

Innovate2010

The Premier Software and Product Delivery Event

Let's **build** a smarter planet.



**More interconnected, more
instrumented, more intelligent**

**Software is the invisible thread
enabling systems-of-systems**

**Software & systems delivery has
impacted all aspects of our lives**

Innovate2010

Let's **build** a smarter planet.

IBM.

Creating desired business outcomes



Government

Energy & Utility

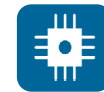
Financial Services

Aerospace &
Defense

Manufacturing

Telecommunications

Retail



INTERCONNECTED



INSTRUMENTED



INTELLIGENT

Software is touching all aspects of our lives....

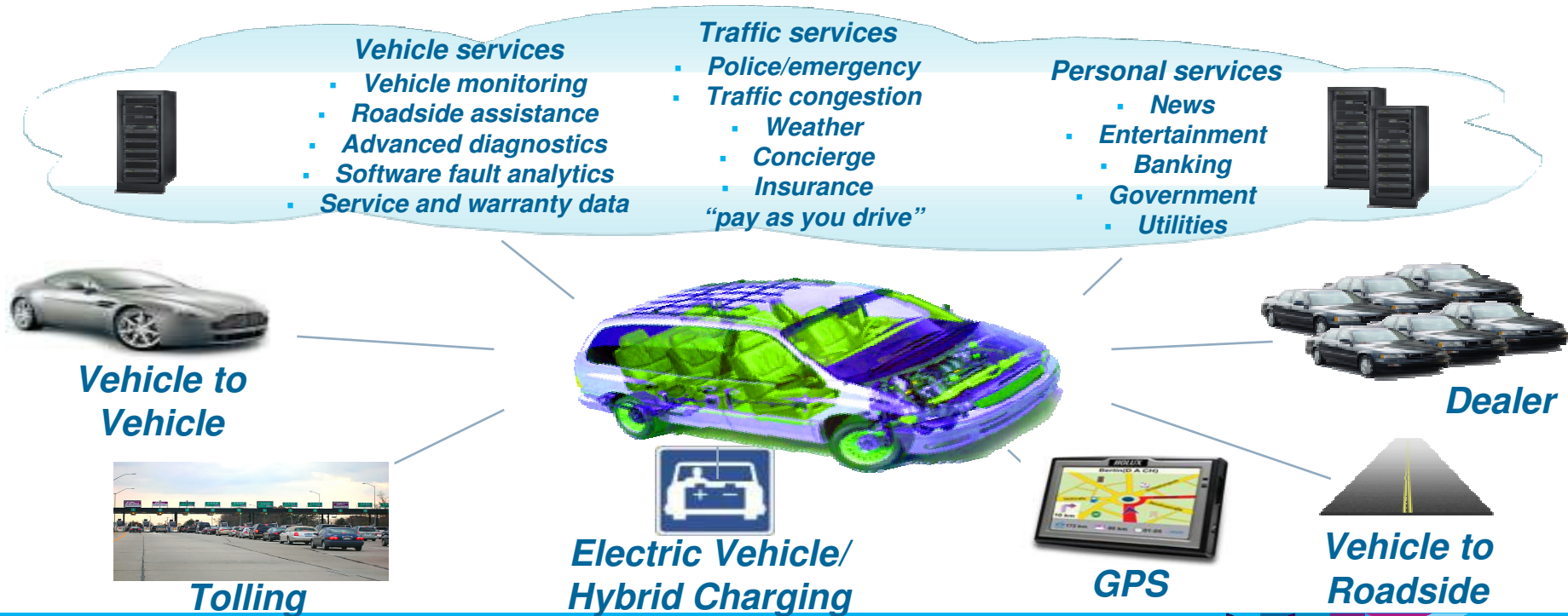
Innovate2010

Let's **build** a smarter planet.

IBM.

Automotive: Systems of Systems

It requires smarter products which are intelligent, interconnected, and instrumented



Innovate2010

Let's build a smarter planet.



Braking software glitch contributes to recall of hundreds of thousands of vehicles worldwide

- Associated Press

Software patch prevents thousands from filing tax returns electronically – \$2.4 million to fix

- ZDNet

***Software may have been factor in deaths
of hundreds in ambulance response prioritization***

- Telegraph.co.uk

Innovate2010

Let's **build** a smarter planet.



IBM.

**A better approach to addressing
complexity and innovation**

Innovate2010

Let's build a smarter planet.

IBM

How important is measurement?

Fortune 500 firms with productivity measures:	30%
Fortune 500 firms with quality measures:	45%
Fortune 500 firms with complete measures:	15%
Number of software projects measured:	160,000
Number of software projects not measured:	50,000,000

Top Reasons for Software Litigations:

1. Unstable, changing requirements
2. Inadequate quality control and poor quality measures
3. Inadequate progress tracking
4. Inadequate cost and schedule estimating
5. False promises by marketing and sales personnel

Source: Capers Jones, *Measurement, Metrics and Industry Leadership, 2009* and *Software Engineering Best Practices, McGraw Hill, 2010*

How will this impact your industry?

