Turning Data into Sales Using IBM Cognos Express and SPSS Predictive Analytics
Session 2955
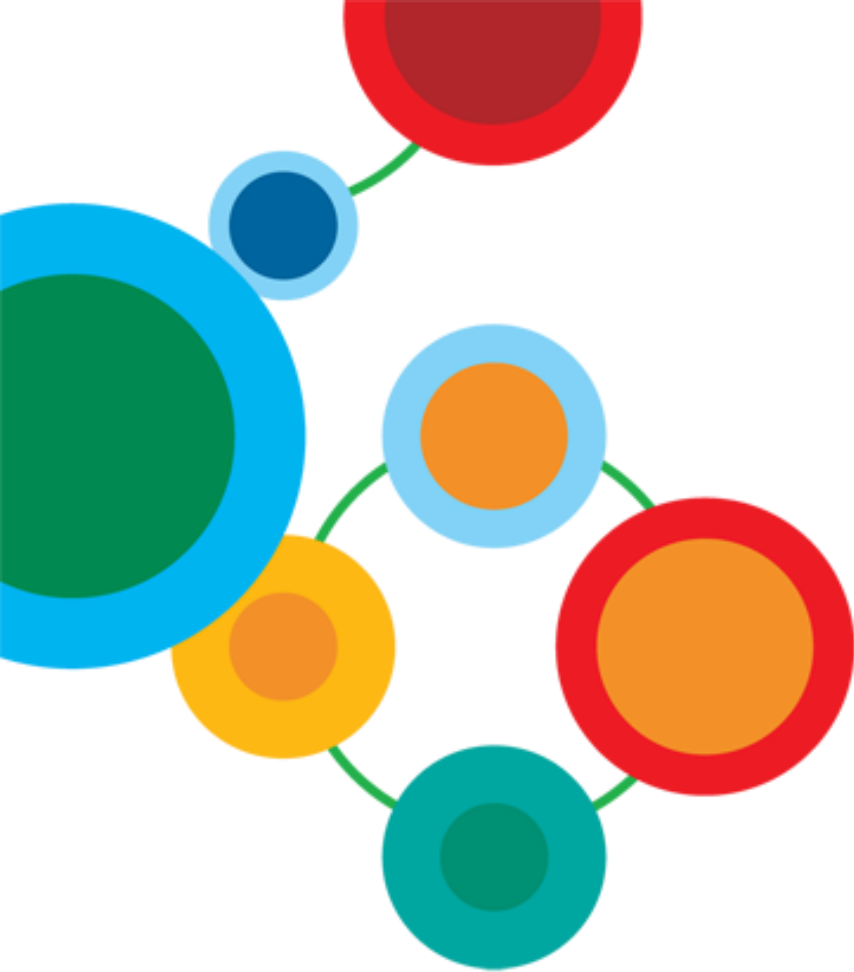
Gavin Rasco, Mentoring Minds
Chad Erman, LPA Systems

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IBM Software
Information On Demand **2011**

Agenda

- Speaker Background
- Company Background
- Business Challenges & Pains
- Solution Success Criteria
- Timeline
- SPSS and Predictive Analytics
  - Challenge & Solution
  - Solution Overview
- Business Intelligence
  - Strategy
  - Success Criteria
  - Challenges
  - Solution Deep Dive
- Benefits & ROI
- Lessons Learned
- What's Next?
- Advice & Tips
- Q & A

Speaker Background

- Gavin Rasco, Director of Marketing, Mentoring Minds
    - 5 years as Director of Marketing for Mentoring Minds
    - Responsible for "anything a customer sees"
        - Website
        - Promotional Material
        - Press Releases
        - Direct Mail
        - And much more…
- Chad Erman, Regional Manager, LPA Systems
    - Former Cognos Customer - Involved In or Led the Cognos/Data Warehouse Enterprise-Wide Implementations for 3 Industry-Leading Companies
    - 2008 IBM Operational Excellence Award Winner (Southwestern Energy)
    - 3-time IBM Information Champion
    - 11 Years of Cognos BI Experience
    - 13 years of Data Warehousing Experience
    - Industry Knowledge: Energy, Hospitality, Manufacturing, Health Care, Supply Chain

Company Background

Mentoring Minds is an educational publisher focused on creating a successful learning environment for children.

