# BI Movie Magic: Maps, Graphs, and BI Dashboards at AMC Theatres

Session ID: 10553

#### Prepared by:

Tim Vlamis
VP & Analytics Strategist
Vlamis Software Solutions
tvlamis@vlamis.com www.vlamis.com

@TimVlamis



#### Agenda:

COLLABORATE 16

- About AMC
- Challenges
- Strategy
- Journey
- Solution Set
  - Maps
  - Graphs
  - BI Dashboards
- Next Steps
- Questions



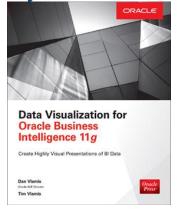


### Vlamis Software Solutions

- Vlamis Software founded in 1992 in Kansas City, Missouri
- Developed more than 200 Oracle BI and Analytics systems
- Specializes in ORACLE-based:
  - Business Intelligence & Analytics
  - Data Mining and Predictive Analytics
  - Data Visualization
  - Data Warehousing
- Expert presenter at major Oracle conferences
- <a href="https://www.vlamis.com">www.vlamis.com</a> (blog, papers, newsletters, services)
- Co-authors of book "Data Visualization for OBI 11g"
- Co-author of book "Oracle Essbase & Oracle OLAP"
- Oracle University Partner
- Oracle Gold Partner











#### **Tim Vlamis**



#### **Vice President & Analytics Strategist**

- 30+ years experience in business modeling and valuation, forecasting, and scenario analyses
- Oracle ACE



- Instructor for Oracle University's Data Mining Techniques and Oracle R Enterprise Essentials Courses
- Professional Certified Marketer (PCM) from AMA
- Adjunct Professor of Business Benedictine College
- MBA Kellogg School of Management (Northwestern University)
- BA Economics Yale University

tvlamis@vlamis.com

### **AMC History**



- 1920 Maurice, Edward and Barney Dubinsky purchase the Regent Theatre in Kansas City, Mo.
- 1961 Stanley Durwood becomes CEO of the company and renames it **American Multi-cinema**.
- 1962 AMC opens the world's first multiplex, the Parkway Twin in Kansas City.
- 1981 AMC becomes the first theatre chain to add cupholder armrests.
- 1991 Introduces Clip®, a "film strip" character to serve as an ambassador of the brand and its Silence is Golden® program
- 1995 AMC opens the world's first megaplex. This innovative destination also inspires AMC to install stadium seating and LoveSeat®-style seating.
- 2000 AMC co-founds online ticket services to add convenience to even the busiest AMC theatres like Empire 25 in New York City, which is recognized as the busiest theatre in the world.
- 2002 AMC becomes the first theatre chain to introduce the circuitwide gift card

# **AMC History Continued...**



- 2005 AMC co-founds National CineMedia, which runs all of AMC's preshow entertainment and in-theatre advertising.
- 2006 AMC expands presence throughout the country with the acquisition of Loews Theatres
- 2007 AMC partners with IMAX to bring approximately 125 IMAX large-screen digital projection systems to AMC locations around the country.
- 2008 AMC launches Dine-In Theatres.
- 2009 AMC partners with Sony and RealD to implement digital and 3D technology.
- 2010 AMC acquires Kerasotes theatres and expands its presence in the Midwest.
- 2011 AMC launches its AMC Stubs rewards program
- 2012 Wanda Group acquires AMC
- 2013 AMC IPO
- 2015 AMC acquires Starplex Cinemas.
- 2015 AMC introduces Online Concessions and delivery to seat.

