#### **IBM** Software Universe

Smarter Businesses, Smarter Industries.

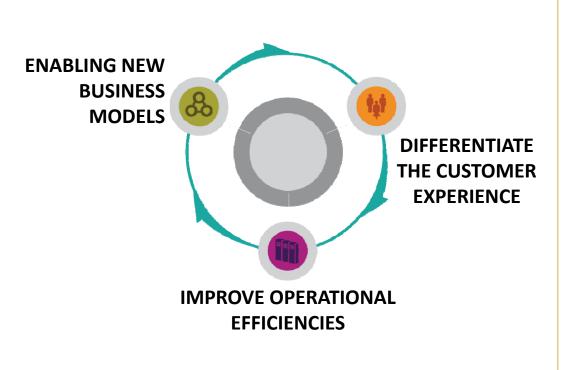
8th March 2011, Pan Pacific, Dhaka.



# **IBM Business Analytics**

Rajesh Shewani Technical Sales Leader – India/SA rshewani@in.ibm.com

#### Smarter Telecom addresses *three* key issues

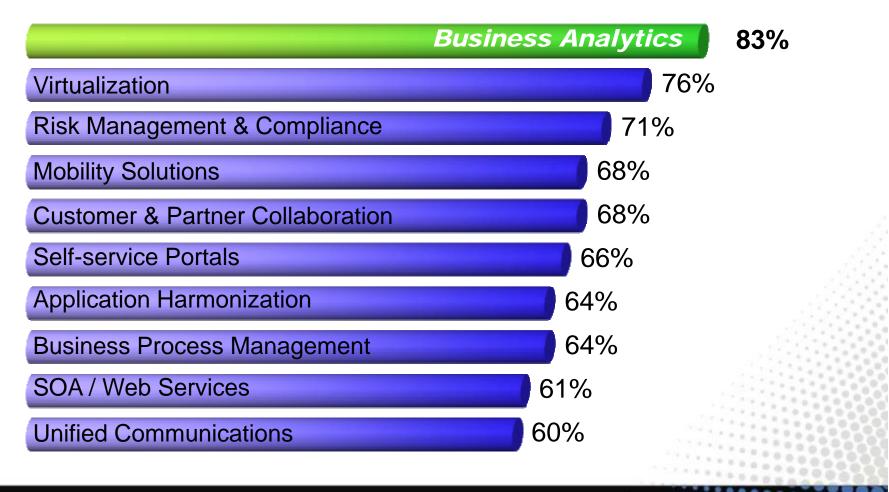




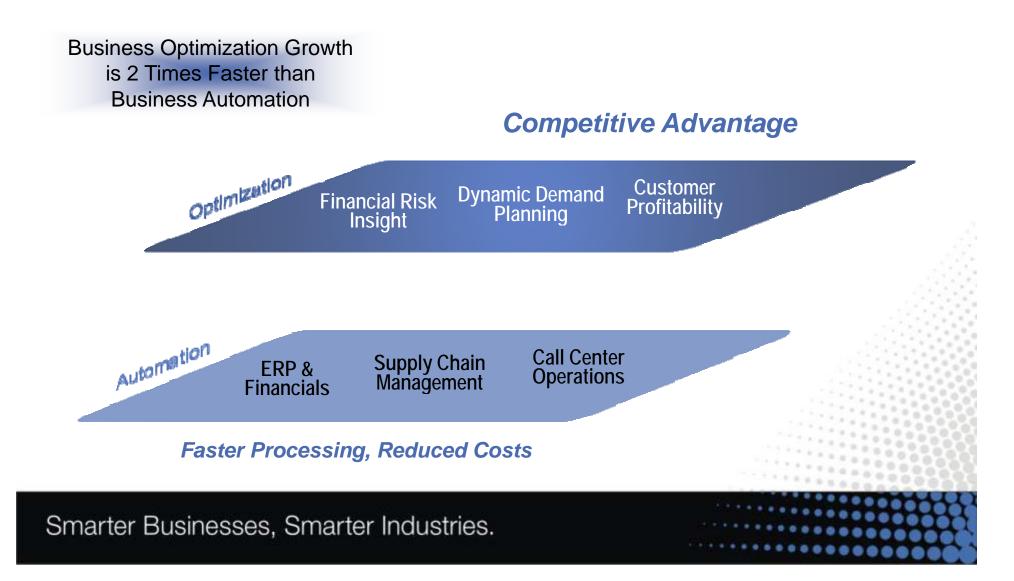
- IBM Telecom Frameworks: Bridging the gap between business & IT
- Data Management for Telecom
- Networks: Fault and Performance Management
- Effective Software Delivery for Telecom
- Access the information you need anytime, anywhere
- Optimizing Business Processes using Filenet BPM
- Customer Churn & Insight for Telecommunications
- Dynamic Business Process Management







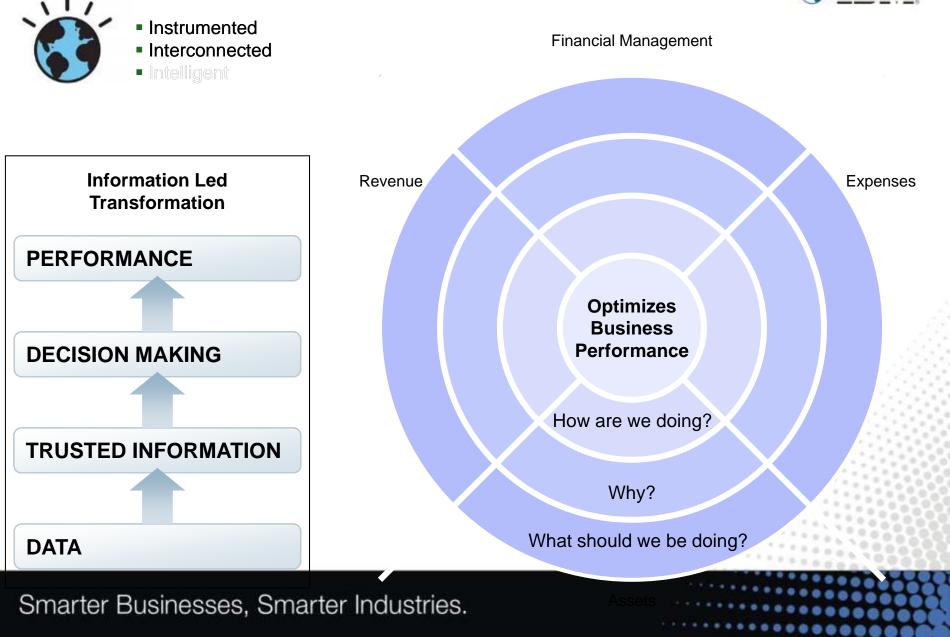
#### New Investments Increasingly Focus on Optimization Organizations Striving for Competitive Advantage





