IT’S ALL ABOUT DATA WHEN IT COMES TO FRAUD, RISK AND COMPLIANCE

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Abstract

• The root cause of all errors, gaps, and failed milestones at some point circle back to a data point that was unknown, misunderstood, misplaced, ignored, and or just simply not processed.

• This session provides an over view of Datum; its current operational state; paradigm shifts in the c-suite; data management; and data analytics and finally the audit and investigative implications of such
Datum

• A single piece of information, as a fact, statistic, or code; an item of data

• Every two days now we create as much information as we did from the dawn of civilization up……about five Exabyte's of data
Social Media & Datum

• People send more than **144.8 billion Email** messages sent a day.
• People and brands on **Twitter** send more than **340 million tweets** a day.
• People on **Facebook** share more than **684,000 bits of content** a day.
• People upload **72 hours (259,200 seconds)** of new video to **YouTube** a minute.
• Consumers spend $272,000 on **Web shopping** a day.
• **Google** receives over **2 million search queries** a minute.
• **Apple** receives around 47,000 app downloads a minute.
• **Brands** receive more than **34,000 Facebook ‘likes’** a minute.
• **Tumblr** blog owners publish **27,000 new posts** a minute.
• **Instagram** photographers share **3,600 new photos** a minute.
• **Flickr** photographers upload **3,125 new photos** a minute.
• People perform over **2,000 Foursquare** check-ins a minute.
• Individuals and organizations launch **571 new websites** a minute.
• **WordPress** bloggers publish close to **350 new blog posts** a minute.
• The **Mobile Web** receives **217 new participants** a minute.
Job Market & Datum

• 2.5 Petabytes: Data flowing through Walmart’s transaction databases. (The Economist)
• 40 Terabytes: Data generated every second from nuclear physics experiments at the Large Hadron Collider at CERN. (The Economist)
• 1.25 Terabytes: The amount of data the human brain can hold. It performs at roughly 100 teraflops. (Ray Kurzweil as cited by IBM’s Tony Pearson)
• 40%: five-year compound annual growth rate (CAGR) growth for worldwide big data market.
Datum Future Job Markets

• Big Tools
• Big Implications
• Big Reports
• Big Data Categories
• Big Books
• Big Videos
• Where to start?

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“What does big data need?”
- Cultural adaptation
- C-suite revolution
- New skills sets
- New roles
- New tools
- New analytics
Datum

“What does data need within your organization?”
- An Inventory
- A Strategy
- A Governance plan
- A Management plan
- Subject matter experts on content and architecture
- Formal analytics
- SECURITY
Operational State of Datum

“What does datum…data… need?”
- Data Inventory – Mission – Valuation - Strategy
- Data Operationalization
- Data Governance
- Predictive Analytics – distinguishing the signal from the noise
- Making data intelligent then actionable
- Integrating internal and external data points (individual generated info/professional tablets/smartphones)
- Data Protection - Cybersecurity – know that it’s “when” not “if”; watermark data
Operational State of Datum

Without analytics tools, the increasing amount of information collected thanks to emerging electronic tools and cloud services can make finding information like searching for a “needle in a haystack.

In the meantime – the ethically challenged are having a field day!
The Security of Datum

- 2013 Breaches by business category
  - 34.4% among businesses
  - 3.7% credit/banking/finance
  - 9.1% government/military
  - 9% educational
  - 43.8% medical/healthcare

Datum Resulting in an Error

• An ERROR results from the wrong data, at the wrong time, resulting in the wrong decision.
Datum Resulting in Fraud

- FRAUD occurs when the right data is utilized at the right time (point of vulnerability) to execute the right illicit transaction.
Key Anomaly Data Points

• What is normal? (Why?)
• What is the subject of the theft/error?
• What is the mechanism of theft/error?
• What is the damage resulting from the error and or fraud?
Behavioral Data Analytic Model

- Who are the parties?
- What are their standards?
- How do they operate (people, process, technology)?
- What are the rules/laws/contracts?
- Where are the road blocks?
- When are damages incurred?
Data Management, Audit, Investigative Impact

IIRB Model – 6 Component Behavioral Analytic Model*

1. **Player**: Identify all person(s), place(s) or thing(s)

2. **Benchmark**: Standard(s) of practice by each player

3. **Functional/Information**: All operational people, process, and technologies applied by each player identified

*Busch, Rebecca 2014 US Patent Pending on IIRB Model, Framework, and Analytic Roadmap
Data Management, Audit, Investigative Impact