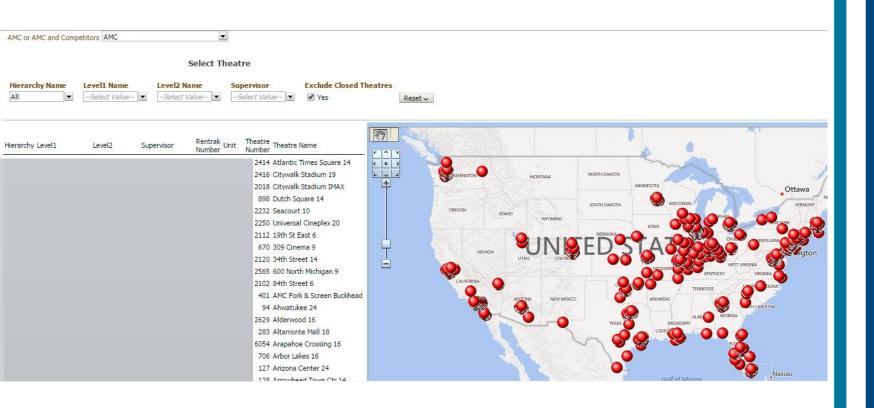
### **AMC Facts, by the NUMBERS**



- Interests in **370+** theatres with **5,000** screens across the U.S.
- 18 Dine-In Theatres offer dinner and a movie
- AMC employs approximately **20,000** full- and part-time associates
- We serve approximately 200 million guests each year with industryleading guest satisfaction ratings
- AMC MacGuffins bars serve beer, wine and cocktails to adult guests in 109 locations
- AMC's food & beverage operations, including our dine-in theatres, represent a Top 60 U.S. restaurant chain
- AMCTheatres.com generates nearly 300 million visits per year
- AMC mobile apps have 5.2 million downloads
- AMC Stubs Loyalty Program with 2.4 million paid members
- Twitter feed with more than 289,000 followers
- Facebook page with more than 4.4 million likes

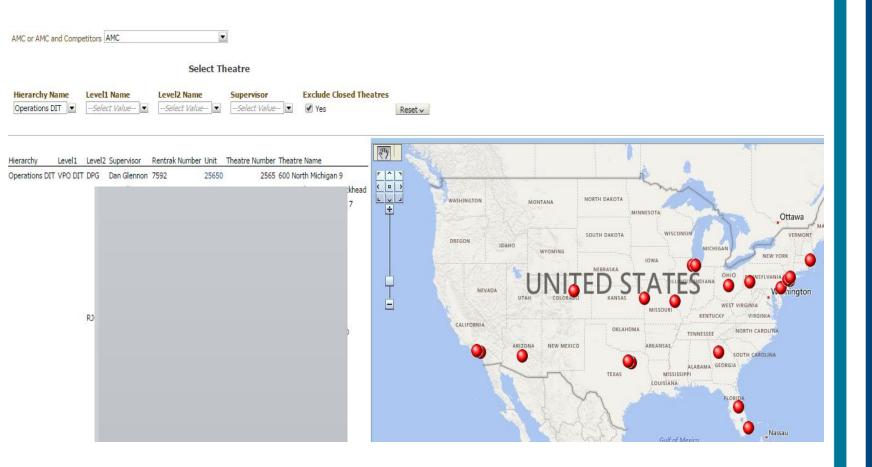
# AMC Facts, by the Visualization, 370+ theatres





# AMC Facts, by the Visualization, 18 DIT theatres





# **Challenges - Strategy...People, Processes, and Technology**





#### **Challenges**



#### People

- Culture
  - Excel Entrenched
  - Numbers, numbers, numbers only
  - How does it print?
- Embrace new tools
  - Graphs, Charts, Colors.
- Limited Staffing

#### **Process**

- Governance Data and Report ownership, Business Glossary
- Expanded Self Service to a wider audience w/OBI Analysis
- Pre-Built Excel Reports vs. Real Time Dashboards

#### Technology

- Legacy Hardware/Software DPA, Hyperion Enterprise
- OBIEE New tool
- Rolling out to 1,500+ @Theatre Users Unproven Platform
- Transition to New EDW from ground up Patience
- Replacing "working" legacy Applications

### Data Driven Culture – data driven decisions, not opinions







#### **Data Strategy**



#### **Data Management**

- <u>Data Delivery</u> EAI and ETL framework
  - Data Models, Canonicals, Schema's
  - Data Mappings
- MDM Master Data Management Engineered with a Purpose
  - Store, Title/Film, F&B Products, Customer
  - Hierarchy Management (DRM) Slicing and Dicing, Regions, Reseats, Core, etc.
- <u>EDW</u> Enterprise Data Warehouse Information Harmonized
  - Star Schema Shared Common Dimensions driven by MDM
  - Data at the right time and lowest grain
  - One source of the "truths"

