Big data e sicurezza nelle banche: l'estensione delle regole di governance a tutte le informazioni sensibili

Sergio Mucciarelli
Data Security Leader – IBM Italia

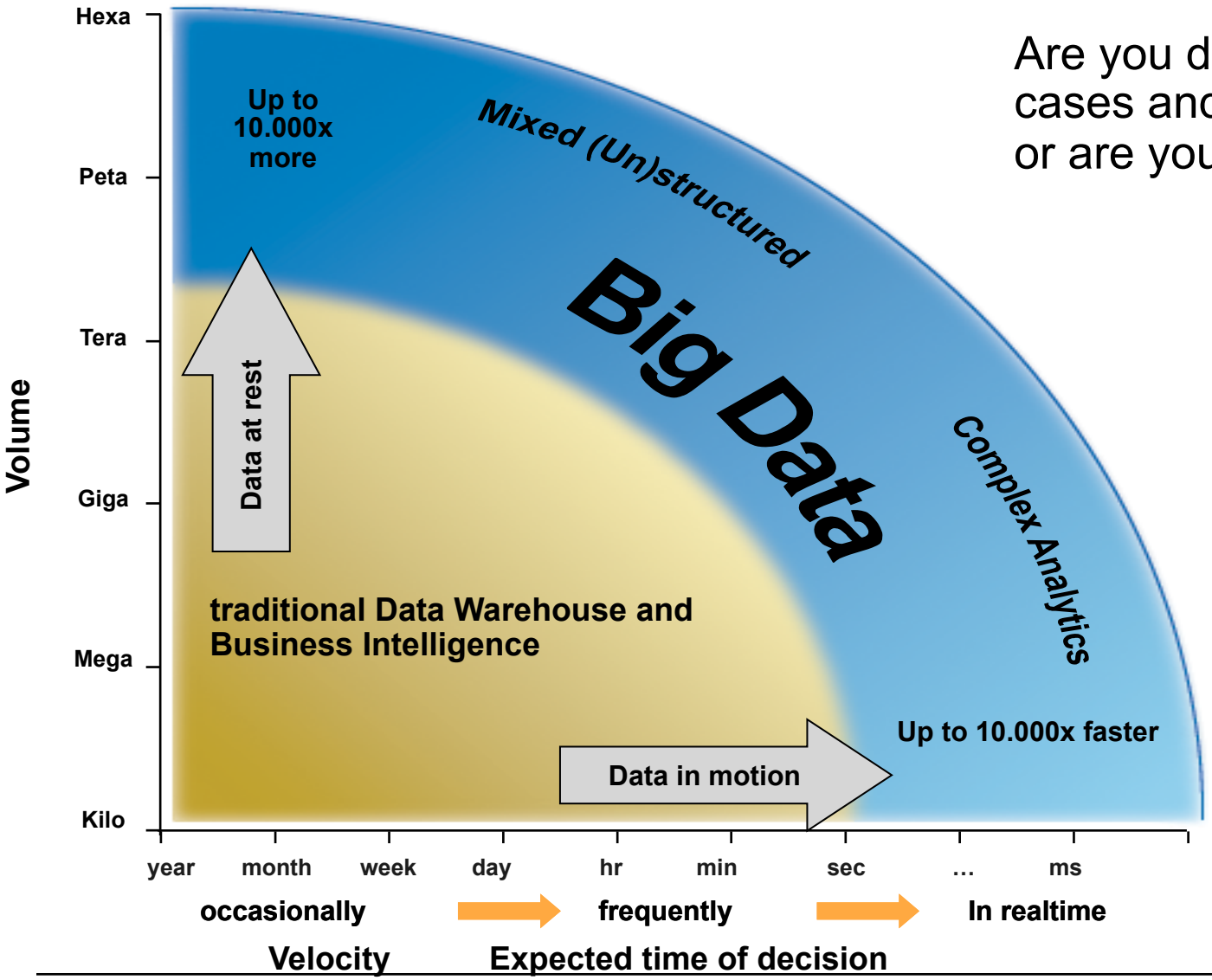
Roma, 5 giugno 2013

Agenda

- Big Data: new capabilities for banking
- Extending Data Governance Security
- An enterprise approach to monitor data activity
- Big Data to enrich security intelligence

Big Data: new capabilities for banking

Big Data offers new strategic business cases



Are you driving new use cases and new capabilities or are you driven ?

