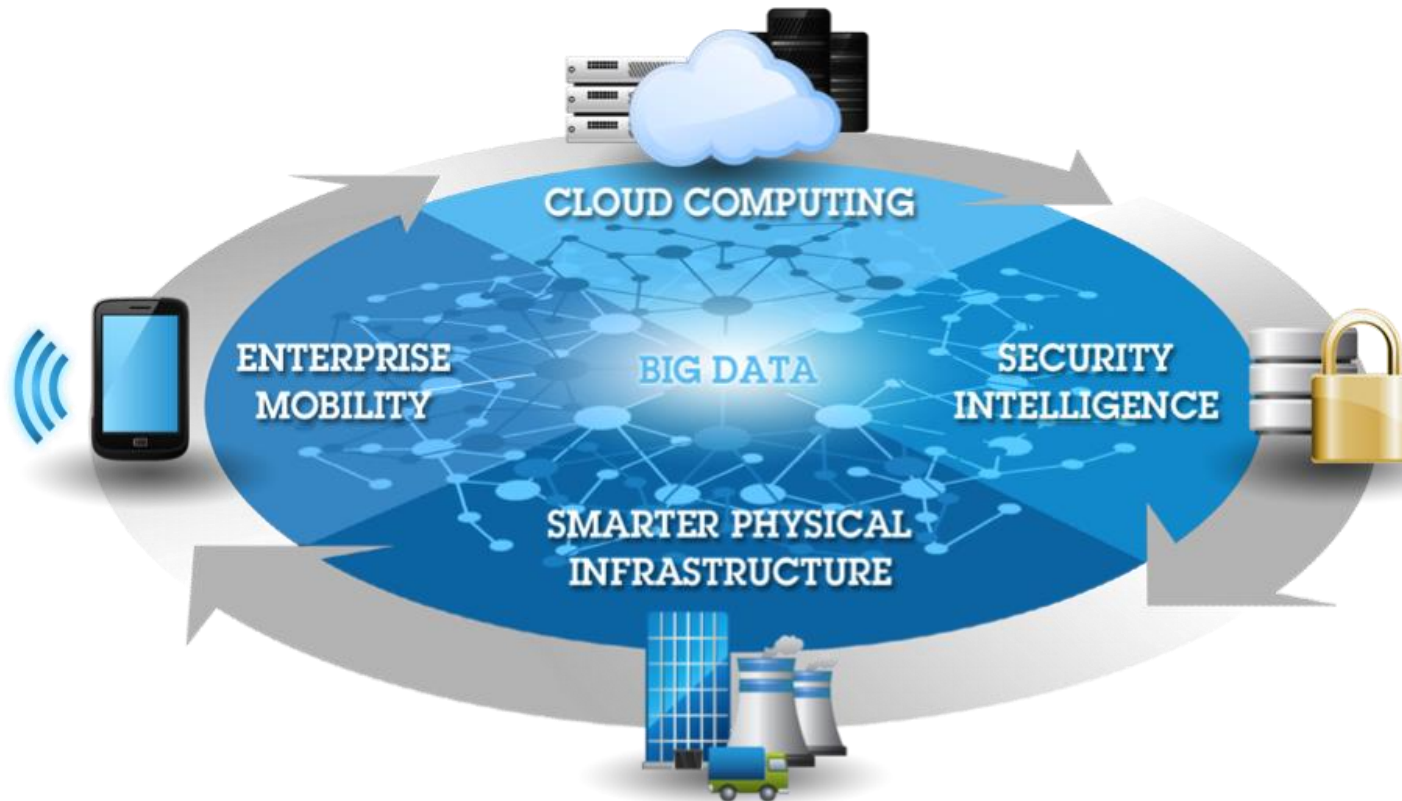# Avoiding the Data Meltdown

Ian Smith
Director Product Management Storage Software

Automation exceeding the boundaries of human oversight

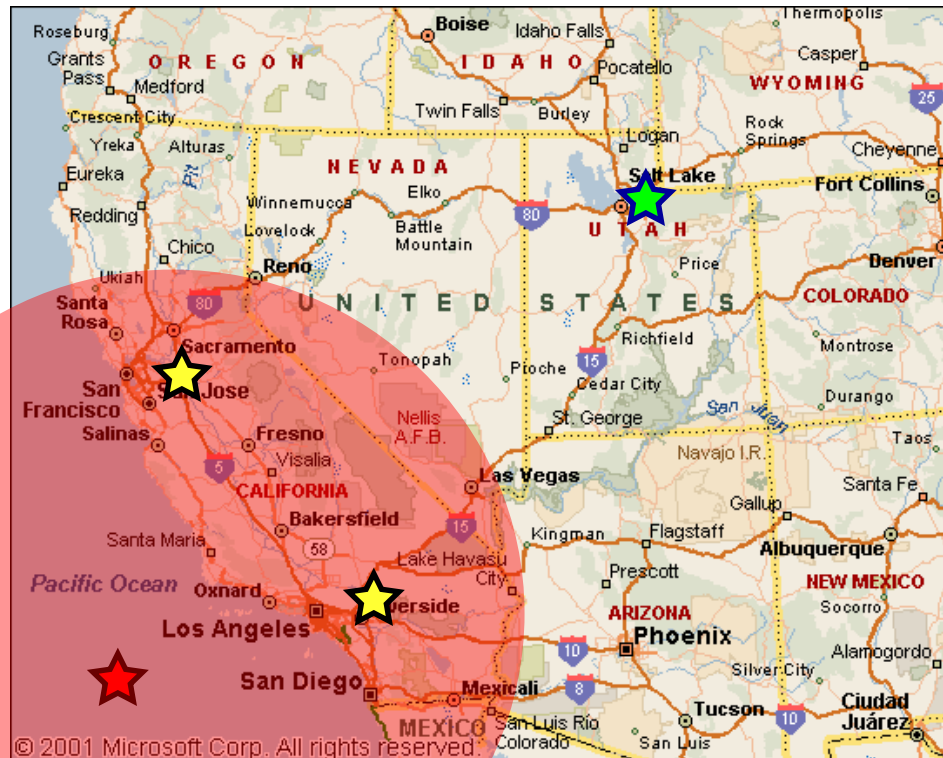Scale and complexity exceeding the boundaries of human control