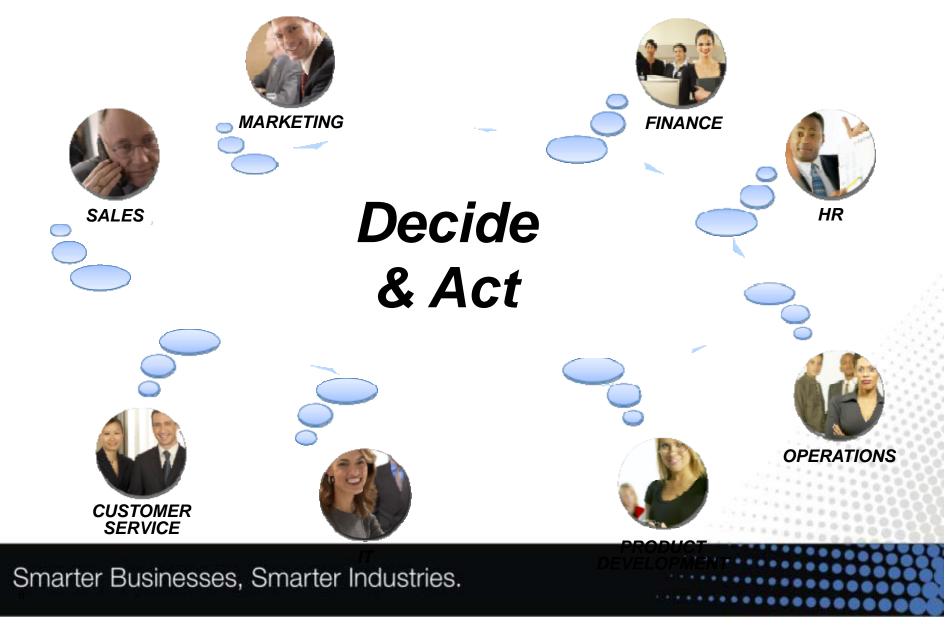
# **Business Analytics**







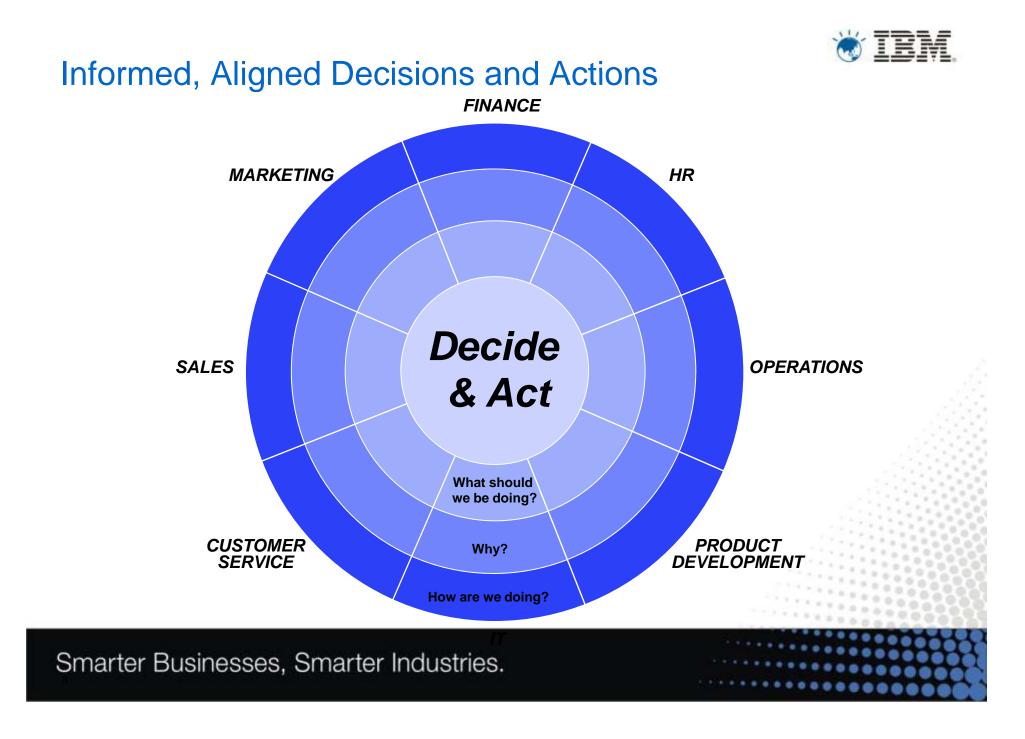
#### **Optimizing Business Performance**

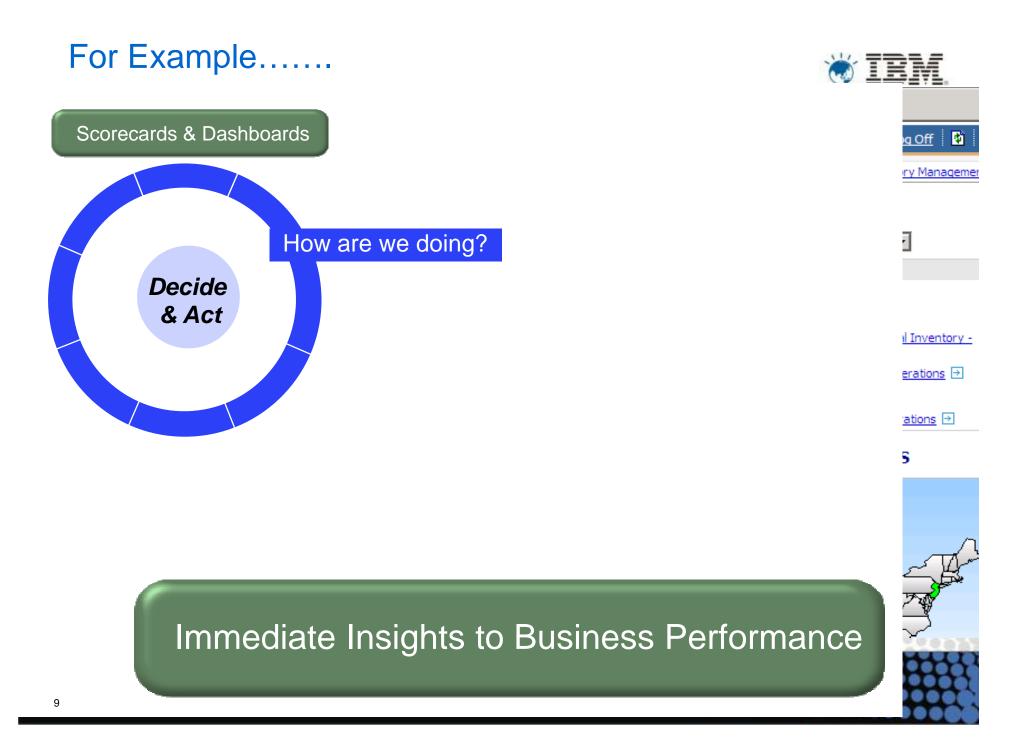




#### **Optimizing Business Performance**

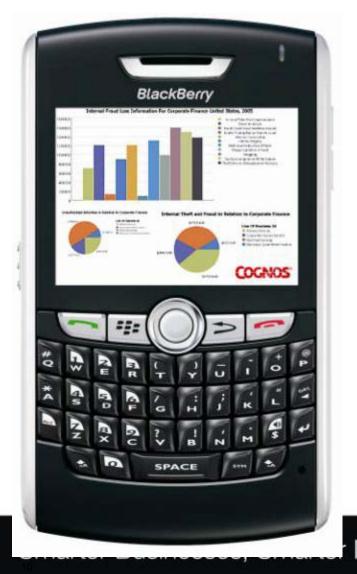








#### **Example: Cognos Mobile**

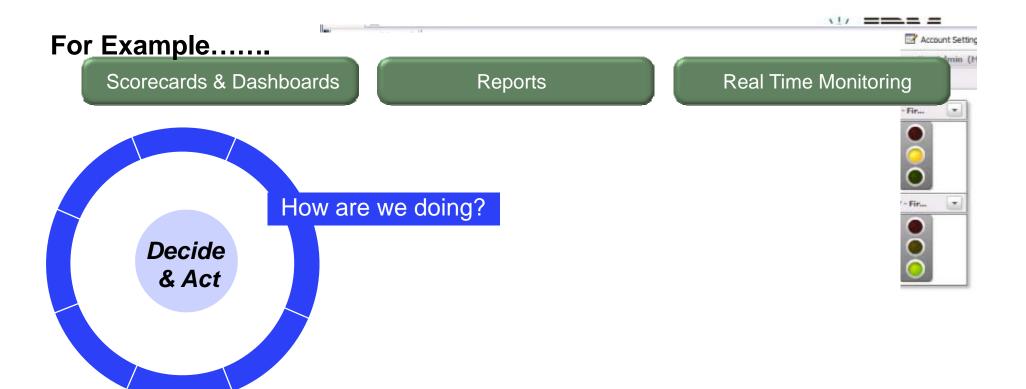


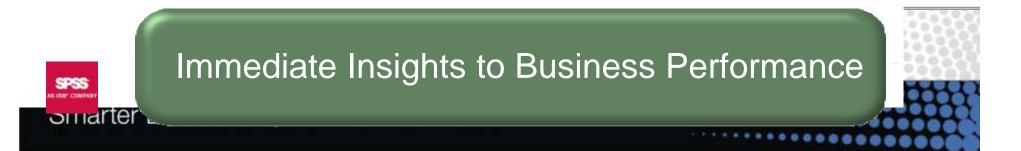
# Delivers Cognos 8 BI content to mobile users

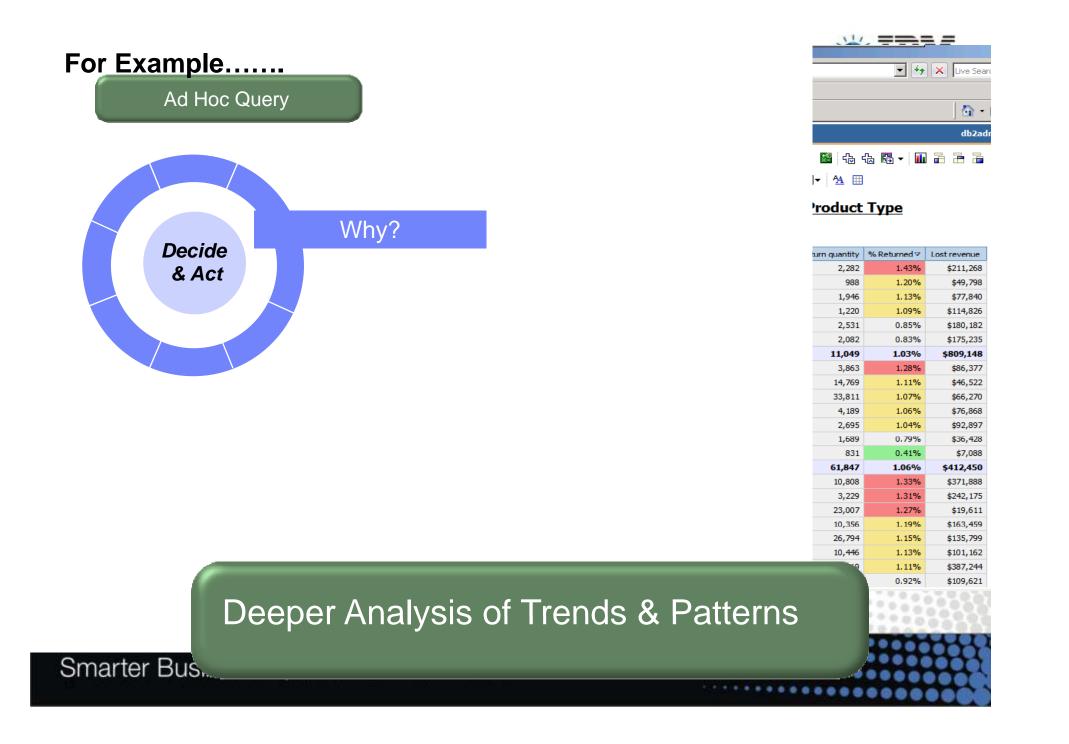
- Can view and interact with the exact same reports that have been authored for the Web, PDF...
- Leverages the Cognos 8 platform, including security
- Rich native client purpose-built for BlackBerry, Windows Mobile, Symbian

Industries.