Banking key big data business use cases

Optimize enterprise risk management

- **Counterparty Risk Management**
- Real-time Fraud Detection
- AML & Fraud Investigation
- Financial Risk Analysis
- Market & Portfolio Risk Analysis
- Lending Risk Analysis
- Market Surveillance

Create a customer-focused enterprise

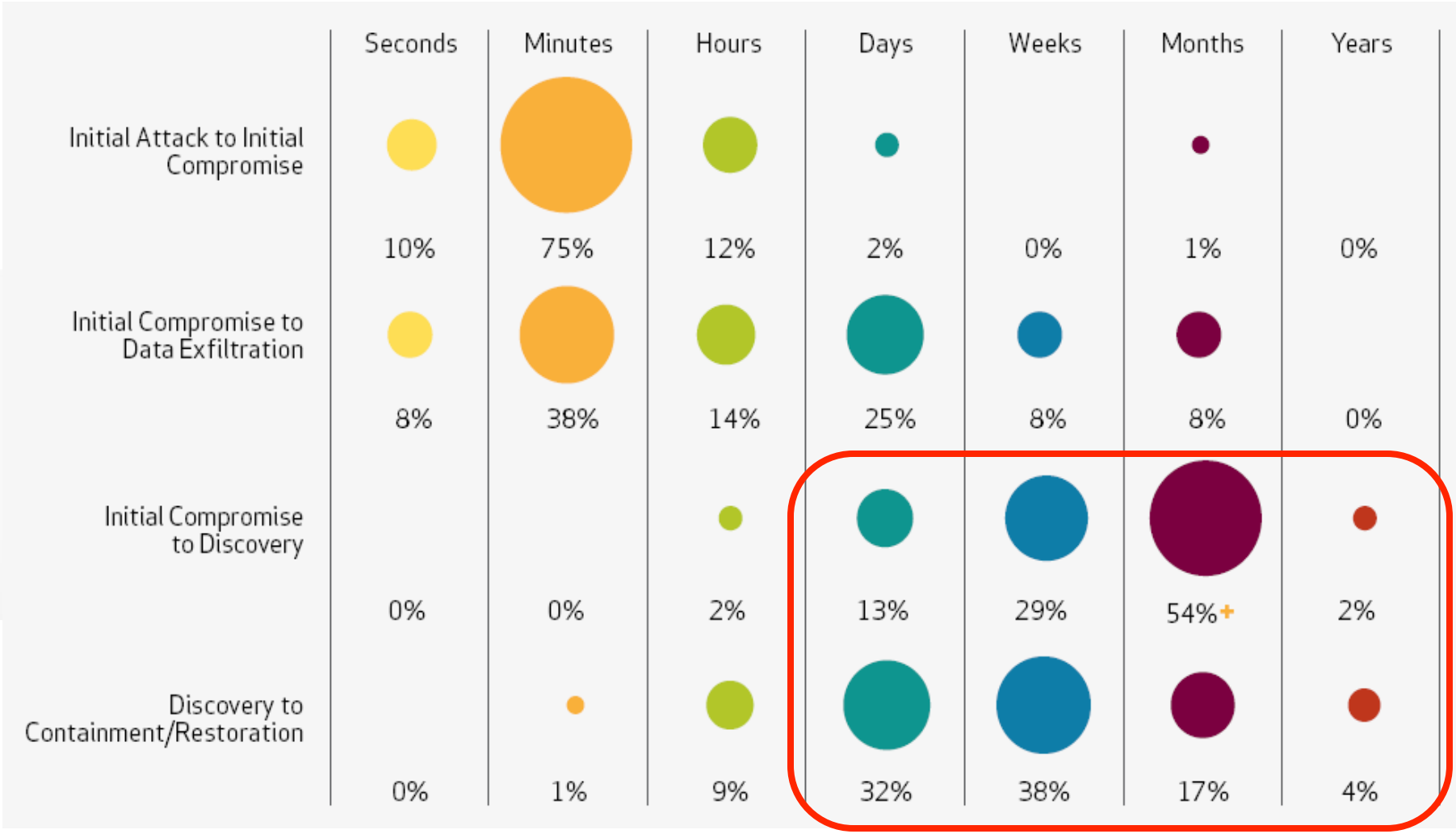
- **Cross Selling & Offer Optimization**
- Contact Center Analytics
- Customer Retention
- Enhanced Customer Segmentation
- Data Monetization & Merchant Analytics
- Market Trading Analysis

Increase flexibility and streamline operations

- **DWH augmentation**
- **Security**
- Data Staging & Management
- System Log Analysis
- System Failure Analysis

