

BIWA 2016

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

Maury Carollo, Director Information Management Systems



Cathye Pendley, VP Consulting Services



BIWA SUMMIT 2016

The Oracle Big Data + Analytics User Conference

January 26-28, 2016

Oracle Spatial Summit + YesSQL Summit

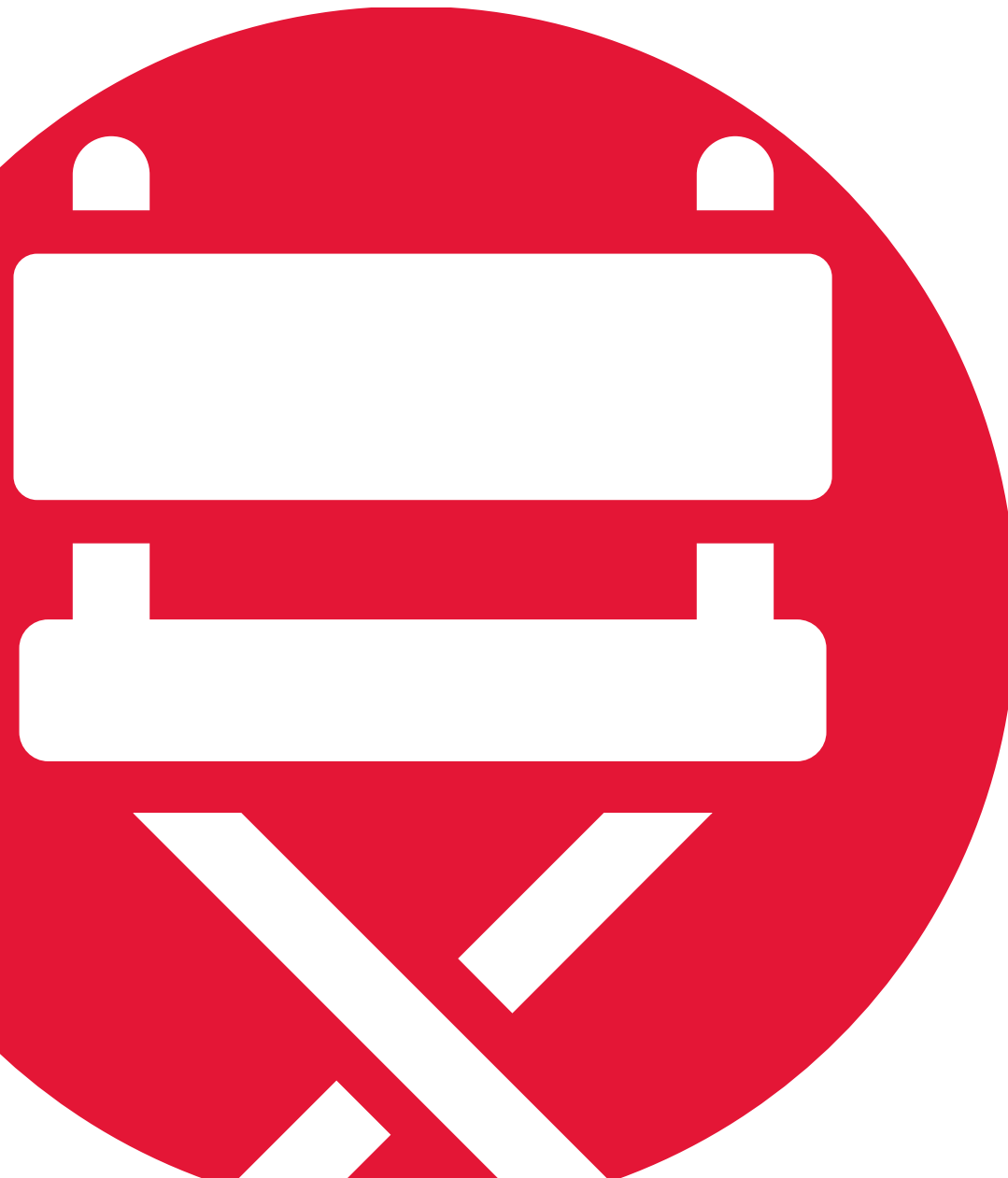
[Home](#) [Speaker Resources](#) [Sessions](#) [Agenda](#) [Sponsorship](#) [Hotel and Travel](#) [Registration Pricing](#) [Registration](#)



ORACLE
SPATIAL AND GRAPH

SPECIAL
INTEREST
GROUP (SIG)





Agenda:

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



Safe Harbor Disclaimer:

THE FOLLOWING **PREVIEW** HAS BEEN APPROVED FOR
ALL AUDIENCES

BY THE MOTION PICTURE ASSOCIATION OF AMERICA, INC.

THE FILM ADVERTISED HAS BEEN RATED

PG-13	PARENTS STRONGLY CAUTIONED 
Some Material May Be Inappropriate for Children Under 13 [®]	
VIOLENCE, DRINKING, LANGUAGE, BLOOD AND GORE, SOME THEMATIC ELEMENTS, STYLIZED ACTION SEQUENCES.	

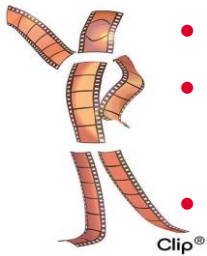
www.filmratings.com

www.mpaa.org



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 circuit-wide **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.

