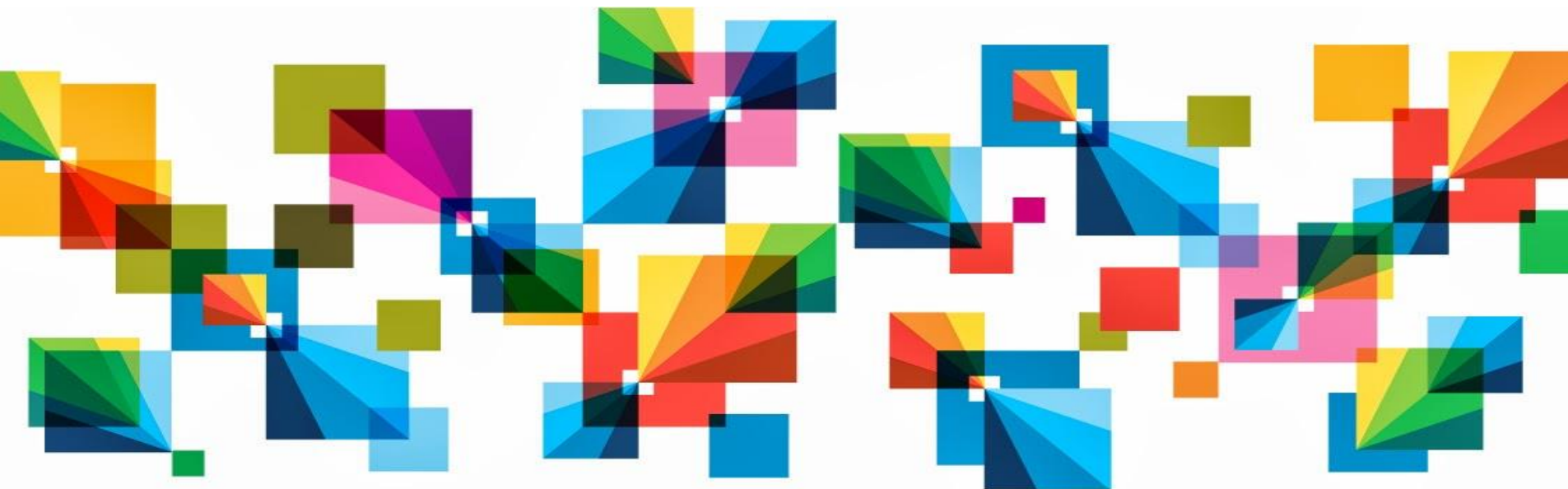


Bringing Big Data and Analytics Together for Greater Insight

A Smarter Approach to Big Data

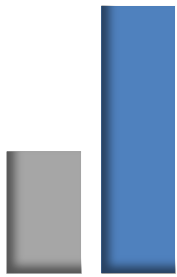


Visualizing Your Data is the Next Step to Greater Insight

- Efficiently Analyze Your Current Data
- **Visualize Your Data**
- Analyze new sources of unstructured and data in motion
- Efficiently integrate all your data
- And **simplify** your environment with the right deployment model

Businesses Gain Competitive Advantage by Using Analytics with Big Data

CIOs rank Analytics as the **#1 factor** Contributing to an organization's competitiveness.¹



Organizations that embrace analytics are more than **2X** as likely to outperform their Peers.²



Financial outperformers are **64%** more likely to use analytics to evaluate talent supply and demand on an ongoing basis.³



Enterprises that apply advanced analytics have **33%** More revenue Growth and **12X** more profit growth.⁴

