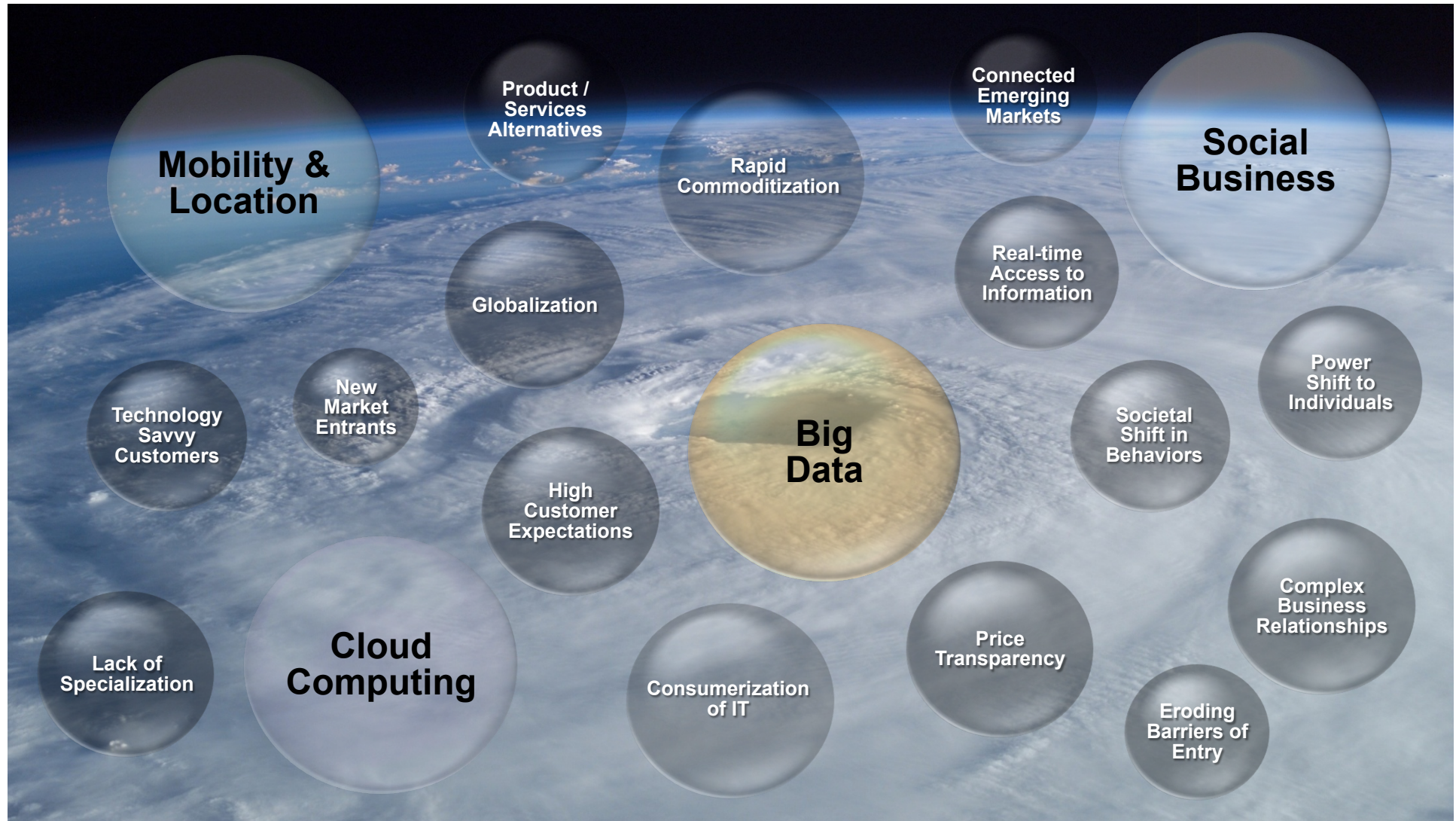




# New Opportunities for HPC – Cloud, Analytics, Big Data

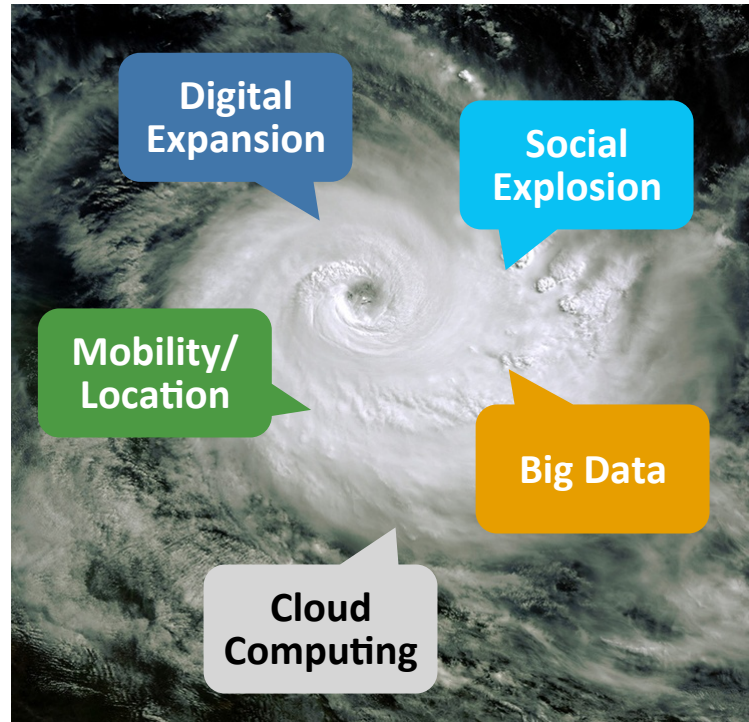
K Ananth Krishnan  
Chief Technology Officer  
Tata Consultancy Services  
Address to Ter@tec, June 27, 2012

# An Era of Business and Technology Disruption...



# ... Creates Opportunities for Holistic Digital Strategies

The Perfect Storm



**Analytics enables the “Adaptive Enterprise”**



## Big Data

### Social Channels

- Blogs, Wikis, Forums
- Social networking
- Groups
- User profiles
- Ratings, reviews, etc.
- Polls, chat, podcasting
- Audio, video, photos
- Events & calendar
- Private messaging+

### Instrumented Channels

- Smart grid
- Home appliances
- Cars
- Sensors
- Monitors
- Supply chain devices
- Other mobile devices

### Mobile Channels

- Mobile Applications – Tablet
- Mobile Applications – Smartphone

### Other Channels

- Video / Audio
- **DIVERSE and un-harmonized internal and external data**



*Fusion of data and information from diverse sources and different formats/details to achieve situational awareness and improved predictability*



