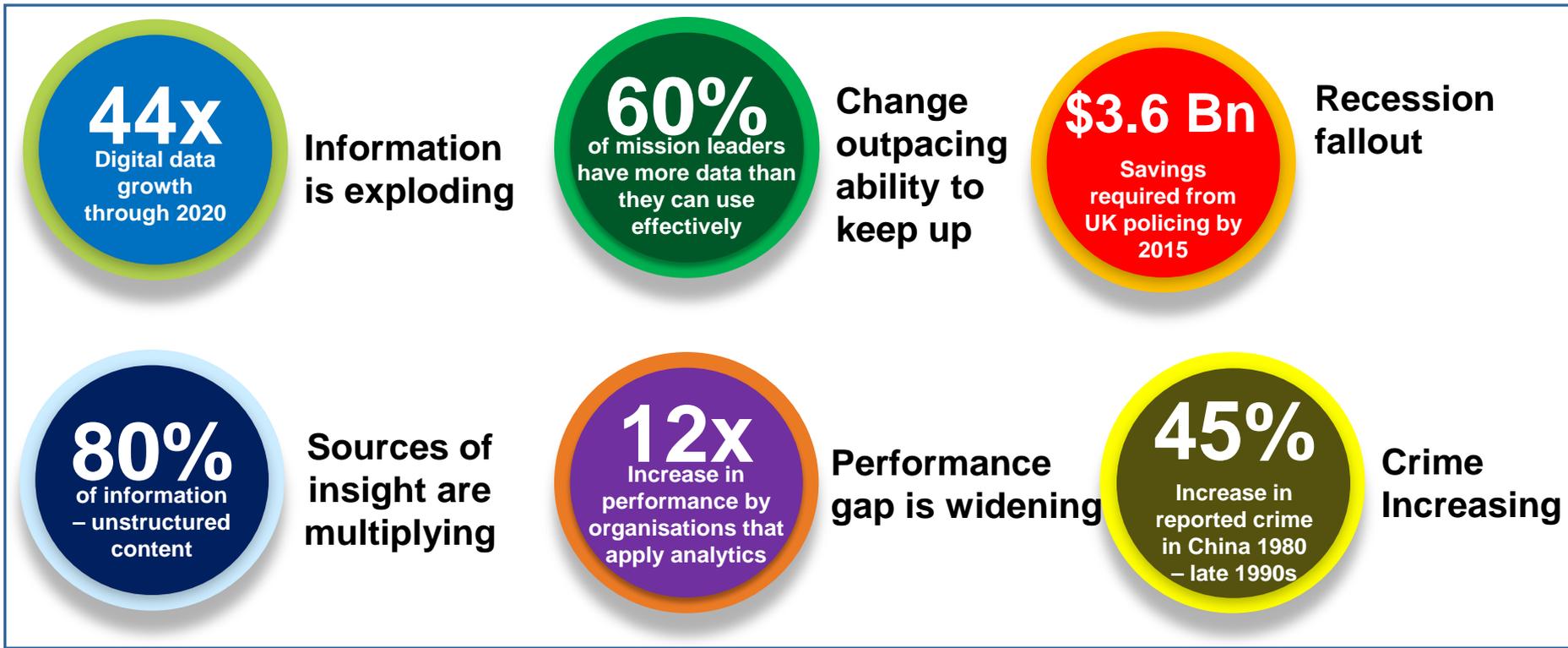