¹ IBM CIO Study 2009

² IBM IBV/MIT Sloan Management Review Study 2011

³ IBM CHRO Study 2010

⁴ IBM CFO Study 2010

Increased Analytics Often Cause CIO Headaches

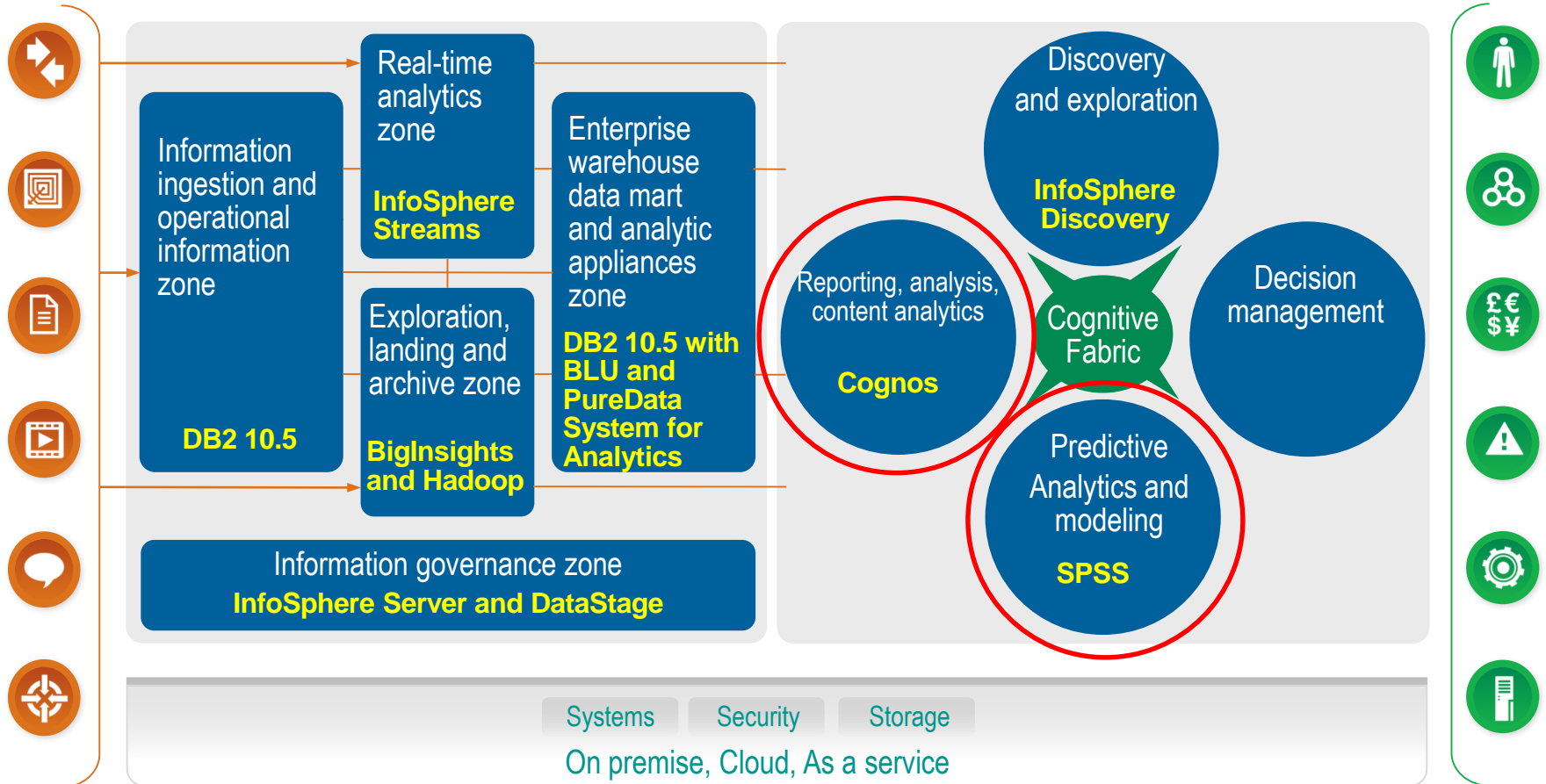
- Increasing number of requests for new analytics reports and dashboards
 - Results in a growing backlog and slows time to benefit from analytics
- Changing visualization requirements
 - Drive rework, increase backlog, and limit business insight
- Increasing size of data and analytics increases performance problems
 - Slower systems reduce use of analytics and cost business opportunity
- Constantly reacting to business changes
 - Lose valuable time reevaluating different business options
- Decreased competitive business advantage!

Make Sense out of BigData with IBM Watson Foundations

All Data

IBM Watson Foundations

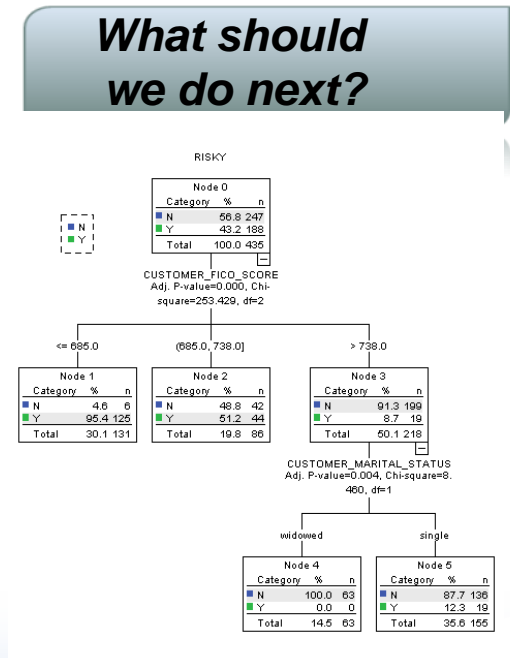
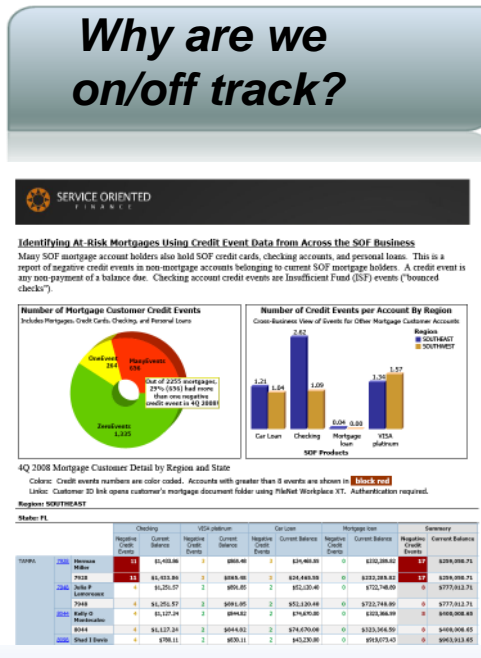
New/Enhanced Applications



