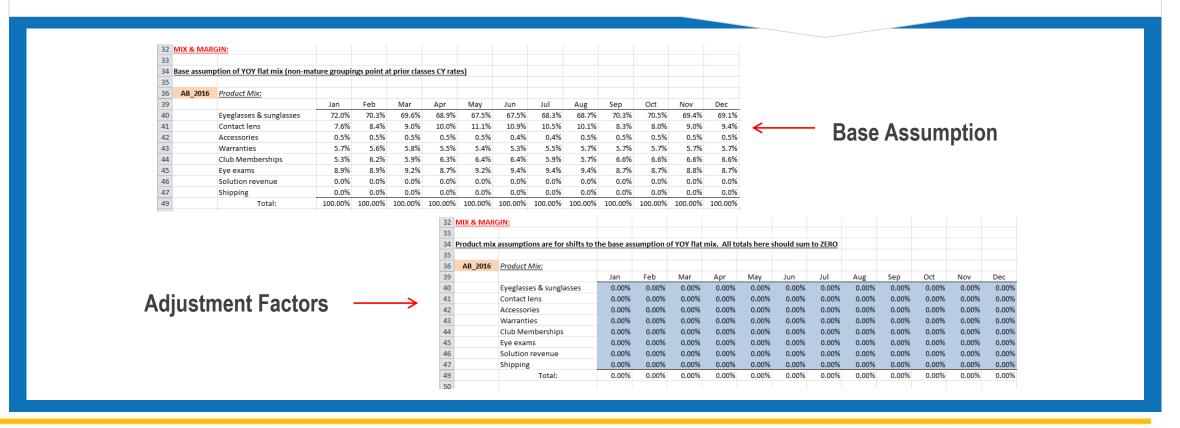


- Revenue forecast for "Next Year" is derived from the "Current Year" forecast and our by Brand (and class/vintage) comparable store sales growth assumptions:
- This sets the TOTAL revenue figures in our "Next Year" forecast
- New stores in our "Next Year," as well as the new stores opened in our "Current Year" have their own drivers (shown later in the presentation)
- Shown here as Yr0 or Yr1 of operation



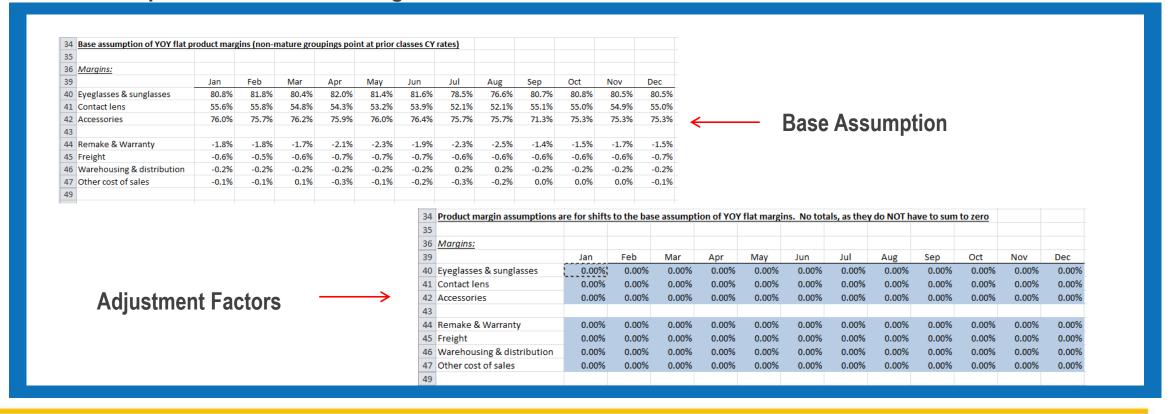


- · Revenue mix is modeled after the "Current Year" forecasted percentages, by month and by Brand/Class
  - Built in adjustment factor allows us to make any adjustments deemed appropriate, giving us strong flexibility and control over the forecast
  - Example of Product Mix:



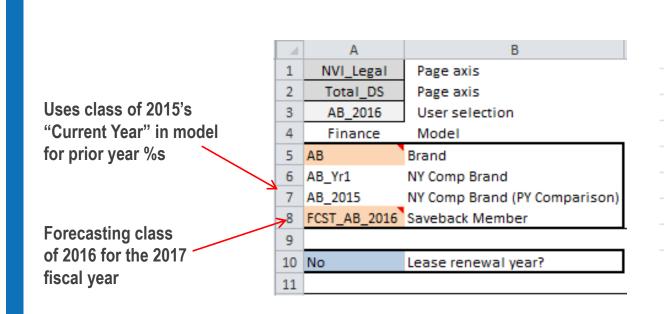


- Cost of sales margins are also modeled after the "Current Year" forecasted percentages, by month and by Brand/Class
  - Built in adjustment factor allows us to make any adjustments deemed appropriate, giving us strong flexibility and control over the forecast
  - Example of cost of sales margins:





- SG&A forecast in the "Next Year" auto calculates our "Current Year" expenses as a % of revenue for each item versus our "Next Year" revenue forecast as the base forecast
- For classes that are in our growth years, the model adjusts to use percentages from the appropriate class that lines up with the forecast year's number of years in business



	Forecast	Year in
	<u>Year</u>	Operation
Class of 2016	2017	2nd
*Prior year look up	for comparison	= Class of 2015 in the
Current Year' f	orecast (also 2nd	d year in operation)



- For certain items, NVI has built adjustment tools into the model to make appropriate changes to the base SG&A forecasts
  - We used a dollar (\$) approach adjustment for this part of the model (company preference)
     that layers on this change to the appropriate line item for the Brand/Class we are adjusting

263 SG&A		SG&A chang	es to the bas	se assumptio	n (PY mar	gin to total re	evenue) w	ill be impleme	ented as \$ a	amounts in	this section	(thousands
264												
265 Store as	ociate: Total Pay	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
266	AB_2016											
267	AB_2015											
268	AB_2014	25,000				25,000					50,000	
269	AB_2013											
270	AB_2012											
271	AB_Mature											
272	AB_Base											
273	EGW_2016			100,000								
274	EGW_2015											
275	EGW_2014											25,000
276	EGW_2013											
277	EGW_2012							(175,000)				
278	EGW_Mature		35,000									
279	EGW_Base											
280	NVI											
281	FM											
282	MIL									_	_	
283	Total ADJ:	25,000	35,000	100,000	_	25,000	_	(175,000)	_	_	50,000	25,000



- New store growth assumptions differ year to year based on planned new store count, targeted growth markets, and monthly planned spread of openings
- Also, we have to adjust the "Current Year" new classes to annualize their results as they would have partial year results

	_	_	_	_								_	_	_	_
4	. D	E	F	G	Н	ı	J	K	L	М	N	0	Р	Q	R
	New store assu	imptions to	r NY Torecast						1. 1. 1. 11						
2							Only manipul	ate blue high	nlighted cells o	on this page.					
	NY>	2017													
	New Store FY F	levenue As	sumption				Prior years ne	w stores, fir	st full year of o	perations per	store Revenu	ue Assumptio	<u>n</u>		
5															
		AB	450,000					Revenue	Store Count						
		EGW	375,000				AB	600,000	40						
0							EGW	525,000	20						
1	New Stores - N	et Sales Pe	rcentage by Pe	eriod:											
2															
3			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1		AB	8.1%	14.5%	9.8%	7.2%	8.0%	6.4%	7.9%	10.1%	7.0%	6.7%	7.7%	6.7%	
5 7		EGW	7.8%	13.2%	8.7%	8.0%	9.2%	7.1%	7.9%	9.7%	7.0%	6.6%	7.5%	7.2%	
7															
8	New Store Ope	nings Assu	mption, by Bra	and and Month	1										
9															
0			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1		<u>AB</u>	3	5	6	2	2	3	4	7	4	1	0	3	4
4															
5		<b>EGW</b>	0	3	3	2	2	2	1	1	3	1	2	0	20