# Data Strategy – One source for Reporting and Analysis, but...





#### **Data Strategy**



#### **Presentation Management – Driven by Key Data Points**

- Dashboards and Reports
  - Sales Data POS, Online ticketing, Mobile.
  - Competitor Rentrak
  - Loyalty Member engagement, Demographics
  - Theatre Report Dashboards Driven by 1m queries!
    - Performance metrics by theatre by day
  - Oracle EBS BI Apps for Finance and HR
- Ad-hoc Self Service Query and Analysis
  - All data in the EDW is available for Ad-hoc query
  - Customer and Sales Subject Areas Depth and breadth of attributes
- Education
  - Internal Custom OBI and Smartview training

#### **Journey Time Line**



- 2009 Microsoft Reporting Services
- 2009 Master Data Management (Store, Film,)
- 2009 EDW Core Dimensions (Date, Store, Film)
- 2009 OBIEE Self Service Ad-hoc (Rentrak Data)
- 2011 OBIEE 10G over Oracle BI Apps over EBS 11.5
- 2011 OBIEE 10G Oracle BI Apps DW w/ Oracle EBS r12
- 2011 OBIEE Over Custom EDW (Non EBS)
- 2011 OBIEE 11G Upgrade
- 2012 Theatre Reports / Dashboards\*

# Theatre Reporting Fast & Furious...from Disruption comes Opportunity



Wanda – Fiscal Year & Weekly to Monthly Changes – Replace Theatre Reporting in 3 months!!





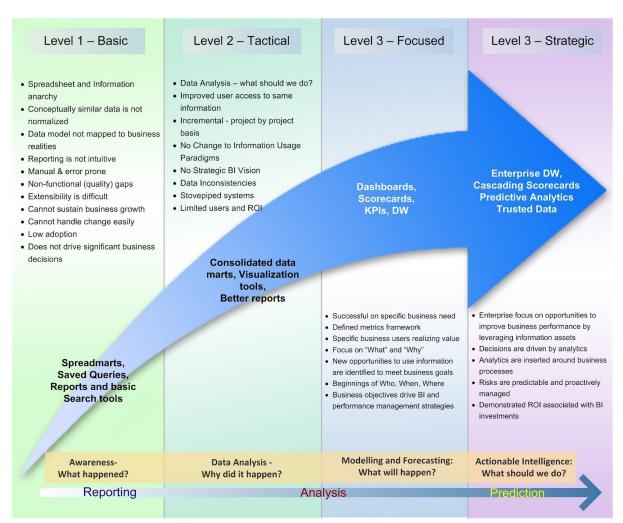
#### **Journey Time Line**



- 2013 Corporate Reports/Dashboards
- 2013 OBI Mobile HD
- 2014 Hyperion Planning and Data Relationship Management (DRM)
- 2014 OBI Visualizations Workshop\*
- 2014 PureData for Analytics Powered by Netezza
- 2014 Geospatial Maps
- 2015 Hyperion Financial Management
- 2015 Retire Hyperion Enterprise!

#### **AMC Business Intelligence Journey**





http://blog.percepsys.com/2012/03/business-intelligence-maturity-model.html

#### **Solution Sets**

COLLABORATE 16

- Maps
- Graphs
- BI Dashboards



#### **Video Wall**





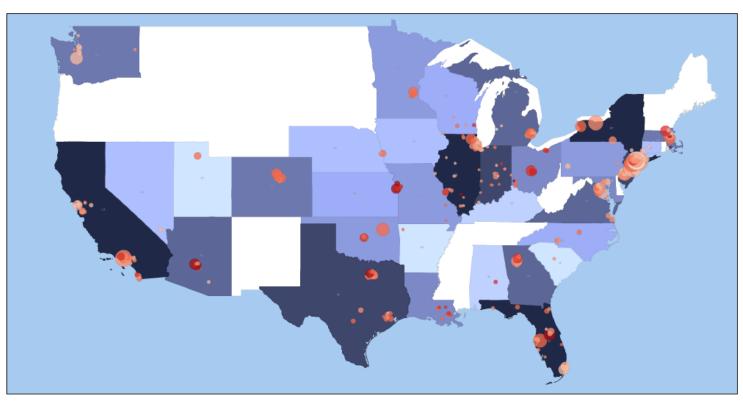


TECHNOLOGY AND APPLICATIONS FORUM FOR THE ORACLE COMMUNITY



#### Maps at AMC – Part of the Solution







# **Operations Summary - Legacy**

**GUEST CONNECTIONS** 



TECHNOLOGY AND APPLICATIONS FORUM FOR THE ORACLE COMMUNITY

SEGMENT: US AND CANADA
QTR / CY: Q3-20??