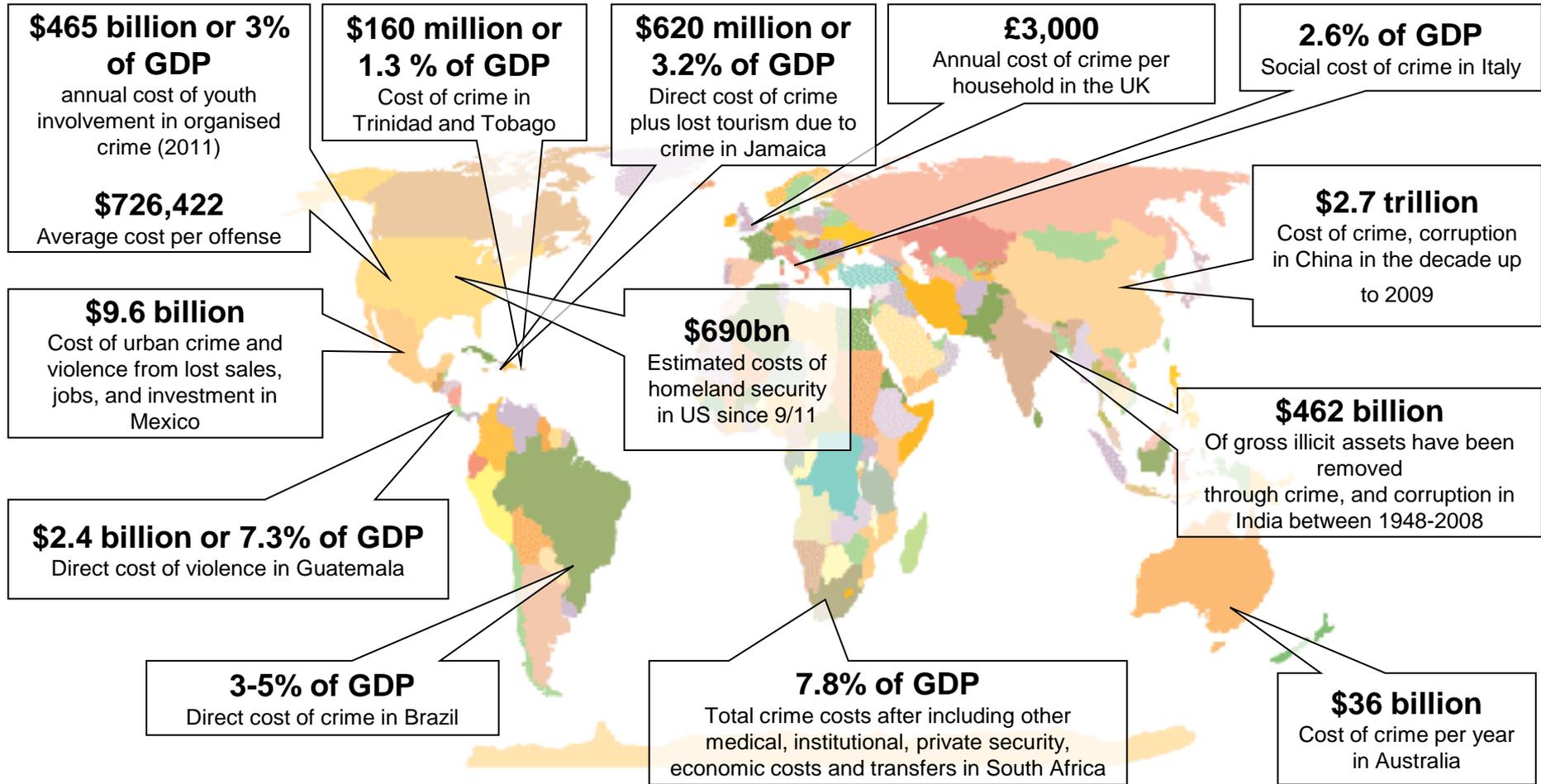