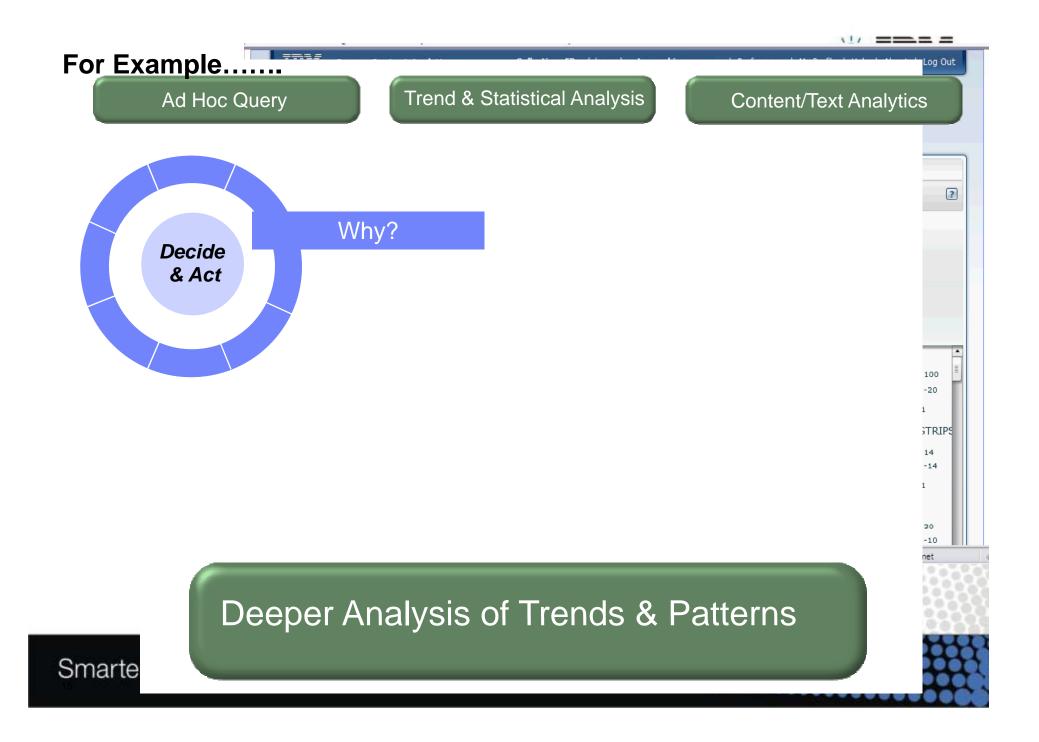


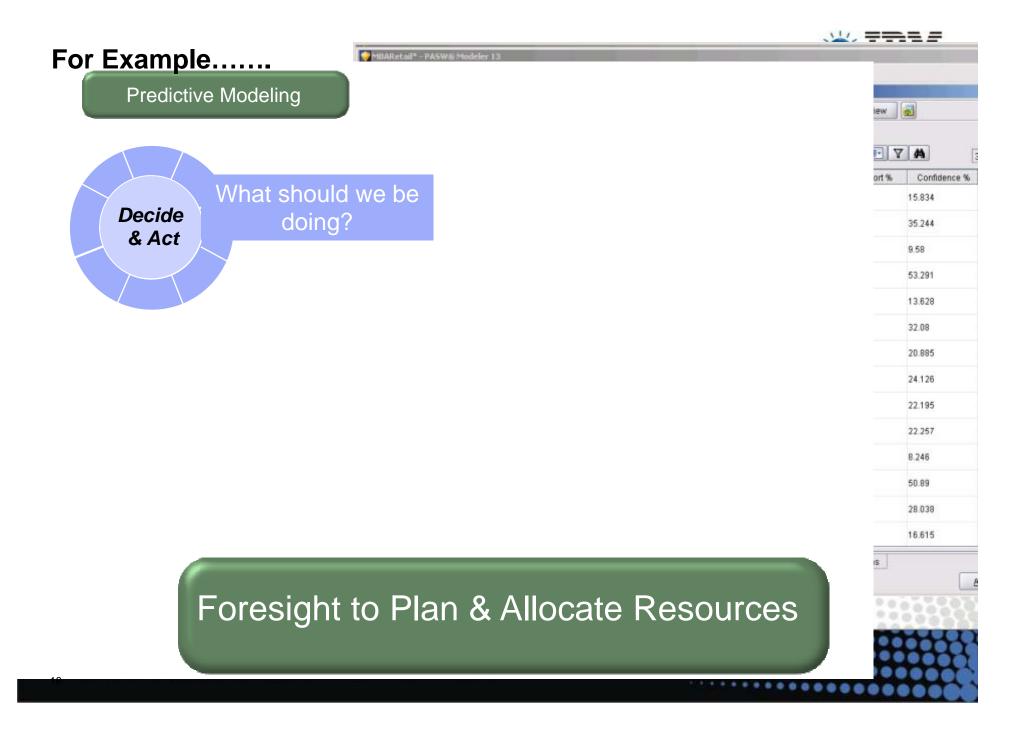


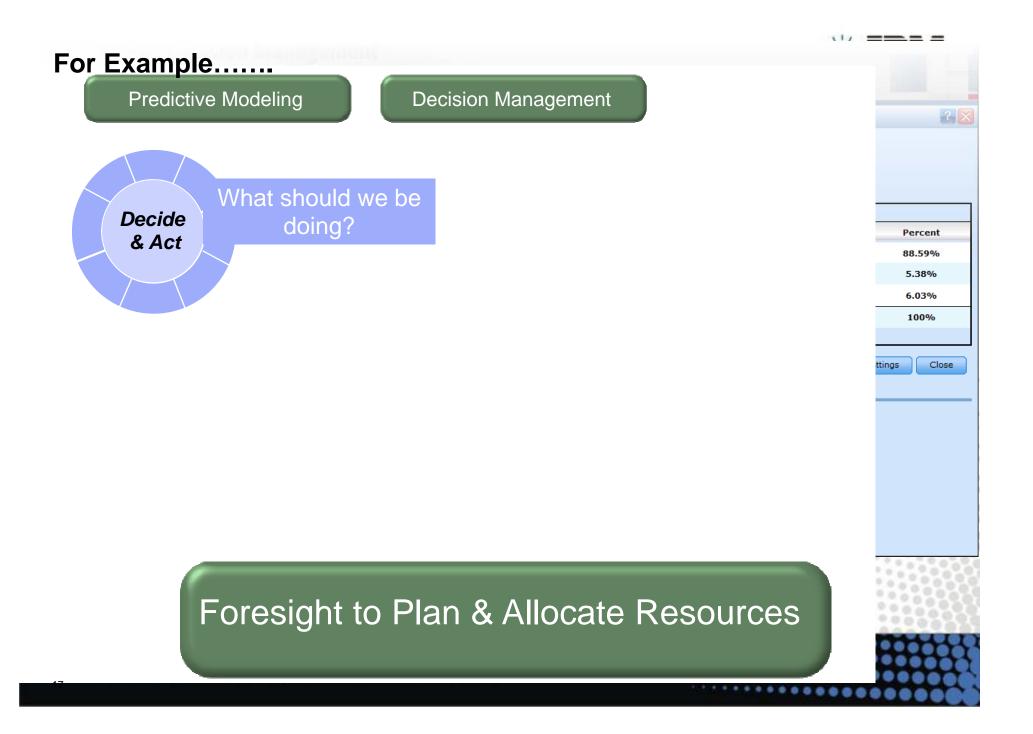


# Deeper Analysis of Trends & Patterns

Smarter Bus.