Analyze all data, from any source, with the right technology

Analytics Tools Answer Key Business Questions to Increase Your Competitive Edge

Analytics help you turn information into business insight to make smarter decisions for better business results



Reports and Dashboards

Deeper Query and Ad-hoc Analysis

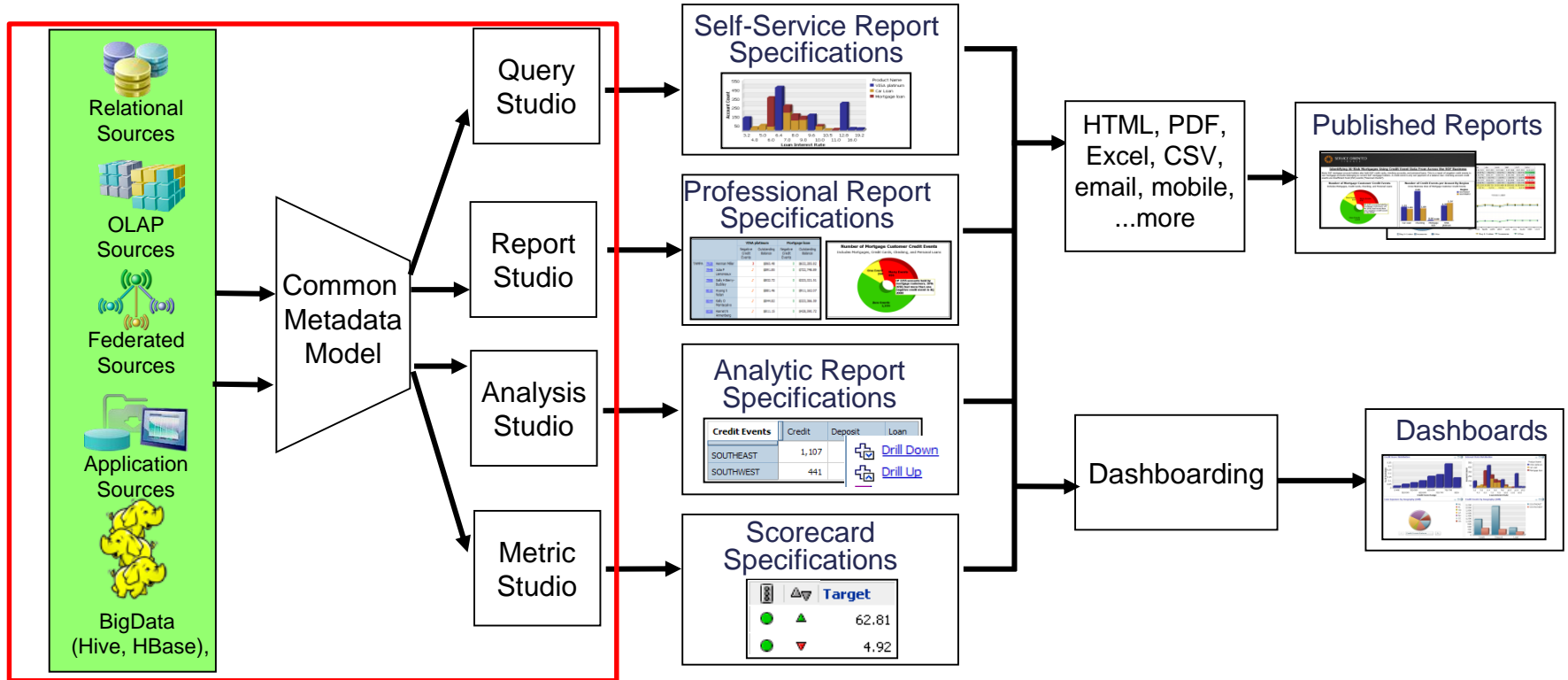
Predictive Analytics



IBM Cognos Enterprise is a Comprehensive Analytics Platform

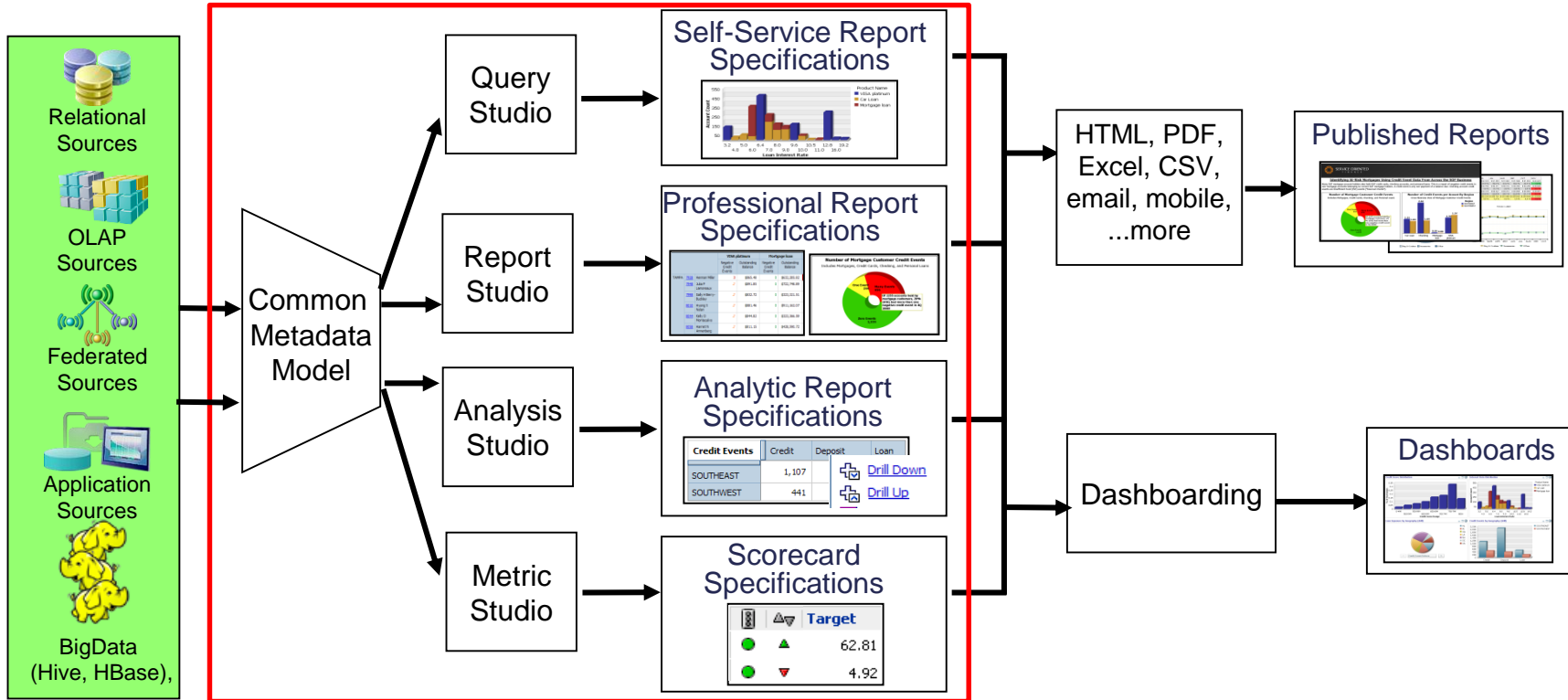
- Complete portfolio of integrated analytic tools
- Scalable open architecture designed for availability and performance
 - Presentation/web, application, and data tiers integrated using XML, SOAP, WSDL, and other proven industry standards