IBM Technology in Public Safety

Ron Fellows FIC, CMC
Global SME, Public Safety
IBM Global Business Services

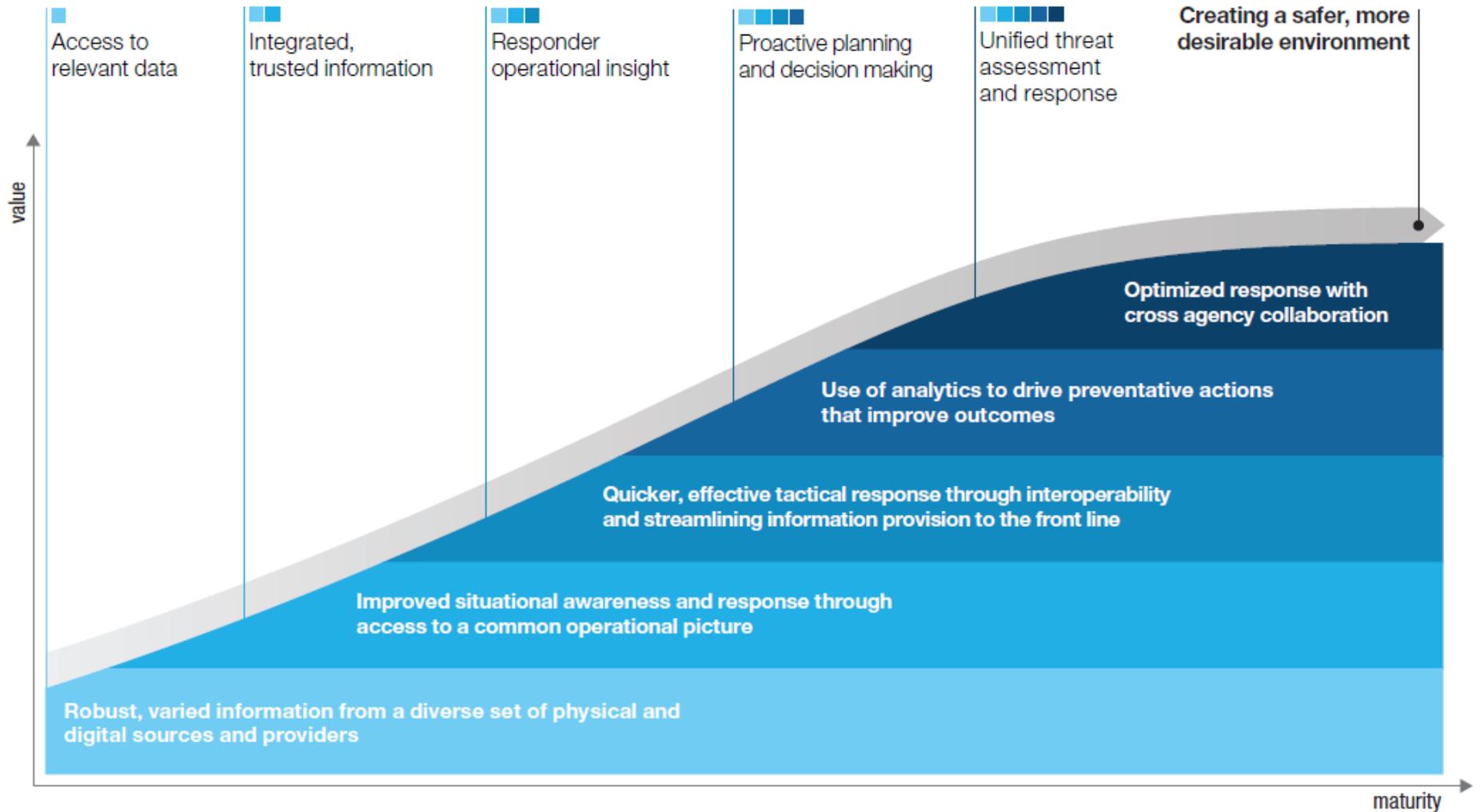


Crime is not only a global business but in these days of recession it imposes a cost on every economy



Source: AIU (2012); BEA (2011); World Bank (2006); UNDP (2011)

Joined-up operational capabilities is the answer



NYPD's Real Time Crime Centre solution turns data collected on the streets and elsewhere into **actionable information for patrol officers**



Making sense of masses of data

Data comes together from databases, documents, cameras and elsewhere into a common decision-making toolset

Deliver information where, when and how it's needed

Used by analysts, detectives and patrol officers along with senior commanders

Real time. Not yesterday. Not last week.