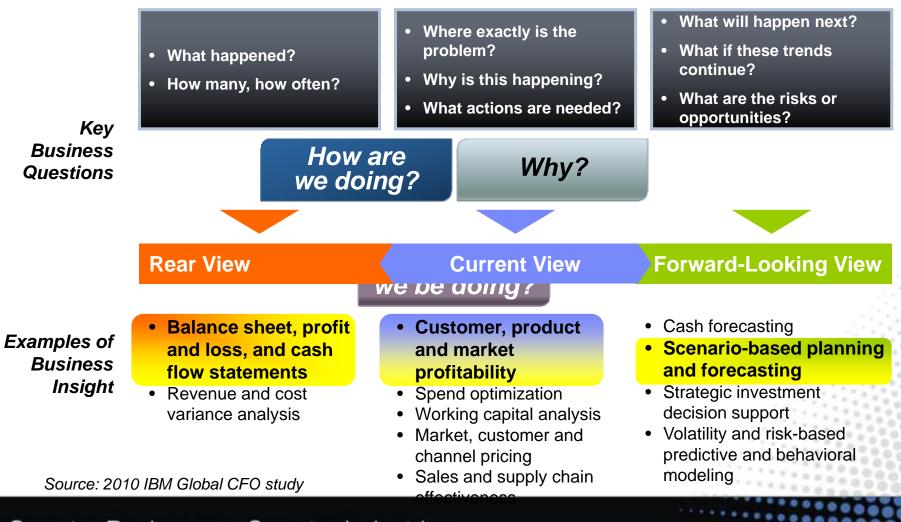








### **Three Questions for Business Insight**



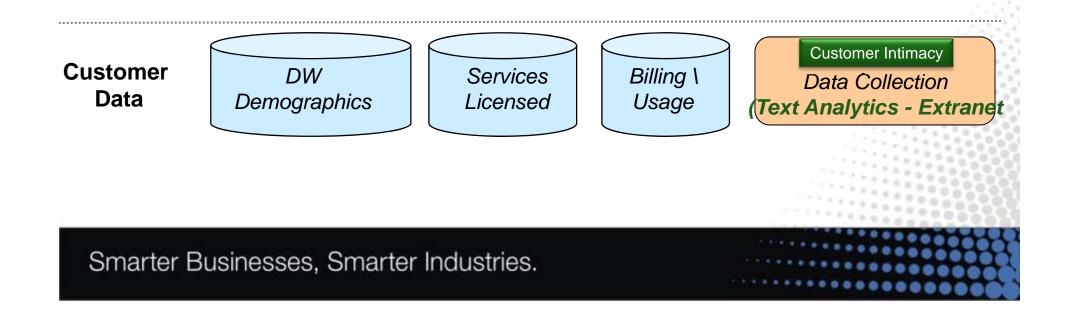


#### **Telecom solution areas**



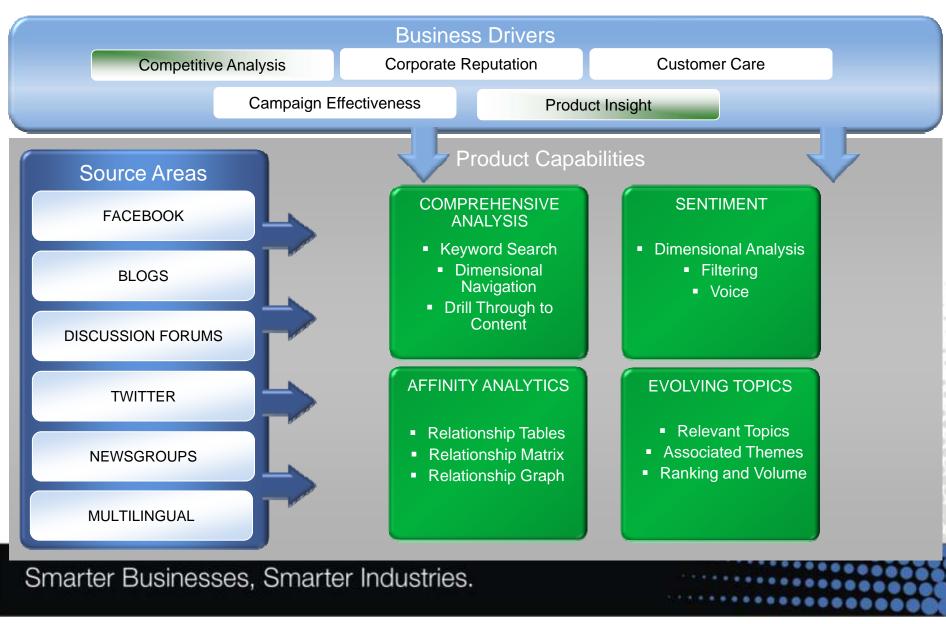
#### **IBM Customer Solutions**





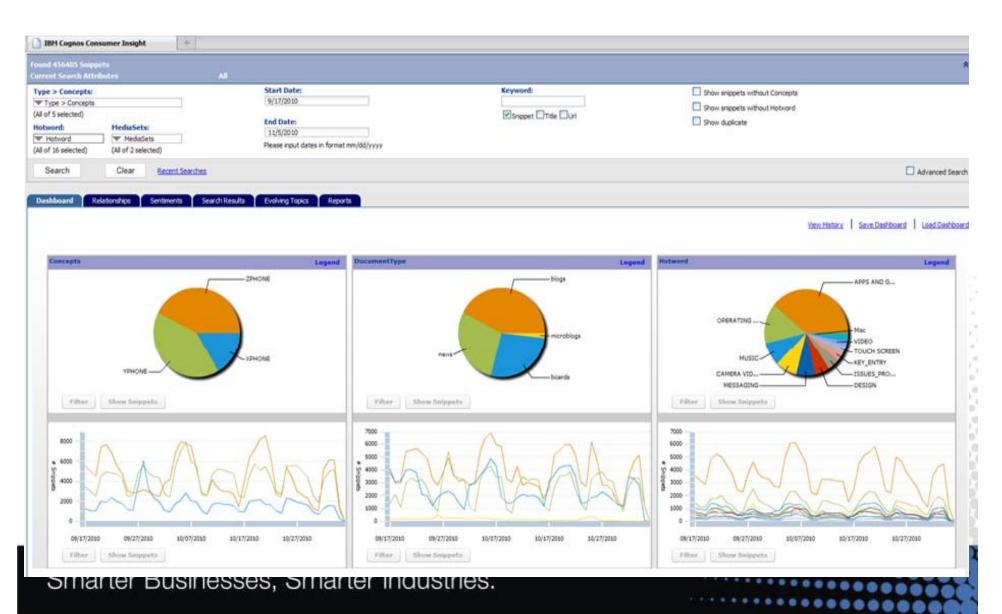
# **IBM Cognos Consumer Insight**







### **IBM Cognos Consumer Insight**



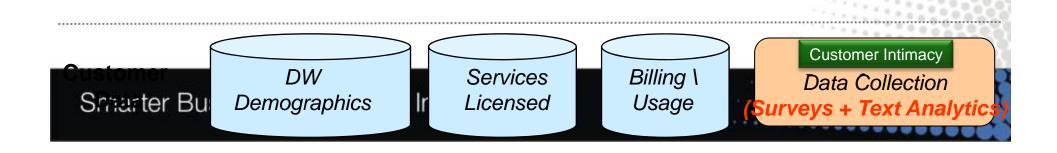


# **IBM Cognos Consumer Insight**

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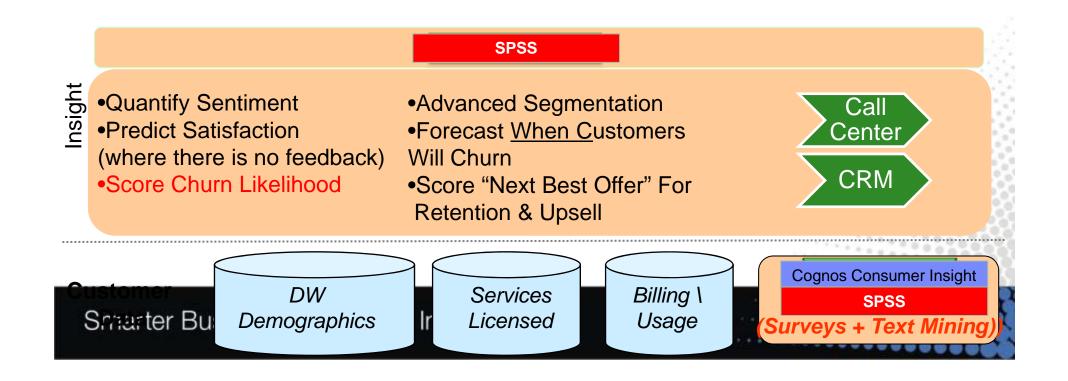
#### **IBM Customer Solutions**