- Common model and access to all of your data (relational, olap, ...)
- Consistent web user interface for advanced tooling based on user needs
 - Query builders for 1st time users, professional reporting, ad-hoc query, ..
 - Web portal to publish, find, manage, organize, and control your BI content
- Available from any device

Cognos Works with Your Existing Data



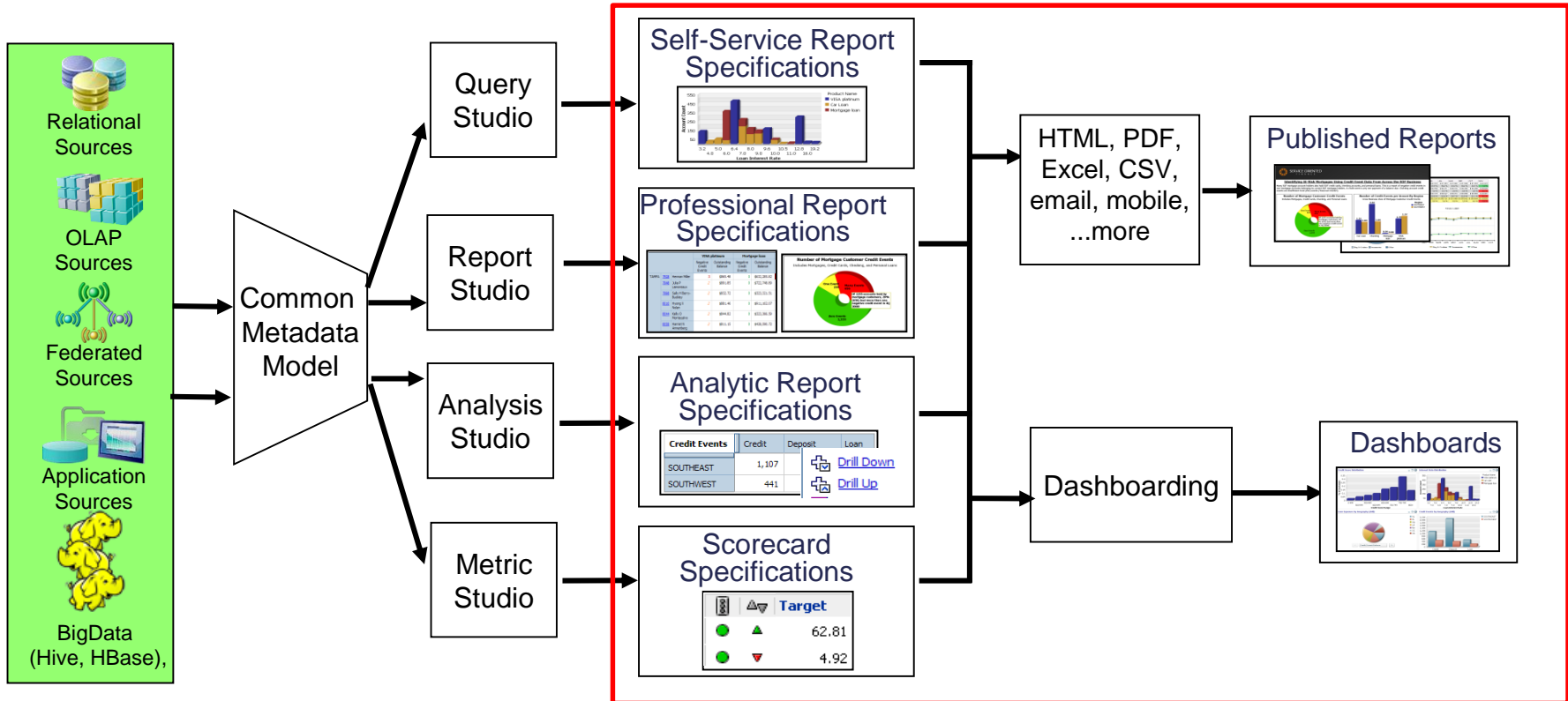
- Open data strategy enables a common view across a variety of data sources
- Support for application data sources such as SAP ERP
- Combine relational, OLAP, federated, and other data sources in any tool