"The electronic platform is too fast; it doesn't slow things down" like humans would. '

Data Feed issues on the NASDAQ - Securities Information processor
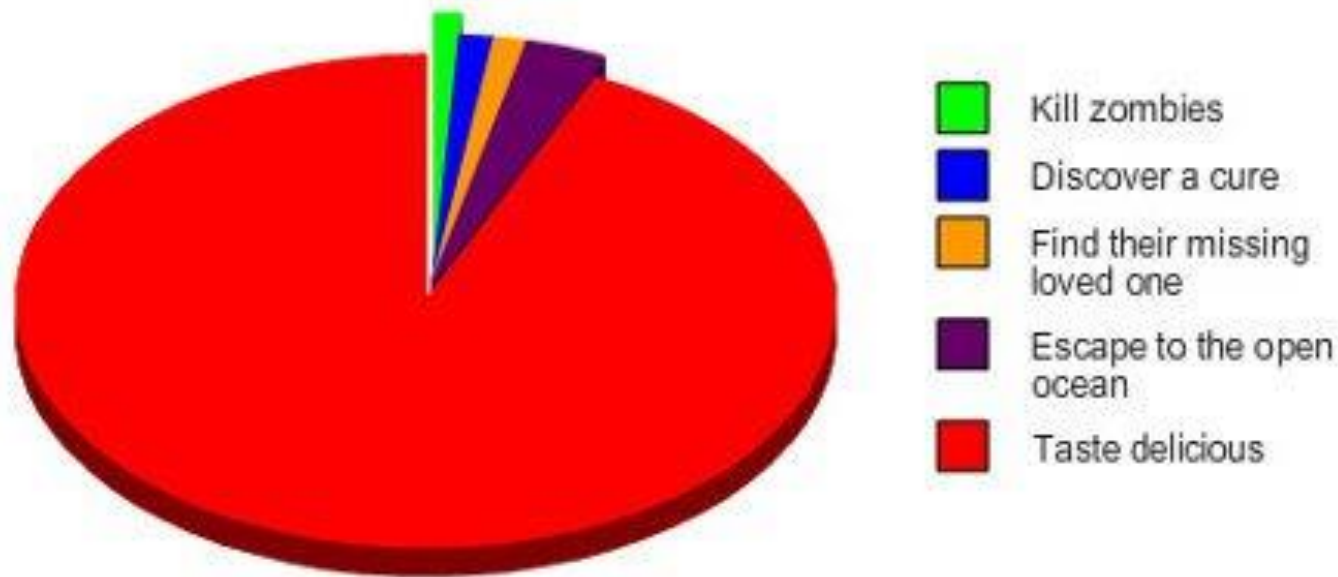
FUNCTIONAL Intelligence