**VEEK ENDED:** 1/12/20?? **SCALE - [FREQ]:** 000's - [MTD]

OTHER INDICATORS

<u> </u>	33.3		GL 5		- FILE KILLING		GILLAN		GUICK		Melecontent		PI-C-FORMAL-MIN		METONN		VALUE (DIT)		VALUE (HNAD)	
	DLY = 2	.5	CY	DLY	CY	DLY	CY	DLY	CY	DLY	CY	DLY	CY	DLY	CY	DLY	CY	DLY	CY	DLY
	DPL = 0	.5	99.9	99.9	99.9	99.1	99.9	99.9	99.9	1.7	32.8	2.6	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9
	TOP BOX % BY MONTH								BY QUARTER				YTD		US/C Ops (000's)					
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOY	DEC	Q1	Q2	Q3	Q4	CY	DLY	CY	DLY
# OF SURVEYS (000's)	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99
OVERALL SATISFACTION	96.8	99.1	44.4	99.9	99.1	99.3	96.3	97.1	98.8	99.3	92.0	61.3	97.8	99.1	98.6	99.3	44.7	2.5	98.7	2.5
DLY	1.0	1.1	1.1	9.9	2.0	9.8	1.9	2.0	2.0	1.0	-0.2	9.1	1.1	1.8	1.2	9.1			l	
OS DIT	91.0	91.2	91.2	100.0	100.0	100.0	90.9	97.7	100.0	92.0	91.9	98.0	91.1	99.9	99.2	99.9	7	-1.0	100.0	-1.0
C/S	100.0	90.0	99.9	91.8	92.0	99.9	98.0	99.2	99.1	99.1	91.9	91.1	98.0	100.0	97.0	97.9	97.2	-9.2	97.2	-9.9
F&S	99.9	91.0	99.1	90.9	97.1	99.2	99.9	91.7	99.8	98.0	91.2	91.9	92.0	97.7	99.1	97.0	97.1	-1.0	97.1	-1.0
OS TRADITIONAL	97.0	99.0	11.0	99.7	99.2	100.0	99.1	99.2	99.9	99.7	99.1	79.9	98.0	99.1	92.0	16 3		1.9	92.0	2.0
SERVICE:	91.9	99.0	99.2	100.0	99.1	99.9	99.9	99.1	99.1	99.8	99.1	91.1	91.9	99.7	99	100.	99		99.7	1.1
Friendliness of Box Office Cashier*	99.0	99.2	99.9	91.9	99.0	99.2	100.0	99.1	99.9	99.1	99.8	91.9	91.9	99.1	99.	99.	100.0	2.0	100.0	2.0
Speed of Purchasing Tickets*	999.0	99.9	99.8	97.9	99.9	99.7	100.0	99.2	97.9	99.2	99.9	99.7	99.9	100.0	99.9	190.0	99.2	10.0	99.1	10.0
Friendly Ticket Taker/Usher*	91.0	100.0	99.9	92.0	92.0	91.8	92.0	91.9	99.9	92.0	92.0	99.2	100.0		91.2		92.0	2.0	92.0	2.0
FACILITIES:	99.8	90.2	99.2	99.2	99.8	92.0	99.9	92.0	92.0	92.0	91.2	99.0	90.9	.d.9	91.9	91.1	99.9	1.8	99.1	1.8
Restroom Cleanliness*	92.0	100.0	91.0	90.1	91.0	90.2							900	90.7			100.0	2.0	90.1	2.0
Restrooms Well Stocked	11.9	90.9	99.0	99.0	11.0	92.0								91.1			99.2	10.0	99.1	1.9
Overall Facility State of Repair	100.0	99.2	99.9	99.7	100.0	99.2	99.1	99.0	99.2	97.9	97.0	90.7	70	99.1		91.0	100.0	2.0	100.0	2.0
Overall Cleanliness of the Facility*	99.7	91.1	91.9	92.0	91.2	91.1	19.9	91.9	99.2	99.9	91.0	97.2		92.0	31.8	99.2	91.9	2.0	92.0	1.9
Restrooms in Good Repair	91.9	99.2	99.9	100.0	100.0	100.0	100.0	100.0	100.0	99.9	100.0	99.1	100.	100.0	99.9	99.2	99.9	1.0	100.0	1.1
