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# Applying analytics to compliance programs

Get your data to work for you

Pharmaceutical Compliance Congress & Best Practices Forum  
Washington, DC  
October 21, 2015

**Joseph Coniker**

Principle – National Practice Leader, Business Analytics

# Today's presenter



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Joseph Coniker is a Principal and national practice leader for Business Analytics at Grant Thornton LLP. Coniker has over 20 years of professional experience, including 15 years focused on Oracle, Siebel and Hyperion based technologies. Projects that Coniker influenced have resulted in more than \$1 billion in working capital improvements.

Coniker is a member of the AICPA, and Oracle Customer Advisory Council. He is a published author on data analytics matters, and frequent speaker at regional and national events, including Oracle Open World, and guest speaker at the doctoral program on technology and warehousing at Robert Morris University, and finance programs at the University of Richmond.

His current focus leverages prior experience, and big data information discovery processes, to enable executive teams to quickly discover insight using their data. Coniker is taking a new approach to business intelligence so that broad and relevant analytics can be delivered when it is most needed.

## Education:

- Harvard Business School- General Management Program
- NYU Stern School of Business - Magna Cum Laude

## Areas of Expertise:

- Business strategy definition
- Merger and acquisition
- Working capital optimization
- Profitability improvement
- Information Discovery and Big Data
- Data governance
- Data visualization
- Data management and business analytics
- Program management setup and delivery

# Topics

- Perspective on big data and analytics
- Pharmaceutical analytics and use cases
- Framework to initiate

# Two topics infiltrating the airwaves



- Our perspective, focused compliance and pharmaceutical analytics

# Pharmaceutical Analytics

## Functional Areas

Functional area	Analytics
Research and discovery	<ul style="list-style-type: none"><li>• Target/biomarker identification</li><li>• Portfolio optimization</li></ul>
<b>Clinical development</b>	<ul style="list-style-type: none"><li>• <b>Resource allocation</b></li><li>• Trial planning and efficiency</li><li>• Clinical trial design</li></ul>
Manufacturing and supply chain	<ul style="list-style-type: none"><li>• Supplier compliance</li><li>• Inventory management</li><li>• Demand planning and forecasting</li></ul>
Sales and marketing	<ul style="list-style-type: none"><li>• Managed markets analytics</li><li>• Customer segmentation</li><li>• Sales force effectiveness</li></ul>
<b>Compliance</b>	<ul style="list-style-type: none"><li>• <b>Compliance and fraud detection</b></li><li>• Foreign corrupt practices act (FCPA)</li><li>• Open payments – Physicians Payments Sunshine Act</li></ul>

# Pharmaceutical Analytics

## Use Cases

### Enterprise Analytics

1mil clinical research org

### Big Data Discovery

20bil global pharma company

#### How we think:

Two ways to go...



Do what you're  
doing better

OR



Go beyond what  
you're doing

#### How you experience

Dashboard



Reports



Interactive  
visualizations



Search  
capabilities



Mobile



- Integrate **multiple sources** of information
- Exploration of summary to detail
- Foundation to build an analytical platform

- Profile vast stores of disparate data
- Identify patterns and draw correlation across structured and unstructured data
- Deliver model for predictive and prescriptive



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# Enterprise Analytics

## Resource Allocation

### 1. Changes to backlog

#### Significant New Awards and Change Orders Added to Backlog During Month:

- Company A – Comprised of 2 phase III Alzheimer's study change orders, \$23.9M, a phase III Tuberculosis change order, \$1.6M, and a phase III MIND program new award, \$2M; expected start 3Q14.

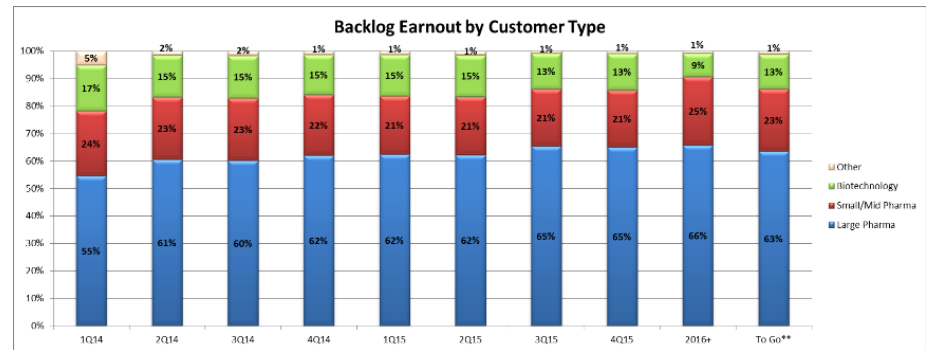
#### Significant Upscopes and Downscopes to Awards Added to Backlog During Month:

- Company B – Phase II Age-Related Macular Degeneration study, part A/B; increase in work order values from original award..