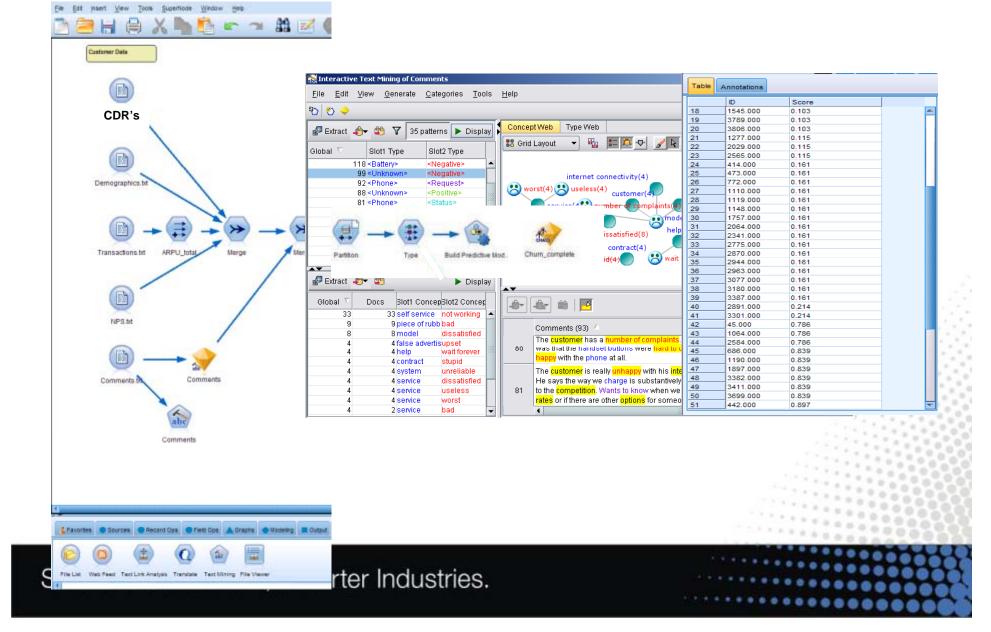
#### **IBM Customer Solutions**







#### **SPSS Predictive Models**





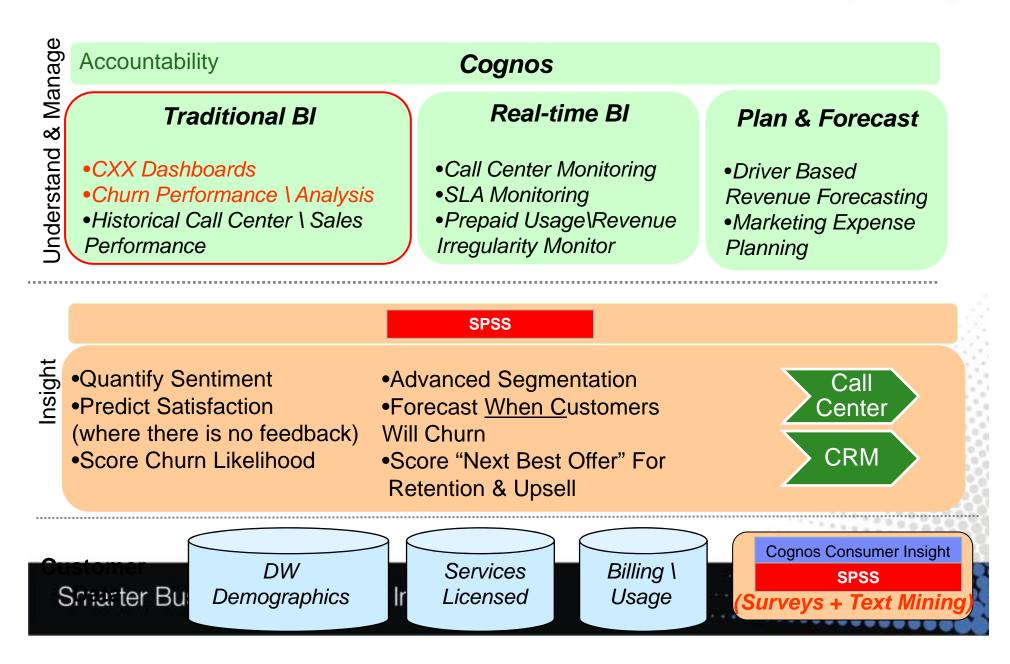
# Predictive Analytics determines propensity to churn for every single customer



18 19	1545.000	Score	
19	1345.000	0.103	4
	3789.000	0.103	
20	3806.000	0.103	
21	1277.000	0.115	
22	2029.000	0.115	
23	2565.000	0.115	
24	414.000	0.161	
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30	1757.000	0.161	
31	2064.000	0.161	
32	2341.000	0.161	
33	2775.000	0.161	
34	2870.000	0.161	
35	2944.000	0.161	
36	2963.000	0.161	
37	3077.000	0.161	
38	3180.000	0.161	
39	3387.000	0.161	
40	2891.000	0.214	
41	3301.000	0.214	
42	45.000	0.786	
43	1064.000	0.786	
44	2584.000	0.786	
45	686.000	0.839	
46	1190.000	0.839	
47	1897.000	0.839	
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# **Telco Analytics Solution Approach**



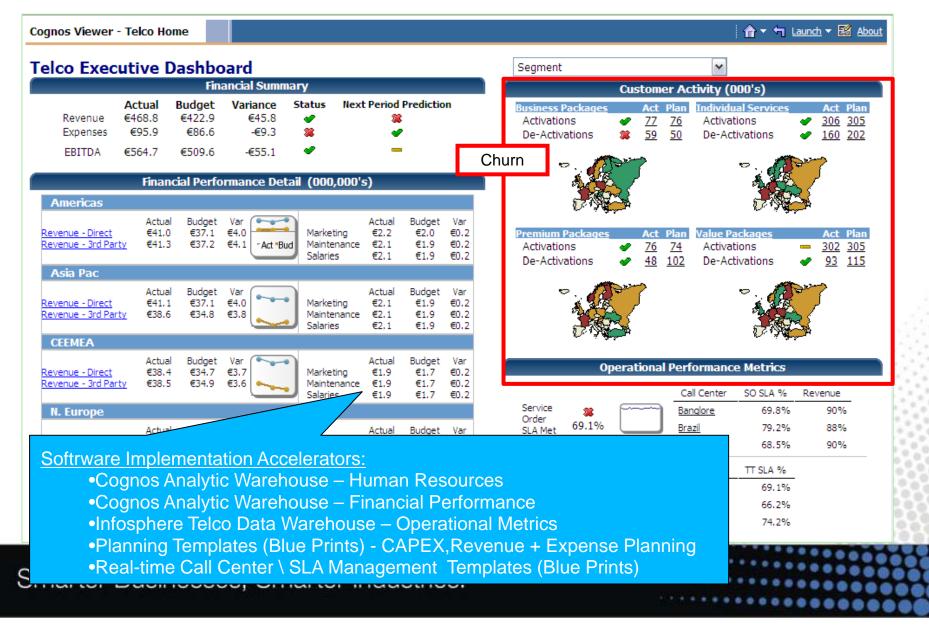








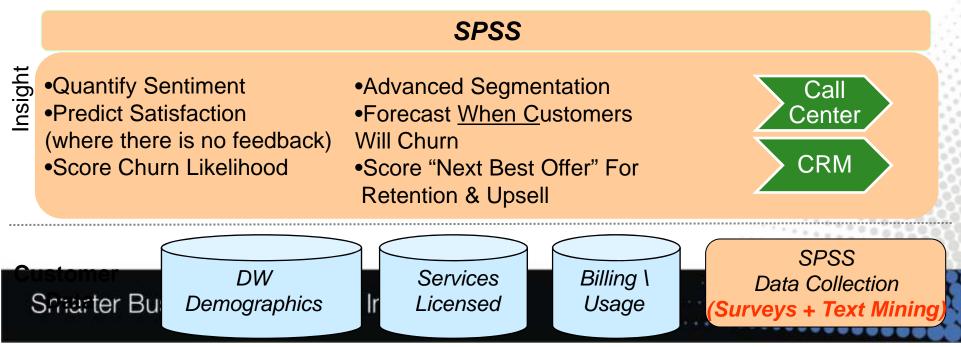
#### **Telco Enterprise Dashboard**



# **Telco Analytics Solution Approach**



**Jnderstand & Manage** Accountability Cognos Real-time BI **Traditional BI** Plan & Forecast •CXX Dashboards •Call Center Monitoring Driver Based •Churn Performance \ Analysis •SLA Monitoring **Revenue Forecasting**  Historical Call Center \ Sales •Prepaid Usage\Revenue •Marketing Expense Irregularity Monitor Performance Planning





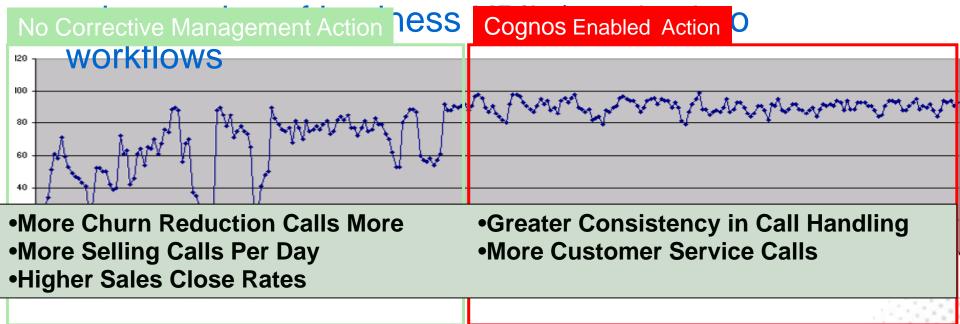
#### **Call Center Optimization**

#### Does saving 1 minute matter?

	All Agent	Hrs of	Days	
	Costs Per	operation	Closed	
Agents	Hour	per day	Per Year	Annual Savings
1	30	24	6	4,308



# 'Before vs. After' Customer Service Center Utilization %



- Overstaffed
- Incorrect allocation of inbound availability vs. outbound activity.