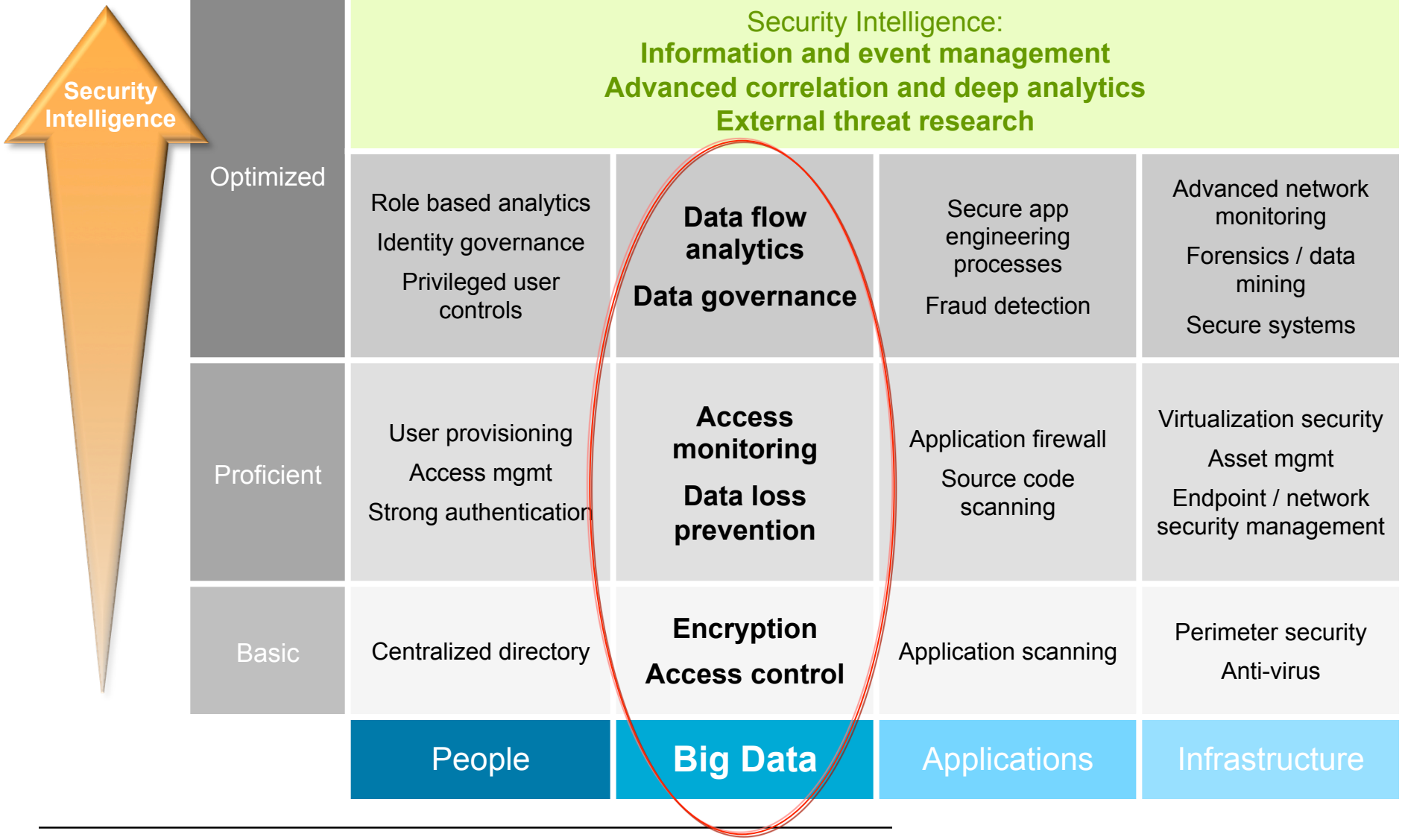
Extending Data Governance Security

Compromises take days or more to discover in 96% of cases; and weeks or more to contain in over in 91% of cases



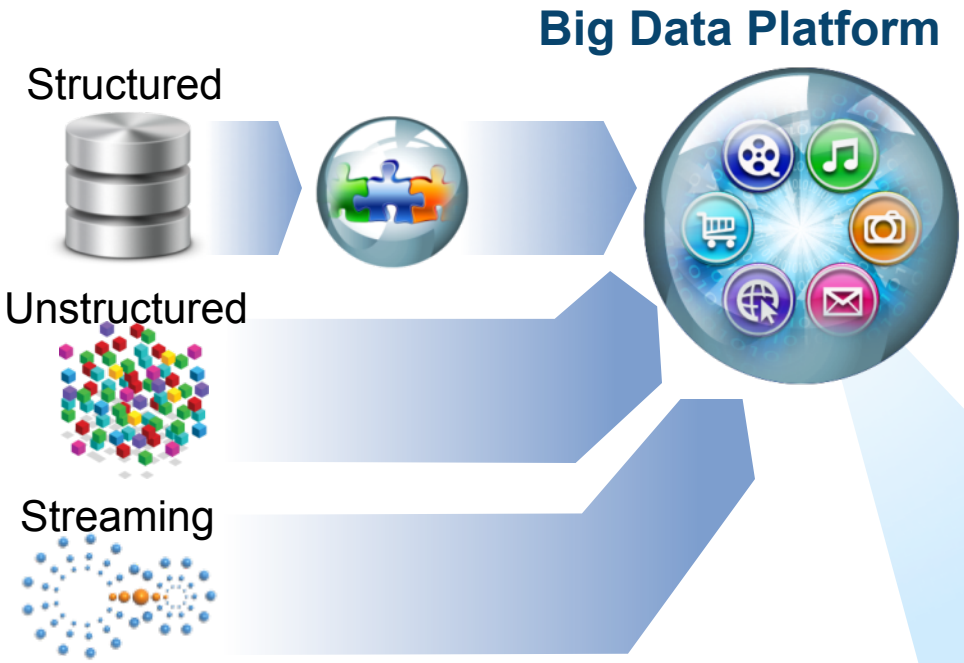
http://www.verizonbusiness.com/resources/reports/rp_data-breach-investigations-report-2012_en_xg.pdf?CMP=DMC-SMB_Z_ZZ_ZZ_Z_TV_N_Z038