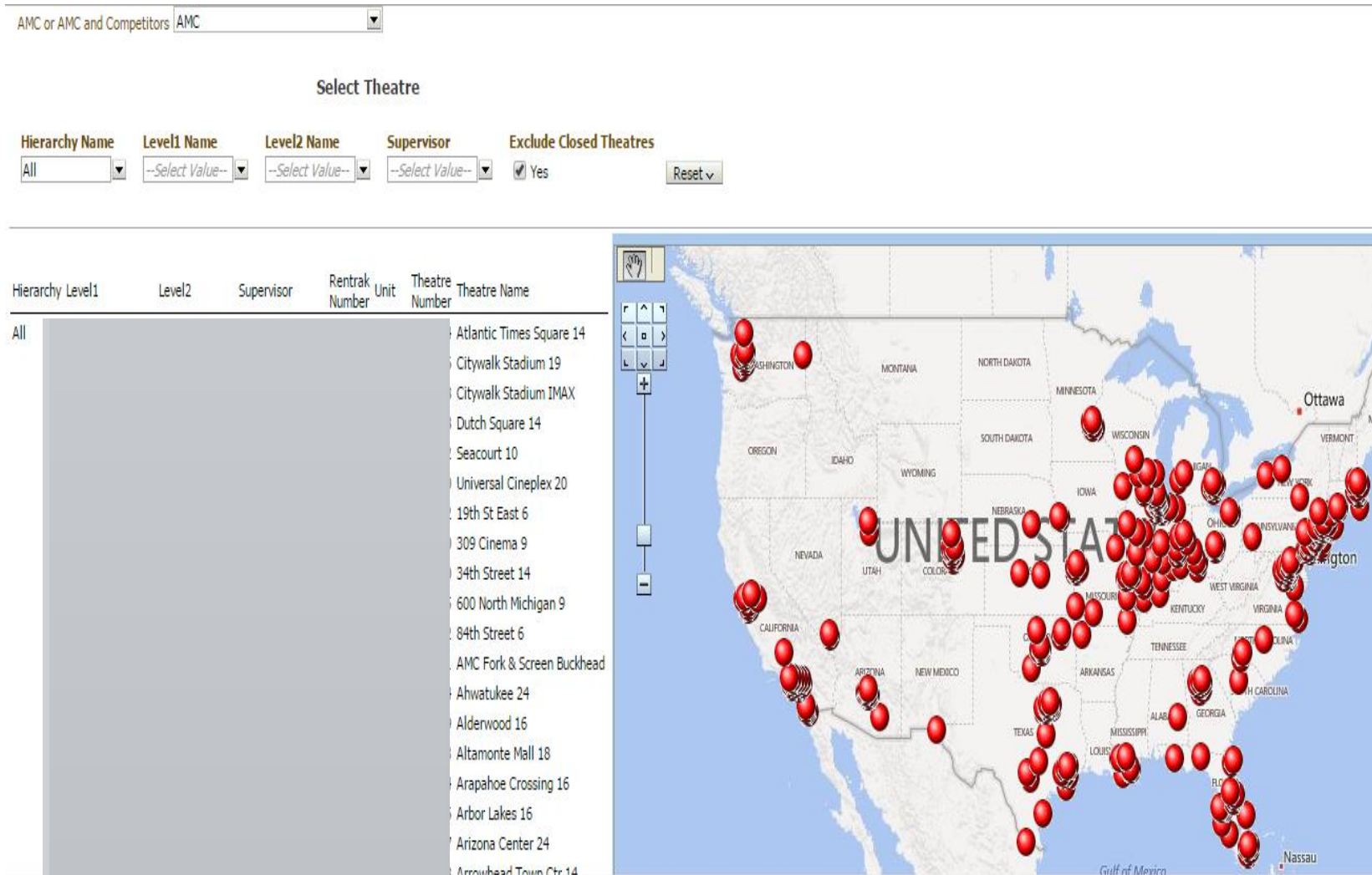


AMC Facts, by the **NUMBERS**

- 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 industry-leading 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

AMC or AMC and Competitors

Select Theatre

Hierarchy Name Level1 Name Level2 Name Supervisor Exclude Closed Theatres
 ☒ Yes

Hierarchy	Level1	Level2	Supervisor	Rentrak Number	Unit	Theatre Number	Theatre Name
Operations DIT	VF					600 North Michigan	9
						AMC Fork & Screen Buckhead	
						Bridgewater Commons	7
						Coral Ridge	10
						Essex Green	9
						Painters Crossing	9
						Southlands	16
						Waterfront	22
						West Olive	16
						Yorktown	18
						Disney Springs	24
						Easton Town Center	30
						Esplanade	14
						Framingham	16
						Fullerton	20
						Grapevine Mills	30
						Marina Dit	6
						Marina Marketplace	6
						Menlo Park	12



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 beats emotions”

– Sean Rad, Founder of Ad.ly



Data Strategy

Data Management

- Data Delivery - 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.
- EDW - 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...



"Torture the data, and it will confess to anything"