- EARTHQUAKE!

- RSS feed USGS

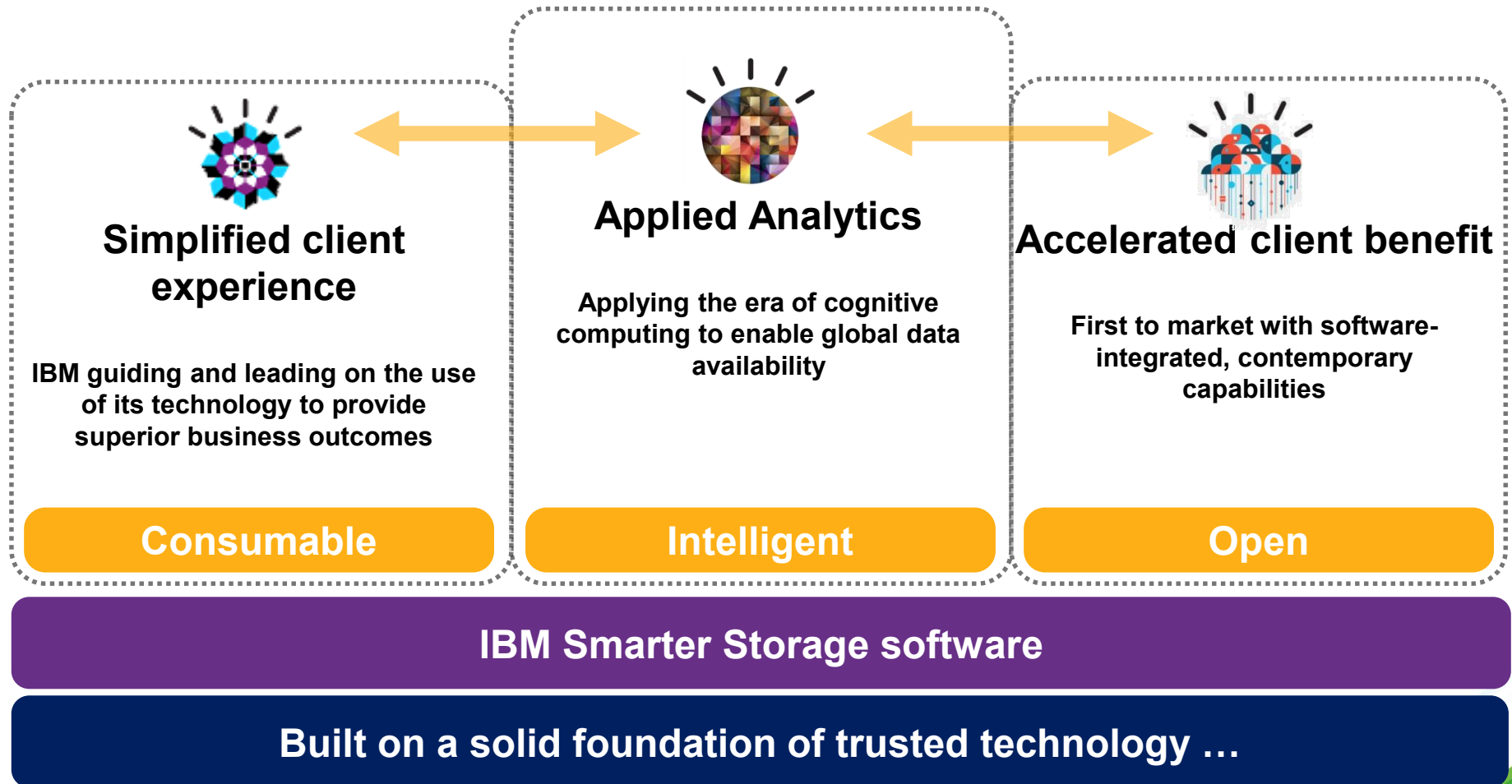- *derive insight driven infrastructure services layer*