Security Intelligence is enabling progress to optimized security



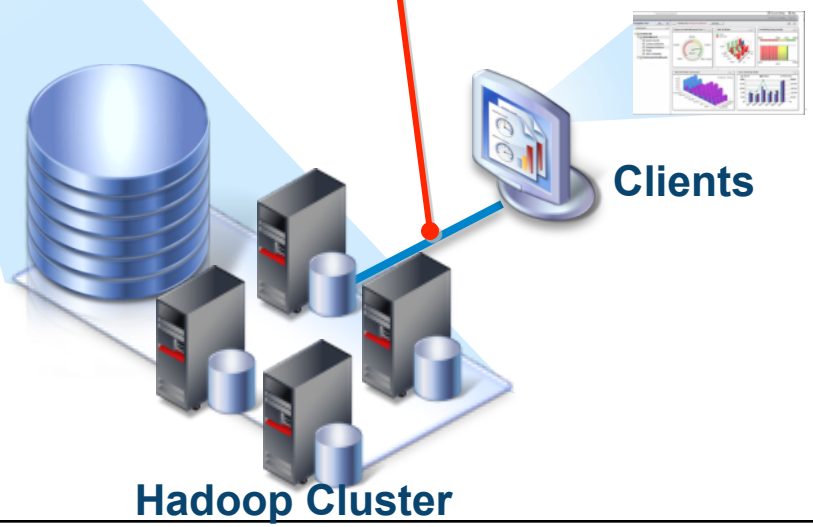
An enterprise approach to monitor data activity

Security and Compliance concerns are similar in Big Data

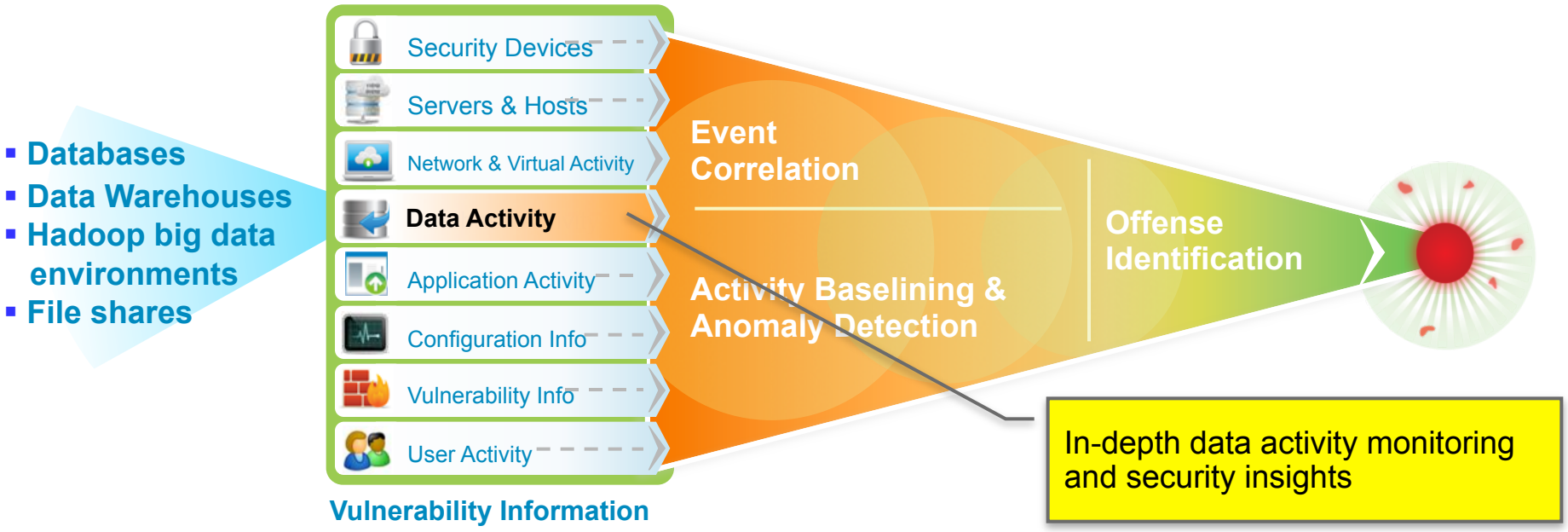


- Massive volume of structured data movement
  - 2.38 TB / Hour load to data warehouse
  - High-volume load to Hadoop file system
- Ingest unstructured data into Hadoop file system
- Integrate streaming data sources

- Who is running specific big data requests?
- What map-reduce jobs are they running?
- Are they trying to download all of the sensitive data for non-authorized purposes?,
- Is there an exceptional number of file permission exceptions?
- Are these jobs part of an authorized program list accessing the data?
- Has some new query application been developed that you were previously unaware existed?