— Ronald Coase, Economics, Nobel Prize Laureate



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

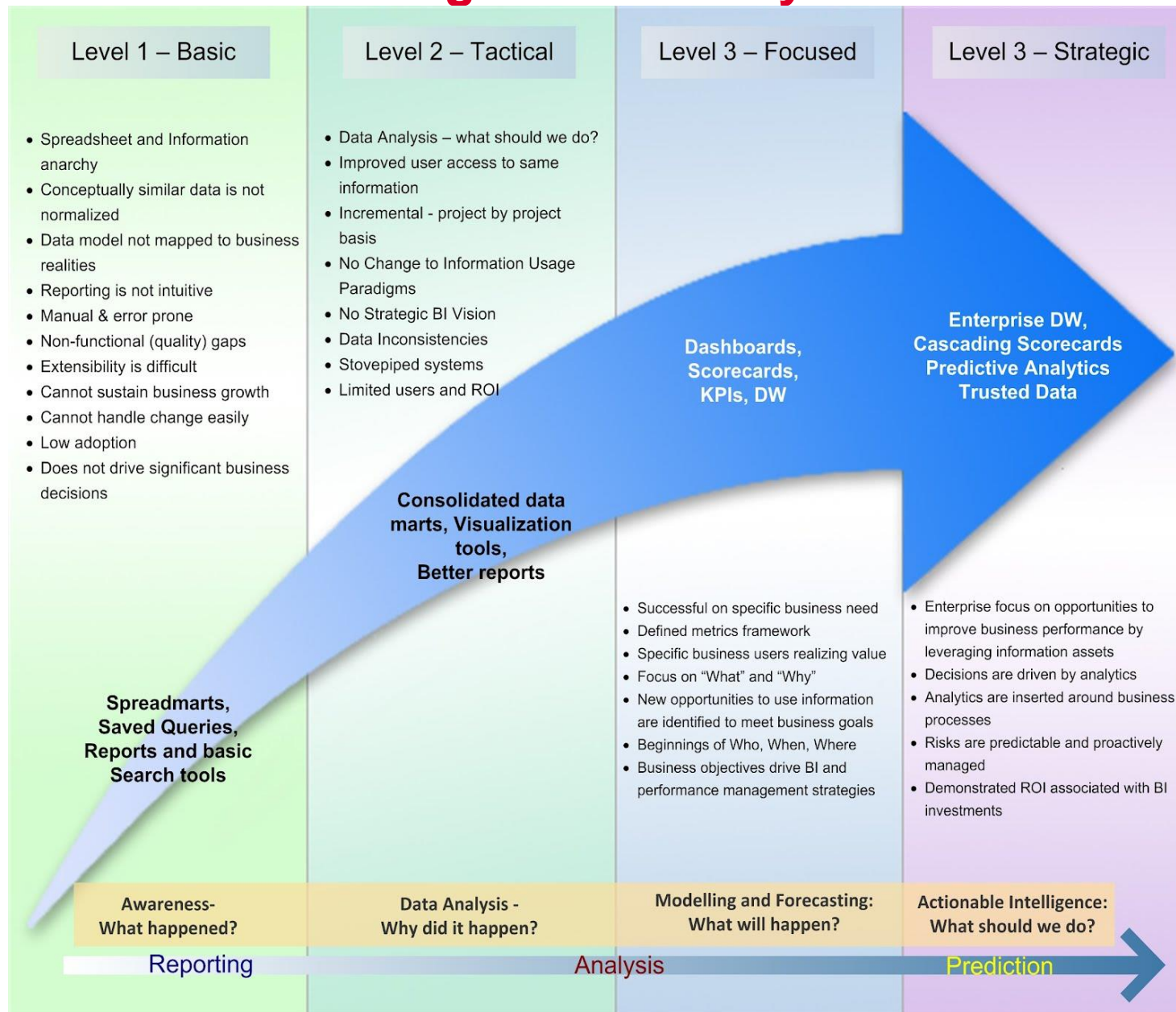
2014 Geospatial Maps

2015 Hyperion Financial Management

2015 Retire Hyperion Enterprise!



AMC Business Intelligence Journey



Solution Sets

- Maps
- Graphs
- BI Dashboards



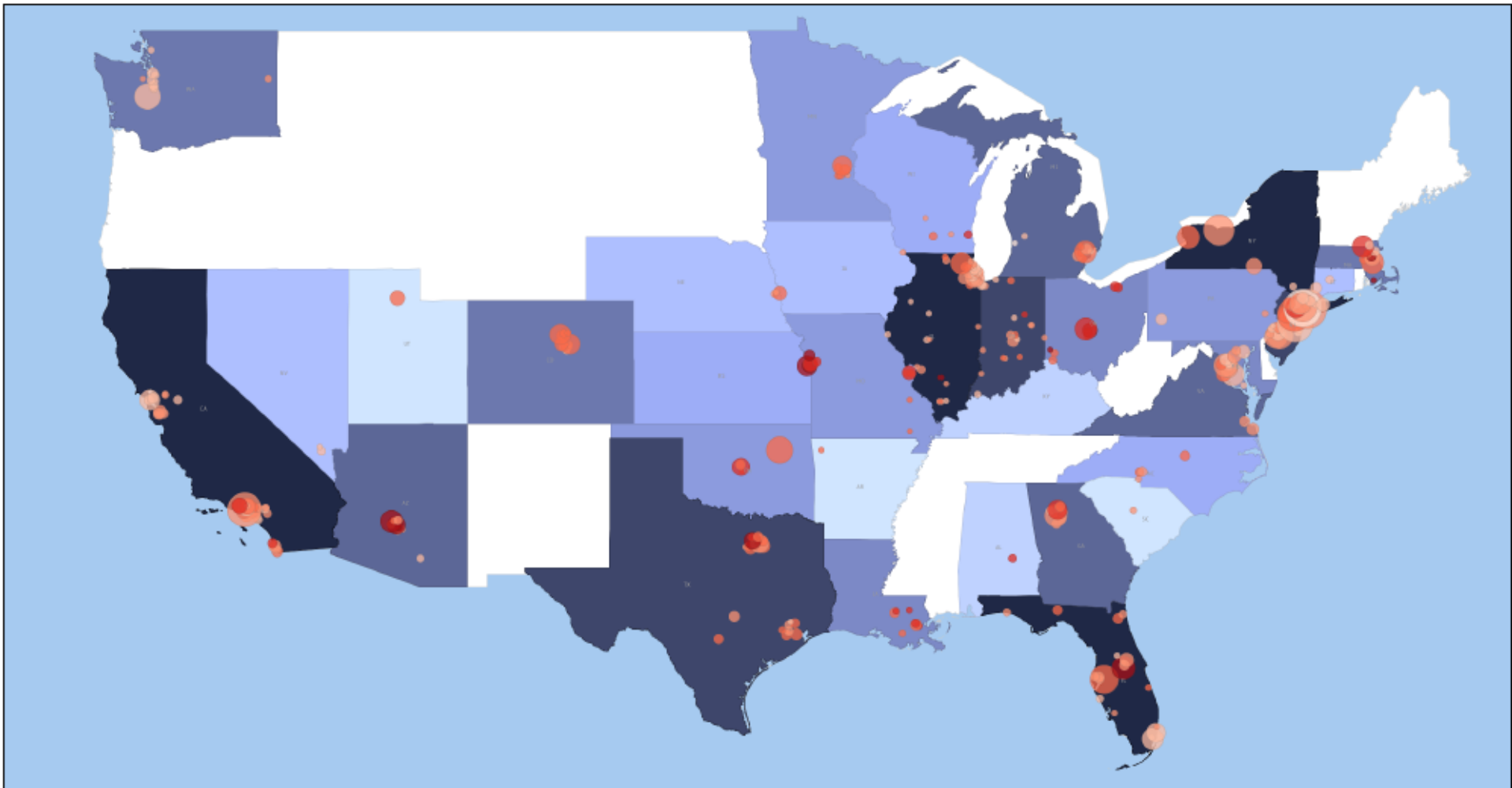
Video Wall



Video Wall



Maps at AMC – Part of the Solution



Big Dots High Web Sales

High web sales



Low web sales



Red Dots High AMC %

High AMC % of
Sales



Low AMC % of Sales



Total Ticket Sales by State

Higher sales



Lower Sales



Operations Summary - Legacy

HP7611

SEGMENT: US AND CANADA

QTR / CY: Q3-20??

WEEK ENDED: 11/12/20??

SCALE - [FREQ]: 000's - [MTD]

	GUEST CONNECTIONS												SERVICE RECOVERY		OTHER INDICATORS							
	Overall Satisfaction		GC SCORE		FRIENDLY		CLEAN		QUICK		RECOVERY		RECOMMEND		RETURN		VALUE (DIT)		VALUE (TRAD)			
	DLY = 2.5	DPL = 0.5	CY	DLY	CY	DLY	CY	DLY	CY	DLY	CY	DLY	CY	DLY	CY	DLY	CY	DLY	CY	DLY	CY	DLY
	99.9		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	NOV	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	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	99.9	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						
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	91.1	93.2	99.9	100.0	-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	97.0	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	79.1	98.0	99.1	97.0	100.0	92.0	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	99.1	100.0	99.8	1.1	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	99.9	91.1	91.9	99.1	99.9	99.1	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	99.9	99.9	100.0	99.9	100.0	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	99.9	99.2	100.0	91.9	91.2	99.9	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	99.9	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							99.2	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							90.9	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	99.9	97.9	97.0	90.7	100.0	99.1	99.8	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	91.9	92.0	91.8	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	99.9	99.9	100.0	99.1	100.0	100.0	99.9	99.2	99.9	1.0	100.0	1.1		