- Founded in 2002 by Michael Lujan, an assistant principal at the time, Mentoring Minds was the brainchild of an idea to make teachers' jobs easier while creating more conducive learning environments for children.
- Our products are developed to not only be a resource for educators, but to provide clear, concise direction for children as they go throughout their schooling
- Products come in the form of educator flip charts, educational wheels, workbooks and flashcards
- Topics covered range from the core subjects of Mathematics and Reading to dealing with relevant issues such as bullying, response to intervention and higher-order thinking.
- Based in Texas, we operate throughout the United States and do business with schools in the public, private and parochial spaces with grades ranging from Kindergarten to 12th grade.

Business Challenges and Pains

It's interesting that it's always challenges and not just a challenge…

- Our root problem can be defined in the following places:
    - Data integrity
    - Generation of manual reports
    - Access to timely information for decision making
    - Always looking behind to make decisions about the future
    - "Shooting from the hip" while making "gut" decisions

Solution Success Criteria

We needed a system that was…
- Easy to implement
- Easy to use
- Customizable
- Scalable
- Delivered actionable results
- Allowed access to results across geographic borders
- Able to easily repeat routine tasks/reports
- Able to combine multiple data sources into one outlet

Timeline

Fall 2007 - SPSS/PASW Modeler
- Quick implementation
- Dedicated time for training and education
- Get in and get dirty

Spring 2010 – Cognos Express Implementation
- Two-week implementation window
- Minimal follow-up to get data structured
- Using the reports from LPA Sales Analytic for Express (SAFE), we instantly had dashboards and results

SPSS and Predictive Analytics

SPSS and Predictive Analytics

Challenges

- Customers were targeted based on "hunches"
- No distinguishing between levels of customers
    - Acquisition vs. Retention
    - High value vs. Low value
- No perception of customer profiles
- Limited capabilities with existing software
- Always looked in the rearview mirror
- Data integrity
- All customers were treated the same

Solutions

- Discover a solution that provided timely, actionable results
- Reduce the amount of manual labor and input diversification
- Find a solution that provided customer segmentation and action backed by data
- Data manipulation tool

SPSS and Predictive Analytics in Action

- Market Basket Analysis

Consequent	Antecedent	Support %	Confidence %
Behavior Guide = T	partname_Accommodations Wheels = T and partname_Intervention Strategies Guide = T and partname_Master Instructional Strategies Flip Chart = T	6.59	88.56
Intervention Strategies Guide = T	partname_Accommodations Wheels = T and partname_Behavior Guide = T and partname_Master Instructional Strategies Flip Chart = T	6.66	87.68
Behavior Guide = T	partname_Accommodations Wheels = T and partname_Intervention Strategies Guide = T	10.27	82.75
Intervention Strategies Guide = T	partname_Accommodations Wheels = T and partname_Behavior Guide = T	10.73	79.20
Behavior Guide = T	partname_Accommodations Wheels = T and partname_Master Instructional Strategies Flip Chart = T	8.73	76.32
Behavior Guide = T	partname_Bully Guide = T	6.92	76.30
Intervention Strategies Guide = T	partname_Accommodations Wheels = T and partname_Master Instructional Strategies Flip Chart = T	8.73	75.56

SPSS and Predictive Analytics in Action

- Used historical data to "predict" the next likely purchase

SPSS and Predictive Analytics in Action

- RFM Analysis

used to have frequent
purchases, what
caused them to stop?

Important Factors to remember
- what is more important? R? F? M?