FILM EXPERIENCE / ENVIRONME	N1 97.9	91.7	99.9	99.9	99.2	90.8	100.0	100.0	100.0	99.9	91.	100.0	91.9	0.00	99.2	91.0	99.9	1.8	999	1.7
Overall Picture Quality	97.9	91.9	99.2	99.1	99.8	71.0	91.9	99.8	100.0	100.0	99.	99.8	92.0	99.8	99.9	100.0	99.1	1.1	99.2	1.2
DIT-Comfortable in Auditorium	92.0	92.0	99.2	91.2	99.9	99.0	99.9	99.9	99.0	91	92.0	100.0	91.9	99.2	99.7	91.2	99.2	1.1	99.9	1.1
DIT-Cleanliness of Dining Area*	100.0	92.0	99.7	91.0	99.1	99.9	99.8	91.0	99.8	A	91.2	90.0	91.1	91.0	99.9	100.0	99.9	1.9	99.9	1.9
Degree Others Respect Silence	99.7	99.2	99.1	91.0	91.0	99.1			•				100.0	91.2			99.1	9.2	99.0	9.2
Temperature of the Auditorium	99.1	90.0	97.9	91.9	99.2	100.0			<u> </u>				91.0	99.1			92.0	0.0	92.0	0.0
Overall Quality of Sound	99.9	97.1	99.2	100.0	99.9	99.0			<b></b>				100.0	99.7			99.0	-1.0	99.0	-1.0
FOOD AND BEVERAGE:	99.9	99.7	99.9	99.9	99.9	91.2	99.9	98	100-0	79.	a	11.1	99.1	92.0	91.2	91.2	99.7	1.1	91.7	1.1
DIT-Accuracy of Order	91.0	91.9	100.0	91.0	90.1	99.1	99.2	100.	<b>J.</b> 8	90.9	97.9	92.0	91.7	90.7	90.1	99.8	99.2	9.9	99.2	1.2
Friendliness of Concession Crew*	99.2	91.9	97.9	91.9	97.2	99.2	90	91.0	99.9	90.8	99.9	91.8	98.0	91.9	90.7	90.9	99.1	9.0	99.1	9.9
Speed of Purchasing Conciltems*	90.1	91.0	90.7	91.0	99.7	91.2	4	100.0	91.0	99.8	100.0	91.1	91.0	91.0	100.0	99.1	100.0	1.9	100.0	1.9
Cleanliness of Concession Area*	91.9	100.0	99.9	100.0	90.1	100.0	99.1	100.0	0	99.2	91.0	99.2	99.2	99.2	91.0	91.1	99.9	-0.1	99.9	1.1
DIT-Attentiveness of Server*	91.8	99.1	92.0	99.9	92.0	<b>2</b> 2		91.9	97.1	99.0	91.2	97.1	99.2	100.0	99.1	90.2	91.0	-1.0	91.0	-1.0
DIT-Speed of Receiving Food & Bev*	91.1	100.0	99.9	99.1	100.0	31.9	90	97.9	99.2	99.9	91.8	90.0	100.0	90.2	91.1	97.9	91.9	10.0	91.7	9.9
DIT-Temperature of Food	91.1	92.0	99.2	91.9	90	98.0	90.9	91.0	99.9	92.0	92.0	92.0	90.1	99.1	91.2	99.2	99.1	1.0	99.1	1.0
DIT-Taste of Food	99.1	99.1	91.9	100.0	92.0	99-2	99.7	99.0	19.7	99.1	100.0	91.9	92.0	99.9	91.2	99.0	92.0	-0.9	92.0	0.2
DIT-Variety of Menu Items	92.0	99.1	99.1	99.2	91.2	Uh.	91.2	91.0	100.0	99.9	90.8	99.2	99.8	99.2	100.0	99.9	99.9	-0.1	99.9	9.9
Freshness of Concession Items	91.9	_98.0	99.8	99.2	97.2	J		99.9	100,0	91.0	100.0	91.0	99.1	99.9	99.0	91.1	JJ.J100.0	1.1	100.0	-1.2
Freshness of Concession Ite	ms	91.9	98.0	99.8	99.2	97.2	.0 97.0	99.9	100.0	91.0	100.0	91.0	99.1	99.9	99.0	91.1	100.0	1.1	100.0 -1.2	.2