Build and Share Visualizations Among Cognos Tools with Common Metadata Model



- Tools use a consistent set of information defined in the common metadata model
- As sources change, metadata model can control and identify impacts to report specifications
- Web interfaces designed for different roles/capabilities

Deliver Data When They Need It, in the Format They Want It



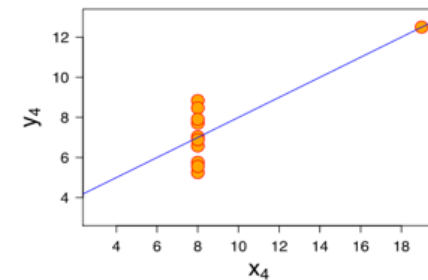
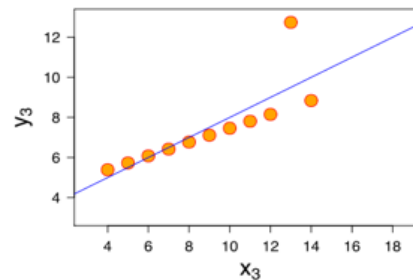
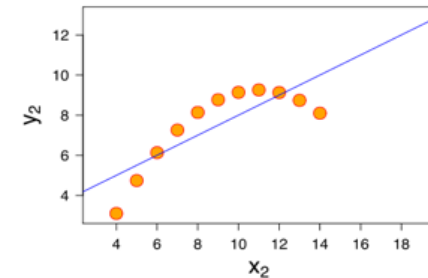
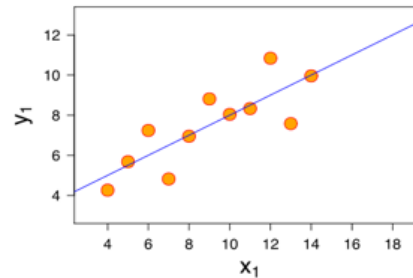
- Portal to control access/distribution
- Different formats based on need
- Access from device of choice

Visualization Leverages Human Insight

- Visualization can find patterns not obvious with just statistics
 - Anscombe's quartet has same average, median, std deviation – but
- Visualization also helps you communicate information to others

Anscombe's Quartet

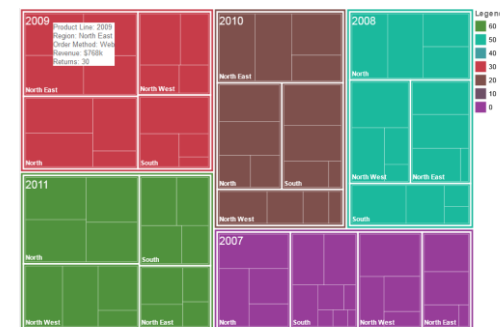
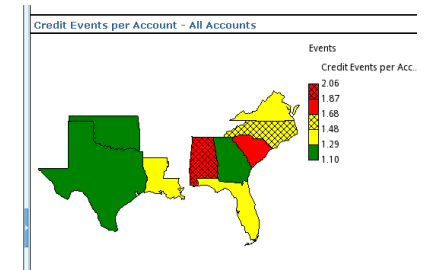
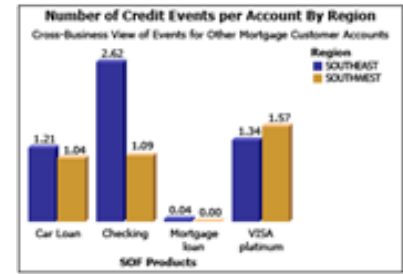
I		II		III		IV	
x	y	x	y	x	y	x	y
10.0	8.04	10.0	9.14	10.0	7.46	8.0	6.58
8.0	6.95	8.0	8.14	8.0	6.77	8.0	5.76
13.0	7.58	13.0	8.74	13.0	12.74	8.0	7.71
9.0	8.81	9.0	8.77	9.0	7.11	8.0	8.84
11.0	8.33	11.0	9.26	11.0	7.81	8.0	8.47
14.0	9.96	14.0	8.10	14.0	8.84	8.0	7.04
6.0	7.24	6.0	6.13	6.0	6.08	8.0	5.25
4.0	4.26	4.0	3.10	4.0	5.39	19.0	12.50
12.0	10.84	12.0	9.13	12.0	8.15	8.0	5.56
7.0	4.82	7.0	7.26	7.0	6.42	8.0	7.91
5.0	5.68	5.0	4.74	5.0	5.73	8.0	6.89