FILM EXPERIENCE / ENVIRONMENT	97.9	91.7	99.9	99.9	99.2	90.8	100.0	91.0	91.0	99.9	91.0	100.0	91.9	100.0	99.2	91.0	99.9	1.8	99.9	1.7		
Overall Picture Quality	97.9	91.9	99.2	99.1	99.8	71.0			100.0	100.0	99.2	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	99.9	99.9	91.2	92.0	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	99.7	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	91.1							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							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	99.9							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	99.2	99.9	99.9	100.0	79.9	99.9	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		90.1	99.1	99.2	100.0	99.8	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	99.2	99.2	90.1	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 Conc Items*	90.1	91.0	90.7		99.7	99.2	99.1	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	92.0	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	99.9	99.2	99.1	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	90.0	91.9	90.8	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	90.8	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	92.0	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	92.0	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		

Operations Summary– New

Executive Summary

1/13/2015 6:40:00 PM All

[Print Entire Dashboard To PDF](#)

Year: 2014
 Time Period: YTD
 Metric: OS
 Hierarchy: All
 Apply Reset

Selected Years:

- 2014 Selected Year
 2013 Prior Year

Conditional Formatting Colors:

- OS \geq 100% of plan
 PPM < last year's DLY
 OS > 95% and < 99% of plan
 PPM > 101% and < 105% of last year's DLY
 OS < 95% of plan.
 PPM > 105% of last year's DLY