Data used for both historical analysis and modelling and the alerting of police and other agencies to real-time incidents

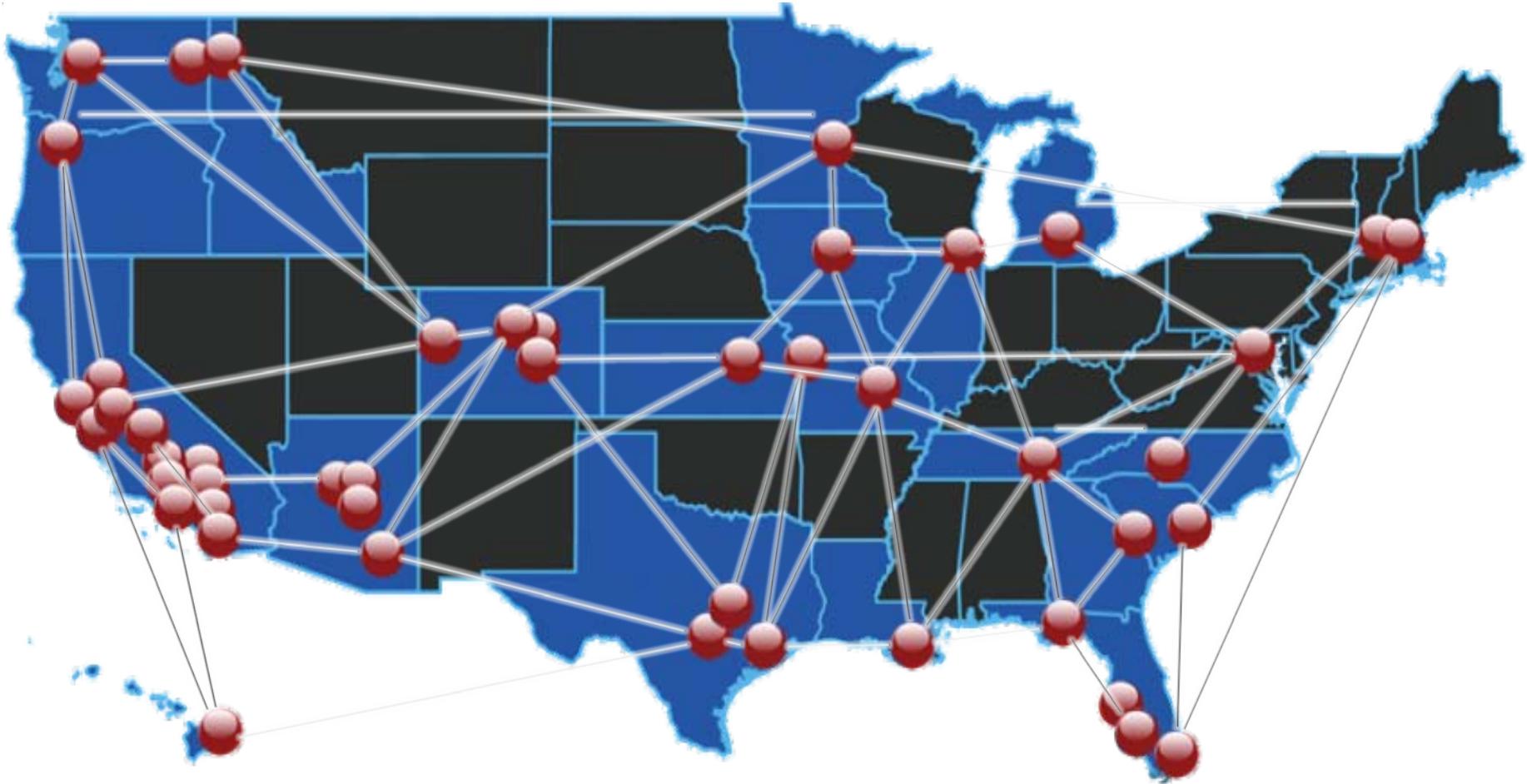
Evolution. Not revolution.

Started in 1998 with performance management. Long-term partnership between IBM and NYPD through to today, with billions of records.