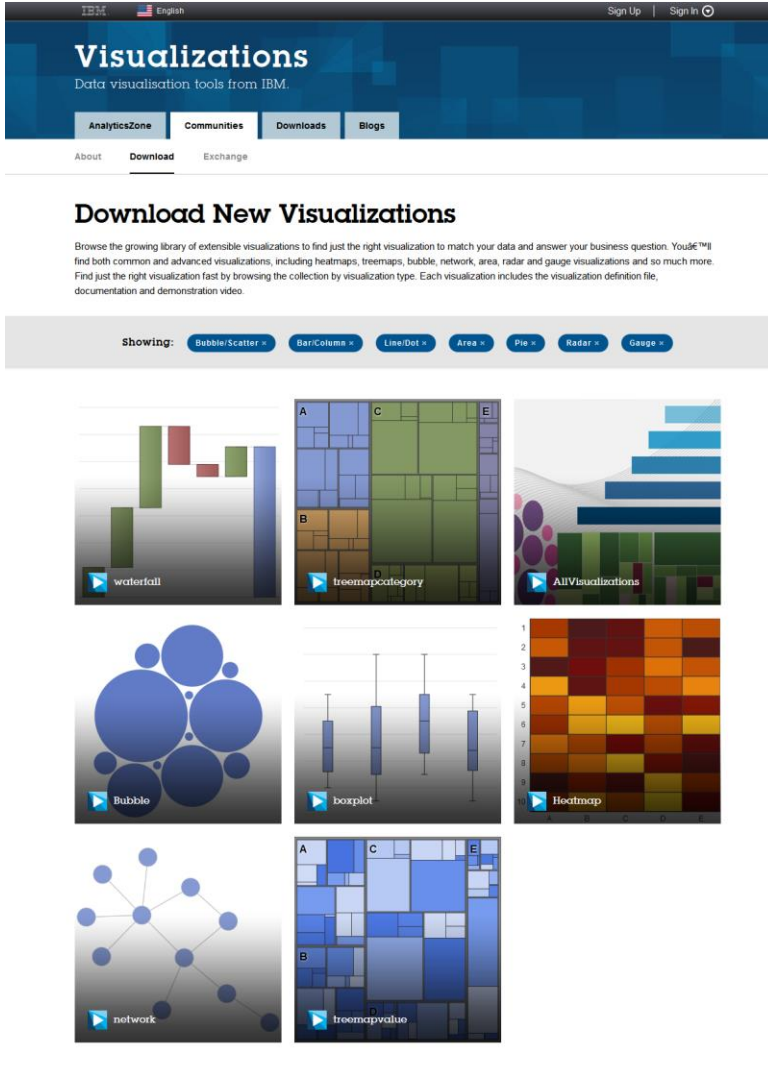
Visualization is Key to Understanding Data

Cognos is Key to Visualization

- Having the data is not enough
 - It has to be presented in a way people can understand it
- Visualization helps us find patterns
 - Reporting alone is not enough
 - Different types of data require different types of visualization
 - From simple bar and pie charts
 - To sophisticated geospatial mapping
- Cognos BI 10.2 adds new visualization capabilities
 - From simple data reports to advanced interactive animations like tag clouds, heat maps, packed bubble charts and more



Powerful New Visualizations are Just a Download Away



The screenshot shows the IBM Visualizations website interface. At the top, there's a navigation bar with 'Visualizations' and 'Data visualisation tools from IBM.' Below that are tabs for 'AnalyticsZone', 'Communities', 'Downloads', and 'Blogs'. A 'Download' button is highlighted. The main content area is titled 'Download New Visualizations' and includes a brief description of the library. Below the text is a filter bar showing 'Showing: Bubble/Scatter', 'Bar/Column', 'Line/Dot', 'Area', 'Pie', 'Radar', and 'Gauge'. The main display area features a grid of visualization thumbnails, each with a play button icon and a label: 'waterfall', 'treemapcategory', 'AllVisualizations', 'Bubble', 'boxplot', 'Heatmap', 'network', and 'treemapvalue'.