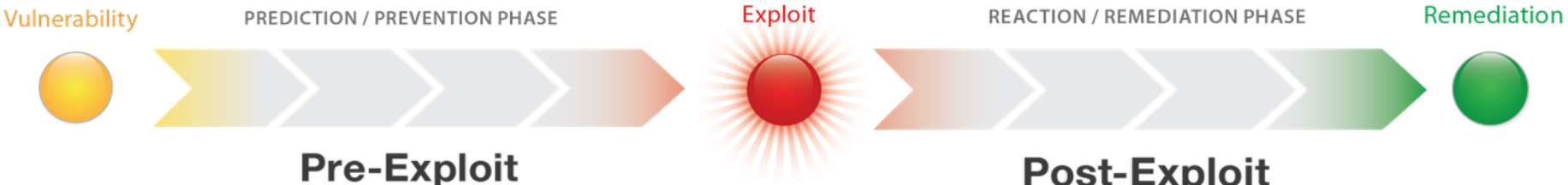


Data security insights to your security intelligence



Extensive Data Sources + Deep Intelligence = Exceptionally Accurate and Actionable Insight

Combat advanced threats with pre- and post-exploit intelligence and action



Pre-Exploit

Prediction & Prevention

Risk Management. Vulnerability Management.
Configuration and Patch Management.
X-Force Research and Threat Intelligence.
Compliance Management. Reporting and Scorecards.