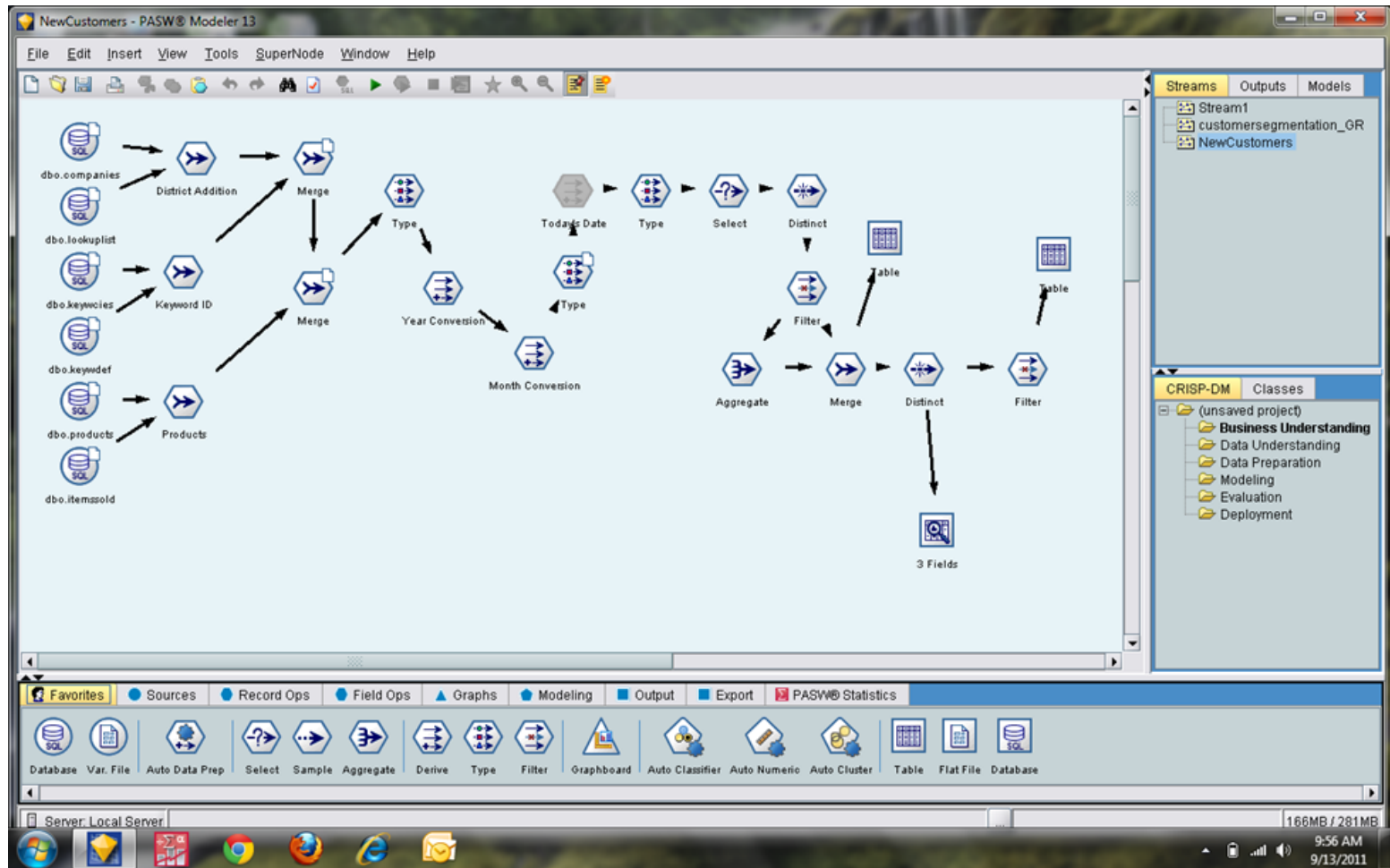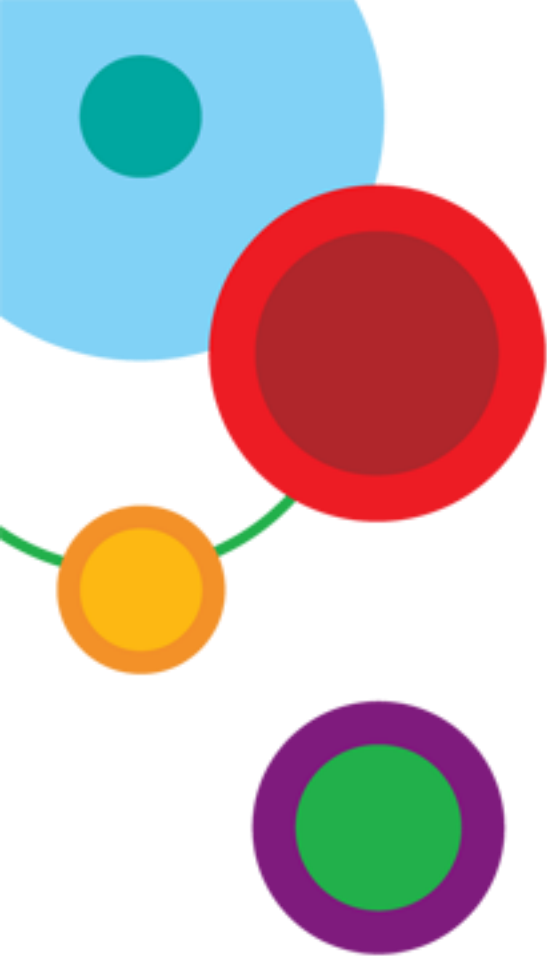**Frequency score * Monetary score * Recency score Crosstabulation**