Find and download visualizations from the visualization community to quickly find the best visual for your reporting needs

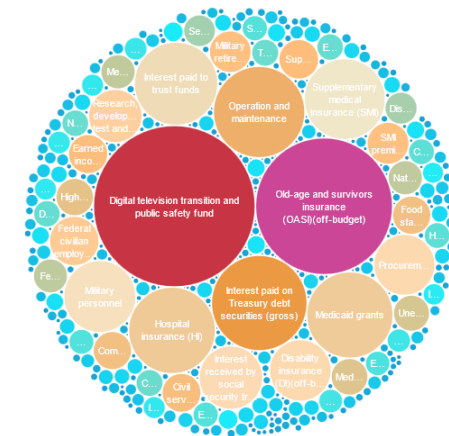
- Scatter
- Gantt
- Area
- Radar
- Boxplot
- Dial
- Treemap / Heatmap
- Waterfall
- Plus a continually growing set of visualizations

analyticszone.com/visualization

Interactive Visualization Capabilities Speed Insight

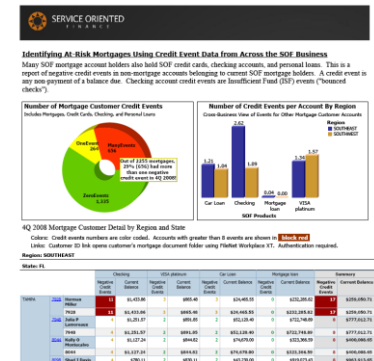
- New visualizations allow users to pinpoint trends faster
 - Animation in Active Reports helps drive data insight
 - Easier to incorporate complex filtering for dynamic reports
 - Extensible so new report types don't require new installs
 - Based on RAVE – Rapidly Adaptive Visualization Engine

- **Multi-platform** graphics engine spanning mobile (phone, table), web, desktop
 - Only need a single specification per visualization for maximum portability

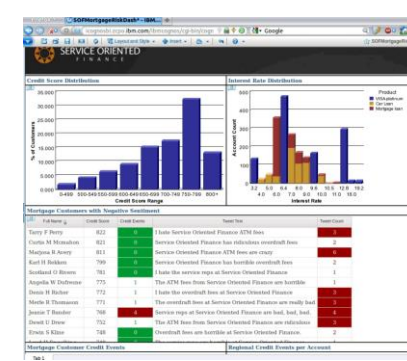


DEMO: Use Cognos to Identify New Business Insights from the Data Warehouse

1. Reviewing just Mortgage data provides false impression of credit risk
2. Look at high risk customers by looking at negative credit events (bounced checks, missed payments) across all accounts (Credit Card, Checking, etc.)
3. Identify customers complaining about SOF
4. Use new visualizations to discover SOF least popular features



Identifying at risk and upset customers



Deliver Data to the User When and Where They Need It

Deliver Data to the user in the format they use, when they need It

- User drive to mobile
 - People check their mobile phones 150 times per day
 - 80% of employed adults use a personal mobile device for business
 - 76% of executives expect mobile use to surpass desktop use in three years
 - 70% will use tablets for work by 2018

- BYOD – Bring Your Own Device with Cognos Mobile capabilities

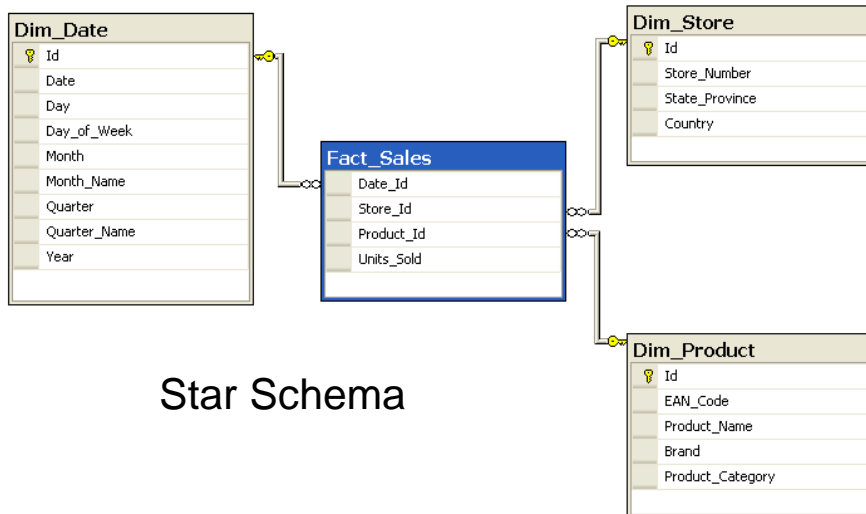
- Enhanced support for mobile
 - Increase personalization and interactivity
 - Arrange content how you want it
 - Preview report without viewing
 - Support for wide range of devices thru mobile web interface
 - iPad native app on AppStore



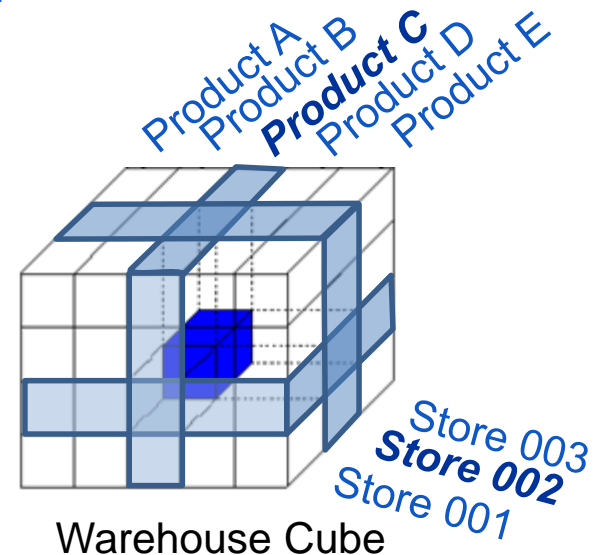
Cognos Dynamic Cubes Answer Large Warehouse Performance Problems