- shut down primary application for write capability
- initiate final replication **storage workload**
- prioritize **IO workload**
- reroute network traffic and QoS
- prioritize inter-site **network workload**
- disconnect links and primary replication to allow application consistency
- shift service **compute workload**
- address remote storage

Things That An Average Person Would Do During A Zombie Apocalypse

- Kill zombies
- Discover a cure
- Find their missing loved one
- Escape to the open ocean
- Taste delicious

GraphJam.com

5

Vision and Strategy

Simplified client experience

IBM guiding and leading on the use of its technology to provide superior business outcomes

Consumable

Applied Analytics

Applying the era of cognitive computing to enable global data availability

Intelligent

Accelerated client benefit

First to market with software-integrated, contemporary capabilities

Open

IBM Smarter Storage software

Built on a solid foundation of trusted technology …

Analytic Driven Data Management

- **Business Analytics**
  – Best practice guidance, industry / geography guidance, cost bench marking
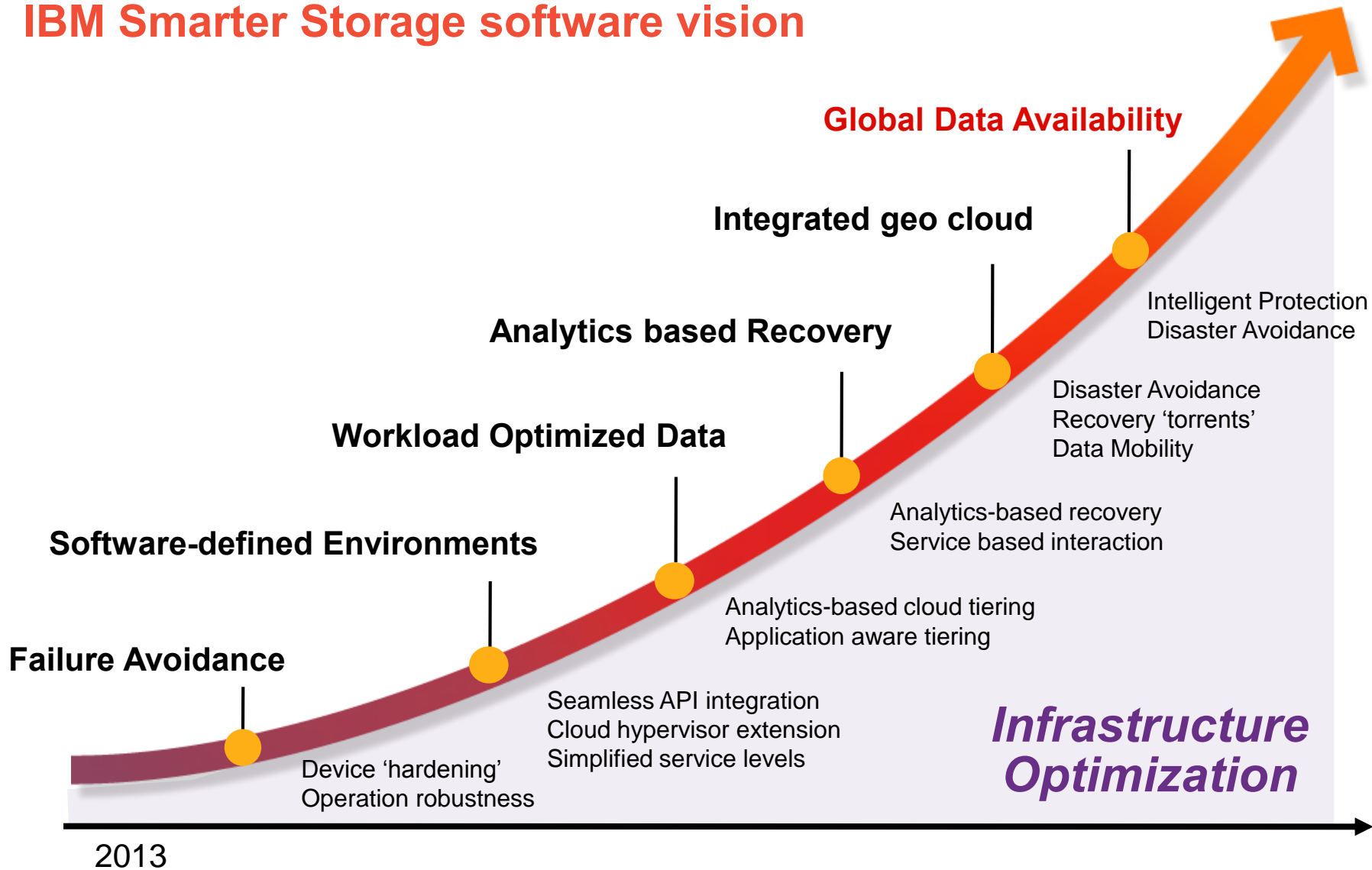
- **Infrastructure Analytics**
  – Primary Data placement optimization, Copy Data capture optimization, Copy Data storage optimization