SERVICE

RECOVERY RECOMMEND

Overall Satisfaction

HP7611

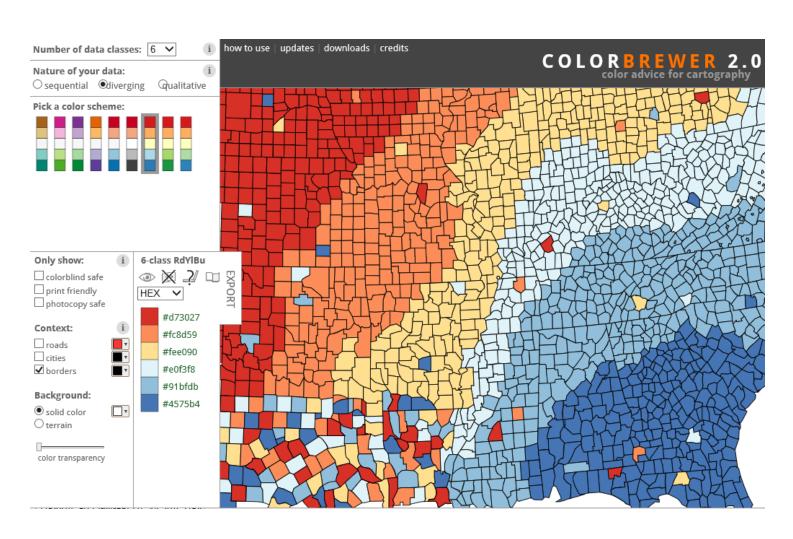
#### **Operations Summary – New**





#### colorbrewer2.org



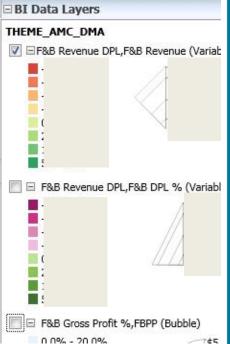


### **Food & Beverage Analytics**









### **Food and Beverage Analytics**





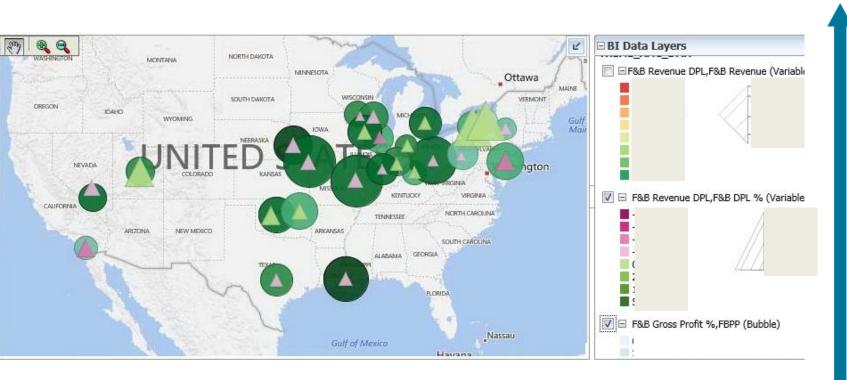
### **Food and Beverage Analytics**





#### **Food and Beverage Analytics**





F&B Revenue DPL	FBPP	F&B Gross Profit %	F&B Cost Impact	F&B Revenue	F&B DPL	%
2						ij
0						Ţ
9						,
-						
	F&B Revenue DPL					F&B Revenue DPL FBPP F&B Gross Profit % F&B Cost Impact F&B Revenue F&B DPL

#### **Text with Maps**



FOR THE ORACLE COMMUNITY

Tulsa, OK Washington, DC West Palm Beach, FL

Refresh - Print - Export - Copy

1

This dashboard shows difference to plan concession revenue analyses by Designated Market Areas (DMAs). There are four different layers. Click in the check box in the BI Layers display to show different layers.