Circuit OS

99.9

DPL: + 0.4 DLY: + 2.4



Non-DIT OS

99.9

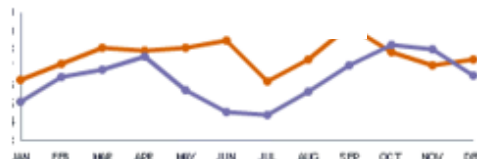
DPL: + 0.8 DLY: + 2.5



Core OS

99.9

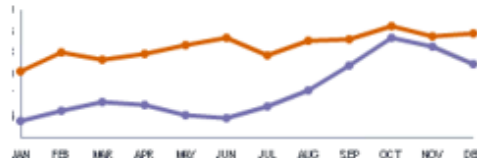
DPL: + 0.2 DLY: + 1.3



Recliner OS

99.9

DPL: + 3.2 DLY: + 6.5



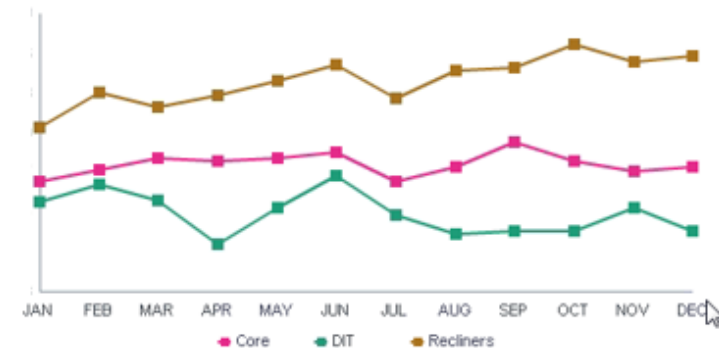
DIT OS

99.9

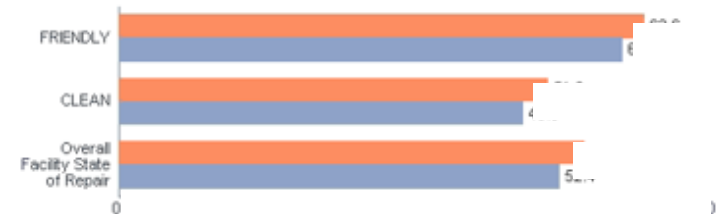
DPL: + 0.3 DLY: + 0.8



OS by Concept



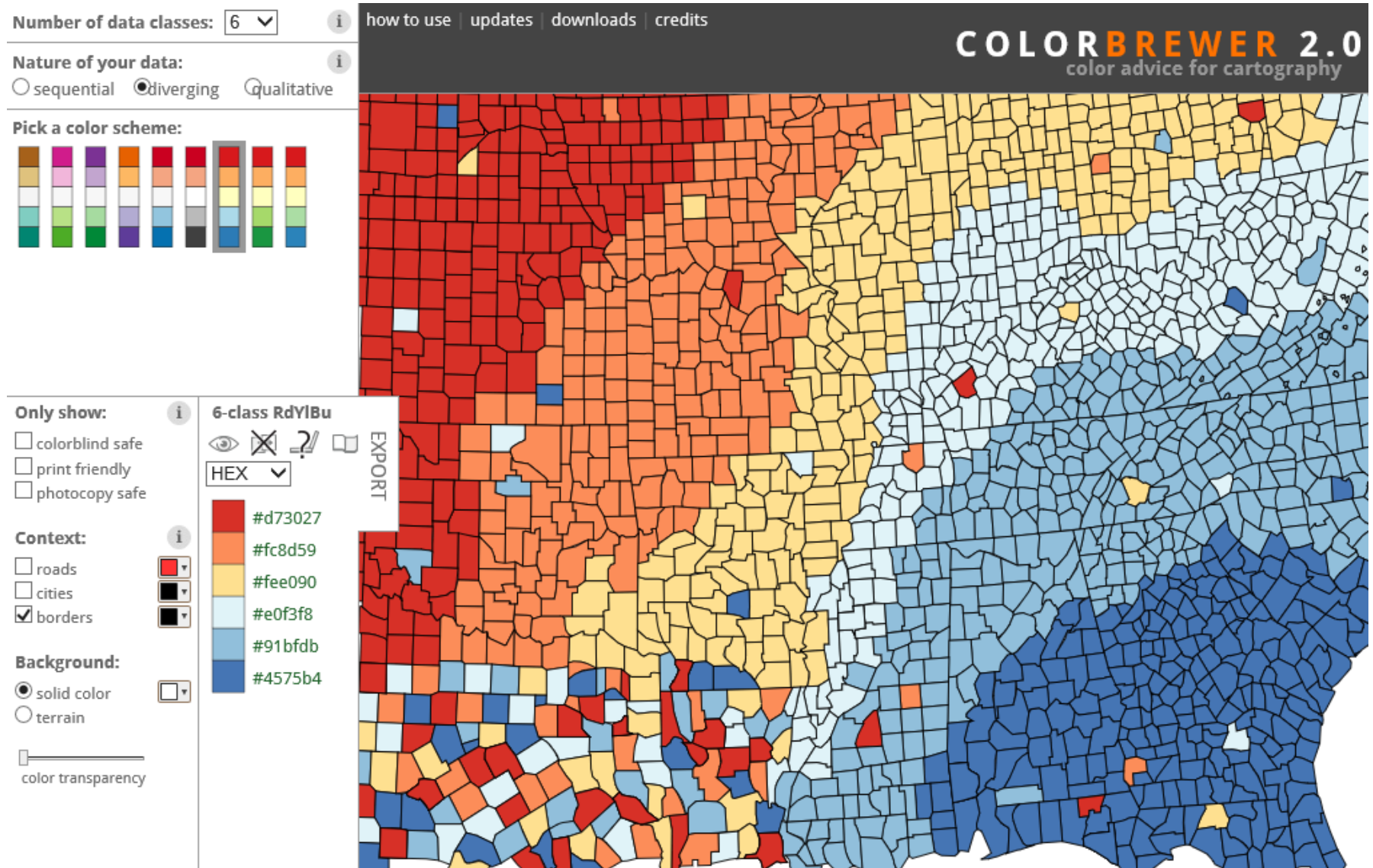
OS Key Drivers



DIT Key Drivers



colorbrewer2.org



Food & Beverage Analytics



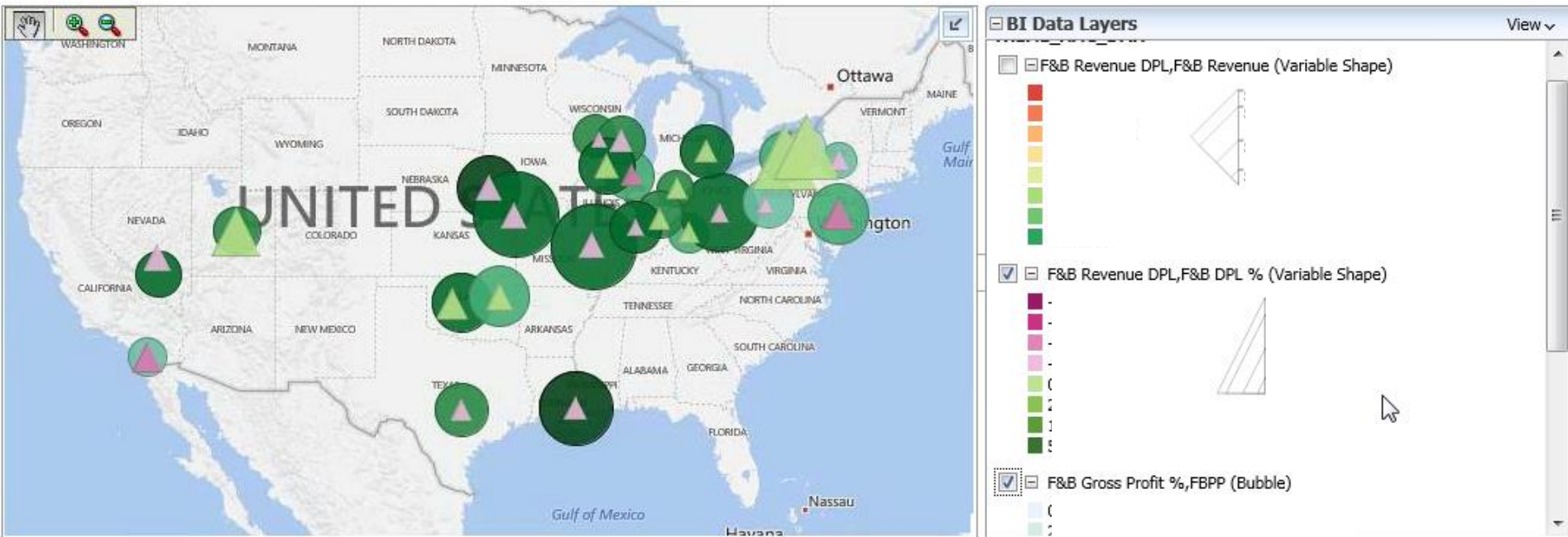
Food and Beverage Analytics



Food and Beverage Analytics



Food and Beverage Analytics