IIRB Model – 6 Component Behavioral Analytic Model* continued…

4. Rules-based: Laws/contracts by each player and respective operations

5. Transparency: Identify road blocks by each player and respective operations

6. Consequence: Identify damages/risk by each player and respective operations

*Busch, Rebecca 2014 US Patent Pending on IIRB Model, Framework, and Analytic Roadmap
IIRB Behavioral Model Application

- Healthcare example
- Michigan Healthcare Fraud & Drug Distribution Scheme
- Business owner(s); pharmacists; healthcare providers
# IIRB Behavioral Model Application

<table>
<thead>
<tr>
<th>Players</th>
<th>A Pharmacist, Business investors, Physician, Clinical Staff, Payers (Medicare, Medicaid), Pharmacy, Wholesaler, Distributor, home health agencies,</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benchmark</td>
<td>licenses (state, professional, distributor, facility, government); product standards (Rx distribution channels); professional practice standards (clinical, pharmaceutical, home health); Industry specific (Healthcare)</td>
</tr>
<tr>
<td>Informatics</td>
<td>All people, process, and technologies utilized by each player</td>
</tr>
<tr>
<td>Rules</td>
<td>False Claims Act; HIPAA Security; Contracts between and among the parties</td>
</tr>
<tr>
<td>Transparency</td>
<td>Access to documentation of patient care services; access to illicit training; full disclosure of theft; unknown adverse impact on patients</td>
</tr>
<tr>
<td>Consequences</td>
<td>$60 million dollar theft; displaced patients</td>
</tr>
</tbody>
</table>

| Who           | Ringleader Babubhai Patel, a pharmacist and businessman from Canton, Michigan, owned and/or controlled 26 pharmacies and several home health agencies |
| Mechanism of Theft | Straw ownership within facilities; solicited cooperation from home health agencies; access to PHI                                             |
| Scheme        | He and his associates recruited a number of pharmacists – mostly from overseas – to staff his pharmacies and help facilitate his scheme to defraud government. There were bribes and kickbacks and thousands of illegal doses of sought-after drugs like oxycodone and hydrocodone |

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IIRB Behavioral Model Application

- Banking example
- Divorce Court – Husband and Wife
- Equity Stripping within a finance company governed by the Federal Trade Commission

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## IIRB Behavioral Model Application

<table>
<thead>
<tr>
<th>Players</th>
<th>A married couple in the process of a divorce; notary; title company; a finance company for the mortgage; real estate attorneys; divorce attorneys; brokers; appraiser</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benchmark</td>
<td>Licenses (state, professional, broker, banks); product standards (mortgage &amp; equity loans); professional practice standards (notary, title, banking, broker, appraiser); Industry specific (banking)</td>
</tr>
<tr>
<td>Informatics</td>
<td>All people, process, and technologies utilized by each player</td>
</tr>
<tr>
<td>Rules</td>
<td>Banking regulations; Agency of Authority; Contracts between and among the parties; notary requirements</td>
</tr>
<tr>
<td>Transparency</td>
<td>Access to documentation of all loan requests; access to witnesses of signatures</td>
</tr>
<tr>
<td>Consequences</td>
<td>$1.2 million in equity stripping</td>
</tr>
</tbody>
</table>

| Who | Spouse obtained false appraisals resulting in additional equity loans above and beyond value of home |
| Mechanism of Theft | Husband utilized a high school friend (notary) to authenticate wife signatures on a series of loans; a broker and appraiser to inflate the value |
| Scheme | Husband paired up with an appraiser and broker to obtain overvalued loans. After exhausting his own credit he utilized his spouses credit |
Data Management, Audit, Investigative Impact

“Adapt or Die” - Data & Information Strategy Assessment Tool (DIS)

- DIS Prevention
- DIS Assessment
- DIS Detection
- DIS Mitigation

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**DIS Prevention:** The process to identify post implementation of a data strategic plan and the effectual hindrance and/or the act of preventing adoption to a new business model.

- Data Strategy for assessing risk
- Anomaly tracking systems
- Random audits
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**DIS Assessment:** The act of evaluation, valuation, assessing as applied to the organization’s current data road map in comparison to its defined strategic plan.

- Fraud Risk and Compliance Assessment
- Third party audits
- Vulnerability assessments
Data Management, Audit, Investigative Impact

DIS Detection: The discovery of, the act of or process of extracting information from the data sets that are not consistent with the organization’s data strategy or data policy.

- Damage control team by SME
- Compliance reporting requirements
- Back up contingency plans

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**DIS Mitigation:** The lessoning of the force, intensity, adverse circumstance(s), condition(s) and/or event consequence(s), of data deficiencies that have been detected within the defined data strategic.