- **Operational Analytics**
  – Configuration assistance, problem isolation, outage avoidance, disaster avoidance

• Common data protection mgt.	• Rapid recovery
• Zero backup window	• Disaster Recovery
• Application integration	• Cloud / Tape integration
• TSM integration	• Common storage platform
• VMware integration	• Value added analytics

IBM Smarter Storage software vision

Global Data Availability

Integrated geo cloud

Intelligent Protection
Disaster Avoidance

Analytics based Recovery

Disaster Avoidance
Recovery 'torrents'
Data Mobility

Workload Optimized Data

Analytics-based recovery
Service based interaction

Software-defined Environments

Analytics-based cloud tiering
Application aware tiering

Failure Avoidance

Seamless API integration
Cloud hypervisor extension
Simplified service levels

Device 'hardening'
Operation robustness

Infrastructure Optimization

2013

7

Meltdown avoidance

Appoint a Chief Data Officer

- Understand the business relevance

- Classify the data to build a Service Catalog
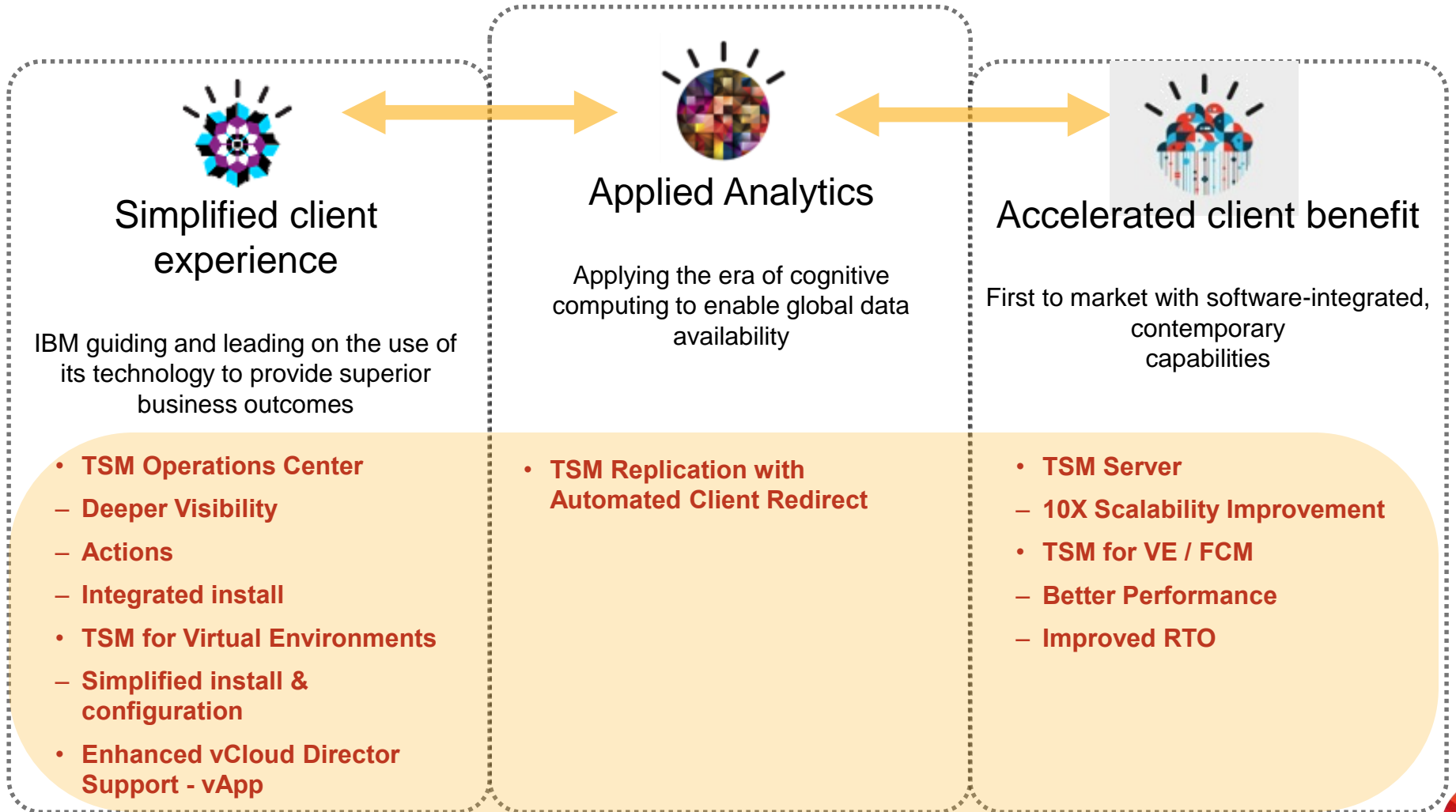
"Enable a software defined environment"

Understand and apply functional intelligence
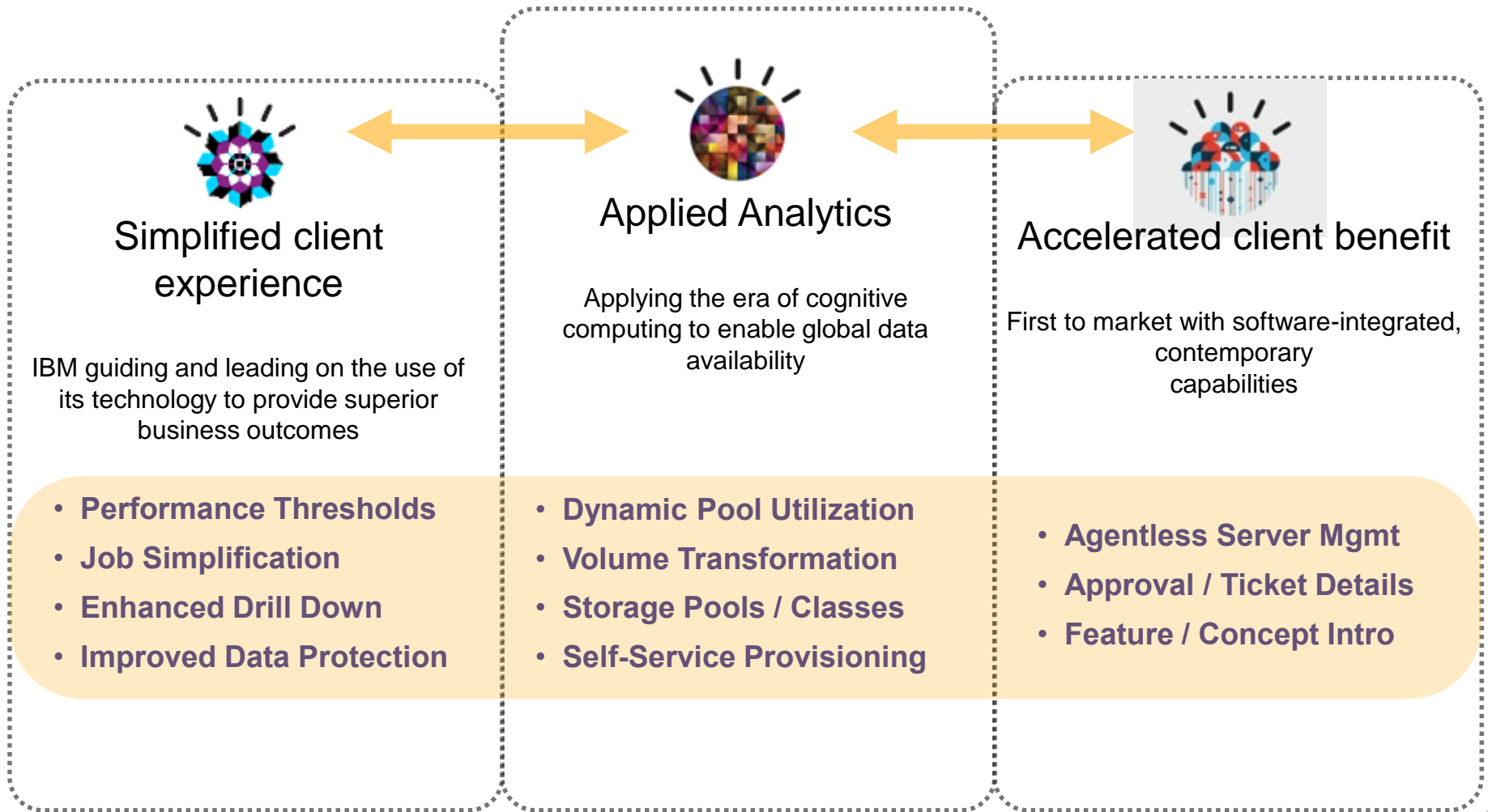
Introduce smart infrastructure where possible