Driving systems-of-systems thinking, skills and strategies

Unique delivery challenges

Software is the invisible thread

*Heterogeneous ecosystem
with dynamic supply chains*

Emergent behaviors

*Outcomes difficult to trace,
understand and predict*

REQUIRES

- Quantify emerging opportunity and risk
- Design for flexibility and extensibility
- Manage new collaborators in value chains
- Configure for multiple, diverse linkages
- Deliver perceived quality sustained over long periods

Systematic management for desired outcomes and failure avoidance

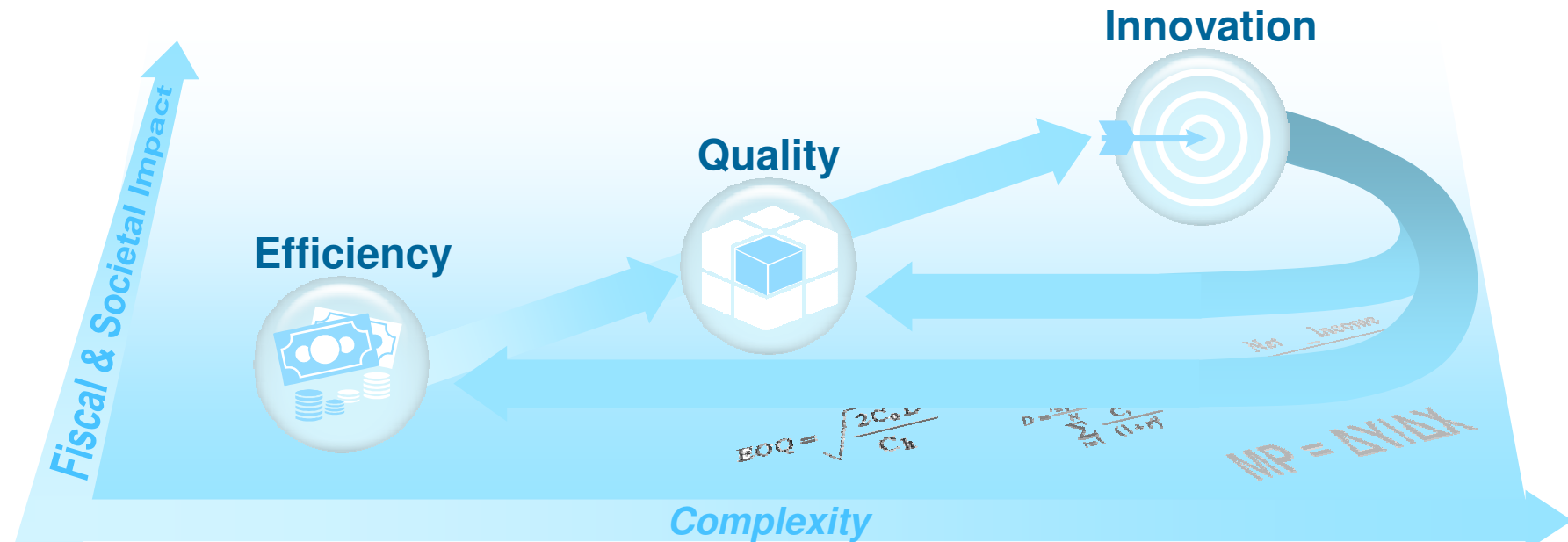
Innovate2010

Let's **build** a smarter planet.

IBM.

New thinking: software & systems econometrics

Optimized outcomes driven by processes towards measured innovation



Evolve beyond pure engineering measures of cost, quality and risk
Quantify the value measures and tie to fiscal and societal impact – monetize!

Innovate2010

Let's build a smarter planet.



IBM.

Gain efficiency in development and production

Collaboration and automation driven by standardization to reduce cost, and drive more predictable, measurable outcomes



Improve product quality and flexibility

Deliver more perceived value at lower cost of ownership



Quality

Reuse **Release Cycles** Customer Attrition
Warranty and **Defect Costs** Rework **TCO**
Acceptance and **Adoption** Breaches

STANDARDIZE, MEASURE AND IMPROVE

Change
Management

Modeling
and Design

Asset
Management

Quality
Management

Security and
Compliance

jazz

Innovate2010

Let's build a smarter planet.



IBM.

Drive new value and faster innovation

Reduce financial, market and organizational risks – make innovation through software the driver of opportunity



Innovate2010

Let's **build** a smarter planet.

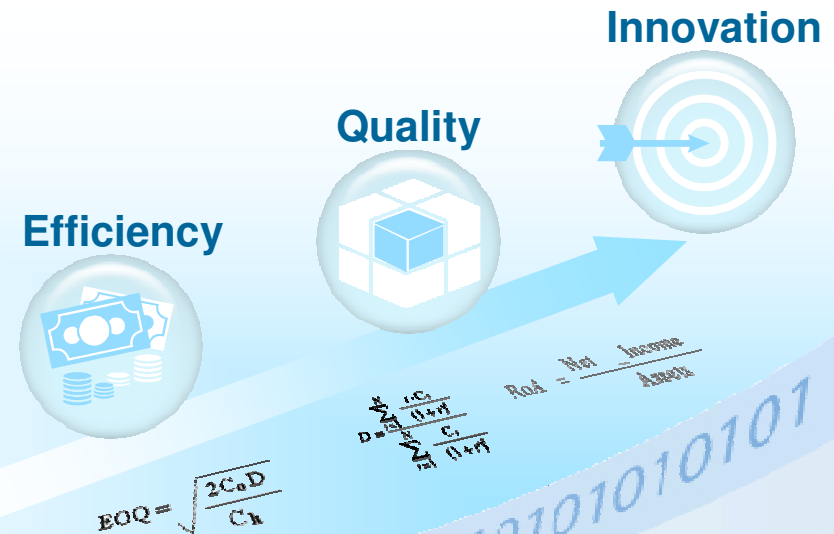


IBM.

Econometrics: a discipline to optimize software delivery processes towards continuously measured innovation

Systematic management for desired outcomes and failure avoidance

- Quantify emerging opportunity and risk
- Manage new collaborators in value chains
- Design for flexibility and extensibility
- Configure for multiple, diverse linkages
- Deliver perceived quality sustainably



Quantify value measures, and tie to fiscal and societal impact – monetize!

Innovate2010

The Premier Software and Product Delivery Event

Let's **build** a smarter planet.