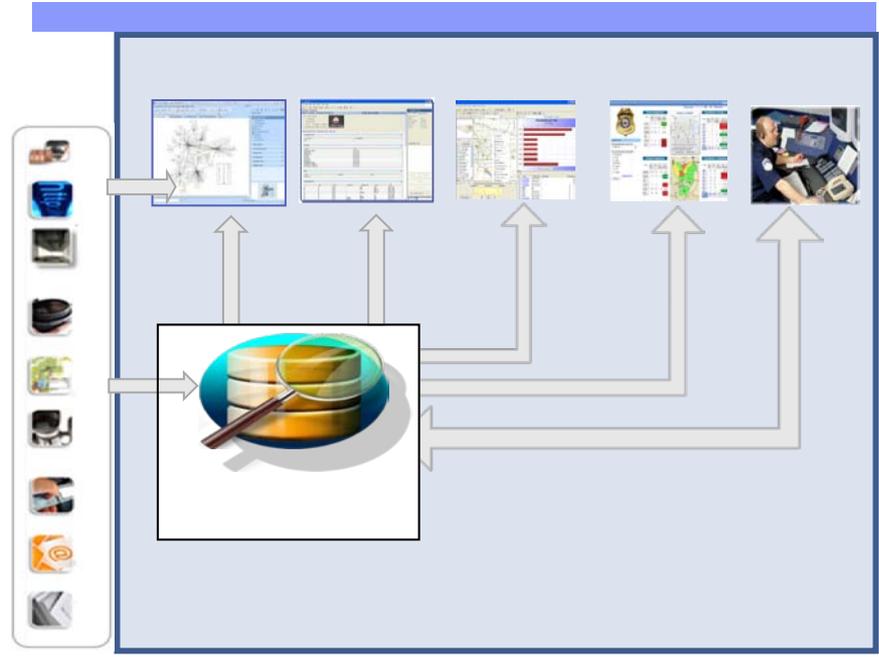
“The NYPD's innovative policing strategies depend on our ability to gather, share and act on information. IBM—its people, partners and technology—have helped us redefine how information can be used to fight crime.”

- James Onalfo, Chief Architect and CIO, NYPD



The network, based on secure data sharing protocols, brings together law enforcement agencies ranging from the FBI to local sheriffs' office, with regional nodes in the Fusion Centres.....and also integrates the Department of Justice, the Department of Homeland Security and the Immigration & Customs Enforcement Agency.

- 
Case & Custody Management
- 
Video & Sensor Analytics and Facial Recognition
- 
Command & Control / Emergency Management



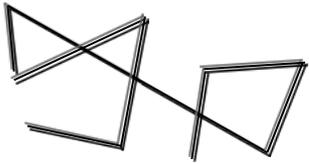

Entity Resolution & Master Data Management


Unstructured Data / Big Data


Crime Prediction & Resource Optimisation


Collaboration & Briefing


Mobile Delivery


Networking and Data Sharing


Data Mining & Profiling

Social Media Analytics enables law enforcement agencies to identify and extract subjective information from Social Media sources



Social Media Analytics for Public Safety

Natural language processing, computational linguistics, and text analytics

Define the environment by location, time and artifacts.

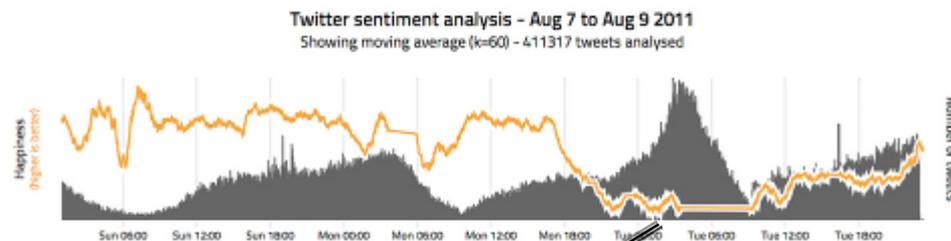
Look for key positive and negative phases associated with that environment.

Set “take action” clip levels against the monitored data

Build the responses into your controlling workflows and cross reference with other environmental events to look for additional patterns

Make use of the mass of data

The very fact of so many people having smartphones can give vital clues as to direction and intent of crowds



Riots in various cities in the UK in 2011 were organised via social networking sites a long time before the police knew about them. IBM is working with a number of forces worldwide to measure the effectiveness of automatic monitoring of social media as a way of gaining vital reaction time. Personal details aren't needed....only location and content

Prediction & Early Detection uses information and advanced analysis to inform forward-thinking crime prevention and optimise deployment

Analysis Assisted

Identify crime trends, examine crime series and deduce where a future even may occur.