- Additional example of NVI's customization to its forecast model is an assumption on our occupancy costs
  - For brands with operating leases, our model assumes an inflation rate on costs for stores 5 years aged from year of forecast
    - NVI typically signs 5 year leases
    - Assumption builds in inflated occupancy costs for just this aged particular class of stores

390 Forec	cast year = 2017												
391													
392 Occup	pancy Assumption	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
393													
394	AB_2012	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%
395	EGW_2012	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%
396	AB_Base	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
397	AB_Mature	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
398	EGW_Base	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
399	EGW_Mature	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
400													



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#### **Demonstration of National Vision's Forecast Model**

- We're now going to switch to a live demonstration of NVI's forecasting model in BPC
- Primary focus of this demonstration will be on the next year portion of the forecast model





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#### **Corporate Overhead Input Template**

In NVI's historical forecasting approach, department heads would provide their individual cost center forecasts to Finance Dept.

- Turnaround time to "assemble" all departments
- Changes after original submission was tedious

Solution: Provide a user-friendly input template for all department heads to dynamically input their respective forecasts directly into BPC

- Virtually eliminated the historical time lost to "assembling" all data
- Changes can be made on demand that will flow through all forecast reporting



### **Corporate Overhead Input Template (cont.)**

Input template designed to mirror management financial reporting format

- Gives user a familiar view
- Template configured to auto adjust input grids based on latest fiscal period closed
  - This also helps avoid mistakes from our end users loading data into periods they should not

Designed to be a one-stop shop for end users

- Adjacent to the input grids, there are monthly budgets and variance reports built into the template so that end users can see how their respective departments have performed versus plan during the current fiscal year
  - Also can review year-over-year plan for the upcoming year which is part of NVI's overall forecasting



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#### Where to Find More Information

- https://blogs.sap.com/2012/07/22/how-to-build-rolling-forecasts-in-bpc-100/
  - Srikanth Gandlur, "How to build Rolling Forecasts in BPC 10.0" (SCN, July 2012).
    - Provides an in depth look in how to build components of a rolling forecast in BPC
- www.youtube.com/watch?v=LvATXMQ6PmY
  - Katrina Kun, "Rolling Forecast in BPC" (YouTube, November 2013).
    - ► A YouTube video showing another example of building a rolling forecast in BPC
- <a href="http://sapinsider.wispubs.com/Assets/Blogs/2011/June/Advanced-Trend-Forecasting-in-BPCExcel-Step-by-Step-example">http://sapinsider.wispubs.com/Assets/Blogs/2011/June/Advanced-Trend-Forecasting-in-BPCExcel-Step-by-Step-example</a>
  - Dr. Bjarne Berg, "Advanced Trend Forecasting in BPC/Excel Step-by-Step example" (SAPinsider, June 2011).
    - ► This article shows another example of some forecasting techniques that can be applied to BPC
- www.youtube.com/watch?v=PMu8INbWXcI
  - Jarrett Bialek via SAPinsider, "A Leading Expert's Guide to Mastering BPC Reporting and Analytics Capabilities" (YouTube, May 2013).
    - ► This YouTube video gives a good overview of how to use the EPM Add-in, which is the basis of the forecasting process that is presented in this demo



# 7 Key Points to Take Home

- BPC is a dynamic tool for any firm's reporting, planning, and forecasting requirements
- Leveraging existing reports is not only possible, but highly practical
  - Maintaining existing report formatting to end customers improves presentation
  - Significant time savings on overall project
- Proper hierarchy design allows you to gain greater visibility into your data
- · Global assumption design allows you to push significant data changes through your model with ease
- Using year-over-year "base" assumptions allows you to pre-populate the majority of your forecast
  - More time to focus on specific, major impact items
  - Still have the flexibility to adjust any items across your P&L
- Custom design of certain "levers" in model allows your firm to tailor your forecast model to your very specific requirements
- Designing of templates can help with end-user acceptance



#### **Your Turn!**



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Please remember to complete your session evaluation



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