- Managers actively notified and taking corrective action
  - Check with agent when utilization is outside of tolerance (86 % – 92%)
- Throttle outbound activity
- Close Rates increase 44%

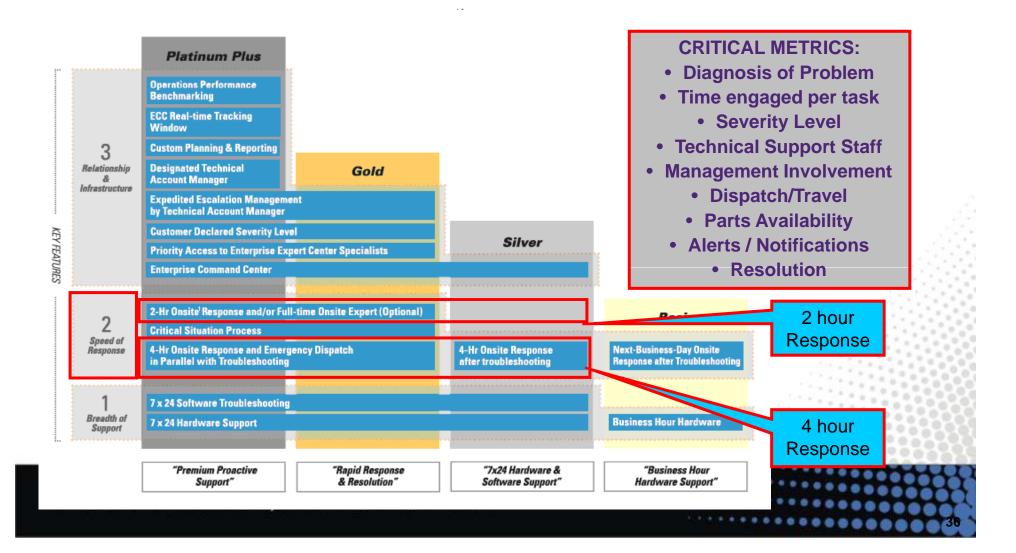






#### SLA Monitoring – Support Response

Deliver Service Level Agreements (SLA's) requiring 2-4 hour response times when critical metrics are only delivered every hour?



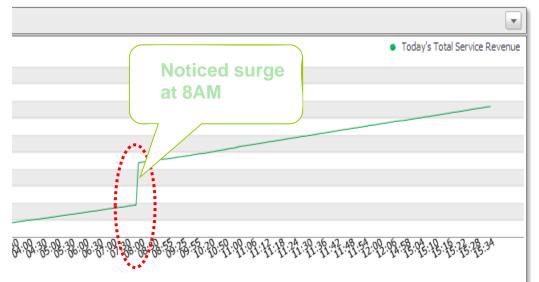
## Prepaid Irregularity Detection (Real-time)



- □Collects and aggregates Service Usage Events (EDRs) and Top Ups
- □Correlation of Revenue to Usage
- Dashboards & Alerts for Usage and Revenue outside expectation
  - By Customer Demographics

Dusiliesse

- By Service Type
- By Region
- By Time



Service Usage Drill	Through by	y Hour an	d Service									Service Usage Drill Through b	oy Geo an	d Service								•
	Hour )	0	1	2	3	4	5	6	7	8	9	SERVICENAME >	CUG	Call Forward	GPRS 14 DAYS	GPRS 7 DAYS	Game Downloads	Hello Tunes	Lifetime 50np	MMS	Missed Call Alerts	Online Ga
CUG		199	196	221	. 74	150				10079		Andhra Pradesh	122	190	149	93	12	141	154	319	275	^
Call Forward		136		109	67	103	199			61	185	Assam	110			12	15	52		59	103	
GPRS 14 DAYS			68	146	99		53	93		103		Goa	102	23	27	77	153	15	99		243	
GPRS 7 DAYS		74	109	74	ł	104		285		51	142	Karnataka	219	204	105	107	305	159	198	92	205	3
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MMS			52		199		63					Rajashthan	269	98	63	385	11	51	95	130		
Missed Call Alerts			203	79		105	186					Tamil Nadu	292		111	109	35		211	12	38	v
SERVIC	ENAME 🔺	<										STATE +	۲									>
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## **Telco Analytics Solution Approach**

Score Churn Likelihood

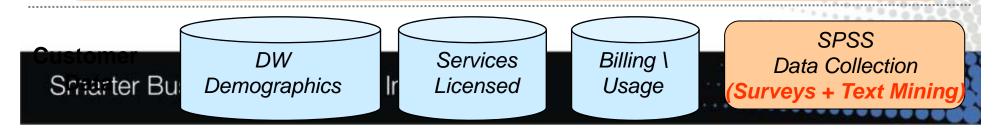


Call

CRM

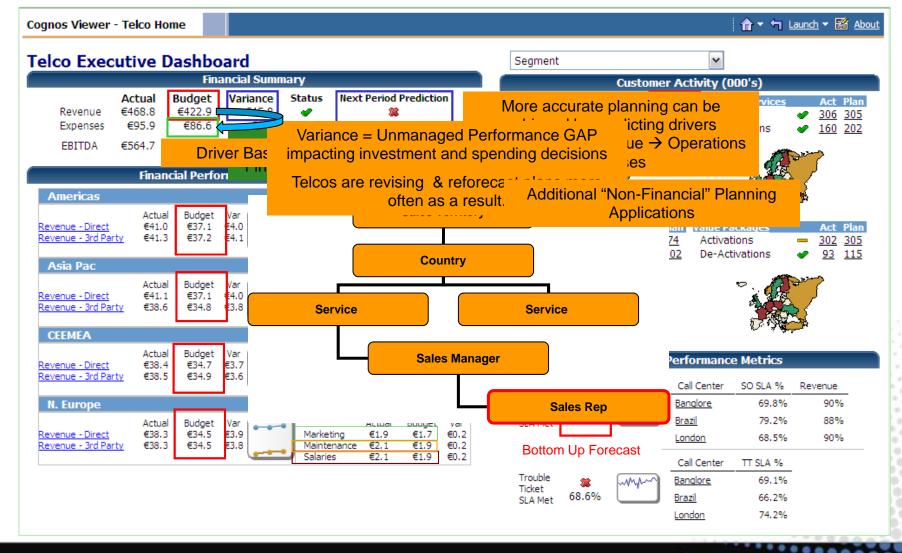
**Jnderstand & Manage** Accountability Cognos Real-time BI Traditional BI **Plan & Forecast** •CXX Dashboards •Call Center Agent Driver Based •Churn Performance \ Analysis Monitoring **Revenue Forecasting**  Historical Call Center \ Sales •Business \ Operations Marketing Expense Monitoring Performance Planning **SPSS** Insight •Quantify Sentiment Advanced Segmentation Predict Satisfaction •Forecast When Customers Center (where there is no feedback) Will Churn

 Score "Next Best Offer" For **Retention & Upsell** 





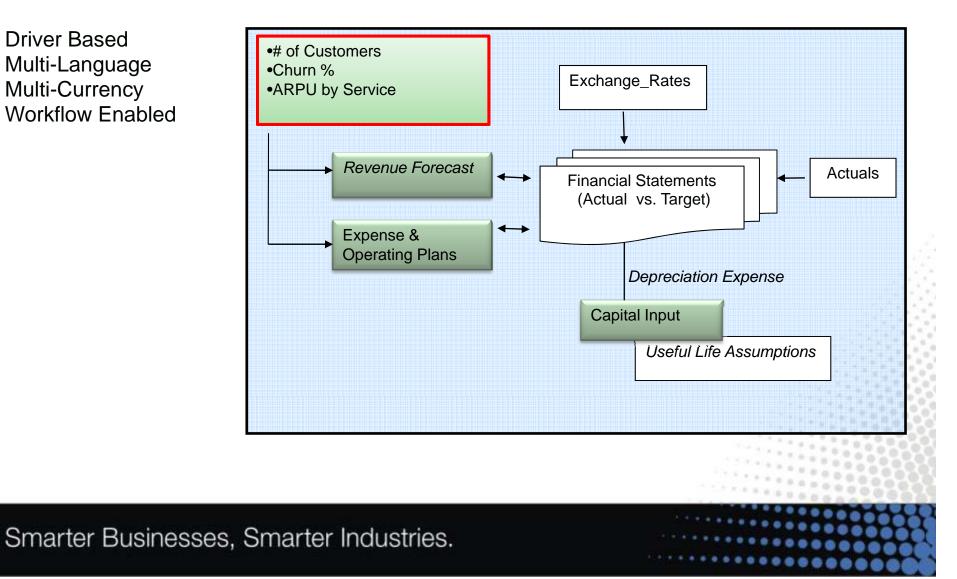
## **Telco Planning Examples**





#### Telco CAPEX, OPEX and Revenue Planning

**Driver Based** Multi-Language Multi-Currency Workflow Enabled





#### Telco CAPEX, OPEX and Revenue Planning (Multi-language)

#### Subscriber Counts

By Region By Cost Centers By Service By Version By Month

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Cows: DataEntry [AverageSubscriber]					iumns: Time [Time]	•				Orleans egions]		paid CDM/ iuscribers]		udget /ersion]	Wirele	
Beginning Customers	<u>Jan-11</u> 6,000	Feb-11 6,505	<u>Mar-11</u> 7,010	∃ <u>01</u> 19,515	Apr-1	_		un-11		<u>ul-11 Au</u> 9,216		ep-11 10,353	∃ <u>03</u> 29,187	<u>Oct-11</u> 11,088	<u>Nov-11</u> 11,836	<u>Dec-11</u> 11,684
	Telco					_					.,	,		,	,	
Churn									-	-						
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🗄 Ending Customers											-					
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Averg. Gross Adds					<u>11</u> F	<u>eb-11</u>	<u>Mar-11</u>	∃ <u>Q1</u>	Apr-11	<u>May-11</u>	<u>Jun-11</u>	∃ <u>02</u>	<u>Jul-11</u>	<u>Aug-11</u>	<u>Sep-11</u>	⊟ <u>Q3</u>
	A par	rtir clientes		6,	,000	6,505	7,010	) 19,515	7,515	5 8,063	8,568	24,146	5 9,216	9,618	10,353	29,187
	Agree	ga bruto			757	757	757	2,271	800	) 757	900	2,457	654	987	987	2,628
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	Prom			6	,253	6,758	7,263							9,986		
	Duration	o Promedio			757	757	757	7 757	768	3 766	788	1,576	5 769	796	817	2,452