DMA AMC Name	F&B Revenue DPL	FBPP	F&B Gross Profit %	F&B Cost Impact	F&B Revenue	F&B DPL %
Atlanta, GA						
Austin, TX						
Baltimore, MD						
Baton Rouge, LA						
Binghamton, NY						
Boston, MA						
Buffalo, NY						
Cedar Rapids, IA						
Champaign, IL						

Text with Maps

Tulsa, OK	
Washington, DC	
West Palm Beach, FL	

[Refresh](#) - [Print](#) - [Export](#) - [Copy](#)



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 chosen. 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.

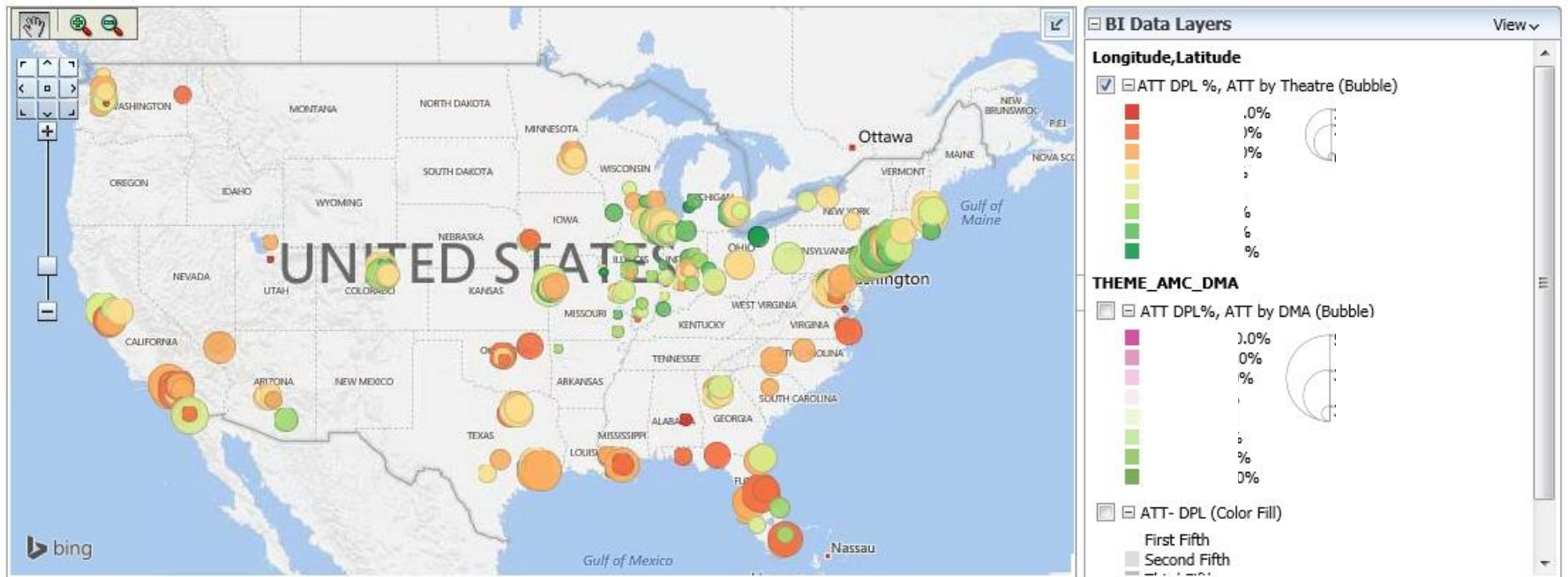
The bottom layer shows the geographic outline for each DMA. Darker areas have higher Difference to Plan concession revenue for the chosen time period.