- Warehouse models are commonly built on de-normalized Star schemas
- Complex analytic queries may aggregate millions of rows for one result
- Cognos Dynamic Cubes add a in-memory relational OLAP component to provide a multi-dimensional cache for accelerated performance

Select sum(units_sold) from Fact_Sales as f join Dim_Date as d on d.Id=f.Date_id where d.Year=2012

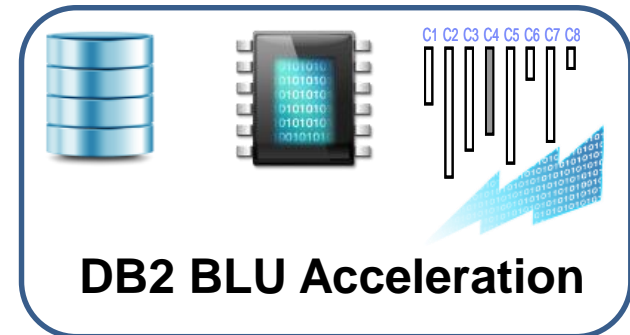
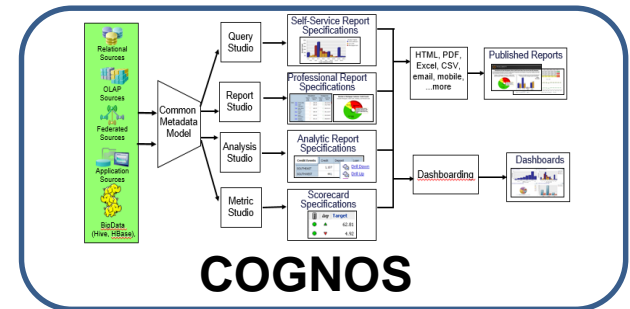


Year – 2010
 - 2011
 - **2012**
 - 2013



Fast on Fast on Fast: POWER8 + DB2 BLU Acceleration + Cognos

- Dynamic in-memory caching query
- Dynamic in-memory caching Cubes
- Accelerated Virtualization



POWER8

- In-memory columnar processing
- Analyze Compressed data
- CPU Acceleration
- Data skipping

- POWER8 Processor Leadership Performance
- Highest reliability
- Best Security

Move from Reactive to Proactive with Predictive Analytics

SPSS Enables Customers To Predict Future Events And Drive Better Business Outcomes

- Being able to better predict possible outcomes, helps you make better business decisions
- Use statistics to understand what has happened in the past.
 - Gain insights from historic data
- And data mining and modeling capture to determine what is likely to happen in the future
- Use that information to determine what action will likely drive the best business outcome

Predictive Analytics Help Businesses Run Smarter

Turn a Call Center into a Profit Center



A large Dutch financial services company generated **\$30 Million in incremental sales**. Essentially, 1M calls generated 180,000 suggestions, reps made 60,000 offers generating 30,000 leads and 22,000 sales.

Prevent crime before it happens



A large city in the US optimized deployment of police resources, **reducing homicides by 35%** year over year, and robberies by 20%.

Turn clients into advocates



A large Swiss telco provider adopted a client retention approach based on satisfaction. And **reduced churn from 14% to 2%**.

Reduce the cost of claims



A large US insurer maximized and accelerated the collections process achieving an **ROI of 403% with payback in 3 months**.

Gain a Competitive Advantage with IBM Business Advanced Visualization and Analytics

- Visualization and Analytics are critical to improving business performance
 - Unlock hidden value of your data with advance visualizations
 - Understand your business better with Cognos
 - Predict future events for better business outcomes with SPSS
- IBM Business Analytics relieves CIO headaches
 - ❌ Growing backlog of requests for new analytics reports and dashboards
 - ✓ Cognos advanced tooling enables a quicker time to value
 - ❌ Constantly changing requirements for visualizations
 - ✓ IBM RAVE technology simplifies advanced visualization creation
 - ❌ Increasing size of data and use of analytics increases performance problems
 - ✓ Achieve better user experience and better business results with faster analytics performance
 - ❌ Constantly reacting to business changes
 - ✓ Enable business foresight with predictive analytics

A Faster Time to Value with Power System Solutions

ENHANCED. For a simple and affordable path to speed of thought analytics, ***now with twice the capacity***, ready to deploy and at a fraction of the cost of competing solutions.



Ann April 28th , GA June 10th 2014

Learn more: [Power Solution for Analytics](#)

Simple to Acquire

One order for all Power hardware and software

Simple to Deploy

Pre-installed and pre-optimized server, storage & software

Simple to Implement

Highly scalable with Capacity on Demand for non-disruptive upgrades to support <1TB to 20TB data warehouse.