speak to IBM

Data Protection

Simplified client experience

IBM guiding and leading on the use of its technology to provide superior business outcomes

- **TSM Operations Center**
  - **Deeper Visibility**
  - **Actions**
  - **Integrated install**
- **TSM for Virtual Environments**
  - **Simplified install & configuration**
- **Enhanced vCloud Director Support - vApp**

Applied Analytics

Applying the era of cognitive computing to enable global data availability

- **TSM Replication with Automated Client Redirect**

Accelerated client benefit

First to market with software-integrated, contemporary capabilities

- **TSM Server**
  - **10X Scalability Improvement**
- **TSM for VE / FCM**
  - **Better Performance**
  - **Improved RTO**

Data Management

Simplified client experience

IBM guiding and leading on the use of its technology to provide superior business outcomes

- **Performance Thresholds**
- **Job Simplification**
- **Enhanced Drill Down**
- **Improved Data Protection**

Applied Analytics

Applying the era of cognitive computing to enable global data availability

- **Dynamic Pool Utilization**
- **Volume Transformation**
- **Storage Pools / Classes**
- **Self-Service Provisioning**

Accelerated client benefit

First to market with software-integrated, contemporary capabilities

- **Agentless Server Mgmt**
- **Approval / Ticket Details**
- **Feature / Concept Intro**

Think differently about IBM

application of analytics to the data that is managed within TSM. These ARE just discussions- other than the data science partners which I am actively engaged in

FYI I am labelling this whole piece of work ADDP (Analytics Driven Data Protection)- to work with ADDM (Analytics Driven data Management). Remember on the 2015 roadmap for TSM analytics.... NO PLAN.

Analytic Driven Data Management

virtual storage center

Infrastructure
- Smarter infrastructure- improved performance , reduced root cause analysis etc
- Improve reliability and efficiency through real time analysis of infrastructure functions: load distribution etc
- An understanding of how the hardware and software components interact to identify bottlenecks, better run the equipment - e.g. 'smarter backup window' Readjusting infrastructure assets top reduce duration and impact etc

Operational
- Analysing patterns of usage to optimise the environment for lowest cost of ownership and ensure policy
- Predictive protection: based on understanding the business flow and models- make active decision outside the standard policy to protect content i.e. increased protection at end of month for billing apps etc
- Auto discovery and protection of new systems on the network (SDN tie-in)
- Auto-tiering for recovery/cloud interaction to add cloud to the storage hierarchy as a low cost tape alternative and using analytics to auto migrate on/off prem etc

Content
If you think about business analytics on your current data set- think of the value of applying it to your historical data and providing prospective views on more 'learned' content.
The idea here is to provide a business value over static, currently non-valuable business data.