Better Decisions

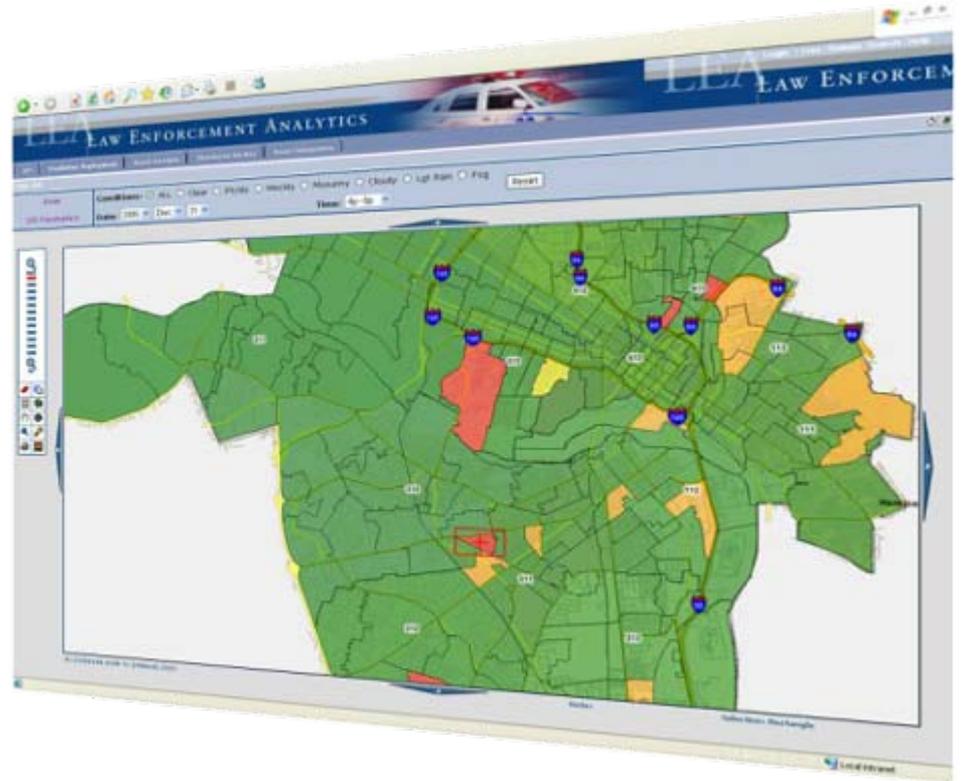
Increase quality of decisions by providing more insightful, actionable reporting

Focused deployment of assets :

Predict events and deploy resources based on facts and evidence

Faster resolution:

Enable faster resolution of high profile crimes such as a serial killer



Memphis PD uses **advanced analytics** to reduce crime without a proportional increase in staff –while expanding coverage area



“On short notice, we’re able to shift officers to a particular ward, on a particular day, right down to the shift level. ... it’s enabling us to make arrests we never could have before” Larry Godwin, Memphis Police Department

In Anti-Fraud investigations, seeking to obscure identities is commonly used.....and automatically uncovered by technology



Anton Carbello

Home address is the same address as . . .



Andréa Duval

Whose emergency contact is ...



David Travers

Who is a suspect in a credit card fraud scheme and shares a phone number with...



Alessandro Redondo

. . . Convicted of large-scale ID-theft and fraud

Relationship Resolution and Correlation spots attempts to hide identities and also creates the social network which can then be used for real-time threat assessment and investigatory link analysis.



Detectives / Analysts



Patrol Officers



Command & Operational Staff

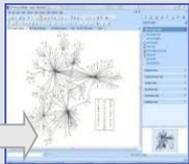
Chiefs of Police

Senior Officers

Managers

Briefing Officers

Crime & Intelligence Analysis



Tactical Lead Generation



Performance Management



Situational Awareness



Alerting & Notifications



1. Public Safety Information Hub
 - Data consolidation
 - Data storage
 - Information discovery
 - Information sharing
2. Situational Awareness
3. Enhanced Collaboration
4. Information Reports
5. Crime Pattern Analysis
6. Crime Series Identification
7. Crime Reporting
8. Tactical Lead Generation
9. Criminal Business and Person Profiles
10. Criminal Network Detection
11. Major Investigation Analysis Support
12. Threat Tracking and Disruption