Post-Exploit

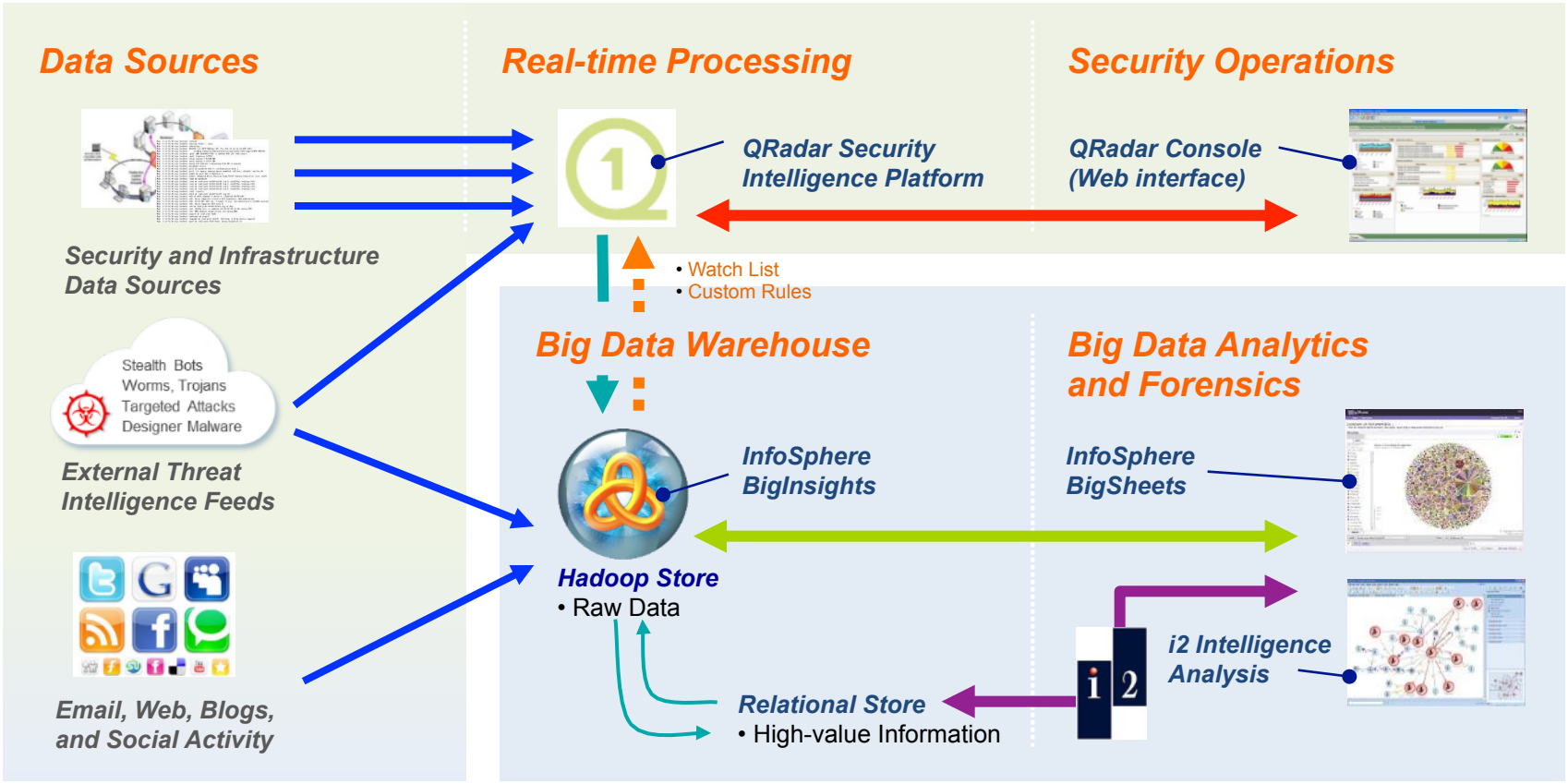
Reaction & Remediation

Network and Host Intrusion Prevention.
Network Anomaly Detection. Packet Forensics.
Database Activity Monitoring. Data Leak Prevention.
SIEM. Log Management. Incident Response.