- If data is off-prem in a cloud storage pool, we could offer analytics as a service
- New data feed analytics to accelerate DR etc such as the USGS/weather feeds etc - this would have allowed
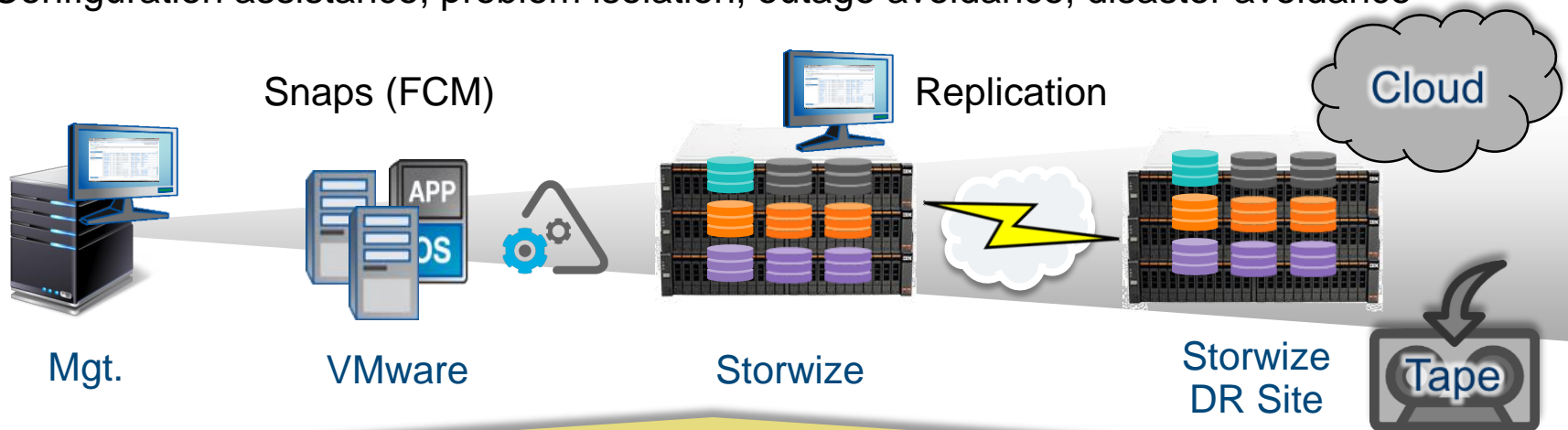
*** ALSO, I am working with Avnet to search for new partners in the DATA SCIENCE arena. These partners can build cognos packs to provide value on the data- such as business risk analysis, data center integrity, disaster tolerance analysis etc etc This is in progress NOW...

IBM's ADDM Solution

- **Business Analytics**
  – Best practice guidance, industry / geography guidance, cost bench marking
- **Infrastructure Analytics**
  – Primary Data placement optimization, Copy Data capture optimization, Copy Data storage optimization
- **Operational Analytics**
  – Configuration assistance, problem isolation, outage avoidance, disaster avoidance

Snaps (FCM)   Replication   Cloud

Mgt.   VMware   Storwize   Storwize DR Site   Tape

- Common data protection mgt.
- Zero backup window
- Application integration
- TSM integration
- VMware integration

- Rapid recovery
- Disaster Recovery
- Cloud / Tape integration
- Common storage platform
- Value added analytics

18

Take Action Now!

Next steps:

REPLACE PIC with one you chose.

Accent Colors for Diagrams Arial 22pt

- Please use these colors as the primary colors by which to build your diagrams
- Additional colors should be pulled from similar tones
- Text inside the accent colors should be black, however, the user can select white if preferred

Fill Color 1 Fill Color 2 Fill Color 3