Knowledge is Power When Demands are High and Resources Few

SAP Thinks Boldly About Creating a Better World
Challenge – Gaining Instant Insight in the format you need for better decisions

Gather All Relevant Big Data

- Data diversity formats make it difficult to analyze
- Pressure to gain insight quickly from data
- Need to determine the right action from many valuable insights

Dashboard
Ad hoc analysis
Reports

Insight to Action
Invest time up-front in identifying use cases for Big Data, segmenting the targeted users and understanding the Value.
Setting an Enterprise Big Data Vision and Strategy

Recommendations from the Official Report of the TechAmerica Foundation’s Big Data Commission

1. Understand the “Art of the Possible” -- Explore the case studies to find inspiration and practical examples.

2. Identify 2-4 key business or mission requirements that Big Data can address for your agency, and define and develop underpinning use cases that would create value for both the agency and the public.

3. Explore the data available both within the agency enterprise and across the government ecosystem within the context of the business requirements and the use cases.

4. Assess your current capabilities and architecture against what is required to support your goals, and select the deployment entry point that best fits your

5. Explore which data assets can be made open and available to the public to help spur innovation outside the agency.
Bring together business thinking with design thinking to create value for your citizens & internal stakeholders

- Bring together mission areas, with IT stakeholders and executives...

- Learn by putting yourselves in the shoes of the end user or customers customer

- Focus on outcomes NOT outputs

- Start SMALL an iterate… target the highest value use case(s) first… get a feel for what it takes to plan, build, and execute
Rethink Technology and innovate without disruption…

**Rethink Data** – volume, variety, velocity, Veracity, complexity, quality, real-time interaction

**Rethink flow of information** – as fresh as it can be

**Rethink Processes** – agility, within and across organizations

**Rethink Collaboration** – consumer like interface, Mobile, collaborate with colleagues for action

**Rethink delivery** – enable end-users the freedom and self-service they require to creatively answer the questions they are asked every day

New demands for a real-time platform to support systems of record & engagement
One Size Does Not Fit All

Understand how Big Data enables new ways to execute your mission

- Gain actionable, **real-time insights** in **business process context**
- Combine real time analytical processing with **batch deep behavior + pattern recognition**
- Deploy on a **Big Data Processing Framework** that is optimized across devices, technology combination and deployment options
Move from reporting on the past to predicting the future

**Traditional Analysis**
- Transactional data
- Extract, transform, load from op systems
- Stored in warehouse or data mart
- Request-based query (report/dashboard)
- Analysis after data is consolidated
- Make decisions and take actions based on *what has already happened*

**Real Time Analysis**
- Operational, transactional, event data
- Rapid bulk loads or event processing
- Store in-memory or process in real-time
- Ad-hoc or continuous query
- Analysis during processing
- Make decisions and take actions based on *what is happening now*

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**SAP HANA Platform**  
*Real Time*

- **Transaction Engine**
- **Dimensional Engine**
- **Analytic Engine**
- **Predictive Engine**
- **Text Engine**
Mobile, big data, analytics, geospatial, sentiment analysis, and cloud are not siloed concerns to be addressed in isolation.

Siloed, Individual Systems

Networked Systems within one Agency

Collaborative Public Enterprise

Take advantage of a convergence of new technology enablers to uncover new possibilities…
Opportunity to gain insight never seen before

- Expedite adaptive planning
- Immediate readiness reporting
- Real-time situational awareness
- Boost cyber security
- Expedite intelligence gathering
- Rapid funds availability
- Improve spend analysis
- Enhance predictive maintenance
- Increased asset availability
- Better predict weapon system failures
- Sense & respond in real-time
- Traffic impact
- Stop improper payments before they are paid
- Model economic impacts
- Predict weather impact
- Understand Citizen Sentiment
- Optimize use of excess energy
- Pinpoint environmental risks
- Optimize routes...
NRI – Tokyo Traffic Management Analytics

- Deeper interrogation of large, dynamic data volumes
- On-demand modeling to redirect traffic via multiple applications
- Incorporating data from multiple sources including real-time traffic, construction and road closures

**Outcome opportunities**

- Improved traffic flow
- Increased livability/desirability of metropolitan area
- Spread use of road assets and get higher ROI
MKI Uses SAP HANA to Speed Cancer Research and Improve Patient Support

**Faster**
Genome analysis

**Better**
Insight to support the needs of cancer patients in real-time

**Greater**
Personalization to individual patient needs

- **High performance** - Powerful real-time computation capability
- **Analysis library** - Embedded predictive analysis libraries
- **Reliability** - A platform for mission critical applications
- **R + Apache Hadoop** - Apache Hadoop connector and R integration
It all starts with … then you can work back to technology enablement
From Rear-view, Batch-processing....
To Real-time, Predictive Intelligent Data. . .

- **Ubiquitous business access to results** – ELIMINATE pre-fabrication requirements

- **Deeper Insight** – interrogate more structured and unstructured granular data, over a larger span of time

- **Ability to transact and analyze data simultaneously** to enable real-time business

- **Real-time operational insight** of changing events with event stream processing

- **Go deeper** – predictive analytics via R on SAP HANA + Apache Hadoop

- **Tap into open data sources from multiple agencies for new insights** via data services, enabling extraction, text analysis, and data quality...