# Telco CAPEX, OPEX and Revenue Planning (Multi-language)

#### <u>ARPU</u>

By Region By Cost Centers By Service By Month By Scenario

🕙 Telco   Work InProgress   New Or	leans - l	Microsof	ft Intern	et Explo	orer								
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	<u>Jan-11</u>	Feb-11	Mar-11	Apr-11	May-11	<u>Jun-11</u>	<u>Jul-11</u>	Aug-11	Sep-11	<u>Oct-11</u>	<u>Nov-11</u>	Dec-11	<u>Jan-12</u>
Cellular-Access	8.735	12.448	6.070	6.070	6.070	6.070	6.070	6.070	6.070	6.070	6.070	6.070	6.070
Fixed Access & Airtime	7.735	10.559	6.070	6.070	6.070	6.070	6.070	6.070	6.070	6.070	6.070	6.070	6.070
Airtime - Regular	3.928	2.262	2.933	2.933	2.933	2.933	2,933	2.933	2.933	2.933	2.933	2.933	2.933
Roaming Claro Customers	1.735	1.486	1.296	1.296	1.296	1.296	1.296	1.296	1.296	1.296	1.296	1.296	1.296
Roaming Visitors	0.999	0.855	0.746	0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.750
Airtime - Prepaid	7.759	6.886	5.912	5.920	5.920	5.920	5.920	5.920	5.920	5.920	5.920	5.920	5.920
Access Revenue (Interconection carriers)	1.050	1.050	1.050	1.050	1.050	1.050	1.050	1.050	1.050	1.050	1.050	1.050	1.050
Deferred Activations (Post & Pre)	5.582	4.823	4.254	4.250	4.250	4.250	4.250	4.250	4.250	4.250	4.250	4.250	4.250
Wireless Off-Island: USA & V. I.	2.050	2.050	2.050	2.050	2.050	2.050	2.050	2.050	2.050	2.050	2.050	2.050	2.050
Wireless Off-Island: International	2.100	2.100	2.100	2.100	2.100	2.100	2.100	2.100	2.100	2.100	2.100	2.100	2.100
Wireless ICLS	2.200	2.200	2.200	2.200	2.200	2.200	2.200	2.200	2.200	2.200	2.200	2.200	2.200
Wireless Data	2.300	2.300	2.300	2.300	2,300	2.300	2,300	2,300	2.300	2.300	2.300	2.300	2.300
Wireless Equipment Sales	2.400	2,400	2.400	2.400	2.400	2.400	2,400	2.400	2.400	2.400	2.400	2.400	2.400
Cellular Other	5.890	5.750	5.850	5.890	5.890	5.890	5.890	5.890	5.890	5.890	5.890	5.890	5.890



# Telco CAPEX, OPEX and Revenue Planning (Multi-language)

Expense Plans

By Region By Cost Centers By Version By Month

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	<u>]an-11</u>	<u>Feb-11</u>	<u>Mar-11</u>	■ <u>01</u>	<u>Apr-11</u>	<u>May-11</u>	<u>Jun-11</u>	∃ <u>Q2</u>	<u>Jul-11</u>
Operating Expenses	1,828,002.78	2,188,912.13	2,188,912.13	6,205,827.04	2,188,912.13	2,188,912.13	2,188,912.13	6,566,736.39	2,188,912.13
∃ ERW/¥SP	(5,982.71)	(6,647.46)	(6,647.46)	(19,277.62)	(6,647.46)	(6,647.46)	(6,647.46)	(19,942.37)	(6,647.46)
Lump Sum Early Retirement	(5,982.71)	(6,647.46)	(6,647.46)	(19,277.62)	(6,647.46)	(6,647.46)	(6,647.46)	(19,942.37)	(6,647.46)
🗉 Total Management Fees	(280,546.36)	(311,718.18)	(311,718.18)	(903,982.72)	(311,718.18)	(311,718.18)	(311,718.18)	(935,154.54)	(311,718.18)
Management Fees	(280,546.36)	(311,718.18)	(311,718.18)	(903,982.72)	(311,718.18)	(311,718.18)	(311,718.18)	(935,154.54)	(311,718.18)
Total Other Expenses	(1,615,687.80)	(1,852,028.58)	(1,852,028.58)	(5,319,744.96)	(1,852,028.58)	(1,852,028.58)	(1,852,028.58)	(5,556,085.75)	(1,852,028.58)
Cost of Good Sold	(58,117.75)	(64,575.28)	(64,575.28)	(187,268.32)	(64,575.28)	(64,575.28)	(64,575.28)	(193,725.85)	(64,575.28)
Deferred Activation Charges	(146,149.06)	(162,387.84)	(162,387.84)	(470,924.74)	(162,387.84)	(162,387.84)	(162,387.84)	(487,163.52)	(162,387.84)
Activation Charges	281,258.59	255,689.63	255,689.63	792,637.84	255,689.63	255,689.63	255,689.63	767,068.88	255,689.63
Rent of Quarters	(45,725.00)	(50,805.55)	(50,805.55)	(147,336.10)	(50,805.55)	(50,805.55)	(50,805.55)	(152,416.66)	(50,805.55)
Rent - Equipment Other	(19,871.14)	(22,079.05)	(22,079.05)	(64,029.24)	(22,079.05)	(22,079.05)	(22,079.05)	(66,237.15)	(22,079.05)
Travel & Entertainment	(5,555.37)	(6,172.64)	(6,172.64)	(17,900.65)	(6,172.64)	(6,172.64)	(6,172.64)	(18,517.91)	(6,172.64)
Membership Dues	(1,709.35)	(1,899.27)	(1,899.27)	(5,507.89)	(1,899.27)	(1,899.27)	(1,899.27)	(5,697.82)	(1,899.27)
Vehicle	(7,051.05)	(7,834.50)	(7,834.50)	(22,720.05)	(7,834.50)	(7,834.50)	(7,834.50)	(23,503.50)	(7,834.50)
Stationery & Office Supplies	(13,247.43)	(14,719.37)	(14,719.37)	(42,686.16)	(14,719.37)	(14,719.37)	(14,719.37)	(44,158.10)	(14,719.37)
Materials	(96,150.70)	(106,834.11)	(106,834.11)	(309,818.91)	(106,834.11)	(106,834.11)	(106,834.11)	(320,502.32)	(106,834.11)
Advertising	(23,076.17)	(25,640.19)	(25,640.19)	(74,356.54)	(25,640.19)	(25,640.19)	(25,640.19)	(76,920.56)	(25,640.19)
Consulting	(58,331.42)	(64,812.69)	(64,812.69)	(187,956.80)	(64,812.69)	(64,812.69)	(64,812.69)	(194,438.07)	(64,812.69)
Legal Fees	(118,585.86)	(131,762.06)	(131,762.06)	(382,109.99)	(131,762.06)	(131,762.06)	(131,762.06)	(395,286.19)	(131,762.06)
Amored & Security Services	(60,681.77)	(67,424.19)	(67,424.19)	(195,530.16)	(67,424.19)	(67,424.19)	(67,424.19)	(202,272.57)	(67,424.19)
Collection Agent Commission	(57,690.42)	(64,100.46)	(64,100.46)	(185,891.34)	(64,100.46)	(64,100.46)	(64,100.46)	(192,301.39)	(64,100.46)
Telemarketing Cost	(28,417.87)	(31,575.41)	(31,575.41)	(91,568.70)	(31,575.41)	(31,575.41)	(31,575.41)	(94,726.24)	(31,575.41)
Public Telephone Commissions	(19,230.14)	(21,366.82)	(21,366.82)	(61,963.78)	(21,366.82)	(21,366.82)	(21,366.82)	(64,100.46)	(21,366.82)



#### TM1 – Planning Workflow



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#### Income Statement Reporting (Multi-Currency Translation)