Count

Recency score			Monetary score					Total
			1	2	3	4	5	
1	Frequency score		172	178	172	178	171	871
		3	100	112	108	105	106	531
		4	83	93	89	88	88	441
		5	108	109	109	109	108	543
	Total		463	492	478	480	473	2386
2	Frequency score	1	180	160	181	166	173	860
		3	125	131	128	128	128	640
		4	90	88	89	89	89	445
		5	84	85	85	85	85	424
	Total		479	464	483	468	475	2369
3	Frequency score	1	28	14	54	19	25	140
		2	197	155	163	181	176	872
		3	103	105	103	104	103	518
		4	78	79	78	79	78	392
		5	89	90	90	90	89	448
	Total		495	443	488	473	471	2370
4	Frequency score	1	181	160	177	172	174	864
		3	106	104	105	105	105	525
		4	103	104	104	104	104	519
		5	97	98	98	98	98	489
	Total		487	466	484	479	481	2397
5	Frequency score	1	98	141	119	121	117	596
		2	57	67	52	58	58	292
		3	102	102	103	102	102	511
		4	101	102	101	102	101	507
		5	94	94	95	94	94	471
	Total		452	506	470	477	472	2377

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SPSS and Predictive Analytics in Action

- Data Manipulation

Business Intelligence

Cognos BI - Strategy

- Heavily involve Executive and Business teams ("Owners" of the current system)

- Think outside the box

- Engage a top-notch IBM partner to lead the charge

  - LPA Systems was selected

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Who is LPA Systems?