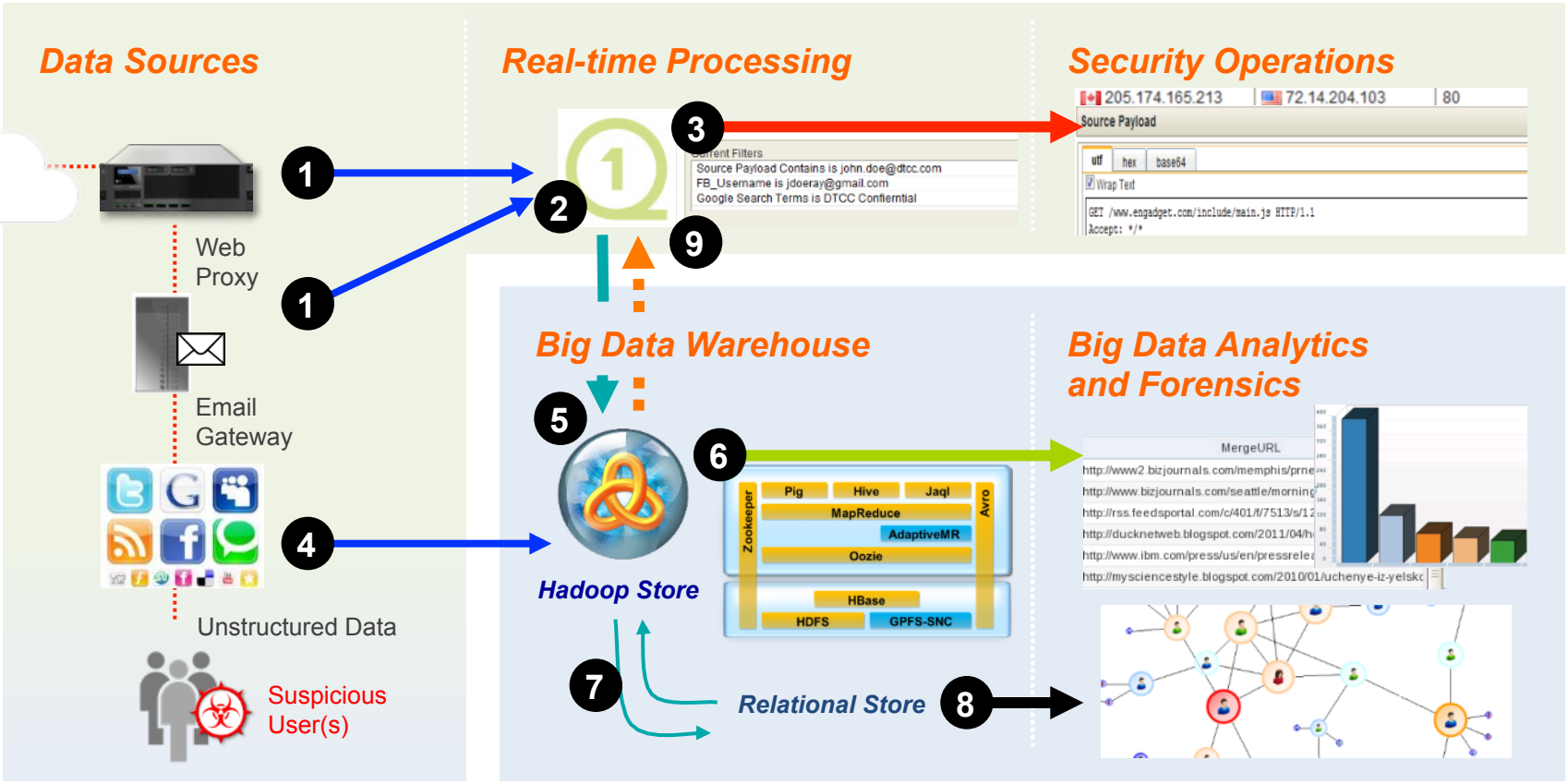
IBM Security Intelligence

Big Data to enrich security intelligence

Security Intelligence with Big Data – Components and data flow



Use case #1 – User profiling based on multiple sources



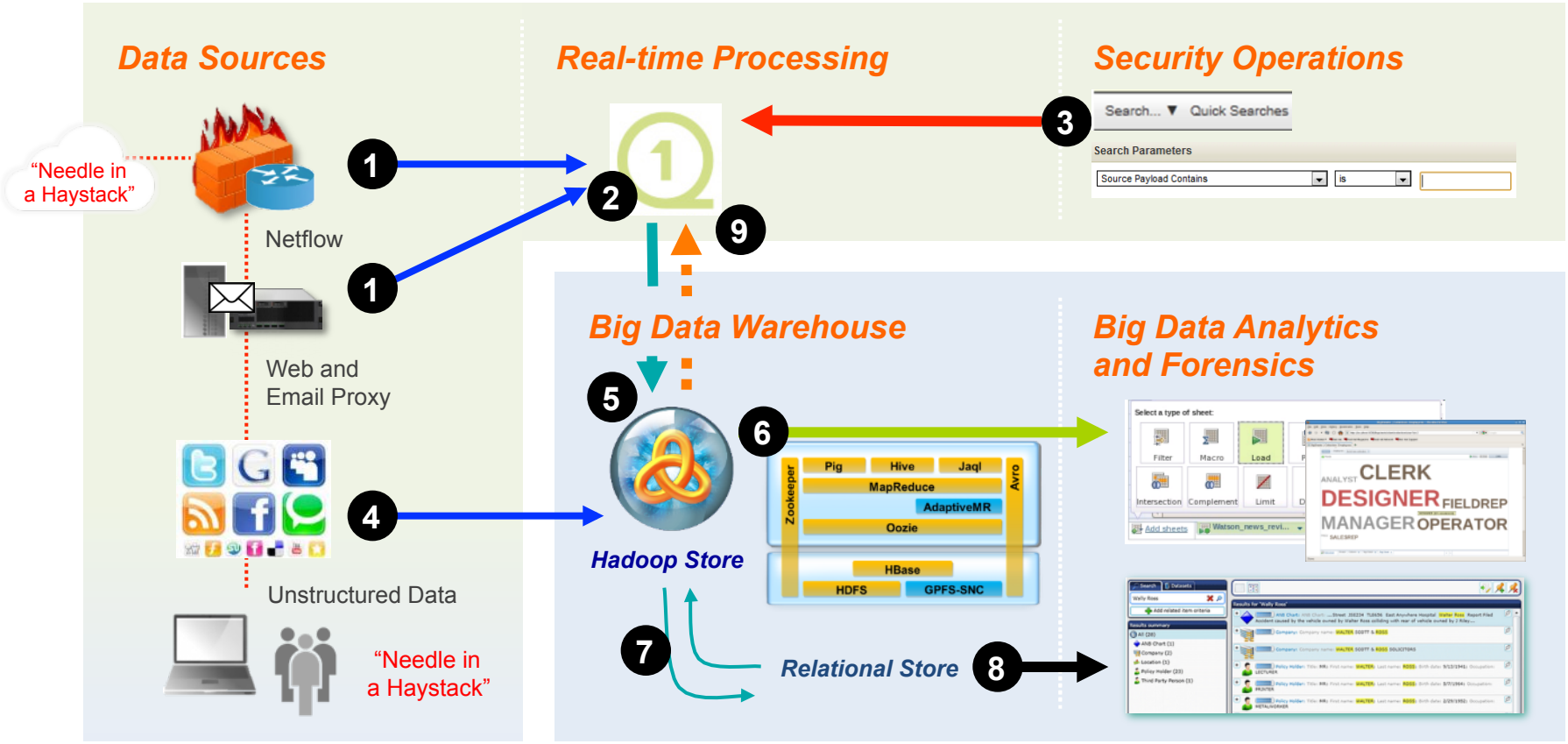
Requirements

Source: proxy, email, unstructured text
Sample Size: >25GB /src
Query time: <45sec
Analytics: Multiple

IBM Approach

1. Logs extracted, sent to QRadar
2. Event normalization
3. Custom filtered events sent to SOC
4. Unstructured data to BigInsights
5. Log / event forwarding to BigInsights
6. Custom BigSheets queries / analytics
7. Post-processed data storage
8. i2 link-based visuals / analytics
9. Update of QRadar real-time rule sets