#### Significant Cancellations and Risks Added to Backlog During Month:

- Company C – Backlog risked out due to redistribution of country site selection across the CNS Diabetic Neuropathic Pain and Fibromyalgia programs.

### 2. Backlog earn out by customer type



### 3. Revenue roll forward based on backlog

Backlog	2012				2013				2014				2015				2012	2013	2014+	2014
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
\$M																				
Jan-12	132.9	123.6	112.0	105.6	95.1	85.0	70.7	66.4									474.1	317.2	465.3	
Feb-12	132.9	135.3	122.3	121.4	105.8	97.2	83.7	76.7									511.9	363.4	502.8	
Mar-12	141.6	142.4	135.0	130.2	115.6	108.0	91.6	83.1									549.2	398.3	536.6	
Apr-12	137.9	143.1	140.8	118.8	111.3	95.1	81.1										563.4	406.3	607.0	
May-12	140.7	150.6	140.0	115.0	108.7	95.3	81.6										572.9	400.6	645.9	
Jun-12	142.0	145.8	140.4	121.8	114.2	105.4	97.4										569.8	438.8	643.4	
Jul-12		143.8	143.8	133.6	120.5	109.7	101.3										571.2	465.1	680.3	
Aug-12		141.8	147.9	134.3	128.1	125.0	110.4										573.3	497.8	663.1	
Sep-12		143.4	146.9	144.2	135.0	125.1	113.6										573.9	517.9	684.7	
Oct-12			146.8	151.2	138.7	127.2	116.6										573.8	533.7	671.0	
Nov-12			148.2	157.6	147.4	135.6	124.7										575.2	565.3	709.1	
Dec-12			152.1	152.4	145.9	132.8	124.8										579.1	555.9	768.2	
Jan-13				148.5	149.6	141.2	127.9	107.2	102.6	95.4	87.5						567.2		392.7	
Feb-13				148.3	152.3	147.4	134.4	114.7	110.7	102.2	87.5						582.4		415.1	
Mar-13				149.7	150.9	147.6	129.1	112.6	106.5	102.2	88.3						577.3		409.6	
Apr-13					153.9	153.2	143.3	123.4	111.9	107.7	94.4						600.1		437.4	
May-13					157.2	155.9	150.0	131.3	117.6	108.6	100.2						612.8		457.7	
Jun-13					159.2	164.3	151.7	142.1	129.4	110.7	102.7						624.9		484.9	
Jul-13					166.3	160.0	141.9	130.3	123.2	113.0							635.2		508.5	
Aug-13					166.6	171.7	154.5	145.3	132.9	125.8							647.3		558.5	
Sep-13					169.1	172.6	159.3	154.4	137.4	130.1							650.6		581.1	
Oct-13						173.0	177.4	171.9	153.2	143.8							651.0		646.4	
Nov-13						174.4	182.2	175.0	159.1	150.9							652.4		667.2	
Dec-13						174.4	184.1	178.8	163.7	155.6							652.4		682.2	

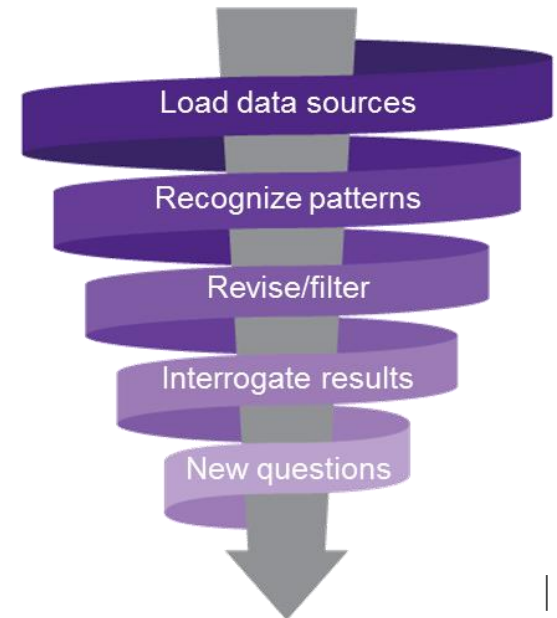
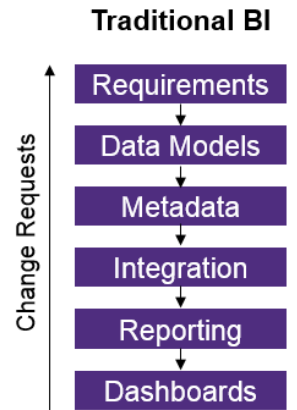
# Big Data Discovery