- Founded in 2001
  - Offices in Rochester, NY and Houston, TX
  - 110+ active clients
    - 30+ new clients in 2010
    - 25+ new clients in 2011
    - 80%+ follow-on business
- An IBM Premier Business Partner (highest accreditation)
  - Partner since 2002
  - IBM Cognos-focused BI consultancy
- Extensive data warehouse experience
- Extensive consulting experience
  - Our Consultants have an average experience of 10+ years
  - Expertise in both Business Intelligence and Financial Performance Management products (planning)
- Industry Knowledge
  - Hospitality, Healthcare, Higher Education, Supply Chain, Distribution, Government, Energy
- Committed to the success of our customers

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Business Intelligence – Success Criteria

- Easy to use and maintain
- Business team can "own" the solution without heavy reliance on IT
- Data from various sources integrates easily
- Must be flexible
- Must be scalable to support company growth

Cognos BI – Challenges & Solutions

Challenges
- Data integrity – multiple sources
- Consolidation of data
- Generation of reports were manual and not easily repeatable
- Access to timely information

Solutions
- Implemented LPA Sales Analytic for Express (SAFE)
    - Ready-built data warehouse and reporting datamart
    - Cognos
        - Pre-built framework, dashboards, reports, and ad-hoc models

Cognos in Action

- Customization and scalability for each department

Cognos in Action

- Cognos dashboards allowed for a variety of information to be readily available
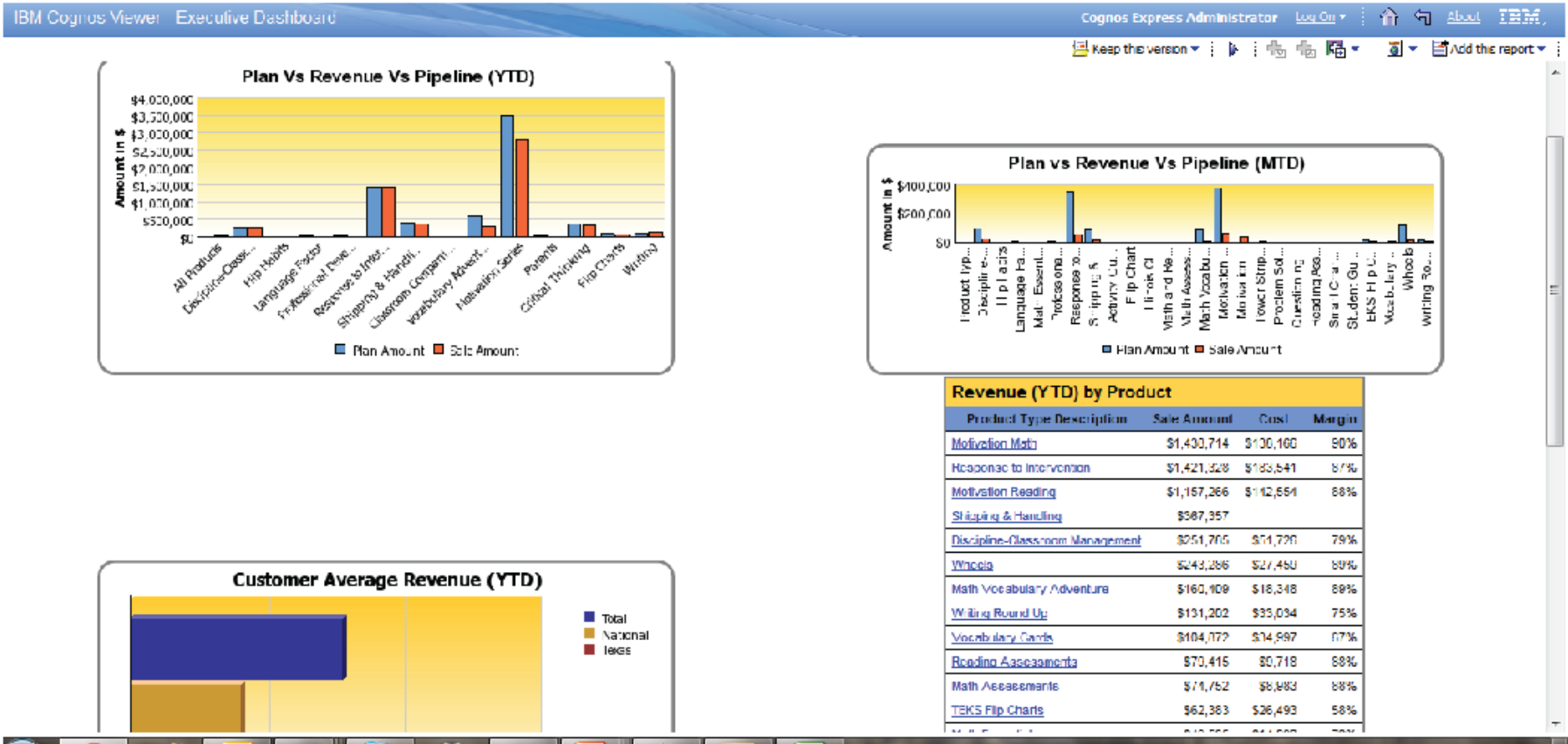
Benefits and ROI