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

National Map

Film Year * From Hierarchy Name Level1 Name Level2 Name
Time Period * To Unit No

Large Attendance USA DMA Maps



[Refresh](#) - [Print](#) - [Export](#) - [Copy](#)

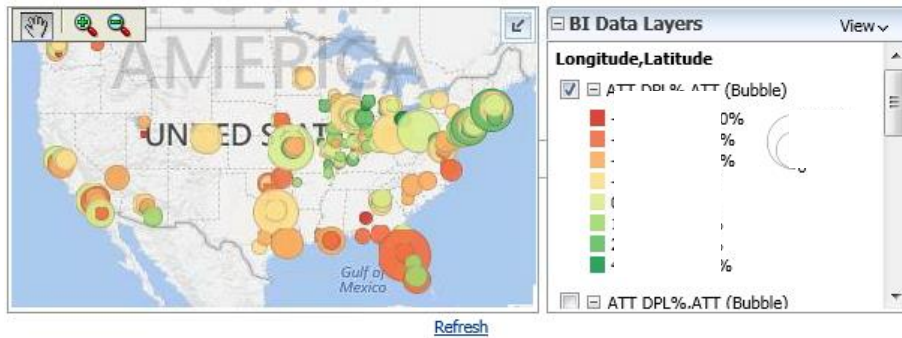
National Map with Top 3 Markets

Film Year * From * To

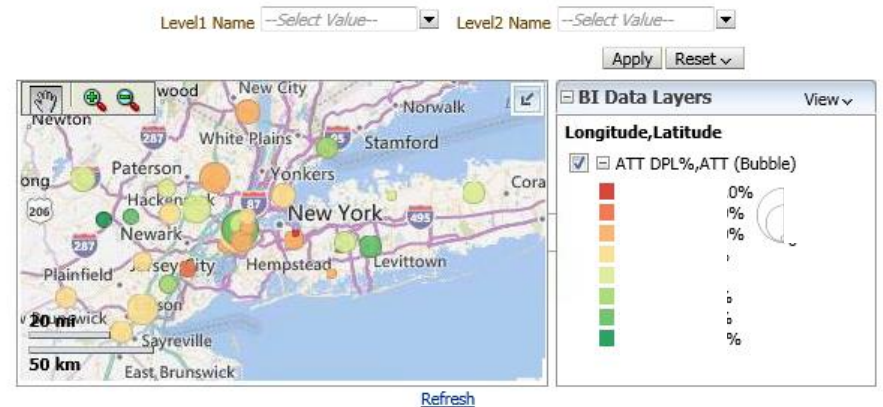
Time Period

Hierarchy Name

Attendance USA DMA Maps

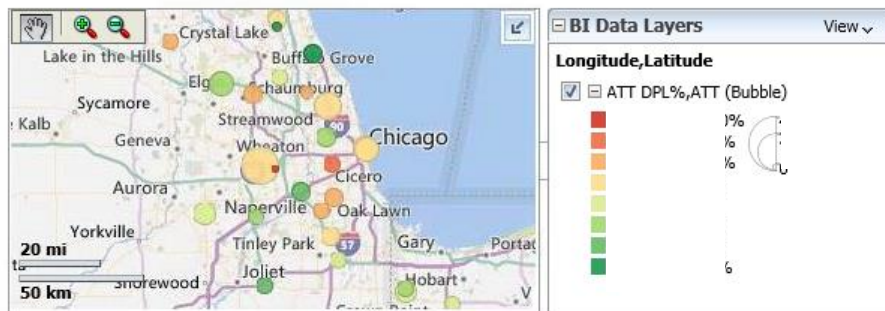


Level1 Name Level2 Name

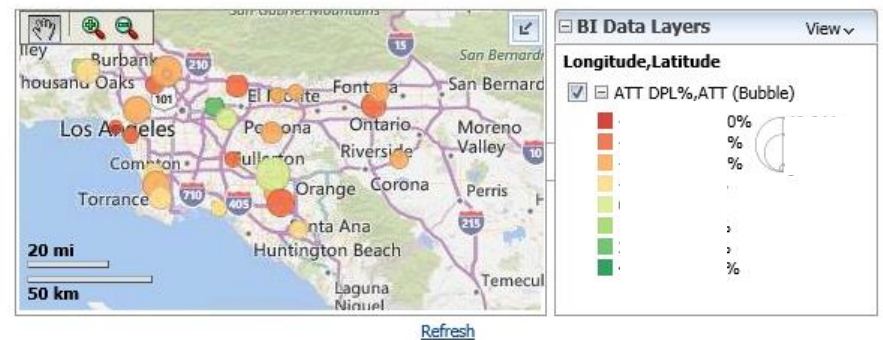


Level1 Name Level2 Name

Attendance Chicago by Theatre

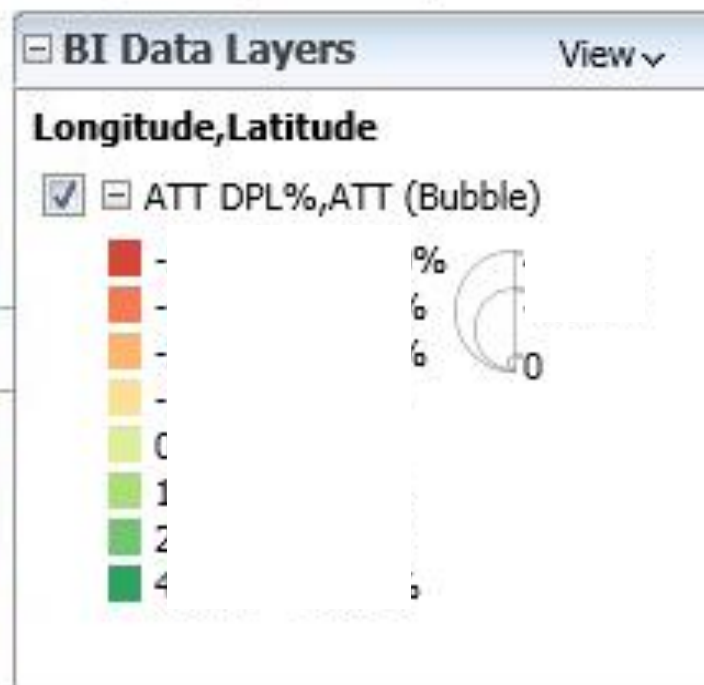


Attendance Los Angeles by Theatre



DMA AMC Name	Theatre Name	Latitude	Longitude	ATT DPL	ATT	ATT DPL%
Atlanta, GA	AMC Fork & Screen Buckhead	33.85	-84.37			

Markets