Data sources



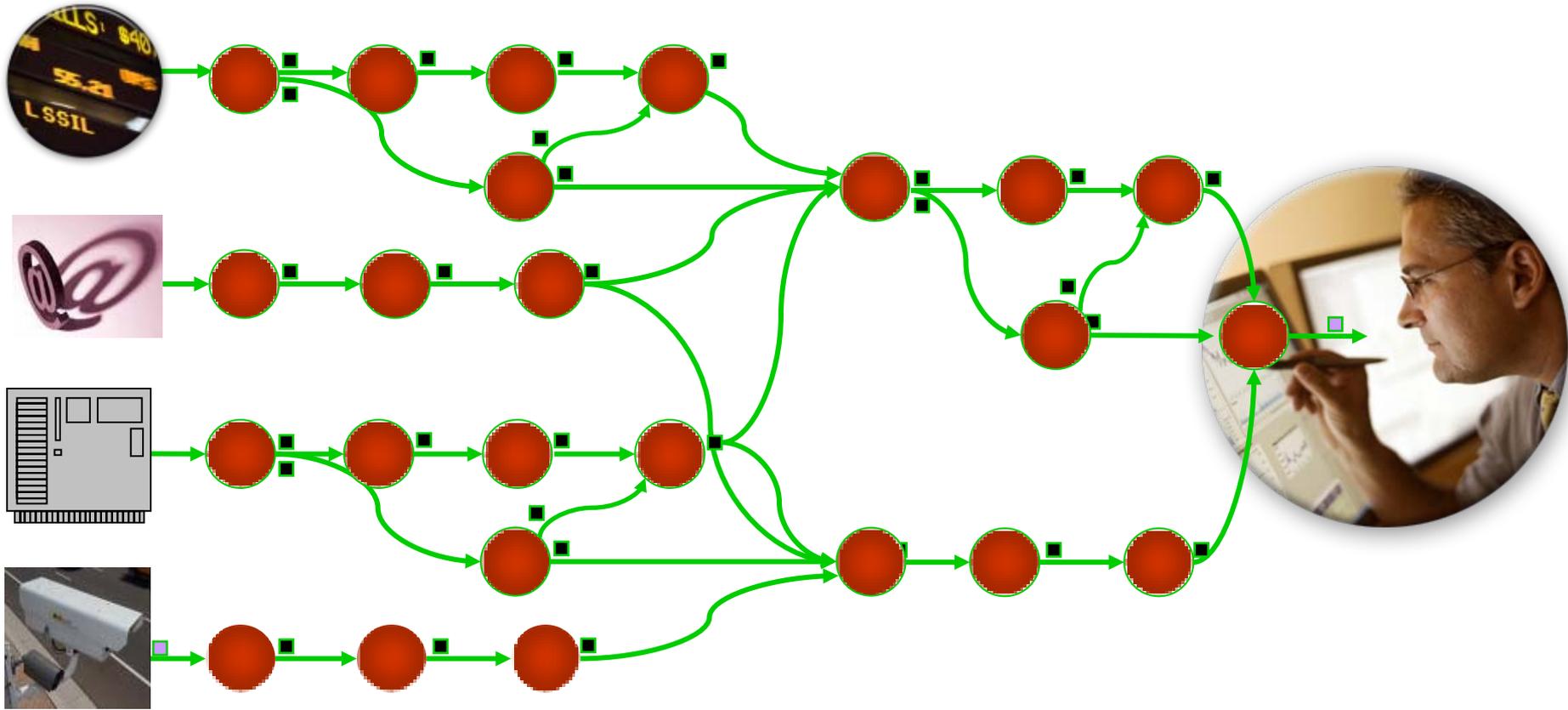
Public Safety Information Hub

IBM Intelligent Law Enforcement

Now apply these capabilities in a way that crosses inter-agency and intra-agency boundaries....as with the US National Index



The object of the exercise is to enable understanding at ALL levels and to automate the process as far as possible while making information available wherever, whenever and however it's needed....



To simply throw ALL of the available data at the hapless police officer or analyst would mean instant overload but automating the intelligence process where information is acquired or combined enables the picture to become clearer....