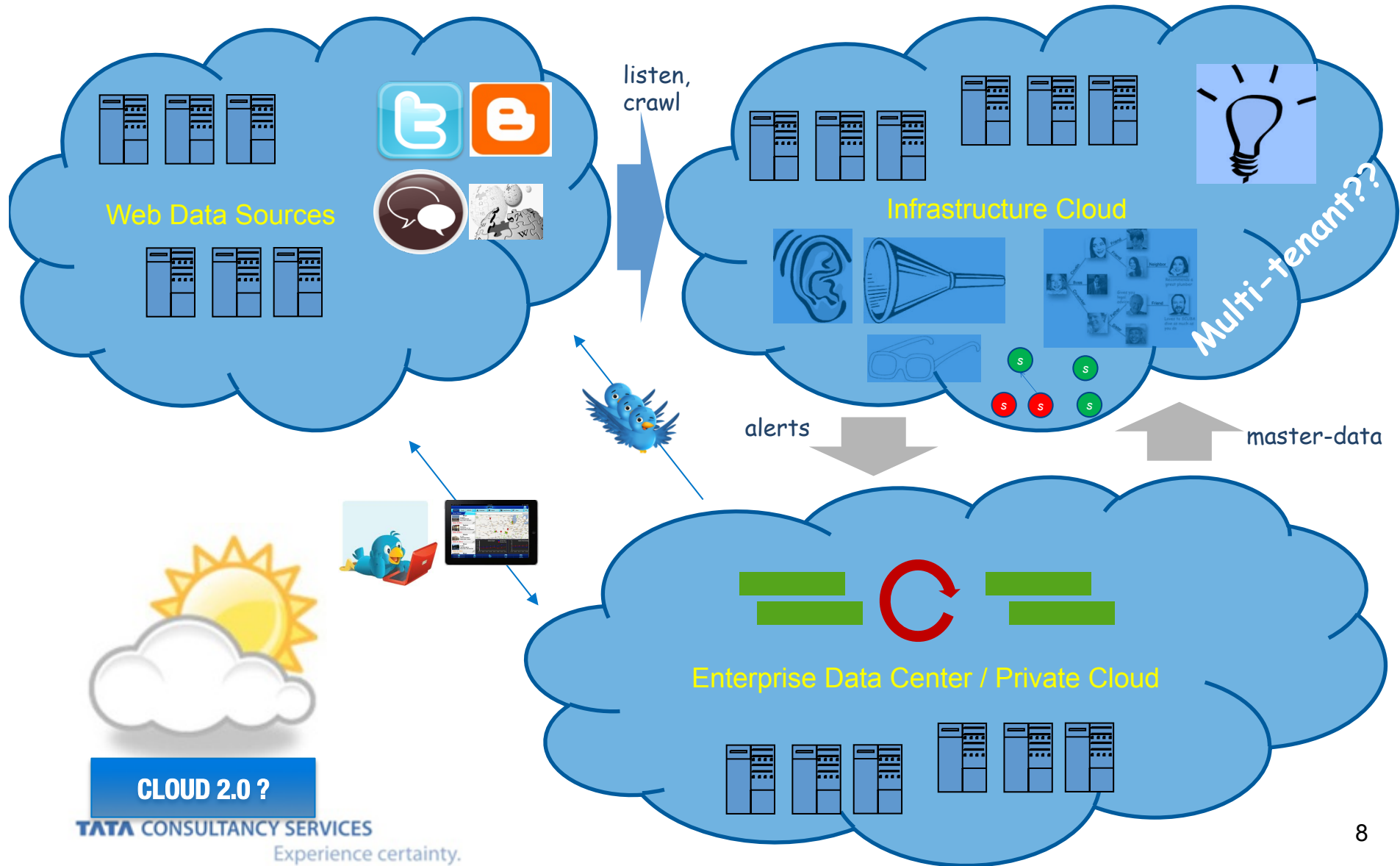
# Information Fusion Components



# Big-Data-based EIF Platform

*Visualization – any time, any where is a key User need*







# Back to Web-Scale: Cloud Analytics?





# Events Impacting Operational Efficiency

## Event Fusion Example (Supply Chains)

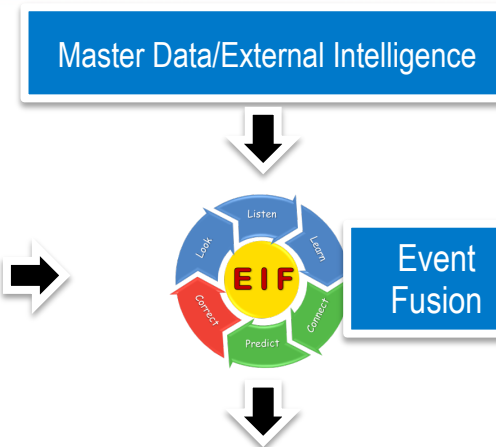
-  [FireCritic](#) Video: Massive Fire in the Netherlands Now Under Control at Chemie-Pack Chemical Storage Facility #CoEMS @FireCritic  
Video: Massive Fire in the Netherlands Now Under Control at Chemie-Pack  
firecritic.com  
Twitter - Jan 6, 2011 5:38:10 PM
-  [ilcpr](#) Fire breaks out at Chemie-Pack plant south of Rotterdam  
UPDATE 3-Dutch chemicals fire disrupts shipping | Reuters - reuters.com  
Twitter - Jan 6, 2011 4:02:40 PM
-  [allwww](#) CNN: Factory fire sparks toxic-smoke worries in the Netherlands #Moerdijk #chemiepack  
Factory fire sparks toxic-smoke worries in the Netherlands - CNN.com - cnn.com  
Twitter - Jan 6, 2011 3:18:02 AM
-  [Expatica](#) Dutch Headlines: Moerdijk fire under control - RNW The fire at the Chemie-Pack chemical plant in Moerdijk has been...  
Moerdijk fire under control < Dutch news | Expatica The Netherlands - expatica.com  
Twitter - Jan 6, 2011 6:04:54 AM
-  [NewportBiz](#) UPDATE 3-Dutch chemicals fire disrupts shipping: \* Fire breaks out at Chemie-Pack plant south of Rotterdam  
UPDATE 2-Dutch chemicals fire disrupts shipping | Reuters - reuters.com  
Twitter - Jan 6, 2011 1:52:35 AM