The top most layer shows a diamond shape for each DMA. The size of each diamond is proportional to the dollar amount of concession sales during the time period indicated by the prompts at the top of the page. The color of each diamond shows the concession revenue difference to plan between the time period chosenr. Negative differences display a color in the red-orange color range while positive differences display a color in the green color range.

The second layer shows a triangle shape for each DMA. The size of each triangle is proportional to the dollar amount percentage difference to plan. Larger triangles show a large percentage difference. Red to pink triangles show a negative concession revenue difference to plan while green triangles show a positive difference to plan for the time range chosen.

The third layer shows a circle sized by concession revenue per head. The larger the circle, the higher the concession revenue per head. The color of each circle shows the margin % for concessions for each DMA

The bottom layer shows the geographic outline for each DMA. Darker areas have higher Difference to Plan concession revenue for the chosen time period.

V

Use the Plus and Minus cursor selectors to zoom in and zoom out of the map. Pan using the hand cursor.

#### **National Map**



Level1 Name -Select Value--Film Year 2015 \* From >= 11/27/2015 Hierarchy Name All Leve \* To <= 12/03/2015 Unit No -- Select Value--Time Period Previous Week Apply Reset v Large Attendance USA DMA Maps ■ BI Data Layers Longitude,Latitude ☑ ■ ATT DPL %, ATT by Theatre NEW . NORTH DAKOTA \* JASHINGTON MONTANA + MINNESOTA Ottawa NOVA SO WISCONSIN VERMONT SOUTH DAKOTA OREGON EDAHO WYOMING Gulf of Maine NSYLVANEAS NEVADA. aumgton THEME\_AMC\_DMA ☐ ATT DPL%, ATT by DMA (BL) MESSOCIEI B KENTUCKY CALIFORNIA CENTA TENNESSEE NEW MEDICO SOUTH CAROLINA GEORGIA TEXAS. □ ATT- DPL (Color Fill) First Fifth bing