Use case #2 – Ad hoc query for specific data on multiple sources



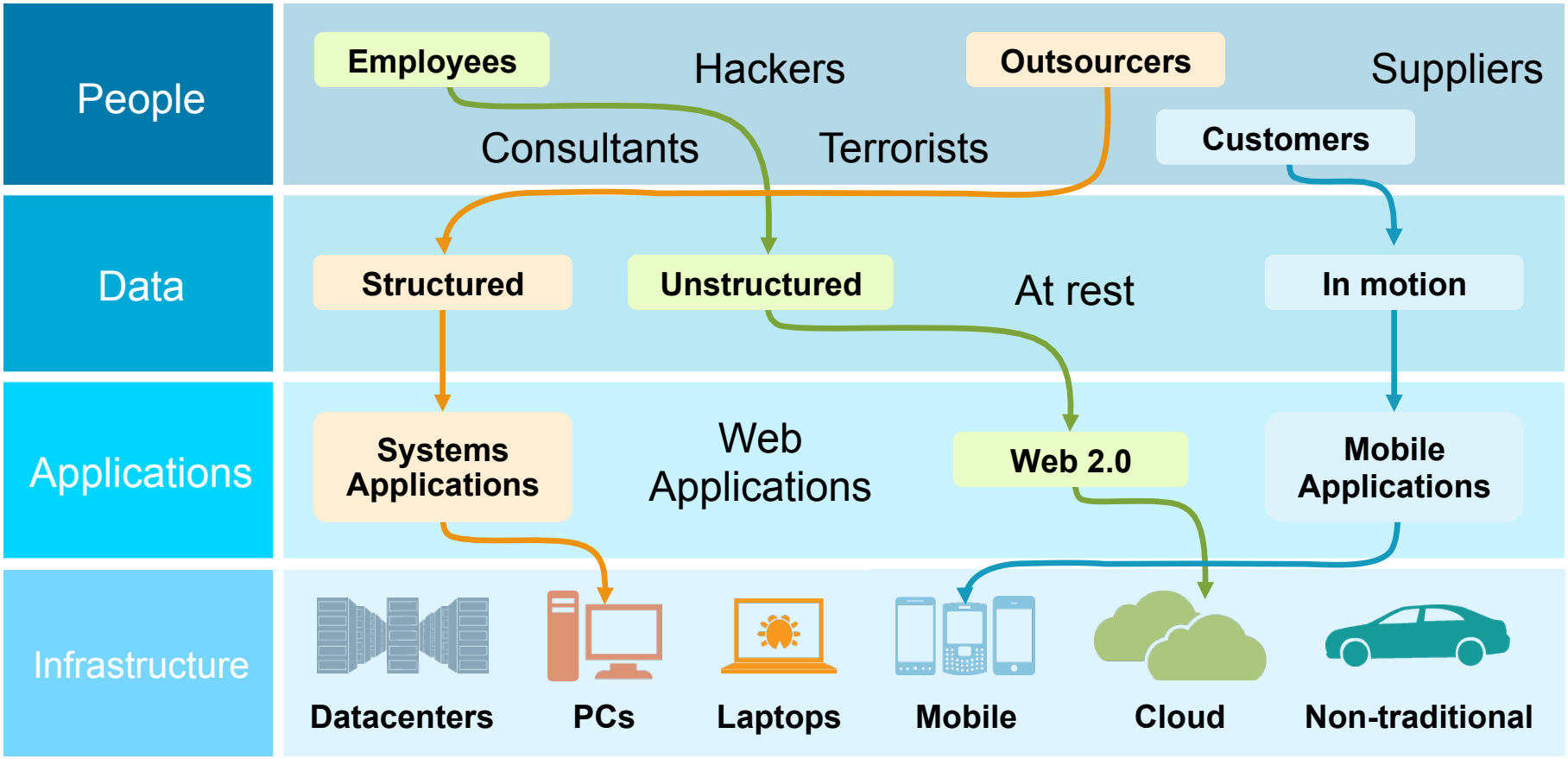
Requirements

Source: All
Sample Size: >20GB /src
Query time: <45sec
Analytics: Search for IP, FQDN and/or email address

IBM Approach

1. Netflow and logs sent to QRadar
2. Event and flow processing
3. Ad hoc payload search from SOC
4. Unstructured data to BigInsights
5. Events and flows sent to BigInsights
6. Custom BigSheets queries / analytics
7. Post-processed data storage
8. i2 text-based, federated search
9. Update of QRadar real-time rule sets

Remove existing barriers between siloed detection mechanisms and integrate through Analytics



Attempting to protect the perimeter is not enough –
siloed point products cannot adequately secure the enterprise

Thank You

Sergio Mucciarelli
Data Security Leader - IBM Italia
smucciarelli@it.ibm.com
+39.335.1432985