-  [NowPublic](#) Netherlands Factory Fire: Chemie-Pack Plant (Video) #NowPublic #News  
Netherlands Factory Fire: Chemie-Pack Plant (Video) | NowPublic - nowpublic.com  
Twitter - Jan 6, 2011 12:46:57 AM



**Fire in Factory**



**06/1/2011**  
**Chemie-Pack**  
**Nederland**  
**Holland**  
**Major Fire**



1. Capture of events of interest from social and news media
2. Conversion of multiple external events into single internal event
3. Fusion of the event with internal information or intelligence
4. Impact analysis through transactional systems

# Social Business Solutions

A suite of “Cloud” based platforms, solutions and services that

Drive superior customer experience and engagement

Create value for customers while generating new revenues

Reduce fixed and variable costs



**Insight Solutions**

Analysis of social mentions, conversations, sentiment and feedback

**Customer Intimacy Solutions**

Digital solutions to virally extend brand awareness and deepen customer engagement

**Collaborative Solutions**

Platform for knowledge sharing, innovation, customer service, sales enablement, etc.

**Enterprise Integration**

CRM, WCM and Multichannel Integration  
Enterprise Data

**Social Analytics**

## Summary and Conclusions: AI for BI

**Fusion of External (Social, News) and Internal (Business) Information**

**Exploiting AI Techniques for Listening, Focusing, and Fusing Information**

**Leveraging Big Data Platforms & Cloud, and Visualization on Mobiles and Tablets**