## Compliance and Fraud

### What we don't have to do...

- Typical requirements gathering
- Mock up reports on paper
- Scrub the data
- Perform hardware analysis

### New paradigm to analytics

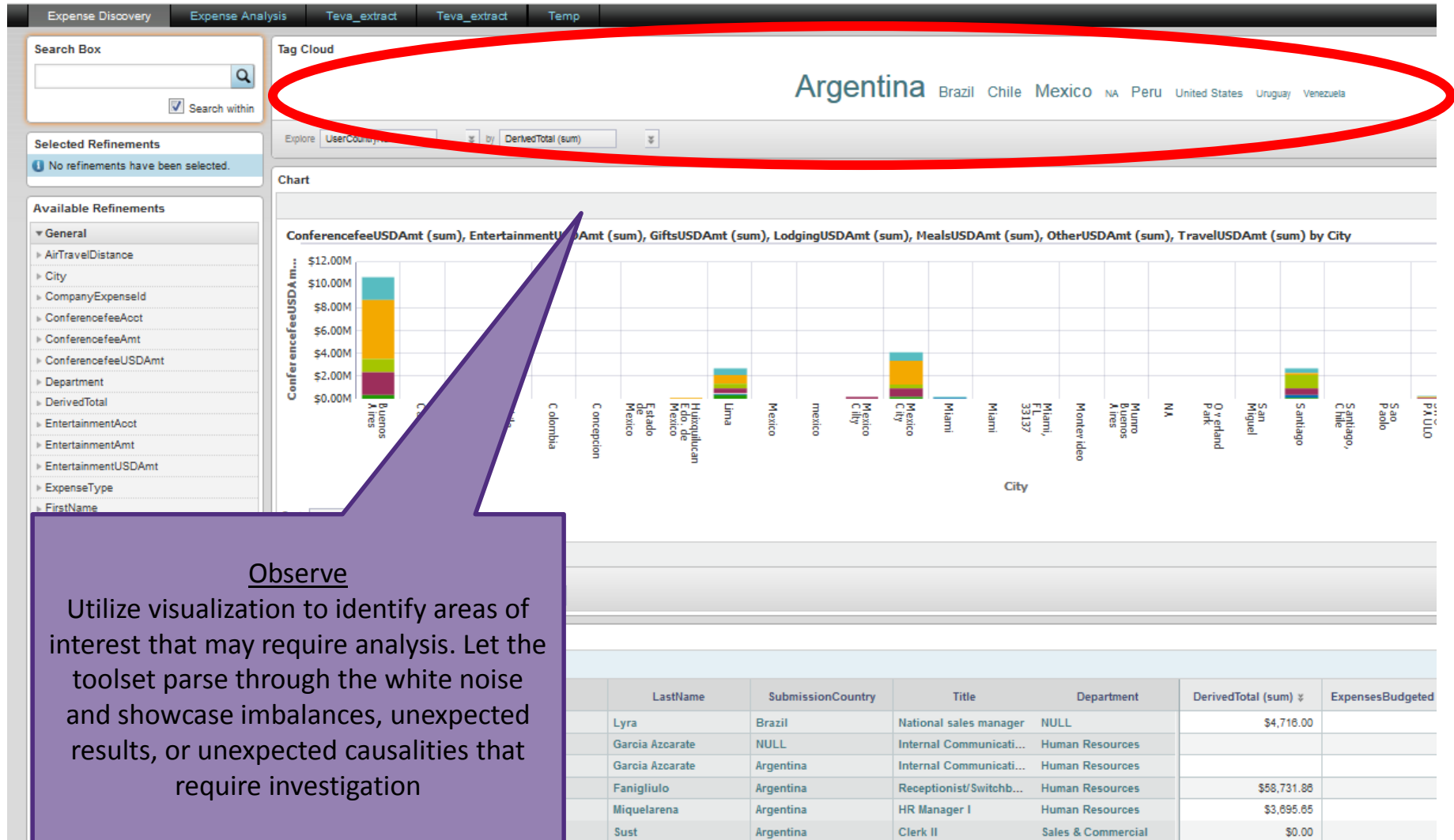




# Big Data Discovery

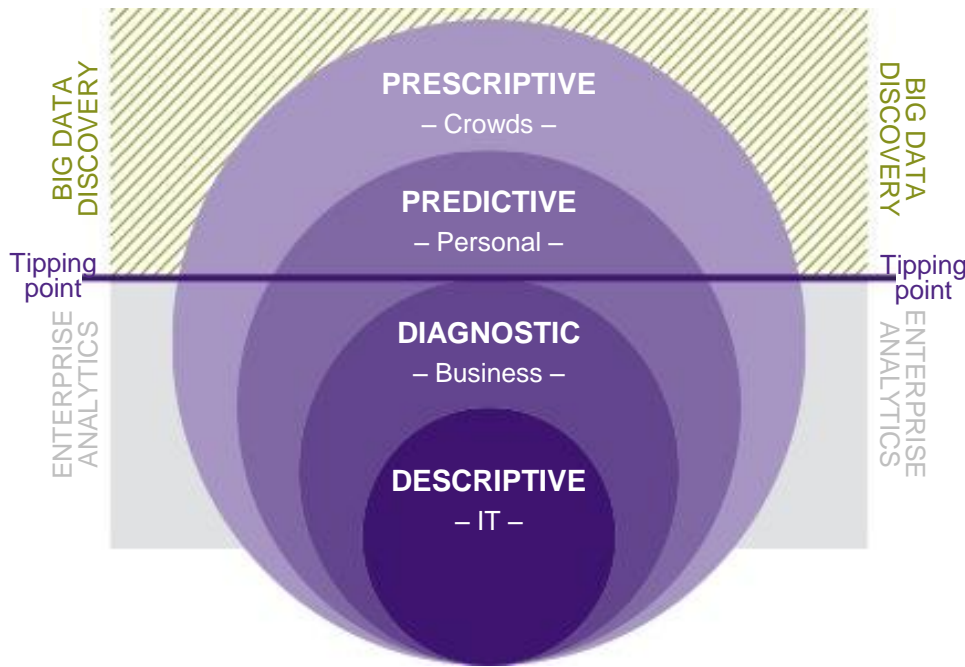
## Compliance and Fraud

ORACLE® Endeca Information Discovery | Teva Compliance



# Framework

## Analytics maturity model



### Big Data Discovery

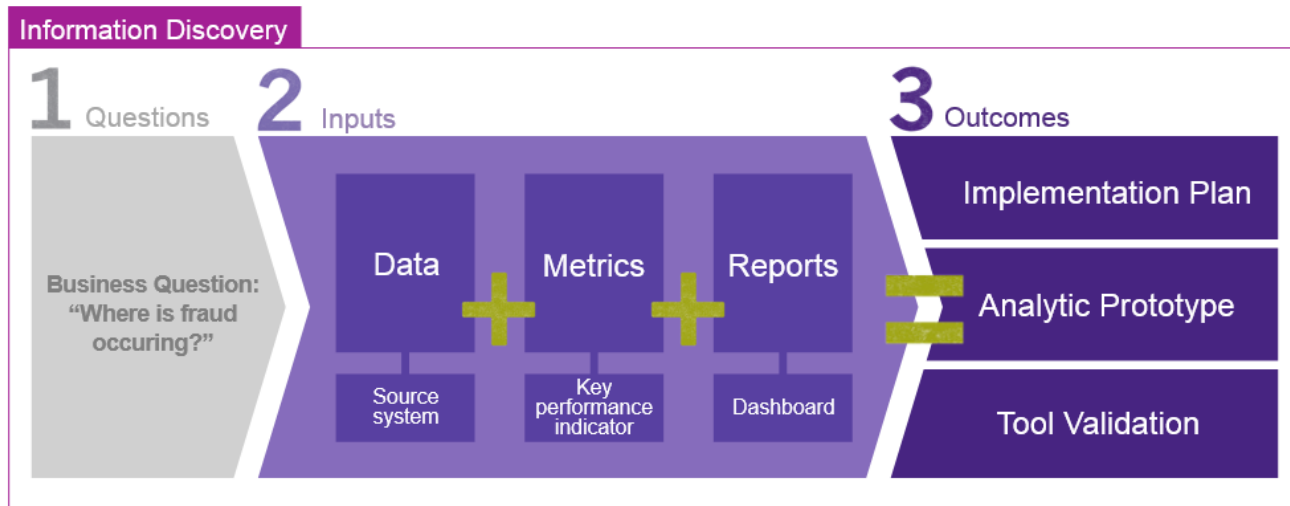
- integrate vast stores of disparate structured and unstructured information
- provide a capability to identify and profile patterns to quickly draw correlations
- deliver advanced analytic application-based solutions without requiring a fixed data model

### Enterprise Analytics

- integrate multiple sources of structured transactional data
- provide robust reporting with summary and detailed with drill-down capability
- provide the foundation to expand the analytic platform














# Framework

## Initiation and Roadmap



Our approach starts with your data...

and results in a faster to deploy and better  
model (data, allocation ...)

 <b>100+</b> A3 projects	 Crossing over <b>40</b> functional areas
Over a <b>10 year</b> development cycle          	With more than <b>150,000</b> artifacts 

Big enough to deliver  
**strong value**

Small enough to provide  
**great service**