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				∃ <u>Q1</u>				∃ <u>Q2</u>			
	<u>Jan-11</u>	Feb-11	<u>Mar-11</u>		Apr-11	<u>May-11</u>	<u>Jun-11</u>		<u>Jul-11</u>	Aug-11	Sep-1
Local Voice	4,865,338.68	4,834,701.10	4,800,427.85	14,500,467.63	4,859,662.22	5,031,098.08	5,202,533.92	15,093,294.23	5,373,969.78	5,545,405.62	5,716,8
Data	1,803,435.50	1,809,368.58	1,814,848.30	5,427,652.37	1,839,529.45	1,887,157.45	1,934,785.45	5,661,472.35	1,982,413.45	2,030,041.45	2,077,6
Long Distance	5,749,741.25	5,746,881.25	5,740,996.25	17,237,618.75	5,797,096.25	5,927,253.75	6,057,411.25	17,781,761.25	6,187,568.75	6,317,726.25	6,447,8
Access	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Cellular	734,653.77	841,823.68	715,918.15	2,292,395.60	769,087.11	821,362.87	875,606.58	2,466,056.56	927,823.31	981,752.15	1,042,2
Paging	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Directory	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
🗄 Revenue	13,153,169.20	13,232,774.60	13,072,190.55	39,458,134.35	13,265,375.03	13,666,872.14	14,070,337.21	41,002,584.38	14,471,775.28	14,874,925.47	15,284,
① Operating Expenses	8,757,447.51	9,118,356.86	9,118,356.86	26,994,161.24	9,118,356.86	9,118,356.86	9,118,356.86	27,355,070.59	9,118,356.86	9,118,356.86	9,118,
🗄 EBITDA	4,395,721.69	4,114,417.74	3,953,833.68	12,463,973.12	4,147,018.17	4,548,515.28	4,951,980.35	13,647,513.80	5,353,418.42	5,756,568.61	6,166,
EBITDA%	33.42%	31.09%	30.25%	31.59%	31.26%	33.28%	35.19%	33.28%	36.99%	38.70%	4
Depreciation & Amortization	0.00	(27,777.78)	(27,777.78)	(55,555.56)	(48,611.11)	(48,611.11)	(48,611.11)	(145,833.33)	(48,611.11)	(48,611.11)	(48,6
Operating Income	4,395,721.69	4,086,639.96	3,926,055.91	12,408,417.56	4,098,407.06	4,499,904.17	4,903,369.23	13,501,680.46	5,304,807.31	5,707,957.50	
🗄 Otros Gastos y Productos:	(5,500.00)	(5,500.00)	(5,500.00)	(16,500.00)	(5,500.00)	(23,500.00)	(5,500.00)	(34,500.00)	(5,500.00)	(5,500.00)	(5,5
🗄 Costo Integral Financiamiento:	7,200.00	200.00	3,200.00	10,600.00	2,200.00	2,200.00	2,200.00	6,600.00	(3,800.00)	2,200.00	2,
🗄 Pretax Income	4,397,421.69	4,081,339.96	3,923,755.91	12,402,517.56	4,095,107.06	4,478,604.17	4,900,069.23	13,473,780.46	5,295,507.31	5,704,657.50	6,114,
Income Tax		(1,224,401.99)				(1,343,581.25)				(1,711,397.25)	
Net Income (before Acct Change)	3,078,195.18		2,746,629.13	8,681,762.29	2,866,574.94		3,430,048.46	9,431,646.32	3,706,855.12		4,280,
Extraordinary Adjustments	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Net Income (Loss)	3,078,195.18	2,856,937.97	2,746,629.13	8,681,762.29	2,866,574.94	3,135,022.92	3,430,048.46	9,431,646.32	3,706,855.12	3,993,260.25	4,280,

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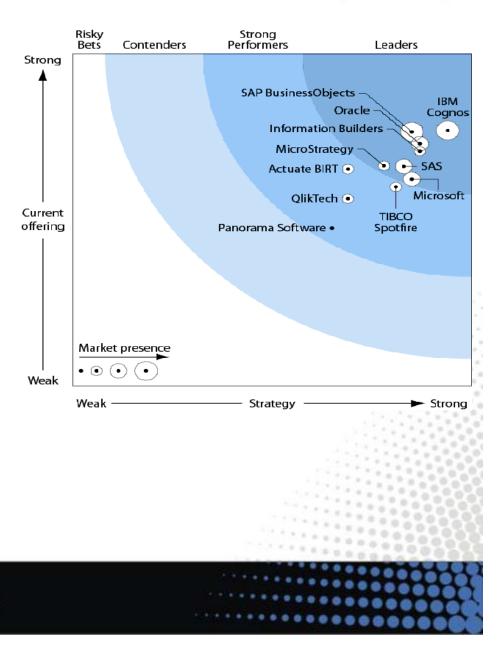
#### Forrester Wave Q4 2010 Chart for BI Offerings

#### Highlights

IBM is now the clear market leader in Current Offering and Strategy, having jumped ahead of SAP Business Objects.

IBM is now only vendor to be recognized as the leader in Strategy/Vision in both the ForresterWave for Enterprise BI and the Gartner Magic Quadrant for BI Platforms.

IBM leads the scoring in Current Offering, Architecture, Strategy, Product Direction (only vendor to receive a 5.00), Global Presence, Partner Ecosystem, and Functional Applications.





#### **Gartner – For Predictive Analytics**





#### **Performance Management Platform of Choice**



## Telecom

4 of the world's 5 largest Telecommunications companies



#### **Other Select IBM Business Analytics Customers**

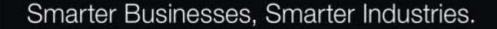






Combined feedback management with text mining and predictive modeling in a Customer Experience Management strategy to attack churn and boost customer satisfaction

- Churn reduced from 19% to 2% for broadband customers
- Satisfaction increased in over 50% of customers
- 23% of "detractors" converted to "promoters"







Combined Feedback Management with Predictive Analytics to improve Marketing efficiency for Customer Aquisition and better cross-sell specific products into existing customer base.

- Targeted "best prospects" list
- 100% improvement in response for Business Highway acquisition campaign



# **V**vtr

Used Predictive Analytics to better interpret marketing surveys covering topics ranging from customer satisfaction to new product introductions and therefore develop more strategic marketing programs

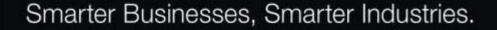
- Improved ability to perform Market Research
- Better identification of non-profitable buyers and change of entry requirements
- Increased retention rate by 13%





Used Predictive Analytics to better and faster target customers for marketing campaigns at a lower cost

- **300% improvement** on customer conversion rate
- Time required to carry out campaign selections reduced by 50%
- Reduction in campaign costs in excess of one million euros





# DIGITAL

Used Real-time Predictive Analytics to leverage in-bound customer interactions to drive loyalty and life time value

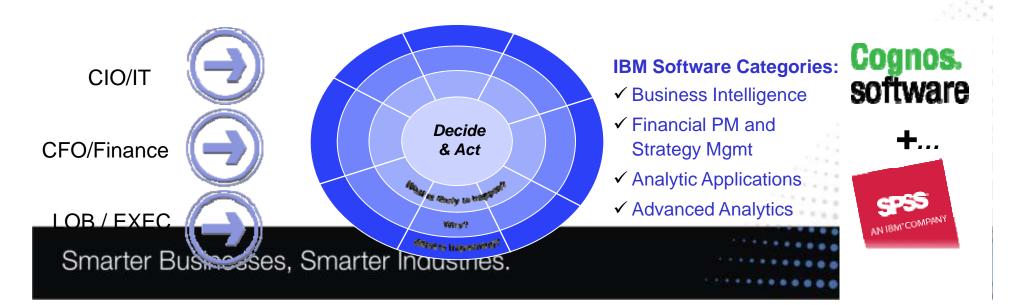
- Shorter, more relevant calls led to increased satisfaction for customers and agents
- 20% higher retention in first 2 months
- Substantial cross-selling through the inbound service channel



an explosion of information.

\_ Optimizing performance is the ability to line up resources, opportunities and execution for optimized outcomes. It's the ability for every decision maker to have up-to-the minute information to understand how their business is doing and why. Predictive modelling and "What if" analysis provides them with the ability to predict opportunities and threats and confidently take action. Financial and operational planning, budgeting and forecasting puts resources in the right place and sets targets for those allocations.

optimize performance.



#### Next Steps



The top industry companies have invested in information and analytics, and are applying results in marketing, finance, and corporate functions to drive their business decisions. To start your journey please click here http://207.154.45.231/

/elcome to the Business Analytics Assessment Tool, a Web-based diagnostic tool esigned specifically to help you identify your personalized path to maximum value from our business intelligence (BI) deployment.	n FF	]
his quick 10-minute survey will allow you to see how your organization stacks-up gainst industry peers. At the end of the assessment, you will receive a customized aport that will help you identify and quantify potential savings in deployment time and ost and obtain actionable best practice recommendations for improvement of BI trategies and results.		
owered by independent market research firm Aberdeen Group, brought to you by IBM		
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#### **IBM** Software Universe

Smarter Businesses, Smarter Industries.

8th March 2011, Pan Pacific, Dhaka.



#### THANK YOU