Gulf of Mexico

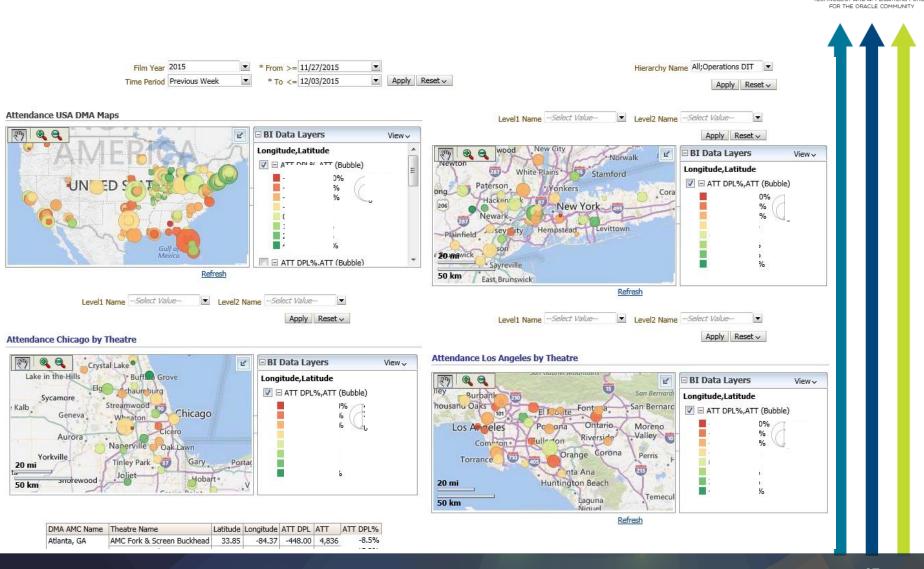
Nassau

Refresh - Print - Export - Copy

Second Fifth

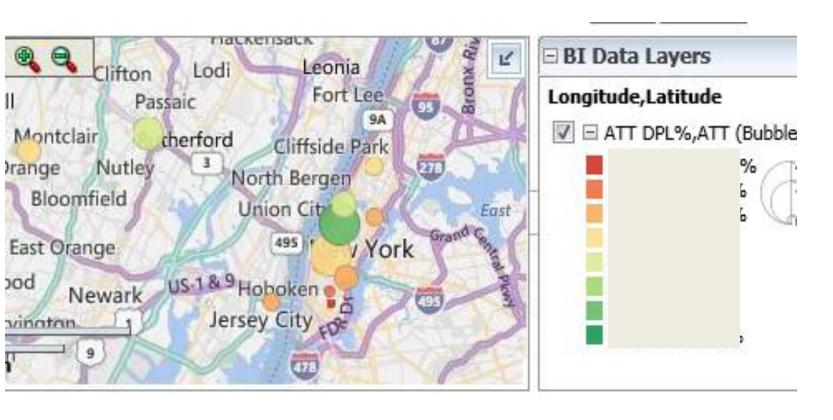
#### **National Map with Top 3 Markets**





#### **Markets**

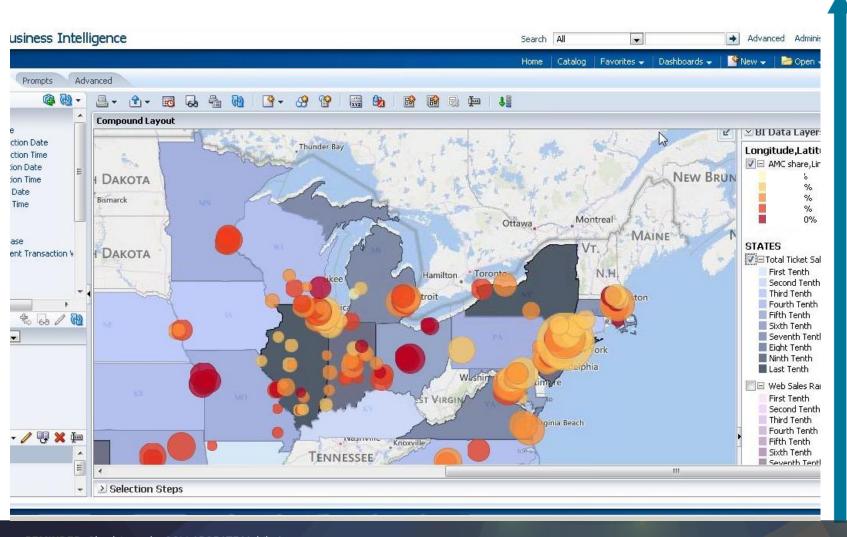




#### **Markets**



TECHNOLOGY AND APPLICATIONS FORUM FOR THE ORACLE COMMUNITY



#### **Next Steps: To Infinity and Beyond!**



- Expand Maps Geography and Seating
- Scheduled Internal Data User Group (BICC)
- Expand Visualization Discovery/Exploration/Visual Analyzer
- Big Data (Volume, Velocity, Variety)
  - Social, Beacons, Mobile App data, Website click data, Projector logs, Sensor data, Freestyle data, etc.
- Data Streaming Real Time Data
  - Technology advancing from daily micro batches to data streams
- Advanced Analytics
  - Predictive, Market Basket Analysis, Text Analysis, Machine Learning
- Embedded Analytics
  - Adding historical insight to transactional business Applications (i.e. Scoring/Trends without switching applications)
- Mobile @ Theatre
  - First line managers alerts and reports at arms length.
- Balanced Score-Carding

# **Key Takeaways**



Spend less time on finding the answers and more time on enjoying life.

### featuring





18 For guests 18 and over.

# BI Movie Magic: Maps, Graphs, and BI Dashboards at AMC Theatres

Session #10553

Presented by Tim Vlamis Vlamis Software Solutions tvlamis@vlamis.com