- Damage control by SME
- Follow up compliance reporting requirements
- Corrective action plan and execution
Data Management, Audit, Investigative Impact

• Information Strategy Assessment Tool
  – Business Intelligence (BI) – all intelligence relevant to business functions
    • Cost Management
    • Resource Allocation
    • Operations
    • Billing Process – maximize efficiency/minimize wasteful spending
    • Staffing
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• Information Strategy Assessment Tool
  – Industry Domain Intelligence (IDI) – the process of maximizing interconnectivity of all industry domain data
    • Grown exponentially with data assets
    • Data as a product
    • Bulk of industry data remains silos and fragmented across systems and departments within organizations

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Datum to Business Intelligence as a Strategic Tool

- PAPER RECORDS
- SILOED DATA
- FRAGMENTED DATA

DATA REPOSITORY

- Industry Data
- ADMIN (DATA ANALYTICS)
- Intelligent DATA

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• Data and Information Strategy Requirements – information and data must be:
  – readily available to relevant end users within the organization
  – protected from unauthorized access
  – effectively captured, stored, mined and analyzed to maximize utility
  – a principal component of all decision making
  – utilized to conduct vulnerability analysis and measure risk both on the industry and business side of the operations
Data Management, Audit, Investigative Impact

• Data and Information Strategy Requirements – information and data must be:
  – able to work with all end users to ensure that the end product efficiently and effectively supports workflow
  – if applicable, properly aligned with the objectives and requirements of the organization with industry regulatory requirements
  – fluid and responsive to emerging market trends
  – considerate of compliance and changing legislation
  – consumer centric
Paradigm Shift in the C-Suite

Dogbert the CEO

Employees are so important to me that our Head of Human Resources will get a C-level title.

Edna will be our CPO, or Chief People Officer.

Take a seat over there by the Chief Artificial Coffee Creamer Officer.

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Paradigm Shift in the C-Suite

New C-Level Roles Added over Last 30 Years:

- **CFO (Chief Financial Officer)** – for value management and better investor relations
- **CMO (Chief Marketing Officer)** – to manage brand building and customer engagement
- **CCO (Chief Compliance Officer)** – responsible for overseeing and managing compliance within an organization, ensuring compliance with regulatory requirements and internal policies and procedures
- **CSO (Chief Strategy Officer)** – to address complex and fast-changing global markets
- **CIO (Chief Information Officer)** and Hybrids – to manage the explosion of data and craft “Big Data” and advanced analytics strategy.

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Paradigm Shift in the C-Suite

New C-Level Roles Added During Recent Data Explosive Years:

- **CISO** (Chief Information Security Officer) - senior-level executive responsible for establishing and maintaining the enterprise vision, strategy and program to ensure information assets and technologies are adequately protected. Directs staff in identifying, developing, implementing and maintaining processes across the organization to reduce information and (IT) risks.

- **CTO** (Chief Technical Officer) – an executive-level position in a company or other entity whose occupant is focused on scientific and technological issues within an organization.

- **CNIO** (Chief Nursing Information Officer) - nursing healthcare executive generally responsible for the health informatics platform required to work with clinical IT staff to support the efficient design, implementation, and use of health technology within a healthcare organization.

- **CDO** (Chief Data Officer) – transforms data into information physicians can use to make better informed decisions.

- **CAO** (Chief Analytic Officer) – transforms data into information physicians can use to make better informed decisions.

- **CPHO** (Chief Health Population Officer) - responsible for overseeing development and implementation of the organization’s population health management strategy.

- **CKO** (Chief Knowledge Officer) – assigned to turn raw data into usable knowledge for organization to use in innovative ways.

- **CIO** (Chief Incentive Officer) – examine ways hospitals can change behaviors to meet particular cost savings goals.

- **CMO** (Chief Mobility Officer) – investigate, plan and implement mobile strategies for the organization.

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Paradigm Shift in the C-Suite

Leadership Roles Traditional/Informational/Support*

Chief Leadership Titles - Channels of Information

Traditional Leadership
- CMO
- COO
- CEO
- CFO
- CCO

Information Leadership
- CIO
- CMIO
- CNIO
- CISO

Support Leadership
- CTO
- CDO
- CSO
- CXO
- CCTO
- CPHM
- CRO

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Paradigm Shift in the C-Suite

Subject and Data Type by Leadership Role

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Questions to Consider

- Who is the data “Chief” in your organization?
- Who has ownership of the organization’s Data Strategy?
- Does your organization employ predictive analytics? If Yes, how is it managed?
- Has your company ever taken a data vulnerability assessment?
- What steps has your organization taken to become a patient centric health and wellness model?
- How will data analytics be incorporated and operationalized to become a data driven organization?
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Coming in June, 2015 by Rebecca Busch:
“C-Suite Revolution”

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