- Dashboards and Sales View allowed us to have quick access to information for next steps in the company
- Since inception of SPSS Modeler and Cognos, we have:
  - Become the 2011 Texas Small Business of the Year
  - Market Campaigns with results like:
    - Over a 15% response rate
      - Using the market basket analysis and historical data, an upsell campaign was developed that had an avg response rate of 11%
    - Over 1000% ROI
      - The same campaign above had an avg ROI of 1,320%
  - Do more with less having a greater impact to our customers and increasing sales
  - Increase automation – able to grow substantially as a company without growing resources
  - Data manipulation is very easy and flexible
  - Actionable insight

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Lessons Learned

- No matter how bad you think you're off…chances are there are several others out there with similar problems, if not worse
- Data…Data…Data…
  - Maintain data integrity and the possibilities are limitless
- Don't be afraid to think outside the box
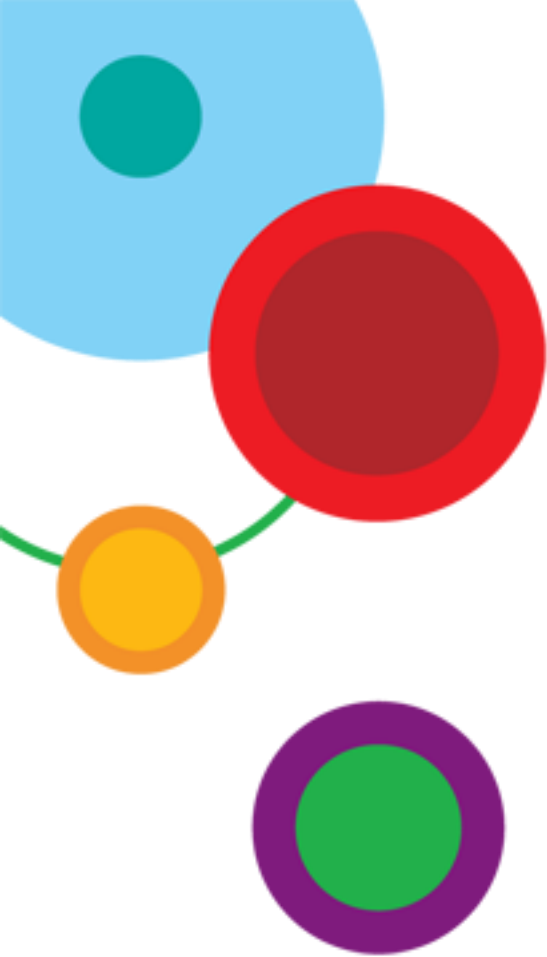- Quick wins or immediate results aren't months away

What's Next?

- Continued utilization as well as more in-depth application of the SPSS solutions
- Integration between SPSS and Cognos
- Increased usage and integration of Cognos throughout the organization
    - Expanded use among departments
    - Utilizing data from other software packages

- Success breeds success - Great things lead to more questions and more requests

Advice and Tips

- Ask questions
- There's no time like the present
- Find good partners to work with that can take your company from here to HERE!

Questions and Answers

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