Markets

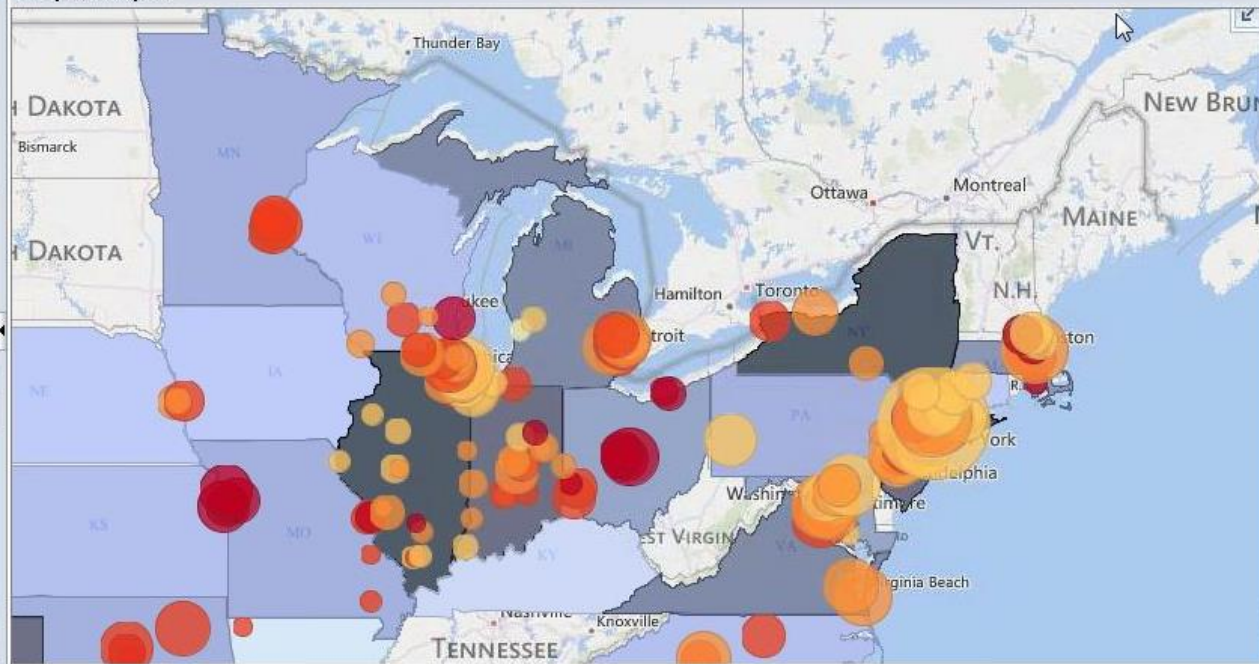
Business Intelligence

Search All Advanced Administration Help Sign Out

Home Catalog Favorites Dashboards New Open Signed In As weblogic

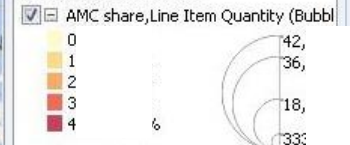
Prompts Advanced

Compound Layout



BI Data Layers View

Longitude, Latitude



STATES

- ☒ Total Ticket Sales Ranking by State (Color Fill)
 - First Tenth
 - Second Tenth
 - Third Tenth
 - Fourth Tenth
 - Fifth Tenth
 - Sixth Tenth
 - Seventh Tenth
 - Eighth Tenth
 - Ninth Tenth
 - Last Tenth
- ☐ Web Sales Ranking by State (Color Fill)
 - First Tenth
 - Second Tenth
 - Third Tenth
 - Fourth Tenth
 - Fifth Tenth
 - Sixth Tenth
 - Seventh Tenth

Selection Steps

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



CINEMA SUITES®



18+

For guests 18 and over.



Questions?

